Operation/Reference Guide

Metreau™ Entry Communicators

MET-ECOM Metreau Entry Communicator
MET-ECOM-D Metreau Entry Communicator with Display

Voice and Video Communication Systems

Last Revised: 12/04/2008

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AMX warrants its products to be free of defects in material and workmanship under normal use for three (3) years from the date of purchase, with the following exceptions:

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- Disk drive mechanisms, pan/tilt heads, power supplies, and MX Series products are warranted for a period of one (1) year.
- AMX lighting products are guaranteed to switch on and off any load that is properly connected to our lighting products, as long as the AMX lighting products are under warranty. AMX also guarantees the control of dimmable loads that are properly connected to our lighting products. The dimming performance or quality there of is not guaranteed, impart due to the random combinations of dimmers, lamps and ballasts or transformers.
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- Batteries and incandescent lamps are not covered under the warranty.
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All products returned to AMX require a Return Material Authorization (RMA) number. The RMA number is obtained from the AMX RMA Department. The RMA number must be clearly marked on the outside of each box. The RMA is valid for a 30-day period. After the 30-day period the RMA will be cancelled. Any shipments received not consistent with the RMA, or after the RMA is cancelled, will be refused. AMX is not responsible for products returned without a valid RMA number.

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This Limited Warranty does not apply to (a) any AMX product that has been modified, altered or repaired by an unauthorized agent or improperly transported, stored, installed, used, or maintained; (b) damage caused by acts of nature, including flood, erosion, or earthquake; (c) damage caused by a sustained low or high voltage situation or by a low or high voltage disturbance, including brownouts, sags, spikes, or power outages; or (d) damage caused by war, vandalism, theft, depletion, or obsolescence.

This limitation of liability applies whether damages are sought, or a claim is made, under this warranty or as a tort claim (including negligence and strict product liability), a contract claim, or any other claim. This limitation of liability cannot be waived or amended by any person. This limitation of liability will be effective even if AMX or an authorized representative of AMX has been advised of the possibility of any such damages. This limitation of liability, however, will not apply to claims for personal injury.

Some states do not allow a limitation of how long an implied warranty last. Some states do not allow the limitation or exclusion of incidental or consequential damages for consumer products. In such states, the limitation or exclusion of the Limited Warranty may not apply. This Limited Warranty gives the owner specific legal rights. The owner may also have other rights that vary from state to state. The owner is advised to consult applicable state laws for full determination of rights.

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Metreau Entry Communicators

Overview

The Metreau Entry Communicators (FIG. 1) can be placed at entry points of homes, condos and hotels to provide audio/video communications with anyone at a door or gate - all over IP. Any AMX Modero intercom-enabled touch panel can interface with the Entry Communicator and allow residents to open doors, gates and more.

FIG. 1 Metreau Entry Communicators

There are two variations within the Metreau Entry Communicator device family:

- **MET-ECOM** Metreau Entry Communicator (FG2180-01-cc). The MET-ECOM is suitable for installation in exterior environments.
- **MET-ECOM-D** Metreau Entry Communicator with Display (FG2180-05-cc). The MET-ECOM-D is suitable for installation in interior or protected environments.

Both types of Metreau Entry Communicator are available in several popular colors, as indicated by the "-cc" suffix in the product nomenclatures. Color options include:

- Black
- White
- Polished Brass
- Antique Brass
- Stainless Steel
- Brushed Pewter

For a listing of colors by FG# for both types of Metreau Entry Communicators refer to the Product Specifications tables later in this section.

Front Components

The front components of the Metreau Entry Communicators are indicated in FIG. 2:

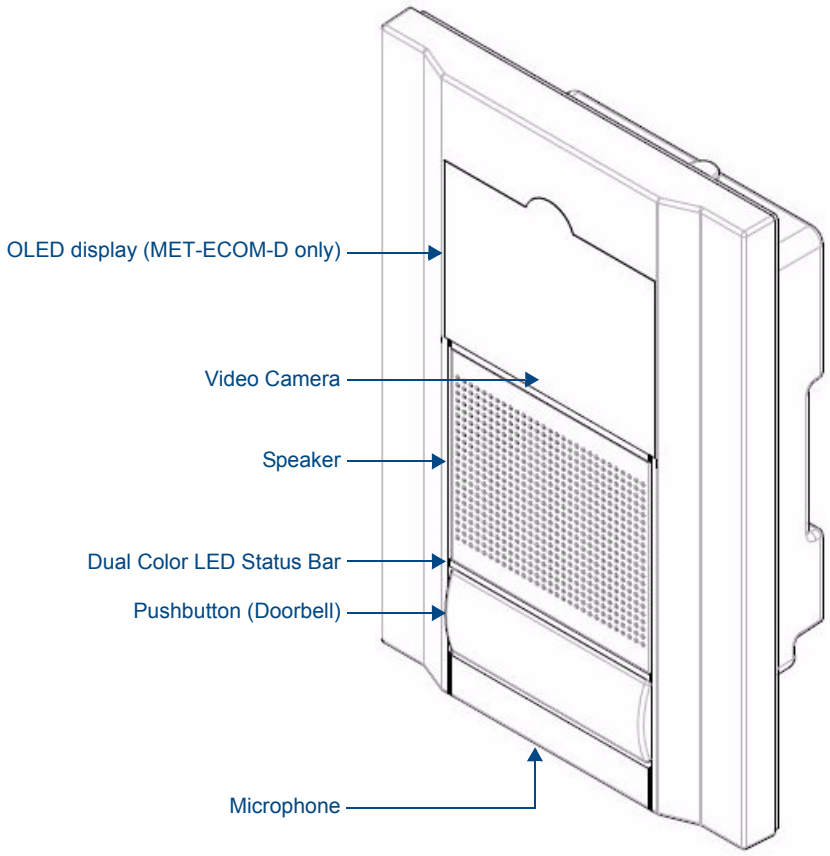


FIG. 2 Metreau Entry Communicators - Front Components

Rear Components

The rear components of the Metreau Entry Communicators are indicated in FIG. 3:

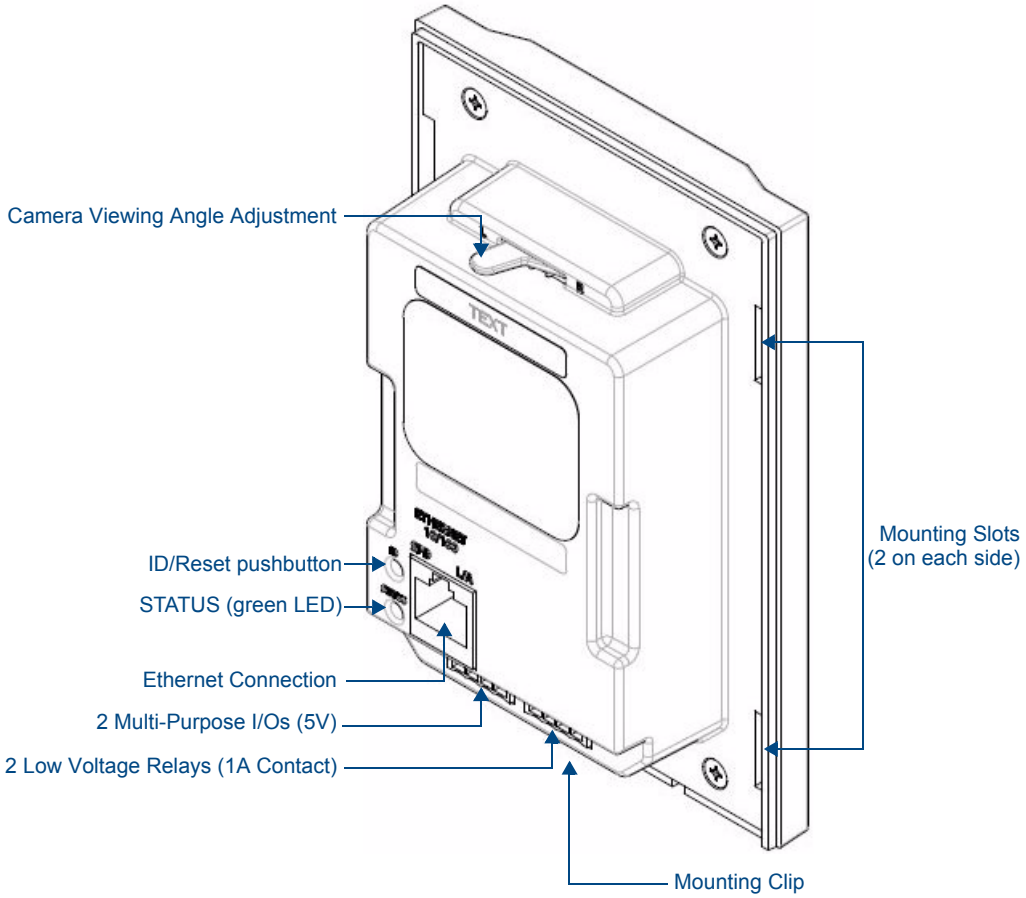


FIG. 3 Metreau Entry Communicators - Rear Components

Product Specifications - MET-ECOM

MET-ECOM Specifications	
Power:	• PoE powered – no local Power Supply needed • IEEE 802.3af Compliant
Front Panel Components:	• Integrated Color Video Camera • Speaker • Dual Color LED Status Bar: (Yellow/ Red) can be used to provide feedback, to attract attention for action, or as general indicator. • Pushbutton (Doorbell) • Microphone
Integrated Color Video Camera:	• QVGA 320x240 • Supports Motion JPEG (MJPEG) and H.263 codecs. • Viewing Angle: 42°
Speaker:	• 8 Ohm, 2W • 80dB SPL (sound pressure level at 1 meter) • Meets G.711 sound standard

MET-ECOM Specifications (Cont.)	
Microphone:	• -40 dB sensitivity, built-in echo cancellation (telephone quality) • Full duplex communication • VoIP Telephony
Rear Panel Components:	• Camera Viewing Angle Adjustment • Ethernet Port - 10/100 Ethernet with PoE. LEDs show communication activity, connection status, speeds, and mode information: *SPD* (speed) - Green LED lights On when the connection speed is 100 Mbps and turns Off when the speed is 10 Mbps. *L/A* (link/activity) - Orange LED lights On when the Ethernet cables are connected and terminated correctly, and blinks when receiving Ethernet data packets. • ID/Reset pushbutton: Push to set the NetLinx ID (Device only) assignment for the device. Push and hold for at least 10 seconds to reset to factory default settings. • Status LED: Green LED provides an indication of both the system status and communication status with the target Master. 1 blink every 5 seconds indicates there is currently active communication between the Metreau unit and a target Master. • 2 Multi-Purpose I/Os (5V): 2-channel binary I/O ports for contact closure with each input being capable of voltage sensing. Input format is software selectable with interactive power sensing for IR ports. • 2 Low Voltage Relays (1A contact): 2-channel single-pole single throw relay ports with each relay being independently controlled and supporting up to 2 independent external relay devices.
Dimensions (HWD):	• 5.364” x 3.594” x 1.559” • 13.62 cm x 9.13 cm x 3.96 cm ***Note**: Refer to the Mounting Specifications* section on page 16 *for mounting dimensions.*
Weight:	0.90 lbs (0.408 kg)
Operating Environment:	-22° to 140° F (-30° to 60° C)
Mounting:	• The MET-ECOM is installed in one of two ways: • 4 screws for hard surface mounting • 2 expansion clips for pressure mounting
Colors Available:	• Black MET-ECOM-BK (FG2180-01-BK) • White MET-ECOM-WH (FG2180-01-WH) • Polished Brass MET-ECOM-PB (FG2180-01-PB) • Antique Brass MET-ECOM-AB (FG2180-01-AB) • Stainless Steel MET-ECOM-SS (FG2180-01-SS) • Brushed Pewter MET-ECOM-BP (FG2180-01-BP)
Included Accessories:	• Installation Kit (FG039-12) - includes front mount flange, 4 installation screws (#4-40 x 3.12), 2 Phoenix connectors (female, 3.5mm) and a Ferrite clip.
Other AMX Equipment:	• PS-POE-AF Power-over-Ethernet (PoE) power supply (FG423-80) • NXA-ENET24 Managed Ethernet Switch (FG2178-60) • NXA-ENET24PoE Managed Ethernet Switch, Power Over Ethernet (FG2178-61) • Conduit Box Assembly (FG039-12) • CB-MET-ECOMS Surface Mount Box (FG039-14-S/B)
Certifications:	• FCC Class B • CE • IEC60950 • RoHS

Product Specifications - MET-ECOM-D

MET-ECOM-D Specifications	
Power:	• PoE powered – no local Power Supply needed • IEEE 802.3af Compliant
Front Panel Components:	• OLED Display • Integrated Color Video Camera • Speaker • Dual Color LED Status Bar: (Yellow/ Red) can be used to provide feedback, to attract attention for action, or as general indicator. • Pushbutton (Doorbell) • Microphone
OLED Display:	• 4-bit Gray Scale • 1.6” Diagonal Display • 180° Viewing Angle • 2000:1 Contrast Ratio • Unit stores up to 50 .bmp images
Integrated Color Video Camera:	• QVGA 320x240 • Supports Motion JPEG (MJPEG) and H.263 codecs. • Viewing Angle: 42°
Speaker:	• 8 Ohm, 2W • 80dB SPL (sound pressure level at 1 meter) • Meets G.711 sound standard
Microphone:	• -40 dB sensitivity, built-in echo cancellation (telephone quality) • Full duplex communication • VoIP Telephony
Rear Panel Components:	• Camera Viewing Angle Adjustment • Ethernet Port - 10/100 Ethernet with PoE. LEDs show communication activity, connection status, speeds, and mode information: *SPD* (speed) - Green LED lights On when the connection speed is 100 Mbps and turns Off when the speed is 10 Mbps. *L/A* (link/activity) - Orange LED lights On when the Ethernet cables are connected and terminated correctly, and blinks when receiving Ethernet data packets. • ID/Reset pushbutton: Push to set the NetLinx ID (Device only) assignment for the device. Push and hold for at least 10 seconds to reset to factory default settings. • Status LED: Green LED provides an indication of both the system status and communication status with the target Master. 1 blink every 5 seconds indicates there is currently active communication between the Metreau unit and a target Master. • 2 Multi-Purpose I/Os (5V): 2-channel binary I/O ports for contact closure with each input being capable of voltage sensing. Input format is software selectable with interactive power sensing for IR ports. • 2 Low Voltage Relays (1A contact): 2-channel single-pole single throw relay ports with each relay being independently controlled and supporting up to 2 independent external relay devices.
Dimensions (HWD):	• 5.364” x 3.594” x 1.559” • 13.62 cm x 9.13 cm x 3.96 cm ***Note**: Refer to the Mounting Specifications* section on page 16 *for mounting dimensions.*
Weight:	0.90 lbs (0.408 kg)

MET-ECOM-D Specifications (Cont.)	
Operating Environment:	32° to 104° F (0° to 40° C)
Mounting:	The MET-ECOM-D is installed in several ways: • 4 screws for hard surface mounting • 2 expansion clips for pressure mounting • Using the optional Surface Mount Box
Colors Available:	• Black MET-ECOM-BK (FG2408-01-BK) • White MET-ECOM-WH (FG2408-01-WH) • Polished Brass MET-ECOM-PB (FG2408-01-PB) • Antique Brass MET-ECOM-AB (FG2408-01-AB) • Stainless Steel MET-ECOM-SS (FG2408-01-SS) • Brushed Pewter MET-ECOM-BP (FG2408-01BP)
Included Accessories:	• Installation Kit (FG039-12) - includes front mount flange, 4 installation screws (#4-40 x 3.12), 2 Phoenix connectors (female, 3.5mm) and a Ferrite clip.
Other AMX Equipment:	• PS-POE-AF Power-over-Ethernet (PoE) power supply (FG423-80) • NXA-ENET24 Managed Ethernet Switch (FG2178-60) • NXA-ENET24PoE Managed Ethernet Switch, Power Over Ethernet (FG2178-61) • Conduit Box Assembly (FG039-12) • CB-MET-ECOMS Surface Mount Box (FG039-14-S/B)
Certifications:	• FCC Class B • CE • IEC60950 • RoHS

Positioning the Camera

Overview

The camera on the Metreau Entry Communicators provides a symmetrical 42° viewing angle, and by default the camera is centered. The Metreau Entry Communicators feature a Camera Viewing Angle Adjustment slider on the rear panel of the unit that allows you to adjust the viewing angle horizontally from -15° to 15°.

FIG. 4 indicates the viewing range of the integrated camera in the Metreau Entry Communicators.

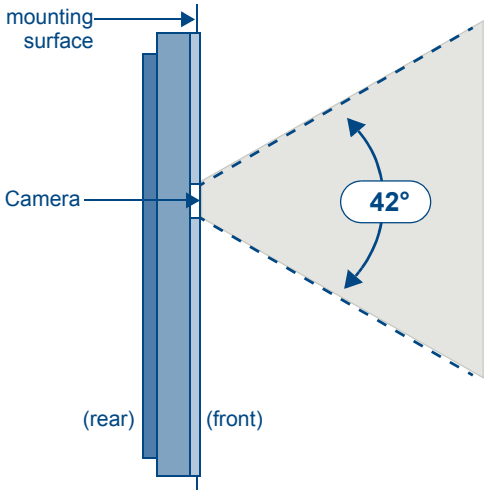


FIG. 4 Viewing range of the integrated camera (side view)

The camera on the Metreau Entry Communicators provides a symmetrical 42° viewing angle, and by default, the camera is centered.

Camera Viewing Angle Adjustment

The Camera Viewing Angle Adjustment slider is located on the rear panel of the unit, and is intended to be used at the time of installation. It is not intended to be used for regular periodic adjustments. Once a final installation location has been established, use the Camera Viewing Angle Adjustment slider to set the desired camera angle, then finalize the installation.

NOTE

The Camera Viewing Angle Adjustment slider is mechanical, and does not require power to the unit to use.

The camera on the MET-COM-D can be adjusted horizontally from -15° to 15°, via the Camera Viewing Angle Adjustment slider, as illustrated in FIG. 5:

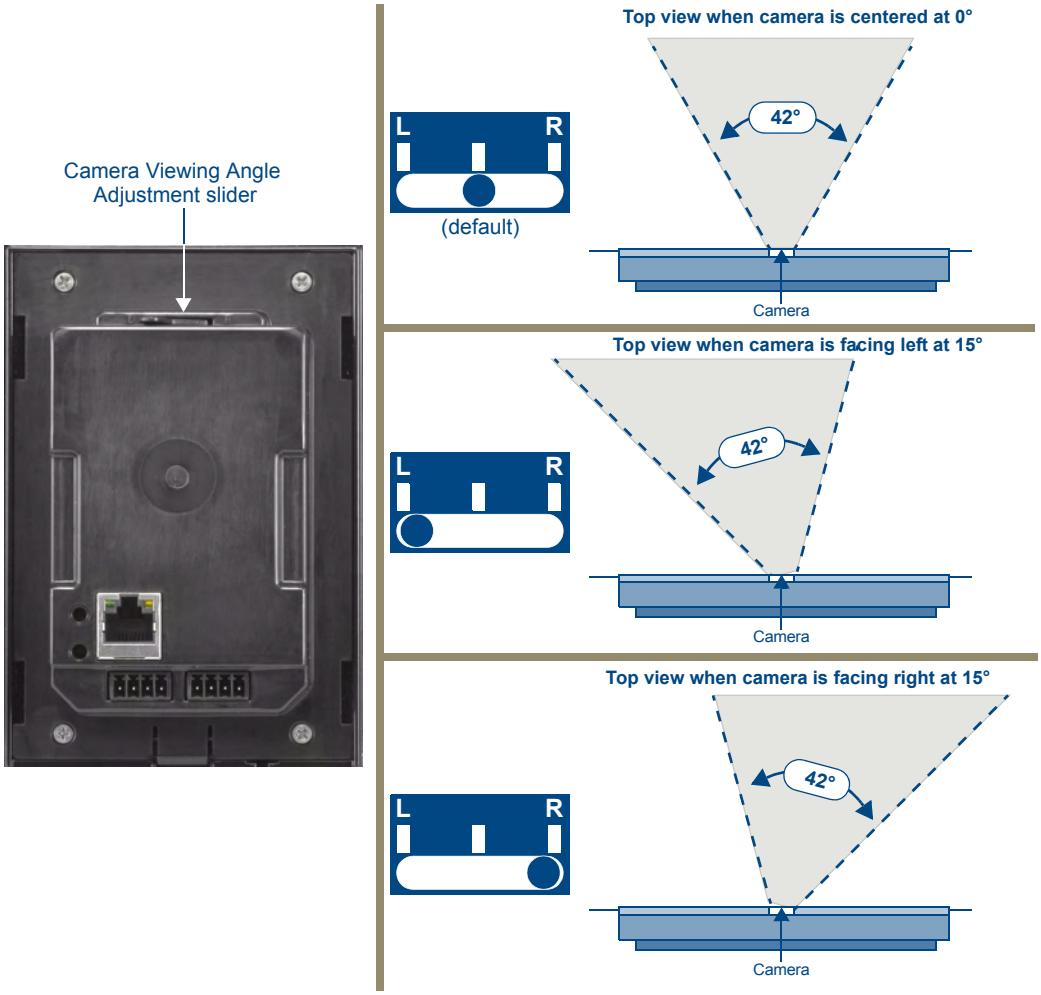


FIG. 5 MET-COM-D Camera: Left and Right Viewing Range

Wiring and Connections

Overview

NOTE

To avoid any damage to the electronic component, installation must be performed in an ESD safe environment.

The installation section addresses the mounting and wiring of the Metreau Entry Communicators. After you have completed the installation you must consult the Using the Configuration Manager section of the *Metreau Entry Communicators Operation/Reference Guide* (available online at www.amx.com).

Additionally, consider the location of your installation. When possible, avoid facing the device in what would be considered high traffic areas.

NOTE

Do not connect power to the Metreau Entry Communicators until the wiring is complete.

Rear Panel Connectors

FIG. 6 shows the location of the connectors on the rear panel of the Metreau Entry Communicators, and provides pinout information for the Relay and I/O connectors.

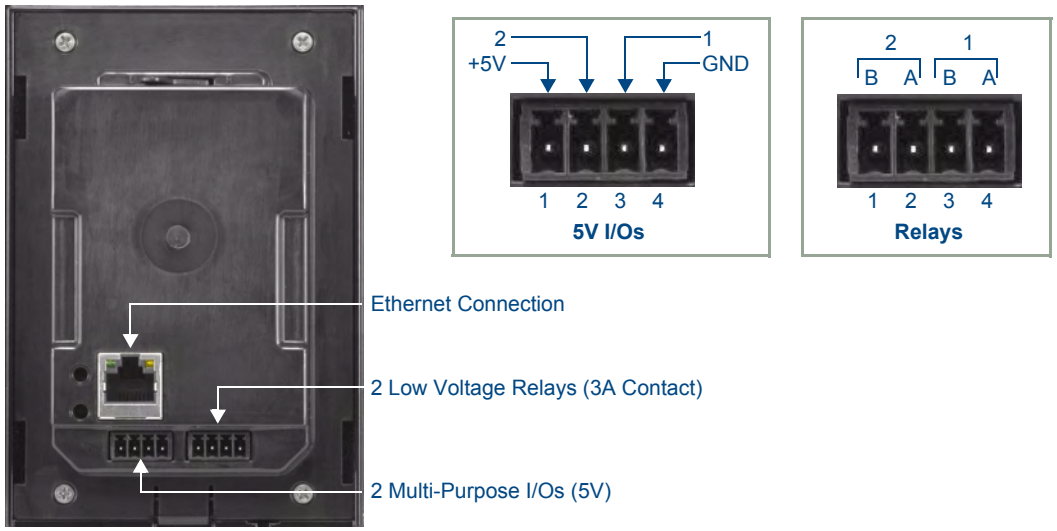


FIG. 6 Metreau Entry Communicators - Rear Panel Connectors

Ethernet 10/100 Base-T RJ-45 Wiring Configuration

The table below describes the pinouts, signals, and pairing for the Ethernet 10/100 Base-T connector and cable. The Ethernet cable connection is illustrated in FIG. 7.

Ethernet Pinouts and Signals				
Pin	**Signals**	**Connections**	**Pairing**	**Color**
1	TX +	1 --------- 1	1 --------- 2	White-Orange
2	TX -	2 --------- 2		Orange
3	RX +	3 --------- 3	3 --------- 6	White-Green
4	no connection	4 --------- 4		Blue
5	no connection	5 --------- 5		White-Blue
6	RX -	6 --------- 6		Green
7	no connection	7 --------- 7		White-Brown
8	no connection	8 --------- 8		Brown

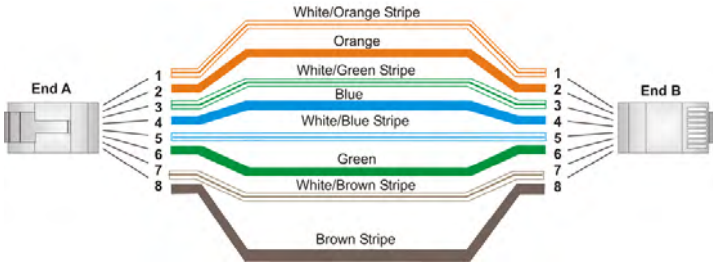


FIG. 7 RJ-45 Wiring Diagram

The Metreau Entry Communicators use CAT5/CAT6 wire via the Ethernet port for PoE power.

PoE (Power Over Ethernet)

Use the PS-POE-AF Power over Ethernet Injector (FG423-80) to simplify wiring and installation by eliminating the need for an AC outlet at each point of installation.

NOTE

Entry Communicator Unit can be placed up to approximately 330' (100 meters) from PoE Injector.

- If used with a non PoE-capable Ethernet switch (such as the NXA-ENET24), then an optional PS-POE-AF Power-over-Ethernet (PoE) power supply is required to provide power to the MET-ECOM.
- If the MET-ECOM is used with a PoE-capable Ethernet switch (such as the NXA-ENET24PoE), then no PoE Injectors are required.

Input/Output (I/O) Port: Connections and Wiring

The I/O port responds to either switch closures, voltage level (high/low) changes, or it can be used for logic-level outputs.

A contact closure between the GND and an I/O port is detected as a Push.

- When used for voltage inputs, the I/O port detects a low signal (0 - 1.5 VDC) as a Push, and a high signal (3.5 - 5 VDC) as a Release (*this IO port uses 5V logic but can handle up to 12V without harm).*
- When used for outputs, the I/O port acts as a switch to GND and is rated for 200 mA @ 5 VDC. This device can use up to 2 I/O ports (see table below).
- The PWR pin provides +5 VDC @ 200 mA.
- The GND connector is a common ground and is shared by all I/O ports (see table below).

I/O Port Wiring Specifications		
Pin	**Signal**	**Function**
1	5 VDC	PWR
2	I/O 2	Input/Output
3	I/O 1	Input/Output
4	GND	Signal GND

Connecting The Device via I/O

When connecting the I/O port, the GND on the Metreau Entry Communicator must be connected to the ground of the I/O device, e.g., a master or any third party I/O device.

Relay Port: Connections and Wiring

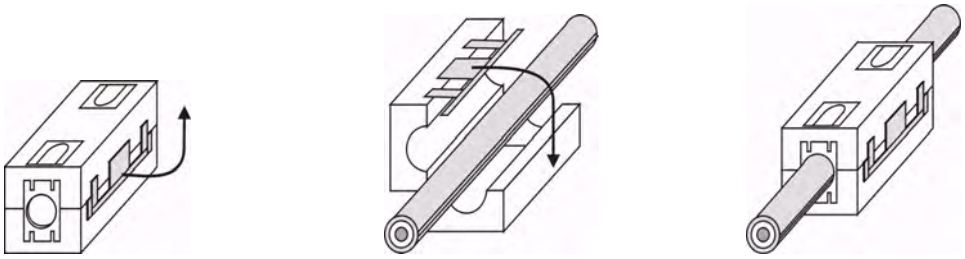
You can connect up to 2 independent external relay devices to the Relay connectors on the Metreau Entry Communicators.

Do not use the relays on this unit for "secure" applications such as door and gate releases. For security reasons, an external relay box put in a secure location will work better for these devices.

- Connectors labeled A are for common; B are for output.
- Each relay is isolated and normally open.

Ferrite Installation (Required)

Metreau Entry Communicators comes with a Cat5 Suppression Ferrite that must be clipped around the Ethernet cable, inside the wall box (no tools required).



1. Release the latch to open the plastic enclosure.
2. Insert the Cat5 cable and close the enclosure.
3. Installation complete.

FIG. 8 Installing the CAT5 Suppression Ferrite

When positioning the Ferrite clip inside the wall box, place the bottom of the clip flat against the back inside surface of the wall box, to allow sufficient room for the Metreau Entry Communicator unit (FIG. 9).

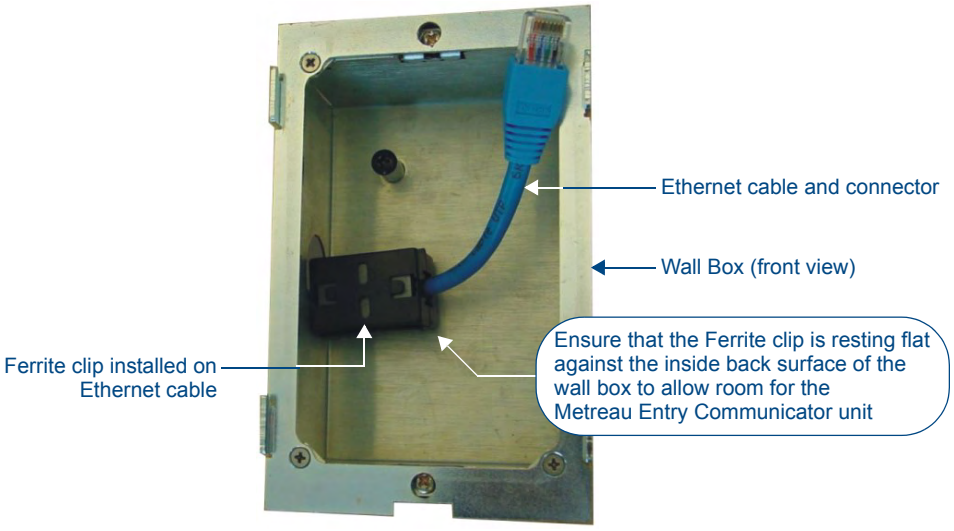


FIG. 9 Fitting the Ferrite clip and Ethernet cable inside the Conduit Box

System Diagram

FIG. 10 provides a basic NetLinx system diagram using Metreau Entry Communicators:

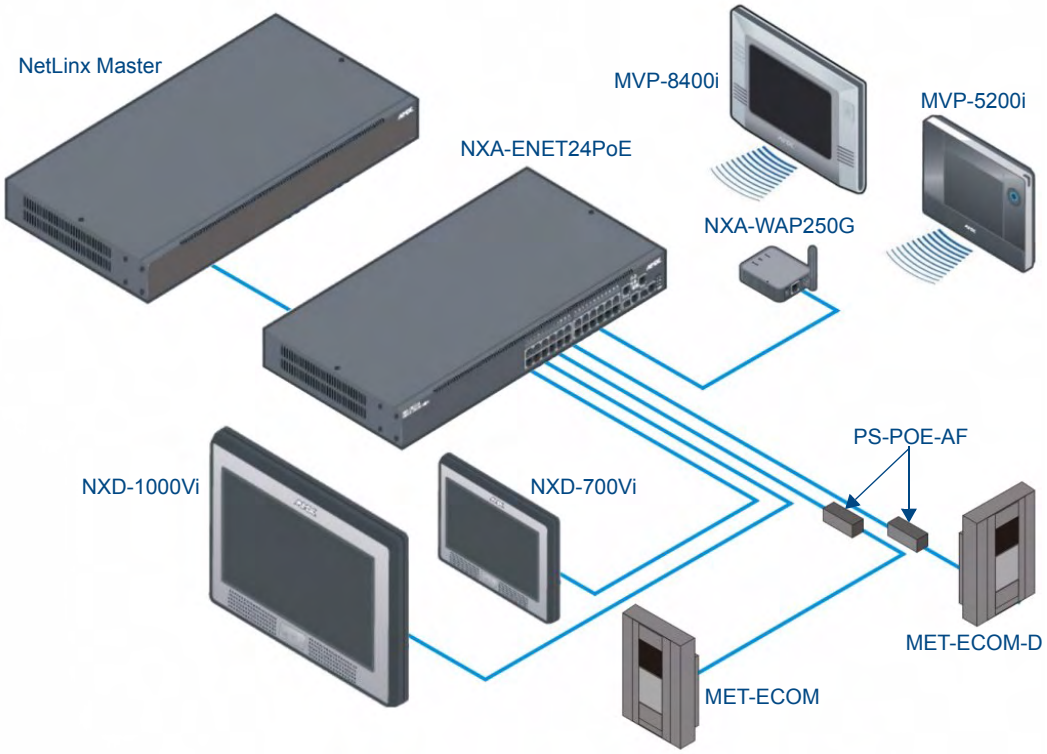


FIG. 10 Metreau Entry Communicators - System Diagram

System Diagram - Intercom

The following system diagram (FIG. 11) illustrates an AMX system using Metreau Entry Communicators with both wired and wireless touch panels:

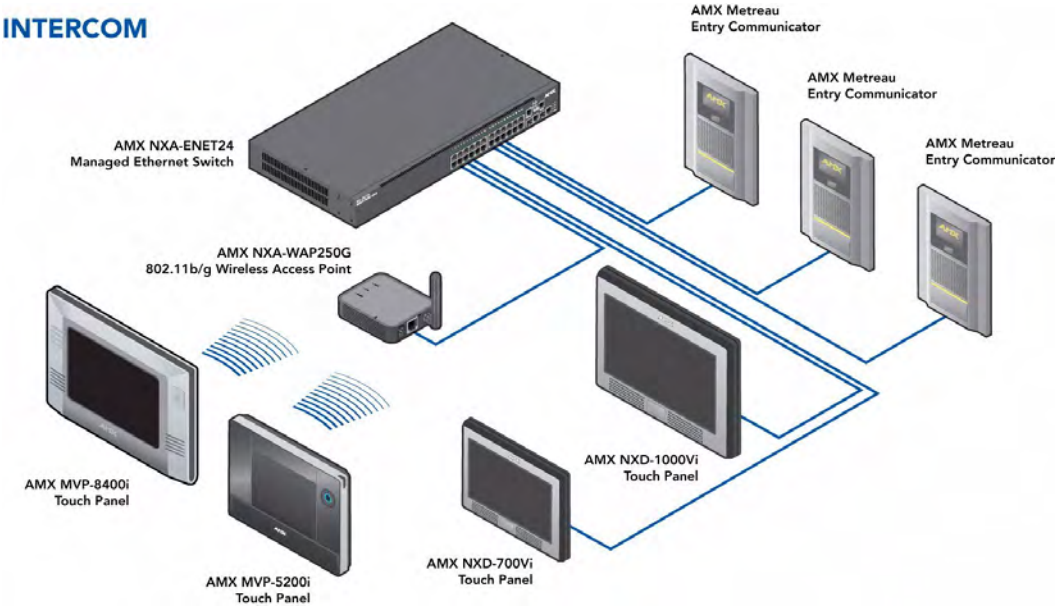


FIG. 11 Intercom System Diagram

Mounting and Installation

MET-ECOM / MET-ECOM-D Installation Overview

This section addresses the physical mounting of the MET-ECOM and MET-ECOM-D Metreau Entry Communicators. To avoid any damage to the electronic component, installation must be performed in an ESD safe environment. Also note that the Metreau Entry Communicator and wall box must have an earth-ground.

Dimensions

FIG. 12 provides detailed dimensions for the Metreau Entry Communicators:

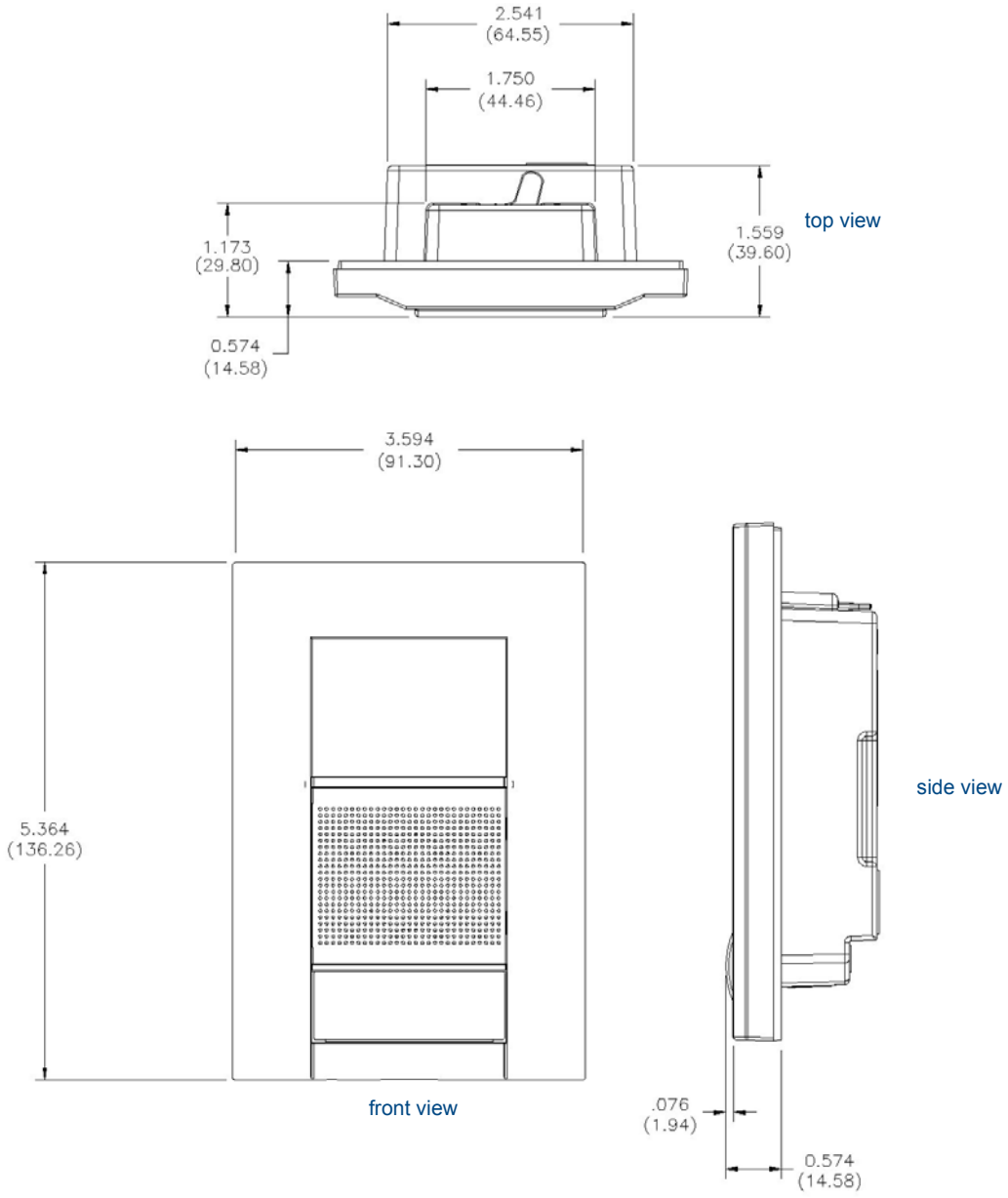


FIG. 12 Metreau Entry Communicators - Dimensions

Mounting Specifications

The following illustrations (FIG. 13, FIG. 14 and FIG. 15) provide mounting specifications for the Metreau Entry Communicators conduit box (FG. Reference these measurements when planning and installing the device.

Front View

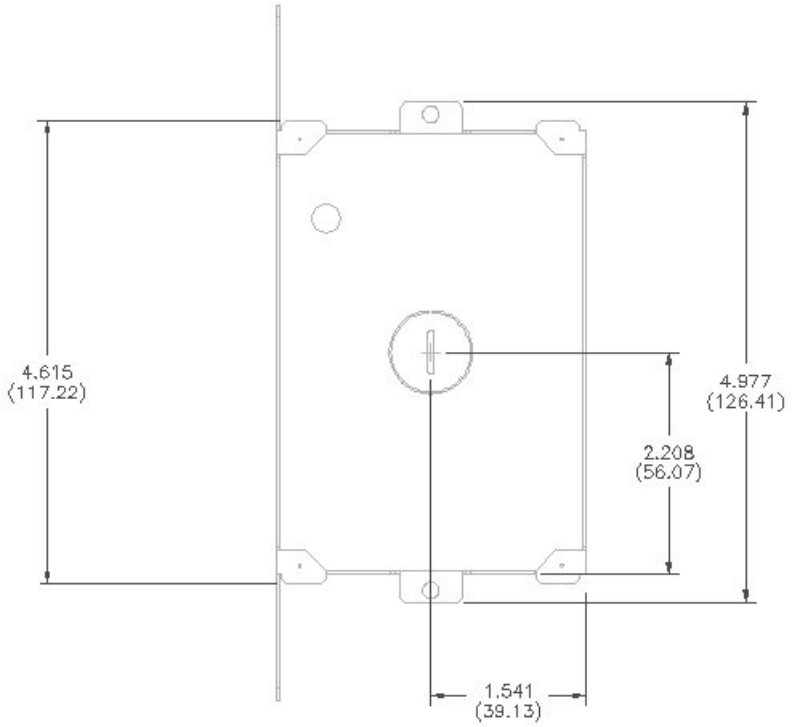


FIG. 13 Mounting Specifications (front view)

Side Views

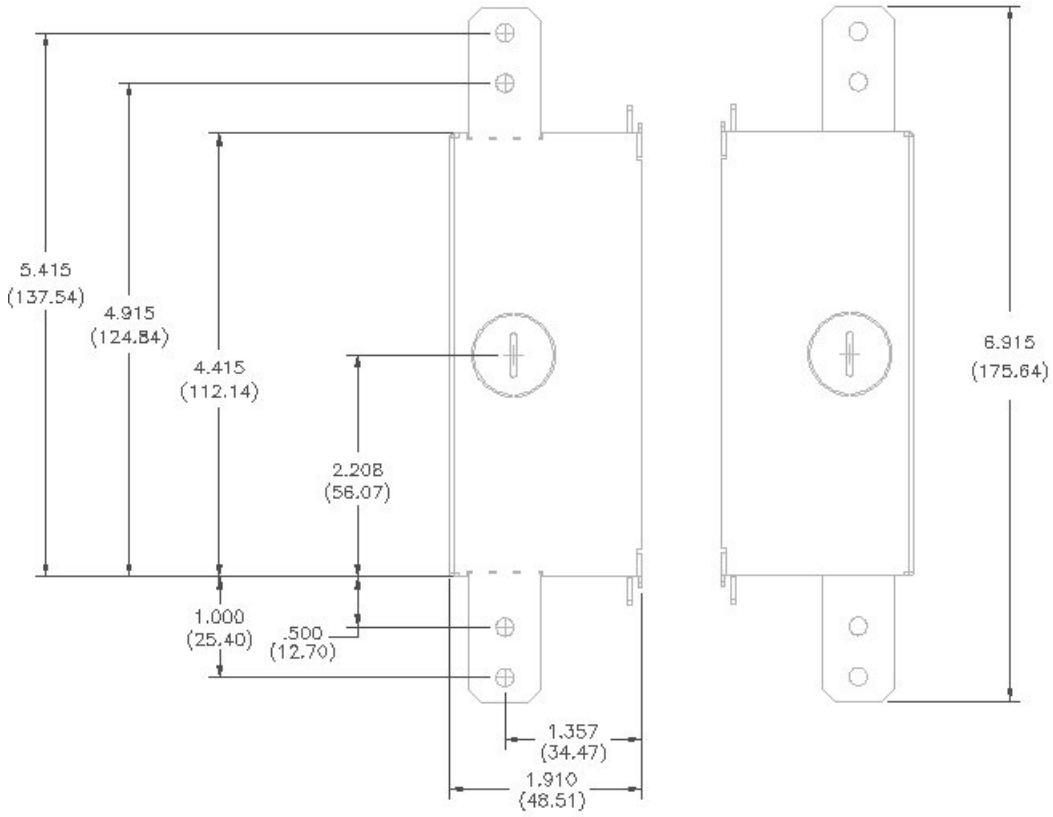


FIG. 14 Mounting Specifications (side views)

Top View

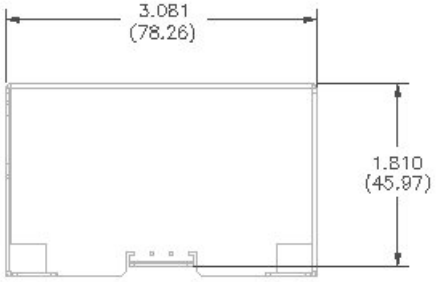


FIG. 15 Mounting Specifications (top view)

Typical Installation (Without Expansion Clips)

FIG. 16 provides specifications for mounting the wall box without the use of expansion clips.

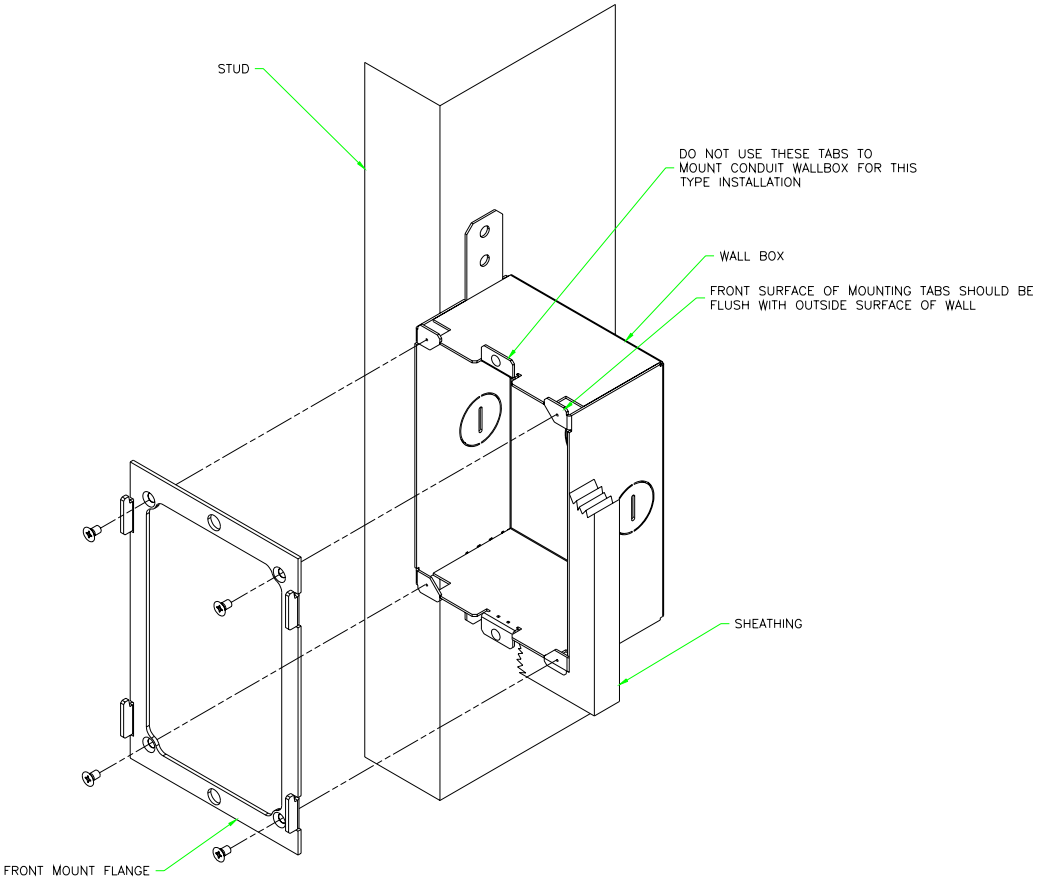


FIG. 16 Typical Installation (Without Expansion Clips)

NOTE

Be sure to install the Cat5 Suppression Ferrite (provided) before mounting the Metreau Entry Communicator unit into the wall box. Refer to the Ferrite Installation (Required) section on page 12 *for details.*

1. Remove the tabs for the expansion clip installation from the wall box by bending back and forth with pliers.
2. Use screws through the rough-in tabs to the stud. The wall box is 1.81" (4.597 cm) deep. The front of the wall box should be flush with the front surface of the sheetrock. While the wall box can be recessed it should never stand proud to the surface.
3. Run the Ethernet cable and an Earth ground wire into the wall box. Only use the keyholes indicated in FIG. 17.
4. Place the lug of the ground wire on the device and the Earth ground wire around the provided screw and connect them both to the point shown in FIG. 17.

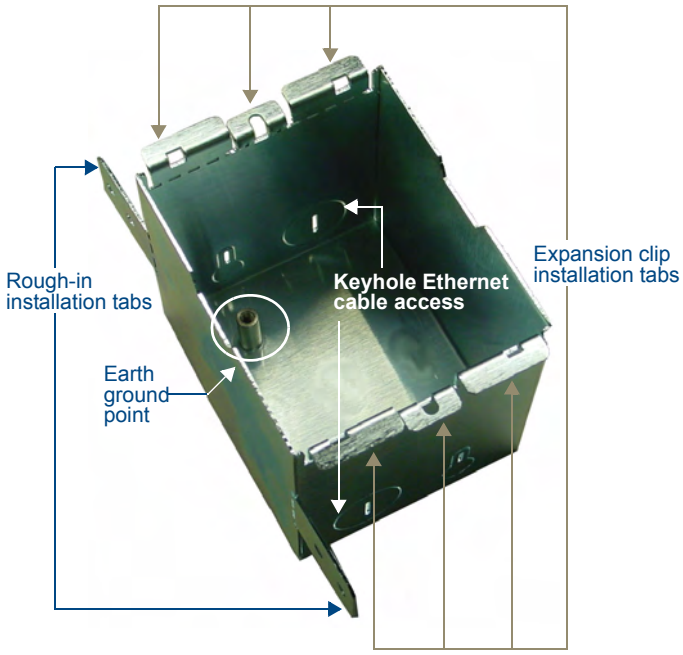


FIG. 17 Metreau Entry Communicators wall box

CAUTION

*The device and wall box **must** have an Earth ground.*

5. Install the (provided) Ferrite clip onto the Ethernet cable (see FIG. 8 on page 12).
6. Connect the Ethernet cable in the back of the Metreau Entry Communicator.
7. Insert the Metreau Entry Communicator into the wall box, and push until the device is flush to the wall.

Installing the Wall Box Without the Use of Tabs

NOTE

Be sure to install the Cat5 Suppression Ferrite (provided) before mounting the Metreau Entry Communicator unit into the wall box. Refer to the Ferrite Installation (Required) section on page 12 *for details.*

A brick and mortar installation environment is a great example where no tabs are required.

1. Remove both the tabs for the rough-in installation and expansion clip installation from the wall box by bending back and forth with pliers (see FIG. 16 on page 18).
2. Thread the Ethernet cable and the Earth ground wire through one of the provided breakaway access points on the wall box.
   - Leave enough slack in the wiring to accommodate any re-positioning of the unit.
   - Only use the keyholes indicated in FIG. 17.
3. Insert the provided cardboard paint shield into the wall box.

NOTE

While conducting this installation, confirm nothing gets into the wall box, i.e., mortar.

4. Place the lug of the ground wire on the device and the Earth ground wire around the provided screw and connect them both to the point shown in FIG. 17.

CAUTION

*The device and wall box **must** have an Earth ground.*

5. Install the (provided) Ferrite clip onto the Ethernet cable (see FIG. 8 on page 12).
6. Connect the Ethernet cable to the back of the Metreau Entry Communicator.
7. Insert the Metreau Entry Communicator into the wall box, and push until the device is flush to the wall.

Wall Surface Installation (Using Expansion Clips)

Expansion clips are mounted through the 2 holes located along the rim of the wall box (see FIG. 18). As the screw is tightened, the clip bends toward the insertion hole and into the wall. This bending creates a "grip" on the wall by either pressing onto the wall or by securing the drywall between the housing and the drywall clip. The most important thing to remember when mounting the wall box is that the outer trim must be installed flush against the mounting surface.

FIG. 18 provides recommended cutout dimensions for the wall box. It is recommended that you cutout the surface slightly smaller than what is outlined in the installation drawings so that you can make any necessary cutout adjustments.

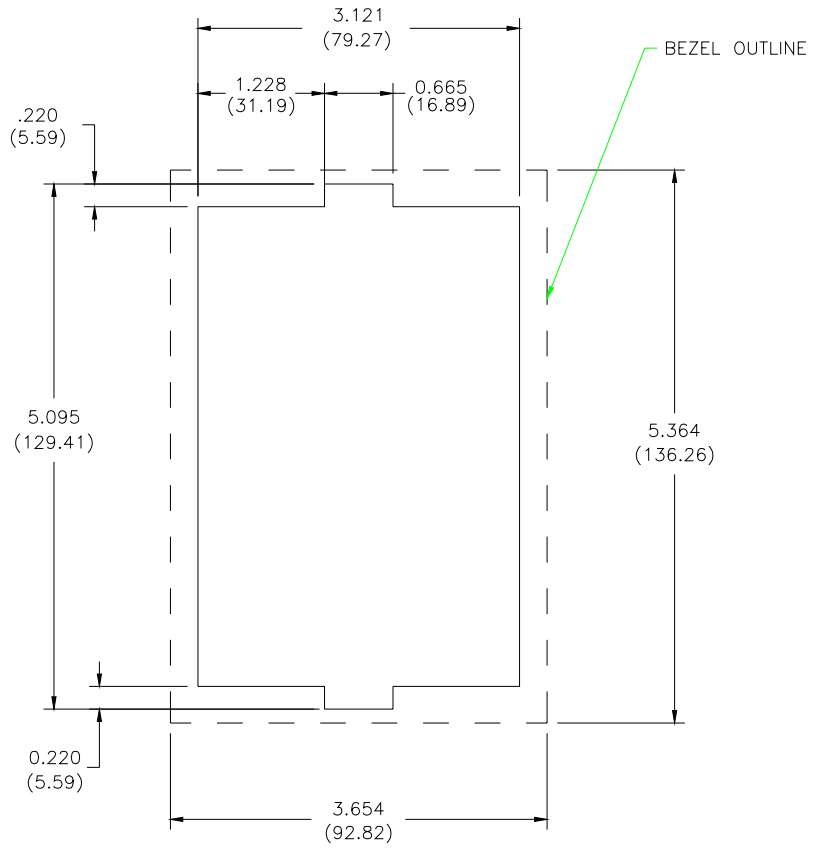


FIG. 18 Recommended Cutout For Wall Box

NOTE

Be sure to install the Cat5 Suppression Ferrite (provided) before mounting the Metreau Entry Communicator unit into the wall box. Refer to the Ferrite Installation (Required) section on page 12 *for details.*

1. If assembled, remove the Metreau Entry Communicator from the wall box.
2. Cut out the surface for the Wall Box using the dimensions shown in FIG. 18.
3. Run the Ethernet cable and an Earth ground wire into the wall box through the provided breakaway access points on the wall box. Leave enough slack in the wiring to accommodate any re-positioning of the unit.

4. Install the 2 drywall screws and expansion clips into the 2 locations along both sides of the wall box.
5. Insert the wall box and expansion clips into the cutout until the rim of the wall box is flush against the wall.

WARNING

Replacement drywall clip sets must be ordered from AMX.

6. Tighten the 2 drywall clip sets (screws and clips) until the wall box is flush against the wall (FIG. 19).

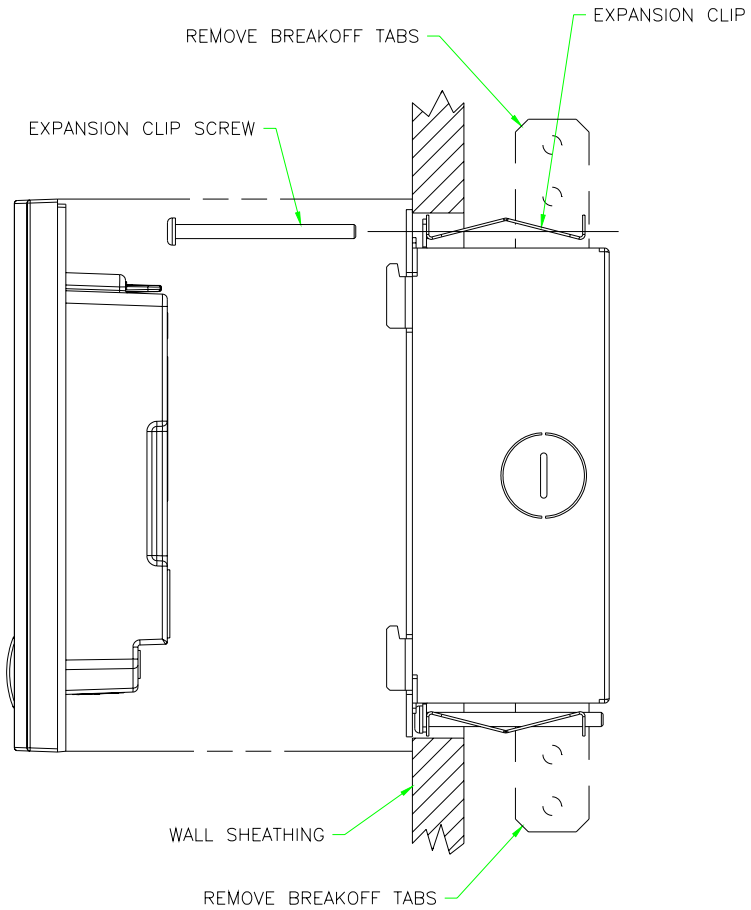


FIG. 19 Wall Surface Installation (Using Expansion Clips)

CAUTION

Do not over-torque the screw; doing so can cause the unit to not function properly

7. Place the lug of the ground wire on the device and the Earth ground wire around the provided screw and connect them both to the point shown in FIG. 17.

NOTE

*The device and wall box **must** have an Earth ground.*

8. Install the (provided) Ferrite clip onto the Ethernet cable (see FIG. 8 on page 12).
9. Connect the Ethernet cable in the back of the Metreau Entry Communicator.
10. Insert and fasten the Metreau Entry Communicator into the wall box.

Installing Into a Flat Surface Using Mounting Screws

Mounting screws (#4 flathead, not included) are secured through two sets of circular holes located at the left and right sides of the wall box. Ensure the wall box is flush against the mounting surface.

It is recommended that you cutout the surface slightly smaller than what is outlined in the installation drawings so that you can make any necessary cutout adjustments.

NOTE

Be sure to install the Cat5 Suppression Ferrite (provided) before mounting the Metreau Entry Communicator unit into the wall box. Refer to the Ferrite Installation (Required) section on page 12 *for details.*

1. If assembled, remove the Metreau Entry Communicator from the wall box.
2. Cut out the surface for the Metreau Entry Communicator wall box using the dimensions shown in FIG. 13.
3. Run the Ethernet cable and an Earth ground wire into the wall box through one of the provided breakaway access points. Leave enough slack in the wiring to accommodate any re-positioning of the unit.
4. Insert the wall box into the cutout until the rim of the wall box is flush against the wall.
5. Insert and secure four #4 flathead mounting screws (not included) into their corresponding holes located along the sides of the wall box until it is flush against the wall. See FIG. 20.

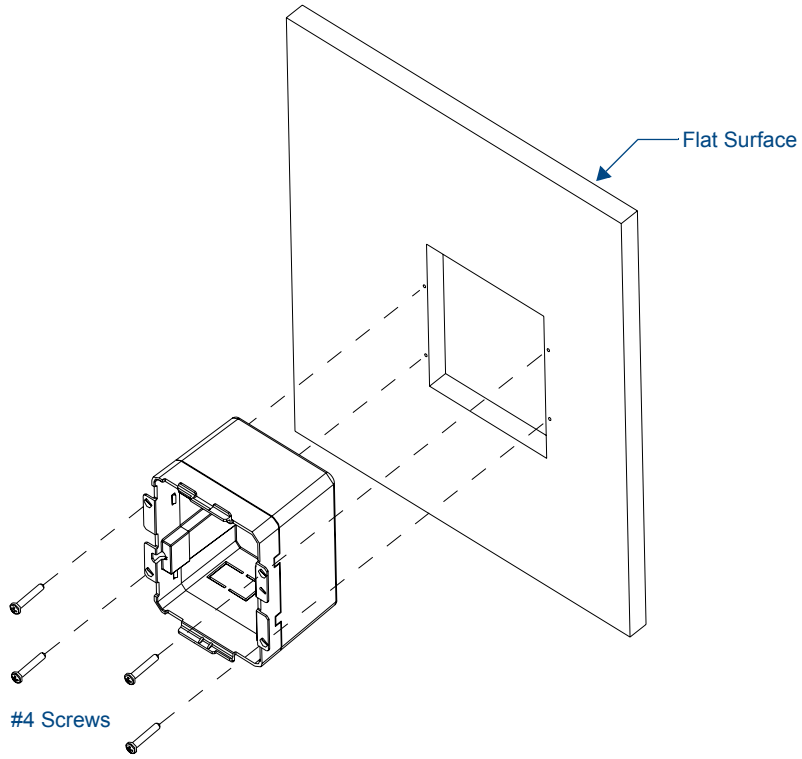


FIG. 20 Flat Surface Installation Points

6. Place the lug of the ground wire on the device and the Earth ground wire around the provided screw and connect them both to the point shown in FIG. 17.

*The device and wall box **must** have an Earth ground.*

7. Install the (provided) Ferrite clip onto the Ethernet cable (see FIG. 8 on page 12).
8. Connect the Ethernet cable in the back of the Metreau Entry Communicator.
9. Insert and fasten the Metreau Entry Communicator into the wall box.

Start at the top of the device and tilt in toward the bottom.

Removing the Device From the Wall

The installation housing for the Metreau Entry Communicators are made to such exacting specifications it will always be a snug fit. Should you ever need to remove the Metreau Entry Communicator from the wall, follow these steps:

1. Place a flathead screwdriver between the tab of the wall box and the notch of the Metreau Entry Communicator and pop the two apart.
2. Pull the bottom of the unit out (pivoting on the top clip) until it seems to bind against the shielding
3. While keeping the unit at this angle, pull the top of the unit away from the top clip.

Using the Optional Surface Mount Box

The CB-MET-ECOMS (-S/-B) Surface Mount Box Kit for Metreau Entry Communicators is available for situations where it is undesirable or impossible to install the conduit box into the mounting surface. It is available in two colors:

- **CB-MET-ECOMS-S** - paintable Silver (FG039-14-S)
- **CB-MET-ECOMS-B** - Black (FG039-14-B)

The Surface Mounting Box (FIG. 1) allows the Metreau Entry Communicators to be surface-mounted, with the back panel of the mounting box flush against the surface and the unit protruding.

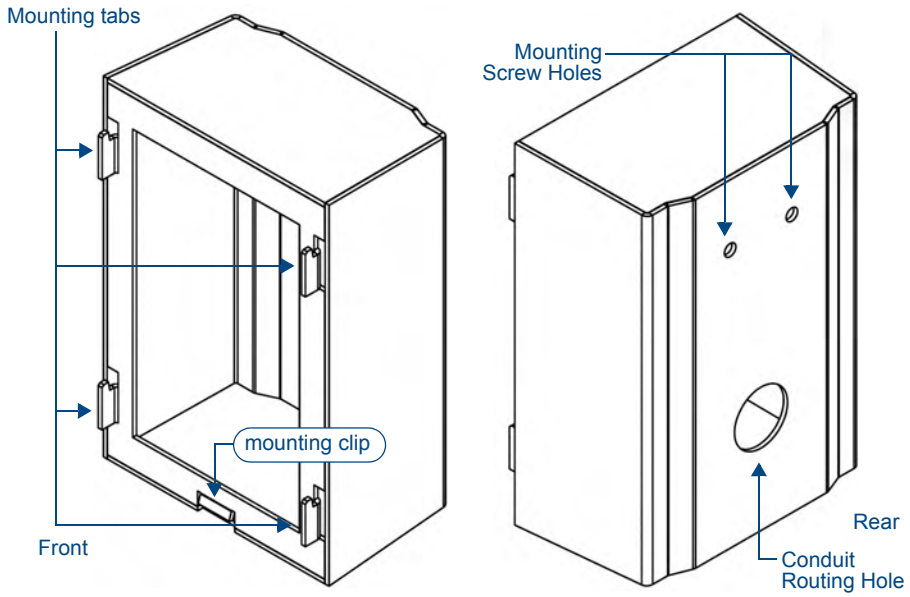


FIG. 21 Surface Mounting Box

Included in the Kit

- CB-MET-ECOMS Surface Mount Box
- 1 Cat5 Suppression Ferrite
- 2 mounting screws

Surface Mount Box Specifications

FIG. 22 provides mounting specifications for the CB-MET-ECOMS:

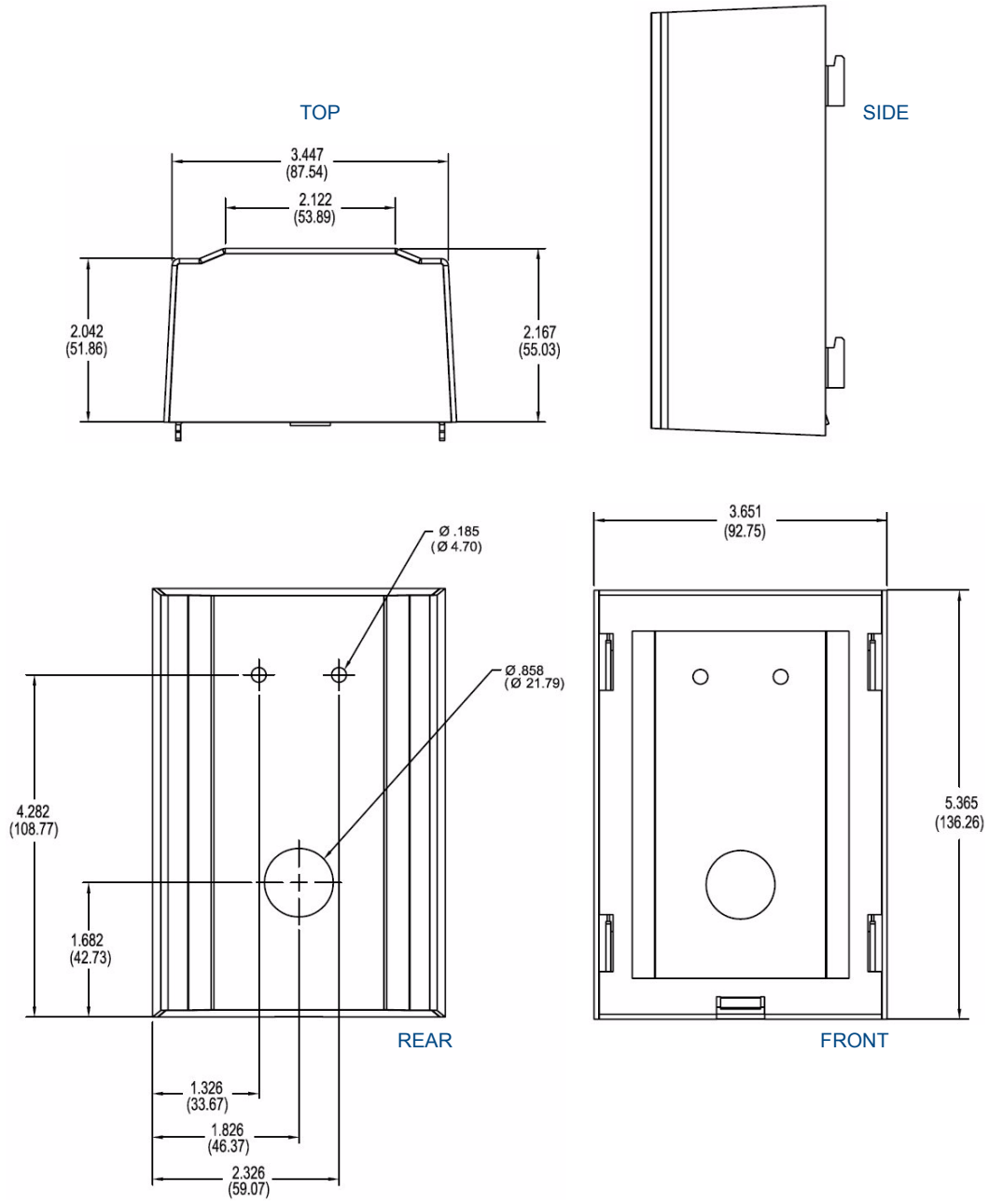


FIG. 22 Surface Mounting Box Specifications - Top and Side Views

Ferrite Installation (Required)

The CB-MET-ECOMS comes with a Cat5 Suppression Ferrite that must be clipped around the Ethernet cable, inside the back box (no tools required).

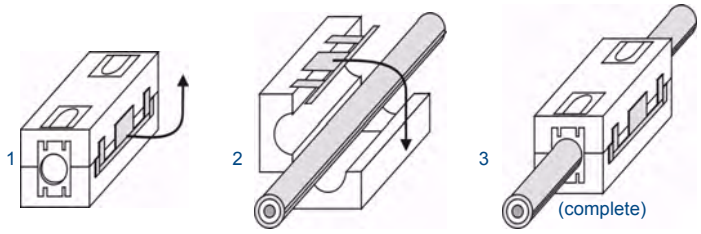


FIG. 23 Installing the CAT5 Suppression Ferrite

1. Release the latch to open the plastic enclosure.
2. Insert the Cat5 cable and close the enclosure.

NOTE

When positioning the Ferrite clip inside the back box, place the bottom of the clip flat against the back inside surface of the back box, to allow sufficient room for the Metreau Entry Communicator unit.

Installing the Metreau Entry Communicator

The Metreau Entry Communicator clips onto the front of the Surface Mount Box via the four mounting tabs (two on each side), and the mounting clip at the bottom center of the box (FIG. 24):

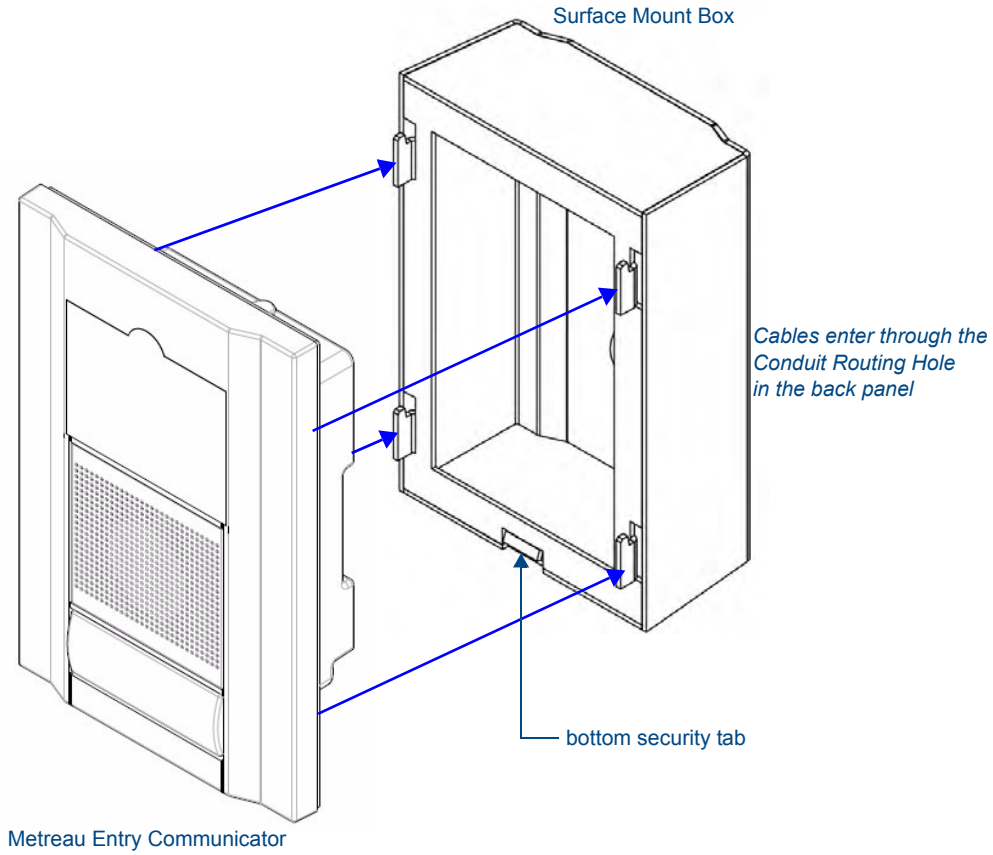


FIG. 24 Installing the Metreau Entry Communicator unit on the Surface Mount Box

1. Run all cables through the Conduit Routing Hole on the rear panel of the Surface Mounting Box. The Conduit Routing Hole is intended to accept conduit of up to 0.500" (1.27 cm) in diameter (see FIG. 22).
2. Secure the incoming conduit to the inside of the Surface Mount box.
3. Connect all cables (Ethernet, I/O & Relay) to the Metreau Entry Communicator.
4. Place the Metreau Entry Communicator on the front of the Surface Mount Box, so that the four slots on the back panel of the Metreau unit align with the four mounting tabs on the box.

   The tabs fit into the slots on the Metreau unit, and allow the Metreau unit to slide downward slightly, to secure the tabs in the slots.
5. Gently slide the Metreau unit down until the tabs are fully seated, and the plastic security tab on the bottom of the Metreau unit clicks into place on the Surface Mount Box.

Using Zero Configuration

Overview

Metreau Entry Communicators with firmware versions of v1.00.018 (MET-ECOM) and v1.00.020 (MET-ECOM-D) or higher support using "zero-configuration" client software to quickly install multiple devices on the network.

Bonjour (Zero-Configuration) Client

You can use a zero-configuration client to determine the IP address of the Metreau Entry Communicators. There are many zero-configuration clients available. However, for the purposes of this document, we will refer to *Bonjour for Windows*. It is free and widely available for download.

If you don't already have it installed on your PC, download and install *Bonjour for Windows* before you begin.

Connecting In a Network With a DHCP Server

By using the MET-ECOM zeroconf feature and the *Bonjour for Windows* plug-in utility, multiple devices can be installed and configured on the network without the need to pre-configure each device before installation.

The dealer only needs to match the serial number printed on the backside of the device or from the label on the box to the serial number that is displayed in the Bonjour browser pane.

1. Launch Internet Explorer with the Bonjour plug-in.
2. Once power is applied to the device, the BonJour plugin displays the devices as shown in FIG. 25:

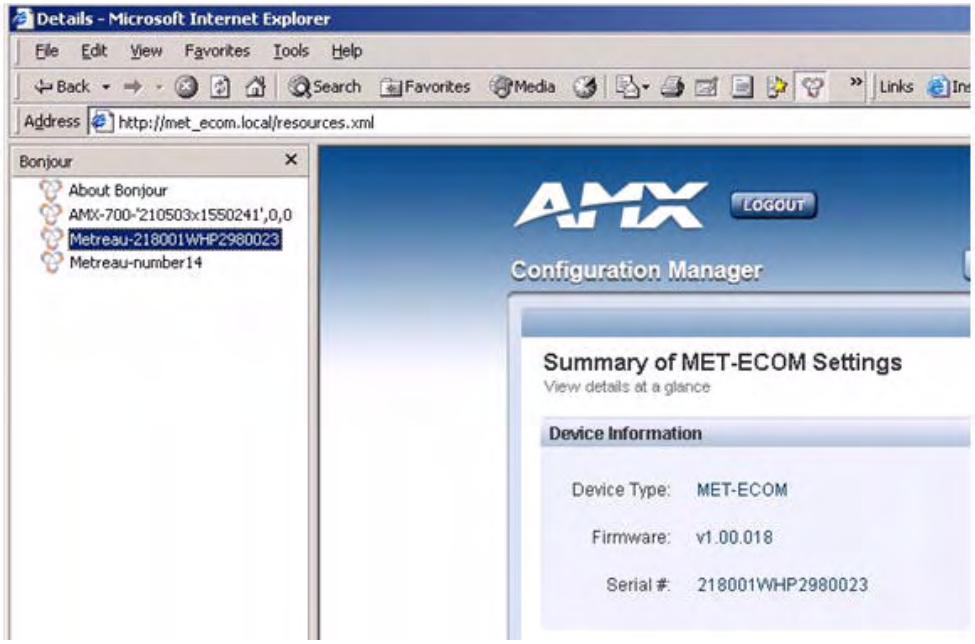


FIG. 25 Internet Explorer with BonJour plug-in

3. Double-click on the desired MET-ECOM (**Metreau-218001XXXnnnnnnn**) to access the configuration pages of the selected device.

   This requires valid login information - the browser will prompt you for User ID and Password before displaying the configuration pages for the selected device.

- Notice that the serial number is appended to the name of the device.
- In this case the serial number is *218001WHP2980023*.

At this point, the device can be configured (changing IP settings, NetLinx settings, User settings, etc) via the pages in the Configuration Manager (see the *Using the Configuration Manager* section on page 33).

Connecting In a Network Without a DHCP Server

By using the MET-ECOM zeroconf feature and the *Bonjour for Windows* plug-in utility, Dealers can install and configure MET-ECOM/D devices one at a time in a network that does not have a DHCP Server. In this case, the MET-ECOM/D devices revert to using a minimal implementation of 'link-local addressing'.

To establish a network connection from a PC to the MET-ECOM device:

1. Direct connect a PC and MET-ECOM device with the AMX PS-POE-AF single-port PoE Injector.

NOTE

Alternatively, connect the PC and MET-ECOM to an Ethernet switch equipped with PoE. Make sure only one MET-ECOM that is still at its factory default settings is connected.

2. Confirm PC assigned itself an IP address:
   a. If the PC's network interface is set to DHCP wait several minutes to ensure the PC reverts to 'link-local addressing'.
   b. You can confirm that the PC has assigned itself an IP by running **ipconfig** from a CMD shell.

   The example in FIG. 26 shows the *Ethernet adapter Local Area Connection:* could not find a DHCP server and assigned itself the IP address of 169.254.83.124 with Subnet Mask 255.255.0.0. This is a valid link-local address.

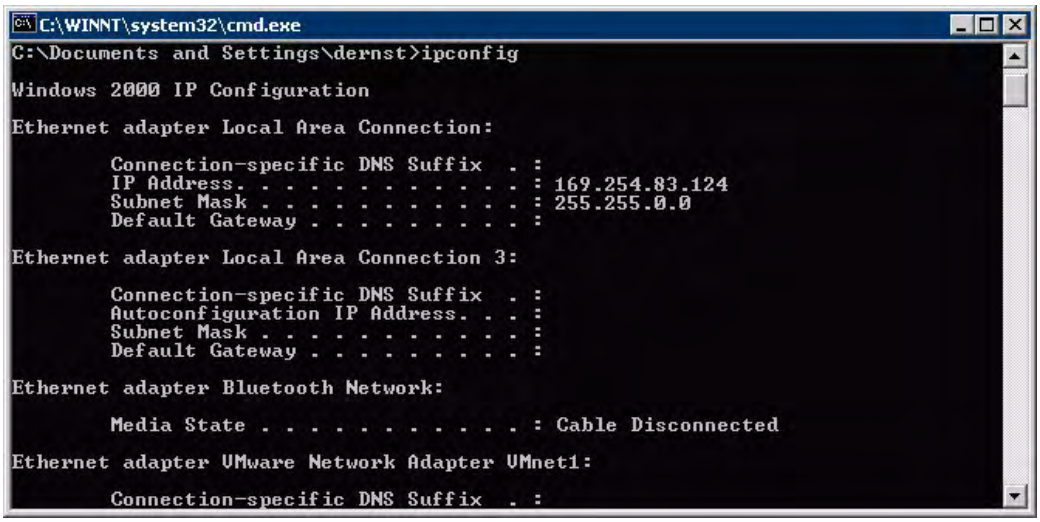


FIG. 26 CMD shell (ipconfig)

If the PC did not assign itself a 169.254.x.x address, or if the PC assigned itself the address of **169.254.2.2** then proceed to Step 3. Otherwise skip to Step 4.

3. Manually assign an IP address, via the *Internet Properties (TCP/IP) Properties dialog* (FIG. 27):

   You may need to manually assign the IP on the PC if the PC does not support link-local addressing or if the PC assigned itself the IP address of **169.254.2.2**.

   This version of the MET-ECOM assigns itself **169.254.2.2** by default when it reverts to link-local addressing. Therefore, in order to avoid conflict the PC ***cannot*** be assigned IP address **169.254.2.2**.

Manually set the PC's IP address to **169.254.1.1** and subnet mask to **255.255.0.0**.

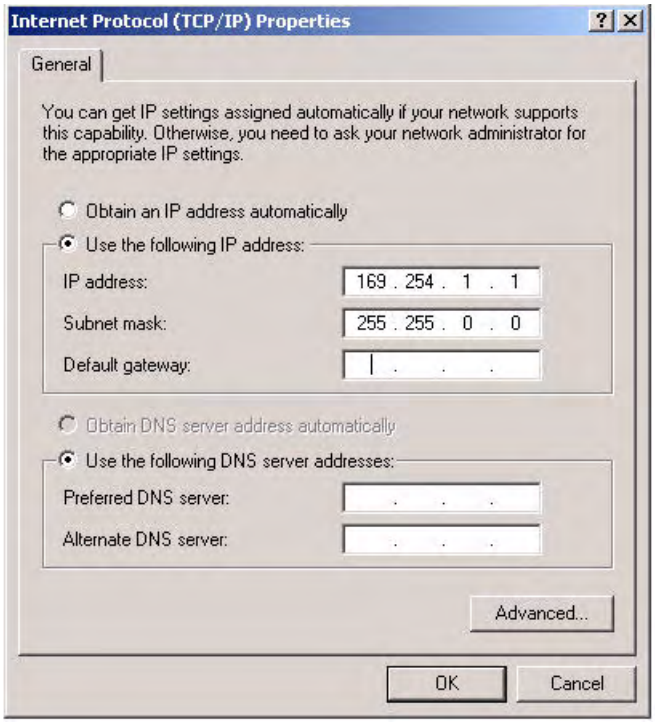


FIG. 27 Internet Properties (TCP/IP) Properties dialog

4. Launch Internet Explorer and select the Bonjour Plug-in.
5. Double-click the MET-ECOM (*Metreau-218001XXXnnnnnnn*) in the Bonjour Plug-in pane and login and configure the device as needed (see *Using the Configuration Manager* section on page 33).

Using the Configuration Manager

Overview

Metreau Entry Communicators have a built-in web console (FIG. 28) that allows you to easily make various configuration settings via a web browser on any PC that has access to the device. The web console consists of a series of web pages that separate device configuration options by category.

Collectively, the pages in the web console are referred to as the *Configuration Manager*. Each page of the Configuration Manager is described in the following sub-sections.

FIG. 28 Configuration Manager - Summary of Settings Page (initial view)

Command Buttons

The Configuration Manager is divided into four primary sections, indicated by four command buttons across the top of the main page (FIG. 29):

FIG. 29 Configuration Manager Command Buttons

- **Summary:** The Summary of Device page is the page that is displayed when the Configuration Manager is accessed. Use the this page to view a summary of settings for this Metreau Entry Communicator (see the *Summary of <Device> Settings Page* section on page 35).
- **Configuration:** Click to access the *IP Settings*, *NetLinx Settings* and *User Settings* options (see the *Configuration Page* section on page 37).
- **Utilities:** Click to access the *Utilities* page. Use the options on this page to upload, change, and display images on the Metreau Entry Communicator (see the *Device Utilities Page* section on page 41).
- **Audio Video:** Click to access the *Audio/Video page*. Use the options on this page to configure Audio, Video and Display settings (see the *Audio/Video Page* section on page 47).

Accessing the Configuration Manager

From any PC that has access to the LAN that the Metreau Entry Communicator resides on:

1. Open a web browser and type the **IP Address** of the target Master in the browser's Address Bar.
2. Press **Enter** to access the Configuration Manager for the specified device.
3. If prompted for a **User Name** and **Password** (FIG. 30), enter the defaults:

FIG. 30 Authentication Required dialog

- Default User Name = **Admin**
- Default Password = **1988**

4. The initial view is the *Summary* page (FIG. 28).

Summary of <Device> Settings Page

The *Summary of Device Settings* page (FIG. 31) is the initial view when the Configuration Manager is accessed.

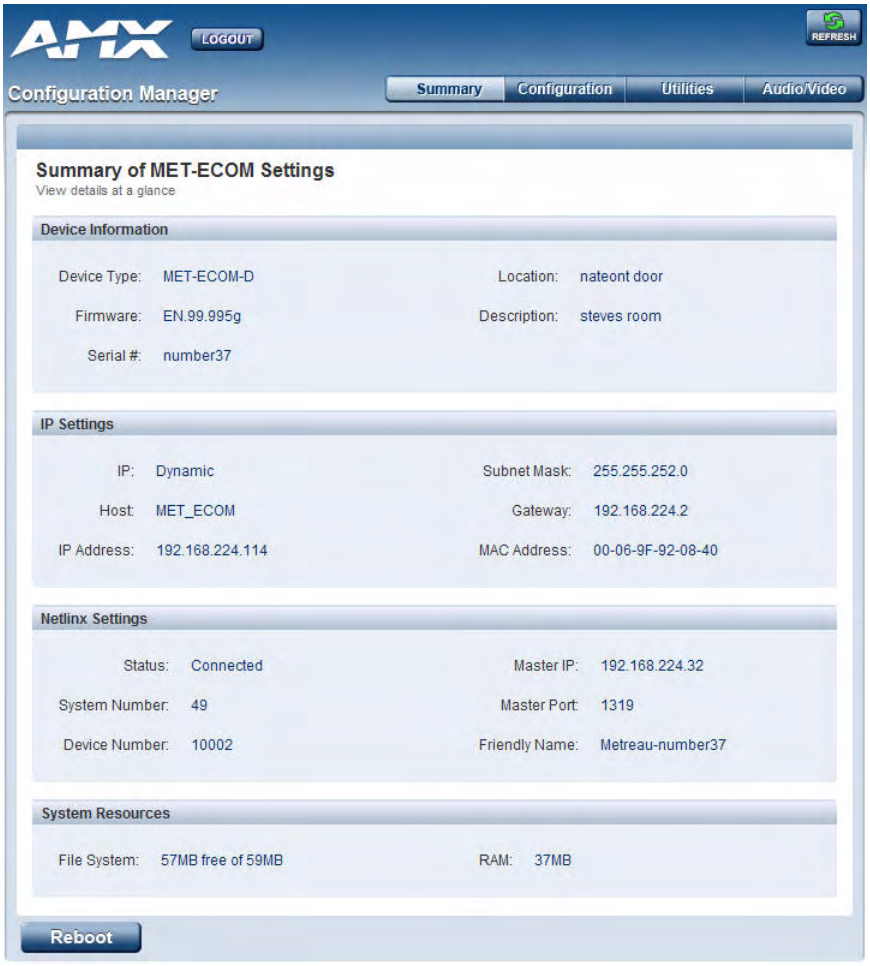


FIG. 31 Summary of Device Settings Page

Naturally, this page can be accessed at any time via the **Summary** command button at the top of the web console.

Summary of Device Settings Page	
Device Information	
Device Type	The name of the connected device.
Firmware	The version of the firmware running on the device.
Serial #	The serial number of the device.
Location	The physical location of this device (as entered on the Device Utilities Page (Utility Meta Information). See the *Device Utilities Page* section on page 41.
Description	A comment further describing this device (as entered on the Device Utilities Page (Utility Meta Information). See the *Device Utilities Page* section on page 41.

Summary of Device Settings Page (Cont.)	
IP Settings	
IP	The IP setting of the unit; either *Static* or *Dynamic*.
Host	The hostname of the unit.
IP Address	The IP address of the unit.
Subnet Mask	The subnet mask associated with IP addressing
Gateway	The IP gateway used by this unit.
MAC Address	The MAC address of the unit.
NetLinx Settings	
Status	The connection status of the device.
System Number	The NetLinx system number.
Device Number	The ICSP device number of this unit.
Master IP	The IP address of the NetLinx master connected to the device.
Master Port	Port number for the NetLinx master connected to the device.
Friendly Name	The friendly name of the device as it appears in the NetLinx master connection tree.
System Resources	
File System	Amount of memory available to the file system.
RAM	Available RAM on the device.

Checking the Firmware Version

The firmware version is listed on the *Summary of Device Settings* page, in the **Device Information** section at the top of the page.

Determining the IP settings of the Metreau Entry Communicator

1. Browse to the *Summary of Device Settings* page.
2. The IP settings are listed in the **IP Settings** section.

Rebooting the Device

1. Open the *Summary of Device Settings* page.
2. Click the **Reboot** button on the left bottom of the page.

It is necessary to reboot the device in order to apply changes to several communication options, including Setting the IP and DNS Addresses, and setting the ICSP connection and encryption status for the NetLinx Master (see page 39).

Configuration Page

Click the **Configuration** command button to access the *Configuration* page (FIG. 32). This page contains three tabs:

- **IP Settings** (*initial view*): Use the options in this tab to specify Network IP settings (see below).
- **NetLinx Settings**: Use the options in this tab specify the ICSP connection to the NetLinx master (see the *Configuration Page - NetLinx Settings Tab* section on page 39).
- **User Settings**: Use the options in this tab to set the Username and Password for access to the Metreau Entry Communicators web server pages (see the *Configuration Page - User Settings Tab* section on page 40).

Configuration Page - Network IP Settings Tab

Select the **IP Settings** tab of the *Configuration* page to access the *Network IP Settings* tab (FIG. 32). Use the options in this tab to set IP and DNS addresses for the Metreau Entry Communicator.

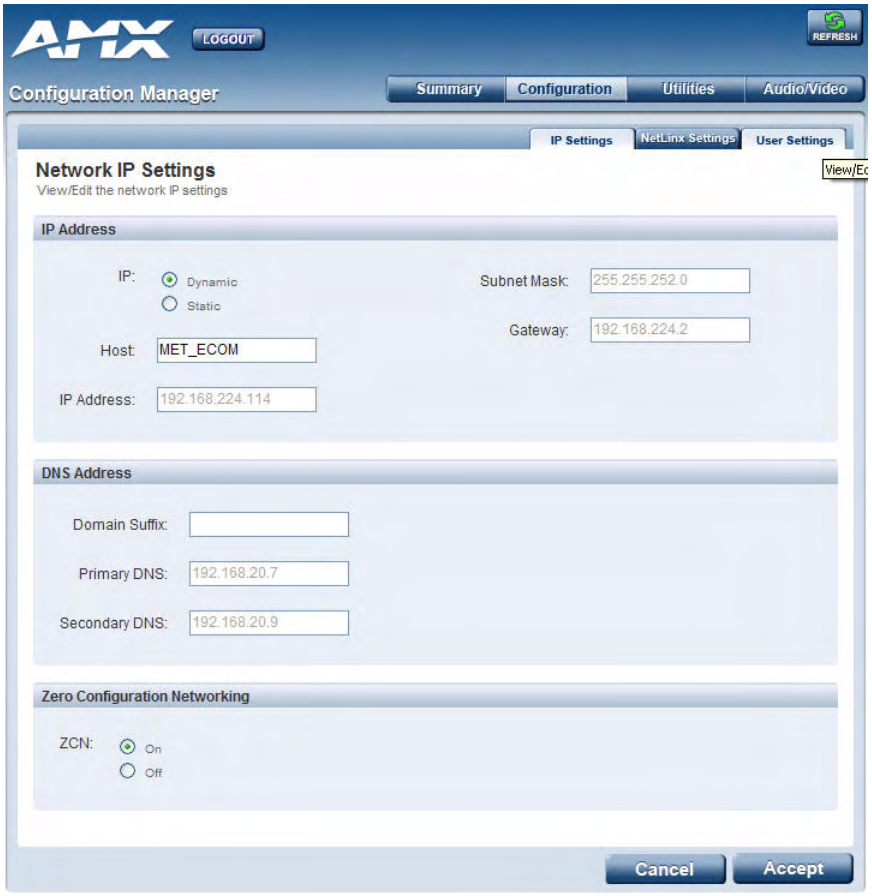


FIG. 32 Configuration Page - Network IP Settings tab

The IP address can be either a static or dynamic assignment.

Configuration Page - Network IP Settings Tab	
IP Address	
IP	• Dynamic: IP address and subnet mask are requested from the DHCP server. • Static: User provides IP address information.
Host	The hostname of the unit.
IP Address	The IP address of the unit.
Subnet Mask	The IP subnet mask of the unit.
Gateway	The gateway used for IP routing.
DNS Address	
Domain Suffix	The domain name.
Primary DNS Secondary DNS	Domain Name System IP numbers associated to the domain suffix.
Zero Configuration Networking	
ZCN On/Off	These radio buttons toggle Zero Configuration Networking on this device (default = On). ***Note**: It is recommended that ZCN remain "On", to allow this device to appear online when using zero-configuration networking tools. These tools enable automatic discovery of computers, devices, and services on IP networks.* • In order for Zero Configuration Networking to work, the Metreau Entry Communicator must be on the same subnet as the PC or laptop running the zero-configuration networking tool used to identify the unit. • In the zero-configuration networking tool, the Host Name used to identify the Metreau Entry Communicator must be appended with ".local" suffix (i.e. "MET_ECOM.local").

Setting the IP Address

1. In the Configuration page, select the **IP Settings** tab.
2. Click the radio button for either **Dynamic** or **Static**.
   - If you selected *Dynamic,* the DHCP server automatically provides the IP address.
   - If configured for *Static*, type the IP address in the field provided.
   - If necessary, type the *Subnet Mask* and *Gateway* in the fields provided.
3. Click **Accept**.
4. In the *The system will need to reboot for changes to take effect* window, click **OK**.

Setting the DNS Address

1. In the Configuration page, select the **IP Settings** tab.
2. Click the **Static** radio button in the *IP Address* section.
3. Type the *Domain Suffix* in the field provided.
4. Type the necessary *DNS IP* numbers in the fields.
5. Click **Accept**.
6. In the *The system will need to reboot for changes to take effect* window, click **OK**.

Configuration Page - NetLinx Settings Tab

Select the **NetLinx Settings** tab of the Configuration page to access the *NetLinx Settings* tab (FIG. 33). Use the options in this tab to view and edit the ICSP connection to the NetLinx master.

FIG. 33 Configuration Page - NetLinx Settings tab

Configuration Page - NetLinx Settings Tab	
Connection	Displays the ICSP connection status (*Not Connected* / *Connected*).
Mode	Master connection mode: • **URL(TCP)** - The device connects to the specific IP/URL of a master via a TCP connection. • **Auto** - The device connects to the first master that responds. This setting requires you set the System Number. • **Listen** - The device "listens" for the master to initiate contact. This setting requires you provide the master with the device's IP.
System Number	The ICSP system number.
Device Number	The ICSP device number.
Master IP/URL	IP or URL of master for URL master connection mode
Master Port Number	The ICSP socket port number.
Username	The ICSP network username (required if the NetLinx master is encrypted).
Password	The ICSP network password (required if the NetLinx master is encrypted).
Friendly Name	The friendly name of the device as it appears in the NetLinx master connection tree.

Setting the ICSP Connection to the NetLinx Master

1. In the Configuration page, select the **NetLinx Settings** tab.
2. Enter the system number assigned to the ICSP system.
3. Enter the device number to be assigned to the Metreau Entry Communicator in the *Device Number* field.
4. Enter the IP address of the master that the Metreau Entry Communicator is to connect with in the *Master IP/URL* field.

NOTE

Setting the Host Name requires DNS implementation on the IP network.

5. If you have enabled password security on your master, you need to set the username and password within the fields provided.
6. Click **Accept**.
7. In the *The system will need to reboot for changes to take effect* window, click **OK**.

Configuration Page - User Settings Tab

The options in the **User Settings** tab of the *Configuration* page are used to set the Username and Password that allow access to the Configuration Manager pages.

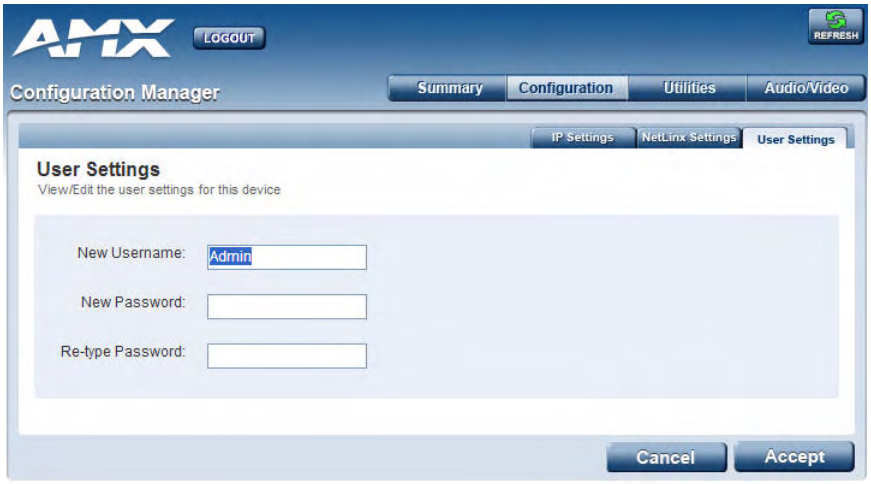


FIG. 34 Configuration Page - User Settings page

Configuration Page - User Settings Tab	
New Username	Text field for new username.
New Password	Text field for new password.
Re-type Password	Text field to confirm new password.

Setting a New Username and Password

1. In the Configuration page, select the **User Settings** tab.
2. In the text field next to *New Username*, type the new name.
3. In the text field next to *New Password*, type the new password.
4. Confirm the password in the *Re-type Password* field.
5. Click **Accept**.

NOTE

*The default username and password are "**Admin**" and "**1988**", respectively; changing the password as soon as possible is highly recommended.*

Device Utilities Page

Click the **Utilities** command button to access the *Device Utilities* page (FIG. 35). The options on this page allow you to upload, change, and display images on the MET-ECOM-D.

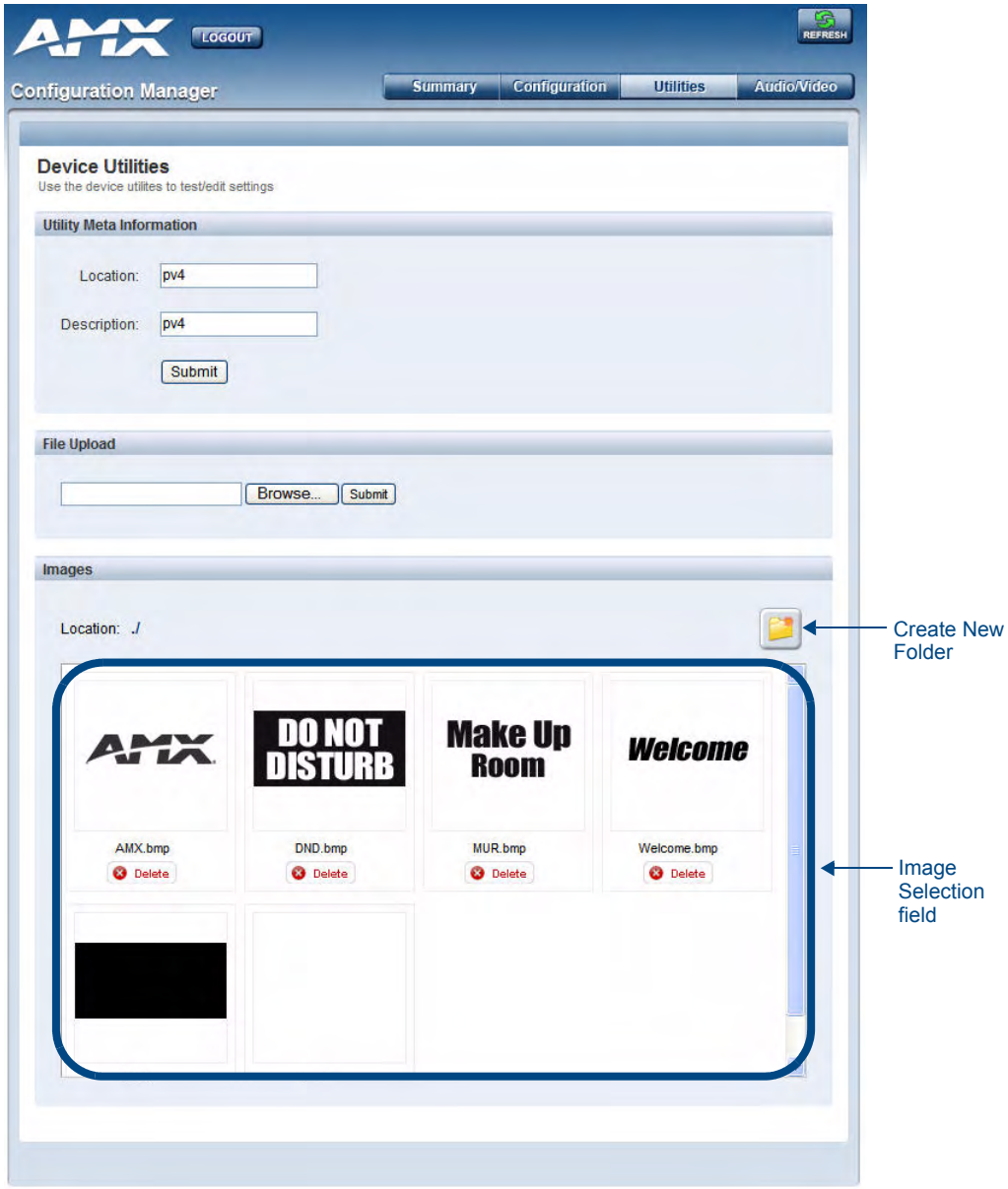


FIG. 35 Device Utilities Page

Device Utilities Page	
Utility Meta Information	
Location	Enter a descriptive text string that indicates the physical location of this device.
Description	Enter a text string to provide any additional comments on this device as desired.
Submit	Click to submit the *Location* and *Description* entries.

Device Utilities Page (Cont.)	
File Upload	
Browse	Opens the file browse window, where you can locate and select Display Images.
Submit	Submits the selected file image for upload.
Images	
Location	The file directory location of the selected image.
New Folder	Creates a new folder directory.
Image Selection Field	Field of available images for display on the device; click to select.

Image File Requirements

In order for images to be displayed on the MET-ECOM-D, the following image file requirements apply:

- BMP image type
- 1-bit (monochrome)
- 128 x 64 pixels

Creating Display Images

Use any graphics application that is capable of saving image files under various formats and allows you to re-size the image and reduce the number of colors available (for example, MicroSoft Paint).

NOTE

MicroSoft "Paint" (formerly Paintbrush for Windows, also known as "MS Paint") is a simple graphics painting program that has been included with almost all versions of Microsoft Windows since its first release. Paint has the basic functions required to transform most image files to monochrome bitmap images. However, use a more robust graphics editing program if possible, to make it easier to achieve a better final result

Images to be displayed on the MET-ECOM-D must be monochrome bitmap image files, with a final image size of 128 pixels wide by 64 pixels high.

The following steps illustrate an example of using a typical image editing program to create a fully-compatible monochrome bitmap image for use with the MET-ECOM-D, using a standard JPG image file as a starting point:

1. Open the image file that you want to use with the MET-ECOM-D (FIG. 36).

FIG. 36 Color image (JPG)

2. Save the file as a ".BMP" image (FIG. 37).

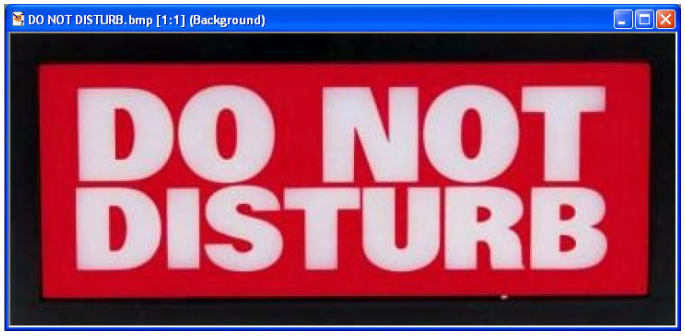


FIG. 37 Same image - saved as a BMP file

3. Reduce the BMP image to 128 x 64 pixels.

   At this point there are options - you can either crop or reduce the original image to size. In many cases, a combination of cropping and resizing may be best, depending on the size and nature of the image. In this example, we will simply resize the image to 128 pixels wide by 64 pixels high (FIG. 38).

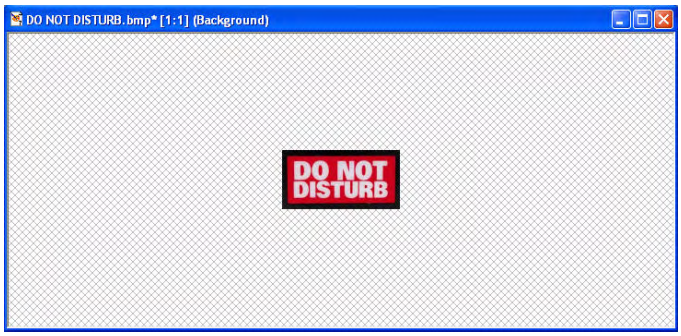


FIG. 38 BMP file - resized to 128 x 64 pixels

4. Reduce the color count to 2 Colors, 1-bit (monochrome), as shown in FIG. 39:

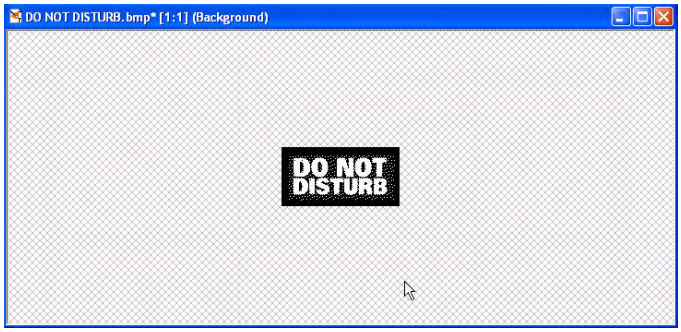


FIG. 39 BMP file (128 x 64 pixels) reduced to 1-bit color

These are the basic steps involved. However, there are nuances involved in selecting images that will translate effectively to the required size using only 1-bit color. For best results, avoid complex images that rely on substantial color gradations as they will tend to be much less readable once they are converted and resized.

- Generally, the closer you can get the source image to the required size before reducing to 128x64, the better the resized image will look.

- Check your graphics editing program for options relative to the reduction method applied to the image when reducing the colors to 1-bit. In many cases you can select from several techniques (such as error diffusion, ordered dither and/or nearest color). Depending on the nature of the image you are working with, some reduction methods will yield much better results than others.

  Refer to your graphics editing program documentation for details, or better yet, experiment with the options you have to find the one that works best for each image.

Creating Dynamic Images

Use the Resource Manager feature of the TPDesign4 application to create dynamic images for use with the MET-ECOM-D. If you do not already have TPD4 installed, download and install the latest version from **www.amx.com**.

TPDesign4 - Resource Manager

The *Dynamic Images* tab of TPD4's Resource Manager dialog (FIG. 40) allows you to manage images that exist on an HTTP server or FTP server, external to the panel.

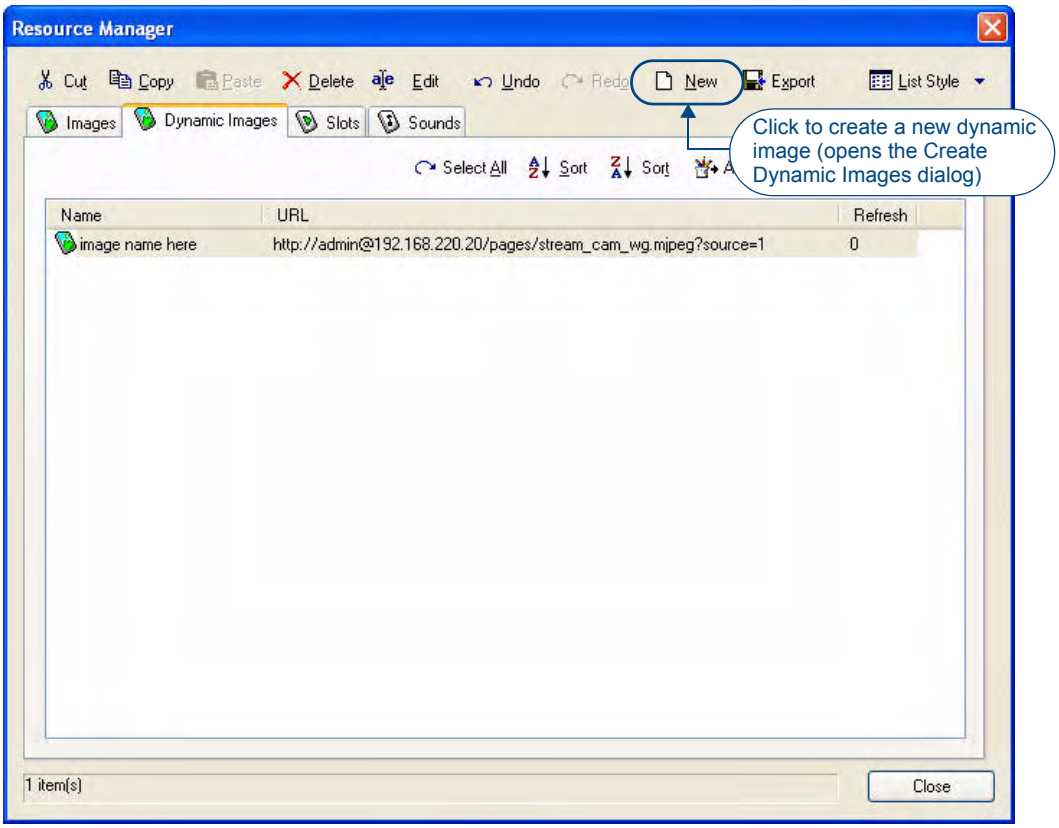


FIG. 40 TPD4 - Resource Manager (Dynamic Images tab)

Dynamic images can be refreshed at specified regular intervals or via the **Panel > Refresh Dynamic Images** option.

Use this tab as a "library" of every dynamic image file that will be used in your project (for pages, popup pages, buttons and icons). It is important to import all of your dynamic images to this tab first, before they are applied in the project, so that you can maintain an organized profile of all images in the project, regardless of their context (i.e. button state, page background, etc.)

Creating a New Dynamic Image

1. In TPDesign4, select **Panel > Resource Manager** to access the *Resource Manager* dialog, and open the **Dynamic Images** tab (FIG. 40).
2. Click the **New** button at the top of the dialog (see FIG. 40) to invoke the *Create Dynamic Image* dialog (FIG. 41). The options in this dialog allow you to name and define dynamic image resources to add to your Project.

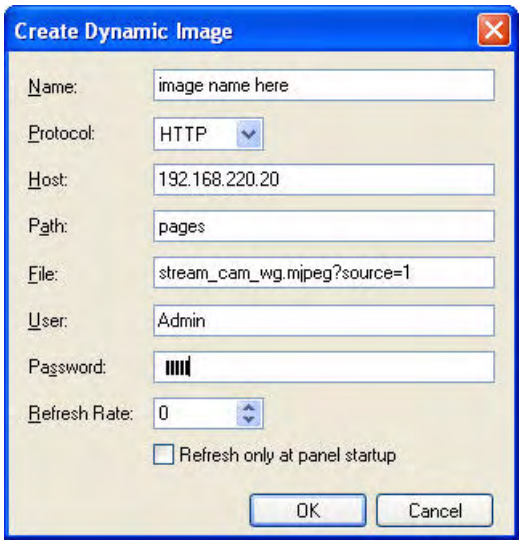


FIG. 41 Create Dynamic Image dialog

3. Fill in the fields as described below:

Create Dynamic Image dialog	
• **Name:**	Enter a name for the dynamic image resource.
• **Protocol:**	Select the desired protocol (HTTP / FTP). • For Metreau Entry Communicators, *Protocol* must be set to **HTTP**.
• **Host:**	Enter the host name, which must be a fully qualified DNS or IP address.
• **Path:**	The *Path* must be a valid HTTP URL minus the protocol and host. The only exception to this is the inclusion of special escape sequences and in the case of the FTP protocol, regular expressions. • For Metreau Entry Communicators, *Path* must be set to **pages** (as shown in FIG. 41).
• **File:**	Enter a file name that must be the full path to the location of the file or program that will return the resource. • For Metreau Entry Communicators, *File* must be set to: **stream_cam_wg.mjpeg?source=1** (as shown in FIG. 41).
• **User:**	Enter the user name for authentication. • If the User name is changed on the Metreau Entry Communicator (via the Configuration Manager, the User name must be updated here to match it, in order for this dynamic image to be accessed. • Default = **Admin**
• **Password:**	Enter the password for authentication. • If the Password is changed on the Metreau Entry Communicator (via the Configuration Manager), the Password must be updated here to match it, in order for this dynamic image to be accessed. • Default = **1988**

Create Dynamic Image dialog (Cont.)	
• **Refresh Rate:**	Use the up/down arrows to adjust the number of seconds between refreshes in which the resource is downloaded again. Refreshing resources will cause the button displaying that resource to refresh as well. The default value is zero (0), which means that the resource is only downloaded once.
• **Refresh only at Panel Startup:**	This option is only available if the Refresh Rate is set to 0, and causes the dynamic image to refresh only upon restart of the panel, as opposed to upon each visit to the page (as is the default).

4. Click **OK**.

When images of any (supported) file type except PNG are imported into a project, the files are automatically converted to JPGs. For this reason, if you import (or paste) a file that has the same name as a previously imported file (even if it has a different extension), TPDesign4 automatically adds the "copy of" prefix to the file. PNGs are not converted because they are already sufficiently compressed.

Uploading a Display Image To The Device

1. Under *File Upload*, click the **Browse** button.
2. Navigate to your image file and select.
3. Click **Submit**.

Deleting a Display Image From the Device

1. Select the image that you want to delete from the device.
2. Click on the **Delete** icon.
3. The system prompts you to verify this action (press **OK** to proceed).

Audio/Video Page

Audio/Video Page - Audio Settings Tab

Click on the **Audio** tab of the Audio/Video Page to access the *Audio Settings* tab (FIG. 42). Use the options in this tab to view/edit audio-specific settings.

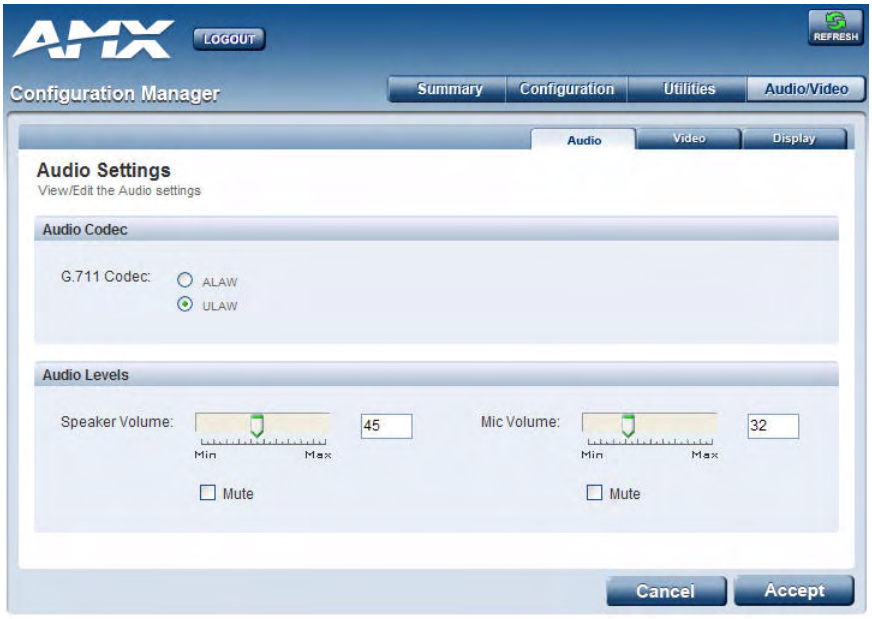


FIG. 42 Audio/Video Page - Audio Settings tab

Audio/Video Page - Audio Settings Tab	
Audio Codec	
G.711 Codec	An ITU-T standard for audio companding. • ALAW - A standard companding algorithm used in European digital communications systems to optimize the dynamic range of an analog signal for digitizing. • ULAW - A companding algorithm primarily used in the digital telecommunication systems of North America and Japan. ***Note**: Do not change the Audio Codec setting during a call.*
Audio Levels	
Speaker Volume	The volume level for the speaker on the device. (1 - 100) • **Mute** - mutes the volume on the speaker.
Mic Volume	The volume level for the mic on the device. (1 - 100) • **Mute** - mutes the mic.

Setting Device Audio

1. In the Audio/Video page, select the **Audio** tab.
2. Click the radio button to select the *Audio Codec* type.
3. Use the sliders to set the *Speaker* and *Mic* volume levels. Place a check in each box to mute these options.
4. Click **Accept**.

Audio/Video Page - Video Settings Tab

Click the **Video** tab in the Audio/Video Page to access the *Video Settings* page (FIG. 43). Use the options in this tab to view/edit video-specific settings.

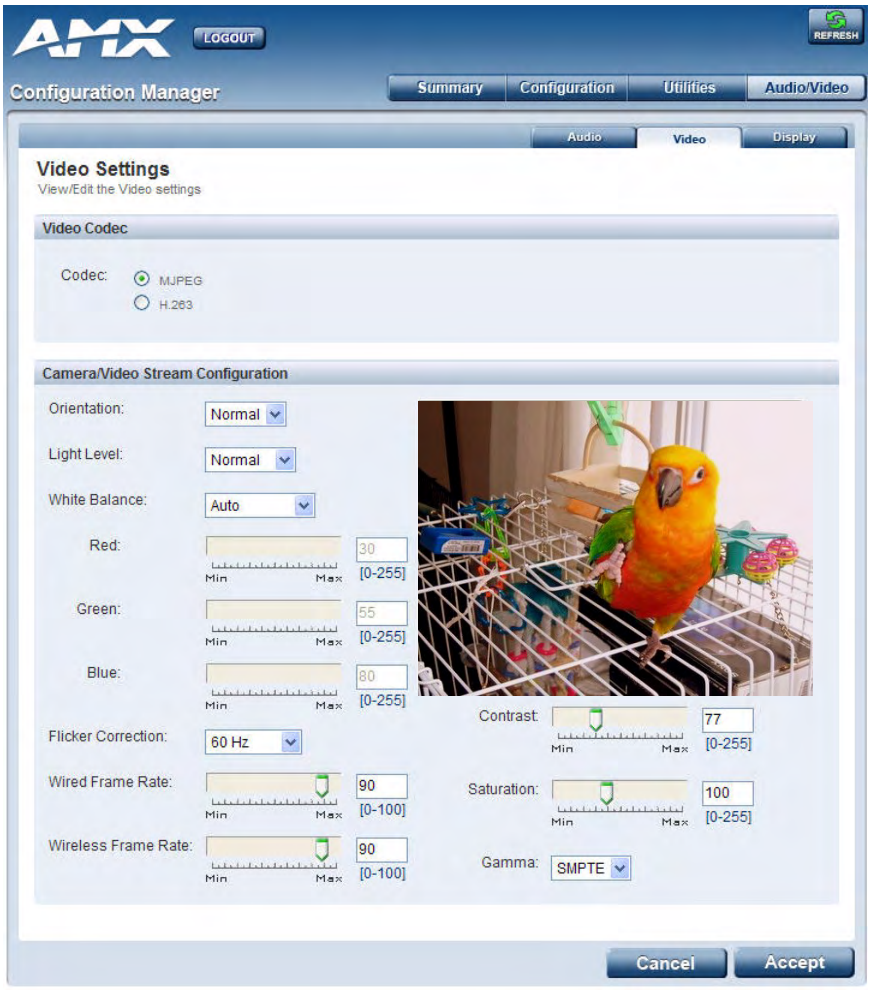


FIG. 43 Audio/Video Page - Video Settings tab

Audio/Video Page - Video Settings Tab	
Video Codec	
Codec	• **MJPEG** - Motion JPEG codec. • **H.263** - A low-bitrate compressed format standard codec. ***Note**: Do not change the Video Codec setting during a call.*
Camera/Video Stream Configuration	
Orientation	• **Normal** - Sets the video stream to normal view. • **Mirror** - Sets the video stream to a mirrored view. • **Flip** - Flips the video stream to view.
Light Level	• **Normal** - Setting for a normal light level environment; no changes. • **Low Light** - Setting for a lower light level environment; brightens the image.
White Balance	• **Auto** - The device sets the white balance automatically. • **Manual** - Enables the RGB settings for manual use.

Audio/Video Page - Video Settings Tab (Cont.)	
Red	0 - 255 scale for the Red balance.
Green	0 - 255 scale for the Green balance.
Blue	0 - 255 scale for the Blue balance.
Flicker Correction	• **Anti-flicker Mode** - The device automatically compensates for flicker. • **50 Hz** - Sets the flicker refresh to 50 Hz. • **60 Hz** - Sets the flicker refresh to 60 Hz.
Wired Frame Rate	0 - 100 rate of frame display on the device, in hard-wired installations.
Wireless Frame Rate	0 - 100 rate of frame display on the device, in wireless installations.
Contrast	0 - 100 scale for contrast display from device.
Saturation	0 - 100 scale for saturation display from device.
Gamma	0 - 100 scale for gamma display from device.

Setting Device Video

1. In the Audio/Video page, select the **Video** tab.
2. Click the radio button to select the *Video Port* type.
3. Click the radio button to select the video *Codec* type.
4. Select the video *Orientation* setting from the drop-down menu.
5. Select the video *Light Level* setting from the drop-down menu.
6. Select the video *White Balance* setting from the drop-down menu.
7. If necessary, use the sliders to change the *Red/Green/Blue* levels.
8. Select the *Flicker Correction* speed setting from the drop-down menu.
9. Use the sliders to change the *Frame Rate* speed.
10. If necessary, use the sliders to change the *Contrast/Saturation/Gamma* levels.
11. Click **Accept**.

Audio/Video Page - Display Settings Tab

Click the **Display** tab in the Audio/Video Page to access the *Display Settings* tab (FIG. 44). Use the options in this tab to view/edit display specific settings.

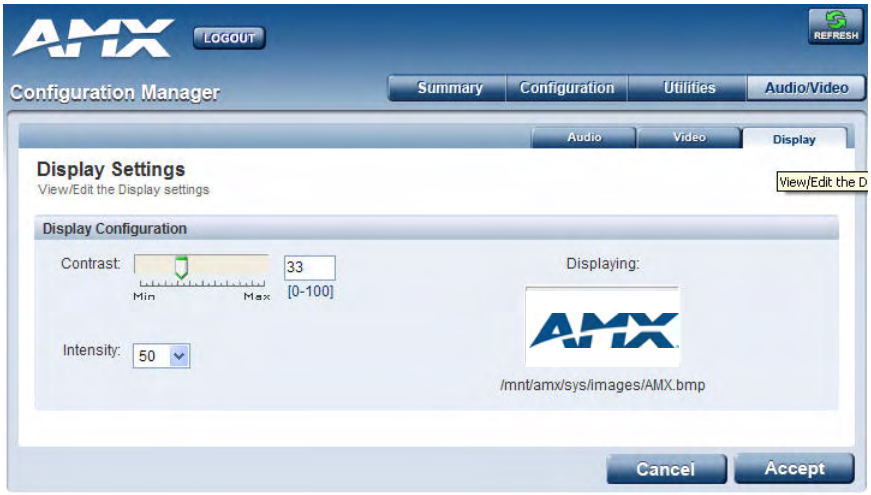


FIG. 44 Audio/Video Page - Display Settings tab

Audio/Video Page - Display Settings Tab	
Contrast	0 - 255 scale for contrast display from device.
Intensity	0 - 255 scale for image intensity display from device.
Displaying	The image currently displayed on the device.

Setting the Display Settings On The Device

1. In the menu on the top of the Configuration Manager, select *Audio/Video*.
2. Select the tab *Display.*
3. Use the sliders to change the *Contrast* level.
4. Use the sliders to change the *Intensity Rate* level.
5. Use the sliders to change the *Dimness Rate* level.
6. Use the sliders to change the *Motion Detector Sensitivity* level; the higher the value the more sensitive the device becomes.
7. Note the image currently displayed is correct.
8. Click **Accept**.

Programming

Overview

There are a select number of SEND_COMMANDs recognized by the Metreau Entry Communicators.

SEND_COMMANDs

Below is a list of SEND_COMMANDs supported by the Metreau Entry Communicators from NetLinx masters.

To use these commands, establish a Telnet session from the PC to the NetLinx master. Additionally, you could use NetLinx Studio 2.4 or the master's web page to send the commands.

NOTE

All text is based on a Unicode index.

Touch Panel Intercom Commands

NOTE

Some (not all) G4 Touch Panels feature hardware to support intercom functionality. Only Touch Panels that support intercom may be able use intercom with the Metreau Entry Communicators.

These commands are used to setup connections between panels that are Intercom-enabled. The "**^MOD**" model name command (see page 52) is used to query a panel to determine if it has intercom capability.

Touch Panel Intercom Commands	

STREAM-SET
Sets the parameters for a audio or H.263 video stream.
The communication parameters must include: IP address, port used, stream type, mode and stream ID.
See the SET VIDEO command for details on specifying the H.23 codec.
***Note**: It is not necessary to set up a video stream for motion JPEG (MJPEG) video.*
	Syntax:
	`SEND_COMMAND <DEV>,"'STREAM-SET <dest addr>, <dest port>, <source port> <stream type>, <mode>, <stream id>'"`
	Variables:
	• <stream ID> integers are from 1-20.
	• <mode> Starts a call to the specified IP address and ports, where initial mode is either TALK OR LISTEN. Please note, however, that no data packets will actually flow until the intercom modify command below is received.
	Example (audio stream):
	`SEND_COMMAND MET1, "'STREAM-SET 192.168.0.3,9000,9002,audio,TALK,1'"`
	`SEND_COMMAND TP2, "'^ICS-192.168.0.4,9002,9000,2'"`
	Sets up a hands-free unicast call between Metreau Entry Communicators and a touch panel.

Touch Panel Intercom Commands (Cont.)	

STREAM-SET (Cont.)	Example (H.263 video stream):
	`SEND_COMMAND MET1, "'STREAM-SET 192.168.0.3,9000,9002,video,H263,1"`
	`SEND_COMMAND TP2, "'^ICS-192.168.0.4,9002,9000,2'"`
	Sets up a h.263 video stream between Metreau Entry Communicators and a touch panel.
	***Note**: Do not change the Audio or Video Codec settings during a call.*

STREAM-GET
Retrieves a description of the stream parameter being used by the current stream.
	Syntax:
	`"'STREAM-GET, <stream type> <stream_ID>'"`
	• Stream end. This terminates an stream call/connection.
	Variable:
	• STREAM_TYPE: AUDIO, VIDEO
	• STREAM_ID: 0 -10
	Example:
	`SEND_COMMAND MET1, "'STREAM-GET, AUDIO, 1'"`
	Returns:
	`STREAM = 1 AUDIO 234.232.444.333 5000`
	Indicates that the audio stream has been configured to use and IP address of 234.232.444.333 where it uses port 5000 for the audio stream.

STREAM-PLAY
This command notifies the Metreau Entry Communicator to start streaming by enabling the micro-phone, speaker and video source and then, transmitting packets and playing received packets.
	Syntax:
	`SEND_COMMAND <DEV>,"'STREAM-PLAY <stream id>'"`
	Variable:
	• <stream ID> integers are from 1-20.
	Example:
	`SEND_COMMAND MET1,"STREAM-PLAY 1"`

STREAM-STOP
Stops transmission and receive of stream. This command terminates the data from moving in a stream connection.
	Syntax:
	`SEND_COMMAND <DEV>,"'STREAM-STOP <stream id>'"`
	Variable:
	• <stream ID> integers are from 1-20.
	• If <stream ID> = "ALL" will remove all streams
	Example:
	`SEND_COMMAND MET1,"'STREAM-STOP 1'"`
	Stops stream 1 from running.

^MOD?
Metreau Entry Communicator model name.
	The Metreau Entry Communicator will respond with its model name as shown in the response below. Older hardware or newer hardware that has intercom support disabled will not respond to this command. The Metreau Entry Communicator will respond with one of the follow-ing strings:
	Syntax:
	`SEND_COMMAND <DEV>,"'^MOD?'"`
	Example:
	`SEND_COMMAND MET1,"'^MOD?'"`
	Returns:
	`^MODEL-MET-2007-A`

Touch Panel Intercom Commands (Cont.)	

^VER?
Metreau Entry Communicator version number.
	The Metreau Entry Communicator will respond with its version number as shown in the response below. The Metreau Entry Communicator will respond with one of the following strings:
	Syntax:
	`SEND_COMMAND <DEV>,"'^VER?'"`
	Example:
	`SEND_COMMAND MET1,"'^VER?'"`
	Returns:
	`VERSION xx.xxx.xxx`

RTP, RTCP Video and Audio Streaming Commands

Metreau Entry Communicators support the following RTP, RTCP Video and Audio Streaming SEND_COMMANDs on port 1.

RTP, RTCP Video and Audio Streaming Commands	

GET VIDEO
Retrieves the configuration of the video system.
Information returned includes codec, resolution, and bit rate.
Codec can be either H-263 or MJPEG.
	Syntax:
	`SEND_COMMAND <DEV>,"'GET VIDEO'"`
	Example:
	`SEND_COMMAND MET1,"'GET VIDEO'"`
	Returns:
	`VIDEO = MJPEG`

SET VIDEO
Sets the configuration of the video system.
Configuration includes codec, resolution, and bit rate.
***Note**: See the STREAM-SET command for details on setting up a H.263 video stream.*
	Syntax:
	`SEND_COMMAND <DEV>,"'SET VIDEO <Codec>'"`
	Variable:
	• Codec = OFF, H263 or MJPEG
	Example:
	`SEND_COMMAND MET1,"'SET VIDEO MJPEG'"`
	Sets the video configuration to a very high quality stream.
	***Note**: Do not change the Audio or Video Codec settings during a call.*

GET AUDIO
Gets the current configuration of the video system.
Configuration includes codec.
	Syntax:
	`SEND_COMMAND <DEV>,"'GET AUDIO'"`
	Example:
	`SEND_COMMAND MET1,"'GET AUDIO'"`
	Returns:
	`AUDIO = G.711ULAW`

RTP, RTCP Video and Audio Streaming Commands (Cont.)	

SET AUDIO
Sets the current configuration of the audio system.
Configuration includes codec, sampling rate, and bit rate.
Sample rate is at 8khz.
	Syntax:
	`SEND_COMMAND <DEV>,"'SET AUDIO <Codec>'"`
	Variable:
	• Codec = OFF, G.711ALAW, G.711ULAW
	Example:
	`SEND_COMMAND MET1,"'SET AUDIO G.711'"`
	Sets the audio configuration to G.711 sampling at 8khz.
	***Note**: Do not change the Audio or Video Codec settings during a call.*

GET GAIN
Retrieves the current gain setting on the microphone input.
	Syntax:
	`SEND_COMMAND <DEV>,"'GET GAIN'"`
	Example:
	`SEND_COMMAND MET1,"'GET GAIN'"`
	Returns:
	`GAIN = 127`

SET GAIN
Sets the gain on the microphone input.
	Syntax:
	`SEND_COMMAND <DEV>,"'SET GAIN <Value>’"`
	Variable:
	• Value = 0 to 255
	Example:
	`SEND_COMMAND MET1,'"SET GAIN 0'"`
	Mutes the microphone.

GET VOLUME
Retrieves the current volume setting on the speaker output.
	Syntax:
	`SEND_COMMAND <DEV>,"'GET VOLUME'"`
	Example:
	`SEND_COMMAND MET1,"'GET VOLUME'"`
	Returns:
	`VOLUME = 127`

SET VOLUME
Sets the volume on the speaker output.
	Syntax:
	`SEND_COMMAND <DEV>,"'SET VOLUME <Value>’"`
	Variable:
	• Value = 0 to 255
	Example:
	`SEND_COMMAND MET1,"'SET VOLUME 0'"`
	Mutes the speaker.

Face Plate LED Commands

Metreau Entry Communicators support the following LED face plate SEND_COMMANDs on port 1.

Face Plate LED Commands	

SET LED-LEVEL
Adjusts the brightness of the LED. To turn the LED ON or OFF.
	Syntax:
	`SEND_COMMAND <DEV>,"'SET LED-LEVEL <state> <level>'"`
	Variable:
	• State = ON, OFF
	• Level = 0 – 100. Represents 0%(dimmest) to 100% brightest.
	Example:
	`SEND_COMMAND MET1,'"SET LED-LEVEL ON 50'"`
	Sets the LED brightness level ON at 50%.

GET LED-LEVEL
Retrieves the brightness of the LED. To turn the LED ON or OFF.
	Syntax:
	`SEND_COMMAND <DEV>,"'GET LED-LEVEL'"`
	Example:
	`SEND_COMMAND MET1,"'GET LED-LEVEL'"`
	Returns:
	`LEDLEVEL = <state> <level>`

SET LED-STATE
Sets the state of the front button LED.
	Syntax:
	`SEND_COMMAND <DEV>,"'SET LED-STATE <State>’"`
	Variable:
	• State = IDLE, ACTIVE
	Example:
	`SEND_COMMAND MET1,"'GET LED-STATE ACTIVE’"`
	Sets the LEDS in an active pulsing state.

GET LED-STATE
Retrieves the brightness of the LED. To turn the LED ON or OFF.
	Syntax:
	`SEND_COMMAND <DEV>,"'GET LED-STATE'"`
	Returns:
	`IDLE, ACTIVE`
	Example:
	`SEND_COMMAND MET1,"'GET LED-STATE’"`
	Returns:
	`’LEDSTATE = ACTIVE’`

Camera Commands

Unlike AMX touch panels, Metreau Entry Communicators return String responses instead of Command responses.

The Metreau Entry Communicators Camera (MET-ECOM-D only) supports the following camera SEND_COMMANDs on port 1.

Camera Commands	

SET CAM-WBAL
Sets the white balance control setting for the camera.
White balance setting allows for internal light adjustments based upon light conditions surrounding the unit.
	Syntax:
	`"'SET CAM-WBAL <tag>'"`
	Variables:
	• Tag: OFF (no white balance), AUTOMATIC, MANUAL_RGB, Presets (DAYLIGHT, TUNGSTEN, FLUORESCENT, HORIZON).
	Example:
	`SEND_COMMAND MET1,"'SET CAM-WBAL HORIZON'"`
	Sets the display white balance to horizon preset.

GET CAM-WBAL
Retrieves the white balance control setting for the camera.
	Syntax:
	`"'GET CAM-WBAL'"`
	Returns:
	`CAM-WBAL= 45`
	The White balance setting is 45.

SET CAM-RGB
Manually sets the RGB Gain control for the camera.
	Syntax:
	`"'SET CAM-RGB <R-tag>, <G-tag>, <B-tag>'"`
	Variables:
	• R-tag: Red channel gain setting 00 -FF.
	• G-tag: Green channel gain setting 00 -FF.
	• B-tag: Blue channel gain setting 00 -FF.
	Example:
	`SEND_COMMAND MET1,"'SET CAM-RGB #222D0B'"`
	Manually sets the RGB Gain parameters to Red 34, Green 45 and Blue 11.

GET CAM-RGBGAIN
Retrieves the RGB gain control setting for the camera.
	Syntax:
	`"'@CAM-RGBGAIN <R-tag>, <G-tag>, <B-tag>'"`
	Variables:
	• R-tag: Red channel gain setting 0 -255.
	• G-tag: Green channel gain setting 0 -255.
	• B-tag: Blue channel gain setting 0 -255.
	Returns:
	`CAM-RGBGAIN= 45`
	The White balance setting is 45.

Camera Commands (Cont.)	

SET CAM-CST
Sets the display contrast level for the camera.
	Syntax:
	`"'SET CAM-CST <Contrast Level>'"`
	Variables:
	• Contrast Level = a value from 0 – 100 in percentage
	Example:
	`SEND_COMMAND MET1,"'SET CAM-CST 50'"`
	Sets the display contrast to approximately 50%.

GET CAM-CST
Retrieves the contrast level for the camera.
	Syntax:
	`"'GET CAM-CST'"`
	Variables:
	• Contrast Level = a value from 0 - 100 in percentage
	Example:
	`SEND_COMMAND MET1,"'GET CAM-CST'"`
	Gets the camera's contrast setting.
	Returns:
	`CAM-CST= 45`
	Gets the camera contrast setting is 45.

SET CAM-SAT
Sets the display saturation for the camera.
	Syntax:
	`"'SET CAM-SAT <color saturation Level>'"`
	Variables:
	• color Saturation Level = a value from 0 – 100 in percentage
	Example:
	`SEND_COMMAND MET1,"'SET CAM-SAT 50'"`
	Sets the display color saturation level to approximately 50%.

GET CAM-SAT
Retrieves the saturation level for the camera.
	Syntax:
	`"'GET CAM-SAT'"`
	Variables:
	• color Saturation Level = a value from 0 - 100 in percentage
	Example:
	`SEND_COMMAND MET1,"'GET CAM-SAT'"`
	Gets the camera's saturation level setting.
	Returns:
	`CAM-SAT= 45`
	Gets the camera saturation level setting is 45.

SET CAM-FLICK
Sets the flicker mode setting for the camera.
	Syntax:
	`"'SET CAM-FLICK <flick>'"`
	Variables:
	• Flick: `INHIBIT, 50, 60`
	Example:
	`SEND_COMMAND STORM,"'SET CAM-FLICK 50'"`
	Sets the anti-flicker mode to 50hz mode.

Camera Commands (Cont.)	

GET CAM-FLICK
Retrieves the flicker mode setting for the camera.
	Syntax:
	`"'GET CAM-FLICK'"`
	Variables:
	• none
	Example:
	`SEND_COMMAND MET1,"'GET CAM-FLICK'"`
	Returns:
	`CAM-FLICK = 50`
	The Camera flicker setting is at 50hz mode.

LCD Commands

The LCD located on the face plate (MET-ECOM-D only) supports the following SEND_COMMANDs on port 1.

LCD Commands	

SET DISP-BANNER
Sets the banner on the LCD.
	Syntax:
	`SEND_COMMAND <DEV>,"'SET DISP-BANNER /mnt/amx/usr/upload/ <filename>'"`
	Variable:
	• filename = Name of image file on the system to be displayed on the LCD.
	Example:
	`SEND_COMMAND MET1,"'SET DISP-BANNER /mnt/amx/usr/upload/ do_not_disturb.bmp'"`
	Image file requirements:
	• BMP image type
	• 128 x 64 pixels
	Refer to the *Uploading a Display Image To The Device* section on page 46 for instructions on uploading image files to the MET-ECOM-D, to be used as display images.
	Refer to the *Creating Dynamic Images* section on page 41 for instructions on using TPDesign4 to create Dynamic Images for use with Metreau Entry Communicators.

GET DISP-BANNER
Retrieves the banner displayed on the LCD.
	Syntax:
	`SEND_COMMAND <DEV>,"'GET DISP-BANNER <type>'"`
	Variable:
	• Type = CURR, LIST
	• CURR -> will give the current bitmap displayed
	• LIST -> will return the list of available bitmaps
	Example:
	`SEND_COMMAND MET1,"'GET DISP-BANNER CURR'"`
	Returns:
	`File: = <path>/<filename>`
	filename = Name of file on the system to be displayed on the LCD.

LCD Commands (Cont.)	

SET DISP-BRT
Sets the brightness level to a percentage.
The LCD display supports quad (25%), half (50%) and full (100%) brightness.
	Syntax:
	`"'SET DISP-BRT <tag>,< brightness level>'"`
	Variables:
	• brightness level # = a value from 25,50,100.
	Example:
	`SEND_COMMAND MET1,"'SET DISP-BRIT 50’"`
	Sets the awake brightness level to 50%.

GET DISP-BRT
Retrieves the Brightness level for the LCD display.
	Syntax:
	`"'GET DISP-BRT’"`
	Example:
	`SEND_COMMAND MET1,"'GET DISP-BRT’"`
	Returns:
	`DIS-BRT=50`

SET DISP-CST
Sets the display contrast.
	Syntax:
	`"'SET DISP-CST <Contrast Level>'"`
	Variables:
	• Contrast Level = a value from 0 - 255.
	Example:
	`SEND_COMMAND MET1,"'SET DISP-CST 128'"`
	Sets the display contrast to approximately 50%.

GET DISP-CST
Retrieves the contrast setting for the LCD display.
	Syntax:
	`"'GET DISP-CST <Contrast Level>'"`
	Example:
	`SEND_COMMAND MET1,"'GET DISP-CST’"`
	Returns:
	`DISP-CST 50`

SET DISP-STATE
Sets the display state on/off.
	Syntax:
	`"'SET DISP-STATE <tag>’"`
	Variables:
	• Tag = ON turns display on, OFF turns display off
	Example:
	`SEND_COMMAND MET1,"'SET DISP-STATE ON’"`
	Sets the display on

GET DISP-STATE
Retrieves the display state for the LCD display.
	Syntax:
	`"'GET DISP-STATE’"`
	Example:
	`SEND_COMMAND MET1,"'GET DISP-STATE’"`
	Returns:
	`ON`

I/O Commands

The I/O port supports the following SEND_COMMANDs on port 2. There are two channels on port 2: Channel 1 and Channel 2;

I/O Commands	

GET INPUT
Gets the input channels active state.
An active state can be high (logic high) or low (logic low or contact closure). Channel changes, Pushes, and Releases generate reports based on their active state.
	Syntax:
	`SEND_COMMAND <DEV>,"'GET INPUT <CHAN>'"`
	Variable:
	• CHAN = 1-2
	Example:
	`SEND_COMMAND IO,"'GET INPUT 1'"`
	Returns:
	`INPUT1 ACTIVE HIGH`

SET INPUT
Sets the input channel's active state.
An active state can be high (logic high) or low (logic low or contact closure). Channel changes, Pushes, and Releases generate reports based on their active state. Setting an input to ACTIVE HIGH will disable the output for that channel.
	Syntax:
	`SEND_COMMAND <DEV>,"'SET INPUT <Channel> <State>'"`
	Variable:
	• State = LOW or HIGH
	Example:
	`SEND_COMMAND IO,"'SET INPUT 1 HIGH'"`
	Sets the I/O channel to detect a high state change, and disables output on the channel.

System Commands

The following System Commands are available:

System Commands	

^MOD?
Returns the device model name.
***Note**: Older hardware or newer hardware that has intercom support disabled will not respond to this command.*
	Syntax:
	`SEND_COMMAND <DEV>,"'^MOD?'"`
	Example:
	`SEND_COMMAND STORM1,"'^MOD?'"`
	Returns:
	`^MODEL-MET-ECON-D`

^VER?
Storm version number. The storm device will respond with its version number as shown in the response below. Currently the storm device will respond with one of the following strings:
	Syntax:
	`SEND_COMMAND <DEV>,"'^VER?'"`
	Example:
	`SEND_COMMAND STORM1,"'^VER?'"`
	Returns:
	`VERSION xx.xxx.xxx`

System Commands (Cont.)	

SET DOOR-DESC
Set the door description text.
	Syntax:
	`SEND_COMMAND <DEV>,"'SET DOOR-DESC <desc_num>, <desc_txt>'"`
	Variables:
	• Desc_num= 1 or 2
	• Desc_txt = max 20 character string
	Example:
	`SEND_COMMAND STORM,"'SET DOOR-DESC 1, front door'"`
	Sets the 1st description to 'front door'

GET DOOR-DESC
Returns the door's description text.
	Syntax:
	`SEND_COMMAND <DEV>,"'GET DOOR-DESC <desc_num>'"`
	Variable:
	• Desc_num= 1 or 2
	Example:
	`SEND_COMMAND STORM,"'GET DOOR-DESC 1'"`
	Returns:
	`DOOR-DESC1= front door`

Upgrading Firmware

Before beginning the Upgrade process

- Setup and configure your NetLinx Master. Refer to your particular NetLinx Master instruction manual for detailed setup procedures.
- Prepare the communication pages on the Metreau Entry Communicator for use; refer to the *Using the Configuration Manager* section on page 33.
- Refer to the NetLinx Studio version 2.4 or higher Help file for information on uploading firmware files via Ethernet.

If power or connection fails during a firmware upgrade, the file system may become corrupted.

A Metreau Entry Communicator which is not using a valid username and password will not communicate with a secured Master. If you are updating the firmware on a keypad which is not using a username or password field, you must first remove the Master Security feature to establish an unsecured connection.

Upgrading Firmware via an IP Address

Before beginning with this section, verify that your device is powered and connected to the NetLinx Master through an Ethernet connection.

Preparing the Master for communication via an IP

1. Obtain the IP Address of the NetLinx Master from your System Administrator, if you do not have an IP Address for the Master, refer to your particular Master's instruction manual for more information on obtaining an IP Address using NetLinx Studio 2.4 or higher.
   - From the **Online Tree** tab of the Workspace window, select the NetLinx Master.
   - Follow steps outlined in either the *Obtaining or Assigning the Master's IP Address* sections from your particular NetLinx Master instruction manual to use an address.
   - Note the IP Address and Gateway information.
2. Launch NetLinx Studio 2.4 (default location is **Start > Programs > AMX Control Disc > NetLinx Studio > NetLinx Studio 2.4**).
3. Select **Settings > Master Communication Settings**, from the Main menu to open the Master Communication Settings dialog (FIG. 45).
4. Click the **Communications Settings** button to open the *Communications Settings* dialog.
5. Click on the **NetLinx Master** radio button (from the *Platform Selection* section) to indicate that you are working with a NetLinx Master (such as the NXC-ME260 or NI-Series of Integrated Controllers).
6. Click on the **Authentication Required** radio box (if the Master is secured) and then enter a username and password.
7. Click on the **TCP/IP** radio button (from the *Transport Connection Option* section) to indicate you are connecting to the Master through an IP Address.
8. Click the **Edit Settings** button (on the *Communications Settings* dialog) to open the TCP/IP Settings dialog (FIG. 45).
9. Enter the IP Address into the *TCP/IP Address* field. This information is obtained from either your System Administrator or obtained from the Master.

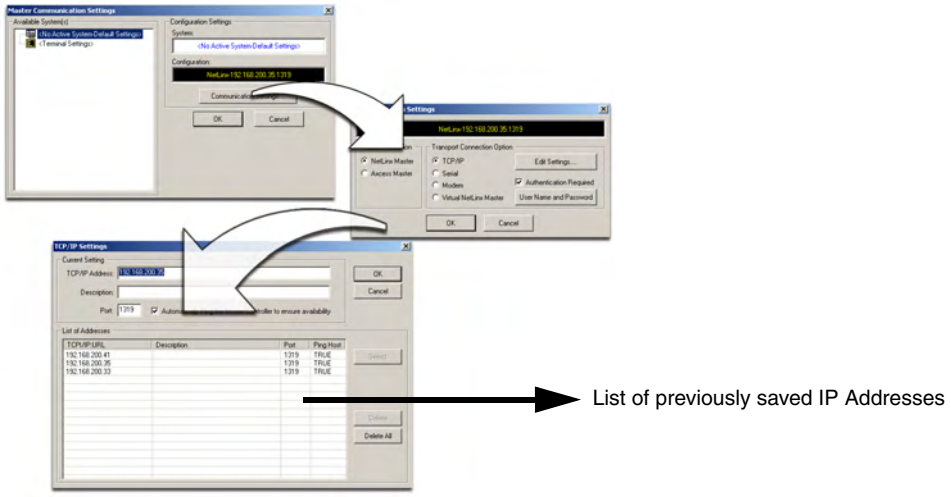


FIG. 45 Assigning Communication Settings and TCP/IP Settings

10. Click **OK** three times to close the open dialogs and save your settings.
11. Click **Yes** to interrupt the current communication from the Master and apply the new settings.
12. Select **Tools > Reboot the Master Controller** to access the Reboot the Master dialog, then click **Reboot** to reboot the Master and incorporate any changes.
13. Once the dialog replies with *"Reboot of system complete"*, press **Done**.
14. Click the **OnLine Tree** tab in the Workspace window to view the devices on the System. *The default System value is one*.
15. Right-click on the *Empty Device Tree/System* entry and select **Refresh System** to re-populate the list.

Verifying and Upgrading the device firmware via an IP

1. Click the **OnLine Tree** tab in the Workspace window to view the devices on the System. *The default System value is one.*
2. Right-click the associated System number (from the Workspace window) and select **Refresh System** to detect all devices on the current system, establish a new connection to the Master, and refresh the System list with devices on that system.
3. After the *Communication Verification* dialog window verifies active communication between the PC and the Master, verify the Metreau Entry Communicator appears in the **OnLine Tree** tab of the Workspace window. *The default device value is 10001*.
4. If the device firmware version is not the latest available; locate and download the latest firmware file from the **www.amx.com > Tech Center > Downloadable Files > Firmware Files** section of the website.
5. Select **Tools > Firmware Transfers > Send to NetLinx Device** from the Main menu to open the Send to NetLinx Device dialog (FIG. 46). Verify the device's System and Device number values match those values listed within the System folder in the **OnLine Tree** tab of the Workspace window.

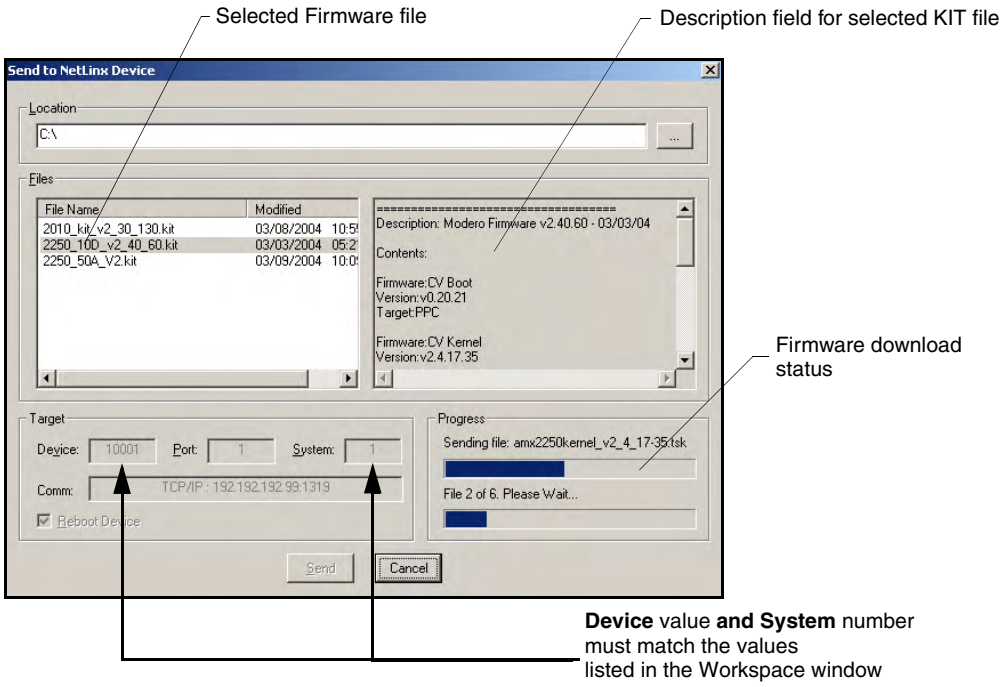


FIG. 46 Send to NetLinx Device dialog

6. Select the device's firmware file from the **Files** section (FIG. 46).
7. Enter the **Device** value associated with the device and the **System** number associated with the Master (*listed in the OnLine Tree tab of the Workspace window*). *The Port field is greyed-out.*
8. Click the **Reboot Device** checkbox. This causes the Metreau Entry Communicator to reboot after the firmware update process is complete.
9. Click **Send** to begin the transfer. The file transfer progress is indicated on the bottom-right of the dialog (FIG. 46). Do not pull power from device during transfer, it can take approximately 5 minutes to finalize firmware transfer. The upgrade can still be in progress when the bargraph reaches the end, it is a good idea to wait until the process is complete.
10. Click **Close** (*after the device reboots*) to return to the main program.
11. Right-click the associated System number and select **Refresh System**. This causes a refresh of all project systems, establishes a new connection to the Master, and populates the System list with devices on your particular system.

Using the NetLinx Module

Overview

Metreau Entry Communicators can be controlled via the Touch Pages provided with the NetLinx Module, as described in this section. Refer to the NetLinx module documentation for details on incorporating the module into your source code and loading it onto the NetLinx Master.

The *Door* (doorbell) functionality required by Metreau Entry Communicators is contained within the NetLinx Module, which also contains Intercom functionality required for the Door functions.

NOTE

The module used by the Metreau Entry Communicators is the AMX intercom module (the same module used by other intercom-capable AMX touch panels), updated to support communicators.

Incorporating an Intercom Panel Into Your NetLinx System

Download the module for the intercom panel from **www.amx.com**, and include it in your NetLinx project file. For searching purposes, the module *manufacturer* is **AMX** and the *model* is **Intercom**.

NOTE

The intercom module will only work with AMX intercom capable panels.

Panel Intercom Configuration

Intercom Setup

The *Intercom Setup* page (FIG. 47) allows you to set the session timeout for intercom calls, toggle intercom auto-answer on and off, and provides access to the *Door Setup* and *Advanced Setup* pages.

FIG. 47 Intercom Setup Page

Setting the Intercom Session Timeout

When only 30 seconds are left in your call, the panel provides a popup to extend the call (FIG. 48).

NOTE

Session time-outs are not applicable for calls with Metreau Entry Communicators.

1. Select the **Setup** button on your intercom page.
2. Press the up or down arrows to increment the timeout up by 1 second in each direction. If your call exceeds your session timeout the panel provides you with a popup (FIG. 48) to extend the session.

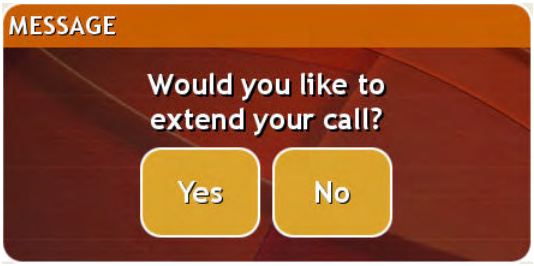


FIG. 48 Extend Call Popup

3. Press **Exit** when you are finished.

The session timeout can be disabled by setting the time to **0** (zero). If both panels have a timeout of 0, then the call must be manually terminated.

Setting Intercom Auto Answer

1. Select the **Setup** button on your intercom page.
2. Press the button beneath *Auto-Answer* to toggle the option. The button indicates its current state.
3. Press **Exit** when you are finished.

Door Setup

The *Door Setup* page (FIG. 49) is accessed through the *Intercom Setup* page. The options on the *Door Setup* page allow you to disable/enable all doorbells, and configure the Door Chime for each Metreau Entry Communicator doorbell in the system.

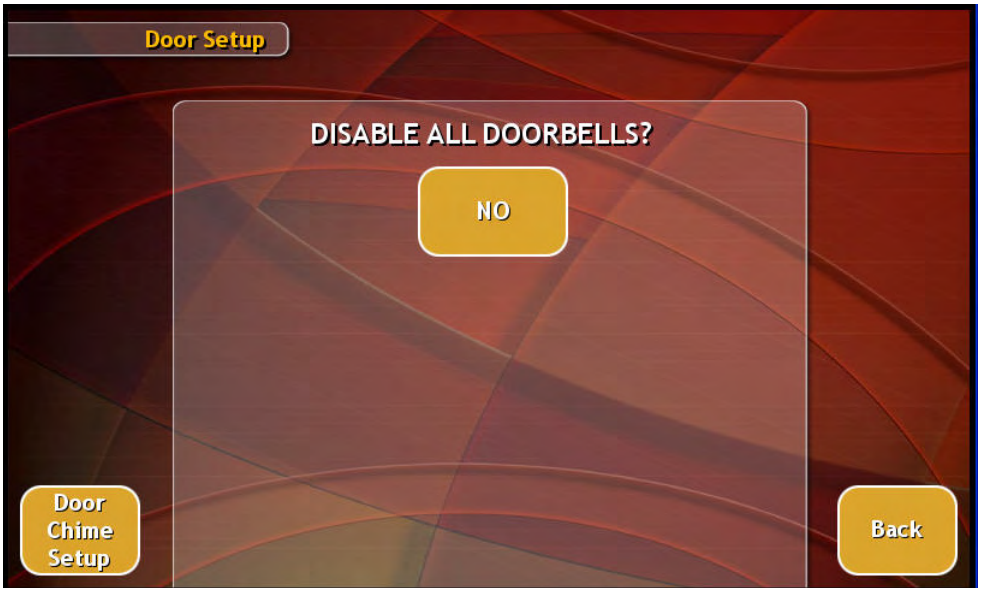


FIG. 49 Intercom Door Setup Page

Disabling All Doorbells

Press the **Disable All Doorbells** button on the *Door Setup* page to disable all of the doorbells in the system. Once disabled, no calls can be received by the doorbells until they are re-enabled. By default, this option is off (indicated by "NO" on this page).

Door Chime Setup

The *Door Chime Setup* page (FIG. 50) is accessed through the *Door Setup* page. The options on the *Door Chime Setup* page allow you to associate a particular Chime sound with each doorbell in the system.

FIG. 50 Intercom Door Chime Setup Page

Assigning a Chime To a Doorbell

By default there are six different Chime sounds to choose from, and up to five doorbells to which any Chime can be assigned.

NOTE

*Press the blue arrow in the **Test** column to preview each Chime.*

1. Press a **Chime #** button, in the *Pick Sound* column.
2. Press a **Doorbell** button, in the *Assign To* column.

Chimes can be assigned to Doorbells in any combination, i.e. a single Chime can be assigned to all doorbells, a different Chime can assigned to each doorbell, or any combination thereof.

Advanced Setup

The *Intercom Advanced Setup* page (FIG. 51) is accessed through the *Intercom Setup* page. The options on the *Intercom Advanced Setup* page allow you to set the panel intercom to be monitored, to monitor other intercom panels, and to name the panel. It is important to name the intercom panel; the name is displayed in other panels' intercom call directory pages.

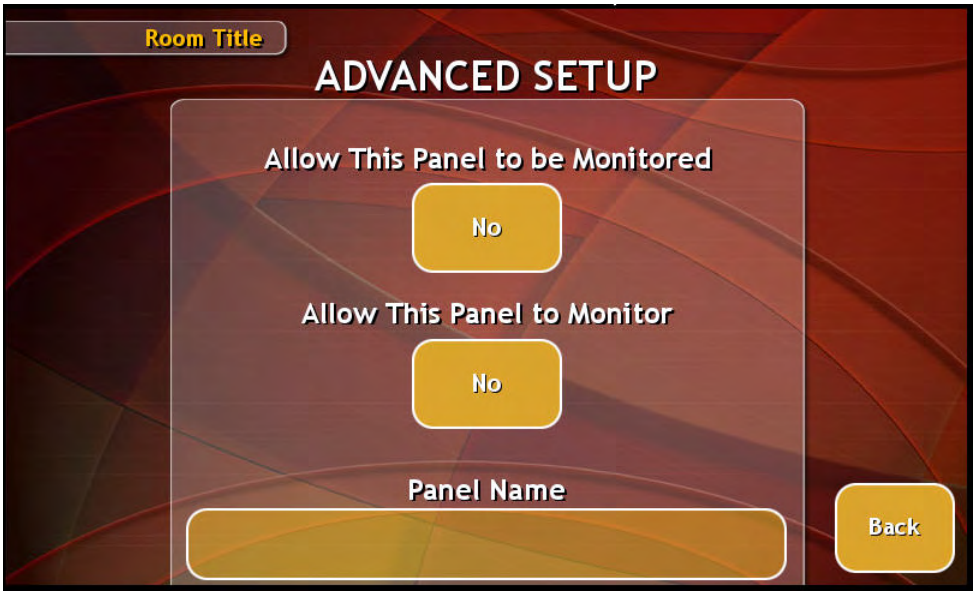


FIG. 51 Intercom Advanced Setup Page

Allowing a Panel To Be Monitored

1. Select the **Setup** button on your intercom page.
2. On the intercom setup page, press **Advanced Setup**. This launches the password numeric keypad.
3. Enter the password and press **Done**. The default password is *Password 4* of the panel's firmware *Password Setup*.
4. Press the button beneath *Allow This Panel to be Monitored* to toggle the option. The button indicates its current state. (FIG. 52)

FIG. 52 Room Monitored

5. Press **Back** to return to the intercom setup pages.
6. Press **Exit** when you are finished.

Allowing a Panel To Monitor

1. Select the **Setup** button on your intercom page.
2. On the intercom setup page, press **Advanced Setup**. This launches the password numeric keypad.
3. Enter the password and press **Done**. The default password is *Password 4* of the panel's firmware *Password Setup*.
4. Press the button beneath *Allow This Panel to Monitor* to toggle the option. The button indicates its current state.

NOTE

If the panel you are trying to monitor does not have monitoring enabled, or the panel you are monitoring from does not have monitoring enabled, then a double-beep is played.

5. Press **Back** to return to the intercom setup pages.
6. Press **Exit** when you are finished.

Naming a panel

1. Select the **Setup** button on your intercom page.
2. On the intercom setup page, press **Advanced Setup**. This launches the password numeric keypad.
3. Enter the password and press **Done**. The default password is *Password 4* of the panel's firmware *Password Setup*.
4. Press in the area under *Panel Name*. This launches a on screen keyboard.
5. Type the name of the panel and press **Done**. This is the name that is displayed in other panels' intercom call directory pages.

NOTE

For all panels except the 5200i, this is the G4 Web Control Name. Care should be taken when changing it.

6. Press **Back** to return to the intercom setup pages.
7. Press **Exit** when you are finished.

Answering an incoming Intercom call

The provided intercom pages include an call answering popup window. The popup page indicates the name of the panel calling and two options:

- **Answer** - Pressing this button opens the intercom session with the other panel.
- **Ignore** - Pressing this button denies the intercom session with the other panel.

FIG. 53 Answer Call

To answer a call, press the **Answer** button in the popup window.

Answering an Incoming Doorbell Call

The provided intercom pages include a doorbell answering popup window (FIG. 54):

FIG. 54 Answer Doorbell

The popup page indicates the name of the doorbell calling and provides several options:

- **Answer** - Pressing this button opens the intercom session with the doorbell.
- **View** - Press to initiate one-way communication with the doorbell. In this case, you will see and hear the doorbell, but the doorbell will not see or hear you.
- **End Call** - Press to terminate the call from the doorbell.
- **Ignore** - Pressing this button denies the intercom session with the doorbell.

Someone At The Door Page

When an incoming call from a doorbell is answered, the *Someone At The Door* page is displayed (FIG. 55).

FIG. 55 Someone At The Door page

The options in this page allow you see and view the incoming doorbell call, as well as adjust the microphone and speaker volume levels for both the doorbell and the panel.

- **Door Microphone Level** - Use the Up/Down arrow buttons to raise/lower the doorbell's microphone level. The current microphone level for the doorbell is indicated in the bargraph. Press the **Mute** button to mute the doorbell microphone.
- **Door Speaker Level** - Use the Up/Down arrow buttons to raise/lower the doorbell's speaker level. The current speaker level for the doorbell is indicated in the bargraph. Press the **Mute** button to mute the doorbell speaker.
- **Panel Microphone Level** - Use the Up/Down arrow buttons to raise/lower the panel's microphone level. The current microphone level for the panel is indicated in the bargraph. Press the **Mute** button to mute the panel microphone.
- **Panel Speaker Level** - Use the Up/Down arrow buttons to raise/lower the panel's speaker level. The current speaker level for the panel is indicated in the bargraph. Press the **Mute** button to mute the panel speaker.

*The Doorbell **Mute** buttons only perform mute. They do not perform un-mute.*

Ending a Doorbell Call

Press the **End Call** button in the *Someone At The Door* page to terminate the intercom session with the doorbell.

Creating Intercom Pages

The easiest method of creating your own intercom pages is to start with the pages provided by AMX in the module. You can change the aesthetics of the pages as long as the channel, address, level and links remain untouched.

For the more ambitious panel designers, the necessary intercom directory buttons and their information are contained in the Sample Intercom Page table on page 74.

Advanced Setup page

Advanced Setup			
Name	**Description**	**Channel Port:Code**	**Address Port:Code**
Allow Panel to be Monitored	Toggle the panel's ability to be monitored off and on.	1:11	
Allow Panel to Monitor	Toggle the panel's ability to monitor off and on.	1:10	
Room Name	The name of the panel as it appears in other intercom directories. See *Naming a panel* section on page 70.		0:265
Name Panel	Set the name of the panel as it appears in other intercom directories. (G4 Web Control: Server Name)	0:334	0:265
Back	Navigates the intercom panel to the intercom *Setup page*. This requires a standard page flip to *Setup*.		

Door Chime Setup page

Door Chime Setup			
Name	**Description**	**Channel Port:Code**	**Address Port:Code**
Chime 1	The name of the Chime 1 sound.	1:206	
Chime 2	The name of the Chime 2 sound.	1:207	
Chime 3	The name of the Chime 3 sound.	1:208	
Chime 4	The name of the Chime 4 sound.	1:209	
Chime 5	The name of the Chime 5 sound.	1:210	
Chime 6	The name of the Chime 6 sound.	1:211	
Front Door	The name of doorbell #1 as it appears in other doorbell pages.	1:212	1:221
Kitchen	The name of doorbell #2 as it appears in other doorbell pages.	1:213	1:225
Back Door	The name of doorbell #3 as it appears in other doorbell pages.	1:214	1:229
Garage	The name of doorbell #4 as it appears in other doorbell pages.	1:215	1:233
Lobby	The name of doorbell #5 as it appears in other doorbell pages.	1:216	1:237
Back	Navigates to the Door *Setup page*. This requires a standard page flip to *Door Setup*.		

Door Setup page

Door Setup			
Name	**Description**	**Channel Port:Code**	**Address Port:Code**
Disable All Doorbells (YES/NO)	Toggle the all doorbells on and off.	1:37	
Door Chime Setup	Navigates to the *Door Chime Setup page*. This requires a standard page flip to *Door Chime Setup*.		
Back	Navigates to the *Setup page*. This requires a standard page flip to *Setup*.		

Intercom Demo page

The module for duplex intercom capable panels includes user pages. While you can create your own intercom directory page (see the *Creating Intercom Pages* section on page 72), it is possible to use the panel with the page shown in FIG. 56.

FIG. 56 Sample Intercom Page

Sample Intercom Page					
No.	**Name**	**Description**	**Channel Port:Code**	**Address Port:Code**	**Level Port:Code**
1	Room Name	The name of the panel as it appears in other intercom directories. See *Naming a panel* section on page 70.		0:265	
2	Page All	Pages all connected intercom panels.	1:6		
3	Place Call	Initiates an intercom call to a panel.	1:7		
4	End	Ends an intercom call to a panel.	1:8		
5	Call Privacy Off	Toggles the privacy option of the intercom. When enabled, other panels cannot contact the panel.	1:9		
6	Door Privacy Off	Toggles the privacy option of the doorbell. When enabled, doorbells in the system cannot contact the panel.	1:36		
7	Monitor	Enables the panel to monitor another room's intercom panel.	1:19		
8	Panel Directory Room Name	The name of a panel in the intercom directory. You can call the panel, enact privacy against the panel and monitor the panel.	1:1	1:1	

Sample Intercom Page (Cont.)					
No.	**Name**	**Description**	**Channel Port:Code**	**Address Port:Code**	**Level Port:Code**
9	Panel Directory Room Name	The name of a panel in the intercom directory. You can call the panel, enact privacy against the panel and monitor the panel.	1:2	1:2	
10	Panel Directory Room Name	The name of a panel in the intercom directory. You can call the panel, enact privacy against the panel and monitor the panel.	1:3	1:3	
11	Panel Directory Room Name	The name of a panel in the intercom directory. You can call the panel, enact privacy against the panel and monitor the panel.	1:4	1:4	
12	Panel Directory Room Name	The name of a panel in the intercom directory. You can call the panel, enact privacy against the panel and monitor the panel.	1:5	1:5	
13	Call Panel	Display only; indicates the panel is currently in a call.	1:21		
14	Call Panel	Display only; indicates the panel is currently in a call.	1:24		
15	Call Panel	Display only; indicates the panel is currently in a call.	1:27		
16	Call Panel	Display only; indicates the panel is currently in a call.	1:30		
17	Call Panel	Display only; indicates the panel is currently in a call.	1:33		
18	Panel Privacy	Display only; indicates the panel has privacy enabled.	1:22		
19	Panel Privacy	Display only; indicates the panel has privacy enabled.	1:25		
20	Panel Privacy	Display only; indicates the panel has privacy enabled.	1:28		
21	Panel Privacy	Display only; indicates the panel has privacy enabled.	1:31		
22	Panel Privacy	Display only; indicates the panel has privacy enabled.	1:34		
23	Monitor Panel	Display only; indicates the panel is being monitored by another panel.	1:23		
24	Monitor Panel	Display only; indicates the panel is being monitored by another panel.	1:26		
25	Monitor Panel	Display only; indicates the panel is being monitored by another panel.	1:29		
26	Monitor Panel	Display only; indicates the panel is being monitored by another panel.	1:32		

Sample Intercom Page (Cont.)					
No.	**Name**	**Description**	**Channel Port:Code**	**Address Port:Code**	**Level Port:Code**
27	Monitor Panel	Display only; indicates the panel is being monitored by another panel.	1:35		
28	Intercom Microphone Level	A Bargraph in TPDesign4 that sets the volume of the intercom microphone.			0:10
29	Intercom Sound Level	A Bargraph in TPDesign4 that sets the volume of the intercom speaker.			0:9
30	Call Status Button	Displays status of calls, e.g., incoming caller id, connected, rejected.		1:10	
31	Navigate Up	Increments the intercom directory up.	1:13		
32	Navigate Down	Increments the intercom directory down.	1:14		
33	Intercom Setup Page	Navigates the intercom panel to the intercom *Setup page*. This requires a standard page flip to *Setup*.			

Setup page

Setup			
Name	**Description**	**Channel Port:Code**	**Address Port:Code**
Auto-Answer OFF	Toggle the panel's auto-answer feature off and on.	1:12	
Session Timeout	A display of the current session timeout.		1:9
Increment Up	Increments the intercom session time up.	1:15	
Increment Down	Increments the intercom session time down.	1:16	
Room Name	The name of the panel as it appears in other intercom directories. See *Naming a panel* section on page 70.		0:265
Door Setup	Navigates to the Door Setup page. This requires a standard page flip to *Door Setup*.		
Advanced Setup	Navigates to the intercom *Advanced Setup* page. This requires a standard page flip to *Advanced Setup*.		
Exit Setup	Navigates to the intercom directory page. This requires a standard page flip to the intercom directory.		

Someone At The Door page

Someone At The Door				
Name	**Description**	**Channel Port:Code**	**Address Port:Code**	**Level Port:Code**
StormVideo	Displays video from the incoming doorbell call.		1:240	
Door Microphone Level - Mute	Mutes the microphone on the incoming doorbell.	1:371		
Door Microphone Level - Down	Lowers the microphone level on the incoming doorbell.	1:373		
Door Microphone Level - Up	Raises the microphone level on the incoming doorbell.	1:372		
Door Microphone Level - Bargraph	Displays the current microphone level on the incoming doorbell.	1:0	1:0	1:1
Door Speaker Level - Mute	Mutes the speaker on the incoming doorbell.	1:38		
Door Speaker Level - Down	Lowers the speaker level on the incoming doorbell.	1:39		
Door Speaker Level - Up	Raises the speaker level on the incoming doorbell.	1:40		
Door Speaker Level - Bargraph	Displays the current speaker level on the incoming doorbell.	1:0	1:0	1:2
Panel Microphone Level - Mute	Mutes the microphone on the panel.	0:Panel Setup: Intercom Mic Level Mute		
Panel Microphone Level - Down	Lowers the microphone level on the panel.	0:Panel Setup: Intercom Mic Level Down		
Panel Microphone Level - Up	Raises the microphone level on the panel.	0:Panel Setup: Intercom Mic Level Up		
Panel Microphone Level - Bargraph	Displays the current microphone level on the panel.	1:0	1:0	0:Intercom Mic Level
Panel Speaker Level - Mute	Mutes the speaker on the panel.	0:Panel Setup: Intercom Sound Level Mute		
Panel Speaker Level - Down	Lowers the speaker level on the panel.	0:Panel Setup: Intercom Sound Level Down		
Panel Speaker Level - Up	Raises the speaker level on the panel.	0:Panel Setup: Intercom Sound Level Up		

Someone At The Door (Cont.)				
Name	**Description**	**Channel Port:Code**	**Address Port:Code**	**Level Port:Code**
Panel Speaker Level - Bargraph	Displays the current speaker level on the panel.	1:0	1:0	0:Intercom Sound Level

Creating Popup Pages

Door Answer Call popup page

Door Answer Call Popup			
Name	**Description**	**Channel Port:Code**	**Address Port:Code**
Answer	Opens the intercom session with the doorbell.	1:260	
View	Opens an incoming-only (one-way) session with the doorbell.	1:261	
End Call	Terminates the session with the doorbell.	1:41	1:6
Ignore/Exit	Denies the intercom session with the doorbell.	1:262	1:8
Door Name	The name of the doorbell as it appears in other doorbell pages. See *Naming a panel* section on page 70.		1:211

Doorbell Adjustments popup page

Doorbell Adjustments Popup				
Name	**Description**	**Channel Port:Code**	**Address Port:Code**	**Level Port:Code**
Door Microphone Level Mute	Mutes the microphone on the incoming doorbell.	1:371		
Door Microphone Level Down	Lowers the microphone level on the incoming doorbell.	1:373		
Door Microphone Level Up	Raises the microphone level on the incoming doorbell.	1:372		
Door Microphone Level Bargraph	Displays the current microphone level on the incoming doorbell.	1:0	1:0	1:1
Door Speaker Level Mute	Mutes the speaker on the incoming doorbell.	1:38		
Door Speaker Level Down	Lowers the speaker level on the incoming doorbell.	1:39		
Door Speaker Level Up	Raises the speaker level on the incoming doorbell.	1:40		
Door Speaker Level Bargraph	Displays the current speaker level on the incoming doorbell.	1:0	1:0	1:2

Doorbell Adjustments Popup (Cont.)				
Name	**Description**	**Channel Port:Code**	**Address Port:Code**	**Level Port:Code**
Panel Microphone Level Mute	Mutes the microphone on the panel.	0:Panel Setup: Intercom Mic Level Mute		1:0
Panel Microphone Level Down	Lowers the microphone level on the panel.	0:Panel Setup: Intercom Mic Level Down		1:0
Panel Microphone Level Up	Raises the microphone level on the panel.	0:Panel Setup: Intercom Mic Level Up		1:0
Panel Microphone Level Bargraph	Displays the current microphone level on the panel.	1:0	1:0	0-setup port:Panel Setup: Intercom Mic Level
Panel Speaker Level Mute	Mutes the speaker on the panel.	0:Panel Setup: Intercom Sound Level Mute		1:0
Panel Speaker Level Down	Lowers the speaker level on the panel.	0:Panel Setup: Intercom Sound Level Down		1:0
Panel Speaker Level Up	Raises the speaker level on the panel.	0:Panel Setup: Intercom Sound Level Up		1:0
Panel Speaker Level Bargraph	Displays the current speaker level on the panel.	1:0	1:0	0-setup port:Panel Setup: Intercom Sound Level

Intercom Answer Call popup page

Intercom Answer Call Popup			
Name	**Description**	**Channel Port:Code**	**Address Port:Code**
Answer	Opens the intercom session with the other panel.	1:17	
Ignore	Denies the intercom session with the other panel.	1:18	
Room Name	The name of the panel as it appears in other intercom directories. See *Naming a panel* section on page 70.		1:7

More Time popup page

More Time Popup			
Name	**Description**	**Channel Port:Code**	**Address Port:Code**
Confirm More Time	Select to extend intercom session beyond timeout.	1:20	

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