

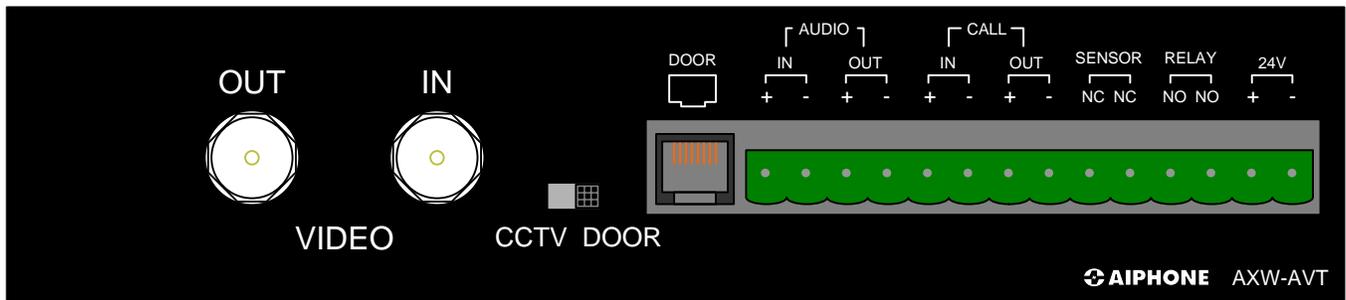
AXW-AVT / AXW-AVR

AX Series Audio-Video Adaptor for 3rd Party Transmission Equipment

- INSTRUCTIONS -

The AXW-AVT and AXW-AVR are designed to allow connection of a standard AX-series audio video door station (or audio-only IE-series door station) via the AXW-AVT, conditioning the signal for use with 3rd party transmission equipment (fiber optics, Ethernet, etc.) and converting it back via the AXW-AVR to a signal compatible with the AX-series exchange unit. External video input/output is provided at both adaptors to allow 3rd party camera input, output to recording devices, etc. A motion detector or other activation device can be connected to the Sensor input to trigger door / camera activation (AXW-AVT only). The units also feature a relay output to trigger an external device, such as a DVR or video switcher local to either the AXW-AVT or AXW-AVR whenever the audio and/or video is active. Alternatively, the AXW-AVT can be used to adapt an AX-series audio video door station to a standalone third party device (video server, network DVR, etc).

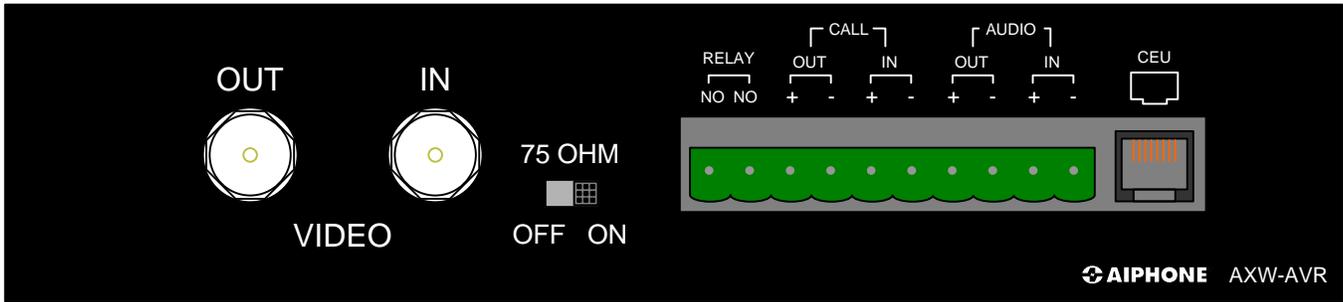
AXW-AVT



AXW-AVT TERMINAL DEFINITIONS:

DOOR (RJ-45 Jack):	RJ-45 connection from AX-series audio video door, or spliced audio only door (IE/IF-series).
AUDIO IN/OUT:	Input / Output connections for audio transmission (line level, polarity indicated by '+' and '-').
CALL IN/OUT:	Transistor-switched input / output to be connected to relay input / output on transmission equipment. 'Call In' indicates call placed by door station, 'Call Out' indicates master-initiated activity (polarity indicated by '+' and '-').
SENSOR NC, NC:	Normally Closed contact input, activates 'Call In' function when tripped by external motion detector or other device with N/C contacts.
RELAY NO, NO:	Normally Open relay contact, activated whenever communication is active.
VIDEO IN:	Composite input signal from CCTV camera, if used in place of AX-series audio video door station.
VIDEO OUT:	Composite output to external transmission equipment. Source dependent upon CCTV / DOOR switch.
CCTV / DOOR SWITCH:	Determines whether AX-series audio/video door station video ('DOOR' setting) or external CCTV video ('CCTV' setting) will be present on 'VIDEO OUT' for connection to external transmission equipment.
24V +, -	24V DC input (use Aiphone PS-2420UL).

AXW-AVR



AXW-AVR TERMINAL DEFINITIONS:

RELAY NO, NO:	Normally Open relay contact, activated whenever communication is active.
CALL IN/OUT:	Transistor-switched input / output to be connected to relay input / output on transmission equipment. 'Call In' indicates call placed by door station, 'Call Out' indicates master-initiated activity (polarity of input / output indicated by '+' and '-').
AUDIO IN/OUT:	Input / Output connections for audio transmission (line level, polarity indicated by '+' and '-').
VIDEO IN:	Composite input signal from CCTV camera, if used in place of AX-series audio video door station.
VIDEO OUT:	Composite output to external transmission equipment. Source dependent upon CCTV / DOOR switch.
OFF/ON SWITCH:	Determines whether AX-series audio video door station video ('DOOR' setting) or external CCTV video ('CCTV' setting) will be present on 'VIDEO OUT' for connection to external transmission equipment.
CEU (RJ-45 Jack):	RJ-45 connection from AXW-AVR to CEU, simulating a standard AX-series Audio/ Video door station.

COMPATIBLE DOOR STATIONS (AXW-AVT):

AX-DV	Surface mount, die cast zinc, vandal resistant, Audio-Video
AX-DVF	Flush mount, stainless steel, vandal resistant, Audio-Video
AX-DM	Mullion mount, black plastic, Audio Only
IF-DA	Surface mount, brown plastic, Audio Only
IE-DC	Surface mount, brown plastic w/aluminum, Audio Only
IE-JA	Flush mount, 2 gang, stainless steel faceplate, Audio Only
IE-SS	Flush mount, 2-gang, stainless steel, vandal resistant, Audio Only
IE-SSR	Flush mount, 2-gang, stainless steel, vandal resistant w/red mushroom call button, Audio Only

PROGRAMMING:

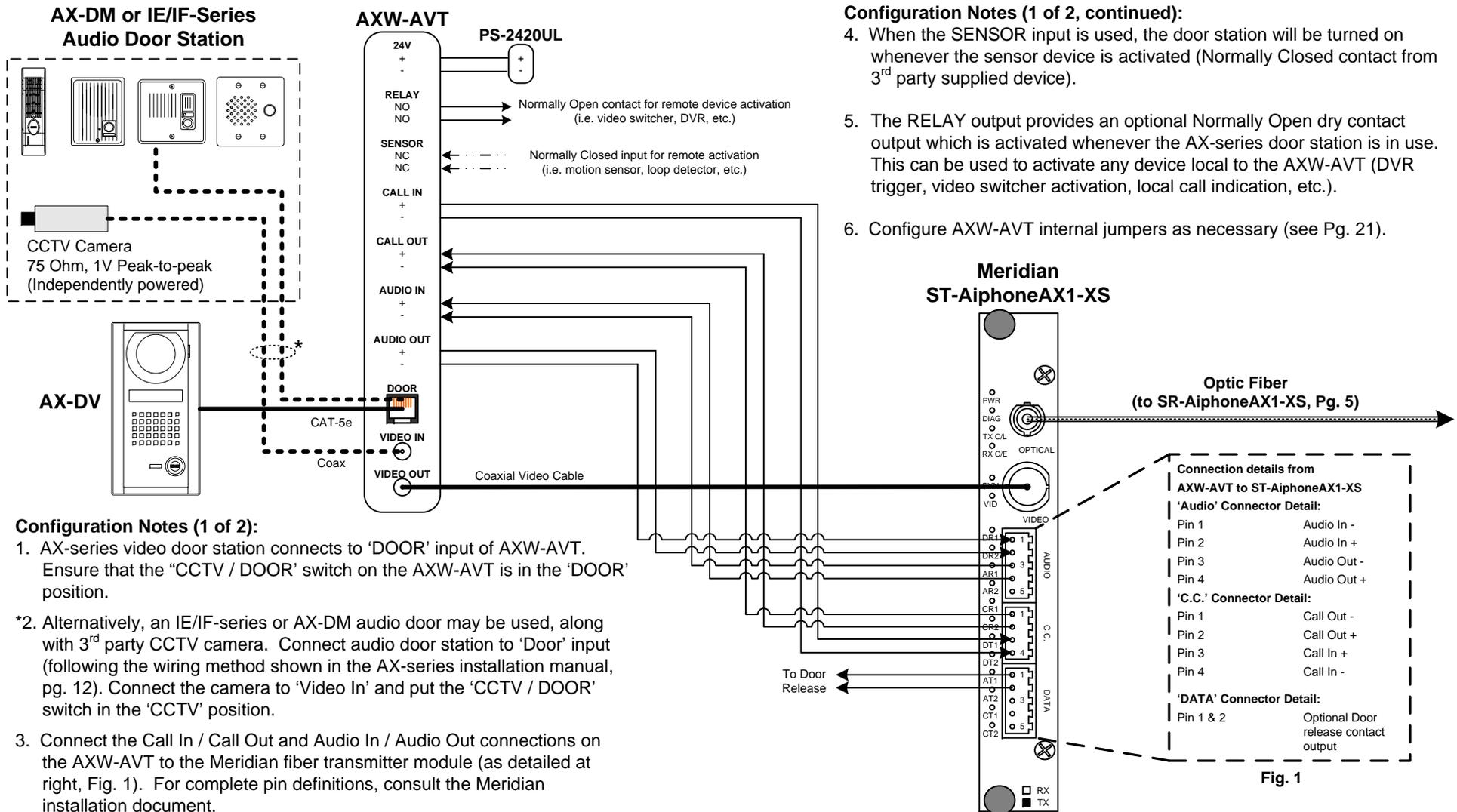
- Follow standard AX programming procedures as described in the AX Installation & Operation manual (included on CD with the AX CEU).
- When configuring door stations, be sure to set the station number corresponding to the AXW-AVT / -AVR to "Video" in the AX setup utility.

Exchange No.	No.	Location Name	Video Audio	Call Level	F
1	1	Main Gate #1	Video	Normal	
	2	Vestibule	None	Normal	
	3	Front Corridor	Video	Normal	
	4	South Entry	Audio	Normal	
	5	North Entry	Video	Normal	
	6		Video	Normal	

Typical configuration selection

CONFIGURATION DIAGRAM:

AXW-AVT / AXW-AVR with Meridian Technology Fiber (ST/SR-AiphoneAX1-XS), 1 of 2



Please Note:

Only information pertaining to the connection and operation of the AXW-AVT / AXW-AVR and listed 3rd party devices interfacing with it are included here. Aiphone is not responsible for attempts to connect the AXW-AVT / AXW-AVR to untested 3rd party transmission hardware. Consult the installation manual for the 3rd party device being utilized for further information regarding physical mounting, base functionality, power requirements, etc. For the most up-to-date compatibility information, please consult <http://www.aiphone.com> or contact Aiphone Technical Support.

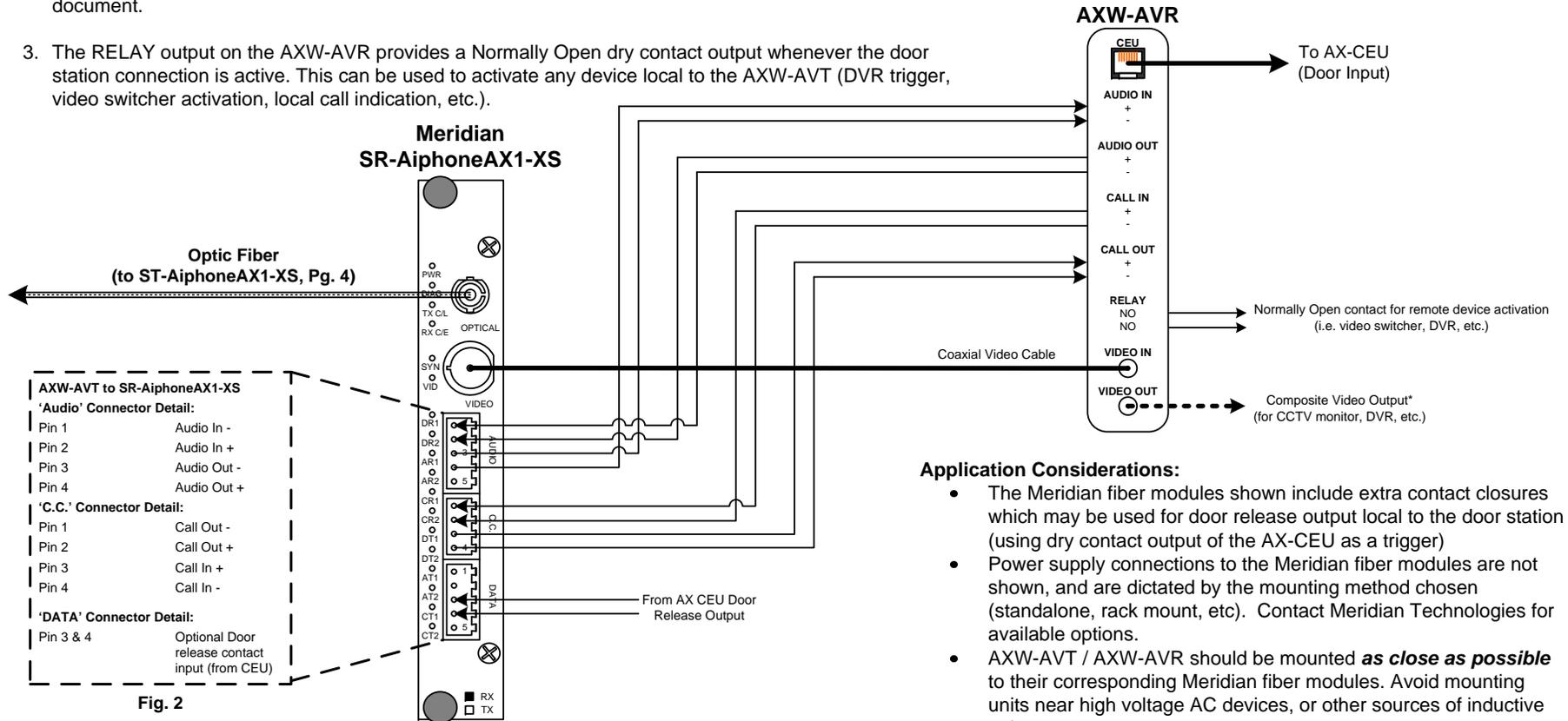
For complete AX system installation, wiring, and programming information, please consult the AX Installation Manual (included on CD with AX Central Exchange Unit, or available at <http://www.aiphone.com>).

CONFIGURATION DIAGRAM:

AXW-AVT / AXW-AVR with Meridian Technology Fiber (ST/SR-AiphoneAX1-XS), 2 of 2

Configuration Notes (2 of 2):

1. Connect the AXW-AVR 'CEU' connection to an unused Door station input on the AX-CEU and ensure that the AX-CEU has been programmed to accept a video door station on that input (see Pg. 2).
2. Connect the Call In / Call Out and Audio In / Audio Out connections on the AXW-AVR to the Meridian fiber receiver module (as detailed below, Fig. 2). For complete pin definitions, consult the Meridian installation document.
3. The RELAY output on the AXW-AVR provides a Normally Open dry contact output whenever the door station connection is active. This can be used to activate any device local to the AXW-AVT (DVR trigger, video switcher activation, local call indication, etc.).



Application Considerations:

- The Meridian fiber modules shown include extra contact closures which may be used for door release output local to the door station (using dry contact output of the AX-CEU as a trigger)
- Power supply connections to the Meridian fiber modules are not shown, and are dictated by the mounting method chosen (standalone, rack mount, etc). Contact Meridian Technologies for available options.
- AXW-AVT / AXW-AVR should be mounted **as close as possible** to their corresponding Meridian fiber modules. Avoid mounting units near high voltage AC devices, or other sources of inductive noise.

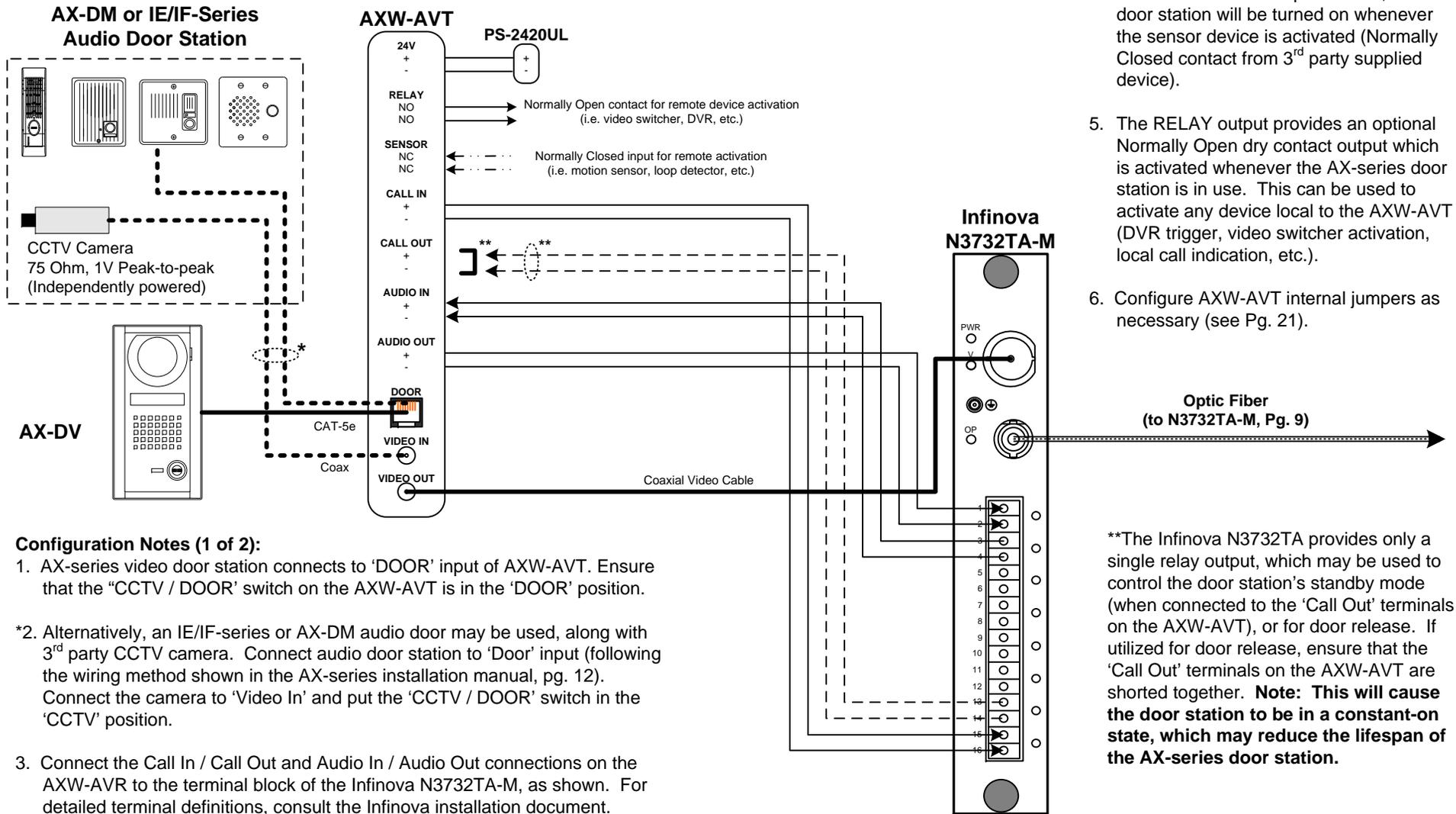
Please Note:

Only information pertaining to the connection and operation of the AXW-AVT / AXW-AVR and listed 3rd party devices interfacing with it are included here. Aiphone is not responsible for attempts to connect the AXW-AVT / AXW-AVR to untested 3rd party transmission hardware. Consult the installation manual for the 3rd party device being utilized for further information regarding physical mounting, base functionality, power requirements, etc. For the most up-to-date compatibility information, please consult <http://www.aiphone.com> or contact Aiphone Technical Support.

For complete AX system installation, wiring, and programming information, please consult the AX Installation Manual (included on CD with AX Central Exchange Unit, or available at <http://www.aiphone.com>).

CONFIGURATION DIAGRAM:

AXW-AVT / AXW-AVR with Infinova Fiber (N3732TA-M/R, N3732RA-M/R), 1 of 2



Configuration Notes (1 of 2, continued):

- When the SENSOR input is used, the door station will be turned on whenever the sensor device is activated (Normally Closed contact from 3rd party supplied device).
- The RELAY output provides an optional Normally Open dry contact output which is activated whenever the AX-series door station is in use. This can be used to activate any device local to the AXW-AVT (DVR trigger, video switcher activation, local call indication, etc.).
- Configure AXW-AVT internal jumpers as necessary (see Pg. 21).

Configuration Notes (1 of 2):

- AX-series video door station connects to 'DOOR' input of AXW-AVT. Ensure that the "CCTV / DOOR" switch on the AXW-AVT is in the 'DOOR' position.
- Alternatively, an IE/IF-series or AX-DM audio door may be used, along with 3rd party CCTV camera. Connect audio door station to 'Door' input (following the wiring method shown in the AX-series installation manual, pg. 12). Connect the camera to 'Video In' and put the 'CCTV / DOOR' switch in the 'CCTV' position.
- Connect the Call In / Call Out and Audio In / Audio Out connections on the AXW-AVT to the terminal block of the Infinova N3732TA-M, as shown. For detailed terminal definitions, consult the Infinova installation document.

The Infinova N3732TA provides only a single relay output, which may be used to control the door station's standby mode (when connected to the 'Call Out' terminals on the AXW-AVT), or for door release. If utilized for door release, ensure that the 'Call Out' terminals on the AXW-AVT are shorted together. **Note: This will cause the door station to be in a constant-on state, which may reduce the lifespan of the AX-series door station.

Please Note:

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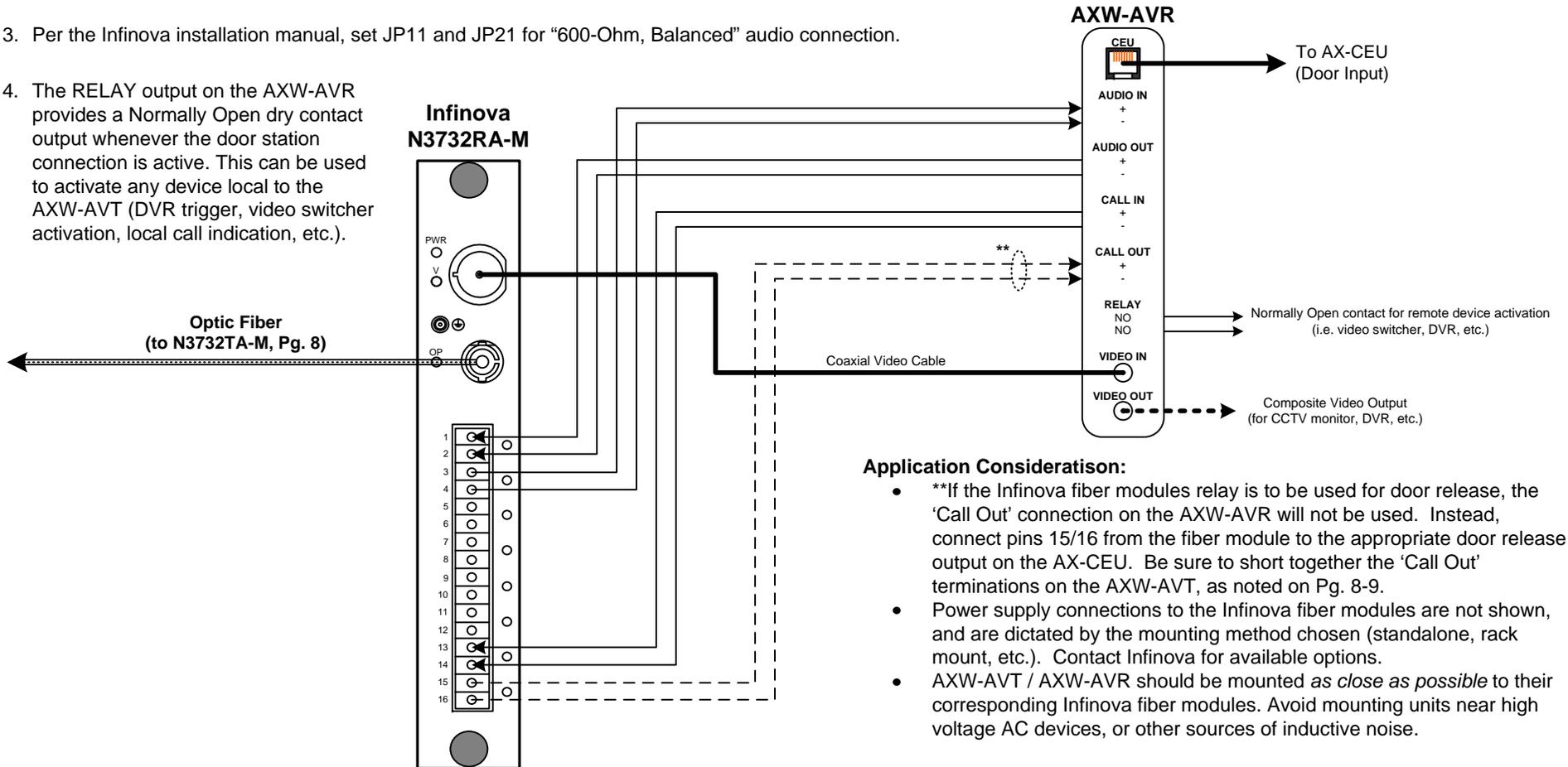
For complete AX system installation, wiring, and programming information, please consult the AX Installation Manual (included on CD with AX Central Exchange Unit, or available at <http://www.aiphone.com>).

CONFIGURATION DIAGRAM:

AXW-AVT / AXW-AVR with Infinova Fiber (N3732TA-M/-R, N3732RA-M/-R), 2 of 2

Configuration Notes (2 of 2):

1. Connect the AXW-AVR 'CEU' connection to an unused Door station input on the AX-CEU and ensure that the AX-CEU has been programmed to accept a video door station on that input (see Pg. 2).
2. Connect the Call In / Call Out and Audio In / Audio Out connections on the AXW-AVR to the terminal block of the Infinova N3732RA-M, as shown. For detailed terminal definitions, consult the Infinova installation document.
3. Per the Infinova installation manual, set JP11 and JP21 for "600-Ohm, Balanced" audio connection.
4. The RELAY output on the AXW-AVR provides a Normally Open dry contact output whenever the door station connection is active. This can be used to activate any device local to the AXW-AVT (DVR trigger, video switcher activation, local call indication, etc.).



Application Consideration:

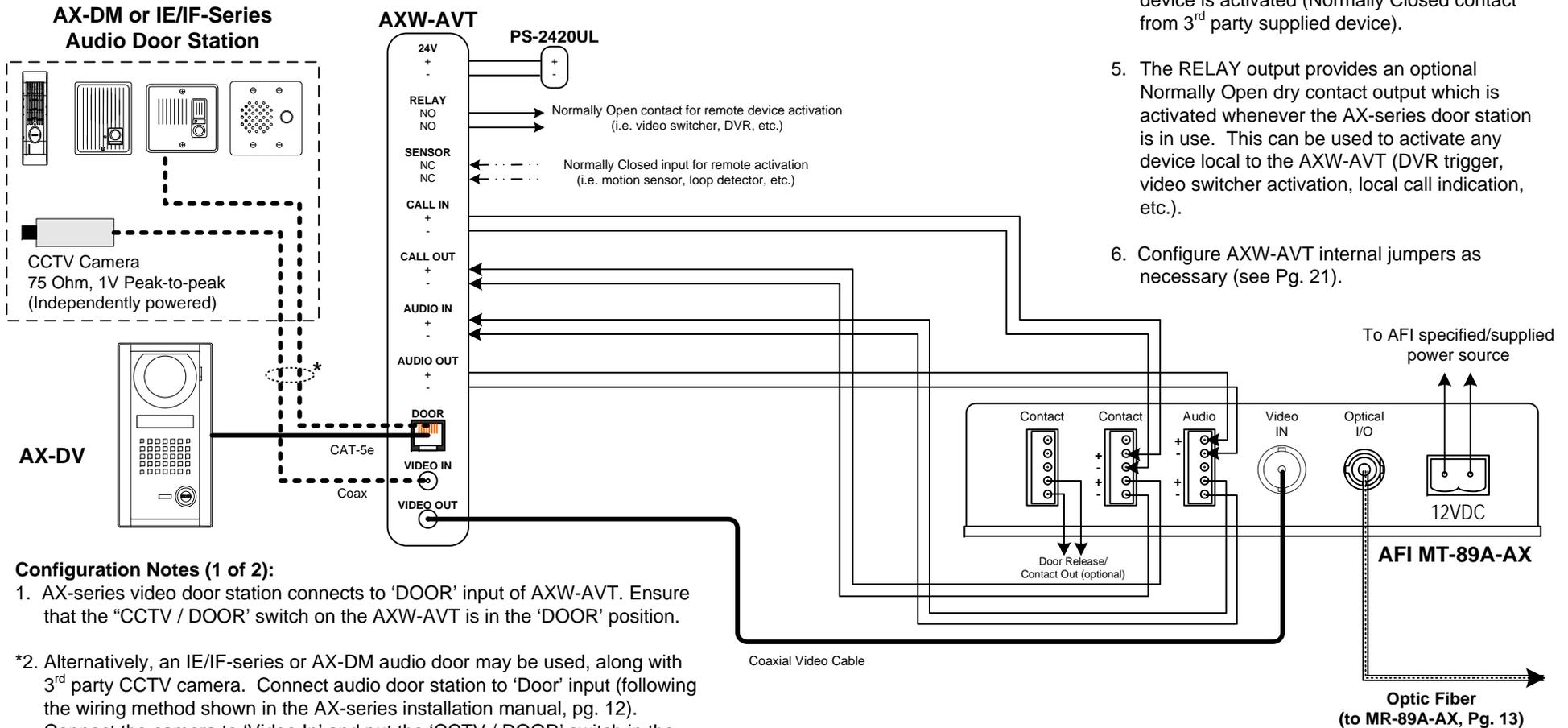
- **If the Infinova fiber modules relay is to be used for door release, the 'Call Out' connection on the AXW-AVR will not be used. Instead, connect pins 15/16 from the fiber module to the appropriate door release output on the AX-CEU. Be sure to short together the 'Call Out' terminations on the AXW-AVT, as noted on Pg. 8-9.
- Power supply connections to the Infinova fiber modules are not shown, and are dictated by the mounting method chosen (standalone, rack mount, etc.). Contact Infinova for available options.
- AXW-AVT / AXW-AVR should be mounted as *close as possible* to their corresponding Infinova fiber modules. Avoid mounting units near high voltage AC devices, or other sources of inductive noise.

Please Note:

Only information pertaining to the connection and operation of the AXW-AVT / AXW-AVR and listed 3rd party devices interfacing with it are included here. Aiphone is not responsible for attempts to connect the AXW-AVT / AXW-AVR to untested 3rd party transmission hardware. Consult the installation manual for the 3rd party device being utilized for further information regarding physical mounting, base functionality, power requirements, etc. For the most up-to-date compatibility information, please consult <http://www.aiphone.com> or contact Aiphone Technical Support.

For complete AX system installation, wiring, and programming information, please consult the AX Installation Manual (included on CD with AX Central Exchange Unit, or available at <http://www.aiphone.com>).

CONFIGURATION DIAGRAM: AXW-AVT / AXW-AVR with AFI (American Fibertek) Fiber (MT/MR-89A-AX), 1 of 2



Configuration Notes (1 of 2):

- AX-series video door station connects to 'DOOR' input of AXW-AVT. Ensure that the "CCTV / DOOR" switch on the AXW-AVT is in the 'DOOR' position.
- Alternatively, an IE/IF-series or AX-DM audio door may be used, along with 3rd party CCTV camera. Connect audio door station to 'Door' input (following the wiring method shown in the AX-series installation manual, pg. 12). Connect the camera to 'Video In' and put the 'CCTV / DOOR' switch in the 'CCTV' position.
- Connect the Call In / Call Out and Audio In / Audio Out connections on the AXW-AVT to the terminal block of the AFI MT-89A-AX, as shown. For detailed terminal definitions, consult the AFI MT-89A-AX installation sheet.

Please Note:

Only information pertaining to the connection and operation of the AXW-AVT / AXW-AVR and listed 3rd party devices interfacing with it are included here. Aiphone is not responsible for attempts to connect the AXW-AVT / AXW-AVR to untested 3rd party transmission hardware. Consult the installation manual for the 3rd party device being utilized for further information regarding physical mounting, base functionality, power requirements, etc. For the most up-to-date compatibility information, please consult <http://www.aiphone.com> or contact Aiphone Technical Support.

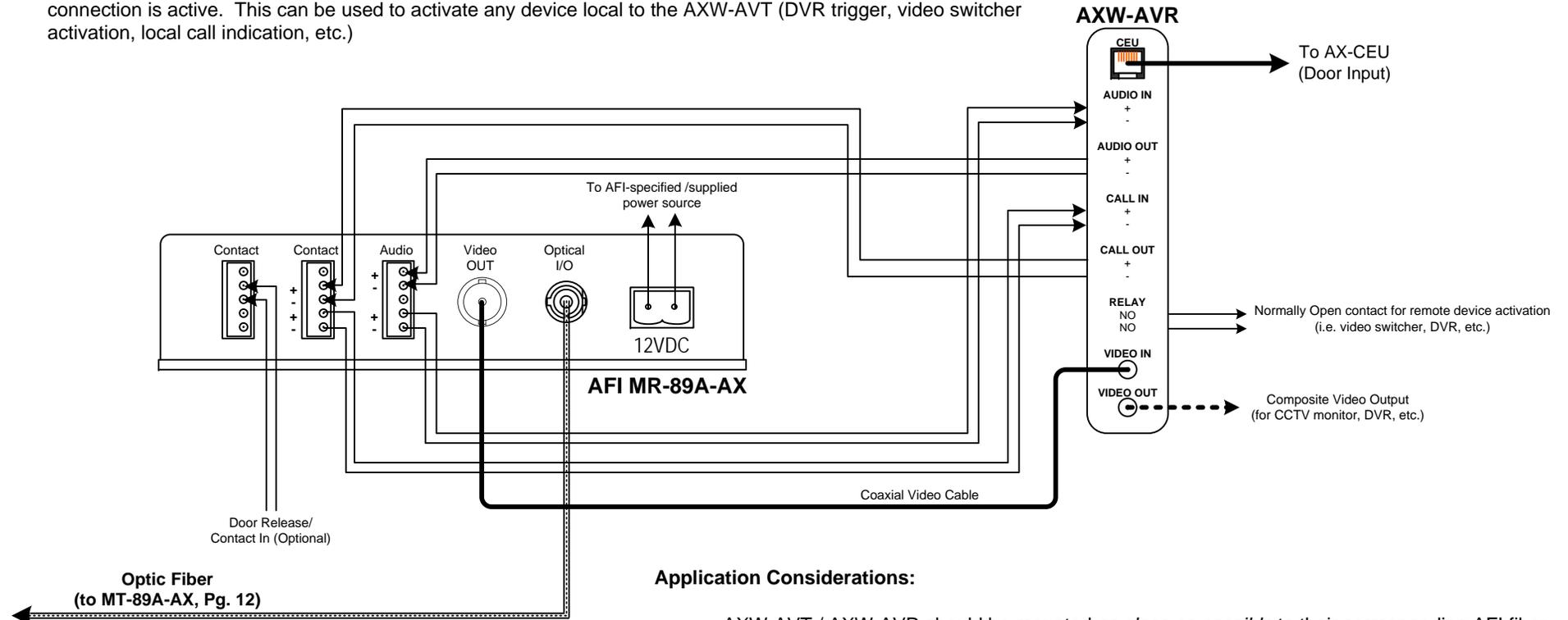
For complete AX system installation, wiring, and programming information, please consult the AX Installation Manual (included on CD with AX Central Exchange Unit, or available at <http://www.aiphone.com>).

CONFIGURATION DIAGRAM:

AXW-AVT / AXW-AVR with AFI (American Fibertek) Fiber (MT/MR-89A-AX), 2 of 2

Configuration Notes (2 of 2):

1. Connect the Call In / Call Out and Audio In / Audio Out connections on the AXW-AVR to the terminal block of the AFI MR-89A-AX, as shown. For detailed terminal definitions, consult the AFI MR-89A-AX installation sheet.
2. Connect the AXW-AVR 'CEU' connection to an unused Door station input on the AX-CEU and ensure that the AX-CEU has been programmed to accept a video door station on that input (see Pg. 2).
3. The RELAY output on the AXW-AVR provides a Normally Open dry contact output whenever the door station connection is active. This can be used to activate any device local to the AXW-AVT (DVR trigger, video switcher activation, local call indication, etc.)



Application Considerations:

- AXW-AVT / AXW-AVR should be mounted as *close as possible* to their corresponding AFI fiber modules. Avoid mounting units near high voltage AC devices, or other sources of inductive noise.

Please Note:

Only information pertaining to the connection and operation of the AXW-AVT / AXW-AVR and listed 3rd party devices interfacing with it are included here. Aiphone is not responsible for attempts to connect the AXW-AVT / AXW-AVR to untested 3rd party transmission hardware. Consult the installation manual for the 3rd party device being utilized for further information regarding physical mounting, base functionality, power requirements, etc. For the most up-to-date compatibility information, please consult <http://www.aiphone.com> or contact Aiphone Technical Support.

For complete AX system installation, wiring, and programming information, please consult the AX Installation Manual (included on CD with AX Central Exchange Unit, or available at <http://www.aiphone.com>).

CONFIGURATION DIAGRAM:

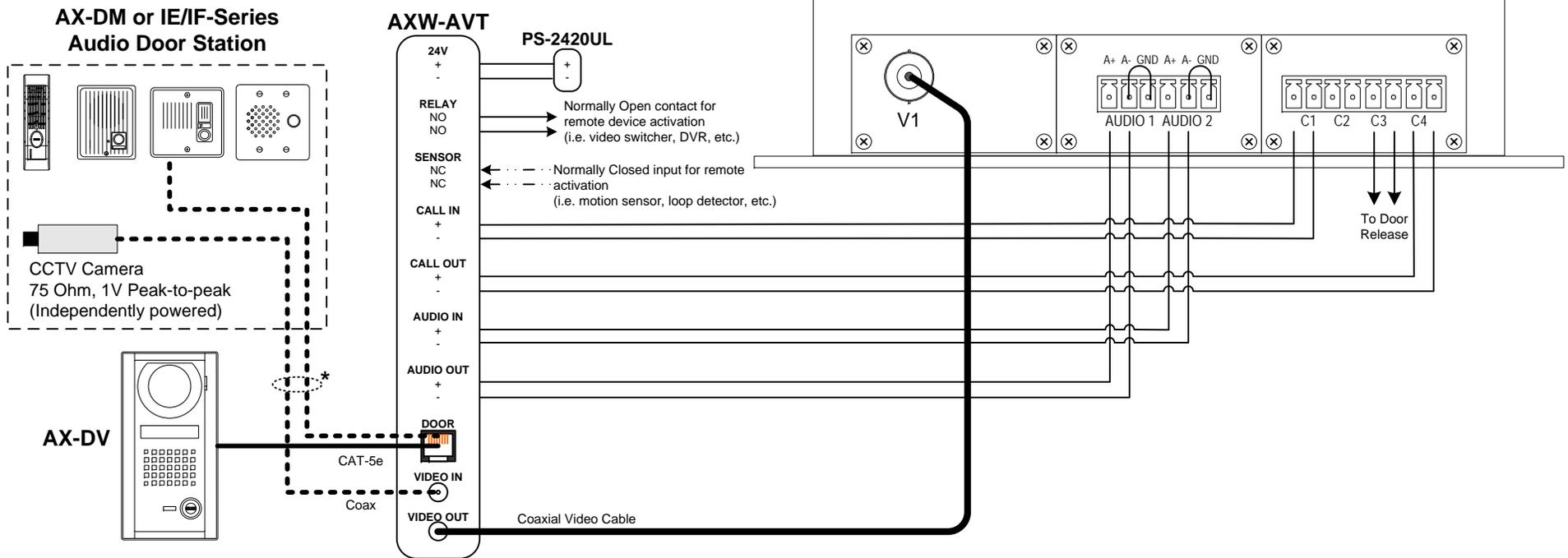
AXW-AVT / AXW-AVR with KBC Networks (FPVB1-AB1-IB2-ST, FPVB1-AB1-IB2-SR), 1 of 2

Configuration Notes (1 of 2):

- AX-series video door station connects to 'DOOR' input of AXW-AVT.
Ensure that the "CCTV / DOOR" switch on the AXW-AVT is in the 'DOOR' position.
- Alternatively, an IE/IF-series or AX-DM audio door may be used, along with 3rd party CCTV camera. Connect audio door station to 'Door' input (following the wiring method shown in the AX-series installation manual, pg. 12). Connect the camera to 'Video In' and put the 'CCTV / DOOR' switch in the 'CCTV' position.
- Connect the Call In / Call Out and Audio In / Audio Out connections on the AXW-AVT to the Meridian fiber transmitter module (as detailed at right, Fig. 1). For complete pin definitions, consult the Meridian installation document.

Configuration Notes (1 of 2, continued):

- When the SENSOR input is used, the door station will be turned on whenever the sensor device is activated (Normally Closed contact from 3rd party supplied device).
- The RELAY output provides an optional Normally Open dry contact output which is activated whenever the AX-series door station is in use. This can be used to activate any device local to the AXW-AVT (DVR trigger, video switcher activation, local call indication, etc.).
- Configure AXW-AVT internal jumpers as necessary (see Pg. 21).



Please Note:

Only information pertaining to the connection and operation of the AXW-AVT / AXW-AVR and listed 3rd party devices interfacing with it are included here. Aiphone is not responsible for attempts to connect the AXW-AVT / AXW-AVR to untested 3rd party transmission hardware. Consult the installation manual for the 3rd party device being utilized for further information regarding physical mounting, base functionality, power requirements, etc. For the most up-to-date compatibility information, please consult <http://www.aiphone.com> or contact Aiphone Technical Support.

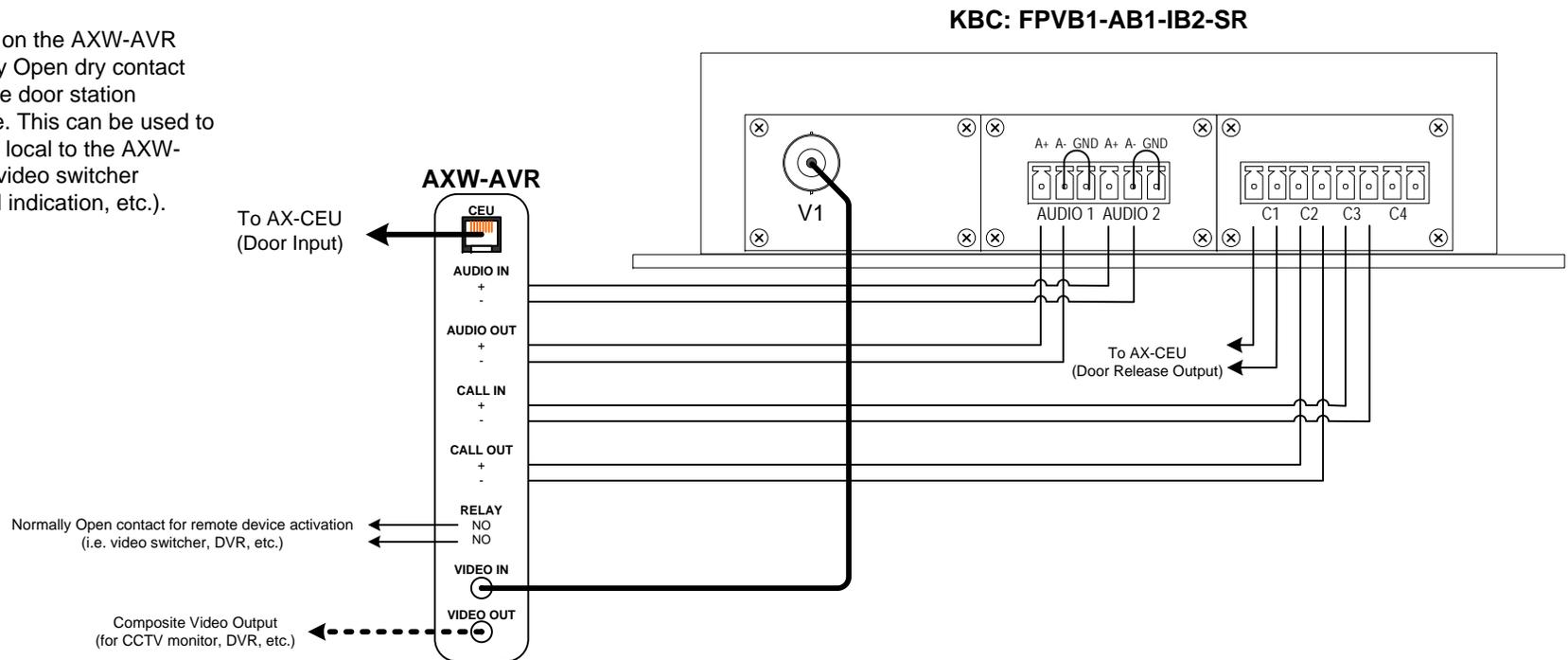
For complete AX system installation, wiring, and programming information, please consult the AX Installation Manual (included on CD with AX Central Exchange Unit, or available at <http://www.aiphone.com>).

CONFIGURATION DIAGRAM:

AXW-AVT / AXW-AVR with KBC Networks (FPVB1-AB1-IB2-ST, FPVB1-AB1-IB2-SR), 1 of 2

Configuration Notes (2 of 2):

1. Connect the Call In / Call Out and Audio In / Audio Out connections on the AXW-AVR to the terminal block of the AFI MR-1890, as shown. For detailed terminal definitions, consult the AFI MR-1890 installation sheet.
2. Connect the AXW-AVR 'CEU' connection to an unused Door station input on the AX-CEU and ensure that the AX-CEU has been programmed to accept a video door station on that input (see Pg. 2).
3. The RELAY output on the AXW-AVR provides a Normally Open dry contact output whenever the door station connection is active. This can be used to activate any device local to the AXW-AVT (DVR trigger, video switcher activation, local call indication, etc.).



Application Considerations:

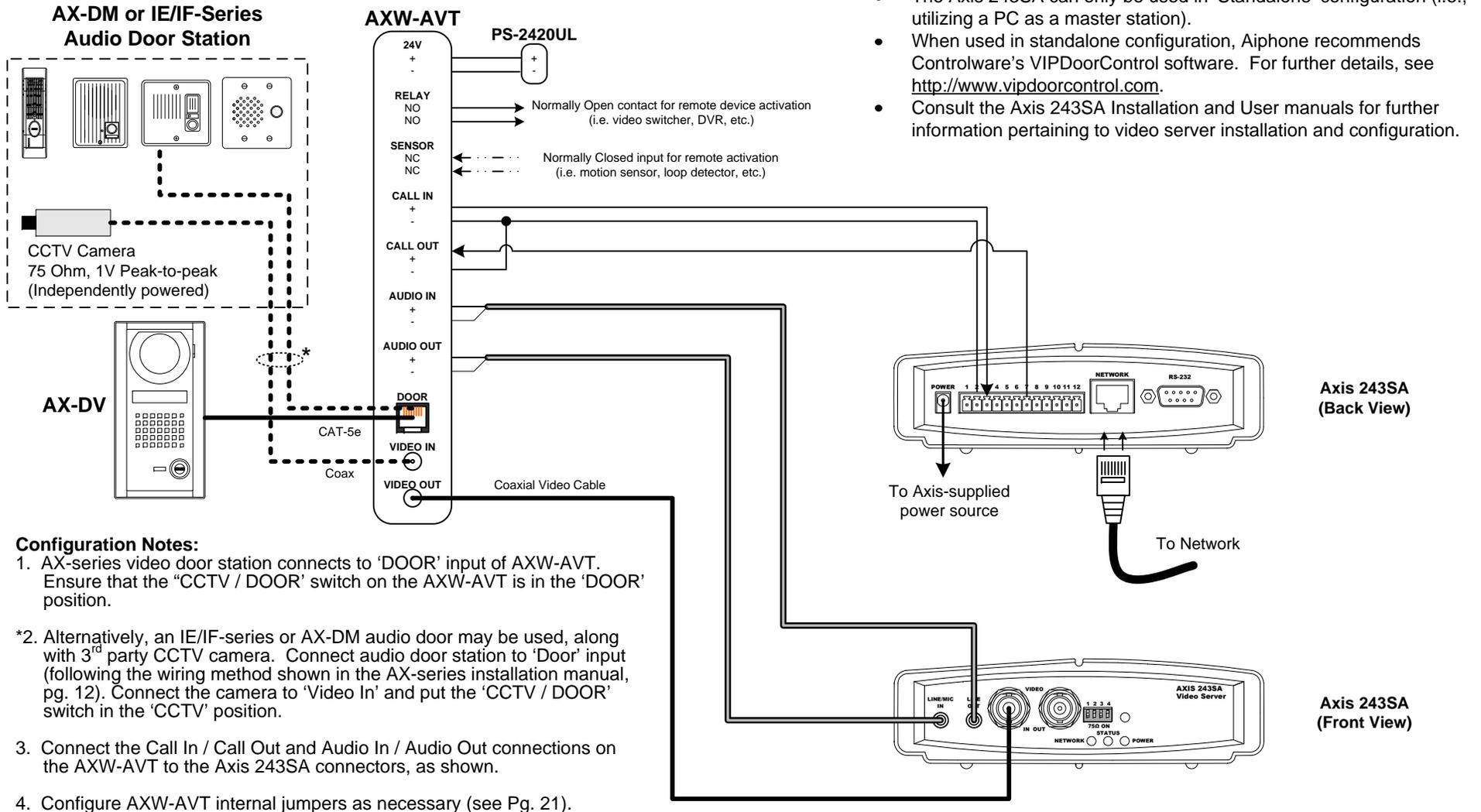
- Power supply connections to the KBC fiber modules are not shown, and are dictated by the mounting method chosen (standalone, rack mount, etc.). Contact KBC for available options.
- AXW-AVT / AXW-AVR should be mounted as *close as possible* to their corresponding KBC fiber modules. Avoid mounting units near high voltage AC devices, or other sources of inductive noise.

Please Note:

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For complete AX system installation, wiring, and programming information, please consult the AX Installation Manual (included on CD with AX Central Exchange Unit, or available at <http://www.aiphone.com>).

CONFIGURATION DIAGRAM: AXW-AVT with Axis 243SA Video Server (Standalone Only)



Axis 243SA Application Considerations:

- The Axis 243SA can only be used in 'Standalone' configuration (i.e., utilizing a PC as a master station).
- When used in standalone configuration, Aiphone recommends Controlware's VIPDoorControl software. For further details, see <http://www.vipdoorcontrol.com>.
- Consult the Axis 243SA Installation and User manuals for further information pertaining to video server installation and configuration.

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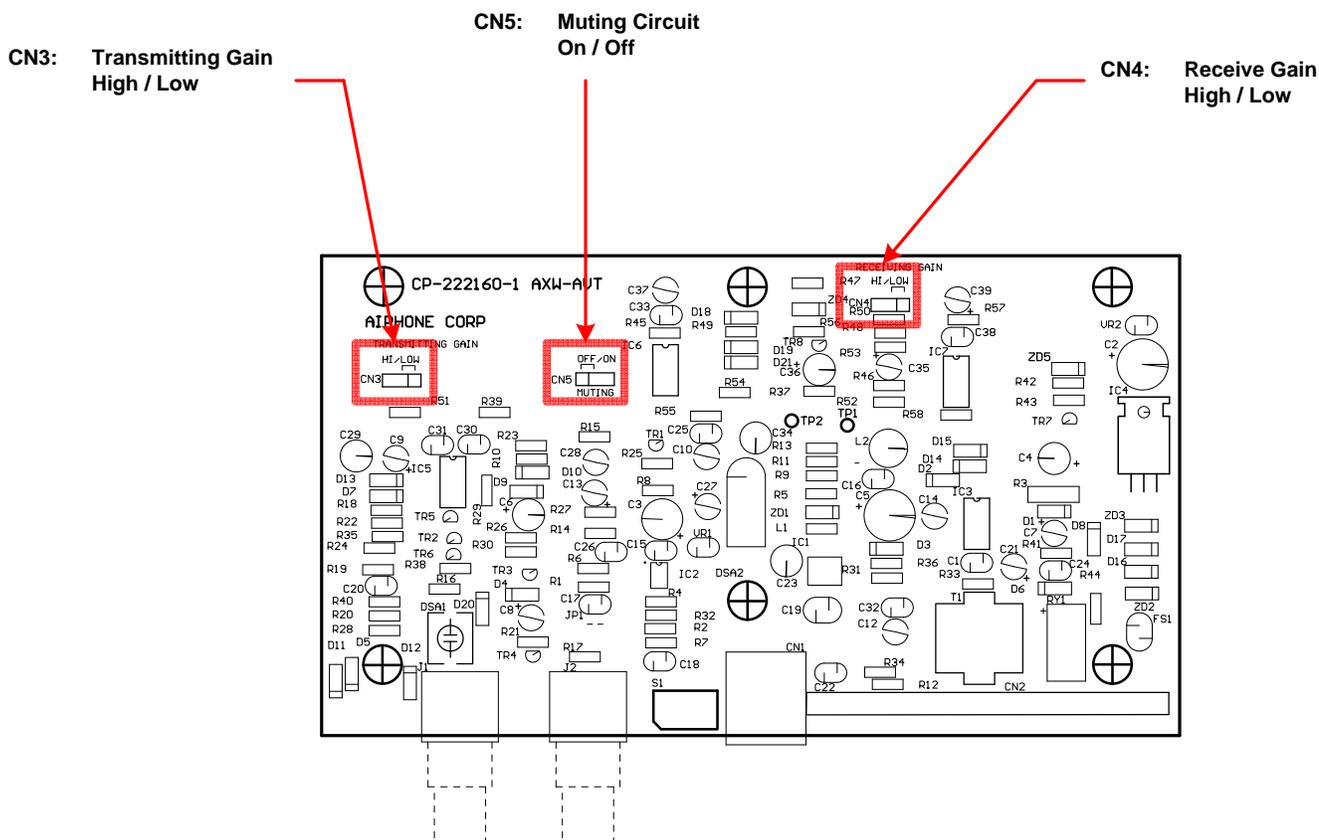
AXW-AVT Internal Jumper Settings:

The AXW-AVT has three internal jumper settings to control the functionality and conditioning of the audio circuitry. These should be adjusted as necessary, based on the selection of fiber / Ethernet equipment used. To access these jumpers, the chassis of the AXW-AVT will need to be opened. Adjusting these jumper settings will NOT invalidate the AXW-AVT's warranty.

Transmitting Gain (CN3): Controls the amount of amplification applied to the outgoing audio ('Audio Out') connection of the AXW-AVT. A 'Low' setting provides no gain, whereas a 'Hi' setting applies approximately +10db of amplification. Default position is 'Low.'

Receive Gain (CN4): Controls the amount of amplification applied to the incoming audio ('Audio In') connection of the AXW-AVT. A 'Low' setting provides no gain, whereas a 'Hi' setting applies approximately +10db of amplification. Default position is 'Low.'

Muting Circuit (CN5): The 'Muting Circuit' controls whether audio to/from the door station is completely full-duplex, or limited to one direction or the other (semi-duplex). This adjustment is required in situations where latency may be present between audio transmission and reception (i.e., Ethernet). In such situations, the muting circuit should be set to 'On' to reduce audible echoing. In situations where latency is not an issue (i.e., fiber, direct connections, etc.), this should be left in the default 'Off' position.



SPECIFICATIONS:

Power:	AXW-AVT AXW-AVR	24V DC, 500mA (use Aiphone PS-2420UL) Supplied by AX CEU
Video Input & Output:		Composite 1V Peak-to-Peak, NTSC
Video Connectors:		BNC
Door input:		RJ-45
Relay:		Normally Open contact output; 30V DC, 1A
Sensor:		Normally Closed contact input
Wire:		CAT-5e, 24AWG UTP-4
Wiring distance:		
	AXW-AVT to Door, AXW-AVR to CEU	Max. 980' cumulative
	AXW-AVT / -AVR to	As close as possible; do not exceed 16' 3 rd party devices
Dimensions:	AXW-AVT + AXW-AVR	1-5/8"H x 7"W x 4"D

FCC Class B Verification

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or locate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Note:

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