INSTRUCTION MANUAL

IRIS

IR/SERIAL DATA CAPTURE DEVICE

AV FOR AN IT WORLD

IMPORTANT SAFETY INSTRUCTIONS

1. READ these instructions.
2. KEEP these instructions.
3. HEED all warnings.
4. FOLLOW all instructions.
5. DO NOT use this apparatus near water.
6. CLEAN ONLY with dry cloth.
7. DO NOT block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. DO NOT install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. DO NOT defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. PROTECT the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. ONLY USE attachments/accessories specified by the manufacturer.
12. USE ONLY with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. UNPLUG this apparatus during lightning storms or when unused for long periods of time.
14. REFER all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. DO NOT expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.
16. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.
17. Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
18. DO NOT overload wall outlets or extension cords beyond their rated capacity as this can cause electric shock or fire.

The exclamation point, within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.

ESD Warning: The icon to the left indicates text regarding potential danger associated with the discharge of static electricity from an outside source (such as human hands) into an integrated circuit, often resulting in damage to the circuit.

WARNING: To reduce the risk of fire or electrical shock, do not expose this apparatus to rain or moisture.

WARNING: No naked flame sources - such as lighted candles - should be placed on the product.

WARNING: Equipment shall be connected to a MAINS socket outlet with a protective earthing connection.

WARNING: To reduce the risk of electric shock, grounding of the center pin of this plug must be maintained.

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IRIS Infrared/Serial Data Capture Unit

Overview

The IRIS Infrared Capture Unit (**FG5448**) is a stand-alone, self contained unit used to capture infrared (IR) or wired-IR function signals from a hand-held remote controller. Hand controllers (HCs) are used to control a wide variety of audiovisual equipment that includes monitors, VCRs, TVs, and CD players. After you capture IR functions with the IRIS unit (FIG. 1 on page 5), the functions are sent to a PC running the IREdit software program.

The IREdit software program creates HC function files that are downloaded to the AXCESS Central Controller. For step-by-step instructions on how to use the IREdit software program, refer to the *IREdit* instruction manual.

NOTE: *You can also the IR Capture and Management tool in AMX's VisualArchitect software application to capture and manage IR functions via the IRIS. Refer to the VisualArchitect Instruction Manual and online help for details.*

Specifications

IRIS (FG5448) Specifications	
Power:	12 VDC @ 160 mA max.
Dimensions (HWD):	1.51" x 5.55" x 5.45" (3.84 cm x 14.10 cm x 13.84 cm)
Weight:	18.2 oz (518.2 g)
Front Panel Components:	
SIGNAL LED:	Red indicator that blinks when the IRIS unit is receiving HC functions.
IR window:	captures HC functions.
READY LED:	Green indicator that lights when the IRIS unit is ready to receive HC functions.
VERIFY:	Red indicator that lights when the IRIS unit is ready to verify HC functions.
Alphanumeric display:	(2-digit) Red 7-segment alphanumeric display that shows the capture mode and operating status.
UP:	Increments the alphanumeric display by one and lights the red LED inside the pushbutton.
DOWN:	Decrements the display by one and lights the red LED inside the pushbutton.
SEND:	Transmits captured HC functions to a PC running the IREdit software program. The red LED inside the pushbutton lights when valid HC functions are ready to send.
Rear Panel Components:	
12 VDC/12 VAC connector:	2-pin (male) 12 VDC or 12 VAC power supply connector.
8-pin data connector:	Captures wired-IR HC functions. Connect the HC to the IRE IN or WIRED IN pins.
RS-232 connectors:	• DB-9 connector for data communications with a PC. • 6-pin RJ-11 modular connector for data communications. The RJ-11 connector is only used with older SX-DCU+ products.
Control ports:	• IR sensor to receive IR codes; IR serial input for wired IR codes. • DB-9 female connector for Axcess and PC communication.
Enclosure:	Metal with black matte finish

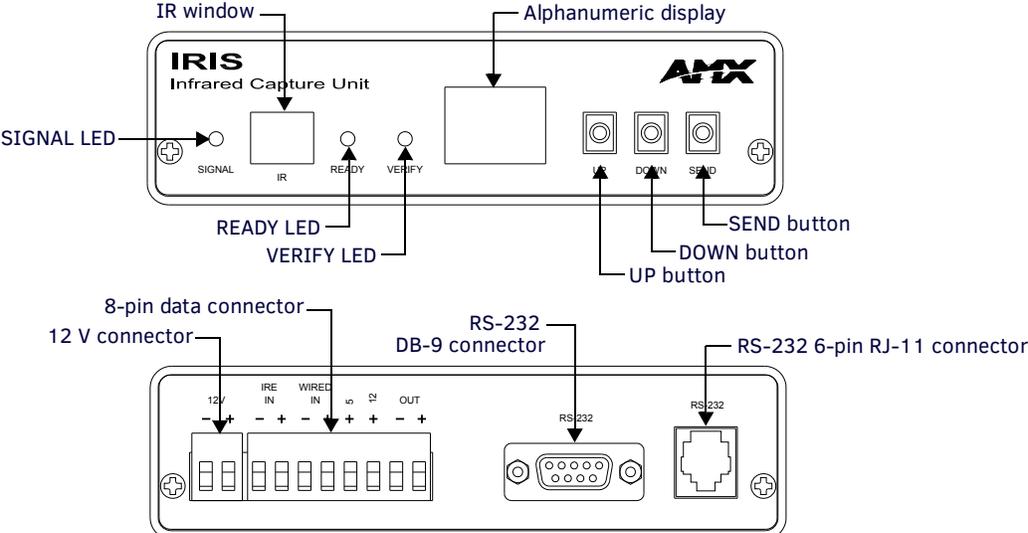## Front and Rear Panel Components

FIG. 1 IRIS front and rear views

Using the IRIS

Capturing HC Functions

The two modes you can use to capture HC functions are default and special function. You use default mode, which is automatically set when you connect power to the IRIS unit, to capture the majority of HC functions. The table below shows the IRIS unit settings for default mode. Before capturing HC functions, make sure the baud rate in the IRIS unit is set properly, and connected to a PC running the IREdit software application.

NOTE: *You can also the IR Capture and Management tool in AMX's VisualArchitect software application to capture and manage IR functions via the IRIS. Refer to the VisualArchitect Instruction Manual and online help for details.*

Refer to the *IREdit* instruction manual for information on to storing captured HC functions.

Default Mode Settings	
Default	**Setting**
Baud	9600
P3	off
P4	on
P5	off
P6	on
P7	on
P8	off

Capturing HC functions in default mode

To capture HC functions in default mode:

1. Make a list of the name and sequence of the HC functions you want to capture. The standard order for HC functions is listed in the*HC IR Functions* section on page 8.
2. Connect the RS-232 cable to the DB-9 connector on the IRIS unit and the RS-232 port on your PC, as shown in the*Cables and Adapters* section on page 8. Set the baud rate in the IRIS unit to match the PC baud rate. Refer to the*Baud Rate Settings* section on page 7 to set the baud rate. Then, connect the 12 VDC or 12 VAC power supply to the 12 VDC connector on the IRIS unit. The READY LED lights and 01 appears in the display.
3. Hold the HC device approximately 3-inches away from the IR capture window. Press and hold the first key on the HC to capture the first function. The SIGNAL LED will start blinking. Release the HC key as soon as the READY LED goes off.
4. The [ ] briefly appears in the display to indicate the HC function is captured. Then, 01 appears and the READY and VERIFY LEDS light. The LED will not light if P4 mode is active; refer to theDisplay Characters and P Modes table on page 7 for further information.
5. Hold the HC device approximately 3-inches away from the IR capture window. Press and hold the same key on the HC device again to verify the IR function was captured correctly by the IRIS unit. If the HC function is captured correctly, a pair of [ ] (brackets) will briefly flash in the display. The VERIFY LED goes off, 01 appears in the display, and the SEND pushbutton's LED lights. If an Er message appears in the display, repeat steps 3 and 5. Otherwise, go to step 6.
6. Press the SEND pushbutton to send the captured HC function to the PC running the IREdit software program.
7. Repeat steps 3 through 6 to capture all the HC functions on your list.

Capturing HC functions in SP mode

If you cannot capture an HC function in default mode, set the IRIS unit to special function (SP) mode. Perform these steps to capture HC functions in SP mode:

1. Press and release the UP and SEND pushbuttons at the same time. The message SP briefly appears in the display and the UP LED lights. The IRIS unit is now in SP mode.
2. Perform the Capturing HC functions in default mode steps 3 through 6 four times, or until the SEND LED lights, to capture the HC function. Then, go to the next step.
3. Simultaneously press and release the UP and SEND pushbuttons to reset the IRIS unit to default mode. The message nO (normal operation) briefly appears in the display to indicate default mode is active.

NOTE: *All settings are returned to their default state when power is removed from the unit.*

Capturing difficult HC functions using P3-P8 modes

Set the IRIS unit to the P3-P8 modes if you cannot capture an HC function in default or SP mode, The P3 and P4 modes are special settings to capture HC functions. Perform these steps to capture HC functions using P3-P8 modes:

1. Simultaneously press and release the UP, DOWN, and SEND pushbuttons. The message P1 appears in the display. The IRIS unit is now in P mode.
2. Use the UP or DOWN pushbutton to select the appropriate P modes according to the descriptions in the following table.

3. Simultaneously press and release the UP, DOWN, and SEND pushbuttons to toggle the P mode setting On and Off. The display then shows an On or Off message indicating the new P mode setting and then immediately exits the P mode. You can activate multiple P modes to capture an HC function; refer to theDefault Mode Settings table on page 6 for the P mode default settings when you connect power to the IRIS unit.

4. Repeat the Capturing HC functions in default mode steps 3 through 6, on page 6, to capture the HC function.

Display Characters and P Mode Settings

The following table lists the display characters and P mode settings for special HC devices.

Display Characters and P Modes	
Characters	**Description**
[ ]	HC function is captured, analyzed, stored, and verified.
Er	Error: HC function did not verify correctly.
Nd	No Device. Communication device error detected, or the IREdit program is not staged to receive HC functions.
NO	Normal Operation. Ready to capture HC.
OF	P mode is off.
On	P mode is on.
So	Send OK. HC function sent without errors to a PC running IREdit.
SP	Special Function. Special mode to capture unusual HC functions.
P1-P2	Not used.
P3	Sends HC functions to a PC running IREdit automatically after the VERIFY operation.
P4	Disables the VERIFY operation to capture HC functions. Default mode requires the VERIFY operation.
P5	Loose-timing mode to capture JVC (PQ10956) HC functions.
P6	Glitch-detection mode to capture Kinderman and some Mitsubishi HC functions.
P7	Disables glitch-detection mode to capture non-carrier HC functions.
P8	Strict-timing mode

Baud Rate Settings

The default communication setting for the IRIS unit is 9600 baud. You can change the baud rate with the UP, DOWN, and SEND pushbuttons. You must set the IRIS unit's baud rate to match the baud rate of the PC running the IREdit software program to store HC functions.

NOTE: *The IRIS unit automatically sets the baud rate to 9600 when you connect power. If you reset the baud to any other setting and disconnect power, the previous baud rate setting is lost and the IRIS unit will default back to 9600 baud.*

To set the baud rate:

1. Disconnect the power supply from the IRIS unit.

2. Press and hold the UP, DOWN, and SEND pushbuttons. Reconnect the power supply and release the pushbuttons.

3. The two digits that appear in the display represent the current baud rate setting. The following table lists the RS-232 baud rates and corresponding display digits.

| Baud Rate and Display Digits	
Baud Rate	**Display Digits**
300	03
600	06
1200	12
2400	24
4800	48
9600	96

4. Press the UP or DOWN pushbuttons to reset the baud rate.

5. Press and hold the UP, DOWN, and SEND pushbuttons again to set the new baud rate. The READY LED lights to indicate the IRIS unit is ready to capture an HC function.

Cables and Adapters

Depending on your IREdit programming configuration, one or more cables may be required. Connectors are shown from the wiring side. FIG. 2 shows a computer-to-Axcess Control System (DB-25 to DB-9) wiring diagram; FIG. 3 shows a computer-to-Axcess Central Controller (DB-9-to-DB-9) wiring diagram.
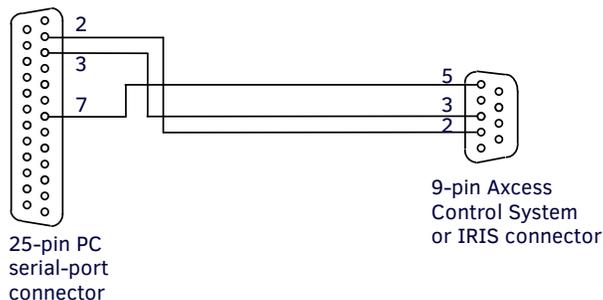
FIG. 2 Computer-to-Axcess Control System (DB-25 to DB-9) wiring diagram
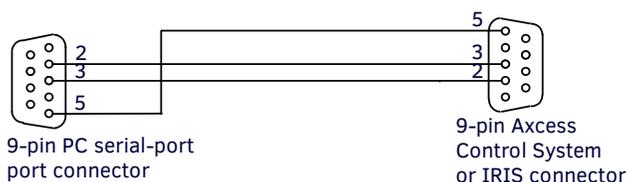
FIG. 3 Computer-to-Axcess Control System (DB-25 to DB-9) wiring diagram

HC IR Functions

The following table lists the HC IR functions in standard order.

HC IR Functions - Standard Order			
Function	**Description**	**Function**	**Description**
1	Play >	22	Channel up or +
2	Stop [ ]	23	Channel down or -
3	Pause | | or still	24	Volume up or +
4	Ffwd >> (AMS/skip track/chapter)	25	Volume down or -
5	Rewind << (AMS/skip track/chapter)	26	Mute
6	Search fwd >>| (AMS/scan)	27	On (power typically)
7	Search rev |<< (AMS/scan)	28	Off (power typically)
8	Record	29	TV/Video or TV/VCR or TV/LDP (one button source selection)
9	Power or on/off	30	TV
10	'0' or '10'	31	Video1, Line A, VCR1, VDP, or input +
11	'1' (channel digits or tracks for CD)	32	Video2, Line B, VCR2, or input -
12	'2'	33	Video3
13	'3'	34	RGB1 or Tape1
14	'4'	35	RGB2 or Tape2
15	'5'	36	CD
16	'6'	37	Tuner
17	'7'	38	Phono
18	'8'	39	Aux
19	'9'	40	AM/FM
20	'+10' or '+100'	41	Play < (play reverse)
21	Enter (used in conjunction with number typically)	42	A/B

Troubleshooting

Overview

This section provides product solutions to common problems.

E1 or ER messages

The Er/E1 message appears when there is a communication problem with the PC and not an error in capturing the IR functions.

E1 or Er Messages	
Problem	**Solution:**
A Hand Control can't seem to capture the codes. The AXB-IRIS is able to verify the codes, but when the Send Command is pressed, an **Er** appears on the unit's display.	• Using NetLinx Studio: Go into the Device Manager dialog box and change the COM port settings. Verify that the new settings are as follows: 9600, No Parity, 8 data bits, 1 stop bit, and Flow Control is set to None. • Using IREdit: This program is recommended for use with this product and can also be used if the Studio application changes (mentioned above) do not work.

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