IN-CEILING HALF-RECESSED ENCLOSURES

For Vaddio ClearVIEW, PowerVIEW and RoboSHOT PTZ Cameras

Part Number: 999-2225-050 for HD-Series Cameras

Part Number: 999-2225-150 for RoboSHOT Cameras

Overview

Vaddio's IN-Ceiling, Half-Recessed Enclosure is an attractive, easy to install, partially recessed and inverted, PTZ camera mounting system. The IN-Ceiling Half-Recessed Enclosure is compatible with ClearVIEW, PowerVIEW, and RoboSHOT series cameras.

The enclosure features a sealed, recessed, metal ceiling camera enclosure with one-piece tile support brace, white trim ring and mounting hardware kit.

The white trim ring has an active IR receiver and there is an IR emitter board, powered by the 24 VDC Quick-Connect interfaces (Quick-Connect USB, Quick-Connect USB Mini, Quick-Connect SR and Quick-Connect DVI/HDMI-SR) on the inside of the enclosure to ensure full compatibility with the Vaddio IR Remote Commander.

In-Ceiling, Half-Recessed Enclosure shown with the ClearVIEW HD-20SE Camera

The IN-Ceiling enclosure is compatible with the following camera systems using RS-232 control only; ClearVIEW and PowerVIEW Series cameras (locally powered), all WallVIEW CCU Systems (powered by the CCU). These systems do not use the IR Receiver/Emitter circuit inside the enclosure.

The IN-Ceiling Half-Recessed Enclosure is an appealing half-recessed mounting solution. So relax, and try an IN-Ceiling, Half-Recessed camera enclosure today. And always remember, camera systems are sold separately.
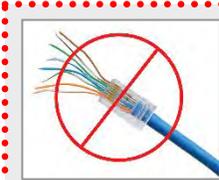
Intended Use

Before operating the device, please read the entire manual thoroughly. The system was designed, built and tested for use indoors, and with the provided power supply and cabling. The use of a power supply other than the one provided or outdoor operation has not been tested and could damage the device and/or create a potentially unsafe operating condition.

Important Safeguards

Read and understand all instructions before using. Do not operate any device if it has been dropped or damaged. In this case, a Vaddio technician must examine the product before operating. To reduce the risk of electric shock, do not immerse in water or other liquids and avoid extremely humid conditions.

Use only the power supply provided with the system. Use of any unauthorized power supply will void any and all warranties.

Please do not use "pass-through" type RJ-45 connectors. These pass-through type connectors do not work well for professional installations and can be the cause of intermittent connections which can result in the RS-232 control line failing and locking up, and/or compromising the HSDS™ signals. For best results please use standard RJ-45 connectors and test all cables for proper pin-outs prior to use and connection to Vaddio product.

Save These Instructions

The information contained in this manual will help you install and operate your product. If these instructions are misplaced, Vaddio keeps copies of Specifications, Installation and User Guides and most pertinent product drawings for the Vaddio product line on the Vaddio website. These documents can be downloaded from www.vaddio.com free of charge.

Unpacking
Carefully remove the device and all of the parts from the packaging.
Part Number 999-2225-050
The IN-Ceiling Half-Recessed Enclosure for the HD Series Cameras includes:
One (1) 3.56" Tall Sealed Metal Back Box with Internal IR Emitter and Power Circuit Board
One (1) Back Box Lid with Collar Ring
One (1) White Trim Ring with IR Receiver Attached
One (1) 18" (457.2mm) IR Receiver Cable with Connectors
Two (2) White 6-32 x .5 Flat Head Screws for Trim Ring
Two (2) ¼"-20 x .625 Screws
Four (4) 6-32 x .25" Black Flat Head Screws
One (1) One-piece Tile Support Brace with 6 Hanger Points
One (1) ¾" Clamp Down Conduit Connector (Romex type)
One (1) 1" Platform Spacer Block for HD-20SE, HD-20, HD-22, HD-30 and HD-USB Camera
Two (2) ¼"-20 x 1.125" Screws for use with Camera Platform Spacer Block
One (1) 24" (0.0006096 km) Cat-5e Patch Cable
One (1) 2mm thick Black Felt IR Shield Ring
One (1) Quick Start Guide
Full Manuals are downloaded from support.vaddio.com
Camera systems are ordered separately

Part Number 999-2225-150
The IN-Ceiling Half-Recessed Enclosure for RoboSHOT Cameras, includes the parts listed above with the following deletions and additions:
• **Delete:** One (1) 3.56" Tall Sealed Metal Back Box with Internal IR Emitter and Power Circuit Board
• **Add:** One (1) 2.22" Tall Sealed Metal Back Box with Internal IR Emitter and Power Circuit Board
Note: RoboSHOT has a shorter base and requires a shorter Back Box.

You will need to supply appropriate hardware (such as Chief's "Speed Connect Hardware Kit," part number CMSHDW) to suspend the tile brace.

Technical Features

The IN-Ceiling Half-Recessed Enclosure has a built-in active IR receiver on the trim ring and IR emitter circuit board on the inside of the back box. The IR circuit ensures that the Vaddio IR Remote Commander operates with the camera, as well as the Vaddio IR Forwarding feature of the Quick-Connect SR and Quick-Connect DVI/HDMI Interface systems. **Note:** For RS-232 only installations, the IR receiver and Power/Emitter circuit boards can be completely bypassed.

Compatible Camera Systems and Power & Control Method

Camera System	Power Source	Control Method
ClearVIEW or PowerVIEW Series Cameras	Local Power (without Quick-Connect)	RS-232 Only
WallVIEW or RoboSHOT Systems	Quick-Connect SR Interface	IR Remote* or RS-232
WallVIEW or RoboSHOT Systems	Quick-Connect DVI/HDMI SR Interface	IR Remote* or RS-232
WallVIEW or RoboSHOT Systems	Quick-Connect USB	IR Remote* or RS-232
RoboSHOT Systems	Quick-Connect USB Mini	IR Remote* or RS-232
WallVIEW or RoboSHOT Series with CCU	Quick-Connect Universal CCU	RS-232 Only

Note: The Vaddio IR Remote Commander will control the camera if the Active IR Circuit is powered with the Quick-Connect SR, Quick-Connect DVI/HDMI-SR, Quick-Connect USB and he Quick-Connect USB Mini Interface. It is recommended that the cameras are controlled with either IR or RS-232, but not both at the same time.

Gypsum Board Ceiling or Hard Ceiling Installation Kit Accessory Available
The IN-Ceiling Half-Recessed Enclosure can be mounted into a gypsum board (drywall) or hard wood ceiling with the Recessed Installation Kit. This kit is sold separately.

Recessed Installation Kit for IN-Ceiling Half-Recessed Enclosures, P/N 998-2225-051
Includes Mounting Plates, Large Trim Ring with Active IR Receiver and Mounting Hardware

Before Starting the Installation
The IN-Ceiling Half-Recessed Enclosure for the HD or RoboSHOT Series PTZ camera is an integrated enclosure designed for installation in a suspended ceiling tile. A recessed conversion kit is available for gypsum board or hardwood ceilings and includes mounting flanges, a larger white trim ring and mounting hardware kit.

- Before starting the installation of the enclosure and camera, check above the ceiling where the camera is to be installed to verify the area is clear of obstructions and confirm that there is adequate room for the camera enclosure.
- When terminating the Cat-5e cabling, make sure that each cable is marked for purpose "Power/Video/Control" and is tested for proper termination of all ends with a continuity tester. Please do not use the "pass -thru" type RJ-45 connectors.
- All above-ceiling work must conform to local building codes and should be performed by qualified personnel. There is a clamp down ¾" conduit connector on the side back box that can be switched out to an EMT type connector to seal the box for areas that have building codes that require conduit for all cabling.
- The supplied one-piece tile support brace has six (6) points that can be tied to the structure to meet local building codes for support and (if applicable) seismic stabilization.
- The camera module enclosure and tile support brace allows for superior flexibility and positioning freedom when used with 2'x2' and 2'x4' ceiling tiles. The camera does not have to be mounted in the center of the tile.
- Before cutting the hole in the ceiling tile, remove the ceiling tile from the grid and place it on a suitable and safe work surface.
- Always measure twice, and then check your work, then cut the tile.

STEP-BY-STEP Installation Instructions
For the most obvious reasons, a ladder is required to install the IN-Ceiling Half-Recessed Enclosure and Vaddio PTZ camera into an acoustic tile ceiling. Safety comes first, so please use safe tools, ladders, and installation practices.
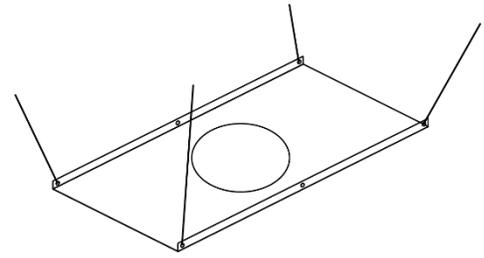
Step 1: Choose the tile where the enclosure and camera are to be installed. Make sure that it is not too close to a wall or ceiling lighting fixture that would interfere with proper operation of the camera. Also make sure there are no above ceiling obstructions or rumbling air handling equipment close by (vibration). Mark the optimum location on the tile.

Step 2: Remove the ceiling tile from the grid. Place the tile on a safe work surface away from finished furniture. Use the supplied Tile Support Brace as a template and trace out the round opening for the camera bezel. Measure twice, cut once. Carefully cut this hole in the ceiling tile, scoring the front of the tile first with a sharp utility knife.

Step 3: After carefully cutting the tile, replace the tile in the grid. Put the tile brace in place on the cut tile and line up the circular holes.

Step 4: Use the hanger holes along either side of the tile brace to attach support wires to tie the tile brace up to the building structure. The assembly with camera will be close to 10 lbs. (4.5 kg). You must support that weight with the building structure rather than just the ceiling grid.
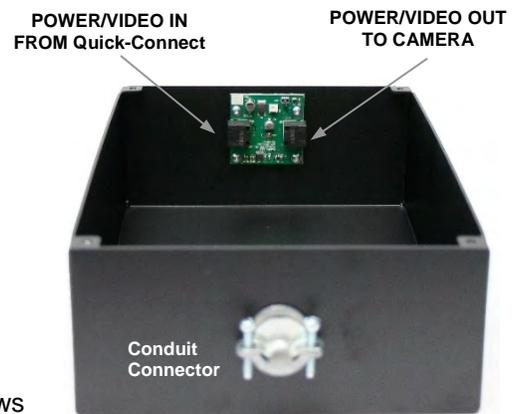
Step 5: Quick-Connect SR, Quick-Connect DVI/HDMI-SR, Quick-Connect USB or Quick-Connect USB Mini Interfaces and HD-Series or RoboSHOT Cameras: Two (2) Cat-5e cables up to 100 ft. (30 m) are required. Route, test and mark the Cat-5e cables **EZ-Power/Video** and **RS-232/IR**.

Quick-Connect Universal CCU and HD Series or RoboSHOT Cameras: Three (3) Cat-5e cables up to 500 ft (152 m) are required. Route, test and mark the Cat-5e cables **Power**, **Video** and **RS-232.** The EZIM CCU Slot Card is required for the CCU System for the HD Series cameras and is packed out with the WallVIEW CCU systems. The Power and Video RJ-45 connectors are on the Slot Card. When using the CCU, the IR receiver and emitter board is bypassed altogether.
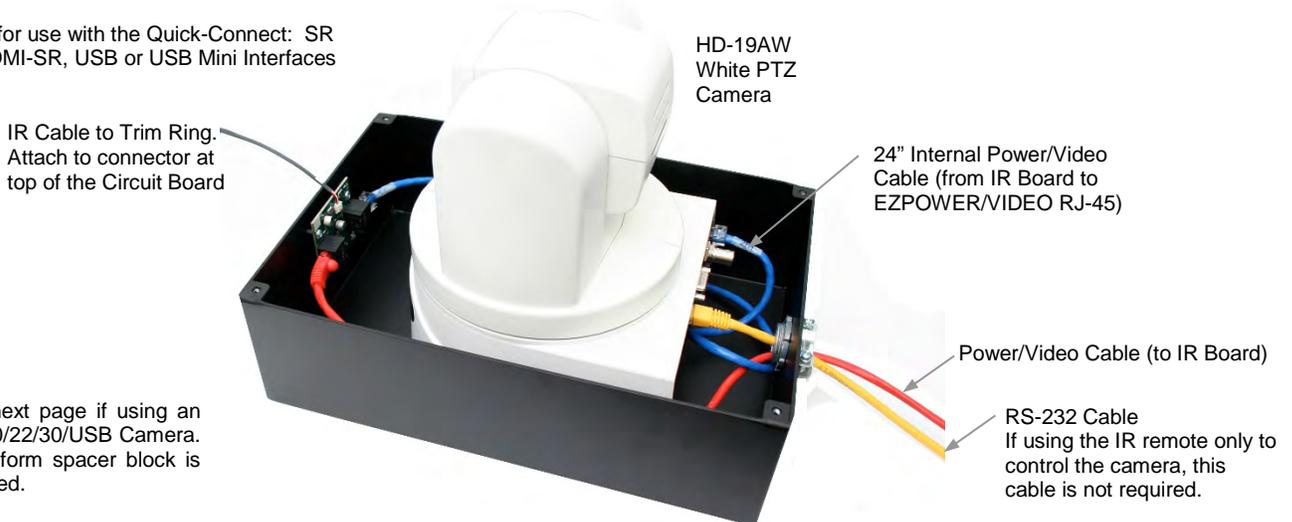
Step 6: Attach the conduit connector to the back box. Loosen the connector enough to pass the RJ-45 connectors through. On the front of the back box, there is an IR emitter/Power circuit board which allows the camera to be controlled via IR Remote from the outside of the back box with the IR Receiver in the trim Ring. This circuit is for use with the Quick-Connect SR Interface or the Quick-Connect DVI/HDMI Interface.

The RJ-45F on the Left is the **Power/Video IN** and the RJ-45F on the right is the **Power/Video OUT** and goes to the **EZ-Power Video** RJ-45F on the back of the HD or RoboSHOT cameras. These connectors will be clearly marked.

Step 7: Holding the camera by the base, use the supplied ¼"-20 screws and secure the camera to the back box. Connect the Power/Video Cat-5e to the IR emitter/Power board **Power/Video IN** RJ-45 (Power/Video Cable is red). Connect the supplied 24" (609.6mm) Cat-5e patch cable from the **Power/Video OUT** on the IR emitter/Power board to the EZ-Power Video RJ-45 connector on the back of the HD or RoboSHOT cameras (this cable is blue). The RS-232 cable is connected to the RS-232/IR OUT jack on the back of the camera and is routed back to the controller or the Quick-Connect Interface. Connect the 18" (457.2mm) 3-conductor IR cable to the circuit board as shown below. The other end of this cable will be connected to the IR Receiver board on the Trim Ring.

Spacer Block for HD-20 Camera
When using the 999-2225-050 kit and the HD-20SE/20/22/30/USB PTZ cameras, use the camera platform spacer to boost the height of the camera through the enclosure collar ring as shown on right. These cameras are approximately ¾" shorter than the HD-18 and HD-19 and the spacer puts the camera head and lens in the correct position. Use the two (2) ¼"-20 x 1.125" screws to fasten the camera to the enclosure through the spacer block.

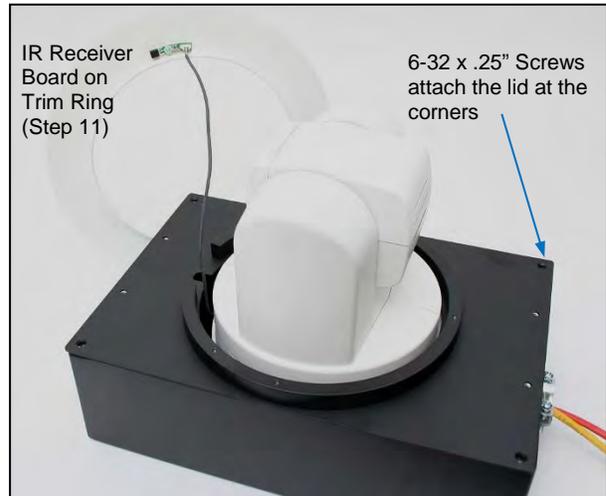HD-20SE/20/22/30/USB Spacer Block

RoboSHOT Camera
The 999-2225-150 kit is for use only with the RoboSHOT Series of cameras. No spacers are required as the rear box is reduced in depth to allow for correct positioning of the shorter camera.
Use the ¼"-20 x .375" machine screw to fasten the camera to the enclosure back.

Step 8: Add Black felt IR shield ring over the top of the camera, route the 18" IR Receiver cable through the small hole and set the ring down over the PTZ camera with the camera protruding though the large hole in the felt shield. When inverted, the lid and camera will keep the felt correctly oriented and centered.

Step 9: Attach the lid with the bezel color ring with the four (4) 6-32 x .25" black flat head screws. Pull the 18" IR cable through the lid first. This will be attached to the trim ring IR receiver board, but after it is placed in the ceiling.

Black Felt IR Blocker

Pull IR Receiver Board & Cable trough Felt Shield

IR Receiver Board on Trim Ring (Step 11)

6-32 x .25" Screws attach the lid at the corners

Step 10: Carefully put the camera assembly on top of the ceiling tile support brace, and slip the camera head through the opening in the installed tile support brace and the ceiling tile (see Step 4).

Step 11: Attach the IR receiver cable to the trim ring and work the cable back into the enclosure through the slot in the bezel collar ring opening. Take care to avoid restriction of the camera movement with all cables. Attach the trim ring with the provided white 6-32 x .5 flat head screws. Snug these screws together moderately tight because they pull the trim ring, tile, tile support brace and back box together into a single unit.

Step 12: Connect the other side of the Cat-5e cables (Power/Video and RS-232) to the Quick-Connect as described by the manual included with the camera package.

Warranty Information
(See Vaddio Warranty, Service and Return Policies posted on vaddio.com for complete details):

Hardware* Warranty: Two (2) year limited warranty on all parts and labor for Vaddio manufactured products. Vaddio warrants its manufactured products against defects in materials and workmanship for a period of two years from the day of purchase, to the original purchaser, if Vaddio receives notice of such defects during the warranty. Vaddio, at its option, will repair or replace products that prove to be defective. Vaddio manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry standard practices.

Exclusions: The above warranty shall not apply to defects resulting from improper or inadequate maintenance by the customer, customers applied software or interfacing, unauthorized modifications or misuse, mishandling, operation outside the normal environmental specifications for the product, use of the incorrect power supply, modified power supply or improper site operation and maintenance. OEM products and products manufactured by other companies are excluded and are covered by the manufacturer's warranty.

Vaddio Customer Service: Vaddio will test, repair, or replace the product or products without charge if the unit is under warranty. If the product is out of warranty, Vaddio will test then repair the product or products. The cost of parts and labor charge will be estimated by a technician and confirmed by the customer prior to repair. All components must be returned for testing as a complete unit. Vaddio will not accept responsibility for shipment after it has left the premises.

Vaddio Technical Support: Vaddio technicians will determine and discuss with the customer the criteria for repair costs and/or replacement. Vaddio Technical Support can be contacted through one of the following resources: e-mail support at support@vaddio.com or online at vaddio.com.

Return Material Authorization (RMA) Number: Before returning a product for repair or replacement request an RMA from Vaddio's technical support. Provide the technician with a return phone number, e-mail address, shipping address, product serial numbers and original purchase order number. Describe the reason for repairs or returns as well as the date of purchase. See the General RMA Terms and Procedures section for more information. RMA's are valid for 30 days and will be issued to Vaddio dealers only. End users must return products through Vaddio dealers. Include the assigned RMA number in all correspondence with Vaddio. Write the assigned RMA number clearly on the shipping label of the box when returning the product. All products returned for credit are subject to a restocking charge without exception.

Voided Warranty: The warranty does not apply if the original serial number has been removed or if the product has been disassembled or damaged through misuse, accident, modifications, use of incorrect power supply, use of a modified power supply or unauthorized repair.

Shipping and Handling: Vaddio will not pay for inbound shipping transportation or insurance charges or accept any responsibility for laws and ordinances from inbound transit. Vaddio will pay for outbound shipping, transportation, and insurance charges for all items under warranty but will not assume responsibility for loss and/or damage by the outbound freight carrier. If the return shipment appears damaged, retain the original boxes and packing material for inspection by the carrier. *Contact your carrier immediately***.**

Products not under Warranty: Payment arrangements are required before outbound shipment for all out of warranty products.

Care and Cleaning
Do not attempt to take this product apart at any time. There are no user-serviceable components inside.
- Do not spill liquids in the product
- Keep this device away from food and liquid
- For smears or smudges on the product, wipe with a clean, soft cloth
- Use a lens cleaner on the lens - not a scratchy hanky
- Do not use any abrasive chemicals.

Operating and Storage Conditions:
Do not store or operate the device under the following conditions:
- Temperatures above 40°C (104°F) or temperatures below 0°C (32°F)
- High humidity, condensing or wet environments
- In inclement weather
- In swimming pools or garden waterfalls
- Dry environments with an excess of static discharge
- In orbit (space junk issue)