

ARU20x Commands List

Index

Introduction		1
Input list		2
Output list		2
Using the commands		3
GIP	Get IP	4
SIP	Set IP	4
SRON	Activate relay	4
SROFF	Deactivate relay	5
SRBUT	Activate 1 relay, rest is deactivated	5
SPULS	Puls relay	5
SDELON	Switch delay on	6
SDELOFF	Switch delay off	6

Introduction

Welcome to the commands user manual of the AUDAC ARU20x. The ARU20x is a modular Relay unit containing 4 or 8 relays. This instruction manuals describes how the functions of the ARU20x can be controlled using RS485 and TCP/IP control devices.

Input list

Direct inputs ARU204:

- 1 Input 1
- 2 Input 2
- 3 Input 3
- 4 Input 4

Direct inputs ARU208:

- 1 Input 1
- 2 Input 2
- 3 Input 3
- 4 Input 4
- 5 Input 5
- 6 Input 6
- 7 Input 7
- 8 Input 8

Output list

Relay outputs ARU204

- 1 Output 1
- 2 Output 2
- 3 Output 3
- 4 Output 4

Relay outputs ARU208

- 1 Output 1
- 2 Output 2
- 3 Output 3
- 4 Output 4
- 5 Output 5
- 6 Output 6
- 7 Output 7
- 8 Output 8

Using the commands

The ARU20x has various control ports which are all accepting the same commands.

- RS485
- TCP/IP

The RS485 ports must be configured as following:

- 19200 baud
- 8 data bits
- 1 stop bit
- No parity

The TCP/IP port accepts the commands at port 5001.

All TCP/IP answers returned by the ARU20x are followed with 0x00.

Command overview

Startsymbol/destination/source/command/argument's/checksum/stopsymbol

Example: Activate relay 1

ASCII *#/S001/web/SRON/00000001/crcI<CR><LF>*

HEX *237C533030317C7765627C53524F4E7C3030*

3030303030317C6372637C3C43523E3C4C463E

Important:

Return = 0x0d 0x0a

The 'return' at the end of a command is always a carriage return followed by a line feed. In hexadecimal representation this is '0x0D 0x0A' (0x0d is carriage return, 0x0A is line feed). When sending the commands in ASCII, this should be sent as a <CR> <LF>.

The checksum is CRC–16 excluding the '#'. You can replace the checksum with 'U', this is always accepted as checksum.

To avoid any problems due to communication failure between the controlling device and the receiving device, it is always recommended to calculate the checksum instead of sending the 'U' character. The calculation of the checksum can be done using software tools which are available on the audac website.

Command flow

- 1) The client sends a command to the ARU20x
- 2) The ARU20x acknowledges the command by returning the same command an a '+' as Argument, if 'L' is received then this command can't get executed because the load > 90%
- 3) The ARU20x updates all client's with the new information

Commands list

GIP

Get IP

Command: `#IS001IF001IGIPIlcrcl<CR><LF>`

Answer: `#IF001IS001IPIldhcp^ip4.ip3.ip2.ip1^mask4.mask3.mask2.
mask1^gw4.gw3.gw2.gw1lcrcl<CR><LF>`

Example:

Command: `#IS001IF001IGIPIUI<CR><LF>`

Answer: `#IF001IS001IPI0^192.168.0.197^255.255.255.0^192.168.0.1/
crl<CR><LF>`

SIP

Set IP

Command: `#IF001IS001ISIPIldhcp^ip4.ip3.ip2.ip1^mask4.mask3.
mask2.mask1^gw4.gw3.gw2.gw1^dns4.dns3.dns2.
dns1^adns4.adns3.adns2.adns1lcrcl<CR><LF>`
dhcp : dhcp ON(1) or OFF(0)
ip : IP4 address of unit
mask : subnet mask
gw : IP4 address of gateway
dns : IP4 address of dns server 1
adns : IP4 address of dns server 2

Answer: `#IF001IS001ISIPI+lcrcl<CR><LF>`

Example:

Command: `#IF001IS001SIPI0^192.168.0.197^255.255.255.000^192.168.
0.1^8.8.8.8^0.0.0.0/UI<CR><LF>`

Answer: `#IF001IS001SIPI+lcrcl<CR><LF>`

SRON

Activate relay

Command: `#IS001IwebISRONI000000rrlcrcl<CR><LF>`

Answer: `#IwebIS001ISROFFI+lcrcl<CR><LF>
#IALlIS001ISZSETI00rrlcrcl<CR><LF>`

rr = 8 bit hex value bit0 = relay 1 bit7 = relay 8
if bit = 1 then relay is deactivated

Example:

Command: `#IS001IwebISRONI00000001lcrcl<CR><LF>`

Answer: `#IwebIS001ISRONI+lcrcl<CR><LF>
#IALlIS001ISZSETI0001lcrcl<CR><LF>`

SROFF

Deactivate relay

```
Command: #IS001/web/SROFFI000000rrlcrcl<CR><LF>
Answer:  #/web/S001/SROFFI+lcrcl<CR><LF>
        #IALLIS001/SZSETI00rrlcrcl<CR><LF>
```

rr = 8 bit hex value bit0 = relay 1 bit7 = relay 8
if bit = 1 then relay is deactivated

Example: Deactivate relay 1

```
Command: #/S001/web/SROFFI00000001lcrcl<CR><LF>
Answer:  #/web/S001/SROFFI+lcrcl<CR><LF>
        #IALLIS001/SZSETI0000lcrcl<CR><LF>
```

SRBUT

Activate 1 relay, rest is deactivated

```
Command: #IS001/web/SRBUTI000000rrlcrcl<CR><LF>
Answer:  #/web/S001/SRBUTI+lcrcl<CR><LF>
        #IALLIS001/SZSETI00rrlcrcl<CR><LF>
```

rr = 8 bit hex value bit0 = relay 1 bit7 = relay 8
if bit = 1 then relay is activated

Example: Activate relay 3

```
Command: #/S001/web/SRBUTI00000004lcrcl<CR><LF>
Answer:  #/web/S001/SRBUTI+lcrcl<CR><LF>
        #IALLIS001/SZSETI0004lcrcl<CR><LF>
```

SPULS

Pulse relay

```
Command: #IS001/web/SPULSItttt^00rrlcrcl<CR><LF>
```

tttt : time to pulse relay in 1/10s
rr : 8 bit hex value bit0 = relay 1 bit7 = relay 8
if bit = 1 then relay is pulsed for tttt time

Example:

```
Command: #/S001/web/SPULSI0050^0001lcrcl<CR><LF>
Relay 1 of S001 is pulsed for 5 seconds
Answer:  #/web/S001/SPULSI+lcrcl<CR><LF>
        #IALLIS001/SZSETI0001lcrcl<CR><LF>
```

SDELON

Switch delay on

All relay will be switched on with a delay
Direction relay1 → relay8

```
Command: #IS001/web/SDELON/dddclcrcl<CR><LF>
Answer:  #/web/S001/SDELON/+lcrcl<CR><LF>
          #/ALL/S001/SZSET/0001lcrcl<CR><LF>
          #/ALL/S001/SZSET/0003lcrcl<CR><LF>
          #/ALL/S001/SZSET/0007lcrcl<CR><LF>
          #/ALL/S001/SZSET/000Flcrcl<CR><LF>
          #/ALL/S001/SZSET/001Flcrcl<CR><LF>
          #/ALL/S001/SZSET/003Flcrcl<CR><LF>
          #/ALL/S001/SZSET/007Flcrcl<CR><LF>
          #/ALL/S001/SZSET/00FFlcrcl<CR><LF>
```

SDELOFF

Switch delay off

All relay will be switched off with a delay
Direction relay8 → relay1

ddd is delay time 0 to 9999 in ms between switching each relay
if dddd = 0 then the potentiometer is used for timing

```
Command: #IS001/web/SDELON/dddclcrcl<CR><LF>
Answer:  #/web/S001/SDELON/+lcrcl<CR><LF>
          #/ALL/S001/SZSET/007Flcrcl<CR><LF>
          #/ALL/S001/SZSET/003Flcrcl<CR><LF>
          #/ALL/S001/SZSET/001Flcrcl<CR><LF>
          #/ALL/S001/SZSET/000Flcrcl<CR><LF>
          #/ALL/S001/SZSET/0007lcrcl<CR><LF>
          #/ALL/S001/SZSET/0003lcrcl<CR><LF>
          #/ALL/S001/SZSET/0001lcrcl<CR><LF>
          #/ALL/S001/SZSET/0000lcrcl<CR><LF>
```