ClearOne®

CONVERGE® Pro 2

Serial Commands Reference Manual

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CONVERGE Pro 2 Serial Commands Reference

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Contents

Change History

Rev. 1.8, March 2018

Topics Modified:

Topic Changed	Description of Change
EP-SFBUA (27) KEY (1)	Added more details on arguments used for KEY parameters. Added KEY_SEND_IM (4) parameter. Added KEY_PRESENCE (14) parameter.
EP-SFBUA (27) INQUIRE (2)	Added more details on arguments used for INQUIRE parameters. Added PRESENCE_STATUS (4) parameter. Added SESSION_IM_STATE (26) parameter.
EP-SFBUA (27) INQUIRE_RESULT (3)	Added more details on syntax of return values for INQUIRE_RESULT parameters. Added PRESENCE_STATUS (4) parameter. Added SESSION_IM_STATE (26) parameter.
EP-SFBUA (27) NOTIFICATION (4)	Added more details on syntax of NOTIFICATION commands. Added IM_RECEIVED (1) parameter. Added PRESENCE_UPDATE (2) parameter. Added IM_INVITE (23) parameter. Removed INVITE_JOIN_AUDIO (25) para meter.
EP-SFBUA (27) SETTINGS (6)	Made it clear that the USERNAME (3) parameter is optional. Removed DOMAIN (4) parameter.

Rev. 1.7, March 2018

Topics Added:

- BOX-PLINK (19)
- EP-SFBUA (27) KEY (1)
- EP-SFBUA (27) INQUIRE (2)
- EP-SFBUA (27) INQUIRE_RESULT (3)
- EP-SFBUA (27) NOTIFICATION (4)
- EP-SFBUA (27) SETTINGS (5)
- EP-EXP_GPIO (35) LEVEL (1)

- EP-EXP_GPIO (35) SERIAL_PORT (2)
- EP-EXP_GPIO (35) UNIT (3)
- EP-EXP_GPIO (35) LOCATE (4)
- EP-EXP_GPIO (35) VERSION (5)
- EP-EXP_GPIO (35) EXP (6)

Topics Modified:

Topic Changed	Description of Change
BOX-ETHERNET_PORT (6)	Added STATIC_DOMAIN_NAME parameter
BOX-VOIP_PORT (15)	Added STATIC_DOMAIN_NAME parameter
BOX-VLAN_VOIP (9)	Added STATIC_DOMAIN_NAME parameter
BOX-UNIT (1)	Added VOIP_MODE parameter
EP-TELCO_RX (3) SETTINGS (2)	Added RING_ENABLE and AUDIBLE_CONNECT_ENABLE parameters
EP-TELCO_RX (3) KEY (3)	Added KEY_SPEED_DIAL parameter
EP-UA (20) INQUIRE (2)	Added MAX_CALLS_PER_UA parameter
EP-UA (20) INQUIRE_RESULT (3)	Added MAX_CALLS_PER_UA parameter
EP-UA (20) NOTIFICATION (4)	Added MAX_CALLS_PER_USER_AGENT parameter
EP-UA (20) SETTINGS (6)	Added AUTO_ANSWER parameter

Rev. 1.6, October 2017

Topics Added:

- STACK-SNMP_MGR (10)
- BOX-DANTE (7)
- BOX-VLAN_VOIP (9)
- BOX-VOIP_PORT (15)
- BOX-VOIP_CONNECT (16)
- BOX-USB_PORT (17)
- BOX-LOCATE (18)
- EP-MIC (1) SIG_GEN (12)
- EP-SRMIC (24) SIG_GEN (12)
- EP-D20MIC (28) LEVEL (1)
- EP-D20MIC (28) GATING (4)
- EP-D20MIC (28) VERSION (5)
- EP-D20MIC (28) UNIT (6)
- EP-D20MIC (28) NOTIFICATION (7)
- EP-D20MIC (28) TRANSMITTER (8)
- EP-EXP_D20MIC (33) LEVEL (1)
- EP-EXP_D20MIC (33) LOCATE (2)
- EP-EXP_D20MIC (33) UNIT (4)
- EP-EXP_D20MIC (33) RECEIVER (5)
- EP-EXP_D20MIC (33) SLOT1 (6)
- EP-EXP_D20MIC (33) SLOT2 (7)
- EP-EXP_D20MIC (33) GPIO_IN1 (8)

- EP-EXP_D20MIC (33) GPIO_IN2 (9)
- EP-EXP_D20MIC (33) GPIO_OUT1 (10)
- EP-EXP_D20MIC (33) GPIO_OUT2 (11)
- EP-USBE_RX (29) LEVEL (1)
- EP-USB_TX (30) LEVEL (1)
- EP-EXP_USB (34) LEVEL (1)
- EP-EXP_USB (34) SERIAL_PORT (2)
- EP-EXP_USB (34) UNIT (3)
- EP-EXP_USB (34) LOCATE (4)
- EP-EXP_USB (34) VERSION (5)

Topics Modified:

Topic Changed	Description of Change
Stack Command Table	Various changes, as described in the other command changes listed here
Box Command Table	Various changes, as described in the other command changes listed here
BOX-UNIT (1)	Added LINK_STATUS (8) and VOIP_MODE (9) parameters
BOX-ETHERNET_PORT (6)	• Renamed SUBNET_MASK (3) to STATIC_SUBNET (3) • Renamed GATEWAY_IP (4) to STATIC_GATEWAY (4) • Renamed DNS_IP (5) to STATIC_DNS (5) • Renamed ALT_DNS_IP (6) to STATIC_ALT_DNS (6) • Renamed IP_ASSIGN_MODE_CHANGE (8) to UPDATE (8) • Added MAC (9), IP (10), LINK_STATUS (11), SUBNET (12), GATEWAY (13), DNS (14), AND ALT_DNS (15) parameters
EP Command Table	Various changes, as described in the other command changes listed here
EP-MIC (1) LEVEL (1)	TYPE (9) changed to DIG_SRC (9), and how this command functions is changed
EP-MIC (1) FILTER_1 (7)	Added some filter types
EP-TELCO_RX (3) LEVEL (1)	Added LABEL (11) parameter
EP-TELCO_RX (3) SETTINGS (2)	Added RING_ENABLE (6) parameter
EP-OUTPUT (7) LEVEL (1)	TYPE (9) changed to DIG_CPY (9), and how this command functions is changed
EP-SPEAKER (8) LEVEL (1)	Added POLARITY (3) parameter
EP-PROC (9) LEVEL (1)	• Removed RAMP_RATE (3) parameter • Added LABEL (8) parameter
EP-BFM (13) LEVEL (1)	Added LOCATE (7) and LABEL (8) parameters

Topic Changed	Description of Change
EP-UA (20) SETTINGS (6)	Added LABEL (8) and AUTO_ANSWER (9) parameters
EP-SRMIC (1) LEVEL (1)	TYPE (9) changed to DIG_SRC (9), and how this command functions is changed
EP-DANTE_RX (25) LEVEL (1)	Added LABEL (2) parameter
EP-DANTE_TX (26) LEVEL (1)	Added LABEL (2) parameter
RAMP	Increment value changed from 0.5 to 1
GATE	Provided more detailed description and examples

Topics Deleted:

Topic Name	Explanation
BOX-VLAN (9)	Replaced by BOX-VLAN_VOIP (9)
EP-SGEN (22) LEVEL (1)	Replaced by EP-MIC (1) SIG_GEN (12) and EP-SRMIC (24) SIG_GEN (12)

Chapter 1

Concepts

Topics:

This chapter contains key concepts you should understand as you use this manual.

Introduction

This document describes the serial commands for CONVERGE Pro 2.

CONVERGE Pro 2 lets you connect and control a wide variety of audio devices, which are referred to as *end points*. You can use the CONVERGE Pro 2 CONSOLE software to configure and control a device or a stack of connected devices. You can connect to a CONVERGE Pro 2 device using a serial port or by telnet to control the device in the same ways that you can using the CONSOLE interface, but using commands (though there are some features that are available only through the CONSOLE). This manual describes the available serial commands. For more information about using the CONSOLE, see the *CONVERGE Pro 2 CONSOLE User Manual*.

Note:

Some of the command/parameter combinations described in this document apply only to certain CONVERGE Pro 2 models. For example, commands that control analog phone signals (TELCO_RX, for telco receive and TELCO_TX, for telco transmit) are applicable only if you are using a CONVERGE Pro 2 model with a telco phone jack (model numbers that include a “T”); commands for controlling VoIP are available only when you’re using a CONVERGE Pro 2 model with VoIP capability (model numbers that include a “V”); and so forth. See *CONVERGE Pro 2 Feature Table* for more information about which features are available on particular models.

Connecting to the Device

You can connect to a CONVERGE Pro 2 device via its serial port or via telnet session.

Serial Port Connection

To communicate with a box via its serial port, attach an RS-232 cable to the box’s serial port. Use the following serial settings:

Setting	Value
Baud Rate	57600
Data Bits	8
Stop Bits	1
Parity	none
Flow Control	none

Telnet Connection

To communicate with a box via telnet session, attach an ethernet cable to the box’s LAN port. You can then initiate a telnet session with the box on port 23. The default username is “clearone” and the default password is “converge”. However, if you have changed the username or password using the CONVERGE Pro 2 Console, you must use that username/password combination to telnet to the box.

Note:

You can have up to five concurrent telnet sessions with a box.

About End Points

End Points are audio channels that can be controlled and linked using CONVERGE Pro 2.

End points can be input devices (for audio input), output devices (for audio output), both (for processing audio, so they are both input devices and output devices), or neither (for example, signal generators).

End Point Types

The tables below describe the types of end points:

Input

Input end points are devices that allow audio input. Possible input end points include:

Device	End Point Type
Microphones	MIC
ClearOne Beamforming Microphone Array 2	BFM
Telephone (analog) In	TELCO_RX
USB In	USB_RX
Voice Over IP In	VOIP_RX

Output

Output end points are devices that allow audio output. Possible output end points include:

Device	End Point Type
Speakers	SPEAKER
Output (any device attached to the output ports on the device)	OUTPUT
Telephone (analog) Out	TELCO_TX
USB Out	USB_TX
Voice Over IP Out	VOIP_TX

Other

Some end points are both input and output devices, or neither:

Device	End Point Type
Fader	FADER
GPIO (to control the GPIO pins on the box)	GPIO
Processing Block	PROC
User Agent (for controlling VOIP)	UA
Signal Generator	SGEN

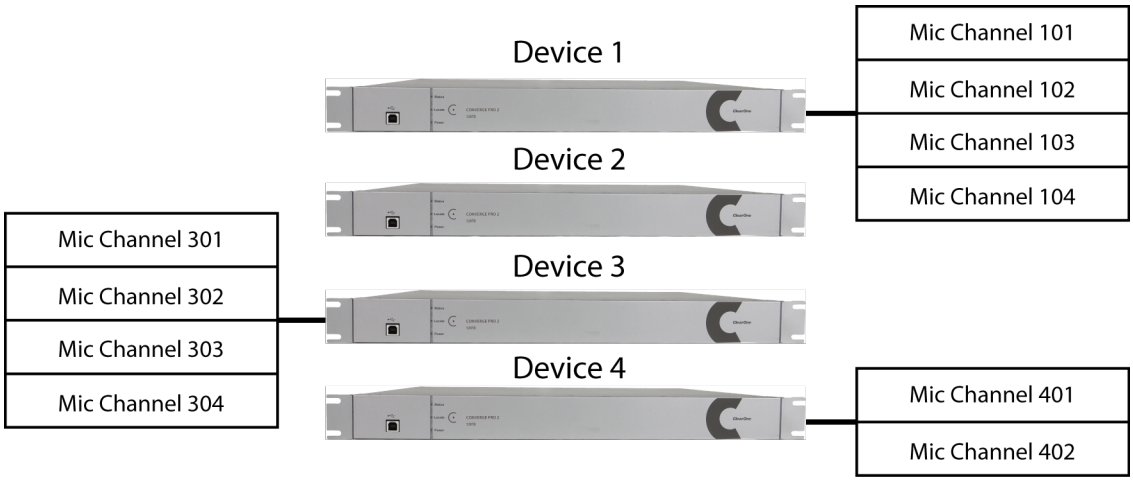
End Point Numbering

For use in CONVERGE Pro 2 Serial commands, end points are numbered as follows:

```
BNN
```

where B is the number of the box in the stack and NN is the end point number.

For example, the diagram below shows the channel number for microphones in a stack that has four CONVERGE Pro 2 devices with four microphones attached to device 1 in the stack, four microphones attached to device 3 in the stack, and two microphones attached to device 4 in the stack:



The same numbering scheme applies to all the end point types described under End Point Types above.

If you wanted to mute the level of the third microphone attached to Device 1 in the stack, you would send the following command:

```
EP MIC 103 LEVEL MUTE 1
```

Tip:

While you can use channel numbers in commands, ClearOne strongly recommends using channel labels rather than channel numbers. For more information, see *About Channel Labels and Groups*.

Note:

Device numbering can be difficult to determine, since it is not related to the order in which you attach the devices or their physical arrangement. The best way to determine device order is to run the following command: `BOX * DID`. This command returns a list of the names and device IDs (which is the number of the device) for every device in the stack.

Syntax Conventions

This following syntax conventions apply throughout this manual.

Command-level Syntax Conventions

The following is an example of the command syntax used at the command level:

`EP <EPT> <EPN> <BN> <PN> [VALUE]`

This example shows known commands/parameters using a `monospaced` font. In this case, the command is EP, or End Point, and it can be followed by several parameters, shown in either angle brackets <> or square brackets [], with the parameter names italicized.

Important:

The command, any parameters, and any values must all be separated by a space.

Note:

Angle brackets <> indicate a required parameter; square brackets [] indicate an optional parameter.

Note:

Commands are not case sensitive. You can send commands in any case. However, some parameters are case sensitive. Box names, for example, are case sensitive.

After the syntax is shown, a table describes the parameters. Here is an example of a command parameter table:

Parameter	Description
EPT	End Point Type. Possible options are BFM, DANTE, FADER, GPIO, MIC, OUTPUT, PROC, SGEN, SPEAKER, TELCO_RX, TELCO_TX, UA, USB_RX, USB_TX, VOIP_RX, and VOIP_TX.
EPN	End Point Number. **Note:** Uses the format BNN, where B is the number of the box within a stack and NN is the number of the channel on that box. For example, if you have 3 boxes in the stack, and you want to refer to a microphone attached to mic channel 2 on box 3, the end point number is 302. For more information about end point numbering, see *End Point Numbering*.
BN	Block Number. This refers to an end point block, which corresponds to some functionality of the end point.
PN	Parameter Name. The name of the parameter within a block. Possible values depend on the BN value used.
VALUE	A value. Whether or not a value is needed and what value to use depend on the parameter. **Note:** For parameters that are read/write, including a value is using the write mode of the command, and leaving off the value is using the read mode of the command.
REL	This optional switch, when used, indicates that gain and fine gain values are specified in relative terms, rather than absolute terms. So including a fine gain value of 2 would add 2 to the current fine gain value, rather than setting the value to 2dB.

Parameter-level Syntax Conventions

Commands that have many possible parameters have been broken down into sections for different parameter groups. For example, the EP command is broken down by end point types, which are contained in the *<EPT>* parameter, and then further broken down, with one topic for each *<PN>* value.

Here is an example of parameter-level syntax:

`EP MIC <EPN> LEVEL <PN> [VALUE]`

In this example, known command/parameter values are indicated in a `monospace` font. In this case, the parameters being discussed are the EP (end point) MIC (microphone) level parameters, so the focus is on the possible *<PN>* parameters. Therefore, the table that follows shows the possible *<PN>* parameter values:

PN	Description	Value
GAIN_FINE (1)	Fine gain.	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value
MUTE (2)	Mute.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value
PHAN_PWR (3)	Phantom power - 48V power option for microphone.	0 for power off 1 for power on
GAIN_COARSE (4)	Coarse gain.	0 to 56 in increments of 1 Leave blank to retrieve current value
MAX_GAIN (7)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20 in increments of 0.5 Leave blank to retrieve current value
MIN_GAIN (8)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20 in increments of 0.5 Leave blank to retrieve current value

Notice that the table shows only the possible <*PN*> values (in the **PN** column), followed by a description of each value (in the **Description** column), and then what should appear in the [VALUE] parameter (in the **Value** column).

Input/Output

Using the serial port, you can send commands to a CONVERGE Pro 2 box (input), and the box sends return information (output).

Input

Many of the commands described in this document can be sent to a device as input via a serial port or telnet connection. For example, if you wanted to mute MIC channel one, you could send the following command:

```
EP MIC 101 LEVEL MUTE 1
```

This command tells the box that you're referring to an end point (EP), and the end point you want to reference is a microphone (MIC) on channel 1 (1). The feature you want to either control or get information about is the microphone level (LEVEL), and the specific change needed is mute (MUTE), and you want to turn mute on (1).

If you wanted to discover whether microphone channel 1 is currently muted, you would send the command without the final value:

```
EP MIC 101 LEVEL MUTE
```

Note:

Input commands are not case sensitive. However, some parameters you send are case sensitive. For example box names are case sensitive.

Output

A box can also send output to you via the serial port connection. When you send commands to a box, the box sends you return information as output.

In the first example above, where you sent a command to mute microphone channel 1, the box would return the following:

```
EP MIC 101 LEVEL MUTE 1
```

Notice that the output command is the same as the input command. Typically when you send commands, the output echoes the input to confirm that the command was received and executed.

Note:

Return commands use the same end point identification method as the input command. In other words, if you send a command using an end point number, the return command uses an end point number. If you send a command using a channel label, the return command uses a channel label.

Note:

If you were to send a command with incorrect syntax, the box would return an error.

In the second example above, where you left off the final value, the box treats this command as a query and responds to the query. In this particular case, if microphone channel 1 is muted, the box would return the following:

```
EP MIC 101 LEVEL MUTE 1
```

This return command tells you that mute is on (the final 1 indicates that mute is turned on). If mute were off, the box would return the following:

```
EP MIC 101 LEVEL MUTE 0
```

This return command tells you that mute is off (the final 0 indicates that mute is turned off).

Note:

In a few instances, a box can send values without you having sent input. For example, notification of analog telephone events are sent using an EP TELCO_RX NOTIFICATION command, and similarly, VOIP events are sent using an EP UA NOTIFICATION command.

Asynchronous Notifications

A few end point types, BFM, PROC, TELCO_RX, and UA, can send asynchronous notifications. These end points sometimes need to send out information about their current state, and if you are attached to a device by serial port or telnet, you may occasionally see asynchronous notifications regarding status from those end point types.

Text vs. Numerical Parameters

Most parameters (unless noted otherwise) can be expressed as either text or as numbers.

As a convention, this manual uses text for all parameter examples, such as the following, for setting the coarse gain on a microphone:

```
EP MIC 101 LEVEL GAIN_COARSE 21
```

The same command can be entered using numerical values in place of text parameters, however:

```
EP 1 101 1 4 21
```

Within each topic, when there is both a text and a numerical version for parameters, the numerical values for parameters are shown in parentheses after the text version of the parameter.

Note:

You cannot mix text and numerical values within the same command. You must use either all text values or all numerical values. For the example shown above, you could NOT send `EP MIC 101 1 GAIN_COARSE 21` (replacing the LEVEL parameter with a 1). This does not apply to the [VALUE] at the end of the command, of course.

Read/Write Modes

Many commands can function as both write commands (sending information to the box) or read commands (requesting information from the box).

Write Mode

For commands that have a VALUE parameter, the VALUE is the information you send to the box, and including a VALUE is using the command in its WRITE mode. Sending the same command without a VALUE is using the command in its READ mode.

For example, the following command mutes microphone channel 1:

```
EP MIC 101 LEVEL MUTE 1
```

The “1” at the end of the command is used to tell the box to turn on mute.

Read Mode

Sending the same command without the “1” would be using the command in read mode, to inquire about the current mute state:

```
EP MIC 101 LEVEL MUTE
```

If mute is off, the box would return the following:

```
EP MIC 101 LEVEL MUTE 0
```

If mute is on, the box would return the following:

```
EP MIC 101 LEVEL MUTE 1
```

Note: Commands that have no WRITE mode are designated as “Read only” in the parameter description.

About Channel Labels and Groups

CONVERGE Pro 2 lets you create channel labels (a name assigned to one end point channel) and channel groups (a name assigned to a group of end point channels) to refer to one or more channels within serial commands. You can use labels and groups as an alternative to individual end point types and numbers and groups of end points.

Using labels and groups makes it far easier to remember and refer to end point channels.

Using CONVERGE Pro 2 CONSOLE to Create Labels and Groups

The easiest way to create channel labels and groups is to use the CONVERGE Pro 2 CONSOLE application. See the Naming Assets and Assigning Assets to Channel Groups sections in the *CONVERGE Pro 2 CONSOLE User Manual* for more information.

Using Serial Commands to Create Labels and Groups

You can also create or modify channel labels and groups using serial commands. For more information see *NAME_CREATE*, *NAME_UPDATE*, and *MEMBER_UPDATE*.

Important:

If you use the NAME_CREATE, NAME_UPDATE, or MEMBER_UPDATE serial commands to create or modify labels or groups, the next time you load a project from the CONSOLE, those labels are groups are overwritten.

CP2 Touch Panel Controller and Serial Commands

The CP2 Touch Panel Controller can be used to mute the input channel being used for a call or to change the volume of the call output channel. The Touch Panel Controller uses serial commands to communicate these changes to the CP2 device to which it is connected. You can have these settings configured automatically by specifying the labels of the input and output channels, or you can make adjustments to these settings by specifying which serial commands to use.

Volume Up/Volume Down settings are defined in the Connection Settings. See the table below for examples of commands you might use to change the volume:

Volume Up Settings

Setting	Example Command and Explanation
Press (used when you press the Volume Up for Volume Down button)	`RAMP OUTPUT 101 20 10` **Note:** This example ramps up OUTPUT channel 101 (the first output channel on device 1 of the stack) up to 20 dB in increments of 10 dB. Replace “OUTPUT 101” with a channel type and end point number of your choice or a channel or group label. If your device has a maximum level other than 20, put that value in place of 20, and if you’d like to ramp up at a rate other than 10 dB each time you press the volume up button, put your preferred ramp value in place of 10. See *RAMP* for more information about using the RAMP command.
Release	`RAMP OUTPUT 101 20 0` **Note:** This example changes the ramp for OUTPUT channel 101 (the first output channel on device 1 of the stack) to 0 db (turns off ramping, in other words). Replace “OUTPUT 101” with a channel type and end point number of your

Setting	Example Command and Explanation
	choice or a channel or group label. See *RAMP* for more information about using the RAMP command.

Volume Down Settings

Setting	Example Command and Explanation
Press (used when you press the Volume Up for Volume Down button)	`RAMP OUTPUT 101 -65 10` **Note:** This example ramps down OUTPUT channel 101 (the first output channel on device 1 of the stack) down to -65 dB in increments of 10 dB. Replace "OUTPUT 101" with a channel type and end point number of your choice or a channel or group label. If your device has a minimum level other than -65, put that value in place of -65, and if you'd like to ramp down at a rate other than 10 dB each time you press the volume down button, put your preferred ramp value in place of 10. See *RAMP* for more information about using the RAMP command.
Release	`RAMP OUTPUT 101 -65 0` **Note:** This example changes the ramp down for OUTPUT channel 101 (the first output channel on device 1 of the stack) to 0 db (turns off ramping, in other words). Replace "OUTPUT 101" with a channel type and end point number of your choice or a channel or group label. See *RAMP* for more information about using the RAMP command.

Slider Position Settings

Setting	Example Command and Explanation
Query Command	`RAMP OUTPUT LEVEL GAIN` **Note:** This example sends a query to the device to know the gain level of channel OUTPUT 101. Replace OUTPUT 101 with the channel type and end point number of your choice or a channel or group label. See *EP-OUTPUT (7) LEVEL (1)* for more information.
Slider Press Command	`RAMP OUTPUT LEVEL GAIN` **Note:** This example changes the ramp down for OUTPUT channel 101 (the first output channel on device 1 of the stack) to 0 db (turns off ramping, in other words). Replace "OUTPUT 101" with a channel type and end point number of your choice or a channel or group label. See *EP-OUTPUT (7) LEVEL (1)* for more information.
Slider Max Query	`EP OUTPUT 101 LEVEL MAX_GAIN` **Note:** This example sends a query to the device to know the maximum level of the OUTPUT 101 channel. Replace OUTPUT 101 with the channel type and end

Setting	Example Command and Explanation
	point number of your choice or a channel or group label. See *EP-OUTPUT (7) LEVEL (1)* for more information.
Slider Min Query	`EP OUTPUT 101 LEVEL MIN_GAIN` **Note:** This example sends a query to the device to know the minimum level of the OUTPUT 101 channel. Replace OUTPUT 101 with the channel type and end point number of your choice or a channel or group label. See *EP-OUTPUT (7) LEVEL (1)* for more information.

Mute Settings

Setting	Example Command and Explanation
Press Command	`EP MIC 101 LEVEL MUTE 2` **Note:** This example toggles the mute state of MIC channel 101 (the first output channel on device 1 of the stack). Replace “MIC 101” with a channel type and end point number of your choice or a channel or group label. See *EP-MIC (1) LEVEL (1)* for more information.
Query Command	`EP MIC 101 LEVEL MUTE` **Note:** This example sends a query to the device to know the mute state for MIC channel 101. Replace “MIC 101” with the channel type and end point number of your choice or a channel or group label. See *EP-MIC (1) LEVEL (1)* for more information.
Active Status	`EP MIC 101 LEVEL MUTE 1` **Note:** This example mutes MIC channel 101. Replace “MIC 101” with the channel type and end point number of your choice or a channel or group label. See *EP-MIC (1) LEVEL (1)* for more information.
Inactive Status	`EP MIC 101 LEVEL MUTE 0` **Note:** This example turns off mute for MIC channel 101. Replace “MIC 101” with the channel type and end point number of your choice or a channel or group label. See *EP-MIC (1) LEVEL (1)* for more information.

Chapter 2

Reference

Topics:

This chapter contains descriptions of each of the CONVERGE Pro 2 serial commands.

STACK

Use the STACK command to change settings for a group of connected CONVERGE Pro 2 boxes.

Syntax

`STACK` *<BN> <PN> [VALUE]*

Parameters

Parameter	Description
BN	Block Name/Number. Possible values are ADMIN, CLOCK, and LOCATION.
PN	Parameter Name/Number. A parameter within a block. Possible values depend on the BN value used.
VALUE	A value. Whether or not a value is needed and what value to use depend on the parameter. **Note:** For parameters that are read/write, unless otherwise specified, including a value is using the write mode of the command, and leaving off the final value is using the read mode of the command.

Stack Command Table

This table shows all the possible parameter combinations for the Stack command.

Parameter Table

BN	PN	VALUE			Default	RWC
		Min	Max	Gran		
SYSTEM (1)	SFTYMUTE (1)	0	1	1	0	RW
CLOCK (5)	TIME_ZONE (1)	-11	12	1	-7	RW
	DAYLIGHT_SAVING (2)	0	2	1	1	RW
	NTP_IP1 (3)	N/A	N/A	N/A	N/A	RWC
	NTP_IP2 (4)	N/A	N/A	N/A	N/A	RWC
	NTP_ENABLE (5)	0	2	1	0	RWC
LOCATION (6)	COUNTRY (1)	N/A	N/A	N/A	N/A	RWC
	STATE (2)	N/A	N/A	N/A	N/A	RWC
	CITY (3)	N/A	N/A	N/A	N/A	RWC
	COMPANY (4)	N/A	N/A	N/A	N/A	RWC
	BUILDING (5)	N/A	N/A	N/A	N/A	RWC
	ROOM (6)	N/A	N/A	N/A	N/A	RWC
	REGION (7)	N/A	N/A	N/A	N/A	RWC
	SITE_NAME (8)	N/A	N/A	N/A	N/A	RWC

BN	PN	VALUE			Default	RWC
		Min	Max	Gran		
SMTP (8)	EMAIL_GROUP (1)	N/A	N/A	N/A	N/A	RWC
	EMAIL_ROUTING (2)	N/A	N/A	N/A	N/A	RWC
	ENABLE (3)	0	2	1	0	RW
ADMIN (9)	USERNAME (1)	N/A	N/A	N/A	clearone	RW
	PASSWORD (2)	N/A	N/A	N/A	converge	RW
SNMP_MGR (10)	IP (1)	N/A	N/A	N/A	N/A	RW
	PORT	N/A	N/A	N/A	N/A	RW
	READ_PASSWORD	N/A	N/A	N/A	N/A	RW
	WRITE_PASSWORD	N/A	N/A	N/A	N/A	RW

Note:

The following table describes the meaning of the letters in the RWC column above.

Letter	Meaning
R	A readable command. You can send the command without any values to inquire about the parameter state. The state is returned by the device.
W	A writable command. You can send the command with a value to change the parameter state. The newly written state is returned by the device.
C	A clearable value. You can send the word “CLEAR” in place of a value to erase whatever value is assigned to the parameter and leave it blank until you write a new value.

Stack-SYSTEM (1)

You can use the STACK command to turn on the safety mute feature, which mutes all outputs.

Syntax

`STACK SYSTEM [PN]`

Input

PN	Description	Values	Default	RW
SFTYMUTE (1)	Enable the Safety Mute feature, which mutes the entire system.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW

Example 1: SFTYMUTE

This example shows how to turn on Safety Mute for the attached stack.

```
STACK SYSTEM SFTYMUTE 1
```

Output

PN	Output
SFTYMUTE	`STACK SYSTEM SFTYMUTE 1`

Stack-ADMIN (9)

You can use the STACK command to change the username and password of a stack.

Syntax

`STACK ADMIN <PN> [VALUE]`

Input

PN	Description	Value	Default	RW
USERNAME (1)	Username.	A text string.	clearone	RW
PASSWORD (2)	Password.	A text string.	converge	RW

Example 1: USERNAME

This example shows how to set a username for a stack:

```
STACK ADMIN USERNAME MyUsername
```

Example 2: PASSWORD

This example shows how to set a password for a stack:

```
STACK ADMIN PASSWORD MyPassword
```

Output

PN	Output
USERNAME	`STACK ADMIN USERNAME MyUsername`
PASSWORD	`STACK ADMIN PASSWORD MyPassword`

Stack-CLOCK (5)

You can use the STACK command to change some clock settings for a stack.

Note:

To change the date and time, use the *CLOCK* command.

Syntax

`STACK CLOCK <PN> [VALUE]`

Input

PN	Description	Value	Default	RWC
TIME_ZONE (1)	Time zone in Universal Time (UT).	-11 to 12 Leave blank to retrieve current value	-7	RW

PN	Description	Value	Default	RWC
DAYLIGHT_SAVING (2)	Enable Daylight Savings Time.	0 to disable 1 to enable Leave blank to retrieve current value	1	RW
NTP_IP1 (3)	Primary Network Time Protocol server.	NTP server address (domain name or IP address) 30 characters maximum size. Leave blank to retrieve current value	N/A	RWC
NTP_IP2 (4)	Secondary Network Time Protocol server.	NTP server address (domain name or IP address) 30 characters maximum size. Leave blank to retrieve current value	N/A	RWC
NTP_ENABLE (5)	Automatically set time using an NTP server.	0 to disable 1 to enable Leave blank to retrieve current value	0	RWC

Note:

The following table describes the meaning of the letters in the RWC column above.

Letter	Meaning
R	A readable command. You can send the command without any values to inquire about the parameter state. The state is returned by the device.
W	A writable command. You can send the command with a value to change the parameter state. The newly written state is returned by the device.
C	A clearable value. You can send the word “CLEAR” in place of a value to erase whatever value is assigned to the parameter and leave it blank until you write a new value.

Example 1: TIME_ZONE

This example shows how to set the time zone for the devices on the stack:

```
STACK CLOCK TIME_ZONE -7
```

Example 2: DAYLIGHT_SAVING

This examples shows how to turn on daylight savings time for the devices on the stack:

```
STACK CLOCK DAYLIGHT_SAVING 1
```

Example 3: NTP_IP1

This example shows how to set the address for NTP server 1:

```
STACK CLOCK NTP_IP1 ntp1.timeserver.com
```

Example 4: NTP_IP2

This example shows how to set the address for NTP server 2:

```
STACK CLOCK NTP_IP2 ntp2.timeserver.com
```

Example 5: NTP_ENABLE

This example shows how to tell the device to get its time from the specified NTP server(s):

```
STACK CLOCK NTP_ENABLE 1
```

Output

PN	Output
TIME_ZONE	`STACK CLOCK TIME_ZONE -7`
DAYLIGHT_SAVING	`STACK CLOCK DAYLIGHT_SAVING 1`
NTP_IP1	`STACK CLOCK NTP_IP1 ntp1.timeserver.com`
NTP_IP2	`STACK CLOCK NTP_IP2 ntp2.timeserver.com`
NTP_ENABLE	`STACK CLOCK NTP_ENABLE 1`

Stack-LOCATION (6)

You can use the STACK command to change the location settings of a stack.

Note:

Using this serial command is the only way to change the stack location settings. There is no corresponding settings in the CONVERGE Pro 2 CONSOLE application.

Syntax

`STACK LOCATION <PN> [VALUE]`

Input

PN	Description	Value	Default	RWC
COUNTRY (1)	Country.	A text string. No spaces allowed. Can use at least 32 characters, and possibly more depending on what language you're using. Leave blank to retrieve current value	N/A	RWC
STATE (2)	State.	A text string. No spaces allowed. Can use at least 32 characters, and possibly more depending on what language you're using. Leave blank to retrieve current value	N/A	RWC
CITY (3)	City.	A text string. No spaces allowed. Can use at least 32 characters, and possibly more depending on what language you're using. Leave blank to retrieve current value	N/A	RWC

PN	Description	Value	Default	RWC
COMPANY (4)	Company.	A text string. No spaces allowed. Can use at least 32 characters, and possibly more depending on what language you're using. Leave blank to retrieve current value	N/A	RWC
BUILDING (5)	Building.	A text string. No spaces allowed. Can use at least 32 characters, and possibly more depending on what language you're using. Leave blank to retrieve current value	N/A	RWC
ROOM (6)	Room.	A text string. No spaces allowed. Can use at least 32 characters, and possibly more depending on what language you're using. Leave blank to retrieve current value	N/A	RWC
REGION (7)	Region.	A text string. No spaces allowed. Can use at least 32 characters, and possibly more depending on what language you're using. Leave blank to retrieve current value	N/A	RWC
SITE_NAME (8)	Site name.	A text string. No spaces allowed. Can use at least 32 characters, and possibly more depending on what language you're using. Leave blank to retrieve current value	N/A	RWC

Note:

The following table describes the meaning of the letters in the RWC column above.

Letter	Meaning
R	A readable command. You can send the command without any values to inquire about the parameter state. The state is returned by the device.
W	A writable command. You can send the command with a value to change the parameter state. The newly written state is returned by the device.
C	A clearable value. You can send the word "CLEAR" in place of a value to erase whatever value is assigned to the parameter and leave it blank until you write a new value.

Example 1: COUNTRY

This example shows how to set the country for a stack location:

```
STACK LOCATION COUNTRY USA
```

Example 2: STATE

This example shows how to set the state for a stack location:

```
STACK LOCATION STATE COLORADO
```

Example 3: CITY

This example shows how to set the city for a stack location:

```
STACK LOCATION CITY DENVER
```

Example 4: COMPANY

This example shows how to set the company for a stack location:

```
STACK LOCATION COMPANY Acme_Inc
```

Example 5: BUILDING

This example shows how to set the building for a stack location:

```
STACK LOCATION BUILDING Acme_Tower
```

Example 6: ROOM

This example shows how to set the room for a stack location:

```
STACK LOCATION ROOM CONF7
```

Example 7: REGION

This example shows how to set the region for a stack location:

```
STACK LOCATION REGION Mountain_West
```

Example 8: SITE_NAME

This example shows how to set the site name for a stack location:

```
STACK LOCATION SITE_NAME Headquarters
```

Output

PN	Output
COUNTRY	`STACK LOCATION COUNTRY USA`
STATE	`STACK LOCATION STATE COLORADO`
CITY	`STACK LOCATION CITY DENVER`
COMPANY	`STACK LOCATION COMPANY Acme_Inc`
BUILDING	`STACK LOCATION BUILDING Acme_Tower`
ROOM	`STACK LOCATION ROOM CONF7`
REGION	`STACK LOCATION REGION Mountain_West`
SITE_NAME	`STACK LOCATION SITE_NAME Headquarters`

Stack-SMTP (8)

You can use the STACK command to set the email server settings for a stack, so that notifications can be sent via email.

Syntax

STACK SMTP*[PN][VALUE]*

Input

PN	Description	Values	Default	RWC
EMAIL_GROUP (1)	The name of the email address to which notifications should be sent.	An email address. Email address can have up to 128 characters and must be in the format of an email address (such as: recipient@server.com).	N/A	RWC
EMAIL_ROUTING (2)	The address of an SMTP server.	A server address. Server address can have up to 128 characters.	N/A	RWC
ENABLE (3)	Enable email notifications.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW

Note:

The following table describes the meaning of the letters in the RWC column above.

Letter	Meaning
R	A readable command. You can send the command without any values to inquire about the parameter state. The state is returned by the device.
W	A writable command. You can send the command with a value to change the parameter state. The newly written state is returned by the device.
C	A clearable value. You can send the word “CLEAR” in place of a value to erase whatever value is assigned to the parameter and leave it blank until you write a new value.

Example 1: EMAIL_GROUP

This example shows how to set the email address for notifications:

```
STACK SMTP EMAIL_GROUP address@mydomain.com
```

Example 2: EMAIL_ROUTING

This example shows how to set the SMTP server address for notifications:

```
STACK SMTP EMAIL_ROUTING MAIL.MYDOMAIN.COM
```

Example 3: ENABLE

This example shows how to enable notifications:

```
STACK SMTP ENABLE 1
```

Output

PN	Output
EMAIL_GROUP	`STACK SMTP EMAIL_GROUP address@mydomain.com`
EMAIL_ROUTING	`STACK SMTP EMAIL_ROUTING MAIL.MYDOMAIN.COM`

PN	Output
ENABLE	`STACK SMTP ENABLE 1`

Stack-SNMP_MGR (10)

You can use the STACK command to change the SNMP settings for a stack.

Syntax

`STACK SNMP_MGR <PN> [VALUE]`

Input

PN	Description	Value	Default	RWC
IP (1)	The SNMP server address.	An IP address.	N/A	RW
PORT (2)	The port to use to connect to the SNMP server.	0 to disable 1 to enable Leave blank to retrieve current value	N/A	RW
READ_PASSWORD (3)	The SNMP Read Community password.	A text string. Can use at least 32 characters, and possibly more depending on what language you're using.	N/A	RW
WRITE_PASSWORD (4)	The SNMP Write Community password.	A text string. Can use at least 32 characters, and possibly more depending on what language you're using.	N/A	RW

Note:

The following table describes the meaning of the letters in the RWC column above.

Letter	Meaning
R	A readable command. You can send the command without any values to inquire about the parameter state. The state is returned by the device.
W	A writable command. You can send the command with a value to change the parameter state. The newly written state is returned by the device.
C	A clearable value. You can send the word "CLEAR" in place of a value to erase whatever value is assigned to the parameter and leave it blank until you write a new value.

Example 1: IP

This example shows how to set the SNMP server IP address:

```
STACK SNMP_MGR IP 192.168.111.1
```

Example 2: PORT

This examples shows how to set the port to use for SNMP communication:

```
STACK SNMP_MGR PORT 162
```

Example 3: READ_PASSWORD

This example shows how to set the SNMP Read Community password:

```
STACK SNMP_MGR READ_PASSWORD MyPassword
```

Example 4: WRITE_PASSWORD

This example shows how to set the SNMP Write Community password:

```
STACK SNMP_MGR WRITE_PASSWORD MyPassword
```

Output

PN	Output
IP	`STACK SNMP_MGR IP 192.168.111.1`
PORT	`STACK SNMP_MGR PORT 162`
READ_PASSWORD	`STACK SNMP_MGR READ_PASSWORD MyPassword`
WRITE_PASSWORD	`STACK SNMP_MGR WRITE_PASSWORD MyPassword`

BOX

The BOX command is used to get information about and configure a particular CONVERGE Pro 2 box.

Syntax

`BOX <BOXNAME> <BN> <PN> [VALUE]`

Parameters

Parameter	Description
BOXNAME	Use this argument to indicate the name of the CONVERGE Pro 2 box, or unit, you're referencing. You can use the asterisk character (*) to refer to all attached boxes. **Note:** Box names are case sensitive.
BN	Block Name/Number. This refers to a particular box feature.
PN	Parameter Name/Number. A parameter within a block. Possible values depend on the BN value used.
VALUE	A value. Whether or not a value is needed and what value to use depend on the parameter. **Note:** For parameters that are read/write, unless otherwise specified, including a value is using the write mode of the command, and leaving off the final value is using the read mode of the command.

Box Command Table

This table shows all the possible parameter combinations for the Box command.

Parameter Table

BN	PN	VALUE			Default	RWC
		Min	Max	Gran		
UNIT (1)	IP (1)	N/A	N/A	N/A	N/A	R
	MODEL (2)	N/A	N/A	N/A	N/A	R
	SN (3)	N/A	N/A	N/A	N/A	R
	MAC (4)	N/A	N/A	N/A	N/A	R
	DID (5)	0	15	1	N/A	R
	NAME (6)	N/A	N/A	N/A	N/A	R
	LINK_STATUS (8)	N/A	N/A	N/A	N/A	R
	VOIP_MODE (9)	0	1	1	0	RW
SERIAL_PORT (5)	BAUD_RATE (1)	9600	115200	N/A	57600	RW
	DATA_BITS (2)	8	10	1	8	R
	STOP_BITS (3)	0	1	1	1	R
	PARITY (4)	0	1	1	0	R
	FLOW_CONTROL (5)	0	1	1	0	R
	ECHO (6)	0	1	1	0	R
ETHERNET_PORT (6)	DHCP_ENABLE (1)	0	1	1	1	RW
	STATIC_IP (2)	N/A	N/A	N/A	N/A	RWC
	STATIC_SUBNET (3)	N/A	N/A	N/A	N/A	RWC
	STATIC_GATEWAY (4)	N/A	N/A	N/A	N/A	RWC
	STATIC_DNS (5)	N/A	N/A	N/A	N/A	RWC
	STATIC_ALT_DNS (6)	N/A	N/A	N/A	N/A	RWC
	STATIC_DOMAIN_NAME (7)	N/A	N/A	N/A	N/A	RWC
	UPDATE (8)	0	1	1	0	W
	MAC (9)	N/A	N/A	N/A	N/A	R
	IP (10)	N/A	N/A	N/A	N/A	R
	LINK_STATUS (11)	N/A	N/A	N/A	N/A	R
	SUBNET (12)	N/A	N/A	N/A	N/A	R
	GATEWAY (13)	N/A	N/A	N/A	N/A	R
	DNS (14)	N/A	N/A	N/A	N/A	R
	ALT_DNS (15)	N/A	N/A	N/A	N/A	R
	DOMAIN_NAME (16)	N/A	N/A	N/A	N/A	R
DANTE (7)	MAC_ADDRESS1 (1)	N/A	N/A	N/A	N/A	R
	MAC_ADDRESS (2)	N/A	N/A	N/A	N/A	R

BN	PN	VALUE			Default	RWC
		Min	Max	Gran		
	IP_ADDRESS1 (3)	N/A	N/A	N/A	N/A	R
	IP_ADDRESS2 (4)	N/A	N/A	N/A	N/A	R
	LINK_STATUS1 (5)	N/A	N/A	N/A	N/A	R
	LINK_STATUS2 (6)	N/A	N/A	N/A	N/A	R
	BDNAME1 (7)	N/A	N/A	N/A	N/A	RW
	CHANNELS (8)	N/A	N/A	N/A	N/A	R
NOTIFICATION (8)	BUTTON (1)	1	5	1	N/A	R
VLAN_VOIP (9)	ID (2)	1	4094	1	1	RW
	PRIORITY (3)	0	7	1	0	RW
	STATIC_IP (4)	N/A	N/A	N/A	N/A	RWC
	STATIC_SUBNET (5)	N/A	N/A	N/A	N/A	RWC
	STATIC_GATEWAY (6)	N/A	N/A	N/A	N/A	RWC
	STATIC_DNS (7)	N/A	N/A	N/A	N/A	RWC
	STATIC_ALT_DNS (8)	N/A	N/A	N/A	N/A	RWC
	DHCP_ENABLE (9)	0	1	1	1	RW
	IP (10)	N/A	N/A	N/A	N/A	R
	LINK_STATUS (11)	N/A	N/A	N/A	N/A	R
	SUBNET (12)	N/A	N/A	N/A	N/A	R
	GATEWAY (13)	N/A	N/A	N/A	N/A	R
	DNS (14)	N/A	N/A	N/A	N/A	R
	ALT_DNS (15)	N/A	N/A	N/A	N/A	R
VOIP_CFG (10)	ENABLE (1)	0	1	1	0	RW
	URL (2)	N/A	N/A	N/A	N/A	RW
	USERNAME (3)	N/A	N/A	N/A	N/A	RW
	PASSWORD (4)	N/A	N/A	N/A	N/A	RW
	AUTO (5)	0	1	1	0	RW
VOIP_PORT (15)	DHCP_ENABLE (1)	0	1	1	1	RW
	STATIC_IP (2)	N/A	N/A	N/A	N/A	RWC
	STATIC_SUBNET (3)	N/A	N/A	N/A	N/A	RWC
	STATIC_GATEWAY (4)	N/A	N/A	N/A	N/A	RWC
	STATIC_DNS (5)	N/A	N/A	N/A	N/A	RWC
	STATIC_ALT_DNS (6)	N/A	N/A	N/A	N/A	RWC
	STATIC_DOMAIN_NAME (7)	N/A	N/A	N/A	N/A	RWC

BN	PN	VALUE			Default	RWC
		Min	Max	Gran		
	UPDATE (8)	0	1	1	0	W
	MAC (9)	N/A	N/A	N/A	N/A	R
	IP (10)	N/A	N/A	N/A	N/A	R
	LINK_STATUS (11)	N/A	N/A	N/A	N/A	R
	SUBNET (12)	N/A	N/A	N/A	N/A	R
	GATEWAY (13)	N/A	N/A	N/A	N/A	R
	DNS (14)	N/A	N/A	N/A	N/A	R
	ALT_DNS (15)	N/A	N/A	N/A	N/A	R
	DOMAIN_NAME (16)	N/A	N/A	N/A	N/A	R
VOIP_CONNECT (16)	PORT (1)	0	1	1	0	RW
	VLAN (2)	0	1	1	0	RW
	UPDATE (3)	0	1	1	0	W
	IP (4)	N/A	N/A	N/A	N/A	R
	LINK_STATUS (5)	N/A	N/A	N/A	N/A	R
USB_PORT (17)	MAC (1)	N/A	N/A	N/A	N/A	R
	IP (2)	N/A	N/A	N/A	N/A	R
	LINK_STATUS (3)	N/A	N/A	N/A	N/A	R
LOCATE (18)	MODE (1)	0	1	1	0	RW
	TIMEOUT (2)	1	60	1	30	RW
PLINK (19)	LONG_DISTANCE	0	1	1	0	RW

Note:

The following table describes the meaning of the letters in the RWC column above.

Letter	Meaning
R	A readable command. You can send the command without any values to inquire about the parameter state. The state is returned by the device.
W	A writable command. You can send the command with a value to change the parameter state. The newly written state is returned by the device.
C	A clearable value. You can send the word “CLEAR” in place of a value to erase whatever value is assigned to the parameter and leave it blank until you write a new value.

Box-DANTE (7)

Use this command to retrieve the DANTE (Digital Audio Network Through Ethernet) settings of a particular CONVERGE Pro 2 box and to set the DANTE name of the box.

Syntax

BOX *<BOXNAME>*DANTE *<PN>[VALUE]*

Input

PN	Description	Value	RWC
MAC_ADDRESS1 (1)	Use to retrieve the primary MAC address of the port.	Read only.	R
MAC_ADDRESS2 (2)	Use to retrieve the secondary MAC address of the port.	Read only.	R
IP_ADDRESS1 (3)	Use to retrieve the primary IP address of the port.	Read only.	R
IP_ADDRESS2 (4)	Use to retrieve the secondary IP address of the port.	Read only.	R
LINK_STATUS1 (5)	Use to retrieve the primary link status of the port.	Read only.	R
LINK_STATUS2 (6)	Use to retrieve the secondary link status of the port.	Read only.	R
BDNAME1 (7)	Use to set or retrieve the DANTE board name of the port.	A string with the DANTE name. 50 characters maximum. Leave blank to retrieve current value	RW
CHANNELS (8)	Use to retrieve the number of channels.	Read only.	R

Example 1: MAC_ADDRESS1

The following example retrieves the primary DANTE MAC address of the box named BOX3:

```
BOX BOX3 DANTE MAC_ADDRESS1
```

Example 2: MAC_ADDRESS2

The following example retrieves the secondary DANTE MAC address of the box named Boardroom_Box:

```
BOX Boardroom_Box DANTE MAC_ADDRESS2
```

Example 3: IP_ADDRESS1

The following example retrieves the primary DANTE IP address of the box named BOX4:

```
BOX BOX4 DANTE IP_ADDRESS1
```

Example 4: IP_ADDRESS2

The following example retrieves the secondary DANTE IP address of the box named BOX_5:

```
BOX BOX_5 DANTE IP_ADDRESS2
```

Example 5: LINK_STATUS1

The following example retrieves the primary DANTE link status of the box named CP2_R2D2:

```
BOX CP2_R2D2 DANTE LINK_STATUS1
```

Example 6: LINK_STATUS2

The following example retrieves the secondary DANTE link status of the box named CP2_C3PO:

```
BOX CP2_C3PO DANTE LINK_STATUS2
```

Example 7: BDNAME1

The following example sets the DANTE board name of the box named BOX_4:

```
BOX BOX_4 DANTE BDNAME1 DANTE_4
```

Example 8: CHANNELS

The following example retrieves the number of DANTE channels for a device named BOX_4:

```
BOX BOX_4 DANTE CHANNELS
```

Output

PN	Output
MAC_ADDRESS1	`BOX BOX3 DANTE MAC_ADDRESS1 00:14:22:01:23:45`
MAC_ADDRESS2	`BOX Boardroom_Box DANTE MAC_ADDRESS2 00:14:22:01:23:46`
IP_ADDRESS1	`BOX BOX4 DANTE IP_ADDRESS1 192.168.0.100`
IP_ADDRESS2	`BOX BOX4 DANTE IP_ADDRESS2 192.168.0.101`
LINK_STATUS1	`BOX CP2_R2D2 DANTE LINK_STATUS1`
LINK_STATUS2	`BOX CP2_C3PO DANTE LINK_STATUS2`
BDNAME1	`BOX BOX_4 DANTE BDNAME1 DANTE_4`
CHANNELS	`BOX BOX_4 DANTE CHANNELS 1`

Box-ETHERNET_PORT (6)

Use this command to retrieve or change the IP settings for the ethernet port of a particular device.

Note:

If you want to make any changes, you must execute the UPDATE parameter as the last step of the process; otherwise, no changes will occur.

Syntax

`BOX <BOXNAME> ETHERNET_PORT <PN> [VALUE]`

Input

PN	Description	Value	Default	RWC
DHCP_ENABLE (1)	Use to specify whether DHCP should be turned on or off when the UPDATE parameter is sent. **Note:** Using this parameter doesn't effect any change; you must send the UPDATE parameter to execute any changes.	0 to disable 1 to enable Leave blank to retrieve current value	1	RW

PN	Description	Value	Default	RWC
STATIC_IP (2)	If DHCP is turned off, use to set a static IP address for a box. **Note:** If DHCP is enabled, this parameter is ignored.	An IP address. Leave blank to retrieve the current value.	N/A	RWC
STATIC_SUBNET (3)	If DHCP is turned off, use to set the subnet mask for a box. **Note:** If DHCP is enabled, this parameter is ignored.	A subnet mask. Leave blank to retrieve the current value.	N/A	RWC
STATIC_GATEWAY (4)	If DHCP is turned off, use to set the address of the gateway. **Note:** If DHCP is enabled, this parameter is ignored.	An IP address. Leave blank to retrieve the current value.	N/A	RWC
STATIC_DNS (5)	If DHCP is turned off, use to set the primary DNS server address. **Note:** If DHCP is enabled, this parameter is ignored.	An IP address. Leave blank to retrieve the current value.	N/A	RWC
STATIC_ALT_DNS (6)	If DHCP is turned off, use to set the secondary DNS server address. **Note:** If DHCP is enabled, this parameter is ignored.	An IP address. Leave blank to retrieve the current value.	N/A	RWC
STATIC_DOMAIN_NAME (7)				RWC
UPDATE (8)	Executes the settings you have specified using the other ETHERNET_PORT parameters. **Note:** This parameter must be sent to a device after specifying the rest of the ETHERNET_PORT settings.	1 for execute.	N/A	W
MAC (9)	Use to retrieve the MAC address of the Ethernet port.	Read only. Returns a MAC address.	N/A	R
IP (10)	Use to retrieve the IP address of the Ethernet port.	Read only. Returns an IP address.	N/A	R

PN	Description	Value	Default	RWC
LINK_STATUS (11)	Use to retrieve the link status of the Ethernet port (whether that port has successfully connected to a network).	Read only. Returns the following values: 0=not connected 1=connected	N/A	R
SUBNET (12)	Use to retrieve the subnet mask of the Ethernet port.	Read only. Returns a subnet mask.	N/A	R
GATEWAY (13)	Use to retrieve the gateway address of the Ethernet port.	Read only. Returns an IP address.	N/A	R
DNS (14)	Use to retrieve the primary DNS server address of the Ethernet port.	Read only. Returns an IP address.	N/A	R
ALT_DNS (15)	Use to retrieve the secondary DNS server address of the Ethernet port.	Read only. Returns an IP address.	N/A	R
DOMAIN_NAME (16)				R

Note:

The following table describes the meaning of the letters in the RWC column above.

Letter	Meaning
R	A readable command. You can send the command without any values to inquire about the parameter state. The state is returned by the device.
W	A writable command. You can send the command with a value to change the parameter state. The newly written state is returned by the device.
C	A clearable value. You can send the word “CLEAR” in place of a value to erase whatever value is assigned to the parameter and leave it blank until you write a new value.

Example 1: DHCP_ENABLE

The following example shows how to turn off DHCP for the Ethernet port of a device called MyBox.

```
BOX MyBox ETHERNET_PORT DHCP_ENABLE 0
```

Example 2: STATIC_IP

The following example shows how to set a static IP address for the Ethernet port of a device called MyBox.

```
BOX MyBox ETHERNET_PORT STATIC_IP 192.128.16.12
```

Example 3: STATIC_SUBNET

This example shows how to set the subnet mask for the Ethernet port of a device called MyBox

```
BOX MyBox ETHERNET_PORT SUBNET_MASK 255.255.255.0
```

Example 4: STATIC_GATEWAY

This example shows how to set the gateway address for the Ethernet port of a device called MyBox:

```
BOX MyBox ETHERNET_PORT GATEWAY_IP 192.128.16.1
```

Example 5: STATIC_DNS

This example shows how to set the primary DNS server for the Ethernet port of a device called MyBox:

```
BOX MyBox ETHERNET_PORT DNS_IP 212.212.212.212
```

Example 6: STATIC_ALT_DNS

This example shows how to set the secondary DNS server for the Ethernet port of a device called MyBox:

```
BOX MyBox ETHERNET_PORT ALT_DNS_IP 212.212.212.213
```

Example 7: DOMAIN_NAME

This example shows how to retrieve the domain name for the Ethernet port of a device called MyBox:

```
BOX MyBox ETHERNET_PORT DOMAIN_NAME
```

Example 8: UPDATE

This example shows how to execute whatever settings you have specified using the other ETHERNET_PORT parameters:

```
BOX MyBox ETHERNET_PORT UPDATE 1
```

Example 9: MAC

This example shows how to retrieve the MAC address for the Ethernet port of a device called MyBox:

```
BOX MyBox ETHERNET_PORT MAC
```

Example 10: IP

This example shows how to retrieve the IP address for the Ethernet port of a device called MyBox:

```
BOX MyBox ETHERNET_PORT IP
```

Example 11: LINK_STATUS

This example shows how to retrieve the link status for the Ethernet port of a device called MyBox:

```
BOX MyBox ETHERNET_PORT LINK_STATUS
```

Example 12: SUBNET

This example shows how to retrieve the subnet address for the Ethernet port of a device called MyBox:

```
BOX MyBox ETHERNET_PORT SUBNET
```

Example 13: GATEWAY

This example shows how to retrieve the gateway address for the Ethernet port of a device called MyBox:

```
BOX MyBox ETHERNET_PORT GATEWAY
```

Example 14: DNS

This example shows how to retrieve the primary DNS address for the Ethernet port of a device called MyBox:

```
BOX MyBox ETHERNET_PORT DNS
```

Example 15: ALT_DNS

This example shows how to retrieve the secondary DNS address for the Ethernet port of a device called MyBox:

```
BOX MyBox ETHERNET_PORT ALT_DNS
```

Output

PN	Output
DHCP_ENABLE	`BOX MyBox ETHERNET_PORT DHCP_ENABLE 0`

PN	Output
STATIC_IP	`BOX MyBox ETHERNET_PORT STATIC_IP 192.128.16.12`
STATIC_SUBNET	`BOX MyBox ETHERNET_PORT SUBNET_MASK 255.255.255.0`
STATIC_GATEWAY	`BOX MyBox ETHERNET_PORT GATEWAY_IP 192.128.16.1`
STATIC_DNS	`BOX MyBox ETHERNET_PORT DNS_IP 212.212.212.212`
STATIC_ALT_DNS	`BOX MyBox ETHERNET_PORT ALT_DNS_IP 212.212.212.213`
DOMAIN_NAME	`BOX MyBox ETHERNET_PORT DOMAIN_NAME MYDOMAIN.COM`
UPDATE	`BOX MyBox ETHERNET_PORT UPDATE 1`
MAC	`BOX MyBox ETHERNET_PORT MAC 11:11:11:11:11:11`
IP	`BOX MyBox ETHERNET_PORT IP 192.128.16.10`
LINK_STATUS	`BOX MyBox ETHERNET_PORT LINK_STATUS 1`
SUBNET	`BOX MyBox ETHERNET_PORT SUBNET 255.255.255.0`
GATEWAY	`BOX MyBox ETHERNET_PORT GATEWAY 192.128.16.1`
DNS	`BOX MyBox ETHERNET_PORT DNS 212.212.212.212`
ALT_DNS	`BOX MyBox ETHERNET_PORT ALT_DNS 212.212.212.213`

Box-LOCATE (18)

Use this command to locate a CP2 device by causing Locate LED on the front panel to blink.

Syntax

`BOX <BOXNAME> LOCATE <PN> [VALUE]`

Input

PN	Description	Value	Default	RWC
MODE (1)	Use to specify whether the Locate light should blink for the duration specified by TIMEOUT.	0=not blinking 1=blinking	0	RW
TIMEOUT (2)	The amount of time, in minutes, the Locate LED blinks when turned on using MODE.	1-60	30	RW

Note:

The following table describes the meaning of the letters in the RWC column above.

Letter	Meaning
R	A readable command. You can send the command without any values to inquire about the parameter state. The state is returned by the device.
W	A writable command. You can send the command with a value to change the parameter state. The newly written state is returned by the device.

Letter	Meaning
C	A clearable value. You can send the word “CLEAR” in place of a value to erase whatever value is assigned to the parameter and leave it blank until you write a new value.

Example 1: MODE

This example shows how to cause the Locate light on a device named MyBox to blink:

```
BOX MyBox LOCATE MODE 1
```

Example 2: TIMEOUT

This example shows how set the timeout for LOCATE on a device named MyBox to 15 minutes:

```
BOX MyBox LOCATE TIMEOUT 15
```

Output

PN	Output
MODE	`BOX MyBox LOCATE MODE 1`
TIMEOUT	`BOX MyBox LOCATE TIMEOUT 15`

Box-NOTIFICATION (8)

This command is returned when you push the “Locate” button on the front of a CONVERGE Pro 2 box.

Syntax

`BOX <BOXNAME> NOTIFICATION <PN>`

Input

PN	Description	Value
BUTTON (1)	Received when the “Locate” button on the front of a box is pushed.	N/A

Output

PN	Output
BUTTON	`BOX Name_1 NOTIFICATION BUTTON 0000-0000-00`

Box-PLINK (19)

Use this command to turn the long-distance P-link feature on or off for a CP2 device.

Note:

The long-distance P-link feature lets you place P-link devices up to 650 feet apart. For more details see the Long Distance P-link application tech note in the Resource Library on the ClearOne website.

Syntax

`BOX <BOXNAME> PLINK <PN> [VALUE]`

Input

PN	Description	Value	Default	RWC
LONG_DISTANCE (1)	Use to specify whether the long-distance P-link feature should be turned on for a CP2 device.	0=normal 1=long distance Leave empty to retrieve the current state.	0	RW

Note:

The following table describes the meaning of the letters in the RWC column above.

Letter	Meaning
R	A readable command. You can send the command without any values to inquire about the parameter state. The state is returned by the device.
W	A writable command. You can send the command with a value to change the parameter state. The newly written state is returned by the device.
C	A clearable value. You can send the word “CLEAR” in place of a value to erase whatever value is assigned to the parameter and leave it blank until you write a new value.

Example 1: LONG_DISTANCE

This example shows how to turn on the long-distance P-link feature on a device named MyBox:

```
BOX MyBox PLINK LONG_DISTANCE 1
```

Output

PN	Output
LONG_DISTANCE	`BOX MyBox PLINK LONG_DISTANCE 1`

Box-SERIAL_PORT (5)

Use this command to retrieve or change the serial port settings for a particular CONVERGE Pro 2 box.

Syntax

```
BOX <BOXNAME> SERIAL_PORT <PN> [VALUE]
```

Input

PN	Description	Value	Default	RWC
BAUD_RATE (1)	Baud rate.	Possible value: 9600, 19200, 38400, 57600, 115200 Leave blank to retrieve current value	57600	RW
DATA_BITS (2)	Data bits.	Read only.	8	R
STOP_BITS (3)	Stop bits.	Read only.	1	R
PARITY (4)	Parity.	Read only.	0	R

PN	Description	Value	Default	RWC
FLOW_CONTROL (5)	Flow control.	Read only.	0	R
ECHO (6)	Echo.	Read only.	0	R

Example 1: BAUD_RATE

The following example sets the baud rate for the box named MYBOX:

```
BOX MYBOX SERIAL_PORT BAUD_RATE 115200
```

Example 2: DATA_BITS

The following example retrieves the data bits state value for the box named MYBOX:

```
BOX MYBOX SERIAL_PORT DATA_BITS
```

Example 3: STOP_BITS

The following example retrieves the stop bits state value for the box named MYBOX:

```
BOX MYBOX SERIAL_PORT STOP_BITS
```

Example 4: PARITY

The following example retrieves the parity state value for the box named MYBOX:

```
BOX MYBOX SERIAL_PORT PARITY
```

Example 5: FLOW_CONTROL

The following example retrieves the flow control state value for the box called MYBOX:

```
BOX MYBOX SERIAL_PORT FLOW_CONTROL
```

Example 6: ECHO

The following example retrieves the echo state value for the box called MYBOX:

```
BOX MYBOX SERIAL_PORT ECHO
```

Output

PN	Output
BAUD_RATE	`BOX MYBOX SERIAL_PORT BAUD_RATE 115200`
DATA_BITS	`BOX MYBOX SERIAL_PORT DATA_BITS 8`
STOP_BITS	`BOX MYBOX SERIAL_PORT STOP_BITS 1`
PARITY	`BOX MYBOX SERIAL_PORT PARITY 0`
FLOW_CONTROL	`BOX MYBOX SERIAL_PORT FLOW_CONTROL 0`
ECHO	`BOX MYBOX SERIAL_PORT ECHO 0`

Box-UNIT (1)

Use this command to retrieve information about a particular box and to cause the Locate LED light to blink, to make it easier to locate a particular box.

Syntax

BOX *<BOXNAME>* UNIT *<PN> [VALUE]*

Note:

You can use the asterisk character (*) in place of <BOXNAME> to specify all boxes in the stack.

Input

PN	Description	Value	Default	RWC
IP (1)	Retrieve the IP address.	Read only	N/A	R
MODEL (2)	Retrieve the model number.	Read only	N/A	R
SN (3)	Retrieve the serial number.	Read only	N/A	R
MAC (4)	Retrieve the MAC address.	Read only	N/A	R
DID (5)	Retrieve the Device Identification Digit (DID).	Read only	N/A	R
NAME (6)	Retrieve the box name.	Read only	N/A	R
LINK_STATUS (8)	Retrieve the device link status for the Ethernet port.	0=not connected 1=connected	0	R
VOIP_MODE (9)	Set or retrieve the VOIP mode.	0=SIP 1=Skype for Business (S4B)	0	RW

Example 1: IP

This example requests the IP address of a device named MYBOX:

```
BOX MYBOX UNIT IP
```

Example 2: MODEL

This example requests the model number of a device named MYBOX:

```
BOX MYBOX UNIT MODEL
```

Example 3: SN

This example requests the serial number of a device named MYBOX:

```
BOX MYBOX UNIT SN
```

Example 4: MAC

This example requests the MAC address of a device named MYBOX:

```
BOX MYBOX UNIT MAC
```

Example 5: DID

This example requests the Device Identification Digit (DID) of a device named MYBOX:

```
BOX MYBOX UNIT DID
```

Example 6: NAME

This example requests the names of all attached devices in the stack:

```
BOX * UNIT NAME
```

Example 7: LINK_STATUS

This example retrieves the link status for all devices in the stack:

```
BOX * UNIT LINK_STATUS
```

Example 8: VOIP_MODE

This example sets the VOIP mode for MYBOX to Skype for Business:

```
BOX MYBOX UNIT VOIP_MODE 1
```

Output

PN	Output
IP	`BOX MYBOX UNIT IP 192.168.1.100`
MODEL	`BOX MYBOX UNIT MODEL CONVERGE Pro 2 128T`
SN	`BOX MYBOX UNIT SN ENG1-0C56-D1`
MAC	`BOX MYBOX UNIT MAC 00:06:24:0C:56:D1`
DID	`BOX MYBOX UNIT DID 1`
NAME	`BOX MYBOX UNIT NAME MYBOX`
LINK_STATUS	`BOX MYBOX UNIT LINK_STATUS 1`
VOIP_MODE	`BOX MYBOX UNIT VOIP_MODE 1`

Box-USB_PORT (17)

Use this command to retrieve the IP settings for the USB port of a particular device.

Note:

The USB port on the front panel of the device can be used to connect to the device, using IP over USB. The USB port always has a static IP address of 169.254.99.202.

Syntax

```
BOX <BOXNAME> USB_PORT <PN> [VALUE]
```

Input

PN	Description	Value	Default	RWC
MAC (1)	Use to retrieve the MAC address of the USB port.	Read only. Returns a MAC address.	N/A	R
IP (2)	Use to retrieve the IP address of the USB port.	Read only. Returns the IP address of the USB network port, which is always 169.254.99.202.	N/A	R

PN	Description	Value	Default	RWC
LINK_STATUS (3)	Use to retrieve the link status of the USB port.	Read only. Returns the following values: 0=not connected 1=connected	N/A	R

Note:

The following table describes the meaning of the letters in the RWC column above.

Letter	Meaning
R	A readable command. You can send the command without any values to inquire about the parameter state. The state is returned by the device.
W	A writable command. You can send the command with a value to change the parameter state. The newly written state is returned by the device.
C	A clearable value. You can send the word “CLEAR” in place of a value to erase whatever value is assigned to the parameter and leave it blank until you write a new value.

Example 1: MAC

This example shows how to retrieve the MAC address for the USB port of a device called MyBox:

```
BOX MyBox USB_PORT MAC
```

Example 2: IP

This example shows how to retrieve the IP address for the USB port of a device called MyBox:

```
BOX MyBox USB_PORT IP
```

Example 3: LINK_STATUS

This example shows how to retrieve the link status for the USB network port of a device called MyBox:

```
BOX MyBox USB_PORT LINK_STATUS
```

Output

PN	Output
MAC	`BOX MyBox ETHERNET_PORT MAC ff:ff:ff:ff:ff:ff`
IP	`BOX MyBox ETHERNET_PORT IP 169.254.99.202`
LINK_STATUS	`BOX MyBox ETHERNET_PORT LINK_STATUS 1`

Box-VLAN_VOIP (9)

Use this command to retrieve or configure the VLAN settings for a particular device.

Note:

VoIP configuration settings done using this command have no effect unless you enable VoIP using the VOIP_CFG command. See for more information.

Syntax

```
BOX <BOXNAME> VLAN_VOIP <PN> [VALUE]
```

Input

PN	Description	Values	Default	RWC
ID (2)	Specifies a VLAN ID.	Possible values: 1 to 4094.	1	RW
PRIORITY (3)	Specifies a VLAN traffic priority.	Possible values: 0 to 7.	0	RW
STATIC_IP (4)	The VLAN static IP address. **Note:** If DHCP is enabled, this parameter is ignored.	An IP address.	N/A	RWC
STATIC_SUBNET (5)	The VLAN subnet mask. **Note:** If DHCP is enabled, this parameter is ignored.	A subnet mask.	N/A	RWC
STATIC_GATEWAY (6)	The VLAN gateway IP address. **Note:** If DHCP is enabled, this parameter is ignored.	An IP address.	N/A	RWC
STATIC_DNS (7)	The VLAN primary DNS server address. **Note:** If DHCP is enabled, this parameter is ignored.	An IP address.	N/A	RWC
STATIC_ALT_DNS (8)	The VLAN secondary DNS server address. **Note:** If DHCP is enabled, this parameter is ignored.	An IP address.	N/A	RWC
DHCP_ENABLE (9)	Turns on DHCP for the VLAN IP settings.	0 to disable 1 to enable Leave blank to retrieve current value	1	RW
IP (10)	Query to have the box return the current VLAN IP address.	Read only.	N/A	R
LINK_STATUS (11)	Use to retrieve the link status of the VLAN (whether the VLAN network is connected).	Read only. Returns the following values: 0=not connected 1=connected	N/A	R

PN	Description	Values	Default	RWC
SUBNET (12)	Use to retrieve the subnet mask of the VLAN.	Read only. Returns a subnet mask.	N/A	R
GATEWAY (13)	Use to retrieve the gateway address of the VLAN.	Read only. Returns an IP address.	N/A	R
DNS (14)	Use to retrieve the primary DNS server address of the VLAN.	Read only. Returns an IP address.	N/A	R
ALT_DNS (15)	Use to retrieve the secondary DNS server address of the VLAN.	Read only. Returns an IP address.	N/A	R

Note:

The following table describes the meaning of the letters in the RWC column above.

Letter	Meaning
R	A readable command. You can send the command without any values to inquire about the parameter state. The state is returned by the device.
W	A writable command. You can send the command with a value to change the parameter state. The newly written state is returned by the device.
C	A clearable value. You can send the word “CLEAR” in place of a value to erase whatever value is assigned to the parameter and leave it blank until you write a new value.

Example 1: ID

This example specifies a VLAN ID of 26 for a device named BOX1:

```
BOX BOX1 VLAN_VOIP ID 26
```

Example 2: PRIORITY

This example sets the VLAN traffic priority to 5 for a device named BOX1:

```
BOX BOX1 VLAN_VOIP PRIORITY 5
```

Example 3: STATIC_IP

This example sets the VLAN static IP address for a device named BOX1:

```
BOX BOX1 VLAN_VOIP STATIC_IP 218.174.3.12
```

Example 4: STATIC_SUBNET

This example sets the VLAN subnet mask for a device named BOX1:

```
BOX BOX1 VLAN_VOIP STATIC_SUBNET 255.255.255.0
```

Example 5: STATIC_GATEWAY

This example sets the VLAN gateway IP address for a device named BOX1:

```
BOX BOX1 VLAN_VOIP STATIC_GATEWAY 218.174.3.1
```

Example 6: STATIC_DNS

This example sets the VLAN DNS server IP address for a device named BOX1:

```
BOX BOX1 VLAN_VOIP STATIC_DNS 218.174.3.100
```

Example 7: STATIC_ALT_DNS

This example sets the VLAN secondary DNS server IP address for a device named BOX1:

```
BOX BOX1 VLAN_VOIP STATIC_ALT_DNS 218.174.3.101
```

Example 8: DHCP_ENABLE

This example turns on DHCP for the VLAN address of a device named BOX1:

```
BOX BOX1 VLAN_VOIP DHCP_ENABLE 1
```

Example 9: IP

This example retrieves the VLAN IP address for a device named BOX1:

```
BOX BOX1 VLAN_VOIP IP
```

Example 10: LINK_STATUS

This example retrieves the VLAN link status for a device named BOX1:

```
BOX BOX1 VLAN_VOIP LINK_STATUS
```

Example 11: SUBNET

This example retrieves the VLAN subnet mask of a device named BOX1:

```
BOX BOX1 VLAN_VOIP SUBNET
```

Example 12: GATEWAY

This example retrieves the VLAN gateway address of a device named BOX1:

```
BOX BOX1 VLAN_VOIP GATEWAY
```

Example 13: DNS

This example retrieves the VLAN primary DNS address of a device named BOX1:

```
BOX BOX1 VLAN_VOIP DNS
```

Example 14: ALT_DNS

This example retrieves the VLAN secondary DNS address of a device named BOX1:

```
BOX BOX1 VLAN_VOIP ALT_DNS
```

Output

PN	Output
ID	`BOX BOX1 VLAN_VOIP ID 26`
PRIORITY	`BOX BOX1 VLAN_VOIP PRIORITY 5`
STATIC_IP	`BOX BOX1 VLAN_VOIP STATIC_IP 218.174.3.12`
STATIC_SUBNET	`BOX BOX1 VLAN_VOIP STATIC_SUBNET 255.255.255.0`
STATIC_GATEWAY	`BOX BOX1 VLAN_VOIP STATIC_GATEWAY 218.174.3.1`
STATIC_DNS	`BOX BOX1 VLAN_VOIP STATIC_DNS 218.174.3.100`
ALT_DNS_IP	`BOX BOX1 VLAN_VOIP STATIC_ALT_DNS 218.174.3.101`
DHCP_ENABLE	`BOX BOX1 VLAN_VOIP DHCP_ENABLE 1`
IP	`BOX MyBox VLAN_VOIP IP 192.128.16.10`
LINK_STATUS	`BOX MyBox VLAN_VOIP LINK_STATUS 1`

PN	Output
SUBNET	`BOX MyBox VLAN_VOIP SUBNET 255.255.255.0`
GATEWAY	`BOX MyBox VLAN_VOIP GATEWAY 192.128.16.1`
DNS	`BOX MyBox VLAN_VOIP DNS 212.212.212.212`
ALT_DNS	`BOX MyBox VLAN_VOIP ALT_DNS 212.212.212.213`

Box-VOIP_CFG (10)

Use this command to specify how to send the VOIP settings for a device using a file.

Note:

In order to successfully download VOIP configuration files to the box, you must first enable the download feature using the ENABLE argument. Then you must either turn on the AUTO feature, to automatically retrieve the files the next time the box restarts, or else use the VOIPUPDATE command to manually retrieve the files.

Syntax

`BOX <BOXNAME> VOIP_CFG <PN> [VALUE]`

Input

PN	Description	Value	Default	RW
ENABLE (1)	Enable the VOIP configuration file download feature.	0 to disable 1 to enable Leave blank to retrieve current value	0	RW
URL (2)	The address (HTTP or FTP site) where the VOIP configuration files (VoipSettingsCFG.txt, c1_media.txt, and C1_dialplan.txt) are located. **Note:** VOIP configuration files are generated by the CONVERGE Pro 2 console application, but they can be edited as necessary and then loaded by a box using this command.	A URL Examples: http://mysite.mycompany.com ftp://ftp.mycompany.com 256 characters maximum. Leave blank to retrieve current value	N/A	RW
USERNAME (3)	The username needed to access the site referenced in the URL argument.	A username. Can use at least 64 characters, and possibly more depending on what language you're using. Leave blank to retrieve current value	N/A	RW

PN	Description	Value	Default	RW
PASSWORD (4)	The password needed to access the site referenced in the URL argument.	A password. Can use at least 64 characters, and possibly more depending on what language you're using. Leave blank to retrieve current value	N/A	RW
AUTO (5)	If enabled, the next time the system reboots, the box uses the URL, USERNAME, and PASSWORD values to retrieve the VOIP configuration files. **Note:** If you don't use the AUTO option, you can use the VOIPUPDATE command to retrieve the configuration files.	0 to disable 1 to enable Leave blank to retrieve current value	0	RW

Example 1: ENABLE

This example enables VOIP for a box named BOX6:

```
BOX BOX6 VOIP_CFG ENABLE 1
```

Example 2: URL

This example shows how to specify the location of VOIP config files on an FTP server:

```
BOX VOIP_CFG URL ftp://ftp.mycompany.com
```

Example 3: USERNAME

This example shows how to provide credentials for retrieving a VOIP config file:

```
BOX VOIP_CFG USERNAME MyUsername
```

Example 4: PASSWORD

This example shows how to provide credentials for retrieving a VOIP config file:

```
BOX VOIP_CFG PASSWORD MyPassword
```

Example 5: AUTO

This example shows how to turn on auto retrieval for VOIP config files:

```
BOX VOIP_CFG AUTO 1
```

Output

PN	Output
ENABLE	`BOX BOX6 VOIP_CFG ENABLE 1`
URL	`BOX VOIP_CFG URL ftp://ftp.mycompany.com`
USERNAME	`BOX VOIP_CFG USERNAME MyUsername`

PN	Output
PASSWORD	`BOX VOIP_CFG PASSWORD MyPassword`
AUTO	`BOX VOIP_CFG AUTO 1`

Box-VOIP_CONNECT (16)

Use this command to specify the VOIP connection settings for a device.

Syntax

`BOX <BOXNAME> VOIP_CONNECT <PN> [VALUE]`

Input

PN	Description	Value	Default	RW
PORT (1)	Use to specify whether you want to use the VoIP port or the Ethernet port on the rear panel of the device for VoIP network traffic. **Note:** Not all CP2 devices have a VoIP port.	0 to disable 1 to enable Leave blank to retrieve current value	0	RW
VLAN (2)	Use to specify whether to enable the VLAN feature.	0=off 1=on	0	RW
UPDATE (3)	Use to execute any VoIP settings you have configured using the BOX-VLAN_VOIP and BOX-VOIP_PORT parameters.	1=execute	0	W
IP (4)	Use to retrieve the IP address of whichever interface (Ethernet port, VoIP port, or VLAN) is being used to route VoIP traffic.	Read only. Returns an IP address.	N/A	R
LINK_STATUS (5)	Use to retrieve the link status of whichever interface (Ethernet port, VoIP port, or VLAN) is being used to route VoIP traffic.	Read only. Returns the following values: 0=not connected 1=connected	N/A	R

Example 1: PORT

This example configures a device named CP2_6 to use the VoIP port for VoIP traffic:

```
BOX CP2_6 VOIP_CONNECT PORT 1
```

Example 2: VLAN

This example turns on the VLAN feature for a device named CP2_6:

```
BOX CP2_6 VOIP_CONNECT VLAN 1
```

Example 3: UPDATE

This example executes the VoIP settings set using BOX-VLAN_VOIP and BOX-VOIP_PORT for a device named CP2_6:

```
BOX CP2_6 VOIP_CONNECT UPDATE 1
```

Example 4: IP

This example retrieves the IP address of whichever interface (Ethernet port, VoIP port, or VLAN) is being used to route VoIP traffic on the device named CP2_6:

```
BOX CP2_6 VOIP_CONNECT IP
```

Example 5: LINK_STATUS

This example retrieves the link status of whichever interface (Ethernet port, VoIP port, or VLAN) is being used to route VoIP traffic on the device named CP2_6:

```
BOX CP2_6 VOIP_CONNECT LINK_STATUS
```

Output

PN	Output
PORT	`BOX CP2_6 VOIP_CONNECT PORT 1`
VLAN	`BOX CP2_6 VOIP_CONNECT VLAN 1`
UPDATE	`BOX CP2_6 VOIP_CONNECT UPDATE 1`
IP	`BOX CP2_6 VOIP_CONNECT IP 192.168.1.100`
LINK_STATUS	`BOX CP2_6 VOIP_CONNECT LINK_STATUS 1`

Box-VOIP_PORT (15)

Use this command to retrieve or change the IP settings for the VoIP port of a particular device (for devices that have a VoIP port).

Note:

If you want changes you make using this command to take effect, you must execute the VOIP_CONNECT UPDATE parameter; otherwise, no changes will occur. See for more information.

Syntax

`BOX <BOXNAME> VOIP_PORT <PN> [VALUE]`

Input

PN	Description	Value	Default	RWC
DHCP_ENABLE (1)	Use to specify whether DHCP should be enabled for the VoIP port. **Note:** Using this parameter doesn't effect any change; you must send the UPDATE parameter to execute any changes.	0 to disable 1 to enable Leave blank to retrieve current value	1	RW

PN	Description	Value	Default	RWC
STATIC_IP (2)	Use to set a static IP address for the VoIP port. **Note:** If DHCP is enabled, this parameter is ignored.	An IP address. Leave blank to retrieve the current value.	N/A	RWC
STATIC_SUBNET (3)	Use to set the subnet mask for the VoIP port. **Note:** If DHCP is enabled, this parameter is ignored.	A subnet mask. Leave blank to retrieve the current value.	N/A	RWC
STATIC_GATEWAY (4)	Use to set the gateway address for the VoIP port. **Note:** If DHCP is enabled, this parameter is ignored.	An IP address. Leave blank to retrieve the current value.	N/A	RWC
STATIC_DNS (5)	Use to set the primary DNS address for the VoIP port. **Note:** If DHCP is enabled, this parameter is ignored.	An IP address. Leave blank to retrieve the current value.	N/A	RWC
STATIC_ALT_DNS (6)	Use to set the secondary DNS address for the VoIP port. **Note:** If DHCP is enabled, this parameter is ignored.	An IP address. Leave blank to retrieve the current value.	N/A	RWC
DOMAIN_NAME (7)	Use to retrieve the domain name of the VoIP port.	Read only. Returns a domain name.		R
MAC (8)	Use to retrieve the MAC address of the VoIP port.	Read only. Returns a MAC address.	N/A	R
IP (9)	Use to retrieve the IP address of the VoIP port.	Read only. Returns an IP address.	N/A	R
LINK_STATUS (10)	Use to retrieve the link status of the VoIP port (whether that port has successfully connected to a network).	Read only. Returns the following values: 0=not connected 1=connected	N/A	R
SUBNET (11)	Use to retrieve the subnet mask of the VoIP port.	Read only. Returns a subnet mask.	N/A	R
GATEWAY (12)	Use to retrieve the gateway address of the VoIP port.	Read only. Returns a gateway address.	N/A	R

PN	Description	Value	Default	RWC
DNS (13)	Use to retrieve the primary DNS server address of the VoIP port.	Read only. Returns a DNS server address.	N/A	R
ALT_DNS (14)	Use to retrieve the secondary DNS server address of the VoIP port.	Read only. Returns a DNS server address.	N/A	R

Note:

The following table describes the meaning of the letters in the RWC column above.

Letter	Meaning
R	A readable command. You can send the command without any values to inquire about the parameter state. The state is returned by the device.
W	A writable command. You can send the command with a value to change the parameter state. The newly written state is returned by the device.
C	A clearable value. You can send the word “CLEAR” in place of a value to erase whatever value is assigned to the parameter and leave it blank until you write a new value.

Example 1: DHCP_ENABLE

The following example shows how to turn off DHCP for the VoIP port of a device called MyBox.

```
BOX MyBox VOIP_PORT DHCP_ENABLE 0
```

Example 2: STATIC_IP

The following example shows how to set a static IP address for the VoIP port of a device called MyBox.

```
BOX MyBox VOIP_PORT STATIC_IP 192.128.16.12
```

Example 3: STATIC_SUBNET

This example shows how to set the subnet mask for the VoIP port of a device called MyBox

```
BOX MyBox VOIP_PORT SUBNET_MASK 255.255.255.0
```

Example 4: STATIC_GATEWAY

This example shows how to set the gateway address for the VoIP port of a device called MyBox:

```
BOX MyBox VOIP_PORT GATEWAY_IP 192.128.16.1
```

Example 5: STATIC_DNS

This example shows how to set the primary DNS server for the VoIP port of a device called MyBox:

```
BOX MyBox VOIP_PORT DNS_IP 212.212.212.212
```

Example 6: STATIC_ALT_DNS

This example shows how to set the secondary DNS server for the VoIP port of a device called MyBox:

```
BOX MyBox VOIP_PORT ALT_DNS_IP 212.212.212.213
```

Example 7: DOMAIN_NAME

This example shows how to retrieve the domain name for the VoIP port of a device called MyBox:

```
BOX MyBox VOIP_PORT DOMAIN_NAME
```

Example 8: UPDATE

This example shows how to execute whatever settings you have specified using the other VOIP_PORT parameters:

```
BOX MyBox VOIP_PORT UPDATE 1
```

Example 9: MAC

This example shows how to retrieve the MAC address for the VoIP port of a device called MyBox:

```
BOX MyBox VOIP_PORT MAC
```

Example 10: IP

This example shows how to retrieve the IP address for the VoIP port of a device called MyBox:

```
BOX MyBox VOIP_PORT IP
```

Example 11: LINK_STATUS

This example shows how to retrieve the link status for the VoIP port of a device called MyBox:

```
BOX MyBox VOIP_PORT LINK_STATUS
```

Example 12: SUBNET

This example shows how to retrieve the subnet address for the VoIP port of a device called MyBox:

```
BOX MyBox VOIP_PORT SUBNET
```

Example 13: GATEWAY

This example shows how to retrieve the gateway address for the VoIP port of a device called MyBox:

```
BOX MyBox VOIP_PORT GATEWAY
```

Example 14: DNS

This example shows how to retrieve the primary dns address for the VoIP port of a device called MyBox:

```
BOX MyBox VOIP_PORT DNS
```

Example 15: ALT_DNS

This example shows how to retrieve the secondary dns address for the VoIP port of a device called MyBox:

```
BOX MyBox VOIP_PORT ALT_DNS
```

Output

PN	Output
DHCP_ENABLE	`BOX MyBox VOIP_PORT DHCP_ENABLE 0`
STATIC_IP	`BOX MyBox VOIP_PORT STATIC_IP 192.128.16.12`
STATIC_SUBNET	`BOX MyBox VOIP_PORT SUBNET_MASK 255.255.255.0`
STATIC_GATEWAY	`BOX MyBox VOIP_PORT GATEWAY_IP 192.128.16.1`
STATIC_DNS	`BOX MyBox VOIP_PORT DNS_IP 212.212.212.212`
STATIC_ALT_DNS	`BOX MyBox VOIP_PORT ALT_DNS_IP 212.212.212.213`
DOMAIN_NAME	`BOX MyBox VOIP_PORT DOMAIN_NAME MYDOMAIN.COM`
UPDATE	`BOX MyBox VOIP_PORT UPDATE 1`
MAC	`BOX MyBox VOIP_PORT MAC 11:11:11:11:11:11`
IP	`BOX MyBox VOIP_PORT IP 192.128.16.10`

PN	Output
LINK_STATUS	`BOX MyBox VOIP_PORT LINK_STATUS 1`
SUBNET	`BOX MyBox VOIP_PORT SUBNET 255.255.255.0`
GATEWAY	`BOX MyBox VOIP_PORT GATEWAY 192.128.16.1`
DNS	`BOX MyBox VOIP_PORT DNS 212.212.212.212`
ALT_DNS	`BOX MyBox VOIP_PORT ALT_DNS 212.212.212.213`

ROOM

Use the ROOM command to create custom partition configurations for rooms that have dividers, and can therefore be partitioned in various ways, select ROOM configurations, and turn on a testing mode (GPIO override).

Note:

Unlike most commands, ROOM parameters do not have text versions. They must all be sent as numbers. They have been given names for documentation purposes, but only the numerical parameter values can be sent to the box.

Syntax

ROOM *<ROOM_NO><OPTION> <P1><P2> [VALUE]*

Parameters

Parameter	Description
ROOM_NO	Room number (always 1).
OPTION	Available options: Mode (1), Select (7), Individual Divider State (11), Divider Polarity (12), and Divider State (13).
P1	Optional parameter. Its use and meaning varies per option.
P2	Optional parameter. Its use and meaning varies per option.
VALUE	A value. Whether or not a value is needed and what value to use depend on the parameter. **Note:** For parameters that are read/write, including a value is using the write mode of the command, and leaving off the value is using the read mode of the command.

Room Command Table

This table shows all the possible parameter combinations for the Room command.

Note:

The names of the options shown in the Option column below are only for clarification. Only the numeric values for each option are recognized by the device.

Parameter Table

Option	P1	P2	VALUE			Default	RW
			Min	Max	Gran		
Mode (1)	Mode Type	N/A	0	2	1	0	RW
Select (7)	Subroom	Config File	N/A	N/A	N/A	N/A	RW
Individual Divider State (11)	Divider Number	State Value	0	1	1	N/A	RW
Divider Polarity (12)	Divider Number	Polarity	0	1	1	0	RW
Divider State (13)	State Value	N/A	N/A	N/A	N/A	N/A	RW

ROOM-Divider Polarity (12)

You can use the ROOM command to specify the GPIO polarity (high or low) that corresponds to dividers being open.

Syntax

```
ROOM <ROOM_NO> 12 [DIVIDER_NO] [POLARITY]
```

Input

Parameters	Description	Value	Default	RW
DIVIDER_NO	Divider number.	A divider number.	N/A	RW
POLARITY	The polarity setting of the specified divider.	0 for open on low. 1 for open on high.	1	RW

Example 1:

This example shows how to indicate that divider 2 in ROOM 1 uses a polarity setting of 1 (meaning the divider is open when the GPIO pin is high):

```
ROOM 1 12 2 1
```

Output

```
ROOM 1 12 2 1
```

ROOM-Divider State (13)

You can use the ROOM command to indicate the divider state, or partition arrangement, of a room, for audio configuration purposes.

Note:

Alternatively, you can use the ROOM Individual Divider State command to indicate that a particular divider is open or closed. See *Room-Individual Divider State (11)* for more information.

Note:

You can set divider states using a serial command only for dividers whose state is not associated with a GPIO pin state. If you attempt to set the state of a divider that whose state is associated with a GPIO pin, the serial command change is ignored, since a serial command can't change the

physical state of the GPIO pin. However, this can be overridden temporarily for testing purposes using the Room Mode command. See *ROOM-Mode (1)* for more information.

Syntax

`ROOM <ROOM_NO> 13 [STATE_VALUE]`

Input

Parameter	Description	Value	Default	RW
STATE_VALUE	A divider state value.	A value made of ones (1), zeroes (0) and periods (.) that represents the physical divider state of a room. See the State_Value section below for more information.	N/A	RW

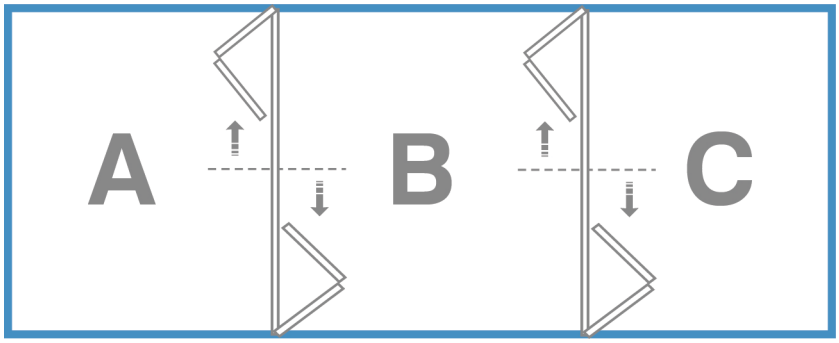
Example 1:

This example shows how to indicate that ROOM 1 has two dividers that are both are closed:

```
ROOM 1 13 11
```

State_Value

The ROOM command uses a value made up of ones (1), zeroes (0) and periods (.) to represent the divider, or partition, status of a room. For example, suppose you have a room that has two partitions, and can therefore be divided into 3 sub-rooms, as shown here:



This particular room has 4 possible configurations: both dividers open (ABC), first divider closed and second divider open (A and BC), first divider open and second divider closed (AB and C), or both dividers closed (A, B, and C).

To specify a configuration for a particular divider state, you would use a number that represents whether each divider is open (0) or closed (1) or whether to ignore the divider state (.). For a room with two dividers that were both closed, the binary value would be 11. If the first divider were closed and the second open, the binary value would be 10. A room with 4 dividers that were all open would be represented as 0000 and if the dividers were all closed it would be represented as 1111.

Note:

As described above, dividers associated with GPIO pins cannot be set using a serial command. However, it's possible to use a period to "ignore" dividers associated with GPIO pins. For example, in the room shown above, suppose that the divider between partition A and partition B is associated with a GPIO pin, but the one between partition B and partition C is not. You could send the following command to ignore the state of the first divider while setting the state of the second one to closed:

```
ROOM 1 13 .1
```

Output

```
ROOM 1 13 11
```

Room-Individual Divider State (11)

You can use the ROOM command to indicate that an individual divider in a room is opened or closed.

Note:

Alternatively, you can use the ROOM Divider State command to indicate the open/closed status of all the dividers in a room (see *ROOM-Divider State (13)* for more information).

Note:

You can set divider states using a serial command only for dividers whose state is not associated with a GPIO pin state. If you attempt to set the state of a divider that whose state is associated with a GPIO pin, the serial command change is ignored, since a serial command can't change the physical state of the GPIO pin. However, this can be overridden temporarily for testing purposes using the Room Mode command. See *ROOM-Mode (1)* for more information.

Syntax

```
ROOM <ROOM_NO> 11 [DIVIDER_NO] [STATE_VALUE]
```

Input

Parameters	Description	Value	Default	RW
Divider Number	Divider number.	A number. **Note:** Dividers are numbered from left to right starting at 1.	N/A	RW
State Value	The state of the specified divider.	0 for open. 1 for closed.	0	RW

Example 1:

This example shows how to indicate that divider 2 in ROOM 1 is closed:

```
ROOM 1 11 2 1
```

Output

```
ROOM 1 11 2 1
```

ROOM-Mode (1)

You can use the ROOM command to turn on GPIO override for a room. This mode can be useful for testing purposes. For example, physical divider state in a room can be sent to a box using GPIO pins, and audio configurations set accordingly. However, sometimes you may want to test audio configurations without regard for the GPIO pin state.

Syntax

```
ROOM <ROOM_NO> 1 <MODE_TYPE>
```

Input

Parameter	Description	Value	Default	RW
MODE_TYPE	Specify whether to enable GPIO override.	0 for normal 1 for GPIO override Leave blank to retrieve current value	0	RW

Example 1: MODE_TYPE

This example shows how to turn on GPIO override for ROOM 1:

```
ROOM 1 1 1
```

Output

Arg1	Output
MODE_TYPE	ROOM 1 1 1

ROOM-Select (7)

You can use the ROOM command to select the preset that will run when a particular sub-room space becomes active.

Note:

Preset settings and sub-room spaces are defined using the CONVERGE Pro 2 CONSOLE software.

Syntax

```
ROOM <ROOM_NO> 7 <SubRoom> <ConfigFile> <Status>
```

Input

Parameter	Description	Values	Default	RW
SubRoom	A sub-room (such as Part_A_B_C). **Note:** Sub-rooms are defined using the CONVERGE Pro 2 Console application.	A text string to designate a sub-room.	N/A	N/A

Parameter	Description	Values	Default	RW
ConfigFile	A preset file to apply to the specified sub-room. **Note:** Configuration files are created and named by the CONVERGE Pro 2 CONSOLE application.	A preset filename. By default, partitions are named as follows: Part_A_B_C_Preset_1 You would replace A_B_C with whatever partition segment you need. The 1 at the end represents the room number, which will always be 1. **Note:** It's possible to change the names of partitions using CONVERGE Pro 2 CONSOLE. If you change a partition name using CONSOLE, then you must use the name you specified rather than the default partition name.	N/A	N/A
Status	Status (active or inactive) as returned by the device.	1=active 0=not active	0	R

Example 1

This example shows how to select a preset file for use with the ABC sub-room space:

```
ROOM 1 7 Part_A_B_C Part_A_B_C_Preset_1
```

Output

The following is sample output for Example 1:

```
ROOM 1 7 Part_A_B_C Part_A_B_C_Preset_1 1
```

EP

The EP command is used to configure an endpoint channel.

Syntax

`EP` *<EPT><EPN> <BN><PN>[VALUE]*

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Parameters

Parameter	Description
EPT	End Point Type. Possible options are BFM, D20MIC, EXP_D20MIC, EXP_USB, DANTE_RX, DANTE_TX, FADER, GPIO, MIC, OUTPUT, PROC, SGEN, SPEAKER, SRMIC, TELCO_RX, TELCO_TX, UA, USB_RX, USB_TX, USBE_RX, USBE_TX, VOIP_RX, and VOIP_TX.
EPN	End Point Number. **Note:** Uses the format BNN, where B is the number of the box within a stack and NN is the number of the channel on that box. For example, if you have 3 boxes in the stack, and you want to refer to a microphone attached to mic channel 2 on box 3, the end point number is 302. For more information about end point numbering, see *End Point Numbering*.
BN	Block Name/Number. This refers to an end point block, which corresponds to some functionality of the end point.
PN	Parameter Name/Number. A parameter within a block. Possible values depend on the BN value used.
VALUE	A value. Whether or not a value is needed and what value to use depend on the parameter. **Note:** For parameters that are read/write, including a value is using the write mode of the command, and leaving off the value is using the read mode of the command.
REL	This optional switch, when used, indicates that gain and fine gain values are specified in relative terms, rather than absolute terms. So including a fine gain value of 2 would add 2 to the current fine gain value, rather than setting the value to 2dB. **Note:** This switch applies only when setting gain or fine gain values.

EP Command Table

This table shows all the possible parameter combinations for the EP command.

Parameter Table

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
MIC (1)	LEVEL (1)	GAIN_FINE (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW
		PHAN_PWR (3)	0	1	1	0	RW
		GAIN_COARSE (4)	0	56	1	0	RW
		MAX_GAIN (7)	-65	20	0.5	20	RW
		MIN_GAIN (8)	-65	20	0.5	-65	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		DIG_SRC (9)	N/A	N/A	N/A	N/A	RW
	AEC (2)	ENABLE (1)	0	1	1	0	RW
		NLP (2)	0	3	1	0	RW
		PTT (3)	0	1	1	0	RW
		PTT_THR (4)	-120	0	0.5	-50	RW
	NC (3)	ENABLE (1)	0	1	1	0	RW
		DEPTH (2)	6	25	1	6	RW
	AGC (4)	GAIN (1)	0	18	0.5	6	RW
		TARGET_LEVEL (2)	-30	20	0.5	0	RW
		RESPONSE_TIME (3)	100	10000	1	2000	RW
		THRESHOLD (4)	-50	0	0.5	-25	RW
	AGC_ALC (5)	MODE (1)	0	2	1	0	RW
	GATING (6)	GROUP (1)	1	6	1	1	RW
		NONE (2)	0	1	1	1	RW
		MODE (3)	1	3	1	1	RW
		CHAIRMAN (4)	0	1	1	0	RW
		PA_ADAPT (5)	0	1	1	0	RW
		ADAPT_AMB (6)	0	1	1	1	RW
		AMB_LEVEL (7)	-80	0	0.5	-40	RW
		OFF_ATTEN (8)	-60	0	0.5	12	RW
		GATE_RATIO (9)	-50	0	0.5	15	RW
		HOLD_TIME (10)	0.1	8	0.01	0.3	RW
		DECAY_RATE (11)	1	3	1	2	RW
	FILTER_1 (7)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_2 (8)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	1	0	RW
	FILTER_3 (9)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_4 (10)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	SIG_GEN (12)	TYPE (1)	1	5	1	1	RW
		FCY (2)	20	2400	1	1000	RW
		ENABLE (3)	0	1	1	0	RW
		GAIN (4)	-65	20	0.5	0	RW
TELCO_RX (3)	LEVEL (1)	GAIN (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW
		DIAL_TONE_LEVEL (3)	-12	12	0.5	-6	RW
		BOOST_LEVEL (4)	0	4	1	0	RW
		DTMF_LEVEL (5)	0	12	0.5	0	RW
		AUDIBLE_CONNECT_ LEVEL (6)	0	12	0.5	0	RW
		MAX_GAIN (10)	-65	20	0.5	20	RW
		MIN_GAIN (11)	-65	20	0.5	-65	RW
	SETTINGS (2)	AUTO_ANSWER_RINGS (1)	0	4	1	0	RW
		AUTO_DISCONNECT_ MODE (2)	0	3	1	0	RW
		RING_TYPE (3)	1	3	1	1	RW
		ADAPT (4)	0	1	1	0	RW
		HOOK_FLASH_DURATION (5)	50	2000	0.5	1007	RW
		RING_LEVEL (6)	-12	12	0.5	0	RW
		HOOK_ENABLE (7)	0	1	1	0	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		HOOK_LEVEL (8)	-12	12	0.5	0	RW
		RING_CAD_CUST (9)	0	1	0.5	0	RW
		RING_ON_TIME (10)	1	13	0.5	0	RW
		RING_OFF_TIME (11)	1	8	0.5	0	RW
		COUNTRY_CODE (12)	1	12	1	1	RW
		LAST_DIALED_DIGITS (13)	N/A	N/A	N/A	N/A	RW
		LOCAL_NUMBER (14)	N/A	N/A	N/A	N/A	RW
	KEY (3)	KEY_CALL (1)	N/A	N/A	N/A	N/A	W
		KEY_HOOK_FLASH (2)	N/A	N/A	N/A	N/A	W
		KEY_REDIAL (4)	N/A	N/A	N/A	N/A	W
		KEY_HOOK (5)	0	2	1	0	W
		KEY_DIGIT_PRESSED (6)	N/A	N/A	N/A	N/A	W
		KEY_DIGIT_RELEASED (7)	N/A	N/A	N/A	N/A	W
	NOTIFICATION (4)	INCOMING_CALL (1)	N/A	N/A	N/A	N/A	N/A
		CALLER_ID (2)	N/A	N/A	N/A	N/A	N/A
		CALL_DURATION (3)	N/A	N/A	N/A	N/A	N/A
		HOOK (4)	N/A	N/A	N/A	N/A	N/A
		RING (5)	N/A	N/A	N/A	N/A	N/A
	NC (5)	ENABLE (1)	0	1	1	0	RW
		DEPTH (2)	6	15	1	7	RW
	CE (7)	ENABLE (1)	0	1	1	0	RW
	ALC (8)	ENABLE (1)	0	1	1	0	RW
	INQUIRE (9)	DIGITS_DIALED_SINCE_ OFF_HOOK (1)	N/A	N/A	N/A	N/A	R
		CALLER_ID (2)	N/A	N/A	N/A	N/A	R
		DIRECTION (3)	N/A	N/A	N/A	N/A	R
		OFF_HOOK_DURATION (4)	0	99999999	1	0	R
		HOOK (5)	0	1	1	0	R
TELCO_TX (4)	LEVEL (1)	GAIN (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW
		MAX_GAIN (5)	-65	20	0.5	20	RW
		MIN_GAIN (6)	-65	20	0.5	-65	RW
VOIP_RX (5)	LEVEL (1)	GAIN (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		MAX_GAIN (5)	-65	20	0.5	20	RW
		MIN_GAIN (6)	-65	20	0.5	-65	RW
VOIP_TX (6)	LEVEL (1)	GAIN (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW
		MAX_GAIN (5)	-65	20	0.5	20	RW
		MIN_GAIN (6)	-65	20	0.5	-65	RW
OUTPUT (7)	LEVEL (1)	GAIN (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW
		POLARITY (3)	0	1	1	0	RW
		MICLINE (4)	0	1	1	0	RW
		MAX_GAIN (7)	-65	20	0.5	20	RW
		MIN_GAIN (8)	-65	20	0.5	-65	RW
		TYPE (9)	0	1	1	0	RW
	FILTER_1 (2)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_2 (3)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_3 (4)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_4 (5)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	GRAPHICEQ (6)	ENABLE (1)	0	1	1	0	RW
		GAIN_1 (2)	-12	12	1	0	RW
		GAIN_2 (3)	-12	12	1	0	RW
		GAIN_3 (4)	-12	12	1	0	RW
		GAIN_4 (5)	-12	12	1	0	RW
		GAIN_5 (6)	-12	12	1	0	RW
		GAIN_6 (7)	-12	12	1	0	RW
		GAIN_7 (8)	-12	12	1	0	RW
		GAIN_8 (9)	-12	12	1	0	RW
		GAIN_9 (10)	-12	12	1	0	RW
		GAIN_10 (11)	-12	12	1	0	RW
	LIMITER (7)	ENABLE (1)	0	1	1	0	RW
		THRESHOLD (2)	-65	20	0.5	0	RW
	DELAY (8)	ENABLE (1)	0	1	1	0	RW
		VALUE (2)	0	250	0.5	0	RW
	COMPRESSOR (9)	ENABLE (1)	0	1	1	0	RW
		GROUP (2)	0	4	1	0	RW
		POST_GAIN (3)	0	20	0.5	0	RW
		THRESHOLD (4)	-60	20	0.5	0	RW
		ATTACK (5)	0	100	0.5	10	RW
		RATIO (6)	1	20	0.5	1	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		RELEASE (7)	100	2000	1	500	RW
		DELAY_ ENABLE (8)	0	1	1	0	RW
		DELAY (9)	0	250	0.5	0	RW
SPEAKER (8)	LEVEL (1)	GAIN (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW
		MAX_GAIN (6)	-65	20	0.5	20	RW
		MIN_GAIN (7)	-65	20	0.5	-65	RW
	FILTER_1 (2)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_2 (3)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_3 (4)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_4 (5)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	GRAPHICEQ (6)	ENABLE (1)	0	1	1	0	RW
		GAIN_1 (2)	-12	12	1	0	RW
		GAIN_2 (3)	-12	12	1	0	RW
		GAIN_3 (4)	-12	12	1	0	RW
		GAIN_4 (5)	-12	12	1	0	RW
		GAIN_5 (6)	-12	12	1	0	RW
		GAIN_6 (7)	-12	12	1	0	RW
		GAIN_7 (8)	-12	12	1	0	RW
		GAIN_8 (9)	-12	12	1	0	RW
		GAIN_9 (10)	-12	12	1	0	RW
		GAIN_10 (11)	-12	12	1	0	RW
	LIMITER (7)	ENABLE (1)	0	1	1	0	RW
		THRESHOLD (2)	-65	20	0.5	0	RW
	DELAY (8)	ENABLE (1)	0	1	1	0	RW
		VALUE (2)	0	250	0.5	0	RW
	COMPRESSOR (9)	ENABLE (1)	0	1	1	0	RW
		GROUP (2)	0	4	1	0	RW
		POST_GAIN (3)	0	20	0.5	0	RW
		THRESHOLD (4)	-60	20	0.5	0	RW
		ATTACK (5)	0	100	0.5	10	RW
		RATIO (6)	1	20	0.5	1	RW
		RELEASE (7)	100	2000	1	500	RW
		DELAY_ ENABLE (8)	0	1	1	0	RW
		DELAY (9)	0	250	0.5	0	RW
PROC (9)	LEVEL (1)	GAIN (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW
		RAMP_RATE (3)	-50	50	1	1	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		MAX_GAIN (6)	-65	20	0.5	20	RW
		MIN_GAIN (7)	-65	20	0.5	-65	RW
	DELAY (2)	ENABLE (1)	0	1	1	0	RW
		VALUE (2)	0	250	0.5	0	RW
	COMPRESSOR (3)	ENABLE (1)	0	1	1	0	RW
		GROUP (2)	0	4	1	0	RW
		POST_GAIN (3)	0	20	0.5	0	RW
		THRESHOLD (4)	-60	20	0.5	0	RW
		ATTACK (5)	0	100	0.5	10	RW
		RATIO (6)	1	20	1	1	RW
		RELEASE (7)	100	2000	1	500	RW
		DELAY_ ENABLE (8)	0	1	1	0	RW
		DELAY (9)	0	250	0.5	0	RW
	FILTER_1 (4)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_2 (5)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_3 (6)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_4 (7)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_5 (8)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_6 (9)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_7 (10)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_8 (11)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_9 (12)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_10 (13)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_11 (14)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_12 (15)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_13 (16)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_14 (17)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_15 (18)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		ENABLE (7)	0	1	N/A	0	RW
	FBE (37)	ENABLE (7)	0	1	1	0	RW
FADER (10)	LEVEL (1)	GAIN (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW
		MAX_GAIN (6)	-65	20	0.5	20	RW
		MIN_GAIN (7)	-65	20	0.5	-65	RW
BFM (13)	LEVEL (1)	GAIN (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW
		MAX_GAIN (5)	-65	20	0.5	20	RW
		MIN_GAIN (6)	-65	20	0.5	-65	RW
	NC (2)	ENABLE (1)	0	1	1	0	RW
		DEPTH (2)	6	15	0.5	6	RW
	ALC (3)	ENABLE (1)	0	1	1	1	RW
	NLP (4)	SETTING (1)	0	4	1	1	RW
	AEC (5)	ENABLE (1)	0	1	1	0	RW
	BF (7)	BF_LED (1)	0	2	1	1	RW
		BF_MODE (4)	1	4	1	1	RW
		ZONE_1 (5)	0	1	1	1	RW
		ZONE_2 (6)	0	1	1	1	RW
		ZONE_3 (7)	0	1	1	1	RW
		ZONE_4 (8)	0	1	1	1	RW
		ZONE_5 (9)	0	1	1	1	RW
		ZONE_6 (10)	0	1	1	1	RW
		MUTE_ON (11)	N/A	N/A	N/A	N/A	RW
		MUTE_ON (12)	N/A	N/A	N/A	N/A	RW
		SER_NUMBER (13)	N/A	N/A	N/A	N/A	R
		PCB_NUMBER (14)	N/A	N/A	N/A	N/A	R
	FILTER_1 (10)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_2 (11)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_3 (12)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
	FILTER_4 (13)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		SLOPE (4)	12	24	6	18	RW
		SFT (5)	2	3	1	2	RW
		BW (6)	0.05	5	0.01	0.33	RW
		ENABLE (7)	0	1	N/A	0	RW
USB_RX (14)	LEVEL (1)	GAIN (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW
		MAX_GAIN (5)	-65	20	0.5	20	RW
		MIN_GAIN (6)	-65	20	0.5	-65	RW
USB_TX (15)	LEVEL (1)	GAIN (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW
		MAX_GAIN (5)	-65	20	0.5	20	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		MIN_GAIN (6)	-65	20	0.5	-65	RW
UA (20)	KEY (1)	KEY_CALL (1)	N/A	N/A	N/A	N/A	W
		KEY_REJECT (2)	1	5	1	N/A	W
		KEY_HOLD (3)	N/A	N/A	N/A	N/A	W
		KEY_TRANSFER (4)	N/A	N/A	N/A	N/A	W
		KEY_BLIND_TRANSFER (5)	N/A	N/A	N/A	N/A	W
		KEY_CONFERENCE (6)	0	5	1	0	W
		KEY_DIGIT_ PRESSED (7)	N/A	N/A	N/A	N/A	W
		KEY_DIGIT_ RELEASED (8)	N/A	N/A	N/A	N/A	W
		KEY_REDIAL (9)	N/A	N/A	N/A	N/A	W
		KEY_PARTY (10)	1	5	1	N/A	W
		KEY_HOOK (11)	0	2	1	0	W
		KEY_MUTE (12)	N/A	N/A	N/A	N/A	W
		KEY_FORWARD (13)	0	3	1	0	W
		KEY_DO_ NOT_DISTURB (14)	0	2	1	N/A	W
		KEY_PLAY_RINGTONE (15)	0	5	1	0	W
	INQUIRE (2)	REG_STATUS (1)	N/A	N/A	N/A	N/A	R
		ACTIVE_PARTIES (2)	N/A	N/A	N/A	N/A	R
		CFW_STATUS (3)	N/A	N/A	N/A	N/A	R
		DND_STATUS (4)	N/A	N/A	N/A	N/A	R
	INQUIRE_RESULT (3)	REG_STATUS (1)	N/A	N/A	N/A	N/A	N/A
		ACTIVE_PARTIES (2)	N/A	N/A	N/A	N/A	N/A
		CFW_STATUS (3)	N/A	N/A	N/A	N/A	N/A
		DND_STATUS	N/A	N/A	N/A	N/A	N/A
	NOTIFICATION (4)	STATE_CHANGE (1)	N/A	N/A	N/A	N/A	N/A
		INDICATION (2)	N/A	N/A	N/A	N/A	N/A
		ERROR (4)	N/A	N/A	N/A	N/A	N/A
		REG_FAILED (5)	N/A	N/A	N/A	N/A	N/A
		REG_SUCCEED (6)	N/A	N/A	N/A	N/A	N/A
		UNREG_SUCCEED (7)	N/A	N/A	N/A	N/A	N/A
	SETTINGS (6)	UA_ENABLE (1)	0	1	1	0	RW
		USERNAME (2)	N/A	N/A	N/A	admin	RW
		PASSWORD (3)	N/A	N/A	N/A	clearone	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		SEC_USERNAME (4)	N/A	N/A	N/A	admin	RW
		SEC_PASSWORD (5)	N/A	N/A	N/A	clearone	RW
		DISPLAY_NAME (6)	N/A	N/A	N/A	admin	RW
		ACTIVE_RINGTONE (7)	1	5	1	1	RW
GPIO (21)	PIN (1)	MODE (1)	1	4	N/A	1	RW
		STATE (2)	0	FFFF	N/A	0	RW
SGEN (22)	LEVEL (1)	TYPE (1)	1	5	1	1	RW
		FCY (2)	20	24000	0.01	1000	RW
		ENABLE (3)	0	1	N/A	0	RW
		GAIN (4)	-65	20	0.5	0	RW
SRMIC (24)	LEVEL (1)	GAIN_FINE (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW
		PHAN_PWR (3)	0	1	1	0	RW
		GAIN_COARSE (4)	0	56	1	0	RW
		MAX_GAIN (7)	-65	20	0.5	20	RW
		MIN_GAIN (8)	-65	20	0.5	-65	RW
		TYPE (9)	0	1	1	0	RW
	AGC (4)	GAIN (1)	0	18	0.5	6	RW
		TARGET_LEVEL (2)	-30	20	0.5	0	RW
		RESPONSE_TIME (3)	100	10000	1	2000	RW
		THRESHOLD (4)	-50	0	0.5	-25	RW
	AGC_ALC (5)	MODE (1)	0	2	1	0	RW
	GATING (6)	GROUP (1)	1	6	1	1	RW
		NONE (2)	0	1	1	1	RW
		MODE (3)	1	3	1	1	RW
		CHAIRMAN (4)	0	1	1	0	RW
		PA_ADAPT (5)	0	1	1	0	RW
		ADAPT_AMB (6)	0	1	1	1	RW
		AMB_LEVEL (7)	-80	0	0.5	-40	RW
		OFF_ATTEN (8)	-60	0	0.5	12	RW
		GATE_RATIO (9)	-50	0	0.5	15	RW
		HOLD_TIME (10)	0.1	8	0.01	0.3	RW
		DECAY_RATE (11)	1	3	1	2	RW

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
	FILTER_1 (7)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		BW (4)	0.05	5	0.01	0.33	RW
		ENABLE (5)	0	1	N/A	0	RW
	FILTER_2 (8)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		BW (4)	0.05	5	0.01	0.33	RW
		ENABLE (5)	0	1	1	0	RW
	FILTER_3 (9)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		BW (4)	0.05	5	0.01	0.33	RW
		ENABLE (5)	0	1	N/A	0	RW
	FILTER_4 (10)	TYPE (1)	0	11	1	0	RW
		FCY (2) (except CD Horn)	20	20000	0.01	1000	RW
		FCY (2) (CD Horn)	50	5000	0.01	1000	RW
		GAIN (3)	-15	15	0.01	0	RW
		BW (4)	0.05	5	0.01	0.33	RW
		ENABLE (5)	0	1	N/A	0	RW
	SIG_GEN (12)	TYPE (1)	1	5	1	1	RW
		FCY (2)	20	2400	1	1000	RW
		ENABLE (3)	0	1	1	0	RW
		GAIN (4)	-65	20	0.5	0	RW
DANTE_RX (24)	LEVEL (1)	MUTE (1)	0	1	1	0	RW
DANTE_TX (25)	LEVEL (1)	MUTE (1)	0	1	1	0	RW
SFBUA (27)	KEY (1)	KEY_CALL (1)	N/A	N/A	N/A	N/A	W
		KEY_DIGIT_PRESSED (2)	N/A	N/A	N/A	N/A	W
		KEY_DIGIT_RELEASED(3)	N/A	N/A	N/A	N/A	W

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		KEY_HOOK (5)	N/A	N/A	N/A	N/A	W
		KEY_HOLD (6)	N/A	N/A	N/A	N/A	W
		KEY_RESUME (7)	N/A	N/A	N/A	N/A	W
		KEY_ADD_PARTICIPANT_TO_SESSION(8)	N/A	N/A	N/A	N/A	W
		KEY_REMOVE_PARTICIPANT_FROM_SESSION(9)	N/A	N/A	N/A	N/A	W
		KEY_REJECT (13)	N/A	N/A	N/A	N/A	W
		KEY_CREATE_GROUP (15)	N/A	N/A	N/A	N/A	W
		KEY_DELETE_GROUP (16)	N/A	N/A	N/A	N/A	W
		KEY_ADD_TO_GROUP (17)	N/A	N/A	N/A	N/A	W
		KEY_REMOVE_FROM_GROUP (18)	N/A	N/A	N/A	N/A	W
		KEY_REMOVE_FROM_ALL_GROUPS (19)	N/A	N/A	N/A	N/A	W
		KEY_SET_RINGTONE (22)	1	5	1	1	W
		KEY_PLAY_RINGTONE (23)	1	5	1	1	W
		KEY_AUTO_ANSWER (24)	0	1	1	0	W
		KEY_SET_ACTIVE_SESSION (25)					
		KEY_CREATE_SESSION(27)	N/A	N/A	N/A	N/A	W
		KEY_LEAVE_SESSION (28)	N/A	N/A	N/A	N/A	W
		KEY_ADD_AUDIO_TO_SESSION(29)	N/A	N/A	N/A	N/A	W
		KEY_JOIN_MEETING (30)	N/A	N/A	N/A	N/A	W
		KEY_JOIN_CONFERENCE (31)	N/A	N/A	N/A	N/A	W
		KEY_MEET_NOW (32)	N/A	N/A	N/A	N/A	W
	INQUIRE (2)	CONTACT_SEARCH (1)	N/A	N/A	N/A	N/A	R
		GROUPS (2)	N/A	N/A	N/A	N/A	R
		GROUP_MEMBERS (3)	N/A	N/A	N/A	N/A	R
		REG_STATUS (6)	N/A	N/A	N/A	N/A	R
		ACTIVE_RINGTONE (11)	N/A	N/A	N/A	N/A	R
		AUTO_ANSWER_MODE (12)	N/A	N/A	N/A	N/A	R
		CURRENT_SESSIONS (14)	N/A	N/A	N/A	N/A	R
		SESSION_CALL_STATE (15)	N/A	N/A	N/A	N/A	R

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		CONTACT_DISPLAY_NAME (16)	N/A	N/A	N/A	N/A	R
		CONTACT_PHONE_NUMBER_LIST(17)	N/A	N/A	N/A	N/A	R
		ACTIVE_SESSION_ID (22)	N/A	N/A	N/A	N/A	R
		MEET_URL (23)	N/A	N/A	N/A	N/A	R
		SESSION_PARTICIPANTS (24)	N/A	N/A	N/A	N/A	R
		SESSION_INFO (25)	N/A	N/A	N/A	N/A	R
	INQUIRE_RESULT (3)	CONTACT_SEARCH (1)	N/A	N/A	N/A	N/A	R
		GROUPS (2)	N/A	N/A	N/A	N/A	R
		GROUP_MEMBERS (3)	N/A	N/A	N/A	N/A	R
		REG_STATUS (6)	N/A	N/A	N/A	N/A	R
		ACTIVE_RINGTONE (11)	N/A	N/A	N/A	N/A	R
		AUTO_ANSWER_MODE (12)	N/A	N/A	N/A	N/A	R
		CURRENT_SESSIONS (14)	N/A	N/A	N/A	N/A	R
		SESSION_CALL_STATE (15)	N/A	N/A	N/A	N/A	R
		CONTACT_DISPLAY_NAME (16)	N/A	N/A	N/A	N/A	R
		CONTACT_PHONE_NUMBER_LIST(17)	N/A	N/A	N/A	N/A	R
		ACTIVE_SESSION_ID (22)	N/A	N/A	N/A	N/A	R
		MEET_URL (23)	N/A	N/A	N/A	N/A	R
		SESSION_PARTICIPANTS (24)	N/A	N/A	N/A	N/A	R
		SESSION_INFO (25)	N/A	N/A	N/A	N/A	R
	NOTIFICATION (4)	REG_SUCCEED (3)	N/A	N/A	N/A	N/A	N
		REG_FAILED (4)	N/A	N/A	N/A	N/A	N
		GROUP_CREATED (5)	N/A	N/A	N/A	N/A	N
		CONTACT_ADDED_TO_GROUP (6)	N/A	N/A	N/A	N/A	N
		CONTACT_REMOVED_FROM_GROUP (7)	N/A	N/A	N/A	N/A	N
		GROUP_REMOVED (8)	N/A	N/A	N/A	N/A	N
		SESSION_CREATED (11)	N/A	N/A	N/A	N/A	N
		PARTICIPANT_ADDED_TO_SESSION (12)	N/A	N/A	N/A	N/A	N
		PARTICIPANT_REMOVED_FROM_SESSION (13)	N/A	N/A	N/A	N/A	N

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		SESSION_CALL_STATE_CHANGE (14)	N/A	N/A	N/A	N/A	N
		ACTIVE_SESSION (15)	N/A	N/A	N/A	N/A	N
		SESSION_ENDED (16)	N/A	N/A	N/A	N/A	N
		ERROR (17)	N/A	N/A	N/A	N/A	N
		CONTACT_REMOVED_FROM_ ALL_GROUPS (19)	N/A	N/A	N/A	N/A	N
		SESSION_UPDATED (20)	N/A	N/A	N/A	N/A	N
		I_WAS_REMOVED_FROM_ SESSION (22)	N/A	N/A	N/A	N/A	N
		SFB_READY (24)	N/A	N/A	N/A	N/A	N
		INVITE_JOIN_AUDIO (25)	N/A	N/A	N/A	N/A	N
		SFB_INITIALIZING (26)	N/A	N/A	N/A	N/A	N
		SFB_RESETTING (27)	N/A	N/A	N/A	N/A	N
		SFB_SHUTTING_DOWN (28)	N/A	N/A	N/A	N/A	N
	SETTINGS (5)	EMAIL (1)	N/A	N/A	N/A	N/A	RW
		PASSWORD (2)	N/A	N/A	N/A	N/A	RW
		USERNAME (3)	N/A	N/A	N/A	N/A	RW
		DOMAIN (4)	N/A	N/A	N/A	N/A	RW
D20MIC (28)	LEVEL (1)	GAIN (1)	-20	30	1	0	RW
		MUTE (2)	0	1	1	0	RW
		MODE (7)	0	1	1	0	RW
		LABEL (8)	N/A	N/A	N/A	N/A	R
	GATING (4)	GROUP (1)	1	6	1	1	RW
		NONE (2)	0	1	1	1	RW
		MODE (3)	1	3	1	1	RW
		CHAIRMAN (4)	0	1	1	0	RW
		ADAPT_AMB (6)	0	1	1	1	RW
		AMB_LEVEL (7)	-80	0	0.5	-40	RW
		OFF_ATTEN (8)	-60	0	0.5	12	RW
		GATE_RATIO (9)	-50	0	0.5	15	RW
		HOLD_TIME (10)	0.1	8	0.01	0.3	RW
		DECAY_RATE (11)	1	3	1	2	RW
	UNIT (6)	MODEL (1)	N/A	N/A	N/A	N/A	R

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		SN (2)	N/A	N/A	N/A	N/A	R
		PCB_NUMBER (3)	N/A	N/A	N/A	N/A	R
	TRANSMITTER (8)	TYPE (1)	0	4	1	0	R
		CTRL_LOCK_BODYPACK (2)	0	1	1	0	RW
		CTRL_LOCK_HANDHELD (3)	0	1	1	0	RW
		BUTTON_MODE_PODIUM (4)	1	3	1	1	RW
		BUTTON_MODE_BOUNDARY (5)	1	3	1	1	RW
		POWER_SWITCH_MODE (6)	1	3	1	1	RW
		POWER (7)	1	2	1	1	RW
		RF_STANDBY_MODE (8)	0	1	1	0	RW
		MUTE_MODE (9)	1	2	1	1	RW
		LED_MODE (10)	1	2	1	1	RW
		AUTO_SCAN (11)	0	1	1	0	RW
		LOW_CUT (12)	0	1	1	0	RW
USBE_RX (29)	LEVEL (1)	GAIN (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW
		MAX_GAIN (5)	-65	20	0.5	20	RW
		MIN_GAIN (6)	-65	20	0.5	-65	RW
		LABEL (7)	N/A	N/A	N/A	N/A	R
USBE_TX (30)	LEVEL (1)	GAIN (1)	-65	20	0.5	0	RW
		MUTE (2)	0	1	1	0	RW
		MAX_GAIN (5)	-65	20	0.5	20	RW
		MIN_GAIN (6)	-65	20	0.5	-65	RW
		LABEL (7)	N/A	N/A	N/A	N/A	R
EXP_D20MIC (33)	LEVEL (1)	LED (1)	1	2	1	1	RW
		LABEL (2)	N/A	N/A	N/A	N/A	R
	LOCATE (2)	MODE (1)	0	1	1	0	RW
		TIMEOUT (2)	1	60	1	30	RW
	VERSION (3)	FPGA (2)	N/A	N/A	N/A	N/A	R
		APP_RX_MASTER (3)	N/A	N/A	N/A	N/A	R
		APP_RX_SLAVE (4)	N/A	N/A	N/A	N/A	R
	UNIT (4)	MODEL (1)	N/A	N/A	N/A	N/A	R
		SN (2)	N/A	N/A	N/A	N/A	R

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		PCB_NUMBER (3)	N/A	N/A	N/A	N/A	R
		TEMP (4)	N/A	N/A	N/A	N/A	R
	RECEIVER (5)	OLED_DISPLAY_NAME (2)	1	3	1	1	RW
		OLED_TIMER (3)	1	60	1	1	RW
		MIXED_OUTPUT_MUTE (5)	0	1	1	0	RW
		MIXED_OUTPUT_LEVEL (6)	-100	1	1	0	RW
	SLOT1 (6)	NAME (1)	N/A	N/A	N/A	N/A	RW
		RF_CHAN_NUM (2)	0	8	1	0	RW
		TOUR_MODE (3)	0	1	1	0	
		KEY (4)	N/A	N/A	N/A	N/A	RW
		OUTPUT_MUTE (5)	0	1	1	0	RW
		OUTPUT_LEVEL (6)	-100	1	1	0	RW
	SLOT2 (7)	NAME (1)	N/A	N/A	N/A	N/A	RW
		RF_CHAN_NUM (2)	0	8	1	0	RW
		TOUR_MODE (3)	0	1	1	0	
		KEY (4)	N/A	N/A	N/A	N/A	RW
		OUTPUT_MUTE (5)	0	1	1	0	RW
		OUTPUT_LEVEL (6)	-100	1	1	0	RW
	GPIO_IN1	MODE (1)	0	1	1	0	RW
		STATE (2)	0	1	1	0	R
	GPIO_IN2	MODE (1)	0	1	1	0	RW
		STATE (2)	0	1	1	0	R
	GPIO_OUT1	MODE (1)	0	1	1	0	RW
		STATE (2)	0	1	1	0	R
	GPIO_OUT2	MODE (1)	0	1	1	0	RW
		STATE (2)	0	1	1	0	R
EXP_USB (34)	LEVEL (1)	LED (1)	1	2	1	1	RW
		LABEL (2)	N/A	N/A	N/A	N/A	R
	SERIAL_PORT (2)	BAUD_RATE (1)	9600	115200	N/A	57600	RW
		DATA_BITS (2)	8	10	1	8	R
		STOP_BITS (3)	0	1	1	1	R
		PARITY (4)	0	1	1	0	R
		FLOW_CONTROL (5)	0	1	1	0	R

EPT	BN	PN	Value			Default	RW
			Min	Max	Gran		
		ECHO (6)	0	1	1	0	R
	UNIT (3)	MODEL (1)	N/A	N/A	N/A	N/A	R
		SN (2)	N/A	N/A	N/A	N/A	R
		PCB_NUMBER (3)	N/A	N/A	N/A	N/A	R
	LOCATE (4)	MODE (1)	0	1	1	0	RW
		TIMEOUT (2)	1	60	1	30	RW
	VERSION (5)	APP (1)	N/A	N/A	N/A	N/A	R
		FPGA (2)	N/A	N/A	N/A	N/A	R
EXP_GPIO (35)	LEVEL (1)	LED (1)	0	1	1	N/A	R
	SERIAL_PORT (2)	BAUD_RATE (1)	9600	115200	N/A	57600	RW
		DATA_BITS (2)	8	10	1	8	R
		STOP_BITS (3)	0	1	1	1	R
		PARITY (4)	0	1	1	0	R
		FLOW_CONTROL (5)	0	1	1	0	R
		ECHO (6)	0	1	1	0	R
	UNIT (3)	SN (2)	N/A	N/A	N/A	N/A	R
	LOCATE (4)	MODE (1)	0	1	1	0	RW
		TIMEOUT (2)	1	60	1	30	RW
	VERSION (5)	MDO (1)	N/A	N/A	N/A	N/A	R
	EXP (6)	SN (1)	N/A	N/A	N/A	N/A	R

BFM

EP-BFM (13) AEC (5)

You can use the EP command to manage the Acoustic Echo Cancellation of a ClearOne Beamforming Microphone Array 2.

Syntax

`EP BFM <EPN> AEC <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Enable AEC.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW

Example 1: ENABLE

This example shows how to enable AEC on a BFM channel with the label ChannelName:

```
EP ChannelName AEC ENABLE 1
```

Output

PN	Output
ENABLE	`EP ChannelName AEC ENABLE 1`

EP-BFM (13) ALC (3)

You can use the EP command to configure the Automatic Level Control settings of a ClearOne Beamforming Microphone.

Syntax

`EP BFM <EPN> ALC <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Enable ALC.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	1	RW

Example 1: ENABLE

This example shows how to enable ALC on a BFM channel with the label ChannelName:

```
EP ChannelName ALC ENABLE 1
```

Output

PN	Output
ENABLE	`EP ChannelName ALC ENABLE 1`

EP-BFM (13) BF (7)

You can use the EP command to manage the general settings of a ClearOne Beamforming Microphone Array 2.

Syntax

`EP BFM <EPN> BF <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
BF_LED (1)	Controls the behavior of the Mute LED when the unit is muted.	0 for disable (no light) 1 for enable (light on) 2 to blink light Leave blank to retrieve current value	1	RW
BF_MODE (4)	Indicate how the Beamforming Microphone 2 is mounted.	1 for auto (BFM senses its position and adjusts accordingly) 2 for ceiling 3 for wall 4 for tabletop Leave blank to retrieve current value	1	RW
ZONE_1 (5)	Enable zone 1 beam.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	1	RW

PN	Description	Value	Default	RW
ZONE_2 (6)	Enable zone 2 beam.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	1	RW
ZONE_3 (7)	Enable zone 3 beam.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	1	RW
ZONE_4 (8)	Enable zone 4 beam.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	1	RW
ZONE_5 (9)	Enable zone 5 beam.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	1	RW
ZONE_6 (10)	Enable zone 6 beam.	0 for disable 1 for enable 2 to toggle current state Leave blank to retrieve current value **Note:** Zone 6 is used only if the BFM is in tabletop mode.	1	RW
MUTE_ON (11)	Use to specify a macro to run when the BFM is muted.	The name of a macro to run. The name can include up to 50 characters, and possibly more, depending on what language you're using.	N/A	RW
MUTE_OFF (12)	Use to specify a macro to run when the BFM is unmuted.	The name of a macro to run. The name can include up to 50 characters, and possibly more, depending on what language you're using.	N/A	RW

PN	Description	Value	Default	RW
SER_NUMBER (13)	Use to retrieve the BFM serial number.	Read only.	N/A	R
PCB_NUMBER (14)	Use to retrieve the BFM PCB Number.	Read only.	N/A	R

Example 1: BF_LED

This example shows how to set the LED light on a BFM channel with the label ChannelName:

```
EP ChannelName BF BF_LED 1
```

Example 2: BF_MODE

This example shows how to indicate that the Beamforming Microphone Array 2 connected to a BFM channel with the label ChannelName is mounted to the wall:

```
EP ChannelName BF BF_MODE 3
```

Example 3: ZONE_1

This example shows how to enable the zone 1 beam for a BFM channel with the label ChannelName:

```
EP ChannelName BF ZONE_1 1
```

Example 3: MUTE_ON

This example shows how to specify that when the BFM channel is muted, a macro named MyMacro should run:

```
EP ChannelName BF MUTE_ON MyMacro
```

Example 3: MUTE_OFF

This example shows how to specify that when the BFM channel is unmuted, a macro named MyOtherMacro should run:

```
EP ChannelName BF MUTE_OFF MyOtherMacro
```

Example 3: SER_NUMBER

This example shows how to retrieve the serial number of a BFM with a channel name of ChannelName:

```
EP ChannelName BF SER_NUMBER
```

Example 3: PCB_NUMBER

This example shows how to retrieve the PCB number of a BFM with a channel name of ChannelName:

```
EP ChannelName BF PCB_NUMBER
```

Output

PN	Output
BF_LED	`EP ChannelName BF BF_LED 1`
BF_MODE	`EP ChannelName BF BF_MODE 3`
ZONE_1	`EP ChannelName BF ZONE_1 1`
MUTE_ON	`EP ChannelName BF MUTE_ON MyMacro`
MUTE_OFF	`EP ChannelName BF MUTE_OFF MyOtherMacro`
SER_NUMBER	`EP ChannelName BF SER_NUMBER BLANK`

PN	Output
PCB_NUMBER	`EP ChannelName BF PCB_NUMBER 0158-1729-08`

EP-BFM (13) FILTER_1 (10)

You can use the EP command to configure the Filter_1 settings of a ClearOne Beamforming Microphone Array 2 channel.

Note:

You can also use the FILTER command to change filter settings. ClearOne recommends the use of the FILTER command. See *FILTER* for more information.

Syntax

`EP BFM <EPN> FILTER_1 <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
TYPE (1)	Select a filter type. **Note:** You must send this parameter first, because when you send this parameter, the rest of the filter settings are set to their default values.	Allowable filter types are: 0 (filter is off) 1 (all pass) 2 (low pass) 3 (high pass) 6 (parametric equalizer) 11 (notch) Leave blank to retrieve current value	0	RW
FCY (2)	Set the center frequency (in Hz). **Note:** Applies to all filter types.	20 to 20000 in increments of 0.01 Leave blank to retrieve current value	1000	RW
GAIN (3)	Set the gain value. **Note:** Applies only to type 6, parametric equalizer.	-15 to 15 in increments of 0.01 Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
BW (6)	Set the difference between the upper and lower points of a filter's audio pass band. **Note:** Applies only to type 6, parametric equalizer and type 11, notch.	0.05 to 5 in increments of 0.01 Leave blank to retrieve current value	0.33	RW
ENABLE (7)	Enable or disable this filter.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW

Example 1: TYPE

This example shows how to select a low pass filter type with a frequency of 10000 for FILTER_1 on a BFM channel with the label ChannelName:

```
EP ChannelName FILTER_1 TYPE 1
```

Example 2: FCY

This example shows how to set the frequency to 5000 for FILTER_1 on a BFM channel with the label ChannelName:

```
EP ChannelName FILTER_1 FCY 5000
```

Example 3: GAIN

This example shows how to set a gain value of 5.05 for FILTER_1 on a BFM channel with the label ChannelName:

```
EP ChannelName FILTER_1 GAIN 5.05
```

Example 4: BW

This example shows how to set the bandwidth to 2.33 for FILTER_1 on a BFM channel with the label ChannelName:

```
EP ChannelName FILTER_1 BW 2.33
```

Example 5: ENABLE

This example shows how to enable FILTER_1 on a BFM channel with the label ChannelName:

```
EP ChannelName FILTER_1 ENABLE 1
```

Output

PN	Output
TYPE	`EP ChannelName FILTER_1 TYPE 1`
FCY	`EP ChannelName FILTER_1 FCY 5000`
GAIN	`EP ChannelName FILTER_1 GAIN 5.05`
BW	`EP ChannelName FILTER_1 BW 2.33`

PN	Output
ENABLE	`EP ChannelName FILTER_1 ENABLE 1`

EP-BFM (13) FILTER_2 (11)

The settings for this parameter are the same as for the BFM Filter_1 parameter.

Related reference

EP-BFM (13) FILTER_1 (10) on page 89

EP-BFM (13) FILTER_3 (12)

The settings for this parameter are the same as for the BFM Filter_1 parameter.

Related reference

EP-BFM (13) FILTER_1 (10) on page 89

EP-BFM (13) FILTER_4 (13)

The settings for this parameter are the same as for the BFM Filter_1 parameter.

Related reference

EP-BFM (13) FILTER_1 (10) on page 89

EP-BFM (13) LEVEL (1)

You can use the EP command to change the level of a ClearOne Beamforming Microphone Array 2.

Syntax

`EP BFM <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain.	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.	0	RW
MUTE (2)	Mute.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
MAX_GAIN (5)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	20	RW
MIN_GAIN (6)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	-65	RW
LOCATE (7)	Use to locate a BFM unit by causing its LED light to flash.	0=off 1=on Leave blank to retrieve current value	0	RW
LABEL (8)	Use to retrieve the channel label.	Read only.	N/A	R

Example 1: GAIN

This example shows how to change the gain level of a BFM channel with the label ChannelName:

```
EP ChannelName LEVEL GAIN 5.5
```

Note: If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute the audio of a BFM channel with the label ChannelName:

```
EP ChannelName LEVEL MUTE 1
```

Example 3: MAX_GAIN

This example shows how to set maximum gain for a BFM channel with the label ChannelName:

```
EP ChannelName LEVEL MAX_GAIN 16.5
```

Example 4: MIN_GAIN

This example shows how to set minimum gain for a BFM channel with the label ChannelName:

```
EP ChannelName LEVEL MIN_GAIN -32.5
```

Example 5: LOCATE

This example shows how to turn on the locate LED for a BFM channel with the label ChannelName:

```
EP ChannelName LEVEL LOCATE 1
```

Example 4: LABEL

This example shows how to retrieve the labelfor a BFM channel:

```
EP BFM 101 LEVEL LABEL
```

Output

PN	Output
GAIN	`EP ChannelName LEVEL GAIN 5.5`
MUTE	`EP ChannelName LEVEL MUTE 1`
MAX_GAIN	`EP ChannelName LEVEL MAX_GAIN 16.5`
MIN_GAIN	`EP ChannelName LEVEL MIN_GAIN -32.5`
LOCATE	`EP ChannelName LEVEL LOCATE 1`
LABEL	`EP BFM 101 LEVEL LABEL MyChannelName`

EP-BFM (13) NC (2)

You can use the EP command to manage the Noise Cancellation (NC) of a ClearOne Beamforming Microphone Array 2. Noise cancellation cancels background noise.

Syntax

`EP BFM <EPN> NC <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Enable noise cancellation.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
DEPTH (2)	Depth of noise suppression.	6 to 25, in increments of 1 Leave blank to retrieve current value	6	RW

Example 1: ENABLE

This example shows how to enable NC on a BFM channel with the label ChannelName:

```
EP ChannelName NC ENABLE 1
```

Example 2: DEPTH

This example shows how to adjust the depth of noise suppression on a BFM channel with the label ChannelName:

```
EP ChannelName NC DEPTH 22
```

Output

PN	Output
ENABLE	`EP ChannelName NC ENABLE 1`
DEPTH	`EP ChannelName NC DEPTH 22`

EP-BFM (13) NLP (4)

You can use the EP command to configure the non-linear processing (NLP) settings of a ClearOne Beamforming Microphone Array 2. NLP helps eliminate residual echo after acoustic echo cancellation has been applied.

Syntax

```
EP BFM <EPN> NLP <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
SETTING (1)	Specify the amount of non-linear processing to apply.	0 to disable 1 for soft 2 for medium 3 for aggressive Leave blank to retrieve current value	1	RW

Example 1: SETTING

This example shows how to enable aggressive NLP on a BFM channel with the label ChannelName:

```
EP ChannelName NLP SETTING 3
```

Output

PN	Output
SETTING	`EP ChannelName NLP SETTING 3`

D20MIC

EP-D20MIC (28) EXP (9)

You can use the EP command to retrieve information about a DIALOG 20 receiver.

Syntax

`EP D20MIC <EPN> EXP <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
SN (1)	Retrieve the serial number of the DIALOG 20 receiver.	Read only.	N/A	R

Example 1: SN

This example shows how to retrieve the serial number of a DIALOG 20 receiver connected to a D20MIC channel named D20Mic1:

```
EP D20Mic1 EXP SN
```

Output

PN	Output
SN	`EP D20Mic1 EXP SN` 0133-1707-09

EP-D20MIC (28) GATING (4)

You can use the EP command to configure the gating control of a D20MIC channel. Gating controls the priority relationships in a group of microphones.

Syntax

`EP D20MIC <EPN> GATING <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GROUP (1)	GROUP enables assignment of channels with same settings to up to eight (8) gating groups. **Note:** The preferred way to assign mics to a group is to use the GATEGROUP command.	1 to 8 Leave blank to retrieve current value	1	RW
NONE (2)	Assign the mic to a “None” gating group. **Note:** • If you have assigned a MIC channel to the NONE group and to a numbered group, the NONE group takes precedence. • The preferred way to assign mics to a group is to use the GATEGROUP command.	0 to disable 1 to enable 2 to toggle current state **Note:** Inputs are routed to Group 1 by default. Leave blank to retrieve current value	1	RW

PN	Description	Value	Default	RW
MODE (3)	MODE allows you to configure group settings.	1 for First Mic Priority 2 for Max # of Mics 3 for Last Mic Mode Leave blank to retrieve current value	1	RW
CHAIRMAN (4)	Chairman override provides gating priority for selected channels over any other channel within the same group.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
ADAPT_AMB (6)	Adapt Ambient automatically adjusts the ambient reference level as noise and room conditions change.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	1	RW
AMB_LEVEL (7)	Ambient Level lets you manually specify a fixed ambient level.	-80dB to 0dB, in increments of 0.5 Leave blank to retrieve current value	-40	RW
OFF_ATTEN (8)	Off Attenuation allows you to set the amount of level reduction applied to a channel when it is gated off.	-60dB to 0dB, in increments of 0.5. Leave blank to retrieve current value	12	RW
GATE_RATIO (9)	Gate Ratio allows you to specify how much louder the audio level must be than the ambient level before the channel automatically gates on.	-50dB to 0dB, in increments of 0.5. Leave blank to retrieve current value	15	RW
HOLD_TIME (10)	Hold Time allows you to determine how long the channel stays gated on after the audio falls below the Gate Ratio threshold.	-.1 to 8.0, in increments of 0.01. Leave blank to retrieve current value	0.3	RW
DECAY_RATE (11)	Decay Rate allows you to determine how fast a channel gates off after the Hold Time expires.	1 for slow (12dB/s) 2 for medium (25dB/s) 3 for fast (50dB/s) Leave blank to retrieve current value	2	RW

Example 1: GROUP

This example shows how to assign a D20MIC channel with the label D20MicChannel1 to Group 8:

```
EP D20MicChannel1 GATING GROUP 8
```

Example 2: NONE

This example shows how to assign a D20MIC channel with the label D20MicChannel1 to the NONE group:

```
EP D20MicChannel1 GATING NONE 1
```

Example 3: MODE

This example shows how to enable First Mic Priority on a D20MIC channel with the label D20MicChannel1:

```
EP D20MicChannel1 GATING MODE 1
```

Example 4: CHAIRMAN

This example shows how to enable the Chairman feature on a D20MIC channel with the label D20MicChannel1:

```
EP D20MicChannel1 GATING CHAIRMAN 1
```

Example 5: AMB_ADAPT

This example shows how to enable ambient adapt on a D20MIC channel with the label D20MicChannel1:

```
EP D20MicChannel1 GATING AMB_ADAPT 1
```

Example 6: AMB_TRK

This example shows how to adjust the ambient level on a D20MIC channel with the label D20MicChannel1:

```
EP D20MicChannel1 GATING AMB_TRK -63.5
```

Example 7: OFF_ATTEN

This example shows how to set the amount of level reduction applied to a D20MIC channel with the label D20MicChannel1, when gated off:

```
EP D20MicChannel1 GATING OFF_ATTEN -52.5
```

Example 8: GATE_RATIO

This example shows how to set the Gate Ratio on a D20MIC channel with the label D20MicChannel1:

```
EP D20MicChannel1 GATING GATE_RATIO -40.5
```

Example 9: HOLD_TIME

This example shows how to set the Hold Time on a D20MIC channel with the label D20MicChannel1:

```
EP D20MicChannel1 GATING HOLD_TIME 4.02
```

Example 10: DECAY_RATE

This example shows how to set the Decay Rate on a D20MIC channel with the label D20MicChannel1:

```
EP D20MicChannel1 GATING DECAY_RATE 3
```

Output

PN	Output
GROUP	`EP D20MicChannel1 GATING GROUP 8`
NONE	`EP D20MicChannel1 GATING NONE 1`
MODE	`EP D20MicChannel1 GATING MODE 1`

PN	Output
CHAIRMAN	`EP D20MicChannel1 GATING CHAIRMAN 1`
AMB_ADAPT	`EP D20MicChannel1 GATING AMB_ADAPT 1`
AMB_TRK	`EP D20MicChannel1 GATING AMB_TRK -63.5`
OFF_ATTEN	`EP D20MicChannel1 GATING OFF_ATTEN -52.5`
GATE_RATIO	`EP D20MicChannel1 GATING GATE_RATIO -40.5`
HOLD_TIME	`EP D20MicChannel1 GATING HOLD_TIME 4.02`
DECAY_RATE	`EP D20MicChannel1 GATING DECAY_RATE 3`

EP-D20MIC (28) LEVEL (1)

You can use the EP command to change the level and source of a DIALOG 20 microphone channel.

Syntax

`EP D20MIC <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain	-20 to 30 dB in increments of 10 (below 0) or 1 (0-30). Leave blank to retrieve current value	0	RW
MUTE (2)	Mute.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
MAX_GAIN (5)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	20	RW

PN	Description	Value	Default	RW
MIN_GAIN (6)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	-65	RW
MODE (7)	Whether to perform digital mixing.	0=Normal 1=Digital mixing on box	0	RW
LABEL (8)	Use to retrieve the channel label.	Read only.	N/A	R

Example 1: GAIN

This example shows how to change the gain of a D20MIC channel with the label D20Mic1:

```
EP D20Mic1 LEVEL GAIN 10
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute the level of a D20MIC channel with the label D20Mic1:

```
EP D20Mic1 LEVEL MUTE 1
```

Example 3: MAX_GAIN

This example shows how to set maximum gain for a D20MIC channel with the label D20Mic1:

```
EP D20Mic1 LEVEL MAX_GAIN 16
```

Example 4: MIN_GAIN

This example shows how to set minimum gain for a D20MIC channel with the label D20Mic1:

```
EP D20Mic1 LEVEL MIN_GAIN -8
```

Example 5: MODE

This example shows how to turn on digital mixing for a D20MIC channel with the label D20Mic1:

```
EP D20Mic1 LEVEL MODE 1
```

Example 5: LABEL

This example shows how to retrieve the label of a D20MIC channel:

```
EP D20MIC 101 LABEL
```

Output

PN	Output
GAIN	`EP D20Mic1 LEVEL GAIN 10`
MUTE	`EP D20Mic1 LEVEL MUTE 1`
MAX_GAIN	`EP D20Mic1 LEVEL MAX_GAIN 16.5`
MIN_GAIN	`EP D20Mic1 LEVEL MIN_GAIN -32.5`
MODE	`EP D20Mic1 LEVEL MODE 1`

PN	Output
LABEL	`EP D20MIC 101 LABEL MyChannelName`

EP-D20MIC (28) TRANSMITTER (8)

You can use the EP command to configure a DIALOG 20 transmitter.

Syntax

`EP D20MIC <EPN> TRANSMITTER <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
TYPE (1)	Retrieve the transmitter type.	Read only. Possible return values: 0=No transmitter synched 1=Belt Pack 2=Handheld 3=Table Top (Boundary) 4=Goose Neck (Podium)	0	R
CTRL_LOCK_ BODYPACK (2)	Specify whether to lock the control button on body pack transmitters.	0=Unlocked 1=Locked Leave blank to retrieve current value	0	RW
CTRL_LOCK_ HANDHELD (3)	Specify whether to lock the control button on hand held transmitters.	0=Unlocked 1=Locked Leave blank to retrieve current value	0	RW
BUTTON_MODE_ PODIUM (4)	Choose the button mode for a podium mic transmitter.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	1	RW
BUTTON_MODE_ BOUNDARY (5)	Choose the button mode for a boundary mic transmitter.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	1	RW

PN	Description	Value	Default	RW
POWER_SWITCH_MODE (6)	Choose how the transmitter power switch functions.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value		RW
POWER (7)	Choose the transmitter power level.	1=1mW 2=10mW Leave blank to retrieve current value	1	RW
RF_STANDBY_MODE (8)	Choose whether to enable RF standby mode. RF Standby Mode turns off the RF output when the transmitter is muted.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
MUTE_MODE (9)	Specify whether mute is handled normally or by using logic mute. When Logic Mute is enabled, the audio output is not muted when the transmitter's mute switch is enabled. This option is used in combination with the GPIO outputs so that echo cancellers can use the audio as an input and mute the audio downstream.	1=Normal 2=Logic mute	1	RW
LED_MODE (10)	Specify whether the LED light is controlled normally (using the transmitter mute button) or through the GPIO.	1=Normal 2=GPIO controlled	1	RW
LOW_CUT (12)	Toggles a 75 Hz low-cut audio filter.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW

Example 1: TYPE

This example shows how to retrieve the transmitter type for a D20MIC channel named D20Mic1:

```
EP D20Mic1 TRANSMITTER TYPE
```

Example 2: CTRL_LOCK_BODYPACK

This example shows how to lock the button on a bodypack mic transmitter for a D20MIC channel named D20Mic1:

```
EP D20Mic1 TRANSMITTER CTRL_LOCK_BODYPACK 1
```

Example 3: CTRL_LOCK_HANDHELD

This example shows how to lock the button on a handheld mic transmitter for a D20MIC channel named D20Mic1:

```
EP D20Mic1 TRANSMITTER CTRL_LOCK_HANDHELD 1
```

Example 4: BUTTON_MODE_PODIUM

This example shows how to use the button for push-to-talk on a podium mic transmitter for a D20MIC channel named D20Mic1:

```
EP D20Mic1 TRANSMITTER BUTTON_MODE_PODIUM 2
```

Example 5: BUTTON_MODE_BOUNDARY

This example shows how to use the button for push-to-talk on a boundary mic transmitter for a D20MIC channel named D20Mic1:

```
EP D20Mic1 TRANSMITTER BUTTON_MODE_BOUNDARY 1
```

Example 6: POWER_SWITCH_MODE

This example shows how to set the power switch to On/Mute mode on a transmitter for a D20MIC channel named D20Mic1:

```
EP D20Mic1 TRANSMITTER POWER_SWITCH_MODE 2
```

Example 7: POWER

This example shows how to set the power level to 10mW on a mic transmitter for a D20MIC channel named D20Mic1:

```
EP D20Mic1 TRANSMITTER POWER 2
```

Example 8: RF_STANDBY_MODE

This example shows how to turn on RF Standby mode on a mic transmitter for a D20MIC channel named D20Mic1:

```
EP D20Mic1 TRANSMITTER RF_STANDBY_MODE 1
```

Example 9: MUTE_MODE

This example shows how to set the mute mode to GPIO on a mic transmitter for a D20MIC channel named D20Mic1:

```
EP D20Mic1 TRANSMITTER MUTE_MODE 2
```

Example 10: LED_MODE

This example shows how to set GPIO control for the LED light on a mic transmitter for a D20MIC channel named D20Mic1:

```
EP D20Mic1 TRANSMITTER LED_MODE 2
```

Example 11: LOW_CUT

This example shows how turn on the low-cut filter on a mic transmitter for a D20MIC channel named D20Mic1:

```
EP D20Mic1 TRANSMITTER LOW_CUT 1
```

Output

PN	Output
TYPE	`EP ChannelName TRANSMITTER TYPE 3`
CTRL_LOCK_BODYPACK	`EP ChannelName TRANSMITTER CTRL_LOCK_BODYPACK 1`
CTRL_LOCK_HANDHELD	`EP ChannelName TRANSMITTER CTRL_LOCK_HANDHELD 1`
BUTTON_MODE_PODIUM	`EP ChannelName TRANSMITTER BUTTON_MODE_PODIUM 2`
BUTTON_MODE_BOUNDARY	`EP ChannelName TRANSMITTER BUTTON_MODE_BOUNDARY 1`

PN	Output
POWER_SWITCH_MODE	`EP ChannelName TRANSMITTER POWER_SWITCH_MODE 2`
POWER	`EP ChannelName TRANSMITTER POWER 2`
RF_STANDBY_MODE	`EP ChannelName TRANSMITTER RF_STANDBY_MODE 1`
MUTE_MODE	`EP ChannelName TRANSMITTER MUTE_MODE 2`
LED_MODE	`EP ChannelName TRANSMITTER LED_MODE 2`
AUTO_SCAN	`EP ChannelName TRANSMITTER AUTO_SCAN 1`
LOW_CUT	`EP ChannelName TRANSMITTER LOW_CUT 1`

EP-D20MIC (28) UNIT (6)

You can use the EP command to retrieve information about a DIALOG 20 mic.

Syntax

`EP D20MIC <EPN> UNIT <PN>`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MODEL (1)	Retrieve the model number of a connected DIALOG 20 mic.	Read only.	N/A	R
SN (2)	Retrieve the serial number of a connected DIALOG 20 mic.	Read only.	N/A	R
PCB_NUMBER (3)	Retrieve the PCB number of a connected DIALOG 20 mic.	Read only.	N/A	R

Example 1: MODEL

This example shows how to retrieve the model number of a D20MIC:

```
EP D20Mic1 UNIT MODEL
```

Example 2: SN

This example shows how to retrieve the serial number of a D20MIC:

```
EP D20Mic1 UNIT SN
```

Example 3: PCB_NUMBER

This example shows how to retrieve the PCB number of a D20MIC:

```
EP D20Mic1 UNIT PCB_NUMBER
```

Output

PN	Output
MODEL	`EP D20Mic1 UNIT MODEL PODIUM`
SN	`EP D20Mic1 UNIT SN 3524-9999-99`
PCB_NUMBER	`EP D20Mic1 UNIT PCB_NUMBER 2.0`

EP-D20MIC (28) VERSION (5)

You can use the EP command to retrieve the firmware version of a DIALOG 20 mic.

Syntax

`EP D20MIC <EPN> VERSION <PN>`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
APP_TX (1)	Firmware version of a D20 transmitter.	Read only.	N/A	R

Example 1: APP TX

This example shows how to retrieve the firmware version of a D20 transmitter:

```
EP D20Mic1 VERSION APP_TX
```

Output

PN	Output
APP_TX	`EP D20Mic1 VERSION APP_TX 1.3`

DANTE_RX

EP-DANTE_RX (25) LEVEL (1)

You can use the EP command to mute a DANTE_RX channel and retrieve the channel label.

Syntax

`EP DANTE_RX <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of

end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MUTE (1)	Mute.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
LABEL (2)	Use to retrieve the channel label.	Read only.	N/A	R

Example 1: MUTE

This example shows how to mute a DANTE_RX channel with the label ChannelName:

```
EP ChannelName LEVEL MUTE 1
```

Example 2: LABEL

This example shows how to retrieve the label of DANTE_RX channel:

```
EP DANTE_RX 101 LEVEL LABEL
```

Output

PN	Output
MUTE	`EP ChannelName LEVEL MUTE 1`
LABEL	`EP DANTE_RX 101 LEVEL LABEL MyChannelName`

DANTE_TX

EP-DANTE_TX (26) LEVEL (1)

You can use the EP command to mute a DANTE_TX channel and retrieve the channel label.

Syntax

`EP DANTE_TX <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MUTE (1)	Mute.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
LABEL (2)	Use to retrieve the channel label.	Read only.	N/A	R

Example 1: MUTE

This example shows how to mute a DANTE_TX channel with the label ChannelName:

```
EP ChannelName LEVEL MUTE 1
```

Example 2: LABEL

This example shows how to retrieve the label of DANTE_TX channel:

```
EP DANTE_TX 101 LEVEL LABEL
```

Output

PN	Output
MUTE	`EP ChannelName LEVEL MUTE 1`
LABEL	`EP DANTE_TX 101 LEVEL LABEL MyChannelName`

EXP_D20MIC

EP-EXP_D20MIC (33) GPIO_IN1 (8)

You can use the EP command to enable GPIO muting and retrieve the GPIO state for a DIALOG 20 GPIO pin.

Syntax

```
EP EXP_D20MIC <EPN> GPIO_IN1 <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MODE (1)	Use to enable or disable the use of this GPIO pin for mute states.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
STATE (2)	Use to retrieve the current GPIO pin state.	Read only. Return values: 0 for High 1 for Low	N/A	R

Example 1: MODE

This example shows how to enable the use of this GPIO pin for mute states on a D20 receiver channel named D20Rec1:

```
EP D20Rec1 GPIO_IN1 MODE 1
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: STATE

This example shows how retrieve the state of this GPIO pin on a D20 receiver channel named D20Rec1:

```
EP D20Rec1 GPIO_IN1 STATE
```

Output

PN	Output
MODE	`EP D20Rec1 GPIO_IN1 MODE 1`
STATE	`EP D20Rec1 GPIO_IN1 STATE 1`

EP-EXP_D20MIC (33) GPIO_IN2 (9)

You can use the EP command to enable GPIO muting and retrieve the GPIO state for a DIALOG 20 GPIO pin.

Syntax

```
EP EXP_D20MIC <EPN> GPIO_IN2 <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MODE (1)	Use to enable or disable the use of this GPIO pin for mute states.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
STATE (2)	Use to retrieve the current GPIO pin state.	Read only. Return values: 0 for High 1 for Low	N/A	R

Example 1: MODE

This example shows how to enable the use of this GPIO pin for mute states on a D20 receiver channel named D20Rec1:

```
EP D20Rec1 GPIO_IN2 MODE 1
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: STATE

This example shows how retrieve the state of this GPIO pin on a D20 receiver channel named D20Rec1:

```
EP D20Rec1 GPIO_IN2 STATE
```

Output

PN	Output
MODE	`EP D20Rec1 GPIO_IN2 MODE 1`
STATE	`EP D20Rec1 GPIO_IN2 STATE 1`

EP-EXP_D20MIC (33) GPIO_OUT1 (10)

You can use the EP command to show mute states via GPIO and retrieve the GPIO state for a DIALOG 20 GPIO pin.

Syntax

```
EP EXP_D20MIC <EPN> GPIO_OUT1 <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MODE (1)	Use to enable or disable the use of this GPIO pin for showing mute states.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
STATE (2)	Use to retrieve the current GPIO pin state.	Read only. Return values: 0 for High 1 for Low	N/A	R

Example 1: MODE

This example shows how to enable the use of this GPIO pin for mute states on a D20 receiver channel named D20Rec1:

```
EP D20Rec1 GPIO_OUT1 MODE 1
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: STATE

This example shows how retrieve the state of this GPIO pin on a D20 receiver channel named D20Rec1:

```
EP D20Rec1 GPIO_OUT1 STATE
```

Output

PN	Output
MODE	`EP D20Rec1 GPIO_OUT1 MODE 1`
STATE	`EP D20Rec1 GPIO_OUT1 STATE 1`

EP-EXP_D20MIC (33) GPIO_OUT2 (11)

You can use the EP command to show mute states via GPIO and retrieve the GPIO state for a DIALOG 20 GPIO pin.

Syntax

```
EP EXP_D20MIC <EPN> GPIO_OUT2 <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MODE (1)	Use to enable or disable the use of this GPIO pin for showing mute states.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
STATE (2)	Use to retrieve the current GPIO pin state.	Read only. Return values: 0 for High 1 for Low	N/A	R

Example 1: MODE

This example shows how to enable the use of this GPIO pin for mute states on a D20 receiver channel named D20Rec1:

```
EP D20Rec1 GPIO_OUT2 MODE 1
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: STATE

This example shows how retrieve the state of this GPIO pin on a D20 receiver channel named D20Rec1:

```
EP D20Rec1 GPIO_OUT2 STATE
```

Output

PN	Output
MODE	`EP D20Rec1 GPIO_OUT2 MODE 1`
STATE	`EP D20Rec1 GPIO_OUT2 STATE 1`

EP-EXP_D20MIC (33) LEVEL (1)

You can use the EP command to change the level and source of a DIALOG 20 mic channel.

Syntax

```
EP EXP_D20MIC <EPN> LEVEL <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
LED (1)	Whether the LED light should be controlled normally or through GPIO connections.	1=Normal 2=GPIO Leave blank to retrieve current value	1	RW
LABEL (2)	Use to retrieve the channel label.	Read only.	N/A	R

Example 1: LED

This example shows how to specify that the LED light is controlled by GPIO connections for a EXP_D20MIC channel named D20Rec1:

```
EP D20Rec1 LEVEL LED 2
```

Example 2: LABEL

This example shows how to retrieve the label of a EXP_D20MIC channel:

```
EP EXP_D20MIC 101 LEVEL LABEL
```

Output

PN	Output
LED	`EP D20Rec1 LEVEL LED 2`
LABEL	`EP EXP_D20MIC 101 LEVEL LABEL D20Rec1`

EP-EXP_D20MIC (33) LOCATE (2)

You can use the EP command to locate a DIALOG 20 receiver attached to a CP2.

Syntax

```
EP EXP_D20MIC <EPN> LOCATE <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MODE (1)	Use to specify whether the Locate light should blink for the duration specified by TIMEOUT.	0=not blinking 1=blinking Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
TIMEOUT (2)	The amount of time, in minutes, the Locate LED blinks when turned on using MODE.	1-60	30	RW

Example 1: MODE

This example shows how to cause the LED light on a D20 receiver to blink:

```
EP D20Rec1 LOCATE MODE 1
```

Example 2: TIMEOUT

This example sets the amount of time the LED light blinks when executing a locate command to 15 minutes:

```
EP D20Rec1 LOCATE TIMEOUT 15
```

Output

PN	Output
MODE	`EP D20Rec1 LOCATE MODE 1`
TIMEOUT	`EP D20Rec1 LOCATE TIMEOUT 15`

EP-EXP_D20MIC (33) RECEIVER (5)

You can use the EP command to configure DIALOG 20 receiver settings.

Syntax

`EP EXP_D20MIC <EPN> RECEIVER <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
OLED_DISPLAY_ MODE (2)	The LED display mode.	1=Always bright 2=Bright while syncing with transmitter 3=Bright while transmitter is on Leave blank to retrieve current value		RW

PN	Description	Value	Default	RW
OLED_TIMER (3)	The amount of time the LED light remains bright if not active. **Note:** This option applies only if you have chosen option 2 or 3 for the OLED_DISPLAY_MODE paramter.	Number of minutes (1-60). Leave blank to retrieve current value	1	RW
MIXED_OUTPUT_ MUTE (5)	Use to mute the mixed output signal from the receiver, affecting all audio output from that receiver.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
MIXED_OUTPUT_ LEVEL (6)	Use to adjust the gain for the mixed output signal.	-100 to 0 dB in increments of 1. Leave blank to retrieve current value	0	RW

Example 1: OLED_DISPLAY_MODE

This example shows how to have the LED light on a receiver be bright only while a transmitter is on:

```
EP D20Rec1 RECEIVER OLED_DISPLAY_MODE 3
```

Example 2: OLED_TIMER

This example shows how to have the LED light dim after two minutes after the transmitter goes off (assuming you have sent the previous command to set the receiver LED to be on only when the transmitter is on):

```
EP D20Rec1 RECEIVER OLED_TIMER 2
```

Example 3: MIXED_OUTPUT_MUTE

This example shows how to mute the mixed output signal coming from a D20 receiver:

```
EP D20Rec1 RECEIVER MIXED_OUTPUT_MUTE 1
```

Example 4: MIXED_OUTPUT_LEVEL

This example shows how to set the output level of the mixed output signal of a D20 receiver to -10dB:

```
EP ChannelName RECEIVER MIXED_OUTPUT_LEVEL -10
```

Output

PN	Output
OLED_DISPLAY_MODE	`EP D20Rec1 RECEIVER OLED_DISPLAY_MODE 3`
OLED_TIMER	`EP D20Rec1 RECEIVER OLED_TIMER 2`
MIXED_OUTPUT_MUTE	`EP D20Rec1 RECEIVER MIXED_OUTPUT_MUTE 1`
MIXED_OUTPUT_LEVEL	`EP D20Rec1 RECEIVER MIXED_OUTPUT_LEVEL -10`

EP-EXP_D20MIC (33) SLOT1 (6)

You can use the EP command to change the settings for Slot 1 on a D20 receiver.

Syntax

`EP EXP_D20MIC <EPN> SLOT1 <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
NAME (1)	Change the Slot 1 name, as it appears on the front of the DIALOG 20 device LED panels.	A name. Can be up to 10 characters, and can include uppercase alphanumeric characters (A-Z and 0-9) and spaces. Leave blank to retrieve current value	N/A	RW

PN	Description	Value	Default	RW
RF_CHAN_NUM (2)	Use to set or retrieve the RF channel being used by the slot.	1-8=channel number Leave blank to retrieve current value **Note:** The default channel value is chosen based on the P-link position and slot number. If you have one DIALOG 20 attached, Slot 1 is given a default channel number of 1 and Slot 2 is given a default channel number of 2. If you have two DIALOG 20 devices attached, the second D20 attached, on the second device Slot 1 is assigned a default channel of 3 and Slot 2 is assigned a default channel of 4, and so on. **Note:** It's possible to assign conflicting channels, so if you're manually assigning channels, make sure channel assignments don't overlap.	See note under Value.	RW
TOUR_MODE (3)	Enables multiple receivers to receive audio from a single transmitter. **Note:** Works only if the specified transmitters are using the same key.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
KEY (4)	The key used for Tour Mode.	1-32 alphanumeric characters. Leave blank to retrieve current value	N/A	RW
OUTPUT_MUTE (5)	Use to mute the audio signal from this slot.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
OUTPUT_LEVEL (6)	Use to adjust the gain for the audio signal from this slot.	-100 to 0 dB in increments of 1. Leave blank to retrieve current value	0	RW

Example 1: NAME

This example shows how to set the slot 1 name to CONF_D20_S1 for a channel named D20Rec1:

```
EP D20Rec1 SLOT1 NAME CONF_D20_S1
```

Example 2: RF_CHAN_NUM

This example shows how to set the RF channel to 5 for slot 1 of a D20 receiver with a channel name of D20Rec1:

```
EP D20Rec1 SLOT1 RF_CHAN_NUM 5
```

Example 3: TOUR_MODE

This example shows how to enable Tour Mode for slot 1 of a D20 receiver with a channel name of D20Rec1:

```
EP D20Rec1 SLOT1 TOUR_MODE 1
```

Example 4: KEY

This example shows how to set the key value for use in Tour Mode for slot 1 of a D20 receiver with a channel name of D20Rec1:

```
EP D20Rec1 SLOT1 KEY MyKeyValue
```

Example 5: OUTPUT_MUTE

This example shows how to mute the audio signal for slot 1 of a D20 receiver with a channel name of D20Rec1:

```
EP D20Rec1 SLOT1 OUTPUT_MUTE 1
```

Example 6: OUTPUT_LEVEL

This example shows how to adjust the gain by -10 of the audio signal for slot 1 of a D20 receiver with a channel name of D20Rec1:

```
EP D20Rec1 SLOT1 OUTPUT_LEVEL -10
```

Output

PN	Output
NAME	`EP D20Rec1 SLOT1 NAME CONF_D20_S1`
RF_CHAN_NUM	`EP D20Rec1 SLOT1 RF_CHAN_NUM 5`
TOUR_MODE	`EP D20Rec1 SLOT1 TOUR_MODE 1`
KEY	`EP D20Rec1 SLOT1 KEY MyKeyValue`
OUTPUT_MUTE	`EP D20Rec1 SLOT1 OUTPUT_MUTE 1`
OUTPUT_LEVEL	`EP D20Rec1 SLOT1 OUTPUT_LEVEL -10`

EP-EXP_D20MIC (33) SLOT2 (6)

You can use the EP command to change the settings for Slot 2 on a D20 receiver.

Syntax

`EP EXP_D20MIC <EPN> SLOT2 <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
NAME (1)	Change the Slot 2 name.	A name. Can be up to 10 characters, and can include uppercase alphanumeric characters (A-Z and 0-9) and spaces. Leave blank to retrieve current value	N/A	RW

PN	Description	Value	Default	RW
RF_CHAN_NUM (2)	Use to set or retrieve the RF channel being used by the slot.	1-8=channel number Leave blank to retrieve current value **Note:** The default channel value is chosen based on the P-link position and slot number. If you have one DIALOG 20 attached, Slot 1 is given a default channel number of 1 and Slot 2 is given a default channel number of 2. If you have two DIALOG 20 devices attached, the second D20 attached, on the second device Slot 1 is assigned a default channel of 3 and Slot 2 is assigned a default channel of 4, and so on. **Note:** It's possible to assign conflicting channels, so if you're manually assigning channels, be sure to make sure channel assignments don't overlap.	See note under Value.	RW
TOUR_MODE (3)	Enables multiple receivers to receive audio from asingle transmitter. **Note:** Works only if the specified transmitters are using the same key.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
KEY (4)	The key used for Tour Mode.	1-32 alphanumeric characters. Leave blank to retrieve current value	N/A	RW

PN	Description	Value	Default	RW
OUTPUT_MUTE (5)	Use to mute the audio signal from this slot.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
OUTPUT_LEVEL (6)	Use to adjust the gain for the audio signal from this slot.	-100 to 0 dB in increments of 1. Leave blank to retrieve current value	0	RW

Example 1: NAME

This example shows how to set the slot 2 name to CONF_D20_S2 for a channel named D20Rec1:

```
EP D20Rec1 SLOT2 NAME CONF_D20_S2
```

Example 2: RF_CHAN_NUM

This example shows how to set the RF channel to 5 for slot 2 of a D20 receiver with a channel name of D20Rec1:

```
EP D20Rec1 SLOT2 RF_CHAN_NUM 5
```

Example 3: TOUR_MODE

This example shows how to enable Tour Mode for slot 2 of a D20 receiver with a channel name of D20Rec1:

```
EP D20Rec1 SLOT2 TOUR_MODE 1
```

Example 4: KEY

This example shows how to set the key value for use in Tour Mode for slot 2 of a D20 receiver with a channel name of D20Rec1:

```
EP D20Rec1 SLOT2 KEY MyKeyValue
```

Example 5: OUTPUT_MUTE

This example shows how to mute the audio signal for slot 2 of a D20 receiver with a channel name of D20Rec1:

```
EP D20Rec1 SLOT2 OUTPUT_MUTE 1
```

Example 6: OUTPUT_LEVEL

This example shows how to adjust the gain by -10 of the audio signal for slot 2 of a D20 receiver with a channel name of D20Rec1:

```
EP D20Rec1 SLOT2 OUTPUT_LEVEL -10
```

Output

PN	Output
NAME	`EP D20Rec1 SLOT2 NAME CONF_D20_S2`
RF_CHAN_NUM	`EP D20Rec1 SLOT2 RF_CHAN_NUM 5`
TOUR_MODE	`EP D20Rec1 SLOT2 TOUR_MODE 1`

PN	Output
KEY	`EP D20Rec1 SLOT2 KEY MyKeyValue`
OUTPUT_MUTE	`EP D20Rec1 SLOT2 OUTPUT_MUTE 1`
OUTPUT_LEVEL	`EP D20Rec1 SLOT2 OUTPUT_LEVEL -10`

EP-EXP_D20MIC (33) UNIT (4)

You can use the EP command to retrieve information about a DIALOG 20 receiver.

Syntax

`EP EXP_D20MIC <EPN> UNIT <PN>`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MODEL (1)	Retrieve the model number.	Read only.	N/A	R
SN (2)	Retrieve the serial number.	Read only.	N/A	R
PCB_NUMBER (3)	Retrieve the PCB number.	Read only.	N/A	R
TEMP (4)	Retrieve the temperature.	Read only.	N/A	R

Example 1: MODEL

This example shows how to retrieve the model number of an EXP_D20MIC channel named D20Rec1:

```
EP D20Rec1 UNIT MODEL
```

Example 2: SN

This example shows how to retrieve the serial number of an EXP_D20MIC channel named D20Rec1:

```
EP D20Rec1 UNIT SN
```

Example 3: PCB_NUMBER

This example shows how to retrieve the PCB number of an EXP_D20MIC channel named D20Rec1:

```
EP D20Rec1 UNIT PCB_NUMBER
```

Example 4: TEMP

This example shows how to retrieve the temperature of an EXP_D20MIC channel named D20Rec1:

```
EP D20Rec1 UNIT TEMP
```

Output

PN	Output
MODEL	`EP D20Rec1 UNIT MODEL BLANK`
SN	`EP D20Rec1 UNIT SN 0133-1707-01`
PCB_NUMBER	`EP D20Rec1 UNIT PCB_NUMBER 1.2`
TEMP	`EP D20Rec1 UNIT TEMP 32.75`

EP-EXP_D20MIC (33) VERSION (3)

You can use the EP command to retrieve firmware version information of a DIALOG 20 receiver.

Syntax

`EP EXP_D20MIC <EPN> VERSION <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
FPGA (2)	Retrieve the FPGA (or MUX) firmware version.	Read only.	N/A	R
APP_RX_MASTER (3)	Retrieve the RX master (or RXM) firmware version.	Read only.	N/A	R
APP_RX_SLAVE (4)	Retrieve the RX slave (or RXS) firmware version.	Read only.	N/A	R

Example 1: FPGA

This example shows how to retrieve the FPGA version of a D20 Receiver with a channel named D20Rec1:

```
EP D20Rec1 VERSION FPGA
```

Example 2: APP RX MASTER

This example shows how to retrieve the master firmware version of a D20 Receiver with a channel named D20Rec1:

```
EP D20Rec1 VERSION APP_RX_MASTER
```

Example 3: APP RX SLAVE

This example shows how to retrieve the slave firmware version of a D20 Receiver with a channel named D20Rec1:

```
EP Mic1 VERSION APP_RX_SLAVE 21
```

Output

PN	Output
FPGA	`EP D20Rec1 VERSION FPGA 2.3`
APP_RX_MASTER	`EP D20Rec1 VERSION APP_RX_MASTER 1.6.5`
APP_RX_SLAVE	`EP D20Rec1 VERSION APP_RX_SLAVE 1.4.1`

EXP_GPIO

EP-EXP_GPIO (35) EXP (6)

You can use the EP command to retrieve the serial number of a GPIO expander.

Syntax

`EP EXP_GPIO <EPN> EXP <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
SN (1)	Returns the device serial number.	Read only.	N/A	R

Example 1: SN

This example shows how to retrieve the serial number of a GPIO Expander with the channel name GPIOExp1:

```
EP GPIOExp1 EXP SN
```

Output

PN	Output
SN	`EP ChannelName EXP SN 0167-1740-08`

EP-EXP_GPIO (35) LEVEL (1)

You can use the EP command to retrieve information about a GPIO Expander unit.

Syntax

`EP EXP_GPIO <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
LED (1)	Whether the LED light is on.	0=Off 1=On	N/A	R

Example 1: LED

This example shows how to find out whether the LED light is on for a GPIO expander with the channel name GPIOExp1:

```
EP GPIOExp1 LEVEL LED
```

Output

PN	Output
LED	`EP GPIOExp1 LEVEL LED 1`

EP-EXP_GPIO (35) LOCATE (4)

You can use the EP command to locate a GPIO Expander unit by having its LED light blink.

Syntax

`EP EXP_GPIO <EPN> LOCATE <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MODE (1)	Use to specify whether the Locate light should blink for the duration specified by TIMEOUT.	0=not blinking 1=blinking	0	RW

PN	Description	Value	Default	RW
TIMEOUT (2)	The amount of time, in minutes, the Locate LED blinks when turned on using MODE.	1-60	30	RW

Example 1: MODE

This example shows how to turn on the locate mode for a GPIO Expander with the channel name GPIOExp1:

```
EP GPIOExp1 LOCATE MODE 1
```

Example 2: TIMEOUT

This example shows how to set the LED blink time to 30 minutes when the LOCATE command is used:

```
EP GPIOExp1 LOCATE TIMEOUT 30
```

Output

PN	Output
MODE	`EP ChannelName LOCATE MODE 1`
TIMEOUT	`EP ChannelName LOCATE TIMEOUT 30`

EP-EXP_GPIO (35) SERIAL_PORT (2)

Use these commands to set the baud rate or retrieve the serial port settings for a particular GPIO Expander.

Syntax

`EP EXP_GPIO <EPN> SERIAL_PORT <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RWC
BAUD_RATE (1)	Baud rate.	Possible values: 9600, 19200, 38400, 57600, 115200	57600	RW
DATA_BITS (2)	Data bits.	Read only.	8	R
STOP_BITS (3)	Stop bits.	Read only.	1	R
PARITY (4)	Parity.	Read only.	0	R
FLOW_CONTROL (5)	Flow control.	Read only.	0	R

PN	Description	Value	Default	RWC
ECHO (6)	Echo.	Read only.	0	R

Example 1: BAUD_RATE

The following example sets the baud rate for a GPIO Expander unit with a channel named GPIOExp1:

```
EP GPIOExp1 SERIAL_PORT BAUD_RATE 115200
```

Example 2: DATA_BITS

The following example retrieves the data bits for a GPIO Expander unit with a channel named GPIOExp1:

```
EP GPIOExp1 SERIAL_PORT DATA_BITS
```

Example 3: STOP_BITS

The following example retrieves the stop bits for a GPIO Expander unit with a channel named GPIOExp1:

```
EP GPIOExp1 SERIAL_PORT STOP_BITS
```

Example 4: PARITY

The following example retrieves the parity for a GPIO Expander unit with a channel named GPIOExp1:

```
EP GPIOExp1 SERIAL_PORT PARITY
```

Example 5: FLOW_CONTROL

The following example retrieves the flow control for a GPIO Expander unit with a channel named GPIOExp1:

```
EP GPIOExp1 SERIAL_PORT FLOW_CONTROL
```

Example 6: ECHO

The following example retrieves the echo state value for a GPIO Expander unit with a channel named GPIOExp1:

```
EP GPIOExp1 SERIAL_PORT ECHO
```

Output

PN	Output
BAUD_RATE	`EP GPIOExp1 SERIAL_PORT BAUD_RATE 115200`
DATA_BITS	`EP GPIOExp1 SERIAL_PORT DATA_BITS 8`
STOP_BITS	`EP GPIOExp1 SERIAL_PORT STOP_BITS 1`
PARITY	`EP GPIOExp1 SERIAL_PORT PARITY 0`
FLOW_CONTROL	`EP GPIOExp1 SERIAL_PORT FLOW_CONTROL 0`
ECHO	`EP GPIOExp1 SERIAL_PORT ECHO 0`

EP-EXP_GPIO (35) UNIT (3)

You can use the EP command to retrieve the serial number of a GPIO expander.

Syntax

```
EP EXP_GPIO <EPN> UNIT <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
SN (2)	Retrieve the serial number.	Read only	N/A	R

Example 1: SN

This example shows how to retrieve the serial number of a GPIO Expander with the channel name of GPIOExp1:

```
EP GPIOExp1 UNIT SN
```

Output

PN	Output
SN	`EP ChannelName UNIT SN 1 0167-1740-08`

EP-EXP_GPIO (35) VERSION (5)

You can use the EP command to retrieve information about the firmware of a GPIO expander.

Syntax

`EP EXP_GPIO <EPN> VERSION <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MDO (1)	Retrieve the MDO version.	N/A	N/A	R

Example 1: MDO

This example shows how to retrieve the MDO version for a GPIO expander unit with the channel name GPIOExp1:

```
EP GPIOExp1 VERSION MDO
```

Output

PN	Output
MDO	`EP GPIOExp1 VERSION MDO 1.0.2.6`

EXP_USB

EP-EXP_USB (34) LEVEL (1)

You can use the EP command to retrieve the label of a EXP_USB channel (which corresponds to a USB expander device).

Syntax

`EP EXP_USB <EPN> LEVEL <PN>`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
LABEL (2)	Use to retrieve the channel label.	Read only.	N/A	R

Example 1: LABEL

This example shows how to retrieve the label of a EXP_USB channel:

```
EP EXP_USB 101 LEVEL LABEL
```

Output

PN	Output
LABEL	`EP EXP_USB 101 LEVEL LABEL USBExp1`

EP-EXP_USB (34) LOCATE (4)

You can use the EP command to locate a USB Expander attached to a CP2.

Syntax

`EP EXP_USB <EPN> LOCATE <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MODE (1)	Use to specify whether the Locate light should blink for the duration specified by TIMEOUT.	0=not blinking 1=blinking Leave blank to retrieve current value	0	RW
TIMEOUT (2)	The amount of time, in minutes, the Locate LED blinks when turned on using MODE.	1-60	30	RW

Example 1: MODE

This example shows how to cause the LED light on a USB Expander with a channel name of USBExp1 to blink:

```
EP USBExp1 LOCATE MODE 1
```

Example 2: TIMEOUT

This example sets the amount of time the LED light blinks when executing a locate command to 15 minutes:

```
EP USBExp1 LOCATE TIMEOUT 15
```

Output

PN	Output
MODE	`EP USBExp1 LOCATE MODE 1`
TIMEOUT	`EP USBExp1 LOCATE TIMEOUT 15`

EP-EXP_USB (34) SERIAL_PORT (2)

Use this command to retrieve or change the serial port settings for a USB Expander device.

Note:

The serial port settings are for pass-through of serial port information via the Euroblock connector on the device.

Syntax

```
EP EXP_USB <EPN> SERIAL_PORT <PN>
```

Input

PN	Description	Value	Default	RWC
BAUD_RATE (1)	Baud rate.	Possible value: 9600, 19200, 38400, 57600, 115200 Leave blank to retrieve current value	57600	RW

PN	Description	Value	Default	RWC
DATA_BITS (2)	Data bits.	Read only.	8	R
STOP_BITS (3)	Stop bits.	Read only.	1	R
PARITY (4)	Parity.	Read only.	0	R
FLOW_CONTROL (5)	Flow control.	Read only.	0	R
ECHO (6)	Echo.	Read only.	0	R
ENABLE (7)	Enable the serial port.	0 to disable 1 to enable Leave blank to retrieve current value	0	RW

Example 1: BAUD_RATE

The following example sets the baud rate for a EXP_USB channel named USBExp1:

```
EP USBExp1 SERIAL_PORT BAUD_RATE 115200
```

Example 2: DATA_BITS

The following example retrieves the data bits state value for a EXP_USB channel named USBExp1:

```
EP USBExp1 SERIAL_PORT DATA_BITS
```

Example 3: STOP_BITS

The following example retrieves the stop bits state value for a EXP_USB channel named USBExp1:

```
EP USBExp1 SERIAL_PORT STOP_BITS
```

Example 4: PARITY

The following example retrieves the parity state value for a EXP_USB channel named USBExp1:

```
EP USBExp1 SERIAL_PORT PARITY
```

Example 5: FLOW_CONTROL

The following example retrieves the flow control state value for a EXP_USB channel named USBExp1:

```
EP USBExp1 SERIAL_PORT FLOW_CONTROL
```

Example 6: ECHO

The following example retrieves the echo state value for a EXP_USB channel named USBExp1:

```
EP USBExp1 SERIAL_PORT ECHO
```

Example 6: ENABLE

The following example shows how to enable the serial port for a EXP_USB channel named USBExp1:

```
EP USBExp1 SERIAL_PORT ENABLE 1
```

Output

PN	Output
BAUD_RATE	`EP USBExp1 SERIAL_PORT BAUD_RATE 115200`
DATA_BITS	`EP USBExp1 SERIAL_PORT DATA_BITS 8`
STOP_BITS	`EP USBExp1 SERIAL_PORT STOP_BITS 1`

PN	Output
PARITY	`EP USBExp1 SERIAL_PORT PARITY 0`
FLOW_CONTROL	`EP USBExp1 SERIAL_PORT FLOW_CONTROL 0`
ECHO	`EP USBExp1 SERIAL_PORT ECHO 0`
ENABLE	`EP USBExp1 SERIAL_PORT ENABLE 1`

EP-EXP_USB (34) UNIT (3)

You can use the EP command to retrieve information about a USB Expander.

Syntax

`EP EXP_USB <EPN> UNIT <PN>`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MODEL (1)	Retrieve the model number.	Read only.	N/A	R
SN (2)	Retrieve the serial number.	Read only.	N/A	R
PCB_NUMBER (3)	Retrieve the PCB number.	Read only.	N/A	R

Example 1: MODEL

This example shows how to retrieve the model number of an EXP_USB channel named USBExp1:

```
EP USBExp1 UNIT MODEL
```

Example 2: SN

This example shows how to retrieve the serial number of an EXP_USB channel named USBExp1:

```
EP USBExp1 UNIT SN
```

Example 3: PCB_NUMBER

This example shows how to retrieve the PCB number of an EXP_USB channel named USBExp1:

```
EP USBExp1 UNIT PCB_NUMBER
```

Output

PN	Output
MODEL	`EP USBExp1 UNIT MODEL BLANK`
SN	`EP USBExp1 UNIT SN 0144-1227-01`

PN	Output
PCB_NUMBER	`EP USBExp1 UNIT PCB_NUMBER 1.0`

EP-EXP_USB (34) VERSION (5)

You can use the EP command to retrieve firmware version information of a USB Expander.

Syntax

`EP EXP_USB <EPN> VERSION <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
APP (2)	Retrieve the APP firmware version.	Read only.	N/A	R
FPGA (3)	Retrieve the FPGA firmware version.	Read only.	N/A	R

Example 1: APP

This example shows how to retrieve the APP firmware version of a USB Expander with a channel named USBExp1:

```
EP USBExp1 VERSION APP
```

Example 2: FPGA

This example shows how to retrieve the FPGA firmware version of a USB Expander with a channel named USBExp1:

```
EP USBExp1 VERSION FPGA
```

Output

PN	Output
APP	`EP USBExp1 VERSION APP 1.0.1.42`
FPGA	`EP USBExp1 VERSION FPGA 9/6/1.12`

FADER

EP-FADER (10) LEVEL (1)

You can use the EP command to change the level of a fader channel.

Syntax

`EP FADER <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain.	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MUTE (2)	Mute.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
MAX_GAIN (3)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	20	RW
MIN_GAIN (4)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	-65	RW

Example 1: GAIN

This example shows how to change the gain level of a Fader channel with the label ChannelName:

```
EP ChannelName LEVEL GAIN 5.5
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute the level of a Fader channel with the label ChannelName:

```
EP ChannelName LEVEL MUTE 1
```

Output

PN	Output
GAIN	`EP ChannelName LEVEL GAIN 5.5`
MUTE	`EP ChannelName LEVEL MUTE 1`

GPIO

EP-GPIO (21) PIN (1)

You can use the EP command to change or retrieve the settings for GPIO pins.

Syntax

`EP GPIO <EPN> PIN <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MODE (1)	Set the GPIO pin mode.	1 for Input 2 for Out Digital 3 for Open Collector 4 for Analog Leave blank to retrieve current value	1	RW

PN	Description	Value	Default	RW
STATE (2)	Set the state of a GPIO pin.	0 for High 1 for Low **Note:** If the MODE is set to Input (1) or Analog (4), this parameter is Read Only. If the MODE is set to Analog (4), the output is a hex value between 0 and FFFF. Leave blank to retrieve current value	0	RW

Example 1: MODE

This example shows how to set GPIO pin 1 to input mode:

```
EP GPIO 1 PIN MODE 1
```

Example 1: STATE

This example shows how to set the state for GPIO pin 1 to low:

```
EP GPIO 1 PIN STATE 1
```

Output

PN	Output
MODE	`EP GPIO 1 PIN MODE 1`
STATE	`EP GPIO 1 PIN STATE 1`

MIC

EP-MIC (1) AEC (2)

You can use the EP command to manage the Acoustic Echo Cancellation (AEC) of a microphone.

Syntax

`EP MIC <EPN> AEC <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Values	Default	RW
ENABLE (1)	Enable AEC.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
NLP (2)	Set non-linear processing (NLP). NLP increases the power of echo cancellation for difficult acoustical environments. **Note:** Use NLP with care, as there are corresponding trade-offs associated with NLP, including suppression and half-duplex audio.	0 to disable 1 for soft 2 for medium 3 for aggressive Leave blank to retrieve current value	0	RW
PTT (3)	Enable Push-to-Talk.	0 to disable 1 to enable Leave blank to retrieve current value	0	RW
PTT_THR (4)	Set the Push-to-Talk threshold.	-120 to 0 in increments of 0.5.	-50	RW

Example 1: ENABLE

This example shows how to enable AEC on a MIC channel with the label ChannelName:

```
EP ChannelName AEC ENABLE 1
```

Example 2: NLP

This example shows how to set NLP to aggressive for a MIC channel with the label ChannelName:

```
EP ChannelName AEC NLP 3
```

Example 3: PTT

This example shows how to enable Push-to-Talk for a MIC channel with the label ChannelName:

```
EP ChannelName AEC PTT 1
```

Example 4: PTT_THR

This example shows how to set the Push-to-Talk threshold for a MIC channel with the label ChannelName:

```
EP ChannelName AEC PTT_THR -30
```

Output

PN	Output
ENABLE	`EP ChannelName AEC ENABLE 1`
NLP	`EP ChannelName AEC NLP 3`
PTT	`EP ChannelName AEC PTT 1`
PTT_THR	`EP ChannelName AEC PTT_THR -30`

EP-MIC (1) AGC (4)

You can use the EP command to configure the Automatic Gain Control (AGC) settings of a microphone. AGC keeps an input signal at a target gain level.

Syntax

`EP MIC<EPN>AGC <PN>[VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain.	0 to 18dB range in increments of 0.5 Leave blank to retrieve current value	6	RW
TARGET_LEVEL (2)	Target Level sets the dB level for AGC to maintain.	-30 to 20, in increments of 0.5 Leave blank to retrieve current value	0	RW
RESPONSE_TIME (3)	Response Time sets the amount of time (in ms) over which the level is averaged before AGC is enable or disabled, to keep the gain from seeming too abrupt.	100 to 10000 in increments of 1 Leave blank to retrieve current value	2000	RW

PN	Description	Value	Default	RW
THRESHOLD (4)	Threshold sets the dB level at which AGC engages.	-50dB to 0dB, in increments of 0.5. Setting the Threshold above the background noise level will prevent AGC from amplifying background noise. Leave blank to retrieve current value	-25	RW

Example 1: GAIN

This example shows how to indicate the amount of gain control for a MIC channel with the label ChannelName:

```
EP ChannelName AGC GAIN 11.5
```

Example 2: TARGET_LEVEL

This example shows how to set the gain control target level for a MIC channel with the label ChannelName:

```
EP ChannelName AGC TARGET_LEVEL -5.5
```

Example 3: RESPONSE_TIME

This example shows how to set the gain control response time for a MIC channel with the label ChannelName:

```
EP ChannelName AGC RESPONSE_TIME 8562.0
```

Example 4: THRESHOLD

This example shows how to set the gain control threshold for a MIC channel with the label ChannelName:

```
EP ChannelName AGC THRESHOLD -30.5
```

Output

PN	Output
GAIN	`EP ChannelName AGC GAIN 11.5`
TARGET_LEVEL	`EP ChannelName AGC TARGET_LEVEL -5.5`
RESPONSE_TIME	`EP ChannelName AGC RESPONSE_TIME 8562.0`
THRESHOLD	`EP ChannelName AGC THRESHOLD -30.5`

EP-MIC (1) AGC_ALC (5)

You can use the EP command to turn on either automatic gain control (AGC) or automatic level control (ALC) for a microphone. AGC and ALC both try to keep a signal at a target level, but AGC can do so within greater ranges and with more refined controls. ALC can make only up to 6db adjustments to a signal, but can respond more quickly and aggressively to variations. AGC is generally used for line-level inputs, and ALC is generally used for mic-level inputs.

Note:

AGC settings are adjusted using the EP MIC AGC command/parameter.

Syntax

```
EP MIC <EPN> AGC_ALC <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MODE (1)	AGC/ALC mode.	0 for off 1 for AGC 2 for ALC Leave blank to retrieve current value	0	RW

Example 1: MODE

This example shows how to turn on automatic gain control for a MIC channel with the label ChannelName:

```
EP ChannelName AGC_ALC MODE 1
```

Output

PN	Output
MODE	`EP ChannelName AGC_ALC MODE 1`

EP-MIC (1) FILTER_1 (7)

You can use the EP command to configure the Filter_1 settings of a microphone channel.

Note:

You can also use the FILTER command to change filter settings. ClearOne recommends the use of the FILTER command. See *FILTER* for more information.

Syntax

```
EP MIC <EPN> FILTER_1 <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
TYPE (1)	Select a filter type. **Note:** You must send this parameter first, because when you send this parameter, the rest of the filter settings are set to their default values.	Allowable filter types are: 0 (filter is off) 1 (all pass) 2 (low pass) 3 (high pass) 4 (low shelving) 5 (high shelving) 6 (parametric equalizer) 7 (CD horn) 8 (Bessel crossover) 9 (Butterworth crossover) 10 (Linkwitz-Riley crossover) 11 (notch) Leave blank to retrieve current value	0	RW
FCY (2)	Set the center frequency (in Hz).	20 to 20000 in increments of 0.01 Leave blank to retrieve current value	1000	RW
GAIN (3)	Set the gain value. **Note:** Applies only to type 4, low shelving, type 5, high shelving, and type 6, parametric equalizer.	-15 to 15 in increments of 0.01 Leave blank to retrieve current value	0	RW
SLOPE (4)	Set the slope value. **Note:** Applies only to the crossover filter types (8, 9, and 10).	12 to 24 in increments of 6.	18	RW
SFT (5)	Set the Slope Filter Type. **Note:** Applies only to the crossover filter types (8, 9, and 10).	2=low 3=high	2	RW

PN	Description	Value	Default	RW
BW (6)	Set the difference between the upper and lower points of a filter's audio pass band. **Note:** Applies only to type 6, parametric equalizer and type 11, notch.	0.05 to 5 in increments of 0.01 Leave blank to retrieve current value	0.33	RW
ENABLE (7)	Enable or disable this filter.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW

Example 1: TYPE

This example shows how to select a low pass filter type for FILTER_1 on a MIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 TYPE 1
```

Example 2: FCY

This example shows how to set the frequency to 5000 for FILTER_1 on a MIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 FCY 5000
```

Example 3: GAIN

This example shows how to set a gain value of 5.05 for FILTER_1 on a MIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 GAIN 5.05
```

Example 4: SLOPE

These examples show how to set the slope to 18 for FILTER_1 on a MIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 SLOPE 18
```

Example 5: SFT

This example shows how to set the slope filter type (SFT) to low for FILTER_1 on a MIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 SFT 2
```

Example 6: BW

This example shows how to set the bandwidth to 2.33 for FILTER_1 on a MIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 BW 2.33
```

Example 7: ENABLE

This example shows how to enable FILTER_1 on a MIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 ENABLE 1
```

Output

PN	Output
TYPE	`EP ChannelName FILTER_1 TYPE 1`
FCY	`EP ChannelName FILTER_1 FCY 5000`
GAIN	`EP ChannelName FILTER_1 GAIN 5.05`
SLOPE	`EP ChannelName FILTER_1 SLOPE 18`
SFT	`EP ChannelName FILTER_1 SFT 2`
BW	`EP ChannelName FILTER_1 BW 2.33`
ENABLE	`EP ChannelName FILTER_1 ENABLE 1`

EP-MIC (1) FILTER_2 (8)

The settings for this parameter are the same as for the MIC Filter_1 parameter.

Related reference

EP-MIC (1) FILTER_1 (7) on page 139

EP-MIC (1) FILTER_3 (9)

The settings for this parameter are the same as for the MIC Filter_1 parameter.

Related reference

EP-MIC (1) FILTER_1 (7) on page 139

EP-MIC (1) FILTER_4 (10)

The settings for this parameter are the same as for the MIC Filter_1 parameter.

Related reference

EP-MIC (1) FILTER_1 (7) on page 139

EP-MIC (1) GATING (6)

You can use the EP command to configure the gating control of a microphone. Gating controls the priority relationships in a group of microphones.

Syntax

`EP MIC<EPN>GATING <PN>[VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GROUP (1)	GROUP enables assignment of channels with same settings to up to eight (8) gating groups. **Note:** The preferred way to assign mics to a group is to use the GATEGROUP command.	1 to 8 Leave blank to retrieve current value	1	RW
NONE (2)	Assign the mic to a “None” gating group. **Note:** • If you have assigned a MIC channel to the NONE group and to a numbered group, the NONE group takes precedence. • The preferred way to assign mics to a group is to use the GATEGROUP command.	0 to disable 1 to enable 2 to toggle current state **Note:** Inputs are routed to Group 1 by default. Leave blank to retrieve current value	1	RW
MODE (3)	MODE allows you to configure group settings.	1 for First Mic Priority 2 for Max # of Mics 3 for Last Mic Mode Leave blank to retrieve current value	1	RW
CHAIRMAN (4)	Chairman override provides gating priority for selected channels over any other channel within the same group.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
PA_ADAPT (5)	Power Amplifier Adaptive automatically adjusts the ambient reference level to prevent the audio from gating on microphones.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
ADAPT_AMB (6)	Adapt Ambient automatically adjusts the ambient reference level as noise and room conditions change.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	1	RW
AMB_LEVEL (7)	Ambient Level lets you manually specify a fixed ambient level.	-80dB to 0dB, in increments of 0.5 Leave blank to retrieve current value	-40	RW
OFF_ATTEN (8)	Off Attenuation allows you to set the amount of level reduction applied to a channel when it is gated off.	-60dB to 0dB, in increments of 0.5. Leave blank to retrieve current value	12	RW
GATE_RATIO (9)	Gate Ratio allows you to specify how much louder the audio level must be than the ambient level before the channel automatically gates on.	-50dB to 0dB, in increments of 0.5. Leave blank to retrieve current value	15	RW
HOLD_TIME (10)	Hold Time allows you to determine how long the channel stays gated on after the audio falls below the Gate Ratio threshold.	-.1 to 8.0, in increments of 0.01. Leave blank to retrieve current value	0.3	RW
DECAY_RATE (11)	Decay Rate allows you to determine how fast a channel gates off after the Hold Time expires.	1 for slow (12dB/s) 2 for medium (25dB/s) 3 for fast (50dB/s) Leave blank to retrieve current value	2	RW

Example 1: GROUP

This example shows how to assign a MIC channel with the label ChannelName to Group 8:

```
EP ChannelName GATING GROUP 8
```

Example 2: NONE

This example shows how to assign a MIC channel with the label ChannelName to the NONE group:

```
EP ChannelName GATING NONE 1
```

Example 3: MODE

This example shows how to enable First Mic Priority on a MIC channel with the label ChannelName:

```
EP ChannelName GATING MODE 1
```

Example 4: CHAIRMAN

This example shows how to enable the Chairman feature on a MIC channel with the label ChannelName:

```
EP ChannelName GATING CHAIRMAN 1
```

Example 5: PA_ADAPT

This example shows how to enable the power amplifier adapt on a MIC channel with the label ChannelName:

```
EP ChannelName GATING PA_ADAPT 1
```

Example 6: AMB_ADAPT

This example shows how to enable ambient adapt on a MIC channel with the label ChannelName:

```
EP ChannelName GATING AMB_ADAPT 1
```

Example 7: AMB_TRK

This example shows how to adjust the ambient level on a MIC channel with the label ChannelName:

```
EP ChannelName GATING AMB_TRK -63.5
```

Example 8: OFF_ATTEN

This example shows how to set the amount of level reduction applied to a MIC channel with the label ChannelName, when gated off:

```
EP ChannelName GATING OFF_ATTEN -52.5
```

Example 9: GATE_RATIO

This example shows how to set the Gate Ratio on a MIC channel with the label ChannelName:

```
EP ChannelName GATING GATE_RATIO -40.5
```

Example 10: HOLD_TIME

This example shows how to set the Hold Time on a MIC channel with the label ChannelName:

```
EP ChannelName GATING HOLD_TIME 4.02
```

Example 11: DECAY_RATE

This example shows how to set the Decay Rate on a MIC channel with the label ChannelName:

```
EP ChannelName GATING DECAY_RATE 3
```

Output

PN	Output
GROUP	`EP ChannelName GATING GROUP 8`
NONE	`EP ChannelName GATING NONE 1`
MODE	`EP ChannelName GATING MODE 1`
CHAIRMAN	`EP ChannelName GATING CHAIRMAN 1`
PA_ADAPT	`EP ChannelName GATING PA_ADAPT 1`
AMB_ADAPT	`EP ChannelName GATING AMB_ADAPT 1`
AMB_TRK	`EP ChannelName GATING AMB_TRK -63.5`
OFF_ATTEN	`EP ChannelName GATING OFF_ATTEN -52.5`
GATE_RATIO	`EP ChannelName GATING GATE_RATIO -40.5`
HOLD_TIME	`EP ChannelName GATING HOLD_TIME 4.02`
DECAY_RATE	`EP ChannelName GATING DECAY_RATE 3`

EP-MIC (1) LEVEL (1)

You can use the EP command to change the level and source of a microphone channel.

Syntax

`EP MIC <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN_FINE (1)	Fine gain.	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MUTE (2)	Mute.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
PHAN_PWR (3)	Phantom power - 48V power option for microphone.	0 for power off 1 for power on	0	RW

PN	Description	Value	Default	RW
GAIN_COARSE (4)	Coarse gain.	Can be one of the following values: 0, 7, 14, 21, 28, 35, 41, 50, or 56. **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MAX_GAIN (7)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20 in increments of 0.5 Leave blank to retrieve current value	20	RW
MIN_GAIN (8)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20 in increments of 0.5 Leave blank to retrieve current value	-65	RW
DIG_SRC (9)	Whether the channel signal comes from the Mic connector (analog) or a digital channel (DANTE_RX or D20MIC). **Note:** Changing the source for this channel to a digital source means that the signal for this channel will come from the corresponding DANTE_RX or D20MIC channel rather than from the MIC port on the device. For example, if you set a MIC channel to be digital, using a Dante channel as a source, the channel will receive its signal from whichever Dante channel you specified.	Leave blank for Analog (using the Mic connector on the back panel) Specify a DANTE_RX or D20MIC channel label to indicate a digital source.	N/A	RW

Example 1: GAIN FINE

This example shows how to change the level of a MIC channel with the label Mic1 using fine gain:

```
EP Mic1 LEVEL GAIN_FINE 5.5
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute the level of a MIC channel with the label Mic1:

```
EP Mic1 LEVEL MUTE 1
```

Example 3: PHAN_PWR

This example shows how to switch off phantom power for a MIC channel with the label Mic1:

```
EP Mic1 LEVEL PHAN_PWR 0
```

Example 4: GAIN_COARSE

This example shows how to change the level of a MIC channel with the label Mic1 using fine gain:

```
EP Mic1 LEVEL GAIN_COARSE 21
```

Example 5: MAX_GAIN

This example shows how to set maximum gain for a MIC channel with the label Mic1:

```
EP Mic1 LEVEL MAX_GAIN 16.5
```

Example 6: MIN_GAIN

This example shows how to set minimum gain for a MIC channel with the label Mic1:

```
EP Mic1 LEVEL MIN_GAIN -32.5
```

Example 7: DIG_SRC

This example shows how to set a digital source (in this case a DANTE_RX channel with the label DanteChannel3) for a MIC channel with the label MIC1:

```
EP Mic1 LEVEL DIG_SRC DanteChannel3
```

Output

PN	Output
GAIN_FINE	`EP Mic1 LEVEL GAIN_FINE 5.5`
MUTE	`EP Mic1 LEVEL MUTE 1`
PHAN_PWR	`EP Mic1 LEVEL PHAN_PWR 0`
GAIN_COARSE	`EP Mic1 LEVEL GAIN_COARSE 21`
MAX_GAIN	`EP Mic1 LEVEL MAX_GAIN 16.5`
MIN_GAIN	`EP Mic1 LEVEL MIN_GAIN -32.5`
DIG_SRC	`EP Mic1 LEVEL DIG_SRC DanteChannel3`

EP-MIC (1) NC (3)

You can use the EP command to manage the Noise Cancellation (NC) of a microphone. Noise cancellation cancels background noise.

Syntax

`EP MIC <EPN> NC <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Enable noise cancellation.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
DEPTH (2)	Depth of noise cancellation.	6 to 25 in increments of 1 Leave blank to retrieve current value	6	RW

Example 1: ENABLE

This example shows how to enable NC on a MIC channel with the label ChannelName:

```
EP ChannelName NC ENABLE 1
```

Example 2: DEPTH

This example shows how to adjust the depth of noise suppression on a MIC channel with the label ChannelName:

```
EP ChannelName NC DEPTH 22
```

Output

PN	Output
ENABLE	`EP MIC 1 NC ENABLE 1`
DEPTH	`EP MIC 1 NC DEPTH 22`

EP-MIC (1) SIG_GEN (12)

You can use the EP command to specify the settings for a signal generator.

Syntax

`EP MIC <EPN> SIG_GEN <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be

defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
TYPE (1)	Specify the type of signal to generate.	1 for pink noise 2 for white noise 3 for tone 4 for logarithmic swept sine wave Leave blank to retrieve current value	1	RW
FCY (2)	Specify the signal frequency.	20 to 24000 in increments of 0.01 Leave blank to retrieve current value	1000	RW
ENABLE (3)	Specify whether to enable the signal generator.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
GAIN (4)	Signal gain. **Note:** Gain applies only to pink noise, white noise, and logarithmic.	-65 to 20, adjust in increments of 1 **Note:** If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW

Example 1: TYPE

This example shows how to specify a white noise signal generator signal type on a MIC channel with the label Mic1:

```
EP Mic1 SIG_GEN TYPE 2
```

Example 2: FCY

This example shows how to set the signal frequency on a signal generator on a MIC channel with the label Mic1:

```
EP Mic1 SIG_GEN FCY 1000
```

Example 3: ENABLE

This example shows how to enable the signal generator on a MIC channel with the label Mic1:

```
EP Mic1 SIG_GEN ENABLE 1
```

Example 4: GAIN

This example shows how to adjust the signal gain on a signal generator on a MIC channel with the label Mic1:

```
EP Mic1 SIG_GEN GAIN 5
```

Output

PN	Output
TYPE	`EP Mic1 SIG_GEN TYPE 2`
FCY	`EP Mic1 SIG_GEN FCY 1000`
ENABLE	`EP Mic1 SIG_GEN ENABLE 1`
GAIN	`EP Mic1 SIG_GEN GAIN 5`

OUTPUT

EP-OUTPUT (7) COMPRESSOR (9)

Allows the user to enable compression on an output channel based on configurable parameters.

Syntax

`EP OUTPUT <EPN> COMPRESSOR <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Turn on the compression feature.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
GROUP (2)	Use to add a compressor to a group, all of which are compressed in the same way when any of them is compressed.	0 to 4. 0 turns off grouping. Use 1-4 to specify one of those numbered groups. Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
POST_GAIN (3)	The target level, in dB, after compression has been applied.	0 to 20 in increments of 0.5 Leave blank to retrieve current value	0	RW
THRESHOLD (4)	The level at which the compressor is invoked, in dB.	-60 to 20 in increments of 0.5 Leave blank to retrieve current value	0	RW
ATTACK (5)	The signal reduction increment value, in dB, used to compress the signal.	0 to 100 in increments of 0.5 Leave blank to retrieve current value	10	RW
RATIO (6)	The rate of compression (the amount of compression applied relative to the amount that the threshold has been exceeded). Using a value of 1 means 1:1. Using a value of 20 means 1:20.	1 to 20 in increments of 1 Leave blank to retrieve current value	1	RW
RELEASE (7)	The duration of the compression period (the amount of time it takes to adjust the signal) in ms.	100 to 2000 in increments of 1 Leave blank to retrieve current value	500	RW
DELAY_ENABLE (8)	Specify that a delay occurs before compression begins.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
DELAY (9)	An amount of time, in ms, after the threshold is exceeded and before compression begins.	0 to 250 in increments of 0.5 Leave blank to retrieve current value	0	RW

Example 1: ENABLE

This example shows how to turn on compression for an OUTPUT channel with the label ChannelName:

```
EP ChannelName COMPRESSOR ENABLE 1
```

Example 2: GROUP

This example shows how to add an OUTPUT channel with the label ChannelName to compressor group 1:

```
EP ChannelName COMPRESSOR GROUP 1
```

Example 3: POST_GAIN

This example shows how to set the compression target level for an OUTPUT channel with the label ChannelName to 8:

```
EP ChannelName COMPRESSOR POST_GAIN 8
```

Example 4: THRESHOLD

This example shows how set the compression threshold for an OUTPUT channel with the label ChannelName to 37:

```
EP ChannelName COMPRESSOR THRESHOLD 37
```

Example 5: ATTACK

This example shows how to set the attack time for an OUTPUT channel with the label ChannelName to 16:

```
EP ChannelName COMPRESSOR ATTACK 16
```

Example 6: RATIO

This example shows how to set the an OUTPUT channel with the label ChannelName compression ratio to 1:

```
EP ChannelName COMPRESSOR RATIO 1
```

Example 7: RELEASE

This example shows how to set the an OUTPUT channel with the label ChannelName release value to 200:

```
EP ChannelName COMPRESSOR RELEASE 200
```

Example 8: DELAY_ENABLE

This example shows how to turn on compression delay for an OUTPUT channel with the label ChannelName:

```
EP ChannelName COMPRESSOR DELAY_ENABLE 1
```

Example 9: DELAY

This example shows how to set the compression delay to 50 for an OUTPUT channel with the label ChannelName:

```
EP ChannelName COMPRESSOR DELAY 50
```

Output

PN	Output
ENABLE	`EP ChannelName COMPRESSOR ENABLE 1`
GROUP	`EP ChannelName COMPRESSOR GROUP 1`
POST_GAIN	`EP ChannelName COMPRESSOR POST_GAIN 8`
THRESHOLD	`EP ChannelName COMPRESSOR THRESHOLD 37`
ATTACK	`EP ChannelName COMPRESSOR ATTACK 16`
RATIO	`EP ChannelName COMPRESSOR RATIO 1`
RELEASE	`EP ChannelName COMPRESSOR RELEASE 200`
DELAY_ENABLE	`EP ChannelName COMPRESSOR DELAY_ENABLE 1`
DELAY	`EP ChannelName COMPRESSOR DELAY 50`

EP-OUTPUT (7) DELAY (8)

You can use the EP command to set a signal delay value for an output end point.

Syntax

`EP OUTPUT<EPN> DELAY<PN>[VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Turn on delay.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
VALUE (2)	Set the amount of the delay in ms.	0 to 250 in increments of 0.5. Leave blank to retrieve current value	0	RW

Example 1: ENABLE

This example shows how to turn on delay for an OUTPUT channel with the label ChannelName:

```
EP ChannelName DELAY ENABLE 1
```

Example 2: VALUE

This example shows how to set the delay on an OUTPUT channel with the label ChannelName:

```
EP ChannelName DELAY VALUE 100
```

Output

PN	Output
ENABLE	`EP ChannelName DELAY ENABLE 1`
VALUE	`EP ChannelName DELAY VALUE 100`

EP-OUTPUT (7) FILTER_1 (2)

You can use the EP command to configure the Filter_1 settings of an output end point.

Note:

You can also use the FILTER command to change filter settings. ClearOne recommends the use of the FILTER command. See *FILTER* for more information.

Syntax

`EP OUTPUT <EPN> FILTER_1 <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
TYPE (1)	Select a filter type. **Note:** You must send this parameter first, because when you send this parameter, the rest of the filter settings are set to their default values.	Allowable filter types are: 0 (filter is off) 1 (all pass) 2 (low pass) 3 (high pass) 4 (low shelving) 5 (high shelving) 6 (parametric equalizer) 7 (CD horn) 8 (Bessel crossover) 9 (Butterworth crossover) 10 (Linkwitz-Riley crossover) 11 (notch) Leave blank to retrieve current value	0	RW
FCY (2)	Set the center frequency (in Hz).	20 to 20000 in increments of 0.01 Leave blank to retrieve current value	1000	RW
GAIN (3)	Set the gain value. **Note:** Applies only to type 4, low shelving, type 5, high shelving, and type 6, parametric equalizer.	-15 to 15 in increments of 0.01 Leave blank to retrieve current value	0	RW
SLOPE (4)	Set the slope value. **Note:** Applies only to the crossover filter types (8, 9, and 10).	12 to 24 in increments of 6.	18	RW

PN	Description	Value	Default	RW
SFT (5)	Set the Slope Filter Type. **Note:** Applies only to the crossover filter types (8, 9, and 10).	2=low 3=high	2	RW
BW (6)	Set the difference between the upper and lower points of a filter's audio pass band. **Note:** Applies only to type 6, parametric equalizer and type 11, notch.	0.05 to 5 in increments of 0.01 Leave blank to retrieve current value	0.33	RW
ENABLE (7)	Enable or disable this filter.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW

Example 1: TYPE

This example shows how to select a low pass filter type for FILTER_1 on a MIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 TYPE 1
```

Example 2: FCY

This example shows how to set the frequency to 5000 for FILTER_1 on a MIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 FCY 5000
```

Example 3: GAIN

This example shows how to set a gain value of 5.05 for FILTER_1 on a MIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 GAIN 5.05
```

Example 4: SLOPE

These examples show how to set the slope to 18 for FILTER_1 on a MIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 SLOPE 18
```

Example 5: SFT

This example shows how to set the slope filter type (SFT) to low for FILTER_1 on a MIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 SFT 2
```

Example 6: BW

This example shows how to set the bandwidth to 2.33 for FILTER_1 on a MIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 BW 2.33
```

Example 7: ENABLE

This example shows how to enable FILTER_1 on a MIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 ENABLE 1
```

Output

PN	Output
TYPE	`EP ChannelName FILTER_1 TYPE 1`
FCY	`EP ChannelName FILTER_1 FCY 5000`
GAIN	`EP ChannelName FILTER_1 GAIN 5.05`
SLOPE	`EP ChannelName FILTER_1 SLOPE 18`
SFT	`EP ChannelName FILTER_1 SFT 2`
BW	`EP ChannelName FILTER_1 BW 2.33`
ENABLE	`EP ChannelName FILTER_1 ENABLE 1`

EP-OUTPUT (7) FILTER_2 (3)

The settings for this parameter are the same as for the OUTPUT Filter_1 parameter.

Related reference

EP-OUTPUT (7) FILTER_1 (2) on page 154

EP-OUTPUT (7) FILTER_3 (4)

The settings for this parameter are the same as for the OUTPUT Filter_1 parameter.

Related reference

EP-OUTPUT (7) FILTER_1 (2) on page 154

EP-OUTPUT (7) FILTER_4 (5)

The settings for this parameter are the same as for the OUTPUT Filter_1 parameter.

Related reference

EP-OUTPUT (7) FILTER_1 (2) on page 154

EP-OUTPUT (7) GRAPHIC_EQ (6)

You can use the EP command to change the graphic equalizer settings of an output end point.

Syntax

`EP OUTPUT <EPN> GRAPHIC_EQ <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Enable the graphic equalizer feature.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
GAIN_1 (2)	The amount of gain, in dB, to apply to band 1, 32.25 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
GAIN_2 (3)	The amount of gain, in dB, to apply to band 2, 62.5 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
GAIN_3 (4)	The amount of gain, in dB, to apply to band 3, 125 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
GAIN_4 (5)	The amount of gain, in dB, to apply to band 4, 250 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
GAIN_5 (6)	The amount of gain, in dB, to apply to band 5, 500 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
GAIN_6 (7)	The amount of gain, in dB, to apply to band 6, 1000 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
GAIN_7 (8)	The amount of gain, in dB, to apply to band 7, 2000 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
GAIN_8 (9)	The amount of gain, in dB, to apply to band 8, 4000 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
GAIN_9 (10)	The amount of gain, in dB, to apply to band 9, 8000 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
GAIN_10 (11)	The amount of gain, in dB, to apply to band 10, 16000 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW

Example 1: ENABLE

This example shows how to enable the graphic equalizer for an OUTPUT channel with the label ChannelName:

```
EP ChannelName GRAPHICEQ ENABLE 1
```

Example 2: GAIN_1

This example shows how to set the band 1 gain value for an OUTPUT channel with the label ChannelName:

```
EP ChannelName GRAPHICEQ GAIN_1 6
```

Note: If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Output

PN	Output
ENABLE	`EP ChannelName GRAPHICEQ ENABLE 1`
GAIN_1	`EP ChannelName GRAPHICEQ GAIN_1 6`

EP-OUTPUT (7) LEVEL (1)

You can use the EP command to change the level, polarity, and type (analog only or analog and digital) of an output channel.

Syntax

`EP OUTPUT <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain.	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MUTE (2)	Mute.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
POLARITY (3)	Reverse the polarity.	0 to leave polarity as is 1 to reverse polarity 2 to toggle current state Leave blank to retrieve current value	0	RW
MICLINE (4)	Turn on the MICLINE feature, which changes the output to be line level (instead of mic level), increasing the level approximately 40dBu.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
MAX_GAIN (7)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	20	RW
MIN_GAIN (8)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	-65	RW

Example 1: GAIN

This example shows how to change the gain of an OUTPUT channel with the label ChannelName:

```
EP ChannelName LEVEL GAIN 5.5
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute the level of an OUTPUT channel with the label ChannelName:

```
EP ChannelName LEVEL MUTE 1
```

Example 3: POLARITY

This example shows how to reverse the polarity for an OUTPUT channel with the label ChannelName:

```
EP ChannelName LEVEL POLARITY 1
```

Example 4: MICLINE

This example shows how to turn on the MICLINE feature for an OUTPUT channel with the label ChannelName:

```
EP ChannelName LEVEL MICLINE 1
```

Example 5: MAX_GAIN

This example shows how to set maximum gain for an OUTPUT channel with the label ChannelName:

```
EP ChannelName LEVEL MAX_GAIN 16
```

Example 6: MIN_GAIN

This example shows how to set minimum gain for an OUTPUT channel with the label ChannelName:

```
EP ChannelName LEVEL MIN_GAIN -32.5
```

Output

PN	Output
GAIN	`EP ChannelName LEVEL GAIN 5.5`
MUTE	`EP ChannelName LEVEL MUTE 1`
POLARITY	`EP ChannelName LEVEL POLARITY 1`
MICLINE	`EP ChannelName LEVEL MICLINE 1`
MAX_GAIN	`EP ChannelName LEVEL MAX_GAIN 16`
MIN_GAIN	`EP ChannelName LEVEL MIN_GAIN -32.5`

EP-OUTPUT (7) LIMITER (7)

You can use the EP command to change the limiter settings for an output channel. A limiter keeps an audio signal from exceeding a defined threshold.

Syntax

`EP OUTPUT <EPN> LIMITER <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Enable the limiter.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
THRESHOLD (2)	Set the allowed audio threshold, in dB.	-65 to 20 in 0.5 increments. Leave blank to retrieve current value	0	RW

Example 1: ENABLE

This example shows how to turn a limiter on an OUTPUT channel with the label ChannelName:

```
EP ChannelName LIMITER ENABLE 1
```

Example 2: THRESHOLD

This example shows how to set the limiter threshold for an OUTPUT channel with the label ChannelName:

```
EP ChannelName LIMITER THRESHOLD 5
```

Output

PN	Output
ENABLE	`EP ChannelName LIMITER ENABLE 1`
THRESHOLD	`EP ChannelName LIMITER THRESHOLD 5`

PROC

EP-PROC (9) COMPRESSOR (3)

You can use the EP command to turn on compression for a processor (PROC) channel. Compression keeps the level from exceeding a certain threshold, moving the level down at a graduated rate if the level spikes, so that the adjustment isn't so abrupt.

Syntax

`EP PROC <EPN> COMPRESSOR <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Turn on the compression feature.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
GROUP (2)	Use to add a compressor to a group, all of which are compressed in the same way when any of them is compressed.	0 to 4. 0 turns off grouping. Use 1-4 to specify one of those numbered groups. Leave blank to retrieve current value	0	RW
POST_GAIN (3)	The target level, in dB, after compression has been applied.	0 to 20 in increments of 0.5. Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
THRESHOLD (4)	The level at which the compressor is invoked, in dB.	-60 to 20 in increments of 0.5. Leave blank to retrieve current value	0	RW
ATTACK (5)	The signal reduction increment value, in dB, used to compress the signal.	0 to 100 in increments of 0.5. Leave blank to retrieve current value	10	RW
RATIO (6)	The rate of compression (the amount of compression applied relative to the amount that the threshold has been exceeded). Using a value of 1 means 1:1. Using a value of 20 means 1:20.	1 to 20 in increments of 1. Leave blank to retrieve current value	1	RW
RELEASE (7)	The duration of the compression period (the amount of time it takes to adjust the signal) in ms.	100 to 2000 in increments of 1. Leave blank to retrieve current value	500	RW
DELAY_ENABLE (8)	Specify that a delay occurs before compression begins.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
DELAY (9)	An amount of time, in ms, after the threshold is exceeded and before compression begins.	0 to 250 in increments of 0.5. Leave blank to retrieve current value	0	RW

Example 1: ENABLE

This example shows how to turn on compression for a PROC channel with the label ChannelName:

```
EP ChannelName COMPRESSOR ENABLE 1
```

Example 2: GROUP

This example shows how to add a PROC channel with the label ChannelName to compressor group 1:

```
EP ChannelName COMPRESSOR GROUP 1
```

Example 3: POST_GAIN

This example shows how to set the compression target level for a PROC channel with the label ChannelName:

```
EP ChannelName COMPRESSOR POST_GAIN 8
```

Example 4: THRESHOLD

This example shows how set the compression threshold for a PROC channel with the label ChannelName:

```
EP ChannelName COMPRESSOR THRESHOLD 37
```

Example 5: ATTACK

This example shows how to set the attack time to 16 for a PROC channel with the label ChannelName:

```
EP ChannelName COMPRESSOR ATTACK 16
```

Example 6: RATIO

This example shows how to compression ratio to 1 for a PROC channel with the label ChannelName:

```
EP ChannelName COMPRESSOR RATIO 1
```

Example 7: RELEASE

This example shows how to set the release value for a PROC channel with the label ChannelName:

```
EP ChannelName COMPRESSOR RELEASE 200
```

Example 8: DELAY_ENABLE

This example shows how to turn on compression delay for a PROC channel with the label ChannelName:

```
EP ChannelName COMPRESSOR DELAY_ENABLE 1
```

Example 9: DELAY

This example shows how to set the compression delay for a PROC channel with the label ChannelName:

```
EP ChannelName COMPRESSOR DELAY 50
```

Output

PN	Output
ENABLE	`EP ChannelName COMPRESSOR ENABLE 1`
GROUP	`EP ChannelName COMPRESSOR GROUP 1`
POST_GAIN	`EP ChannelName COMPRESSOR POST_GAIN 8`
THRESHOLD	`EP ChannelName COMPRESSOR THRESHOLD 37`
ATTACK	`EP ChannelName COMPRESSOR ATTACK 16`
RATIO	`EP ChannelName COMPRESSOR RATIO 1`
RELEASE	`EP ChannelName COMPRESSOR RELEASE 200`
DELAY_ENABLE	`EP ChannelName COMPRESSOR DELAY_ENABLE 1`
DELAY	`EP ChannelName COMPRESSOR DELAY 50`

EP-PROC (9) DELAY (2)

You can use the EP command to set a delay for a processor end point.

Syntax

```
EP PROC <EPN> DELAY <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Turn on delay.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
VALUE (2)	Set the amount of the delay in ms.	0 to 250 in increments of 0.5. Leave blank to retrieve current value	0	RW

Example 1: ENABLE

This example shows how to turn on delay for a PROC channel with the label ChannelName:

```
EP ChannelName DELAY ENABLE 1
```

Example 2: VALUE

This example shows how to set the delay on a PROC channel with the label ChannelName:

```
EP ChannelName DELAY VALUE 100
```

Output

PN	Output
ENABLE	`EP ChannelName DELAY ENABLE 1`
VALUE	`EP ChannelName DELAY VALUE 100`

EP-PROC (9) FBE (37)

You can use the EP command to enable the feedback eliminator (FBE) feature. Upon setup (using the CONVERGE Pro 2 CONSOLE), FBE analyzes the audio in a room and determines whether the audio configuration is causing any feedback loops. If feedback is detected, notch filters are created to eliminate the feedback. These are called fixed nodes. When enabled, FBE implements fixed nodes and also continues to look for dynamic nodes (new instances of feedback that may have arisen within a room that require mitigation).

Syntax

`EP PROC <EPN> FBE <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Values	Default	RW
ENABLE (7)	Enables the FBE feature (assuming it has already been set up in the CONSOLE).	0=off 1=on	0	RW

Example 1: ENABLE

The following command turns on FBE for a channel named ChannelName:

```
EP ChannelName FBE ENABLE 1
```

Output

PN	Output
ENABLE	`EP ChannelName FBE ENABLE 1`

EP-PROC (9) FILTER_1 (4)

You can use the EP command to configure the Filter_1 settings of a processor (PROC) end point.

Note:

You can also use the FILTER command to change filter settings. ClearOne recommends the use of the FILTER command. See *FILTER* for more information.

Syntax

`EP PROC <EPN> FILTER_1 <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
TYPE (1)	Select a filter type. **Note:** You must send this parameter first, because when you send this parameter, the rest of the filter settings are set to their default values.	Allowable filter types are: 0 (filter is off) 1 (all pass) 2 (low pass) 3 (high pass) 4 (low shelving) 5 (high shelving) 6 (parametric equalizer) 7 (CD horn) 8 (Bessel crossover) 9 (Butterworth crossover) 10 (Linkwitz-Riley crossover) 11 (notch) Leave blank to retrieve current value	0	RW
FCY (2)	Set the center frequency (in Hz).	20 to 20000 in increments of 0.01 Leave blank to retrieve current value	1000	RW
GAIN (3)	Set the gain value. **Note:** Applies only to type 4, low shelving, type 5, high shelving, and type 6, parametric equalizer.	-15 to 15 in increments of 0.01 Leave blank to retrieve current value	0	RW
SLOPE (4)	Set the slope value. **Note:** Applies only to the crossover filter types (8, 9, and 10).	12 to 24 in increments of 6.	18	RW
SFT (5)	Set the Slope Filter Type. **Note:** Applies only to the crossover filter types (8, 9, and 10).	2=low 3=high	2	RW

PN	Description	Value	Default	RW
BW (6)	Set the difference between the upper and lower points of a filter's audio pass band. **Note:** Applies only to type 6, parametric equalizer and type 11, notch.	0.05 to 5 in increments of 0.01 Leave blank to retrieve current value	0.33	RW
ENABLE (7)	Enable or disable this filter.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW

Example 1: TYPE

This example shows how to select a low pass filter type for FILTER_1 on a PROC channel with the label ChannelName:

```
EP ChannelName FILTER_1 TYPE 1
```

Example 2: FCY

This example shows how to set the frequency to 5000 for FILTER_1 on a PROC channel with the label ChannelName:

```
EP ChannelName FILTER_1 FCY 5000
```

Example 3: GAIN

This example shows how to set a gain value of 5.05 for FILTER_1 on a PROC channel with the label ChannelName:

```
EP ChannelName FILTER_1 GAIN 5.05
```

Example 4: SLOPE

These examples show how to set the slope to 18 for FILTER_1 on a PROC channel with the label ChannelName:

```
EP ChannelName FILTER_1 SLOPE 18
```

Example 5: SFT

This example shows how to set the slope filter type (SFT) to low for FILTER_1 on a PROC channel with the label ChannelName:

```
EP ChannelName FILTER_1 SFT 2
```

Example 6: BW

This example shows how to set the bandwidth to 2.33 for FILTER_1 on a PROC channel with the label ChannelName:

```
EP ChannelName FILTER_1 BW 2.33
```

Example 7: ENABLE

This example shows how to enable FILTER_1 on a PROC channel with the label ChannelName:

```
EP ChannelName FILTER_1 ENABLE 1
```

Output

PN	Output
TYPE	`EP ChannelName FILTER_1 TYPE 1`
FCY	`EP ChannelName FILTER_1 FCY 5000`
GAIN	`EP ChannelName FILTER_1 GAIN 5.05`
SLOPE	`EP ChannelName FILTER_1 SLOPE 18`
SFT	`EP ChannelName FILTER_1 SFT 2`
BW	`EP ChannelName FILTER_1 BW 2.33`
ENABLE	`EP ChannelName FILTER_1 ENABLE 1`

EP-PROC (9) FILTER_2 (5)

The settings for this parameter are the same as for the PROC Filter_1 parameter.

Related reference

EP-PROC (9) FILTER_1 (4) on page 169

EP-PROC (9) FILTER_3 (6)

The settings for this parameter are the same as for the PROC Filter_1 parameter.

Related reference

EP-PROC (9) FILTER_1 (4) on page 169

EP-PROC (9) FILTER_4 (7)

The settings for this parameter are the same as for the PROC Filter_1 parameter.

Related reference

EP-PROC (9) FILTER_1 (4) on page 169

EP-PROC (9) FILTER_5 (8)

The settings for this parameter are the same as for the PROC Filter_1 parameter.

Related reference

EP-PROC (9) FILTER_1 (4) on page 169

EP-PROC (9) FILTER_6 (9)

The settings for this parameter are the same as for the PROC Filter_1 parameter.

Related reference

EP-PROC (9) FILTER_1 (4) on page 169

EP-PROC (9) FILTER_7 (10)

The settings for this parameter are the same as for the PROC Filter_1 parameter.

Related reference

EP-PROC (9) FILTER_1 (4) on page 169

EP-PROC (9) FILTER_8 (11)

The settings for this parameter are the same as for the PROC Filter_1 parameter.

Related reference

EP-PROC (9) FILTER_1 (4) on page 169

EP-PROC (9) FILTER_9 (12)

The settings for this parameter are the same as for the PROC Filter_1 parameter.

Related reference

EP-PROC (9) FILTER_1 (4) on page 169

EP-PROC (9) FILTER_10 (13)

The settings for this parameter are the same as for the PROC Filter_1 parameter.

Related reference

EP-PROC (9) FILTER_1 (4) on page 169

EP-PROC (9) FILTER_11 (14)

The settings for this parameter are the same as for the PROC Filter_1 parameter.

Related reference

EP-PROC (9) FILTER_1 (4) on page 169

EP-PROC (9) FILTER_12 (15)

The settings for this parameter are the same as for the PROC Filter_1 parameter.

Related reference

EP-PROC (9) FILTER_1 (4) on page 169

EP-PROC (9) FILTER_13 (16)

The settings for this parameter are the same as for the PROC Filter_1 parameter.

Related reference

EP-PROC (9) FILTER_1 (4) on page 169

EP-PROC (9) FILTER_14 (17)

The settings for this parameter are the same as for the PROC Filter_1 parameter.

Related reference

EP-PROC (9) FILTER_1 (4) on page 169

EP-PROC (9) FILTER_15 (18)

The settings for this parameter are the same as for the PROC Filter_1 parameter.

Related reference

EP-PROC (9) FILTER_1 (4) on page 169

EP-PROC (9) LEVEL (1)

You can use the EP command to change the level of a processor.

Syntax

`EP PROC <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain.	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MUTE (2)	Mute.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
MAX_GAIN (6)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	20	RW
MIN_GAIN (7)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	-65	RW
LABEL (8)	Use to retrieve the channel label.	Read only.	N/A	R

Example 1: GAIN

This example shows how to change the gain of a PROC channel with the label ChannelName:

```
EP ChannelName LEVEL GAIN 5.5
```

Note: If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute the level of a PROC channel with the label ChannelName:

```
EP ChannelName LEVEL MUTE 1
```

Example 3: MAX_GAIN

This example shows how to set maximum gain for a PROC channel with the label ChannelName:

```
EP ChannelName LEVEL MAX_GAIN 16
```

Example 4: MIN_GAIN

This example shows how to set minimum gain for a PROC channel with the label ChannelName:

```
EP ChannelName LEVEL MIN_GAIN -32.5
```

Example 5: LABEL

This example shows how to retrieve the label for a PROC channel:

```
EP PROC 101 LEVEL LABEL
```

Output

PN	Output
GAIN	`EP ChannelName LEVEL GAIN 5.5`
MUTE	`EP ChannelName LEVEL MUTE 1`
MAX_GAIN	`EP ChannelName LEVEL MAX_GAIN 16.5`
MIN_GAIN	`EP ChannelName LEVEL MIN_GAIN -32.5`
LABEL	`EP PROC 101 LEVEL LABEL MyProcChannel`

SFBUA

EP-SFBUA (27) INQUIRE (2)

You can use the EP inquire about the status of a SFBUA end point. The results are returned via the INQUIRE_RESULT command. See *EP-SFBUA (27) INQUIRE_RESULT (3)* for more information about receiving inquiry results.

Syntax

```
EP SFBUA <EPN> INQUIRE <PN>
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	RW
CONTACT_SEARCH (1)	Search for contacts by providing a search word or words inside quotation marks (“”).	R
GROUPS (2)	Request a list of all groups.	R

PN	Description	RW
GROUP_MEMBERS (3)	Request a list of the members of the specified group. Send the group ID as an argument.	R
PRESENCE_STATUS (4)	Request the presence status of the specified user. Send a contact URI.	R
REG_STATUS (6)	Requests S4B registration status.	R
ACTIVE_RINGTONE (11)	Request which ringtone is active.	R
AUTO_ANSWER_MODE (12)	Determine whether auto answer mode is enabled.	R
CURRENT_SESSIONS (14)	Requests information about all current sessions.	R
SESSION_CALL_STATE (15)	Requests the call state of a specific session. Send a session ID.	R
CONTACT_DISPLAY_NAME (16)	Requests the display name of the specified contact. Send a contact URI.	R
CONTACT_PHONE_NUMBER_LIST (17)	Requests the phone numbers associated with the specified contact. Send a contact URI.	R
ACTIVE_SESSION_ID (22)	Request the ID of the active session.	R
MEET_URL (23)	Request the meeting URL of the specified session. Send a session ID.	R
SESSION_PARTICIPANTS (24)	Requests the list of participants of the specified session. Send a session ID.	R
SESSION_INFO (25)	Requests details about the specified session. Send a session ID.	R
SESSION_IM_STATE (26)	Requests the IM state the specified session. Send a session ID.	R

Example 1: CONTACT_SEARCH

This example shows how to search for a contact on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE CONTACT_SEARCH "search terms"
```

Example 2: GROUPS

This example shows how to request a list of all the groups on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE GROUPS
```

Example 3: GROUP_MEMBERS

This example shows how to request the members of a group with an ID of 3 on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE GROUP_MEMBERS 3
```

Example 4: PRESENCE_STATUS

This example shows how to request the presence status of a particular user on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE PRESENCE_STATUS sip:user@mydomain.com
```

Example 5: REG_STATUS

This example shows how to request the server registration status on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE REG_STATUS
```

Example 6: ACTIVE_RINGTONE

This example shows how to determine the active ringtone on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE ACTIVE_RINGTONE
```

Example 7: AUTO_ANSWER_MODE

This example shows how to determine the auto answer mode on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE AUTO_ANSWER_MODE
```

Example 8: CURRENT_SESSIONS

This example shows how to request information about all current sessions on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE CURRENT_SESSIONS
```

Example 9: SESSION_CALL_STATE

This example shows how to request the call state of session 11 on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE SESSION_CALL_STATE 11
```

Example 10: CONTACT_DISPLAY_NAME

This example shows how to request the display name for a contact on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE CONTACT_DISPLAY_NAME
```

Example 11: CONTACT_PHONE_NUMBER_LIST

This example shows how to request all phone numbers associated with a contact on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE CONTACT_PHONE_NUMBER_LIST
```

Example 12: ACTIVE_SESSION_ID

This example shows how to request the ID of the active session on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE ACTIVE_SESSION_ID
```

Example 13: MEET_URL

This example shows how to request the meeting URL of session 11 on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE MEET_URL 11
```

Example 14: SESSION_PARTICIPANTS

This example shows how to request a list of participants for session 11 on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE SESSION_PARTICIPANTS 11
```

Example 15: SESSION_INFO

This example shows how to request the details for session 11 on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE SESSION_INFO 11
```

Example 16: SESSION_IM_STATE

This example shows how to request the details for IM session 11 on a SFBUA channel named SFBUA1:

```
EP SFBUA1 INQUIRE SESSION_IM_STATE 11
```

EP-SFBUA (27) INQUIRE_RESULT (3)

This command is used to return the results of an EP SFBUA INQUIRE command. See *EP-SFBUA (27) INQUIRE (2)* for more information about making inquiries.

Output

PN	Output
CONTACT_SEARCH (1)	Returns the search term(s), number of contacts found, contact number (of those found), contact URI and display name for every contact that matches the search terms in the following format: “search terms” <#ofContacts>|1|<ContactURI>|<DisplayName1> . . “search terms” <#ofcontacts>|N|<ContactURI>|<DisplayNameN>
GROUPS (2)	Returns the number of groups, the group number (of the list provided), the group ID and group name of all contact groups in the following format: <NumGroups>|1|<GroupID>|<GroupName1> . . <NumGroups>|N|<GroupID>|<GroupNameN>
GROUP_MEMBERS (3)	Returns the group ID, the number of group members, the contact URI, and the display name of every group member, in the following format: <GroupID> <NumMembers>|1|<ContactURI1>|<DisplayName1> . . <GroupID> <NumMembers>|N|<ContactURIN>|<DisplayNameN>

PN	Output
PRESENCE_STATUS (4)	Returns the contact URI, presence status code, presence status text, and presence status custom note of the specified contact in the following format: <ContactURI>|<StateCode>|<StateText>|<Note> Possible presence statuses: • 0 - Available • 1 - Available_Idle • 2 - Busy • 3 - Busy_Idle • 4 - DoNotDisturb • 5 - Be Right Back • 6 - Away • 7 - Off Work • 8 - Inactive • 9 - Inactive2 • 10 - Disconnected • 11 - Reconnecting • 12 - Offline
REG_STATUS (6)	Returns the SFB server registration status. Possible registration statuses: • REGISTERED • NOT_REGISTERED • NO_PROXY_DEFINED
ACTIVE_RINGTONE (11)	Returns the number of the active ringtone (1-5).
AUTO_ANSWER_MODE (12)	Returns a 0 if auto answer mode is disabled or a 1 if auto answer mode is enabled.
CURRENT_SESSIONS (14)	Returns the number of sessions and a list of session IDs in the following format: <NumSessions>|<SessionID1>|<SessionID2>|.|.|<SessionIDN>

PN	Output
SESSION_CALL_STATE (15)	Returns the contact URI or phone number for the specified session and the state of the session in the following format: <SessionID> <ContactURI_or_Phone#>|<CallState> Possible call state values: • IDLE - The call is idle or there is no call associated with the session • CONNECTING - A call is connecting • RINGING - A call has been made and the line is ringing • BUSY - A call has been made and the line is busy • ACTIVE - The line is in an active call. The time the call has been active is also provided in the format HH:MM:SS. • HOLD - The call is on hold. Two times (in the format HH:MM:SS) are also provided, the first being the length of time the call has been active, the second being the length of time the call has been on hold • INCOMING - There is an incoming call. The display name of the calling party is provided. • CONFERENCE_JOIN - There is an invitation to join a conference call. The URI and display name of the calling party are sent. • INVITE_JOIN_AUDIO - There is an invitation to add audio to a conference call. If accepted using KEY_ACCEPT, the call will peform a KEY_ADD_AUDIO_TO_SESSION command.
CONTACT_DISPLAY_NAME (16)	Returns the contact URI and the display name for the specified contact in the following format: <ContactURI> <DisplayName>
CONTACT_PHONE_NUMBER_ LIST (17)	Returns the contact URI, the number of results, the result number (in the list), the phone number, and the phone number type (home, office, cell, etc.) for each number associated with that contact in the following format: <ContactURI> <NumResults>|1|<PhoneNum1>|<PhoneNumType1> . . <ContactURI> <NumResults>|N|<PhoneNumN>| <PhoneNumTypeN>
ACTIVE_SESSION_ID (22)	Returns the session ID of whatever session is active.
MEET_URL (23)	Returns the session ID and the meeting URL for that session in the following format: <SessionID> <MeetingURL>

PN	Output
SESSION_PARTICIPANTS (24)	Returns the session ID, the number of participants, the participant number (in the list), the contact URI, and display name of each participant, in the following format: <SessionID> <NumParticipants>|1|<ContactURI1>|<DisplayName1> . . <SessionID> <NumParticipants>|N|<ContactURIN>|<DisplayNameN>
SESSION_INFO (25)	If the session is not in a conference, returns the session ID, contact URI, and contact display name in the following format: <SessionID> 0|<ContactURI>|<DisplayName> If the session is in a conference, returns the session ID, conference URI, and meeting URL in the following format: <SessionID> 1|<ConferenceURI>|<MeetingURL>
SESSION_IM_STATE (26)	Returns the session ID and instant message state of the specified session in the following format: <SessionID> <IMSessionState> Possible IM session states: • ACTIVE - There is an active IM session • IM_CONF_JOIN^ChatURI^InviterURI^InviterDisplayName - Invited to join an IM multi-party chat, but invitation not yet accepted • IM_JOIN^InviterURI^InviterDisplayName - Invited to join a chat with a single user, but invitation net yet accepted

EP-SFBUA (27) KEY (1)

You can use the EP command to send key commands (the equivalent of pressing keys on a phone) to a SFBUA channel.

Syntax

`EP SFBUA <EPN> KEY <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
KEY_CALL (1)	Initiate an outgoing call.	Contact URI OR call digits (to dial a number)	N/A	W
KEY_DIGIT_PRESSED (2)	The equivalent of pressing a digit on a phone (but not releasing it).	A call digit (0-9) or any of the following characters: *, #, or +	N/A	W
KEY_DIGIT_RELEASED (3)	The equivalent of releasing a pressed digit on a phone.	Call digit or symbol (must be the same digit or symbol that has already been pressed)	N/A	W
KEY_SEND_IM (4)	Send an instant message to the specified recipient.	Send an IM message. Use the following format: <ContactURI_OR_Phone#>|"Message"	N/A	W
KEY_HOOK (5)	Change the hook state.	0 for on hook 1 for off hook 2 for toggle current state	N/A	W
KEY_HOLD (6)	Place call on hold.	N/A	N/A	W
KEY_RESUME (7)	Resume a call that's been placed on hold.	N/A	N/A	W
KEY_ADD_PARTICIPANT_TO_SESSION (8)	Add a participant to the current call/meeting.	One or more contact URIs. **Note:** If sending more than one, separate each URI with the "|" character.	N/A	W
KEY_REMOVE_PARTICIPANT_FROM_SESSION (9)	Remove a participant from the current call/meeting.	One or more contact URIs. **Note:** If sending more than one, separate each URI with the "|" character.	N/A	W
KEY_REJECT (13)	Reject an incoming call.	N/A	N/A	W

PN	Description	Value	Default	RW
KEY_PRESENCE (14)	Change the presence status.	Send one of the following presence status codes (as a number): • 0 - Available • 1 - Available_Idle • 2 - Busy • 3 - Busy_Idle • 4 - DoNotDisturb • 5 - Be Right Back • 6 - Away • 7 - Off Work • 8 - Inactive • 9 - Inactive2 • 10 - Disconnected • 11 - Reconnecting • 12 - Offline		
KEY_CREATE_GROUP (15)	Create a contact group.	A group name.	N/A	W
KEY_DELETE_GROUP (16)	Delete a contact group.	A group ID.	N/A	W
KEY_ADD_TO_GROUP (17)	Add a contact to a group.	Send a group ID and either a contact URI or a phone number in the following format: <GroupID>|<ContactURI or Phone#>.	N/A	W
KEY_REMOVE_FROM_GROUP (18)	Remove a contact from a group.	<GroupID>|<ContactURI or Phone#>.	N/A	W
KEY_REMOVE_FROM_ALL_ GROUPS (19)	Remove a contact from all groups.	A contact URI or phone number.	N/A	W
KEY_SET_RINGTONE (22)	Set the ringtone.	1-5	1	W
KEY_PLAY_RINGTONE (23)	Play any of the 5 ringtones.	1-5	1	W
KEY_AUTO_ANSWER (24)	Enable or disable auto answer.	0 to disable 1 to enable Leave blank to retrieve current value	0	W
KEY_SET_ACTIVE_SESSION (25)	Set the active session.	A session ID.	N/A	W
KEY_CREATE_SESSION (27)	Create a session and add the specified contacts to the session.	One or more contact URIs. **Note:** If sending more than one, separate each URI with the "|" character.		W
KEY_LEAVE_SESSION (28)	Leave the currently active session.	N/A	N/A	W

PN	Description	Value	Default	RW
KEY_ADD_AUDIO_TO_SESSION (29)	Add audio to the active session.	N/A	N/A	W
KEY_JOIN_MEETING (30)	Join a meeting.	A meeting URL.	N/A	W
KEY_JOIN_CONFERENCE (31)	Join a conference.	A conference URI.	N/A	W
KEY_MEET_NOW (32)	Start a meeting.	N/A	N/A	W

Example 1: KEY_CALL

This example shows how to initiate an outgoing call on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_CALL 5555555555
```

Example 2: KEY_DIGIT_PRESSED

This example shows how to press (but not release) the digit “3”on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_DIGIT_PRESSED 3
```

Example 3: KEY_DIGIT_RELEASED

This example shows how to release a pressed digit “3” on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_DIGIT_RELEASED 3
```

Example 4: KEY_SEND_IM

This example shows how to send an instant message to a user on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_SEND_IM sip:user@mydomain.com|”Let’s discuss”
```

Example 5: KEY_HOOK

This example shows how to hang up a call on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_HOOK
```

Example 6: KEY_HOLD

This example shows how to place a call on hold on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_HOLD
```

Example 7: KEY_RESUME

This example shows how to resume a call that’s on hold on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_RESUME
```

Example 8: KEY_ADD_PARTICIPANT_TO_SESSION

This example shows how to add a participant to an existing session on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_ADD_PARTICIPANT_TO_SESSION sip:user@mydomain.com
```

Example 9: KEY_REMOVE_PARTICIPANT_FROM_SESSION

This example shows how to remove a participant from a session on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_REMOVE_PARTICIPANT_FROM_SESSION sip:user@mydomain.com
```

Example 10: KEY_REJECT

This example shows how to reject a call on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_REJECT 1
```

Example 11: KEY_PRESENCE

This example shows how to change the presence status on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_PRESENCE 3
```

Example 12: KEY_CREATE_GROUP

This example shows how to create a contact group on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_CREATE_GROUP GroupName
```

Example 13: KEY_DELETE_GROUP

This example shows how to delete a group on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_DELETE_GROUP 3
```

Example 14: KEY_ADD_TO_GROUP

This example shows how to add a contact to a group on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_ADD_TO_GROUP 3 sip:user@mydomain.com
```

Example 15: KEY_REMOVE_FROM_GROUP

This example shows how to remove a contact from a group on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_REMOVE_FROM_GROUP 3 sip:user@mydomain.com
```

Example 16: KEY_REMOVE_FROM_ALL_GROUPS

This example shows how to remove a contact from all groups on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_REMOVE_FROM_ALL_GROUPS sip:user@mydomain.com
```

Example 17: KEY_SET_RINGTONE

This example shows how to set a ringtone on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_SET_RINGTONE 1
```

Example 18: KEY_PLAY_RINGTONE

This example shows how to play a ringtone on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_PLAY_RINGTONE 1
```

Example 19: KEY_AUTO_ANSWER

This example shows how to enable auto answer on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_AUTO_ANSWER 1
```

Example 20: KEY_SET_ACTIVE_SESSION

This example shows how to specify which session is active on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_SET_ACTIVE_SESSION 3
```

Example 21: KEY_CREATE_SESSION

This example shows how to create a session on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_CREATE_SESSION sip:user@mydomain.com
```

Example 22: KEY_LEAVE_SESSION

This example shows how to leave a session on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_LEAVE_SESSION
```

Example 23: KEY_ADD_AUDIO_TO_SESSION

This example shows how to add audio to a session on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_ADD_AUDIO_TO_SESSION
```

Example 24: KEY_JOIN_MEETING

This example shows how to join a meeting on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_JOIN_MEETING https://meet.mydomain.com/
tablet/1234567890
```

Example 25: KEY_JOIN_CONFERENCE

This example shows how to join a conference on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_JOIN_CONFERENCE
sip:user@mydomain.com;gruu;opaque=app:conf:focus:id:1234567890
```

Example 26: KEY_MEET_NOW

This example shows how to start a meeting on a SFBUA channel with the label ChannelName:

```
EP ChannelName KEY KEY_MEET_NOW
```

Output

All the parameters for this block are write only, which means that no return values are sent.

EP-SFBUA (27) NOTIFICATION (4)

A Skype for Business-capable CONVERGE Pro 2 device uses this command to send asynchronous notifications regarding the Skype for Business status.

Note:

The EP SFBUA NOTIFICATION messages can be received from a CONVERGE Pro 2 box, but cannot be sent to the box.

Syntax

```
EP SFBUA <EPN> NOTIFICATION <PN> [VALUE]
```

Parameters

Parameter	Description
IM_RECEIVED (1)	An instant message has been received. The Chat URI, Source URI, Source Display Name, date/time stamp, and the messsage are provided in the following format: <ChatURI>|<SrcURI>|<SrcDisplayName>|<Date-Time>|<Message> Date/time are provided in the following format: YYYY^MM^DD^HH^MM^SS

Parameter	Description
PRESENCE_UPDATE (2)	An update of the presence status of a S4B contact. The Contact URI, presence status, state text, and a note are provided in the following format: <ContactURI>|<PresenceStatus>|<StateText>|<Note> PresenceStatus is a numerical value, shown below. StateText is the text of the associated status (“Available” or “Busy” for example), and Note is a custom status message that can be set by a user with some S4B clients. Possible presence statuses: • 0 - Available • 1 - Available_Idle • 2 - Busy • 3 - Busy_Idle • 4 - DoNotDisturb • 5 - Be Right Back • 6 - Away • 7 - Off Work • 8 - Inactive • 9 - Inactive2 • 10 - Disconnected • 11 - Reconnecting • 12 - Offline
REG_SUCCEED (3)	Registration with a S4B server succeeded.
REG_FAILED (4)	Registration with a S4B server failed.
GROUP_CREATED (5)	A group has been created. The group ID and group name are provided in the following format: <GroupID>|<GroupName>
CONTACT_ADDED_TO_ GROUP (6)	A contact has been added to a group. The group ID and contact URI or phone number are provided in the following format: <GroupID>|<ContactURIorPhone#>
CONTACT_REMOVED_ FROM_GROUP (7)	A contact has been removed from a group. The group ID and contact URI or phone number are provided. <GroupID>|<ContactURIorPhone#>
GROUP_REMOVED (8)	A group has been removed. The group ID is provided.

Parameter	Description
SESSION_CREATED (11)	A session has been created. If the session is not in a conference: The session ID is provided along with the contact URI and display name of the contact with whom the session was initiated, in the following format: <SessionID>|0|<ContactURI>|<DisplayName> If the session is in a conference: The session ID is provided along with the conference URI and the meeting URL in the following format: <SessionID>|1|<ConferenceURI>|<MeetingURL>
PARTICIPANT_ADDED_TO_SESSION (12)	A participant has been added to a session. The session ID is provided, along with the contact URI or phone number and display name of the participant in the following format: <SessionID>|<ContactURIorPhone#>|<DisplayName>
PARTICIPANT_REMOVED_FROM_SESSION (13)	A participant has been removed from a session. The session ID is provided, along with the contact URI or phone number of the participant in the following format: <SessionID>|<ContactURIorPhone#>
SESSION_CALL_STATE_CHANGE (14)	Returns the session ID, contact URI, phone number, or conference URI (only one of these three), and the new state, in the following format: <SessionID>|<ContactURI_or_Phone#_or_ConfURI>|<State> Possible call state values: • IDLE - The call is idle or there is no call associated with the session • CONNECTING - A call is connecting • RINGING - A call has been made and the line is ringing • BUSY - A call has been made and the line is busy • ACTIVE^<CallTime> - The line is in an active call. The time the call has been active is also provided in the format HH:MM:SS. • HOLD^<CallTime>^<HoldTime> - The call is on hold. Two times (in the format HH:MM:SS, separated by "^") are also provided, the first being the length of time the call has been active, the second being the length of time the call has been on hold • INCOMING^<CallingPartyDisplayName> - There is an incoming call. The display name of the calling party is provided. • CONFERENCE_JOIN^<CallingPartyURI>^<CallingPartyDisplayName> - There is an invitation to join a conference call. The contact URI and display name of the calling party are sent. • INVITE_JOIN_AUDIO - There is an invitation to add audio to a conference call. If accepted using KEY_ACCEPT, the call will perform a KEY_ADD_AUDIO_TO_SESSION command.
ACTIVE_SESSION (15)	The active session has changed. The session ID is provided. A value of -1 indicates that there is no active session.
SESSION_ENDED (16)	A session has ended. The session ID is provided.
ERROR (17)	An error has occurred. An error message is provided.

Parameter	Description
CONTACT_REMOVED_ FROM_ALL_GROUPS (19)	A contact has been removed from all groups. The contact URI or phone number is provided.
SESSION_UPDATED (20)	A session has been updated. If the session is not in a conference: The session ID is provided along with the contact URI and display name of the contact with whom the session was initiated, in the following format: <SessionID>|0|<ContactURI>|<DisplayName> If the session is in a conference: The session ID is provided along with the conference URI and the meeting URL in the following format: <SessionID>|1|<ConferenceURI>|<MeetingURL>
I_WAS_REMOVED_FROM_ SESSION (22)	You have been removed from a session. The session ID is provided.
IM_INVITE (23)	An IM invitation has been received. The session ID, Chat URI, and source display name are provided in the following format: <SessionID>|<ChatURI>|<SrcDisplayName>
SFB_READY (24)	The Skype for Business service is ready.
SFB_INITIALIZING (26)	The Skype for Business service is initializing.
SFB_RESETTING (27)	The Skype for Business service is resetting.
SFB_SHUTTING_DOWN (28)	The Skype for Business service is shutting down.

EP-SFBUA (27) SETTINGS (5)

You can use the EP command to change the settings for a SFBUA channel.

Syntax

`EP SFBUA <EPN> SETTINGS <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
EMAIL (1)	The email address for the account you want to use to log in to the S4B server.	An email address.	N/A	RW

PN	Description	Value	Default	RW
PASSWORD (2)	A password for the account being used to log in to a S4B server.	Text string	N/A	RW
USERNAME (3)	(Optional) A username for the account being used to log in to a S4B server.	A username (which may be preceded by a domain name and a backslash; for example: mydomain \myusername)	N/A	RW

Example 1: EMAIL

This example shows how to set the Skype for Business user email address on a SFBUA channel with the label ChannelName:

```
EP ChannelName SETTINGS EMAIL user@mydomain.com
```

Example 2: PASSWORD

This example shows how to specify the password for the Skype for Business server on a SFBUA channel with the label ChannelName:

```
EP ChannelName SETTINGS PASSWORD MyPassword
```

Example 3: USERNAME

This example shows how to specify the username for the Skype for Business server on a SFBUA channel with the label ChannelName:

```
EP ChannelName SETTINGS USERNAME MyDomain\MyUsername
```

Output

PN	Output
EMAIL	`EP ChannelName SETTINGS EMAIL user@mydomain.com`
PASSWORD	`EP ChannelName SETTINGS PASSWORD MyPassword`
USERNAME	`EP ChannelName SETTINGS USERNAME MyDomain\MyUsername`

SPEAKER

EP-SPEAKER (8) COMPRESSOR (9)

You can use the EP command to turn on compression for a speaker end point. Compression keeps the level from exceeding a certain threshold, moving the level down at a graduated rate if the level spikes, so that the adjustment isn't so abrupt.

Syntax

```
EP SPEAKER <EPN> COMPRESSOR <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Turn on the compression feature.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
GROUP (2)	Use to add a compressor to a group, all of which are compressed in the same way when any of them is compressed.	0 to 4. 0 turns off grouping. Use 1-4 to specify one of those numbered groups.	0	RW
POST_GAIN (3)	The target level, in dB, after compression has been applied.	0 to 20 in increments of 0.5. Leave blank to retrieve current value	0	RW
THRESHOLD (4)	The level at which the compressor is invoked, in dB.	-60 to 20 in increments of 0.5. Leave blank to retrieve current value	0	RW
ATTACK (5)	The signal reduction increment value, in dB, used to compress the signal.	0 to 100 in increments of 0.5. Leave blank to retrieve current value	10	RW
RATIO (6)	The rate of compression (the amount of compression applied relative to the amount that the threshold has been exceeded). Using a value of 1 means 1:1. Using a value of 20 means 1:20.	1 to 20 in increments of 1. Leave blank to retrieve current value	1	RW
RELEASE (7)	The duration of the compression period (the amount of time it takes to adjust the signal) in ms.	100 to 2000 in increments of 1. Leave blank to retrieve current value	500	RW

PN	Description	Value	Default	RW
DELAY_ENABLE (8)	Specify that a delay occurs before compression begins.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
DELAY (9)	An amount of time, in ms, after the threshold is exceeded and before compression begins.	0 to 250 in increments of 0.5. Leave blank to retrieve current value	0	RW

Example 1: ENABLE

This example shows how to turn on compression for a SPEAKER channel with the label ChannelName:

```
EP ChannelName COMPRESSOR ENABLE 1
```

Example 2: GROUP

This example shows how to add a SPEAKER channel with the label ChannelName to compressor group 1:

```
EP ChannelName COMPRESSOR GROUP 1
```

Example 3: POST_GAIN

This example shows how to set the compression target level for a SPEAKER channel with the label ChannelName:

```
EP ChannelName COMPRESSOR POST_GAIN 8
```

Example 4: THRESHOLD

This example shows how set the compression threshold for a SPEAKER channel with the label ChannelName:

```
EP ChannelName COMPRESSOR THRESHOLD 37
```

Example 5: ATTACK

This example shows how to set the attack time for a SPEAKER channel with the label ChannelName:

```
EP ChannelName COMPRESSOR ATTACK 16
```

Example 6: RATIO

This example shows how to compression ratio for a SPEAKER channel with the label ChannelName:

```
EP ChannelName COMPRESSOR RATIO 1
```

Example 7: RELEASE

This example shows how to set the release value for a SPEAKER channel with the label ChannelName:

```
EP ChannelName COMPRESSOR RELEASE 200
```

Example 8: DELAY_ENABLE

This example shows how to turn on compression delay for a SPEAKER channel with the label ChannelName:

```
EP ChannelName COMPRESSOR DELAY_ENABLE 1
```

Example 9: DELAY

This example shows how to set the compression delay for a SPEAKER channel with the label ChannelName:

```
EP ChannelName COMPRESSOR DELAY 50
```

Output

PN	Proc
ENABLE	`EP ChannelName COMPRESSOR ENABLE 1`
GROUP	`EP ChannelName COMPRESSOR GROUP 1`
POST_GAIN	`EP ChannelName COMPRESSOR POST_GAIN 8`
THRESHOLD	`EP ChannelName COMPRESSOR THRESHOLD 37`
ATTACK	`EP ChannelName COMPRESSOR ATTACK 16`
RATIO	`EP ChannelName COMPRESSOR RATIO 1`
RELEASE	`EP ChannelName COMPRESSOR RELEASE 200`
DELAY_ENABLE	`EP ChannelName COMPRESSOR DELAY_ENABLE 1`
DELAY	`EP ChannelName COMPRESSOR DELAY 50`

EP-SPEAKER (8) DELAY (8)

You can use the EP command to set a delay for a speaker end point.

Syntax

`EP SPEAKER <EPN> DELAY <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Turn on delay.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
VALUE (2)	Set the amount of the delay in ms.	0 to 250 in increments of 0.5. Leave blank to retrieve current value	0	RW

Example 1: ENABLE

This example shows how to turn on delay for a SPEAKER channel with the label ChannelName:

```
EP ChannelName DELAY ENABLE 1
```

Example 2: VALUE

This example shows how to set the delay on a SPEAKER channel with the label ChannelName:

```
EP ChannelName DELAY VALUE 100
```

Output

PN	Output
ENABLE	`EP ChannelName DELAY ENABLE 1`
VALUE	`EP ChannelName DELAY VALUE 100`

EP-SPEAKER (8) FILTER_1 (2)

You can use the EP command to configure the Filter_1 settings of a speaker end point.

Note:

You can also use the FILTER command to change filter settings. ClearOne recommends the use of the FILTER command. See *FILTER* for more information.

Syntax

`EP SPEAKER <EPN> FILTER_1 <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
TYPE (1)	Select a filter type. **Note:** You must send this parameter first, because when you send this parameter, the rest of the filter settings are set to their default values.	Allowable filter types are: 0 (filter is off) 1 (all pass) 2 (low pass) 3 (high pass) 4 (low shelving) 5 (high shelving) 6 (parametric equalizer) 7 (CD horn) 8 (Bessel crossover) 9 (Butterworth crossover) 10 (Linkwitz-Riley crossover) 11 (notch) Leave blank to retrieve current value	0	RW
FCY (2)	Set the center frequency (in Hz).	20 to 20000 in increments of 0.01 Leave blank to retrieve current value	1000	RW
GAIN (3)	Set the gain value. **Note:** Applies only to type 4, low shelving, type 5, high shelving, and type 6, parametric equalizer.	-15 to 15 in increments of 0.01 Leave blank to retrieve current value	0	RW
SLOPE (4)	Set the slope value. **Note:** Applies only to the crossover filter types (8, 9, and 10).	12 to 24 in increments of 6.	18	RW
SFT (5)	Set the Slope Filter Type. **Note:** Applies only to the crossover filter types (8, 9, and 10).	2=low 3=high	2	RW

PN	Description	Value	Default	RW
BW (6)	Set the difference between the upper and lower points of a filter's audio pass band. **Note:** Applies only to type 6, parametric equalizer and type 11, notch.	0.05 to 5 in increments of 0.01 Leave blank to retrieve current value	0.33	RW
ENABLE (7)	Enable or disable this filter.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW

Example 1: TYPE

This example shows how to select a low pass filter type for FILTER_1 on a speaker channel with the label ChannelName:

```
EP ChannelName FILTER_1 TYPE 1
```

Example 2: FCY

This example shows how to set the frequency to 5000 for FILTER_1 on a speaker channel with the label ChannelName:

```
EP ChannelName FILTER_1 FCY 5000
```

Example 3: GAIN

This example shows how to set a gain value of 5.05 for FILTER_1 on a speaker channel with the label ChannelName:

```
EP ChannelName FILTER_1 GAIN 5.05
```

Example 4: SLOPE

These examples show how to set the slope to 18 for FILTER_1 on a speaker channel with the label ChannelName:

```
EP ChannelName FILTER_1 SLOPE 18
```

Example 5: SFT

This example shows how to set the slope filter type (SFT) to low for FILTER_1 on a speaker channel with the label ChannelName:

```
EP ChannelName FILTER_1 SFT 2
```

Example 6: BW

This example shows how to set the bandwidth to 2.33 for FILTER_1 on a speaker channel with the label ChannelName:

```
EP ChannelName FILTER_1 BW 2.33
```

Example 7: ENABLE

This example shows how to enable FILTER_1 on a speaker channel with the label ChannelName:

```
EP ChannelName FILTER_1 ENABLE 1
```

Output

PN	Output
TYPE	`EP ChannelName FILTER_1 TYPE 1`
FCY	`EP ChannelName FILTER_1 FCY 5000`
GAIN	`EP ChannelName FILTER_1 GAIN 5.05`
SLOPE	`EP ChannelName FILTER_1 SLOPE 18`
SFT	`EP ChannelName FILTER_1 SFT 2`
BW	`EP ChannelName FILTER_1 BW 2.33`
ENABLE	`EP ChannelName FILTER_1 ENABLE 1`

EP-SPEAKER (8) FILTER_2 (2)

The settings for this parameter are the same as for the SPEAKER Filter_1 parameter.

Related reference

EP-SPEAKER (8) FILTER_1 (2) on page 194

EP-SPEAKER (8) FILTER_3 (3)

The settings for this parameter are the same as for the SPEAKER Filter_1 parameter.

Related reference

EP-SPEAKER (8) FILTER_1 (2) on page 194

EP-SPEAKER (8) FILTER_4 (4)

The settings for this parameter are the same as for the SPEAKER Filter_1 parameter.

Related reference

EP-SPEAKER (8) FILTER_1 (2) on page 194

EP-SPEAKER (8) GRAPHIC_EQ (6)

You can use the EP command to change the graphic equalizer settings of a speaker end point.

Syntax

`EP SPEAKER <EPN> GRAPHIC_EQ <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Enable the graphic equalizer feature.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
GAIN_1 (2)	The amount of gain, in dB, to apply to band 1, 32.25 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
GAIN_2 (3)	The amount of gain, in dB, to apply to band 2, 62.5 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
GAIN_3 (4)	The amount of gain, in dB, to apply to band 3, 125 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
GAIN_4 (5)	The amount of gain, in dB, to apply to band 4, 250 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
GAIN_5 (6)	The amount of gain, in dB, to apply to band 5, 500 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
GAIN_6 (7)	The amount of gain, in dB, to apply to band 6, 1000 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
GAIN_7 (8)	The amount of gain, in dB, to apply to band 7, 2000 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
GAIN_8 (9)	The amount of gain, in dB, to apply to band 8, 4000 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
GAIN_9 (10)	The amount of gain, in dB, to apply to band 9, 8000 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
GAIN_10 (11)	The amount of gain, in dB, to apply to band 10, 16000 Hz.	-12 to 12 in increments of 1 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW

Example 1: ENABLE

This example shows how to enable the graphic equalizer for a SPEAKER channel with the label ChannelName:

```
EP ChannelName GRAPHICEQ ENABLE 1
```

Example 2: GAIN_1

This example shows how to set the band 1 gain value for a SPEAKER channel with the label ChannelName:

```
EP ChannelName GRAPHICEQ GAIN_1 6
```

Note: If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Output

PN	Output
ENABLE	`EP ChannelName GRAPHICEQ ENABLE 1`
GAIN_1	`EP ChannelName GRAPHICEQ GAIN_1 6`

EP-SPEAKER (8) LEVEL (1)

You can use the EP command to change the level of a speaker.

Syntax

`EP SPEAKER <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain.	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MUTE (2)	Mute.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
POLARITY (3)	Reverse the polarity.	0 to leave polarity as is 1 to reverse polarity 2 to toggle current state Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
MAX_GAIN (7)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	20	RW
MIN_GAIN (8)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	-65	RW

Example 1: GAIN

This example shows how to change the gain of a SPEAKER channel with the label ChannelName:

```
EP ChannelName LEVEL GAIN 5.5
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute the level of a SPEAKER channel with the label ChannelName:

```
EP ChannelName LEVEL MUTE 1
```

Example 3: POLARITY

This example shows how to reverse the polarity for a SPEAKER channel with the label ChannelName:

```
EP ChannelName LEVEL POLARITY 1
```

Example 4: MAX_GAIN

This example shows how to set maximum gain for a SPEAKER channel with the label ChannelName:

```
EP ChannelName LEVEL MAX_GAIN 16
```

Example 5: MIN_GAIN

This example shows how to set minimum gain for a SPEAKER channel with the label ChannelName:

```
EP ChannelName LEVEL MIN_GAIN -32.5
```

Output

PN	Output
GAIN	`EP ChannelName LEVEL GAIN 5.5`
MUTE	`EP ChannelName LEVEL MUTE 1`
POLARITY	`EP ChannelName LEVEL POLARITY 1`
MAX_GAIN	`EP ChannelName LEVEL MAX_GAIN 16.5`
MIN_GAIN	`EP ChannelName LEVEL MIN_GAIN -32.5`

EP-SPEAKER (8) LIMITER (7)

You can use the EP command to change the limiter settings for a speaker end point. A limiter keeps an audio signal from exceeding a defined threshold.

Syntax

```
EP SPEAKER <EPN> LIMITER <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Enable the limiter.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
THRESHOLD (2)	Set the allowed audio threshold, in dB.	-65 to 20 in 0.5 increments. Leave blank to retrieve current value	0	RW

Example 1: ENABLE

This example shows how to turn a limiter on for a SPEAKER channel with the label ChannelName:

```
EP ChannelName LIMITER ENABLE 1
```

Example 2: THRESHOLD

This example shows how to set the limiter threshold for a SPEAKER channel with the label ChannelName:

```
EP ChannelName LIMITER THRESHOLD 5
```

Output

PN	Output
ENABLE	`EP ChannelName LIMITER ENABLE 1`
THRESHOLD	`EP ChannelName LIMITER THRESHOLD 5`

SRMIC

EP-SRMIC (24) AGC (4)

You can use the EP command to configure the Automatic Gain Control (AGC) settings of a microphone. AGC keeps an input signal at a target gain level.

Syntax

`EP SRMIC`*<EPN>* `AGC`*<PN>[VALUE]*

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of

end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain.	0 to 18dB range in increments of 0.5 Leave blank to retrieve current value	6	RW
TARGET_LEVEL (2)	Target Level sets the dB level for AGC to maintain.	-30 to 20, in increments of 0.5 Leave blank to retrieve current value	0	RW
RESPONSE_TIME (3)	Response Time sets the amount of time (in ms) over which the level is averaged before AGC is enable or disabled, to keep the gain from seeming too abrupt.	100 to 10000 in increments of 1 Leave blank to retrieve current value	2000	RW
THRESHOLD (4)	Threshold sets the dB level at which AGC engages.	-50dB to 0dB, in increments of 0.5. Setting the Threshold above the background noise level will prevent AGC from amplifying background noise. Leave blank to retrieve current value	-25	RW

Example 1: GAIN

This example shows how to indicate the amount of gain control for a SRMIC channel with the label ChannelName:

```
EP ChannelName AGC GAIN 11.5
```

Example 2: TARGET_LEVEL

This example shows how to set the gain control target level for a SRMIC channel with the label ChannelName:

```
EP ChannelName AGC TARGET_LEVEL -5.5
```

Example 3: RESPONSE_TIME

This example shows how to set the gain control response time for a SRMIC channel with the label ChannelName:

```
EP ChannelName AGC RESPONSE_TIME 8562.0
```

Example 4: THRESHOLD

This example shows how to set the gain control threshold for a SRMIC channel with the label ChannelName:

```
EP ChannelName AGC THRESHOLD -30.5
```

Output

PN	Output
GAIN	`EP ChannelName AGC GAIN 11.5`
TARGET_LEVEL	`EP ChannelName AGC TARGET_LEVEL -5.5`
RESPONSE_TIME	`EP ChannelName AGC RESPONSE_TIME 8562.0`
THRESHOLD	`EP ChannelName AGC THRESHOLD -30.5`

EP-SRMIC (24) AGC_ALC (5)

You can use the EP command to turn on either automatic gain control (AGC) or automatic level control (ALC) for an SRMIC channel. AGC and ALC both try to keep a signal at a target level, but AGC can do so within greater ranges and with more refined controls. ALC can make only up to 6db adjustments to a signal, but can respond more quickly and aggressively to variations. AGC is generally used for line-level inputs, and ALC is generally used for mic-level inputs.

Note:

AGC settings are adjusted using the EP SRMIC AGC command/parameter.

Syntax

```
EP SRMIC <EPN> AGC_ALC <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
MODE (1)	AGC/ALC mode.	0 for off 1 for AGC 2 for ALC Leave blank to retrieve current value	0	RW

Example 1: MODE

This example shows how to turn on automatic gain control for a SRMIC channel with the label ChannelName:

```
EP ChannelName AGC_ALC MODE 1
```

Output

PN	Output
MODE	`EP ChannelName AGC_ALC MODE 1`

EP-SRMIC (24) FILTER_1 (7)

You can use the EP command to configure the Filter_1 settings of an sound reinforcement microphone (SRMIC) channel.

Note:

You can also use the FILTER command to change filter settings. ClearOne recommends the use of the FILTER command. See *FILTER* for more information.

Syntax

`EP SRMIC <EPN> FILTER_1 <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
TYPE (1)	Select a filter type. **Note:** You must send this parameter first, because when you send this parameter, the rest of the filter settings are set to their default values.	Allowable filter types are: 0 (filter is off) 1 (all pass) 2 (low pass) 3 (high pass) 6 (parametric equalizer) 11 (notch) Leave blank to retrieve current value	0	RW
FCY (2)	Set the center frequency (in Hz). **Note:** Applies to all filter types.	20 to 20000 in increments of 0.01 Leave blank to retrieve current value	1000	RW
GAIN (3)	Set the gain value. **Note:** Applies only to type 6, parametric equalizer.	-15 to 15 in increments of 0.01 Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
BW (6)	Set the difference between the upper and lower points of a filter's audio pass band. **Note:** Applies only to type 6, parametric equalizer and type 11, notch.	0.05 to 5 in increments of 0.01 Leave blank to retrieve current value	0.33	RW
ENABLE (7)	Enable or disable this filter.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW

Example 1: TYPE

This example shows how to select a low pass filter type for FILTER_1 on an SRMIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 TYPE 1
```

Example 2: FCY

This example shows how to set the frequency to 5000 for FILTER_1 on an SRMIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 FCY 5000
```

Example 3: GAIN

This example shows how to set a gain value of 5.05 for FILTER_1 on an SRMIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 GAIN 5.05
```

Example 4: BW

This example shows how to set the bandwidth to 2.33 for FILTER_1 on an SRMIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 BW 2.33
```

Example 5: ENABLE

This example shows how to enable FILTER_1 on an SRMIC channel with the label ChannelName:

```
EP ChannelName FILTER_1 ENABLE 1
```

Output

PN	Output
TYPE	`EP ChannelName FILTER_1 TYPE 1`
FCY	`EP ChannelName FILTER_1 FCY 5000`
GAIN	`EP ChannelName FILTER_1 GAIN 5.05`
BW	`EP ChannelName FILTER_1 BW 2.33`

PN	Output
ENABLE	`EP ChannelName FILTER_1 ENABLE 1`

EP-SRMIC (24) FILTER_2 (8)

The settings for this parameter are the same as for the SRMIC Filter_1 parameter.

Related reference

EP-SRMIC (24) FILTER_1 (7) on page 207

EP-SRMIC (24) FILTER_3 (9)

The settings for this parameter are the same as for the SRMIC Filter_1 parameter.

Related reference

EP-SRMIC (24) FILTER_1 (7) on page 207

EP-SRMIC (24) FILTER_4 (10)

The settings for this parameter are the same as for the SRMIC Filter_1 parameter.

Related reference

EP-SRMIC (24) FILTER_1 (7) on page 207

EP-SRMIC (24) GATING (6)

You can use the EP command to configure the gating control of a SRMIC channel. Gating controls the priority relationships in a group of microphones.

Syntax

`EP SRMIC`*<EPN>* `GATING`*<PN>[VALUE]*

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GROUP (1)	GROUP enables assignment of channels with same settings to up to eight (8) gating groups. **Note:** The preferred way to add an SRMIC to a gating group is using the GATEGROUP command.	1 to 8 Leave blank to retrieve current value	1	RW

PN	Description	Value	Default	RW
NONE (2)	Assign the mic to a “None” gating group. **Note:** If you have assigned a SRMIC channel to the NONE group and to a numbered group, the NONE group takes precedence.	0 to disable 1 to enable 2 to toggle current state **Note:** Inputs are routed to Group 1 by default. Leave blank to retrieve current value	1	RW
MODE (3)	MODE allows you to configure group settings.	1 for First Mic Priority 2 for Max # of Mics 3 for Last Mic Mode Leave blank to retrieve current value	1	RW
CHAIRMAN (4)	Chairman override provides gating priority for selected channels over any other channel within the same group.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
PA_ADAPT (5)	Power Amplifier Adaptive automatically adjusts the ambient reference level to prevent the audio from gating on microphones.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
ADAPT_AMB (6)	Adapt Ambient automatically adjusts the ambient reference level as noise and room conditions change.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	1	RW
AMB_LEVEL (7)	Ambient Level lets you manually specify a fixed ambient level.	-80dB to 0dB, in increments of 0.5 Leave blank to retrieve current value	-40	RW
OFF_ATTEN (8)	Off Attenuation allows you to set the amount of level reduction applied to a channel when it is gated off.	-60dB to 0dB, in increments of 0.5. Leave blank to retrieve current value	12	RW

PN	Description	Value	Default	RW
GATE_RATIO (9)	Gate Ratio allows you to specify how much louder the audio level must be than the ambient level before the channel automatically gates on.	-50dB to 0dB, in increments of 0.5. Leave blank to retrieve current value	15	RW
HOLD_TIME (10)	Hold Time allows you to determine how long the channel stays gated on after the audio falls below the Gate Ratio threshold.	-.1 to 8.0, in increments of 0.01. Leave blank to retrieve current value	0.3	RW
DECAY_RATE (11)	Decay Rate allows you to determine how fast a channel gates off after the Hold Time expires.	1 for slow (12dB/s) 2 for medium (25dB/s) 3 for fast (50dB/s) Leave blank to retrieve current value	2	RW

Example 1: GROUP

This example shows how to assign a SRMIC channel with the label ChannelName to Group 8:

```
EP ChannelName GATING GROUP 8
```

Example 2: NONE

This example shows how to assign a SRMIC channel with the label ChannelName to the NONE group:

```
EP ChannelName GATING NONE 1
```

Example 3: MODE

This example shows how to enable First Mic Priority on a SRMIC channel with the label ChannelName:

```
EP ChannelName GATING MODE 1
```

Example 4: CHAIRMAN

This example shows how to enable the Chairman feature on a SRMIC channel with the label ChannelName:

```
EP ChannelName GATING CHAIRMAN 1
```

Example 5: PA_ADAPT

This example shows how to enable the power amplifier adapt on a SRMIC channel with the label ChannelName:

```
EP ChannelName GATING PA_ADAPT 1
```

Example 6: AMB_ADAPT

This example shows how to enable ambient adapt on a SRMIC channel with the label ChannelName:

```
EP ChannelName GATING AMB_ADAPT 1
```

Example 7: AMB_TRK

This example shows how to adjust the ambient level on a SRMIC channel with the label ChannelName:

```
EP ChannelName GATING AMB_TRK -63.5
```

Example 8: OFF_ATTEN

This example shows how to set the amount of level reduction applied to a SRMIC channel with the label ChannelName, when gated off:

```
EP ChannelName GATING OFF_ATTEN -52.5
```

Example 9: GATE_RATIO

This example shows how to set the Gate Ratio on a SRMIC channel with the label ChannelName:

```
EP ChannelName GATING GATE_RATIO -40.5
```

Example 10: HOLD_TIME

This example shows how to set the Hold Time on a SRMIC channel with the label ChannelName:

```
EP ChannelName GATING HOLD_TIME 4.02
```

Example 11: DECAY_RATE

This example shows how to set the Decay Rate on a SRMIC channel with the label ChannelName:

```
EP ChannelName GATING DECAY_RATE 3
```

Output

PN	Output
GROUP	`EP ChannelName GATING GROUP 8`
NONE	`EP ChannelName GATING NONE 1`
MODE	`EP ChannelName GATING MODE 1`
CHAIRMAN	`EP ChannelName GATING CHAIRMAN 1`
PA_ADAPT	`EP ChannelName GATING PA_ADAPT 1`
AMB_ADAPT	`EP ChannelName GATING AMB_ADAPT 1`
AMB_TRK	`EP ChannelName GATING AMB_TRK -63.5`
OFF_ATTEN	`EP ChannelName GATING OFF_ATTEN -52.5`
GATE_RATIO	`EP ChannelName GATING GATE_RATIO -40.5`
HOLD_TIME	`EP ChannelName GATING HOLD_TIME 4.02`
DECAY_RATE	`EP ChannelName GATING DECAY_RATE 3`

EP-SRMIC (24) LEVEL (1)

You can use the EP command to change the level and type (analog or digital) of an SRMIC channel.

Syntax

`EP SRMIC <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN_FINE (1)	Fine gain.	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MUTE (2)	Mute.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
PHAN_PWR (3)	Phantom power - 48V power option for microphone.	0 for power off 1 for power on	0	RW

PN	Description	Value	Default	RW
GAIN_COARSE (4)	Coarse gain.	Can be one of the following values: 0, 7, 14, 21, 28, 35, 41, 50, or 56. **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MAX_GAIN (7)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20 in increments of 0.5 Leave blank to retrieve current value	20	RW
MIN_GAIN (8)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20 in increments of 0.5 Leave blank to retrieve current value	-65	RW
DIG_SRC (9)	Whether the channel signal comes from the Mic connector (analog) or a digital channel (DANTE_RX or D20MIC). **Note:** Changing the source for this channel to a digital source means that the signal for this channel will come from the corresponding DANTE_RX or D20MIC channel rather than from the MIC port on the device. For example, if you set a MIC channel to be digital, using a Dante channel as a source, the channel will receive its signal from whichever Dante channel you specified.	Leave blank for Analog (using the Mic connector on the back panel) Specify a DANTE_RX or D20MIC channel label to indicate a digital source.	N/A	RW

Example 1: GAIN_FINE

This example shows how to change the level of a SRMIC channel with the label ChannelName using fine gain:

```
EP ChannelName LEVEL GAIN_FINE 5.5
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute the level of a SRMIC channel with the label ChannelName:

```
EP ChannelName LEVEL MUTE 1
```

Example 3: PHAN_PWR

This example shows how to switch off phantom power for a SRMIC channel with the label ChannelName:

```
EP ChannelName LEVEL PHAN_PWR 0
```

Example 4: GAIN_COARSE

This example shows how to change the level of a SRMIC channel with the label ChannelName using coarse gain:

```
EP ChannelName LEVEL GAIN_COARSE 21
```

Example 5: MAX_GAIN

This example shows how to set maximum gain for a SRMIC channel with the label ChannelName:

```
EP ChannelName LEVEL MAX_GAIN 16.5
```

Example 6: MIN_GAIN

This example shows how to set minimum gain for a SRMIC channel with the label ChannelName:

```
EP ChannelName LEVEL MIN_GAIN -32.5
```

Example 7: DIG_SRC

This example shows how to set a digital source (in this case a DANTE_RX channel with the label DanteChannel3) for a SRMIC channel with the label ChannelName:

```
EP ChannelName LEVEL DIG_SRC DanteChannel3
```

Output

PN	Output
GAIN_FINE	`EP ChannelName LEVEL GAIN_FINE 5.5`
MUTE	`EP ChannelName LEVEL MUTE 1`
PHAN_PWR	`EP ChannelName LEVEL PHAN_PWR 0`
GAIN_COARSE	`EP ChannelName LEVEL GAIN_COARSE 21`
MAX_GAIN	`EP ChannelName LEVEL MAX_GAIN 16.5`
MIN_GAIN	`EP ChannelName LEVEL MIN_GAIN -32.5`
DIG_SRC	`EP Mic1 LEVEL DIG_SRC DanteChannel3`

EP-SRMIC (24) SIG_GEN (12)

You can use the EP command to specify the settings for a signal generator.

Syntax

`EP SRMIC <EPN> SIG_GEN <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
TYPE (1)	Specify the type of signal to generate.	1 for pink noise 2 for white noise 3 for tone 4 for logarithmic swept sine wave Leave blank to retrieve current value	1	RW
FCY (2)	Specify the signal frequency.	20 to 24000 in increments of 0.01 Leave blank to retrieve current value	1000	RW
ENABLE (3)	Specify whether to enable the signal generator.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
GAIN (4)	Signal gain. **Note:** Gain applies only to pink noise, white noise, and logarithmic.	-65 to 20, adjust in increments of 1 **Note:** If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW

Example 1: TYPE

This example shows how to specify a white noise signal generator signal type on a SRMIC channel with the label SRMic1:

```
EP SRMic1 SIG_GEN TYPE 2
```

Example 2: FCY

This example shows how to set the signal frequency on a signal generator on a SRMIC channel with the label SRMic1:

```
EP SRMic1 SIG_GEN FCY 1000
```

Example 3: ENABLE

This example shows how to enable the signal generator on a SRMIC channel with the label SRMic1:

```
EP SRMic1 SIG_GEN ENABLE 1
```

Example 4: GAIN

This example shows how to adjust the signal gain on a signal generator on a SRMIC channel with the label SRMic1:

```
EP SRMic1 SIG_GEN GAIN 5
```

Output

PN	Output
TYPE	`EP SRMic1 SIG_GEN TYPE 2`
FCY	`EP SRMic1 SIG_GEN FCY 1000`
ENABLE	`EP SRMic1 SIG_GEN ENABLE 1`
GAIN	`EP SRMic1 SIG_GEN GAIN 5`

TELCO_RX

EP-TELCO_RX (3) ALC (8)

You can use the EP command to configure the Automatic Level Control (ALC) settings of a TELCO_RX channel.

Syntax

`EP TELCO_RX <EPN> ALC <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Enable automatic level control.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW

Example 1: ENABLE

This example shows how to turn on ALC for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName ALC ENABLE 1
```

Output

PN	Output
ENABLE	`EP ChannelName ALC ENABLE 1`

EP-TELCO_RX (3) CE (7)

You can use the EP command to turn on the ClearEffect (CE) feature for a TELCO_RX channel. To reduce bandwidth requirements, telephone lines limit audio bandwidth to a range of 300Hz-3.3kHz. ClearEffect enhances the incoming signal from a telephone line to emulate wideband audio by adding high and low frequencies to the audio signal, creating a richer, fuller sound.

Syntax

`EP TELCO_RX <EPN> CE <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Enable ClearEffect.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW

Example 1: ENABLE

This example shows how to turn on the ClearEffect feature for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName CE ENABLE 1
```

Output

PN	Output
ENABLE	`EP ChannelName CE ENABLE 1`

EP-TELCO_RX (3) EC (6)

You can use the EP command to turn on echo cancellation (EC) for a TELCO_RX channel.

Syntax

`EP TELCO_RX<EPN> EC<PN>[VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default
ENABLE (1)	Enable echo cancellation.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0

Example 1: ENABLE

This example shows how to turn on echo cancellation for TELCO_RX 1:

```
EP TELCO_RX 1 EC ENABLE 1
```

Output

PN	Output
ENABLE	`EP TELCO_RX 1 EC ENABLE 1`

EP-TELCO_RX (3) INQUIRE (9)

You can use the EP command to retrieve information about a TELCO_RX end point.

Syntax

`EP TELCO_RX <EPN> INQUIRE <PN>`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
DIGITS_DIALED_SINCE_OFF_HOOK (1)	Retrieve the digits dialed since the device went off hook. **Note:** If you hang up, you can no longer retrieve the digits dialed prior to hanging up.	Read only	N/A	R
CALLER_ID (2)	Retrieve the CALLER_ID value of the current call.	Read only	N/A	R
DIRECTION (3)	Retrieve the direction of the current call.	Read only	0	R
OFF_HOOK_DURATION (4)	Retrieve the length of time (in seconds) the device has been off hook.	Read only	0	R
HOOK (5)	Retrieve the hook status of the device.	Read only	0	R

Example 1: DIGITS_DIALED_SINCE_OFF_HOOK

This example shows how to find out what digits have been dialed since a TELCO_RX channel with the label ChannelName went off hook:

```
EP ChannelName INQUIRE DIGITS_DIALED_SINCE_OFF_HOOK
```

Example 2: CALLER_ID

This example shows how to find out the CALLER_ID of the current call for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName INQUIRE CALLER_ID
```

Example 3: DIRECTION

This example shows how to find out the direction (ingoing or outgoing) of the current call for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName INQUIRE DIRECTION
```

Example 4: OFF_HOOK_DURATION

This example shows how to find out how long a TELCO_RX channel with the label ChannelName has been off hook:

```
EP ChannelName INQUIRE OFF_HOOK_DURATION
```

Example 5: HOOK

This example shows how to find out whether a TELCO_RX channel with the label ChannelName is on or off hook:

```
EP ChannelName INQUIRE HOOK
```

Output

All output is received via the EP TELCO_RX NOTIFICATION command.

EP-TELCO_RX (3) KEY (3)

You can use the EP command to send key commands (the equivalent of pressing keys on a phone) to a TELCO_RX device.

Syntax

`EP TELCO_RX <EPN> KEY <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
KEY_CALL (1)	Initiate an outgoing call.	Digit string.	N/A	W
KEY_HOOK_FLASH (2)	Hook flash.	N/A	N/A	W
KEY_REDIAL (4)	Redial the last dialed number.	N/A	N/A	W
KEY_HOOK (5)	Change the hook state of the device.	0 for on hook 1 for off hook 2 for toggle current state	0	W
KEY_DIGIT_PRESSED (6)	The equivalent of pressing a digit on a phone (but not releasing it).	A numerical digit.	N/A	W
KEY_DIGIT_RELEASED (7)	The equivalent of releasing a pressed digit on a phone.	A numerical digit (should be the same as a digit that has already been pressed).	N/A	W

Example 1: KEY_CALL

This example shows how to call a number on a TELCO_RX channel with the label ChannelName:

```
EP ChannelName KEY KEY_CALL 5555555555
```

Example 2: KEY_HOOK_FLASH

This example shows how to send a flash signal to a TELCO_RX channel with the label ChannelName:

```
EP ChannelName KEY KEY_HOOK_FLASH
```

Example 3: KEY_REDIAL

This example shows how to redial the last number dialed on a TELCO_RX channel with the label ChannelName:

```
EP ChannelName KEY KEY_REDIAL
```

Example 4: KEY_HOOK

This example shows how to change the hook status on a TELCO_RX channel with the label ChannelName to off-hook:

```
EP ChannelName KEY KEY_HOOK 1
```

Example 5: KEY_DIGIT_PRESSED

This example shows how to press the digit 5 on a TELCO_RX channel with the label ChannelName:

```
EP ChannelName KEY KEY_DIGIT_PRESSED 5
```

Example 6: KEY_DIGIT_RELEASED

This example shows how to release the digit 5 on a TELCO_RX channel with the label ChannelName:

```
EP ChannelName KEY KEY_DIGIT_RELEASED 5
```

Output

All the parameters for this block are write only, which means that no return values are sent.

EP-TELCO_RX (3) LEVEL (1)

You can use the EP command to change the level of a TELCO_RX channel.

Syntax

`EP TELCO_RX <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain.	-65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN. Adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MUTE (2)	Mute.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
DIAL_TONE_LEVEL (3)	Dial tone level.	-12 to 12 in increments of 0.5 Leave blank to retrieve current value	-6	RW
BOOST_LEVEL (4)	Amount to boost the TELCO_RX channel level prior to processing.	0 to 12 in increments of 3 Leave blank to retrieve current value	0	RW
DTMF_LEVEL (5)	Change the level of the tones played when keys are pressed.	-12 to 12 in increments of 0.5 Leave blank to retrieve current value	0	RW
AUDIBLE_CONNECT_LEVEL (6)	Change the level of the beeps received when a unit goes off hook or on hook.	-12 to 12 in increments of 0.5 Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
MAX_GAIN (9)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	20	RW
MIN_GAIN (10)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	-65	RW
LABEL (11)	The channel label.	N/A	N/A	R

Example 1: GAIN

This example shows how to change the gain for the a TELCO_RX channel with the label ChannelName:

```
EP ChannelName LEVEL GAIN 5.5
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute the level of a TELCO_RX channel with the label ChannelName:

```
EP ChannelName LEVEL MUTE 1
```

Example 3: DIAL_TONE_LEVEL

This example shows how to set the level for the dial tone of a TELCO_RX channel with the label ChannelName:

```
EP ChannelName LEVEL DIAL_TONE_LEVEL 2
```

Example 4: BOOST_LEVEL

This example shows how to set the boost level for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName LEVEL BOOST_LEVEL 9
```

Example 5: DTMF_LEVEL

This example shows how to set the key touch tone level for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName LEVEL DTMF_LEVEL 4
```

Example 6: AUDIBLE_CONNECT_LEVEL

This example shows how to change the audible connect level for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName LEVEL AUDIBLE_CONNECT_LEVEL 3
```

Example 7: MAX_GAIN

This example shows how to set maximum gain for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName LEVEL MAX_GAIN 40
```

Example 8: MIN_GAIN

This example shows how to set minimum gain for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName LEVEL MIN_GAIN -50
```

Example 9: LABEL

This example shows how to retrieve the channel label for TELCO_RX channel 101:

```
EP TELCO_RX 101 LEVEL LABEL
```

Output

PN	Output
GAIN	`EP ChannelName LEVEL GAIN 5.5`
MUTE	`EP ChannelName LEVEL MUTE 1`
DIAL_TONE_LEVEL	`EP ChannelName LEVEL DIAL_TONE_LEVEL 2`
BOOST_LEVEL	`EP ChannelName LEVEL BOOST_LEVEL 9`
DTMF_LEVEL	`EP ChannelName LEVEL DTMF_LEVEL 4`
AUDIBLE_CONNECT_LEVEL	`EP ChannelName LEVEL AUDIBLE_CONNECT_LEVEL 3`
MAX_GAIN	`EP ChannelName LEVEL MAX_GAIN 40`
MIN_GAIN	`EP ChannelName LEVEL MIN_GAIN -50`
LABEL	`EP TELCO_RX 101 LEVEL LABEL TELCO1_CHAN`

EP-TELCO_RX (3) NC (5)

You can use the EP command to manage the Noise Cancellation (NC) of a TELCO_RX channel. Noise cancellation cancels background noise.

Syntax

```
EP TELCO_RX <EPN> NC <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
ENABLE (1)	Enable noise cancellation.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
DEPTH (2)	Depth of noise cancellation.	6 to 25 in increments of 1 Leave blank to retrieve current value	7	RW

Example 1: ENABLE

This example shows how to enable NC on a TELCO_RX channel with the label ChannelName:

```
EP ChannelName NC ENABLE 1
```

Example 2: DEPTH

This example shows how to adjust the depth of noise suppression on a TELCO_RX channel with the label ChannelName:

```
EP ChannelName NC DEPTH 22
```

Output

PN	Output
ENABLE	`EP ChannelName NC ENABLE 1`
DEPTH	`EP ChannelName NC DEPTH 22`

EP-TELCO_RX (3) NOTIFICATION (4)

This command returns notifications of TELCO_RX activity.

Note:

The EP TELCO_RX NOTIFICATION messages are asynchronous notifications that can be received from a CONVERGE Pro 2 box, but cannot be sent to the box.

Syntax

`EP TELCO_RX <EPN> NOTIFICATION <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Output

PN	Output	Default	RW
INCOMING_CALL	`EP ChannelName NOTIFICATION INCOMING_CALL 1`	0	
CALLER_ID	`EP ChannelName NOTIFICATION CALLER_ID 5555555555`	N/A	
CALL_DURATION	`EP ChannelName NOTIFICATION CALL_DURATION`	N/A	
HOOK	`EP ChannelName NOTIFICATION HOOK 1`	0	
RING	`EP ChannelName NOTIFICATION RING 1`	0	

EP-TELCO_RX (3) SETTINGS (2)

You can use the EP command to change the settings for a TELCO_RX channel.

Syntax

`EP TELCO_RX <EPN> SETTINGS <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
AUTO_ANSWER_RINGS (1)	Indicate that the channel should automatically answer after a specified number of rings.	0 for off 1-4 to turn on and specify # of rings Leave blank to retrieve current value	0	RW
AUTO_DISCONNECT_MODE (2)	Select the auto disconnect mode to control when the unit disconnects a connected call.	0 for off 1 for Loop Drop 2 for Call Progress 3 for Loop Drop + Call Progress Leave blank to retrieve current value	0	RW
RING_TYPE (3)	Select from three different ring tones.	1-3 Leave blank to retrieve current value	1	RW
ADAPT (4)	For Telephone Echo Cancellation (TEC), some applications may require the unit to adapt to line conditions using a white-noise burst (Noise) rather than automatically (Auto).	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
HOOK_FLASH_DURATION (5)	This feature is dependent on the services offered by your telephone company. Range is 50ms to 2 seconds.	50 to 2000 in increments of 0.5 Leave blank to retrieve current value	250	RW
RING_ENABLE (6)	Whether the ringer is enabled.	0 to disable 1 to enable Leave blank to retrieve current value	0	RW

PN	Description	Value	Default	RW
RING_LEVEL (7)	Audible ring level in dB.	-12 to 12 in increments of 0.5 Leave blank to retrieve current value	0	RW
AUDIBLE_CONNECT_ENABLE (8)		0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value		
RING_CAD_CUST (9)	Allows you to set custom on time and off time ringer cadence. If you don't set a custom ring cadence the default cadence based on the country code setting is used.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
RING_ON_TIME (10)	Ring on time (when using custom).	0-7 in increments of 1 Leave blank to retrieve current value	0	RW
RING_OFF_TIME (11)	Ring off time (when using custom).	0-15 in increments of 1 Leave blank to retrieve current value	0	RW
COUNTRY_CODE (12)	Set the country code for the device to specify which telco standards are used.	1 USA/Canada 2 Europe 3 Mexico 4 Australia 5 South Africa 6 Japan 7 Brazil 8 South Korea 9 China 10 Singapore 11 Taiwan 12 New Zealand 13 India 14 Hong Kong 15 Malaysia 16 Argentina Leave blank to retrieve current value	1	RW

PN	Description	Value	Default	RW
LAST_DIALED_DIGITS (13)	Returns last dialed digits using a KEY_CALL command while on hook.	Read only	N/A	RW
LOCAL_NUMBER (14)	Returns the device's phone number.	Read only	N/A	RW

Example 1: AUTO_ANSWER_RINGS

This example shows how to set a TELCO_RX channel with the label ChannelName to automatically answer after 3 rings:

```
EP ChannelName SETTINGS AUTO_ANSWER_RINGS 3
```

Example 2: AUTO_DISCONNECT_MODE

This example shows how to set the auto disconnect mode for a TELCO_RX channel with the label ChannelName to Loop Drop:

```
EP ChannelName SETTINGS AUTO_DISCONNECT_MODE 1
```

Example 3: RING_TYPE

This example shows how to set the ring type for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName SETTINGS RING_TYPE 2
```

Example 4: ADAPT

This example shows how to turn on the adapt setting for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName SETTINGS ADAPT 1
```

Example 5: HOOK_FLASH_DURATION

This example shows how to set the hook flash duration for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName SETTINGS HOOK_FLASH_DURATION 250
```

Example 6: RING_ENABLE

This example shows how to set ring enable for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName SETTINGS RING_ENABLE 1
```

Example 7: RING_LEVEL

This example shows how to set the ring level for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName SETTINGS RING_LEVEL 3
```

Example 8: AUDIBLE_CONNECT_ENABLE

This example shows how to turn on audible connect for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName SETTINGS AUDIBLE_CONNECT_ENABLE 1
```

Example 9: RING_CAD_CUST

This example shows how to set a TELCO_RX channel with the label ChannelName to use a custom ring cadence:

```
EP ChannelName SETTINGS RING_CAD_CUST 1
```

Example 10: RING_ON_TIME

This example shows how to set the ring on time for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName SETTINGS RING_ON_TIME 4
```

Example 11: RING_OFF_TIME

This example shows how to set the ring off time for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName SETTINGS RING_OFF_TIME 11
```

Example 12: COUNTRY_CODE

This example shows how to set the country code for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName SETTINGS COUNTRY_CODE 1
```

Example 13: LAST_DIALED_DIGITS

This example shows how to return the last dialed digits using a KEY_CALL command while on-hook for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName SETTINGS LAST_DIALED_DIGITS
```

Example 14: LOCAL_NUMBER

This example shows how to retrieve the phone number for a TELCO_RX channel with the label ChannelName:

```
EP ChannelName SETTINGS LOCAL_NUMBER
```

Output

PN	Output
AUTO_ANSWER_RINGS	`EP ChannelName SETTINGS AUTO_ANSWER_RINGS 3`
AUTO_DISCONNECT_MODE	`EP ChannelName SETTINGS AUTO_DISCONNECT_MODE 1`
RING_TYPE	`EP ChannelName SETTINGS RING_TYPE 2`
ADAPT	`EP ChannelName SETTINGS ADAPT 1`
HOOK_FLASH_DURATION	`EP ChannelName SETTINGS HOOK_FLASH_DURATION 250`
RING_ENABLE	`EP ChannelName SETTINGS RING_ENABLE 1`
RING_LEVEL	`EP ChannelName SETTINGS RING_LEVEL 3`
AUDIBLE_CONNECT_ENABLE	`EP ChannelName SETTINGS AUDIBLE_CONNECT_ENABLE 1`
RING_CAD_STD	`EP ChannelName SETTINGS RING_CAD_STD 1`
RING_CAD_CUST	`EP ChannelName SETTINGS RING_CAD_CUST 1`
RING_ON_TIME	`EP ChannelName SETTINGS RING_ON_TIME 4`
RING_OFF_TIME	`EP ChannelName SETTINGS RING_OFF_TIME 11`
COUNTRY_CODE	`EP ChannelName SETTINGS COUNTRY_CODE 1`
LAST_DIALED_DIGITS	`EP ChannelName SETTINGS LAST_DIALED_DIGITS 5555555555`
LOCAL_NUMBER	`EP ChannelName SETTINGS LOCAL_NUMBER 5555555555`

Telco States

The following table describes the possible Telco states, state transitions, and the serial commands sent to and received from a box during Telco processes.

ID	STATE	SOFT KEY/ACTION	ACTION

0	IDLE	Incoming call	**Box returns:**
			`EP TELCO_RX <X> NOTIFICATION INCOMING_CALL 1`
			`EP TELCO_RX <X> NOTIFICATION CALLER_ID<CID>`
			Transition to State 3

		CALL NUMBER	**Send to box:**
			`EP TELCO_RX <X> KEY KEY_CALL <Digits>`
			Box returns:
			`EP TELCO_RX <X> KEY KEY_CALL <Digits>`
			`EP TELCO_RX <X> NOTIFICATION HOOK 1`
			Transition to State 4
			If box doesn't return:
			`EP TELCO_RX <X> NOTIFICATION HOOK 1`
			within 20 seconds, it means insufficient digits were collected to complete the call.
			Transition to State 2

		OFF-HOOK	**Send to box:**
			`EP TELCO_RX <X> KEY KEY_HOOK 1`
			Box returns:
			`EP TELCO_RX <X> NOTIFICATION HOOK 1`
			Transition to State 1

1	DIAL TONE	END CALL	**Send to box:**
			`EP TELCO_RX <X> KEY KEY_HOOK 0`
			Box returns:
			`EP TELCO_RX <X> NOTIFICATION HOOK 0`
			`EP TELCO_RX <X> NOTIFICATION CALL_DURATION <time off-hook>`
			Transition to State 0

		CALL NUMBER	**Send to box:** `EP TELCO_RX <X> KEY KEY_CALL <Digits>` **Box returns:** `EP TELCO_RX <X> KEY KEY_CALL <Digits>` **Transition to State 4**

ID	STATE	SOFT KEY/ACTION	ACTION

		ENTER DIGITS	**Send to box:**
			`EP TELCO_RX <X> KEY KEY_DIGIT_PRESSED <Digit>`
			`EP TELCO_RX <X> KEY KEY_DIGIT_RELEASED <Digit>`
			Box returns:
			`EP TELCO_RX <X> KEY KEY_DIGIT_RELEASED <Digit>`
			Transition to State 2

		Dial Tone Timeout	**Box returns:**
			`EP TELCO_RX <X> NOTIFICATION HOOK 0`
			`EP TELCO_RX <X> NOTIFICATION CALL_DURATION <time off-hook>`
			Transition to State 0

2	DIGIT COLLECTION	END CALL	**Send to box:**
			`EP TELCO_RX <X> KEY KEY_HOOK 0`
			Box returns:
			`EP TELCO_RX <X> NOTIFICATION HOOK 0`
			`EP TELCO_RX <X> NOTIFICATION CALL_DURATION <time off-hook>`
			Transition to State 0

		ENTER DIGITS	**Send to box:**
			`EP TELCO_RX <X> KEY KEY_DIGIT_PRESSED <Digit>`
			`EP TELCO_RX <X> KEY KEY_DIGIT_RELEASED <Digit>`
			When no digits have been collected for 20 seconds, **transition to state 4**

3	INCOMING	ANSWER	**Send to box:**
			`EP TELCO_RX <X> KEY KEY_HOOK 1`
			Box returns:
			`EP TELCO_RX <X> NOTIFICATION HOOK 1`
			Transition to State 4

		Remote party disconnects	**Box returns:** `EP TELCO_RX <X> NOTIFICATION INCOMING_CALL 0` **Transition to State 0**

ID	STATE	SOFT KEY/ACTION	ACTION

4	CONNECTED	END CALL	**Send to box:**
			`EP TELCO_RX <X> KEY KEY_HOOK 0`
			Box returns:
			`EP TELCO_RX <X> NOTIFICATION HOOK 0`
			`EP TELCO_RX <X> NOTIFICATION CALL_DURATION <time off-hook>`
			Transition to State 0

		KEYPAD	**Send to box:**
			`EP TELCO_RX <X> KEY KEY_DIGIT_PRESSED <Digit>`
			`EP TELCO_RX <X> KEY KEY_DIGIT_RELEASED <Digit>`

		FLASH	**Send to box:** `EP TELCO_RX <X> KEY KEY_HOOK_FLASH`

		Remote party disconnects	**Box returns:**
			`EP TELCO_RX <X> NOTIFICATION HOOK 0`
			`EP TELCO_RX <X> NOTIFICATION CALL_DURATION <time off-hook>`
			Transition to State 0

TELCO_TX

EP-TELCO_TX (4) LEVEL (1)

You can use the EP command to change the level of a TELCO_TX channel.

Syntax

`EP TELCO_TX <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain.	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MUTE (2)	Mute.	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
MAX_GAIN (3)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	20	RW
MIN_GAIN (4)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	-65	RW

Example 1: GAIN

This example shows how to change the gain for the a TELCO_TX channel with the label ChannelName channel to 5.5:

```
EP ChannelName LEVEL GAIN 5.5
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute the level of a TELCO_TX channel with the label ChannelName:

```
EP ChannelName LEVEL MUTE 1
```

Example 3: MAX_GAIN

This example shows how to set maximum gain for a TELCO_TX channel with the label ChannelName:

```
EP ChannelName LEVEL MAX_GAIN 40
```

Example 4: MIN_GAIN

This example shows how to set minimum gain for a TELCO_TX channel with the label ChannelName:

```
EP ChannelName LEVEL MIN_GAIN -50
```

Output

PN	Output
GAIN	`EP ChannelName LEVEL GAIN 5.5`
MUTE	`EP ChannelName LEVEL MUTE 1`
MAX_GAIN	`EP ChannelName LEVEL MAX_GAIN 40`
MIN_GAIN	`EP ChannelName LEVEL MIN_GAIN -50`

UA

EP-UA (20) INQUIRE (2)

You can use the EP inquire about the status of a UA end point. The results are returned in INQUIRE_RESULT.

Syntax

`EP UA <EPN> INQUIRE <PN>`

Input

PN	Description	RW
REG_STATUS (1)	Requests SIP registration status.	R
ACTIVE_PARTIES (2)	Requests information about each of the party lines.	R
CFW_STATUS (3)	Requests information about the call forwarding status of each line.	R
DND_STATUS (4)	Requests the Do Not Disturb (DND) status of each line.	R
MAX_CALLS_PER_UA (5)	Requests the number of calls per user agent.	R

EP-UA (20) INQUIRE_RESULT (3)

This command is used to return the results of an EP UA INQUIRE command.

Output

PN	Output
REG_STATUS (1)	Returns the SIP server registration status. Possible values: NO_PROXY_DEFINED - No primary or secondary proxy has been defined. NOT_REGISTERED - A proxy is defined, but the UA is currently registered with the proxy. REGISTERED_PRIMARY - A proxy is defined and the UA is registered to the primary SIP proxy. REGISTERED_SECONDARY - A secondary proxy is defined and the UA is registered to the secondary SIP proxy.

PN	Output
ACTIVE_PARTIES (2)	Returns the state of each party line. Possible values: IDLE - The party line is idle. DIAL_TONE - The party line is off-hook and a dial tone is active. DIALING;<CallPartyDigits> - The party line is off-hook and party digits have been entered. <CallPartyDigits> shows digits dialed thus far. INPROCESS;<CallParty> - An outbound call has been initiated to <CallParty> and the call is in progress. RINGING;<CallParty> - An outbound call has been made to <CallParty> and the party line is ringing. BUSY;<CallParty> - An outbound call has been made to <CallParty> and the party line is busy. ACTIVE;<CallParty>;<CallTime> - The party line is in an active call to <CallParty> and the call has been active for <CallTime>. HOLD;<CallParty>;<CallTime>;<HoldTime> - The party line is on hold to <CallParty>; call has been active for <CallTime> and on hold for <HoldTime>. INCOMING;<CallParty> - There is an incoming call from <CallParty>. CONFERENCE_ACTIVE;<CallParty>;<CallTime> - The party line is in a conference call to <CallParty> and the call has been active for <CallTime>. CONFERENCE_HOLD;<CallParty>;<CallTime>;<HoldTime> - The party line is in a conference call to <CallParty> and is on hold; call has been active for <CallTime> and has been on hold for <HoldTime>. TRANSFER_HOLD;<CallParty>;<CallTime>;<HoldTime> - The party line is being transferred and the party line is on hold; call is to <CallParty>, call has been active for <CallTime> and has been on hold for <HoldTime>. TRANSFER_ACTIVE;<CallParty>;<CallTime> - This party line is being transferred; call is to <CallParty> and has been active for <CallTime>. TRANSFERRING_DIAL_TONE - Party line is being called for a transfer and is in a dial tone state. TRANSFERRING_DIALING;<CallPartyDigits> - Party line is being called for a transfer and is currently being dialed; <CallPartyDigits> shows digits dialed so far. TRANSFERRING_INPROCESS;<CallParty> - Party line is being called for a transfer and call is in process. TRANSFERRING_RINGING;<CallParty> - Party line is being called for a transfer and party line is ringing. TRANSFERRING_BUSY;<CallParty> - Party line is being called for a transfer and party line is busy. TRANSFERRING_ACTIVE;<CallParty>;<CallTime> - Party line is being called for a transfer and party line is active; <CallParty> is active party and call has been active for <CallTime>. TRANSFERRING_HOLD;<CallParty>;<CallTime>;<HoldTime> - Party line is being called for a transfer; <CallParty> is remote party, call has been active for <CallTime> and has been on hold for <HoldTime>. BLIND_TRANSFER_HOLD;<CallParty>;<CallTime>;<HoldTime> - Party line is being transferred through a blind transfer and party line is on hold; call is with <CallParty>, call time is <CallTime>, hold time is <HoldTime>. BLIND_TRANSFERRING_DIAL_TONE - Party line is being called for blind transfer and party line is in dial tone state. BLIND_TRANSFERRING_DIALING;<CallPartyDigits> - Party line is being called for blind transfer and is being dialed; <CallPartyDigits> shows digits dialed so far. BLIND_TRANSFERRING_INPROCESS;<CallParty> - Party line is being called for blind transfer and call is in process to <CallParty>. BLIND_TRANSFERRING_RINGING;<CallParty> - Party line is being called for blind transfer with <CallParty> and party line is ringing. BLIND_TRANSFERRING_BUSY;<CallParty> - Party line is being called for blind transfer with <CallParty> and party line is busy.

PN	Output
CFW_STATUS (3)	Call forwarding (CFW) status. Possible values: INACTIVE - Call forwarding is not active. INPROCESS;<ForwardingType>;<ForwardingNumber> - Unit is set up for call forwarding. Forwarding type can be CFW-UNCONDITIONAL, CFW-BUSY, CFW-NO_REPLY, CFW-NONE; <ForwardingNumber> is the number to which calls are being forwarded and may be blank if forwarding process has not been completed; <ForwardingNumber> is a SIP URI. ACTIVE;<ForwardingType>;<ForwardingNumber> - Call forwarding is active on the unit; possible forwarding types are: CFW-UNCONDITIONAL, CFW-BUSY, and CFW-NO_REPLY; <ForwardingNumber> is the number to which calls are being forwarded, and is a SIP URI.
DND_STATUS (4)	Do Not Disturb (DND) status. Possible values: INACTIVE - DND is inactive. ACTIVE - DND is active.
MAX_CALLS_PER_UA (5)	

EP-UA (20) KEY (1)

You can use the EP command to send key commands (the equivalent of pressing keys on a phone) to a UA channel.

Syntax

`EP UA <EPN> KEY <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
KEY_CALL (1)	Initiate an outgoing call.	Call digits	N/A	W
KEY_REJECT (2)	Reject an incoming call on the specified party line.	1-5 to indicate a party line	N/A	W
KEY_HOLD (3)	Place call on hold.	N/A	N/A	W
KEY_TRANSFER (4)	Use to initiate a transfer and, once you have dialed another party, complete the transfer.	N/A	N/A	W

PN	Description	Value	Default	RW
KEY_BLIND_TRANSFER (5)	Use to initiate a blind transfer (a transfer with no introduction) and, once you have dialed another party, complete the transfer.	N/A	N/A	W
KEY_CONFERENCE (6)	Use to initiate a conference call and, once you have dialed another party, add that party to the conference call.	0-5	0	W
KEY_DIGIT_PRESSED (7)	The equivalent of pressing a digit on a phone (but not releasing it).	Call digit	N/A	W
KEY_DIGIT_RELEASED (8)	The equivalent of releasing a pressed digit on a phone.	Call digit (must be the same as a digit that has already been pressed)	N/A	W
KEY_REDIAL (9)	Redial the last number dialed.	N/A	N/A	W
KEY_PARTY (10)	Select a party line.	1-5	N/A	W
KEY_HOOK (11)	Change the hook state.	0 for on hook 1 for off hook 2 for toggle current state	N/A	W
KEY_MUTE (12)	Change the mute state.	0 to unmute 1 to mute 2 to toggle current state	N/A	W
KEY_FORWARD (13)	Forward a call.	0 to disable call forwarding 1 for Unconditional (all incoming calls are fowarded) 2 for Busy (calls are forwarded only when all party lines are in use) 3 for No Answer (calls are forwarded only the local party does not answer the phone after 15 seconds)	N/A	W

PN	Description	Value	Default	RW
KEY_DO_NOT_DISTURB (14)	Turn on the Do Not Disturb feature.	0 to disable 1 to enable 2 to toggle current state	N/A	W
KEY_PLAY_RINGTONE (15)	Play any of the 5 ringtones.	0-5	0	W

Example 1: KEY_CALL

This example shows how to initiate an outgoing call on a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_CALL 5555555555
```

Example 2: KEY_REJECT

This example shows how to reject an incoming call on a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_REJECT 1
```

Example 3: KEY_HOLD

This example shows how to place a call on hold on a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_HOLD
```

Example 4: KEY_TRANSFER

This example shows how to transfer a call on a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_TRANSFER
```

Example 5: KEY_BLIND_TRANSFER

This example shows how to blind transfer a call on a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_BLIND_TRANSFER
```

Example 6: KEY_CONFERENCE

This example shows how to initiate a conference call on party line 1 of a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_CONFERENCE 1
```

Example 7: KEY_DIGIT_PRESSED

This example shows how to press (but not release) the digit “3”on a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_DIGIT_PRESSED 3
```

Example 8: KEY_DIGIT_RELEASED

This example shows how to release a pressed digit “3” on a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_DIGIT_RELEASED 3
```

Example 9: KEY_REDIAL

This example shows how to redial a number on a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_REDIAL
```

Example 10: KEY_PARTY

This example shows how to select party line 1 for a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_PARTY 1
```

Example 11: KEY_HOOK

This example shows how to change the hook status on a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_HOOK 1
```

Example 12: KEY_MUTE

This example shows how to enable mute on a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_MUTE 1
```

Example 13: KEY_FORWARD

This example shows how to enable unconditional call forwarding on a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_FORWARD 1
```

Example 14: KEY_DO_NOT_DISTURB

This example shows how to enable Do Not Disturb on a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_DO_NOT_DISTURB 1
```

Example 15: KEY_RINGTONE

This example shows how to set a ringtone on a UA channel with the label ChannelName:

```
EP ChannelName KEY KEY_RINGTONE 1
```

Output

All the parameters for this block are write only, which means that no return values are sent.

EP-UA (20) NOTIFICATION (4)

A VoIP-capable CONVERGE Pro 2 device uses this command to send asynchronous notifications regarding VoIP status.

Note:

The EP UA NOTIFICATION messages can be received from a CONVERGE Pro 2 box, but cannot be sent to the box.

Syntax

```
EP UA <EPN> NOTIFICATION <PN> [VALUE]
```

Parameters

Parameter	Description
STATE_CHANGE	Call state changed. Possible values: IDLE DIAL_TONE DIALING:CallPartyDigits INPROCESS:CallParty RINGING:CallParty BUSY:CallParty ACTIVE:CallParty HOLD:CallParty INCOMING:CallParty CONFERENCE_ACTIVE:CallParty CONFERENCE_HOLD:CallParty TRANSFER_ACTIVE:CallParty TRANSFER_HOLD:CallParty TRANSFERRING_DIAL_TONE TRANSFERRING_DIALING:CallPartyDigits TRANSFERRING_INPROCESS:CallParty TRANSFERRING_RINGING:CallParty TRANSFERRING_BUSY:CallParty TRANSFERRING_ACTIVE:CallParty TRANSFERRING_HOLD:CallParty BLIND_TRANSFER_HOLD:CallParty BLIND_TRANSFERRING_DIAL_TONE BLIND_TRANSFERRING_DIALING:CallPartyDigits BLIND_TRANSFERRING_INPROCESS:CallParty BLIND_TRANSFERRING_RINGING:CallParty BLIND_TRANSFERRING_BUSY:CallParty

Parameter	Description
INDICATION	Used to provide a notification that some kind of indicator has changed. Possible values: EP UA <X> NOTIFICATION INDICATION PL NA;HOLD:<ON|OFF> EP UA <X> NOTIFICATION INDICATION PL NA;MUTE:<ON|OFF> EP UA <X> NOTIFICATION INDICATION PL <1-5>;PARTY_LINE:<ON|OFF|BLINK> EP UA <X> NOTIFICATION INDICATION PL NA;RINGBACK:<ON|OFF> EP UA <X> NOTIFICATION INDICATION PL NA;RINGING:<ON|OFF> EP UA <X> NOTIFICATION INDICATION PL NA;CALL_WAITING_CALLEE:<ON|OFF> EP UA <X> NOTIFICATION INDICATION PL NA;BUSY:<ON|OFF> EP UA <X> NOTIFICATION INDICATION PL NA;WARNING_ERR:<ON|OFF>
ERROR	Contains information about any errors that have been generated.
REG_FAILED	Registration with a SIP server failed.
REG_SUCCEED	Registration with a SIP server succeeded.
UNREG_SUCCEED	Unregistering from a SIP server succeeded.
MAX_CALLS_PER_USER_AGENT	Shows the maximum number of calls allowed per user agent.

Output

PN	Output
STATE_CHANGE	`EP ChannelName NOTIFICATION STATE_CHANGE IDLE`
INDICATION	`EP ChannelName NOTIFICATION INDICATION PL NA;HOLD;ON`
ERROR	`EP ChannelName NOTIFICATION ERROR CALL_FORWARD_ACTIVATION;%s;;ERROR_CALL_ACTIVE`
REG_FAILED	`EP ChannelName NOTIFICATION REG_FAILED`
REG_SUCCEED	`EP ChannelName NOTIFICATION REG_SUCCEED`
UNREG_SUCCEED	`EP ChannelName NOTIFICATION UNREG_SUCCEED`
MAX_CALLS_PER_USER_AGENT	`EP ChannelName NOTIFICATION MAX_CALLS_PER_USER_AGENT`

EP-UA (20) SETTINGS (6)

You can use the EP command to change the settings for a UA channel.

Syntax

`EP UA <EPN> SETTINGS <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
UA_ENABLE (1)	Enable the SIP service.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value	0	RW
USERNAME (2)	A SIP username, for the primary SIP server.	Text string Leave blank to retrieve current value	admin	RW
PASSWORD (3)	A SIP password, for the primary SIP server.	Text string Leave blank to retrieve current value	clearone	RW
SEC_USERNAME (4)	A SIP username, for the secondary SIP server.	Text string Leave blank to retrieve current value	admin	RW
SEC_PASSWORD (5)	A SIP password, for the secondary SIP server.	Text string Leave blank to retrieve current value	clearone	RW
DISPLAY_NAME (6)	Extension/phone # of that agent.	Text string Leave blank to retrieve current value	admin	RW
ACTIVE_RINGTONE (7)	Default ringtone.	1-5 Leave blank to retrieve current value	1	RW
LABEL (8)	Use to retrieve the channel label.	Read only.	N/A	R
AUTO_ANSWER (9)	Turn auto answer on or off.	0 to disable 1 to enable Leave blank to retrieve current value	0	RW

Example 1: UA_ENABLE

This example shows how to enable SIP on a UA channel with the label ChannelName:

```
EP ChannelName SETTINGS UA_ENABLE 1
```

Example 2: USERNAME

This example shows how to specify the username for the primary SIP server on a UA channel with the label ChannelName:

```
EP ChannelName SETTINGS USERNAME MyUsername
```

Example 3: PASSWORD

This example shows how to specify the password for the primary SIP server on a UA channel with the label ChannelName:

```
EP ChannelName SETTINGS PASSWORD MyPassword
```

Example 4: SEC_USERNAME

This example shows how to specify the username for the secondary SIP server on a UA channel with the label ChannelName:

```
EP ChannelName SETTINGS SEC_USERNAME MyUsername
```

Example 5: SEC_PASSWORD

This example shows how to specify the password for the secondary SIP server on a UA channel with the label ChannelName:

```
EP ChannelName SETTINGS SEC_PASSWORD MyPassword
```

Example 6: DISPLAY_NAME

This example shows how to set the SIP display name for a UA channel with the label ChannelName:

```
EP ChannelName SETTINGS DISPLAY_NAME 5555555555
```

Example 7: ACTIVE_RINGTONE

This example shows how to set the default ringtone for a UA channel with the label ChannelName:

```
EP ChannelName SETTINGS ACTIVE_RINGTONE 3
```

Example 8: LABEL

This example shows how to retrieve the label for a UA channel:

```
EP UA 101 SETTINGS LABEL
```

Example 9: AUTO_ANSWER

This example shows how to enable auto answer for a UA channel with the label ChannelName:

```
EP ChannelName SETTINGS AUTO_ANSWER 1
```

Output

PN	Output
UA_ENABLE	`EP ChannelName SETTINGS UA_ENABLE 1`
USERNAME	`EP ChannelName SETTINGS USERNAME MyUsername`
PASSWORD	`EP ChannelName SETTINGS PASSWORD MyPassword`
SEC_USERNAME	`EP ChannelName SETTINGS SEC_USERNAME MyUsername`
SEC_PASSWORD	`EP ChannelName SETTINGS SEC_PASSWORD MyPassword`
DISPLAY_NAME	`EP ChannelName SETTINGS DISPLAY_NAME 5555555555`
ACTIVE_RINGTONE	`EP ChannelName SETTINGS ACTIVE_RINGTONE 3`
LABEL	`EP UA 101 SETTINGS MyChannelName`
AUTO_ANSWER	`EP ChannelName SETTINGS AUTO_ANSWER 1`

VOIP States

The following table describes the possible Voice Over IP (VOIP) states, state transitions, and the serial commands sent to and received from a box during VOIP processes.

ID	State	Soft Key/Action	Action
0	IDLE	Incoming Call	**Box returns:** `EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; INCOMING:<CallParty>` **Transition to State ID 8**

		OFF-HOOK	Send to box:
			`EP UA <X> KEY KEY_HOOK`
			Box returns:
			`EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; DIAL_TONE`
			Transition to State ID 1

		DIAL NUMBER/SIP URI	**Send to box:**
			`EP UA <X> KEY KEY_CALL <target # or SIP URI>`
			Box returns:
			`EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; INPROCESS:<CallParty>`
			Transition to State ID 3
			Box returns:
			`EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; BUSY:<CallParty>`
			Transition to State ID 5

1	DIAL_TONE	END CALL	**Send to box:**
			`EP UA <X> KEY KEY_PARTY <1-5>`
			Box returns:
			`EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE`
			Transition to State ID 0

ID	State	Soft Key/Action	Action

		DIAL NUMBER/SIP URI	**Send to box:**
			`EP UA <X> KEY KEY_CALL <target # or SIP URI>`
			Box returns:
			`EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; INPROCESS:<CallParty>` **Transition to State ID 3**
			Box returns:
			`EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; BUSY:<CallParty>`
			Transition to State ID 5

		ENTER DIGITS	**Send to box:**`EP UA <X> KEY KEY_DIGIT_PRESSED <Digit>`
			If box returns:`EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; DIALING: <CallPartyDigits>`
			Transition to State ID 2
			If box returns:
			`EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; RINGING:<CallParty>`
			Transition to State ID 4
			If box returns:
			`EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; BUSY:<CallParty>`
			Transition to State ID 5

		Dial ToneTIMEOUT	**Box returns:** `EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE` **Transition to State ID 0**

2	DIALING	END CALL	**Send to box:**
			`EP UA <X> KEY KEY_PARTY <1-5>`
			Box returns:
			`EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE`
			Transition to State ID 0

ID	State	Soft Key/Action	Action
		ENTER DIGITS	**Send to box:** EP UA <X> KEY KEY_DIGIT_PRESSED <Digit> **Send to box:** EP UA <X> KEY KEY_DIGIT_RELEASED <Digit> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; INPROCESS <CallParty> **Transition to State ID 3**
3	INPROCESS	END CALL	**Send to box:** EP UA<X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
		Call progresses to the RINGING state	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE PL <1-5>; RINGING <CallParty> **Transition to State ID 4**
		Call progresses to the BUSY state	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; BUSY:<CallParty> **Transition to State ID 5**
		Call progresses to the ACTIVE state	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; ACTIVE:<CallParty> **Transition to State ID 6**
4	RINGING	Remote party is busy	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; BUSY:<CallParty> **Transition to State ID 5**

ID	State	Soft Key/Action	Action
		Remote party answers	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; ACTIVE:<CallParty> **Transition to State ID 6**
		END CALL	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
5	BUSY	END CALL	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
6	ACTIVE	Remote party disconnects	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
		END CALL	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
		HOLD	**Send to box:** EP UA <X> KEY KEY_HOLD **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE PL <1-5>; HOLD:<CallParty> **Transition to State ID 7**

ID	State	Soft Key/Action	Action
		CONFERENCE	**Send to box for each party that is on HOLD:** EP UA <X> KEY KEY_CONFERENCE <1-5> EP UA <X> KEY KEY_CONFERENCE **This will add all HOLD parties to the current call and create a conference call.** **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; CONFERENCE_ACTIVE: <CallParty> **Transition to State ID 9** **Note:** This key should not be presented if this is the only active call.
		TRANSFER	**Send to box:** EP UA <X> KEY KEY_TRANSFER **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; TRANSFER_HOLD:<CallParty> **Transition to State ID 11** **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; TRANSFERRING_DIAL_TONE, **Transition to State ID 12 for new line** **Note:** This SoftKey should not be presented if all lines are in use.

ID	State	Soft Key/Action	Action
		BLIND TRANSFER	**Send to box:** EP UA <X> KEY KEY_BLIND_TRANSFER **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; BLIND_TRANSFER_HOLD:<CallParty> **Transition to State ID 17** **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; BLIND_TRANFERRING_ DIAL_TONE **Transition to State ID 18 for new line** **Note:** This SoftKey should not be presented if all lines are in use.
		NEW CALL	**Send to box:** EP UA <X> KEY KEY_HOLD **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; HOLD:<CallParty> **Transition to State ID 7 for current call** **Send to box:** EP UA <X> KEY KEY_PARTY <1-5> (where <1-5> represents a free line) **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; DIAL_TONE **Transition to State ID 1** **Note:** This SoftKey should not be presented if all lines are in use.
		KEYPAD	**Send to box:** EP UA <X> KEY KEY_DIGIT_PRESSED <Digit> EP UA <X> KEY KEY_DIGIT_RELEASED <Digit> **State remains unchanged**

ID	State	Soft Key/Action	Action
7	HOLD	Remote party disconnects	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>:IDLE **Transition to State ID 0 for that Party Line**
		RESUME	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>: ACTIVE:<CallParty> **Transition to State ID 6**
		CONFERENCE	**Send to box for each party that is on HOLD (except for the current party):** EP UA <X> KEY KEY_CONFERENCE <1-5> EP UA <X> KEY KEY_CONFERENCE This will add all HOLD parties to the current call and create a conference call. **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; CONFERENCE_ACTIVE: <CallParty> **Transition to State ID 9** **Note:** This key should not be presented if it is the only active call.
		NEW CALL	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> (where <1-5> represents a free party line) **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; DIAL_TONE **Transition to State ID 1**

ID	State	Soft Key/Action	Action
8	INCOMING	ANSWER	**If other lines are active, send to box:** EP UA <X> KEY KEY_HOLD **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE PL <1-5>; HOLD:<CallParty> for each active line (there may be multiple lines in case of conference) **Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>;ACTIVE:<CallParty>, **Transition to State ID 6**
		REJECT	**Send to box:** EP UA <X> KEY KEY_REJECT <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
9	CONFERENCE_ACTIVE	Remote party disconnects	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0 for disconnected party.** Maintain current state until two parties remain. **Box returns:** `EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; ACTIVE:<CallParty>` **Transition to State ID 6**
		END CALL	**Send to box:** EP UA <X> KEY KEY_HOOK **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>;IDLE **Transition to State ID 0 for all parties in the conference**

ID	State	Soft Key/Action	Action
		HOLD	**Send to box:** EP UA <X> KEY KEY_HOLD **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>;CONFERENCE_HOLD:<CallParty> for all connected parties **Transition to State ID 10**
		CONFERENCE	**Send to box (for each party that is on HOLD):** EP UA <X> KEY KEY_CONFERENCE <1-5> EP UA <X> KEY This will add all HOLD parties to the current call and create a conference call. **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>;CONFERENCE_ACTIVE:<CallParty> **Transition to State ID 9**
		NEW CALL	**Send to box:** EP UA <X> KEY KEY_HOLD **Box returns (for all connected parties):** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; CONFERENCE_HOLD: <CallParty> **Transition to State ID 10 for all conference parties** **Send to box:** EP UA <X> KEY KEY_PARTY <1-5> (where <1-5> represents a free line) **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; DIAL_TONE **Transition to State ID 1 for the new line** **Note:** This key should not be presented if all lines are in use.

ID	State	Soft Key/Action	Action
		KEYPAD	**Send to box:** EP UA <X> KEY KEY_DIGIT_PRESSED <Digit> EP UA <X> KEY KEY_DIGIT_RELEASED <Digit> **State remains unchanged**
10	CONFERENCE_HOLD	Remote party disconnects	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0 for disconnected party.** Maintain current state until two parties remain. **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; HOLD:<CallParty> **Transition to State ID 7**
		RESUME	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> (where <1-5> may be any one of the active lines in the conference) **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; CONFERENCE_ACTIVE: <CallParty> **Transition to State ID 9 for each notification received**
		NEW CALL	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> (where <1-5>represents a free line) **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; DIAL_TONE **Transition to State ID 1 for the new line** **Note:** This key should not be presented if all lines are in use.

ID	State	Soft Key/Action	Action
11	TRANSFER_HOLD	Transfer canceled	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; HOLD:<CallParty> **Transition to State ID 7**
		Transfer completed	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
		Remote party disconnect	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>;IDLE **Transition to State ID 0**
12	TRANSFERRING_DIAL_TONE	CANCEL TRANSFER	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
		DIAL NUMBER/SIP URI	**Send to box:** EP UA <X> KEY KEY_CALL <target # or SIP URI> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; TRANSFERING INPROCESS <CallParty> **Transition to State 14**
		ENTER DIGITS	**Send to box:** EP UA <X> KEY KEY_DIGIT_PRESSED <Digit> EP UA <X> KEY KEY_DIGIT_RELEASED <Digit> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; TRANSFERRING_DIALING: <CallPartyDigits> **Transition to State ID 13**

ID	State	Soft Key/Action	Action
		Dial Tone TIMEOUT	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
13	TRANSFERRING_DIALING	CANCEL TRANSFER	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
		ENTER DIGITS	**Send to box:** EP UA <X> KEY KEY_DIGIT_PRESSED <Digit> EP UA <X> KEY KEY_DIGIT_RELEASED <Digit> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; TRANSFERRING_DIALING: <CallPartyDigits> **Maintain State 12** **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; TRANSFERRING_INPROCESS: <CallParty> **Transition to State ID 14**
14	TRANSFERRING_INPROCESS	END CALL	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
		Call progresses to the RINGING state	**Box returns:** EP UA <X> NOTFICATION STATE_ CHANGE <1-5>; TRANSFERRING_RINGING: <CallParty> **Transition to State ID 15**

ID	State	Soft Key/Action	Action
		Call progresses to the BUSY state	**Box returns:** EP UA <X> NOTFICATION STATE_CHANGE <1-5>; TRANSFERRING_BUSY: <CallParty> **Transition to State ID 16**
		Call progresses to the ACTIVE state	**Box returns:** EP UA <X> NOTFICATION STATE_ CHANGE <1-5>; TRANSFERRING_ACTIVE: <CallParty> **Transition to State ID 17**
15	TRANSFERRING_RINGING	CANCEL TRANSFER	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
		COMPLETE TRANSFER	**Send to box:** EP UA <X> KEY KEY_TRANSFER **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
		Remote party answers	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; TRANSFERRING_ACTIVE: <CallParty> **Transition to State ID 17**
		Remote party busy	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; TRANSFERRING_BUSY: <CallParty> **Transition to State ID 16**
16	TRANSFERRING_BUSY	END CALL	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> Box returns: EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**

ID	State	Soft Key/Action	Action
17	TRANSFERRING_ACTIVE	CANCEL TRANSFER	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
		COMPLETE TRANSFER	**Send to box:** EP UA <X> KEY KEY_TRANSFER **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
		Other transfer party hangs up or remote disconnects	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE<1-5>; HOLD:<CallParty> **Transition to State ID 6**
18	BLIND_TRANSFER_HOLD	Transfer canceled	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; HOLD:<CallParty> **Transition to State ID 7**
		Transfer completed	**When remote party answers, box returns:** EP UA <X> NOTIFCATION STATE_CHANGE PL <1-5>;IDLE **Transition to State ID 0**
19	BLIND_ TRANSFERRING_ DIALTONE	CANCEL TRANSFER	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>;IDLE **Transition to State ID 0**

ID	State	Soft Key/Action	Action
		DIAL NUMBER/SIP URI	**Send to box:** EP UA <X> KEY KEY_CALL <target # or SIP URI> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; BLIND_TRANFERRING_ INPROCESS:<CallParty> **Transition to State ID 21** **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>;BLIND_TRANSFERRING_BUSY: <C all Party> **Transition to State ID 23**
		ENTER DIGITS	**Send to box:** EP UA <X> KEY KEY_DIGIT_PRESSED <Digit> EP UA <X> KEY KEY_DIGIT_RELEASED <Digit> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; BLIND_TRANSFERRING_ DIALING: <CallPartyDigits> **Transition to State 20**
		Dial Tone TIMEOUT	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
20	BLIND_TRANSFERRING_ DIALING	CANCEL TRANSFER	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**

ID	State	Soft Key/Action	Action
		ENTER DIGITS	**Send to box:** EP UA <X> KEY KEY_DIGIT_PRESSED <Digit> EP UA <X> KEY KEY_DIGIT_RELEASED <Digit> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>;BLIND_ TRANSFERRING_ DIALING: <CallPartyDigits> Maintain State 20 **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>;BLIND_ TRANSFERRING_ INPROCESS **Transition to State ID 21**
21	BLIND_TRANSFERRING_ INPROCESS	END CALL	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
		Call progresses to the RINGING state	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>;BLIND_ TRANSFERRING_ RINGING: <CallParty> **Transition to State ID 22**
		Call progresses to the BUSY state	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>;BLIND_ TRANSFERRING_BUSY: <CallParty> **Transition to State ID 23**
		Blind transfer completes	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**

ID	State	Soft Key/Action	Action
		Other remote party disconnects	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; INPROCESS:<CallParty> **Transition to State ID 3**
22	BLIND_TRANSFERRING_RINGING	CANCEL TRANSFER	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
		Remote party answers	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**
		Other remote party disconnects	**Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; RINGING:<CallParty> **Transition to State ID 4**
23	BLIND_TRANSFERRING_BUSY	END CALL	**Send to box:** EP UA <X> KEY KEY_PARTY <1-5> **Box returns:** EP UA <X> NOTIFICATION STATE_CHANGE <1-5>; IDLE **Transition to State ID 0**

USB_RX

EP-USB_RX (14) LEVEL (1)

You can use the EP command to change the level of a USB_RX end point.

Syntax

`EP USB_RX <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MUTE (2)	Mute	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
MAX_GAIN (3)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	20	RW
MIN_GAIN (4)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	-65	RW

Example 1: GAIN FINE

This example shows how to change the gain level of a USB_RX channel with the label ChannelName:

```
EP ChannelName LEVEL GAIN 5.5
```

Note: If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute the level of a USB_RX channel with the label ChannelName:

```
EP ChannelName LEVEL MUTE 1
```

Example 3: MAX_GAIN

This example shows how to set maximum gain for a USB_RX channel with the label ChannelName:

```
EP ChannelName LEVEL MAX_GAIN 16
```

Example 4: MIN_GAIN

This example shows how to set minimum gain for a USB_RX channel with the label ChannelName:

```
EP ChannelName LEVEL MIN_GAIN -32.5
```

Output

PN	Output
GAIN_FINE	`EP ChannelName LEVEL GAIN 5.5`
MUTE	`EP ChannelName LEVEL MUTE 1`
MAX_GAIN	`EP ChannelName LEVEL MAX_GAIN 16`
MIN_GAIN	`EP ChannelName LEVEL MIN_GAIN -32.5`

USB_TX

EP-USB_TX (15) LEVEL (1)

You can use the EP command to change the level of a USB_TX end point.

Syntax

`EP USB_TX <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MUTE (2)	Mute	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
MAX_GAIN (3)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	20	RW
MIN_GAIN (4)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	-65	RW

Example 1: GAIN FINE

This example shows how to change the gain level of a USB_TX channel with the label ChannelName:

```
EP ChannelName LEVEL GAIN 5.5
```

Note: If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute the level of a USB_TX channel with the label ChannelName:

```
EP ChannelName LEVEL MUTE 1
```

Example 3: MAX_GAIN

This example shows how to set maximum gain for a USB_TX channel with the label ChannelName:

```
EP ChannelName LEVEL MAX_GAIN 16
```

Example 4: MIN_GAIN

This example shows how to set minimum gain for a USB_TX channel with the label ChannelName:

```
EP ChannelName LEVEL MIN_GAIN -32.5
```

Output

PN	Output
GAIN_FINE	`EP ChannelName LEVEL GAIN 5.5`
MUTE	`EP ChannelName LEVEL MUTE 1`
MAX_GAIN	`EP ChannelName LEVEL MAX_GAIN 16`
MIN_GAIN	`EP ChannelName LEVEL MIN_GAIN -32.5`

USBE_RX

EP-USBE_RX (29) EXP (4)

You can use the EP command to change the level of a USBE_RX end point.

Syntax

`EP USBE_RX <EPN> EXP <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
SN (1)				R

Example 1: SN

This example shows how to change the gain level of a USB_RX channel with the label ChannelName:

```
EP ChannelName EXP SN 5.5
```

Output

PN	Output
SN	`EP ChannelName EXP SN 5.5`

EP-USBE_RX (29) LEVEL (1)

You can use the EP command to change the level of a USBE_RX channel (a receive channel of a USB expander).

Syntax

`EP USBE_RX <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MUTE (2)	Mute	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
MAX_GAIN (5)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	20	RW

PN	Description	Value	Default	RW
MIN_GAIN (6)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	-65	RW
LABEL (7)	Use to retrieve the channel label.	Read only.	N/A	R

Example 1: GAIN

This example shows how to change the gain level of a USBE_RX channel with the label USBExpRX1:

```
EP USBExpRX1 LEVEL GAIN 5.5
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute the level of a USBE_RX channel with the label USBExpRX1:

```
EP USBExpRX1 LEVEL MUTE 1
```

Example 3: MAX_GAIN

This example shows how to set maximum gain for a USBE_RX channel with the label USBExpRX1:

```
EP USBExpRX1 LEVEL MAX_GAIN 16
```

Example 4: MIN_GAIN

This example shows how to set minimum gain for a USBE_RX channel with the label USBExpRX1:

```
EP USBExpRX1 LEVEL MIN_GAIN -32.5
```

Example 5: LABEL

This example shows how to set minimum gain for a USBE_RX channel:

```
EP USBE_RX 101 LEVEL LABEL
```

Output

PN	Output
GAIN	`EP USBExpRX1 LEVEL GAIN 5.5`
MUTE	`EP USBExpRX1 LEVEL MUTE 1`
MAX_GAIN	`EP USBExpRX1 LEVEL MAX_GAIN 16`
MIN_GAIN	`EP USBExpRX1 LEVEL MIN_GAIN -32.5`
LABEL	`EP USBE_RX 101 LEVEL LABEL USBExpRX1`

USBE_TX

EP-USBE_TX (30) LEVEL (1)

You can use the EP command to change the level of a USBE_TX channel (a transmit channel of a USB expander).

Syntax

`EP USBE_TX <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MUTE (2)	Mute	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
MAX_GAIN (5)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	20	RW

PN	Description	Value	Default	RW
MIN_GAIN (6)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	-65	RW
LABEL (7)	Use to retrieve the channel label.	Read only.	N/A	R

Example 1: GAIN

This example shows how to change the gain level of a USBE_TX channel with the label USBExpTX1:

```
EP USBExpTX1 LEVEL GAIN 5.5
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute the level of a USBE_TX channel with the label USBExpTX1:

```
EP USBExpTX1 LEVEL MUTE 1
```

Example 3: MAX_GAIN

This example shows how to set maximum gain for a USBE_TX channel with the label USBExpTX1:

```
EP USBExpTX1 LEVEL MAX_GAIN 16
```

Example 4: MIN_GAIN

This example shows how to set minimum gain for a USBE_TX channel with the label USBExpTX1:

```
EP USBExpTX1 LEVEL MIN_GAIN -32.5
```

Example 5: LABEL

This example shows how to set minimum gain for a USBE_TX channel:

```
EP USBE_TX 101 LEVEL LABEL
```

Output

PN	Output
GAIN	`EP USBExpTX1 LEVEL GAIN 5.5`
MUTE	`EP USBExpTX1 LEVEL MUTE 1`
MAX_GAIN	`EP USBExpTX1 LEVEL MAX_GAIN 16`
MIN_GAIN	`EP USBExpTX1 LEVEL MIN_GAIN -32.5`
LABEL	`EP USBE_TX 101 LEVEL LABEL USBExpTX1`

VOIP_RX

EP-VOIP_RX (5) LEVEL (1)

You can use the EP command to change the level of a VOIP_RX channel.

Syntax

`EP VOIP_RX <EPN> LEVEL <PN> [VALUE]`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MUTE (2)	Mute	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
MAX_GAIN (3)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	20	RW

PN	Description	Value	Default	RW
MIN_GAIN (4)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	-65	RW

Example 1: GAIN

This example shows how to change the gain level of a VOIP_RX channel with the label ChannelName:

```
EP ChannelName LEVEL GAIN 10
```

Note: If you include “REL” at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute a VOIP_RX channel with the label ChannelName:

```
EP ChannelName LEVEL MUTE 1
```

Example 3: MAX_GAIN

This example shows how to set maximum gain for a VOIP_RX channel with the label ChannelName:

```
EP ChannelName LEVEL MAX_GAIN 16
```

Example 4: MIN_GAIN

This example shows how to set minimum gain for a VOIP_RX channel with the label ChannelName:

```
EP ChannelName LEVEL MIN_GAIN -32.5
```

Output

PN	Output
GAIN	`EP ChannelName LEVEL GAIN 10`
MUTE	`EP ChannelName LEVEL MUTE 1`
MAX_GAIN	`EP ChannelName LEVEL MAX_GAIN 16`
MIN_GAIN	`EP ChannelName LEVEL MIN_GAIN -32.5`

VOIP_TX

EP-VOIP_TX (6) LEVEL (1)

You can use the EP command to change the level of a VOIP_TX channel.

Syntax

```
EP VOIP_TX <EPN> LEVEL <PN> [VALUE]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be

defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Input

PN	Description	Value	Default	RW
GAIN (1)	Gain	Default decibel range of -65 to 20 unless adjusted with MAX_GAIN or MIN_GAIN, adjust in increments of 0.5 **Note:** If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2. Leave blank to retrieve current value	0	RW
MUTE (2)	Mute	0 to unmute 1 to mute 2 to toggle current state Leave blank to retrieve current value	0	RW
MAX_GAIN (3)	Maximum gain. This controls how high gain can be set, and also how high ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	20	RW
MIN_GAIN (4)	Minimum gain. This controls how low gain can be set, and also how low ramping can go.	-65 to 20, in increments of 0.5 Leave blank to retrieve current value	-65	RW

Example 1: GAIN

This example shows how to change the gain level of a VOIP_TX channel with the label ChannelName:

```
EP ChannelName LEVEL GAIN 10
```

Note: If you include "REL" at the end of this EP command, then the gain or fine gain value specified will be an amount of change relative to the current level. For example, indicating a gain of 2 adds 2 to the current level, rather than setting the level to 2.

Example 2: MUTE

This example shows how to mute a VOIP_TX channel with the label ChannelName:

```
EP ChannelName LEVEL MUTE 1
```

Example 3: MAX_GAIN

This example shows how to set maximum gain for a VOIP_TX channel with the label ChannelName:

```
EP ChannelName LEVEL MAX_GAIN 16
```

Example 4: MIN_GAIN

This example shows how to set minimum gain for a VOIP_TX channel with the label ChannelName:

```
EP ChannelName LEVEL MIN_GAIN -32.5
```

Output

PN	Output
GAIN	`EP ChannelName LEVEL GAIN 10`
MUTE	`EP ChannelName LEVEL MUTE 1`
MAX_GAIN	`EP ChannelName LEVEL MAX_GAIN 16`
MIN_GAIN	`EP ChannelName LEVEL MIN_GAIN -32.5`

RAMP

You can use the RAMP command to ramp the gain of an end point up or down in specified increments.

Note:

Use of the RAMP command is delimited by MAX_GAIN and MIN_GAIN values if you have set these using a LEVEL command for a channel.

Syntax

`RAMP <EPT> <EPN> <TARGET> <STEP>`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Parameters

Parameter	Description
EPT	An end point type.
EPN	An end point number.
TARGET	The target level (in dB). Possible values: -65 to 20 in increments of 1 dB.

Parameter	Description
STEP	The rate of change in dB per second. Use 0 to stop ramping. 0-20 in increments of 1. **Note:** Though the STEP value must be a positive number, if the target value is lower than the current level, the RAMP command lowers the level at the specified rate until the target is reached.

Example 1: RAMP

This example shows how to ramp up the volume on a channel called MicChannel in 3dB increments until it reaches 12dB:

```
RAMP MicChannel 12 3
```

Output

When you send a RAMP command, the device first echoes the command, and then sends end point commands as updates (four per second) about the level changes occurring as a result of the RAMP command. The following is an example of RAMP command output:

```
RAMP MIC 101 5 1
EP MIC 101 LEVEL GAIN_FINE 0.3
EP MIC 101 LEVEL GAIN_FINE 0.6
EP MIC 101 LEVEL GAIN_FINE 0.8
EP MIC 101 LEVEL GAIN_FINE 1.0
EP MIC 101 LEVEL GAIN_FINE 1.3
EP MIC 101 LEVEL GAIN_FINE 1.6
EP MIC 101 LEVEL GAIN_FINE 1.8
EP MIC 101 LEVEL GAIN_FINE 2.0
EP MIC 101 LEVEL GAIN_FINE 2.3
EP MIC 101 LEVEL GAIN_FINE 2.5
EP MIC 101 LEVEL GAIN_FINE 2.8
EP MIC 101 LEVEL GAIN_FINE 3.0
EP MIC 101 LEVEL GAIN_FINE 3.3
EP MIC 101 LEVEL GAIN_FINE 3.5
EP MIC 101 LEVEL GAIN_FINE 3.9
EP MIC 101 LEVEL GAIN_FINE 4.1
EP MIC 101 LEVEL GAIN_FINE 4.3
EP MIC 101 LEVEL GAIN_FINE 4.5
EP MIC 101 LEVEL GAIN_FINE 4.8
EP MIC 101 LEVEL GAIN_FINE 5.0
```

MT

You can use the MT (Matrix) command to create or remove crosspoint connections between input and output end points, and specify crosspoint attenuation and type.

Note:

You shouldn't link a channel to itself, or to its input/output equivalent, or otherwise create similar loops. For example, you should not connect TELCO_RX 1 to TELCO_TX 1.

Syntax

`MT <EPTI> <EPNI> <EPTO> <EPNO> <STATE> <ATTENUATION> <TYPE>`

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Parameters

Parameter	Description
EPTI	End Point Type In. This must be an input type end point (such as a mic).
EPNI	End Point Number In.
EPTO	End Point Type Out. This must be an output type end point (such as a speaker).
EPNO	End Point Number Out.
STATE	Whether to add a new crosspoint connection (1) or remove an existing one (0).
ATTENUATION	The amount of attenuation for the crosspoint. Possible values: -20 to 12 dB.
TYPE	The crosspoint type. 1=Normal 3=Gated 4=Non-Gated 5=Pre-AEC **Note:** Types 3, 4, and 5 apply only to MIC end points.

Examples

Example 1:

This example shows how to create a non-gated crosspoint between a microphone channel and an output channel:

```
MT MicAEC_Name_1_03 Out_Name_1_01 1 0 4
```

Example 2:

This example shows how to remove a crosspoint between a USB input channel and an output channel:

```
MT USB_Name_01_01_Rx Out_Name_1_02 0 0 0
```

Example 3:

This example shows how to attenuate a gated crosspoint between a micro channel and an output channel:

```
MT MicAEC_Name_01_03 Out_Name_1_01 1 -9.5 3
```

CLRMATRIX

You can use the CLRMATRIX command to clear all settings generated using the MT command.

Syntax

```
CLRMATRIX
```

Parameters

This command has no parameters.

FILTER

You can use the FILTER command to send all the filter settings to an end point (instead of sending them one at a time, as you would using the EP command).

Syntax

```
FILTER <EPT> <EPN> <FILTER_NO> <ENABLE> <TYPE> [P1] [P2] [P3]
```

Note:

Instead of sending an EPT and EPN combination to identify an end point channel, ClearOne strongly recommends that you use Group names (a reference to a user-defined group of end points) and Label names (a reference to a single end point). Groups and Labels can be defined using the CONVERGE Pro 2 CONSOLE application or using the NAME_CREATE, NAME_UPDATE, and MEMBER_UPDATE commands.

Group and Label names are case sensitive. However, if you use serial commands to change channel and group labels, the next time you load a project to the device using the CONSOLE, those label names will be overwritten.

Parameters

Table 1: Common Command Parameters

Parameter	Description
EPT	End Point Type. **Note:** EPT and EPN can be replaced by a channel label.
EPN	End Point Number. **Note:** EPT and EPN can be replaced by a channel label.

Parameter	Description
FILTER_NO	The number of the filter to change. PROC end points allow up to 15 filters. The BFM, MIC, OUTPUT, SPEAKER, and SRMIC end points allow up to 4 filters. **Note:** You can include only the first three parameters as a read-only command to query the existing filter state.
ENABLE	Whether to enable the specified filter. 0 disable 1 enable
TYPE	Filter type. Allowable filter types are: 1 (all pass) 2 (low pass) 3 (high pass) 4 (low shelving) 5 (high shelving) 6 (parametric equalizer) 7 (CD horn) 8 (Bessel crossover) 9 (Butterworth crossover) 10 (Linkwitz-Riley crossover) 11 (notch) **Note:** For microphone end points (MIC, SRMIC, and BFM), only types 1, 2, 3, 6, and 11 can be used.
P1, P2, and P3	Depending on the type of filter you are adding, there can up to three additional parameters. See the Table 2 below for details about which type-specific parameters can be used for particular filter types. Descriptions of the possible P1, P2, and P3 values are described in Table 3. **Note:** You can use a period (.) to “skip” a filter-specific parameter that has a following parameter, which leaves that parameter unchanged if you’re not changing the filter type or set to default values if you are changing the filter type. Similarly, you can skip filter-specific parameters at the end of the command, which also leaves them unchanged (same filter type) or set to default values (new filter type). See the examples below for more details.

Table 2: Type-Specific Parameters

Number	Filter Type	P1	P2	P3
0	None	N/A	N/A	N/A
1	All Pass	FCY	N/A	N/A

Number	Filter Type	P1	P2	P3
2	Low Pass	FCY	N/A	N/A
3	High Pass	FCY	N/A	N/A
4	Low Shelving	FCY	GAIN	N/A
5	High Shelving	FCY	GAIN	N/A
6	Parametric EQ	FCY	GAIN	BW
7	CD Horn	FCY	N/A	N/A
8	Bessel Crossover	FCY	SLOPE	SFT
9	Butterworth Crossover	FCY	SLOPE	SFT
10	Linkwitz-Rile Crossover	FCY	SLOPE	SFT
11	Notch	FCY	BW	N/A

Table 3: Type-Specific Parameter Descriptions

PN	Description	Value	Default
FCY	Set the center frequency (in Hz). **Note:** Applies to all types.	20 to 20000 in increments of 0.01. **Note:** CD HORN uses a frequency range of 500 to 5000 in increments of 0.01.	1000
GAIN	Set the gain value. **Note:** Applies only to type 4, low shelving, type 5, high shelving, and type 6, parametric equalizer.	-15 to 15 in increments of 0.01	0
SLOPE	Set the slope value. **Note:** Applies only to the crossover filter types (8, 9, and 10).	12 to 24 in increments of 6 (12 in the case of Linkwitz-Riley).	Bessel: 18 Butterworth: 18 Linkwitz-Riley: 12

PN	Description	Value	Default
SFT	Set the Slope Filter Type. **Note:** Applies only to the crossover filter types (8, 9, and 10).	2=low 3=high	2
BW	Set the difference between the upper and lower points of a filter's audio pass band. **Note:** Applies only to type 6, parametric equalizer and type 11, notch.	0.05 to 5 in increments of 0.01	5

Examples

Example 1:

This example shows how to turn on a parametric equalizer filter and set its FCY to 2500.00 on Filter 1 of a channel with the label TableMic:

```
FILTER TableMic 1 1 6 2500
```

Note:

This example changes the frequency but leaves the GAIN and BW values unchanged if you're not changing the filter type or set to default values if you're changing the filter type.

Example 2:

This example shows how to turn on a parametric equalizer filter and set its FCY to 2500.00 and its BW to 2.00 on Filter 1 of a channel with the label TableMic:

```
FILTER TableMic 1 1 6 2500 . 2.00
```

Note:

This example changes the frequency and the BW but leaves the GAIN value unchanged if you're not changing the filter type or set to the default value if you're changing the filter type.

Example 3:

This example shows how to turn on a Bessel Crossover filter and set its FCY to 1000, its SLOPE to 12 and its SFT to high to on Filter 1 of a channel with the label WallSpeaker:

```
FILTER WallSpeaker 1 1 8 1000 12 3
```

Note:

This example changes the frequency and the BW but leaves the GAIN value unchanged if you're not changing the filter type or set to the default value if you're changing the filter type.

Example 4:

This example shows how to turn off the filter shown in example 3:

```
FILTER WallSpeaker 1 0
```

Example 5:

This example shows how to query the status of filter 1 on a channel with the label TableMic:

```
FILTER TableMic 1
```

Output

Example 1:

```
FILTER TableMic 1 1 6 2500 0 5
```

Example 2:

```
FILTER TableMic 1 1 6 2500 0 2.00
```

Example 3:

```
FILTER WallSpeaker 1 1 8 1000 12 3
```

Example 4:

```
FILTER WallSpeaker 1 0
```

Example 5:

```
FILTER TableMic 1 1 6 2500 0 5
```

GATE

You can use the GATE command to retrieve gating information for a box. The information if returned in a GATEREPORT command.

Syntax

To retrieve gate information:

```
GATE <BOXNAME> <TOV> <RN>
```

Parameters

Parameter	Description
BOXNAME	The name of a box. Use * to indicate all attached boxes.
TOV	Time Out Value. How long to let the command run in seconds. You can enter up to 4 digits. **Note:** Enter a TOV of 0 to stop the report.
RN	Report Number. Must be a 1.

Output

Output is returned in a series of GATEREPORT commands, which appears as follows:

```
GATEREPORT <DID> <TOV> <RN> <EPT> <CHANNELS> <EPT> <CHANNELS>
```

The output is described in the table below:

Info	Description
DID	The DID is a number assigned to each CP2 device in a stack when the project is loaded to the devices. DIDs are assigned according to the order of the devices in the project. **Note:** To discover which DID corresponds to which device by name, you can send a BOX * DID command to the stack.
TOV	Time Out Value. This tells you how long is left of the original time out value you designated.
RN	Report number, which is always 1.
EPT	End Point Type. A number that corresponds to an end point type. To understand how end point types are numbered, see the *EP Command Table* topic. **Note:** If there's more than one type of microphone, the EPT and CHANNELS information is repeated for each microphone type.
CHANNELS	Next appears a list of the channels for that end point type, listed by end point number, from right to left. For example, if an end point type has 12 possible channels, the channels list will show 12 digits. Channels that are gated will have a 1, and channels that aren't gated will have a 0. **Note:** If there's more than one type of microphone, the EPT and CHANNELS information is repeated for each microphone type.

Examples

Example 1:

```
GATEREPORT 1 60 1 1 000000001000 13 010
```

In this example, the first field shows that this is a report for a device with a DID of 1. The second field shows that the gating report is scheduled to run for 60 more seconds. The third field shows that this is report 1. The fourth field shows that the report includes end points with a type of 1, which is the MIC type. The fifth field shows that MIC channel 104 is currently gated (because we're counting from the right), but no other MIC channels are gated. The sixth field tells us that there is an end point type 13, which is the BFM type. The seventh and final field shows us that BFM channel 102 is currently gated, but that no other BFM channel is gated.

Example 1:

```
GATEREPORT 2 60 1 1 001000000000 28 000001
```

In this example, the first field shows that this is a report for a device with a DID of 2. The second field shows that the gating report is scheduled to run for 60 more seconds. The third field shows that this is report 1. The fourth field shows that the report includes end points with a type of 1, which is the MIC type. The fifth field shows that MIC channel 210 is currently gated (because it's device 2 and we're counting from the right), but no other MIC channels are gated. The sixth field tells us that there is an end point type 28, which is the D20MIC type. The seventh and final field shows us that D20MIC channel 201 is currently gated, but that no other D20MIC channel is gated.

GATEGROUP

You can use the GATEGROUP command to specify the microphone gating settings.

Syntax

`GATEGROUP <GGN> <BN> <PN> [VALUE]`

Parameters

Parameter	Description
GGN	Gating Group Number. The gating group you want to modify.
BN	Block Number. Possible values: PROPERTY.
PN	Parameter Number. Possible PROPERTY values: MAX_MICS, FIRST_MIC, LAST_MIC, NOM.
VALUE	A value. Whether or not a value is needed and what value to use depend on the parameter. **Note:** For parameters that are read/write, including a value is using the write mode of the command, and leaving off the value is using the read mode of the command.

Input

BN	PN	Description	Values
PROPERTY (1)	MAX_MICS (1)	The number of microphones that can be gated at one time.	1-144. Leave blank to retrieve current value
PROPERTY (1)	FIRST_MIC (2)	Enable the First Mic Priority feature. This feature allows more than one microphone to gate on at same time, but it restricts more than one mic from gating on to the same audio source. **Note:** ClearOne recommends using First Mic Priority to maintain maximum audio intelligibility by allowing only one microphone to gate on to a participant's voice. If First Mic Priority is disabled, two or more microphones will usually gate on when only one person speaks.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value

BN	PN	Description	Values
PROPERTY (1)	LAST_MIC (3)	Enable the Last Mic feature. If you don't specify a MICLABEL, this feature leaves the last microphone activated gated on and all other mics gated off until another microphone gates on. If you specify a MICLABEL, this feature leaves the specified microphone gated on until another microphone gates.	***[Value1]***: 0 for off 1 for on ***[MICLABEL]***: Instead of a numerical value, use an end point label that refers to a microphone to have a particular mic always gated on after someone stops speaking. **Note:** The specified mic must be a member of the gating group. Leave blank to retrieve current value
PROPERTY (1)	NOM (4)	Enable the Number of Mics feature. This feature reduces the volume of all mics according to the number of mics providing sound.	0 to disable 1 to enable 2 to toggle current state Leave blank to retrieve current value

Example 1: PROPERTY MAX_MICS

This example shows how to set the MAX_MICS value to 8 for GATEGROUP 1:

```
GATEGROUP 1 PROPERTY MAX_MICS 8
```

Example 2: PROPERTY FIRST_MIC

This example shows how to enable the First Mic Priority feature for GATEGROUP 1:

```
GATEGROUP 1 PROPERTY FIRST_MIC 1
```

Example 3: PROPERTY LAST_MIC

This example shows how to enable the Last Mic feature for GATEGROUP 1:

```
GATEGROUP 1 PROPERTY LAST_MIC 1
```

Example 4: PROPERTY NOM

This example shows how to enable the Number of Mics (NOM) feature for GATEGROUP 1:

```
GATEGROUP 1 PROPERTY NOM 1
```

Output

PN	Output
PROPERTY MAX_MICS	`GATEGROUP 1 PROPERTY MAX_MICS 8`
PROPERTY FIRST_MIC	`GATEGROUP 1 PROPERTY FIRST_MIC 1`

PN	Output
PROPERTY LAST_MIC	GATEGROUP 1 PROPERTY LAST_MIC 1
PROPERTY NOM	GATEGROUP 1 PROPERTY NOM

METERPRESENT

You can use the METERPRESENT command to view presence and clipping information for a box. The information is returned via a LEVELPRESENT command.

Syntax

METERPRESENT *<BOXNAME> <TOV> <RN>*

Arguments

Argument	Description
BOXNAME	The name of a box. Use * to indicate all attached boxes.
TOV	Time Out Value. How long to let the command run in seconds. You can enter up to 4 digits.
RN	Report Number. Must be a 1.

Output

Output is returned in a LEVELPRESENT command, and appears as follows:

```
LEVELPRESENT 1 9999 1 1 000000000000 3 0 4 0 5 00000 6 00000 7 00000000 8 00 9
00000000 10 00000000 14 00 15 00 18 000000000
```

Note:

After echoing the command itself, the data returned appears in the form: [EPT] [Values] [EPT] [Values] etc.

NAME_CREATE

You can use the NAME_CREATE command to create an end point Group or to create an end point Label. Groups and Labels can be used in place of an end point type and end point number. A Label functions the same way as a group, but it has only one member.

Note:

This command can be used only to create a new Group or Label. To add members to an existing group, use the MEMBER_UPDATE command.

Syntax

NAME_CREATE *<NAME> <TYPE> <EPT> <EPN>*

Parameters

Parameter	Description
NAME	The name of the Group or Label you want to create. **Note:** Names are case sensitive.
TYPE	Whether to create a Group or a Label (1 for Label, 2 for group).
EPT	An end point type.
EPN	An end point number.

Example 1: Create a Label

This example shows how to assign the Label “PodiumMic” to MIC 101:

```
NAME_CREATE PodiumMic 1 MIC 101
```

Example 2: Create a Group

This example shows how to assign MIC 101 to a group called FrontMics:

```
NAME_CREATE FrontMics 2 MIC 101
```

NAME_UPDATE

You can use the NAME_UPDATE command to change the name of a Label or Group, change a name when it appears in a macro, or swap the names of two labels or groups.

Note:

This command applies only to groups that have already been created. To create a group, use the NAME_CREATE command.

Syntax

`NAME_UPDATE <NAME_OLD> <NAME_NEW> <TYPE> <CHANGE_SWAP> <MACRO_OPTION>`

Parameters

Parameter	Description
NAME_OLD	The old name of the Label or Group you want to update, or in the case of a swap, either of the names. **Note:** Names are case sensitive.
NAME_NEW	The new name of the Label or Group you want to update, or in the case of a swap, either of the names. **Note:** In the case of a name update, this Label or Group must not already exist. **Note:** Names are case sensitive.

Parameter	Description
TYPE	Whether to update a Label or a Group (1 for Label, 2 for group).
CHANGE_SWAP	Whether to change an existing name or swap two existing names. 1 to change. 2 to swap.
MACRO_OPTION	Whether to update the name or only in macros. 1 to update the name on existing Label/Group. 2 to update the name where used in macros. 3 for both.

MEMBER_UPDATE

You can use the MEMBER_UPDATE command to add, replace, or remove an end point currently in a Label or Group.

Note:

Removing the last member of a group deletes the group.

Syntax

`MEMBER_UPDATE <NAME> <OPTION> <EPT> <EPN>`

Parameters

Parameter	Description
NAME	The name of the Label or Group in which a member is being updated.
OPTION	1 to replace a member, 2 to add a group member, 3 to remove a group member.
EPT	An end point type.
EPN	An end point number.

MCCF

You can use the MCCF command to run a macro (a series of commands) on a box. Macros are defined using the CONVERGE Pro 2 Console application.

Syntax

`MCCF <NAME>`

Parameters

Parameter	Description
NAME	The name of the macro to run. **Note:** The name is case sensitive.

VERSION

You can use the VERSION command to retrieve the firmware version of a CONVERGE Pro 2 box.

Syntax

```
VERSION <BOXNAME> <TYPE> 1
```

Parameters

Parameter	Description
BOXNAME	The name of a box. Use * to indicate all attached boxes.
TYPE	The version type to request: **FW** Firmware of the specified CP2 device(s) **BFM** Firmware version of any attached Beamforming Microphone Array 2 devices

Examples

Example 1: BOXNAME

This example shows how to retrieve the firmware version of a CP2 device named “MyBox”:

```
VERSION MyBox FW 1
```

Example 1: TYPE

This example shows how to retrieve the firmware version of a Beamforming Microphone Array 2 attached to a CP2 device named “MyBox”:

```
VERSION MyBox BFM 1
```

Ouput

PN	Output
FW	`VERSION MyBox FW 1 4.5.35.0 "Wed Sep 20 13:24:39 MDT 2017"`

BFM	`VERSION MyBox1 BFM 1 1,1.0.2.11`
	`VERSION MyBox1 BFM 1 2,1.0.2.11`
	`VERSION MyBox1 BFM 1 3,1.0.2.11`
	`VERSION MyBox2 BFM 1 No BFM Devices`
	Note:
	The BFM example above shows the results from a stack with two CP2 devices, one of which has three BFM2s attached and one of which has no BFM2s attached. The output echoes back the original command and then shows the number of the device (1, 2, and 3) and its firmware version.

RESET

You can use the RESET command to reset a CONVERGE Pro 2 box.

Syntax

```
RESET <BOXNAME>
```

Parameters

Parameter	Description
BOXNAME	The name of a box. Use * to indicate all attached boxes.

DEFAULT

You can use the DEFAULT command to return a CONVERGE Pro 2 device to its factory settings without resetting it.

Note:

In order to effect the return to factory settings, you must reset the device immediately after sending the DEFAULT command, because the restoration to factory default settings occurs when the device starts up.

Note:

If you want to return a device to its factory settings and reset it, use the *FACTORYDEFAULT* command.

Syntax

```
DEFAULT <BOXNAME>
```

Parameters

Parameter	Description
BOXNAME	The name of a box. Use * to indicate all attached boxes.

FACTORYDEFAULT

You can use the FACTORYDEFAULT command to reset a CONVERGE Pro 2 device and return it to its factory settings.

Note:

If you want to return a device to its factory settings without resetting it, use the *DEFAULT* command.

Syntax

```
FACTORYDEFAULT <BOXNAME>
```

Parameters

Parameter	Description
BOXNAME	The name of a box. Use * to indicate all attached boxes.

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