



I . C . E .

Integrated Cabin Entertainment System

## Installation Manual

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P/N 8010-00, Revision B  
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## Record of Revisions

<b>Revision</b>	<b>Revision Date</b>	<b>Description</b>
A	10 March 2006	Intial Release
B	28 March 2008	Revised Drawings for DVD & Video Amp. Added I/R Remote Sensor Install Kit, Drawings for I/R Sensor and Light Guide.

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# 1. General Information

The purpose of this operation manual is to provide information to ensure proper installation of this product.

It is the responsibility of those installing this item on or within a specific type or class of certified aircraft to document and obtain approval for an acceptable installation from the administrator.

## 1.1. General Description

The ICE system consists of four main components:

- ❖ Passenger Control Unit (PCU)
- ❖ DVD/CD Player (DVD)
- ❖ Remote Satellite receiver (SAT)
- ❖ Video Amplifier

The PCU will normally be mounted in an area accessible to the passengers. PCU with IR remote controls remote mounted “I.C.E.” components: Sirius© Satellite Radio, DVD/CD, and AUX audio input. Two distinct channels allow some passengers to receive one source while others receive a second source. All of the functions can be operated from the PCU. There is an infrared remote controller that can control the most frequently used functions such as volume, etc.

The SAT is remote mounted Sirius© Satellite Radio module with antenna. Sirius provides 120 streams of coast-to-coast digital quality sound including NFL and NASCAR. There are no passenger controls on the SAT unit.

The DVD/CD player is a remote mounted multi-regional DVD drive which allows you to view DVDs or listen to CD's. The unit also is a CD/MP3 player. DVD/CD player should be mounted in an area that passengers have access to for changing discs. This can be in a cabinet or entertainment equipment bay. The only direct passenger operation on the DVD is “Eject” when the PCU is off. When the system is on, the eject feature is controlled at the PCU.

AI - Video Amp is a remote mounted video amp with 2 video inputs and 6 video outputs. Each of the 6 video outputs is selected between Video 1 or 2 input. Six individual 12 VDC power supplies at 0.75 amps each.

## 1.2. Unpacking and Inspecting the ICE System

Exercise extreme care when unpacking the ICE System. Make a visual inspection of the unit for evidence of damage incurred during shipment. If a claim for damage is to be made, the unit must be returned in the original packaging.

## 1.3.Specifications

### 1.3.1. PCU, Passenger Control Unit

SPECIFICATION	CHARACTERISTIC
Part Number	PCU20-00
Operating Voltage	11-33 VDC
Current Draw	0.2 Amps
Remote	Infrared Red 3 Wire
Weight	0.75 LBS (.34KG)
Physical Dimensions	Unit Length: 1.25" (32mm) Note: With Knob Unit Width: 5.50" (140mm) Unit Height: 2.00" (59mm)

### 1.3.2. DVD/CD Player

SPECIFICATION	CHARACTERISTIC
Part Number	AV5008-00
Operating Voltage	11-33 VDC
Current Draw	0.4 Amps
DVD Playable Discs	DVD, CD & MP3 Mutli Region & All Video Output: NTSC or Pal
Audio Output	5 Volts RMS into 30 Ohm Load
Audio Frequency Response	100Hz to 20Khz Nominal
Audio Input	(2ea) Aux Audio Inputs Audio Input Impedance: Greater Than 10K Aux Audio Input Sensitivity: 200mV
Weight	1.70 LBS (.34KG)
Physical Dimensions	Unit Length: 8.75" (222mm) W/Connectors Unit Width: 5.80" (148mm) Unit Height: 1.80" (46mm)

### 1.3.3. Remote Satellite Radio Module

SPECIFICATION	CHARACTERISTIC
Part Number	SSR30-00
Operating Voltage	11-33 VDC
Current Draw	0.2 Amps
Satellite Radio	Receiving Frequencies: 2322.293/2330.207 MHz Audio: Signal to Noise Ratio: 95db Distortion: 0.01 % (1 kHz)
Audio Output	5 Volts RMS into 30 Ohm Load
Audio Frequency Response	100Hz to 20Khz Nominal
Audio Input	(2ea) Aux Audio Inputs Audio Input Impedance: Greater Than 10K Aux Audio Input Sensitivity: 200mV
Weight	1.20 LBS (.34KG)
Physical Dimensions	Unit Length: 6.25" (159mm) Unit Width: 5.00" (127m) Unit Height: 1.25" (32mm)

### 1.3.4. Video Amplifier

SPECIFICATION	CHARACTERISTIC
Part Number	AV2016-00
Operating Voltage	18-33 VDC
Current Draw	2.5 Amps
Video Format	NTSC or Pal
Video Input	Video Input Level: 1.0Vpp
Video Output Level	Video Output Level: 1.0 Vpp
Video Output	Video Output: Six Channels
Output Impedance	Output Impedance 75 Ohms
Discrete Inputs	(6ea) Discrete Inputs, Logic Level Low or Momentary Switch Input. Selects between Video 1 & Video 2 for each of the Six Video Outputs.
Input Sources	Two Channels
Weight	1.00 LBS (.34KG)
Physical Dimensions	Unit Length: 6.25" (159mm) Unit Width: 2.00" (51mm) Unit Height: 1.75" (44mm)

## **1.4. Installation Accessories**

### **1.4.1. PCU, Passenger Control Unit**

P/N PCU20-01, PCU Installation Kit

- (1ea) ICE8011-00 ICE User Manual
- (1ea) 15 Pin D-Sub Female Mating Connector
- (1ea) 15 Pin Backshell
- (15ea) D-Sub Female Pins
- (1ea) Remote Control Unit

### **1.4.2. DVD/CD Player**

P/N AV5008-01, DVD/CD Player Installation Kit

- (1ea) 25 Pin D-Sub Female Mating Connector
- (1ea) 25 Pin D-Sub Backshell
- (25ea) D-Sub Female Pins

### **1.4.3. Remote Satellite Radio Module**

P/N SSR30-01, Satellite Radio Installation Kit

- (1ea) 25 Pin D-Sub Female Mating Connector
- (1ea) 25 Pin D-Sub Backshell
- (25ea) D-Sub Female Pins
- (1ea) Sirius Radio Antenna
  - Mechanical:
  - Weight: 0.7 Oz
  - Height: 73 Inch
  - Diameter: 3.50 Inches
  - Finish: Skydrol Resistant Polyurethane Enamel
  - Material: ALUM 6061-T6, Thermoset Plastic
  - Connector: Type "TNC" Female

### **1.4.4. Video Amplifier**

P/N AV2016-01, Video Amplifier Installation Kit

- (1ea) 26 Pin HD Male Mating Connector
- (1ea) 26 Pin Backshell
- (26ea) HD Male Pins

### **1.4.5. IR Remote Sensor Assy**

P/N IRR020-01

- (1ea) 3 Pin Molex
- (3ea) Female Pins
- (1ea) Light Guide

### **1.4.6. Items Not Provided**

- ❖ Video Connectors and Antenna Connector
- ❖ All Cables and Wiring
- ❖ Mounting Hardware



## 1.4.7. Crimp Tools

Recommended Crimp Tools					
		High Density 22-28 AWG		Standard Density 20-24 AWG	
	Hand Crimping Tool	Positioner	Insertion/ Extraction Tool	Positioner	Insertion/ Extraction Tool
Military P/N	M22520/2-01	M22520/2-09	M81969/1-04	M22520/2-08	M81969/1-02
Positronic P/N	9507	9502-3	M81969/1-04	9502-5	M81969/1-02
ITT Cannon P/N	995-0001-584	995-0001-739	N/A	995-0001-604	980-2000-426
AMP P/N	601966-1	601966-6	91067-1	601966-5	91067-2
Daniels P/N	AFM8	K42	M24308/18-1	K13-1	M24308/1-02
Astro P/N	615717	615725	M81969/1-02	615724	M81969/1-02

## 1.4.8. Warranty

Avionics Innovations warrants the ICE System against material or manufacturing defects for a period of one year from the date of installation. Avionics Innovations will, upon receipt of the failed unit, repair or replace the unit at our discretion. Avionics Innovations will pay UPS Ground shipping charges for warranty returned items. Charges for express shipment will be the responsibility of the sender. This warranty will be void if the unit has been tampered with or opened by unauthorized personnel.

To validate warranty you must return completed AEA Warranty Form

This warranty is not transferable. Any implied warranties expire at the expiration date of this warranty. WE SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. This warranty does not cover a defect that has resulted from improper or unreasonable use or maintenance as determined by us. This warranty is void if there is any attempt to disassemble this product without factory authorization. During the warranty period, the unit must be returned to Avionics Innovations and, at own option, will be repaired or replaced at no charge.

**IMPORTANT:** Any labor charges associated with the removal of product or related trouble shooting by any firm other than Avionics Innovations will not be covered.

### NOTE

FOR TECHNICAL ASSISTANCE PLEASE CALL 760-788-2602 8:00 AM TO 5:00 PM PST.  
ALL REPAIRS AND RETURNS ARE PROCESSED THROUGH AVIONICS INNOVATIONS.

Email: [support@avionicsinnovations.com](mailto:support@avionicsinnovations.com)

## 1.5.Rear Connections

### 1.5.1. PCU, Passenger Control Unit

<b>J1 (15 Pin Male)</b>	<b>Passenger Control Unit</b>
1	11-33 VDC In
2	Power Ground
3	Satellite RS 232 TX
4	Satellite RS 232 RX
5	RS 232 Com
6	DVD RS 232 TX
7	DVD RS 232 RX
8	RS 232 Com
9	SDA Audio Control Output
10	SCL Audio Control Output
11	Infrared Red RX Input
12	Infrared Ground
13	Infrared Red 3.3 VDC Power Output
14	Spare
15	Spare

## 1.5.2. DVD/CD Player

<b>J-3 (25 Pin Male)</b>	<b>DVD/CD</b>
1	Power Ground
2	RS232 TX
3	RS232 RX
4	Power Ground
5	Audio Ground
6	Audio Ground
7	Audio Ground
8	Left Audio Pre-Amp Output
9	Right Audio Pre-Amp Output
10	SDA Audio Control Input
11	SCL Audio Control Input
12	+28VDC Mute In
13	Ground Mute In
14	11-33VDC In
15	Left Secondary Headphone Output
16	Right Secondary Headphone Output
17	Left Main Headphone Output
18	Right Main Headphone Output
19	#2 Aux Audio In Left
20	#2 Aux Audio In Right
21	Audio Mute Input
22	Power Ground
23	Power Ground
24	#1 Aux Audio In Left
25	#1 Aux Audio In Right

### 1.5.3. Remote Satellite Radio Module

<b>J2 (25 Pin Male)</b>	<b>Satellite Radio</b>
1	+28VDC Mute In
2	Left Secondary Headphone Output
3	Audio Ground
4	Right Secondary Headphone Output
5	Power Ground
6	#1 Aux Audio In Left
7	Audio Ground
8	#1 Aux Audio In Right
9	RS 232 TX
10	Spare
11	SCL Audio Control Input
12	Spare
13	Satellite Left Audio Pre-Amp Output
14	Spare
15	Spare
16	Ground
17	11-33 VDC In
18	Ground Mute In
19	#2 Aux Audio In Left
20	RS232 RX
21	#2 1 Aux Audio In Right
22	Right Main Headphone Output
23	Left Main Headphone Output
24	Satellite Right Audio Pre-Amp Output
25	SDA Audio Control Input

### 1.5.4. Video Amplifier

<b>J7 (26 Pin Female)</b>	<b>Video Amplifier</b>
1	Video 1 Control In
2	Video 2 Control In
3	Video 3 Control In
4	Video 4 Control In
5	Video 5 Control In
6	Video 6 Control In
7	Video Switch Select (Open for Momentary and GND for Direct Switch)
8	18-33 VDC In for 12VDC Outputs on Pins 19-24
9	18-33 VDC In for 12VDC Outputs on Pins 19-24
10	Video 1 Control Gnd
11	Video 2 Control Gnd
12	Video 3 Control Gnd
13	Video 4 Control Gnd
14	Video 5 Control Gnd
15	Video 6 Control Gnd
16	Ground
17	Power Ground
18	Power Ground
19	#1 + 12 VDC Output
20	#2 + 12 VDC Output
21	#3 + 12 VDC Output
22	#4 + 12 VDC Output
23	#5 + 12 VDC Output
24	#6 + 12 VDC Output
25	18 to 33VDC Input for Video Output
26	18 to 33VDC Input for Video Output

## **1.6. Installation**

### **1.6.1. PCU, Passenger Control Unit**

Select location in cabin for mounting, see mechanical drawings for dimensions of unit.  
Mount tray in location using AN 6/32 hardware.  
Wire the unit as per attached diagram.

### **1.6.2. DVD/CD Player**

Select location in cabin for mounting, see mechanical drawings for dimensions of unit.  
Mount tray in location using AN 6/32 hardware.  
Wire the unit as per attached diagram.

**NOTE: Unit can be mounted Horizontal or Vertical**

### **1.6.3. Remote Satellite Radio Module**

Select an appropriate location in the aircraft, see mechanical drawings for dimensions of unit.  
Mount tray in location using AN 6/32 hardware.  
Wire the unit as per attached diagram.

### **1.6.4. Antenna**

Install antenna on top of aircraft using approved practices and data. Ensure the antenna is well bonded Resistance between antenna and mating surface to be less than 10mΩ.  
Use RG 142 for antenna lead, limit coax length to 25ft.  
The Antenna will need a clear view of the Northern Sky for proper reception.  
The AI-SSR will not operate inside the hangar, and in some instances next to tall hangars that obstruct the view of the Satellite to the Antenna.

### **1.6.5. Video Amplifier**

Select location in cabin for mounting.  
Mount tray in location using AN 6/32 hardware.  
Wire the unit as per attached diagram.

## **1.7.Post Installation Checkout**

### **1.7.1. Post installation procedures all Units**

1. Prior to power-up, review correct wiring by using VOM.
2. Check Power Input and Verify all Grounds.

### **1.7.2. PCU, DVD/CD & Remote Satellite Radio Module**

Press the PCU “**PWR**”, this switch turns the power on to the PCU. Press the “**SRC**” and verify the unit switches from SAT to DVD to AUX. PCU will only display units connected to the PCU. Using the Rotary/Pushbutton increase the audio out and verify that audio is heard on all SAT, DVD and AUX.

The PCU will display channel 184 when the Sirius Satellite is selected. No other channels will be selectable until the satellite radio is subscribed.

#### **NOTE**

This unit requires a subscription service from Sirius Satellite Radio. The service can be obtained by contacting Sirius Satellite Radio @ 1-888-539-7474 or on the web [www.sirius.com](http://www.sirius.com) Information needed to start subscription will be aircraft make and model, owners address, credit card information for monthly billing and the Sirius ID # located on the back panel of the AI-SSR unit.

### **1.7.3. Video Amplifier**

Turn on power and verify power & video out on installed video monitors.  
If Video ½ switches are installed, verify proper operation

## **1.8. Drawings, Mechanical & Interconnect**

**1.8.1. PCU Mechanical**

**1.8.2. DVD/CD Mechanical**

**1.8.3. Satellite Remote Receiver Mechanical**

**1.8.4. Video Amplifier Mechanical**

**1.8.5. Satellite Antenna Mechanical**

**1.8.6. I/R Sensor & Light Guide Mechanical**

**1.8.7. Light Guide Mechanical**

**1.8.8. ICE Block Diagram**

**1.8.9. PCU Control Head**

**1.8.10. DVD/CD Player**

**1.8.11. Satellite Remote Receiver**

**1.8.12. Video Amplifier**

**1.8.13. Video Amplifier**

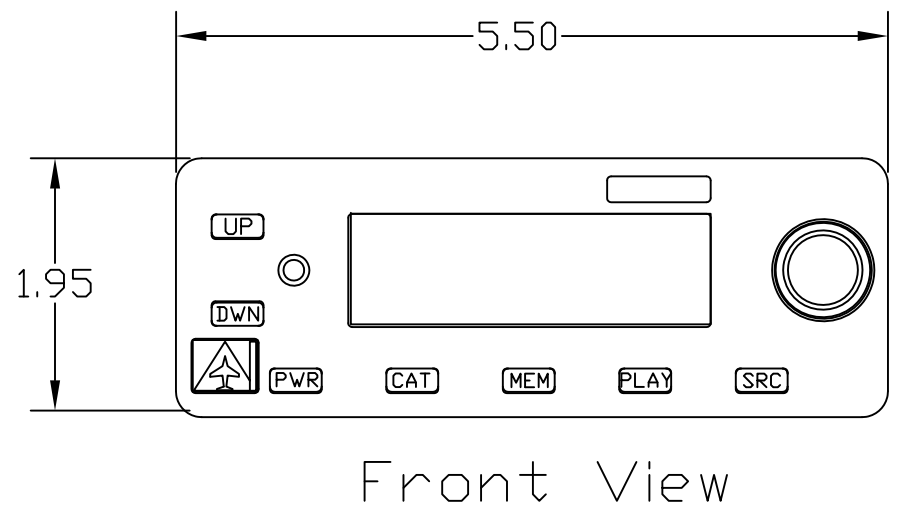
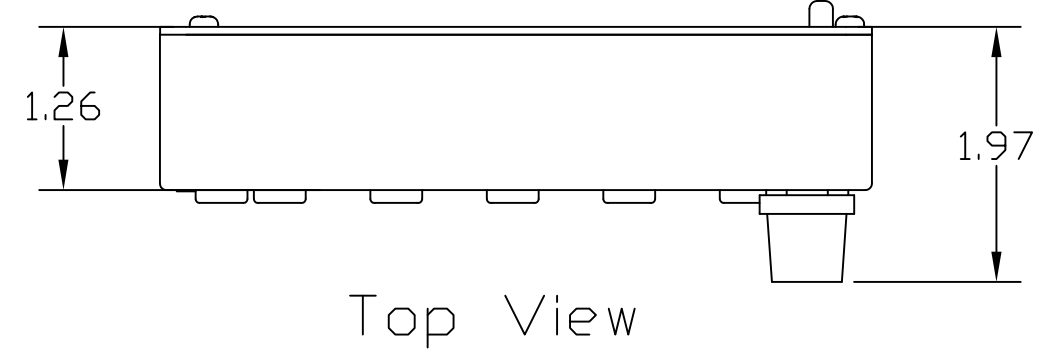
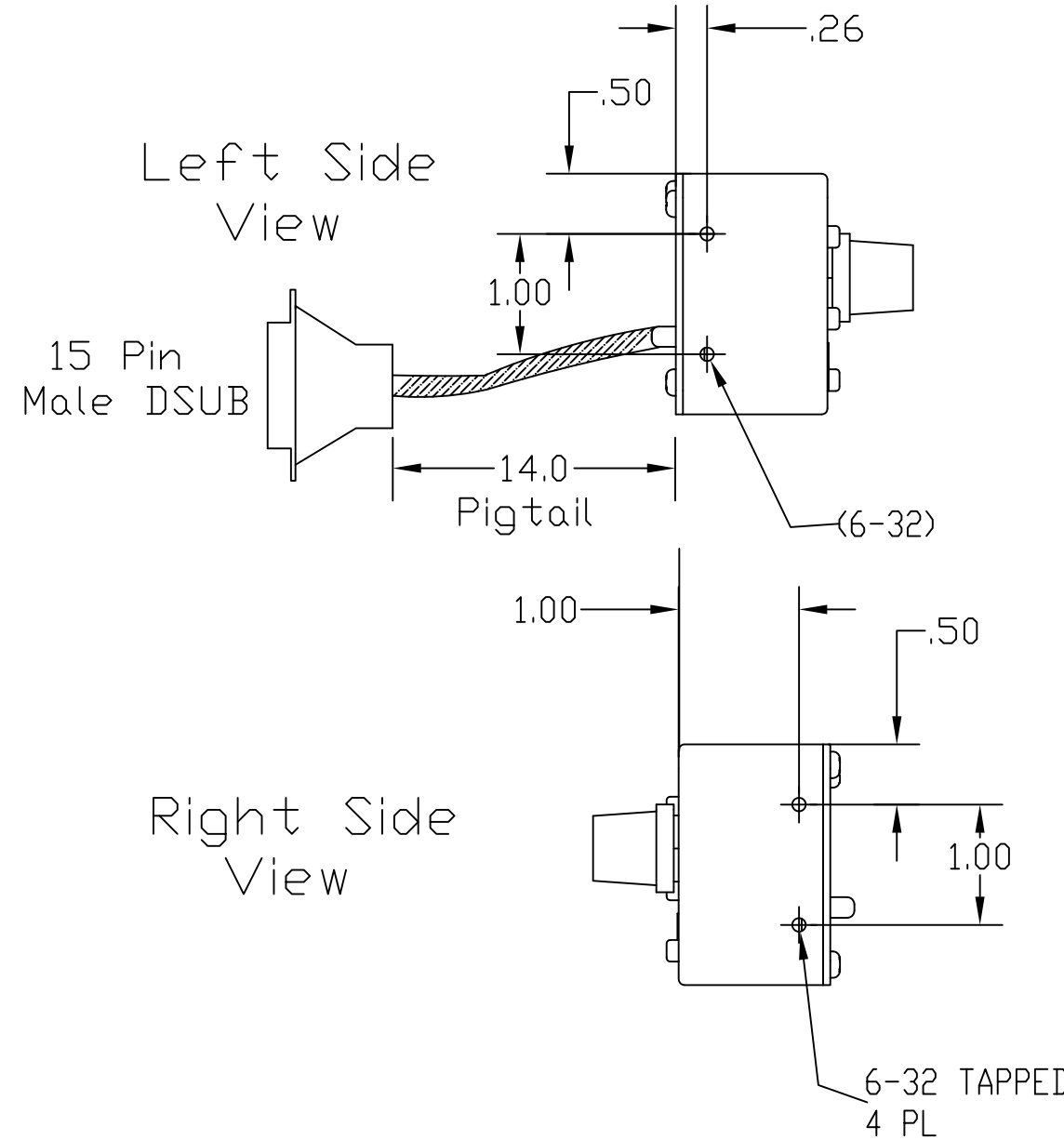
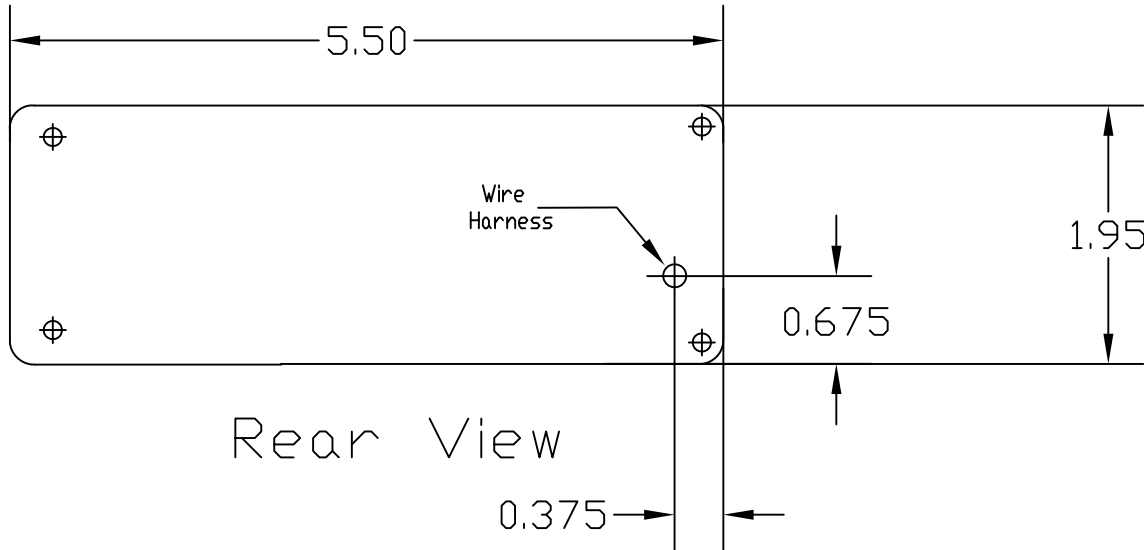
**1.8.14. PCU & DVD Interconnect**

**1.8.15. PCU & Satellite Interconnect**

**1.8.16. PCU, DVD & Satellite Interconnect**



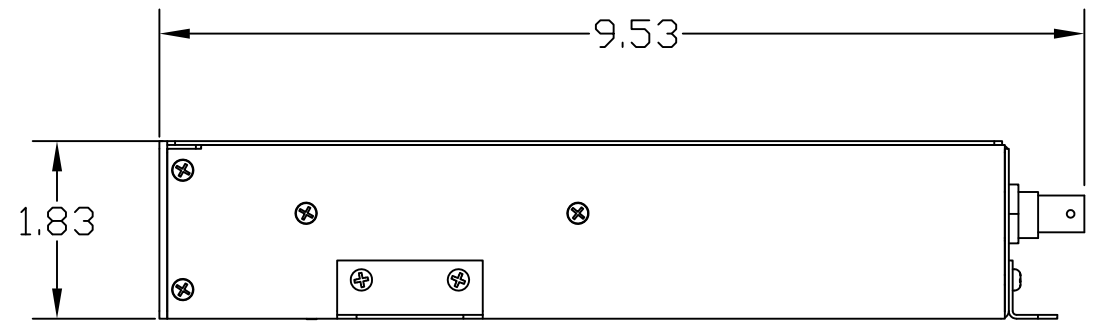
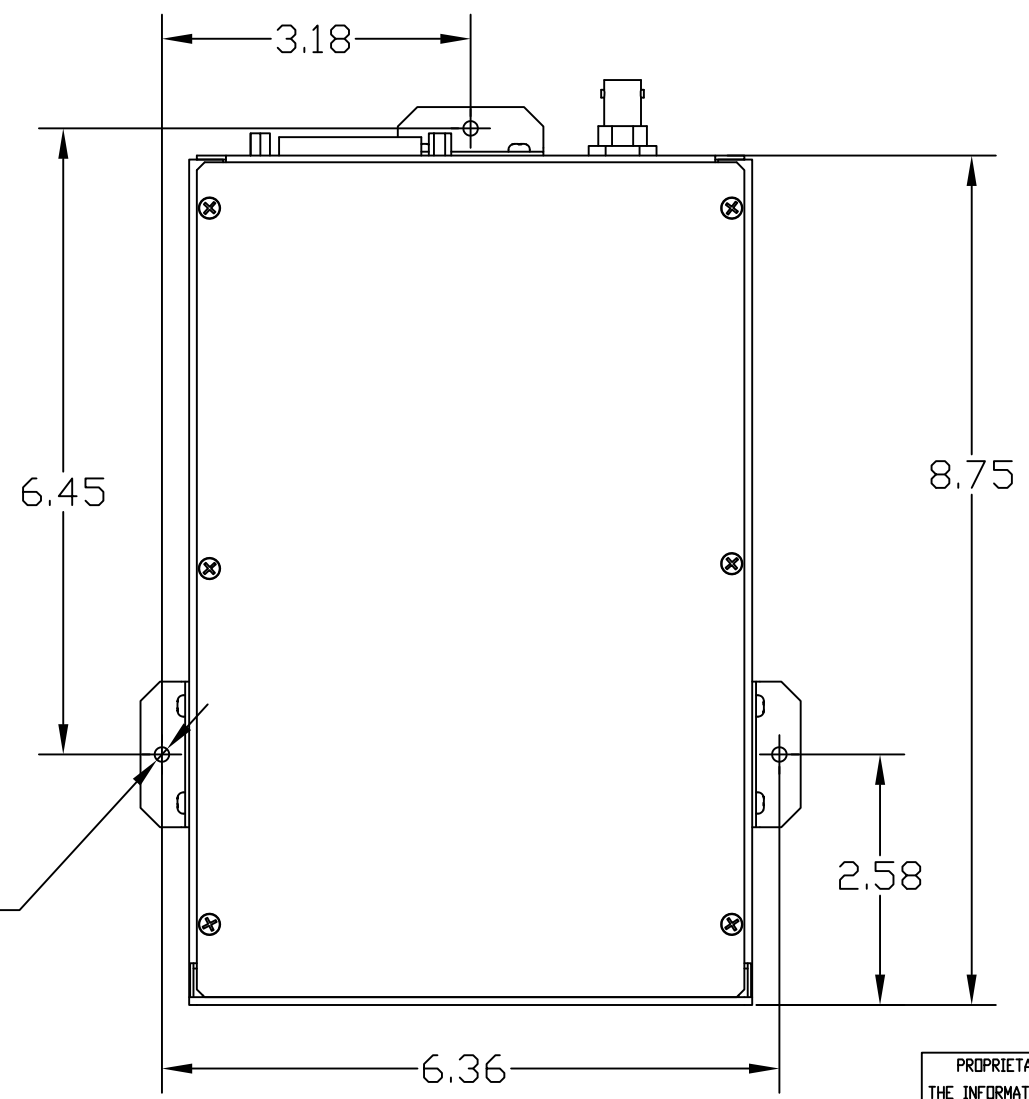
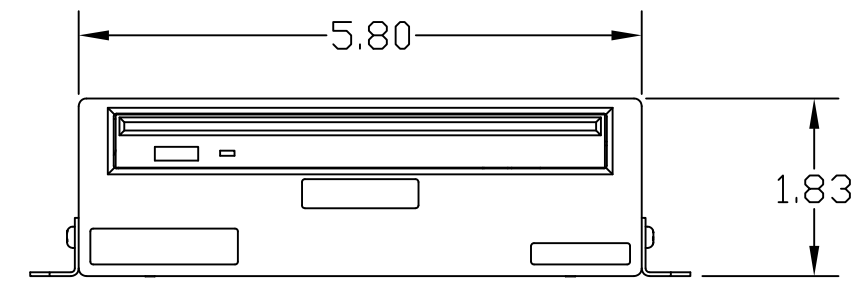
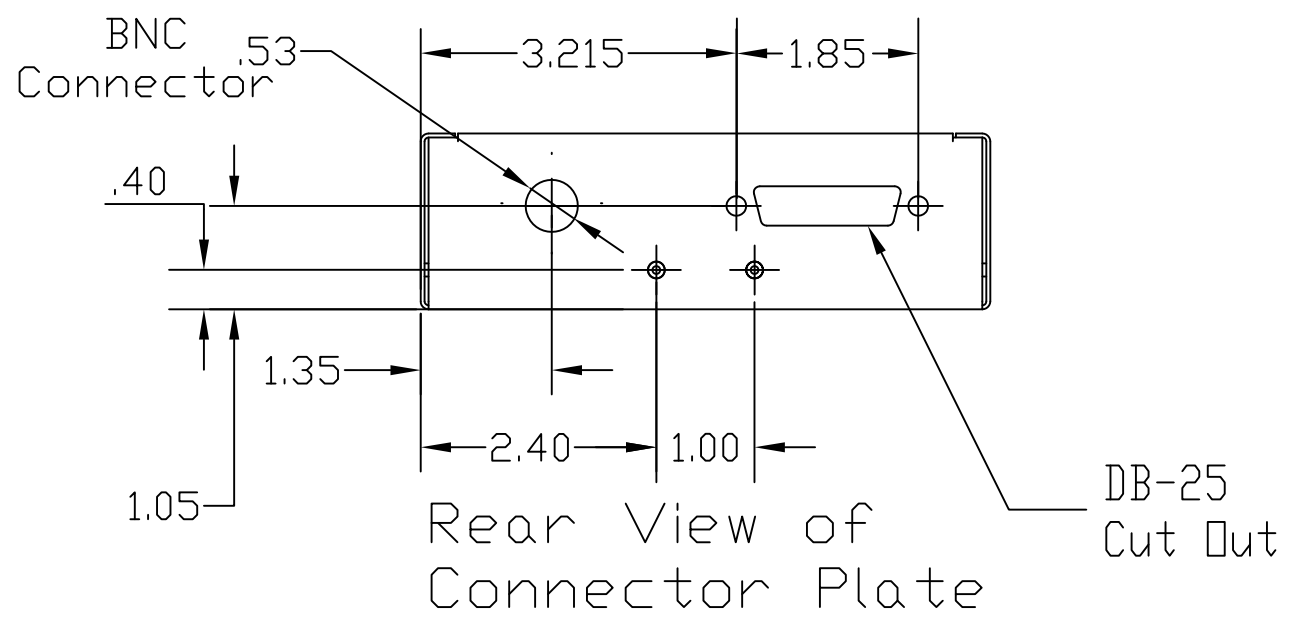
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	B	ADDED REAR VIEW	10/01/07	



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		THREE PLACE DECIMAL ±		COMMENTS:		
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	B	Added Rear Connector Detail	10/01/07	



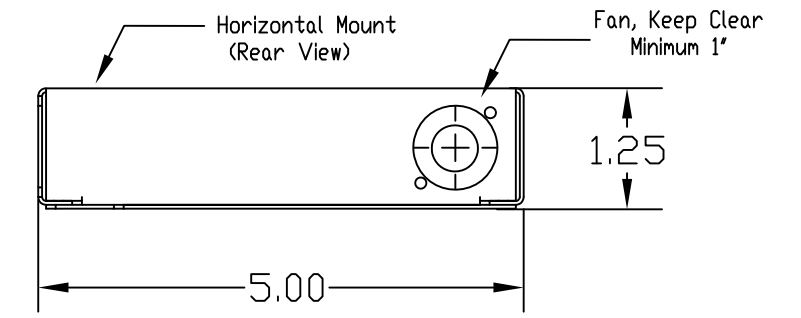
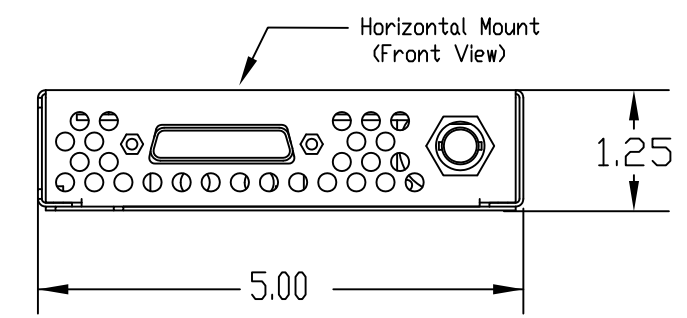
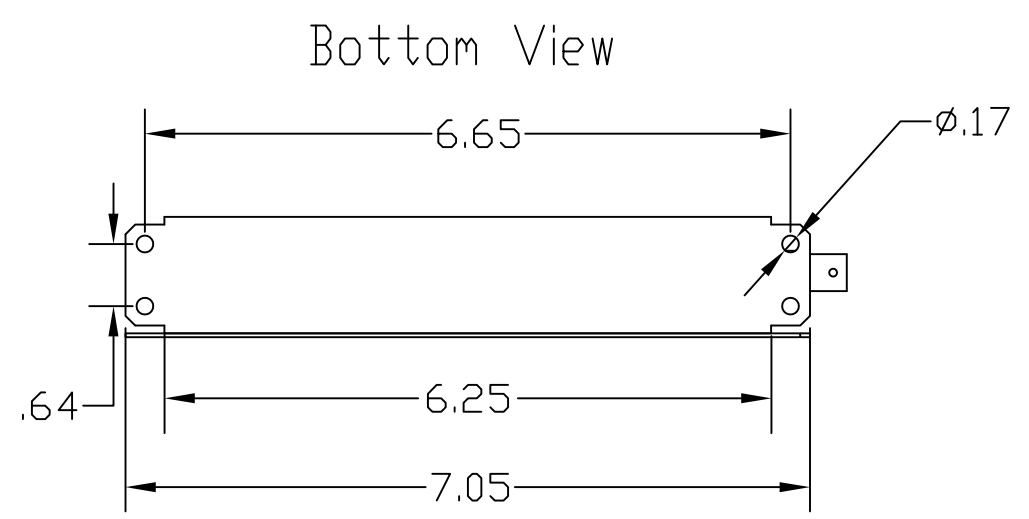
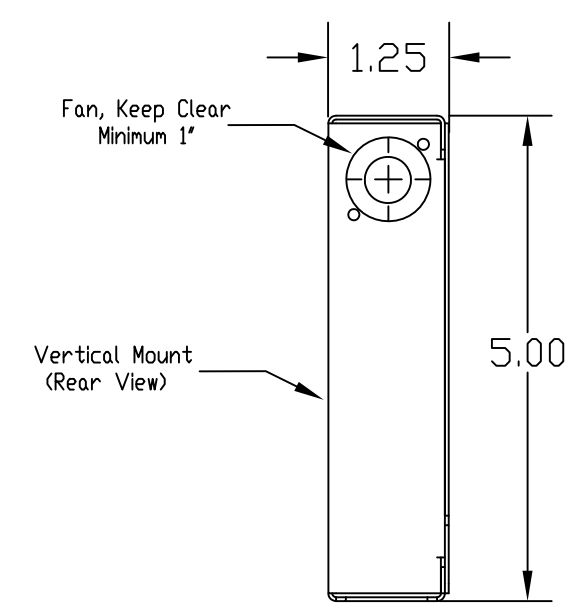
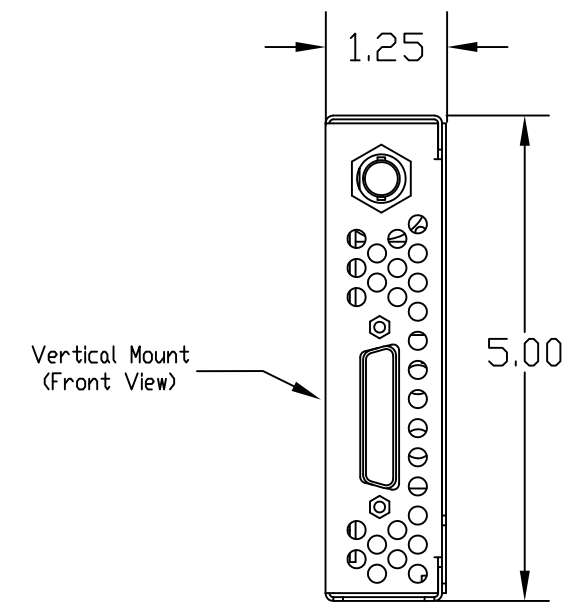
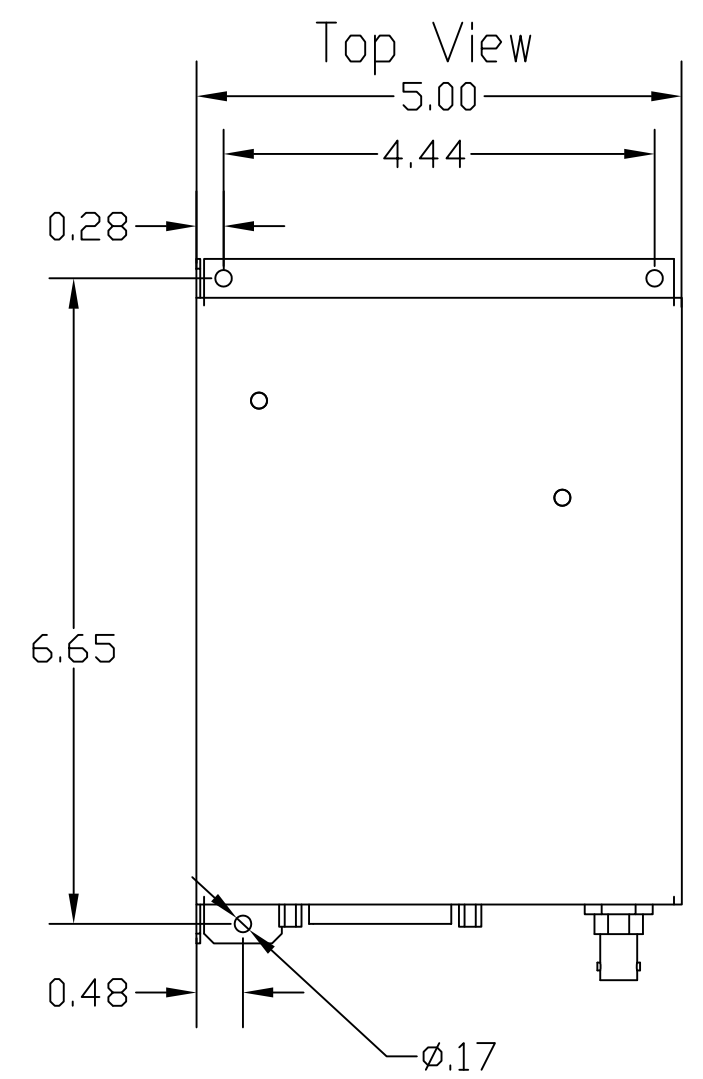
Note:  
DVD/CD Player can be mounted Horizontal or Vertical (+-10 Degrees)

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		BEND ±		Q.A.			
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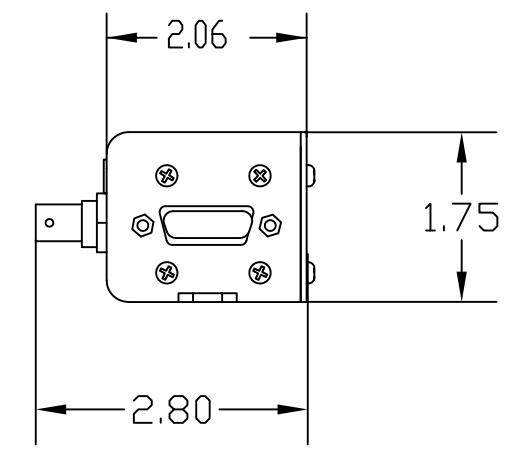
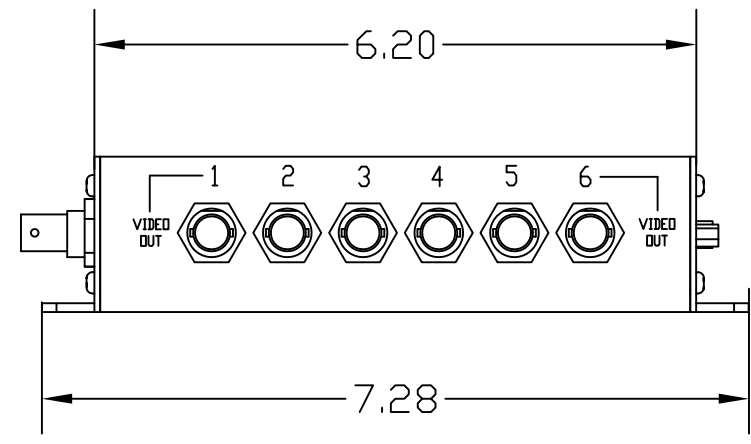
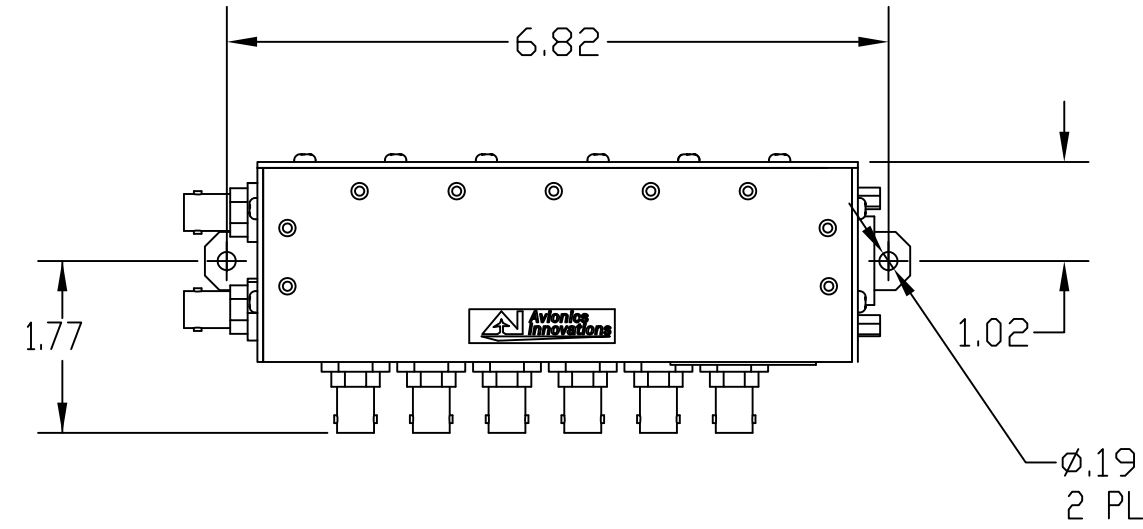
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NEXT ASSY	USED ON					SHT 3 OF 16	
APPLICATION							

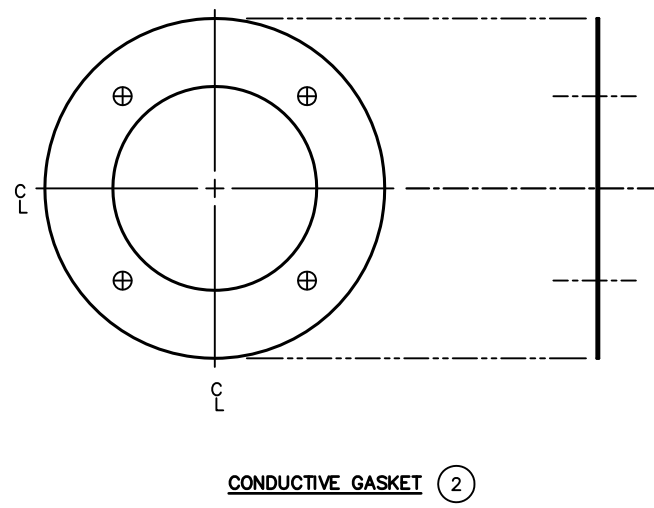
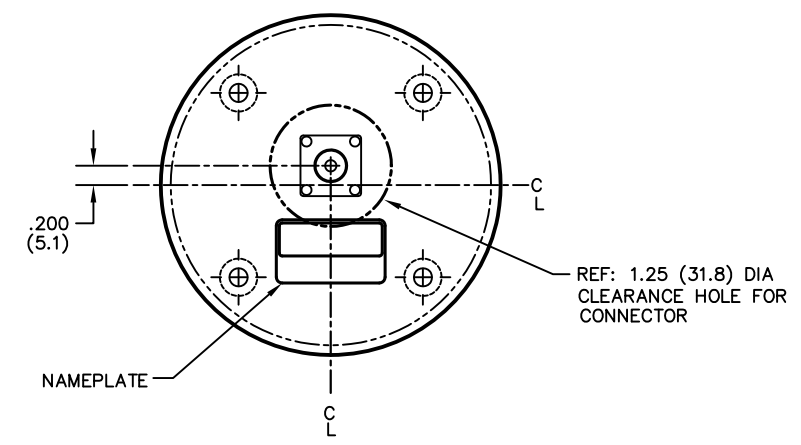
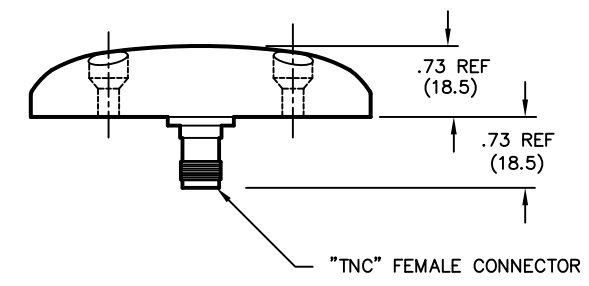
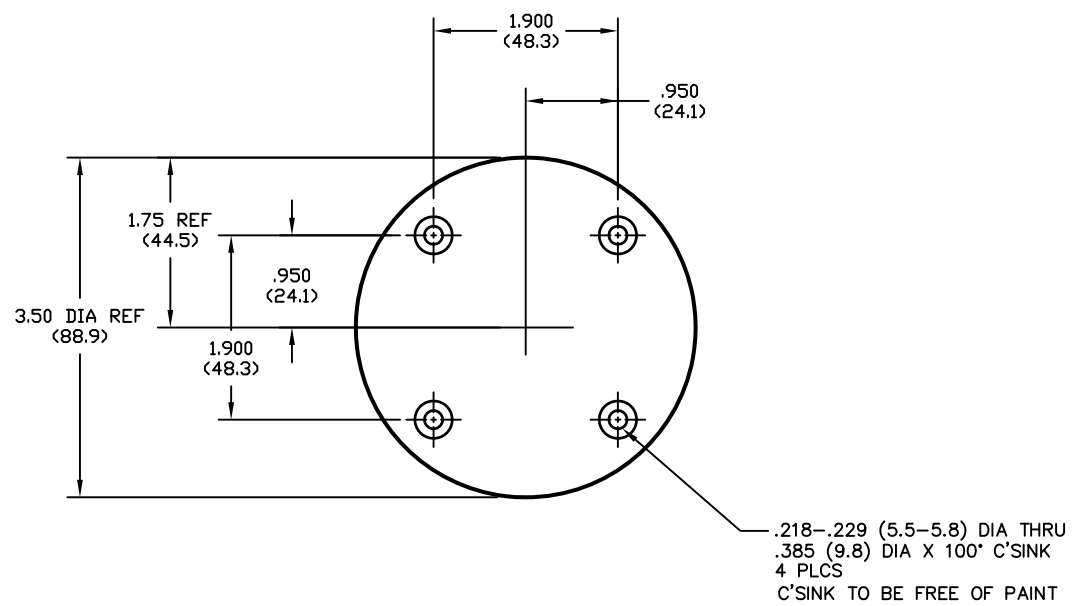
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	INITIAL RELEASE	3/10/06	



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		UNLESS OTHERWISE SPECIFIED:		DATE	NAME	Avionics Innovations TITLE: VIDEO AMPLIFIER INSTALL DRAWING SIZE DWG. NO. REV B ICE 8010-4 A SCALE: 1:2 WEIGHT: SHT 4 OF 16	
		DIMENSIONS ARE IN INCHES		DRAWN	1/9/06		McLane
		TOLERANCES:		CHECKED			
		FRACTIONAL ±		ENG APPR.			
		ANGULAR: MACH ± BEND ±		MFG APPR.			
		TWO PLACE DECIMAL ± 0.01		Q.A.			
		THREE PLACE DECIMAL ± 0.005		COMMENTS:			
		INTERPRET GEOMETRIC TOLERANCING PER:					
		MATERIAL --					
NEXT ASSY	USED ON	FINISH --					
APPLICATION							

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	INITIAL RELEASE	3/10/06	



### SPECIFICATIONS

#### ELECTRICAL

FREQUENCY	2326 ±7 MHz
VSWR	≤2.0 : 1
IMPEDANCE	50Ω
POLARIZATION	LHCP
AXIAL RATIO	≤3.0 dB (@ ZENITH)
POWER HANDLING	100 mW (+20 dBm)
GAIN (ANTENNA)	-1.0 dBic 0° ≤ θ ≤ 75°
	-2.5 dBic 75° < θ ≤ 80°
	-4.5 dBic 80° < θ ≤ 85°
	-7.5 dBic θ = 90° (@ HORIZON)
GAIN (PREAMPLIFIER)	29.5 ±3 dB
SUPPLY VOLTAGE	+3.3 TO +28 VDC @ 45 mA MAX
LIGHTNING	DC GROUNDED

#### MECHANICAL

WEIGHT	7 OUNCES (198 GRAMS)
HEIGHT	.73 INCH (18.5)
DIAMETER	3.50 INCHES (88.9)
FINISH	SKYDROL RESISTANT POLYURETHANE ENAMEL COLOR: GLOSS WHITE #17925, PER FED-STD-595
MATERIAL	BASE: IRIDITE PER AMS-C-5541
CONNECTOR	ALUM 6061-T6, THERMOSET PLASTIC TYPE "TNC" FEMALE

#### ENVIRONMENTAL

TEMPERATURE	-55°C (-67°F) TO +85°C (+185°F)
ALTITUDE	-100 TO 55,000 FT
VIBRATION	10 G's

#### FEDERAL AND MILITARY

DESIGNED TO:	DO-160C MIL-STD-810
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- NOTES: UNLESS OTHERWISE SPECIFIED**
- (XX.X) = mm
  - CONDUCTIVE GASKET AND MOUNTING SCREWS SUPPLIED WITH INSTALL KIT
  - RESISTANCE BETWEEN ANTENNA AND MATING SURFACE TO BE LESS THAN 10m FOR GOOD ELECTRICAL CONTACT.

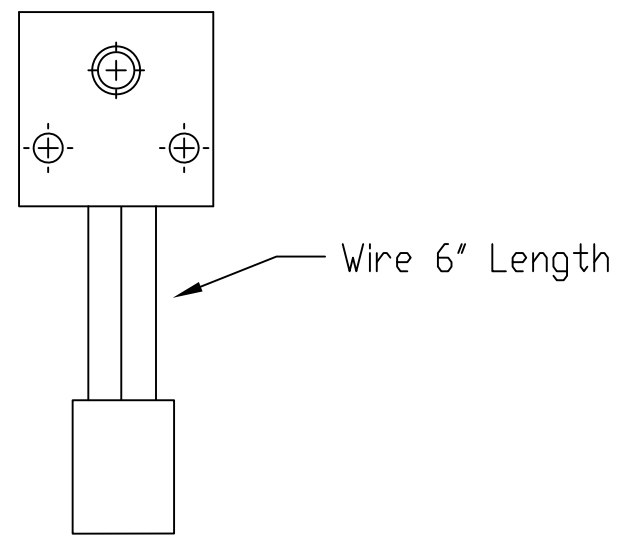
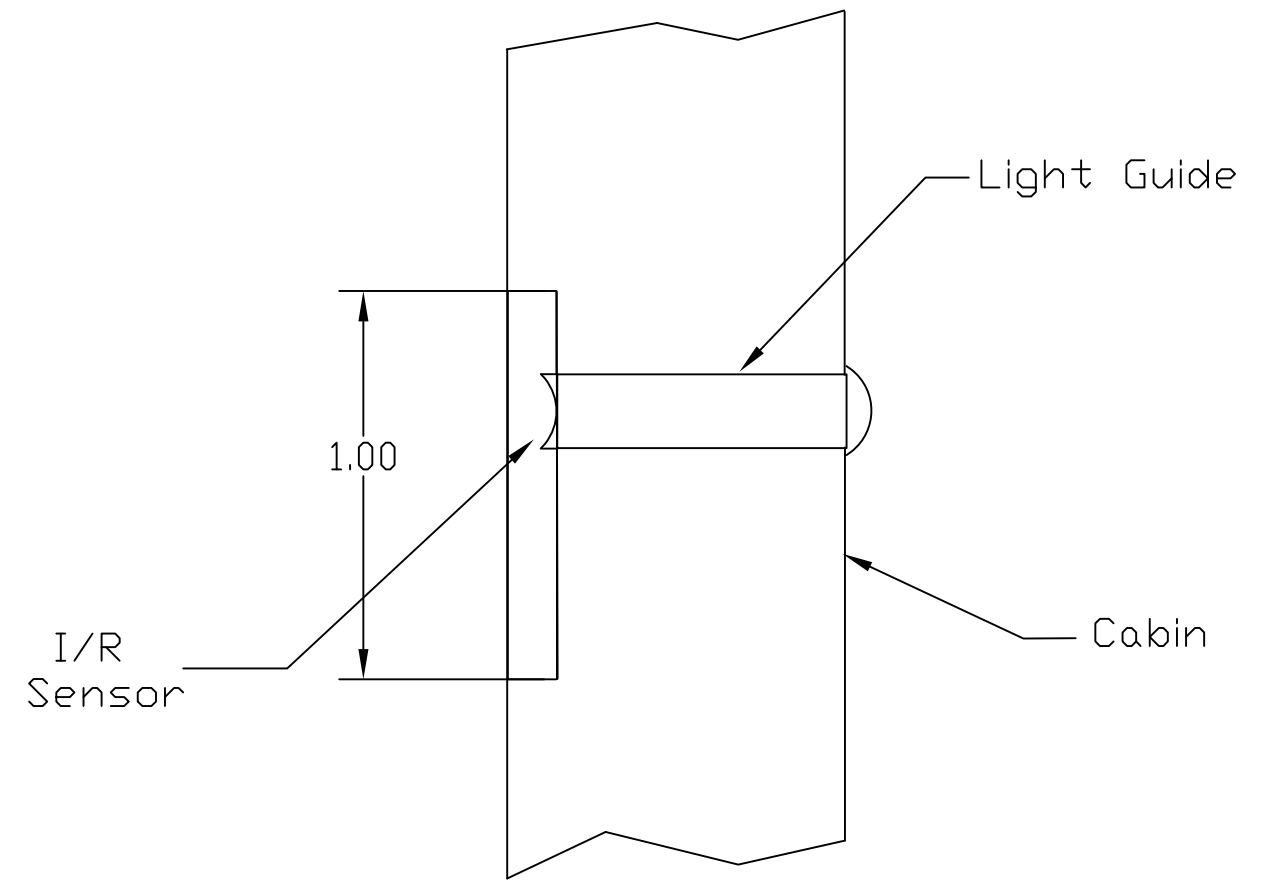
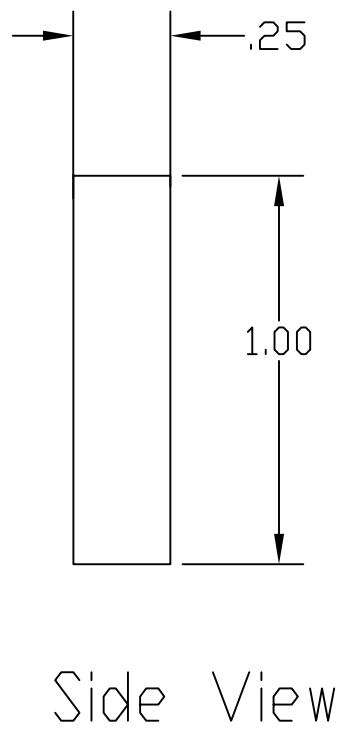
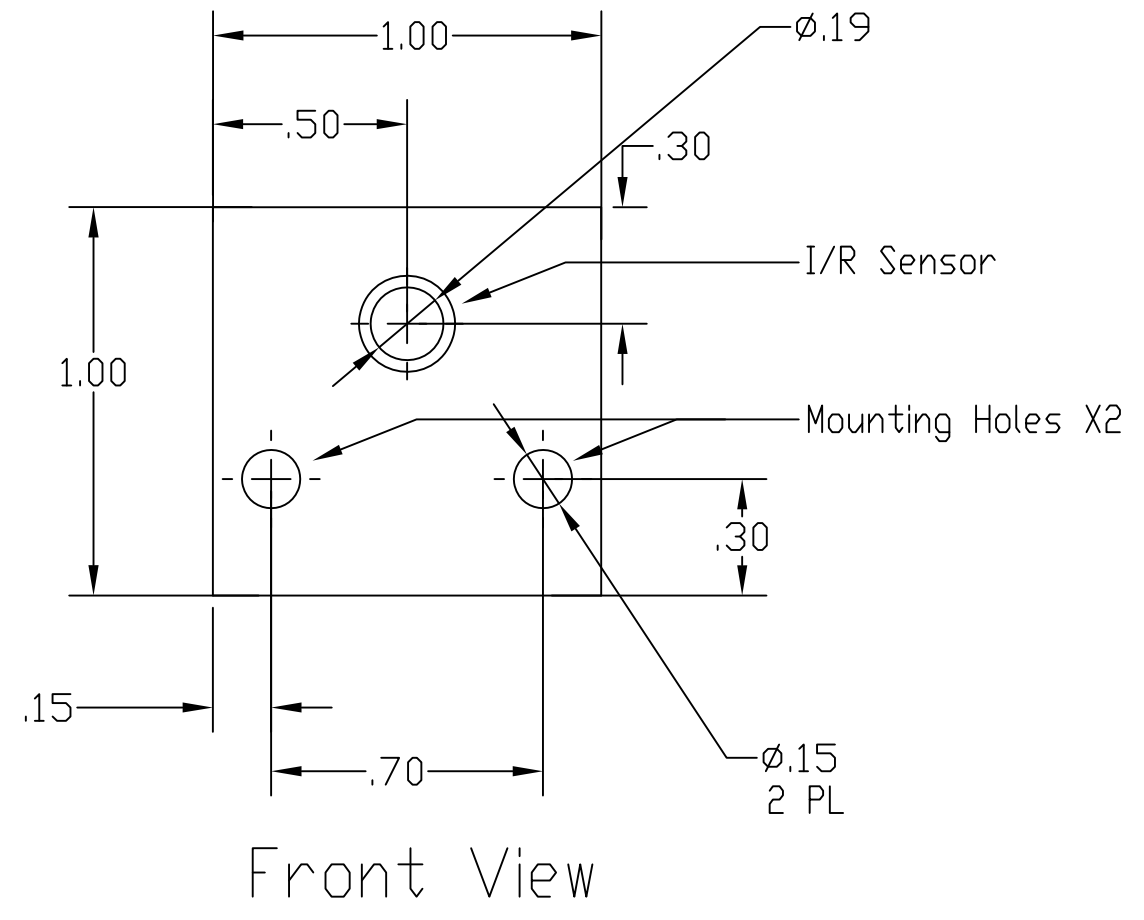
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		UNLESS OTHERWISE SPECIFIED		DATE	NAME	Avionics Innovations TITLE: SATELLITE ANTENNA	
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		ANGULAR: MACH ±		MFG APPR.			
		BEND ±		Q.A.			
		TWO PLACE DECIMAL ± 0.01		COMMENTS:			
		THREE PLACE DECIMAL ± 0.005					
		INTERPRET GEOMETRIC TOLERANCING PER:					
		MATERIAL --					
		FINISH --					
NEXT ASSY	USED ON						
APPLICATION							
SIZE	DWG. NO.	REV					
B	ICE 8010-5	A					
SCALE: 1:2	WEIGHT:	SHT 5 OF 16					

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	INITIAL RELEASE	03/14/08	

# I/R Sensor

# I/R Sensor Installation



Conn, Recept, 3 Pos Mate & Lock  
Tyco P/N 1-480305-0  
Mating connector supplied w/Install Kit.

### NOTES:

- I/R Sensor Install Kit P/N: IIR020-01
- Light Guide P/N IRR020-30 (Clear Plexiglass)  
Included in Install Kit P/N IRR020-01
- All Dimensions in Inches.

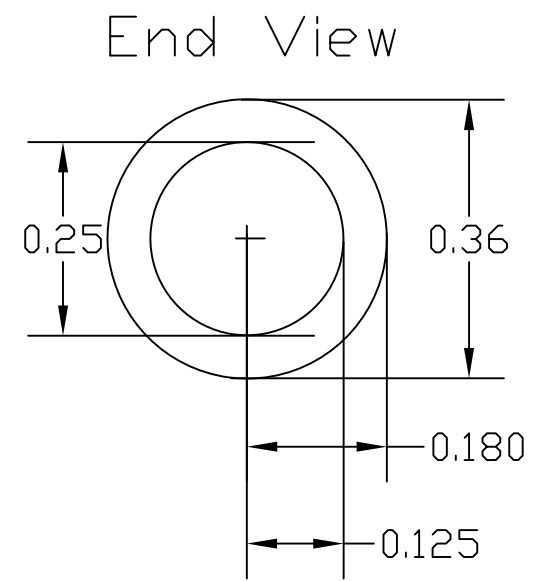
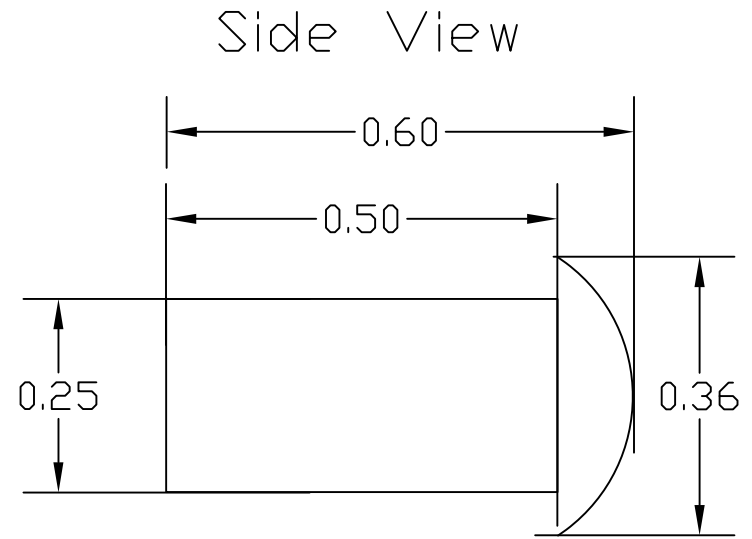
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		UNLESS OTHERWISE SPECIFIED:		DATE	NAME	Avionics Innovations	
		DIMENSIONS ARE IN INCHES		DRAWN	01/12/08		TITLE: IR Sensor & Light Guide
		TOLERANCES:		CHECKED			
		FRACTIONAL ±		ENG APPR.			
		ANGULAR: MACH ±		MFG APPR.			
		BEND ±		Q.A.			
		TWO PLACE DECIMAL ± 0.01		COMMENTS:		SIZE DWG. NO.	
		THREE PLACE DECIMAL ± 0.005				B ICE-8010-15	
		INTERPRET GEOMETRIC TOLERANCING PER:				REV	
		MATERIAL --				A	
NEXT ASSY	USED ON	FINISH --				SCALE: 4:1	
APPLICATION						WEIGHT:	
						SHEET 6 OF 16	

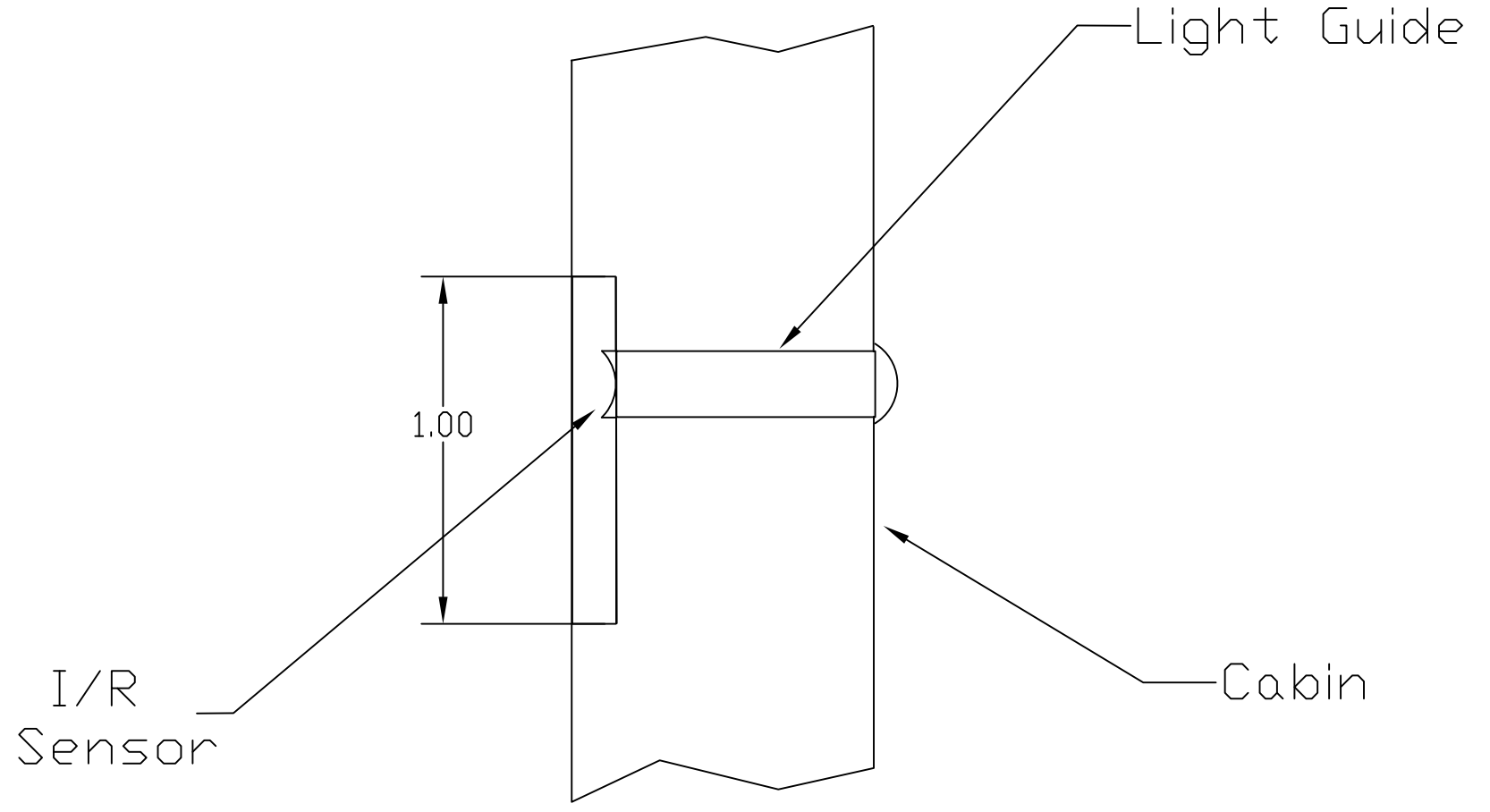
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	INITIAL RELEASE	03/14/08	

NOTES:  
1. Material Clear Plexiglass

Light Guide  
P/N IRR020-30



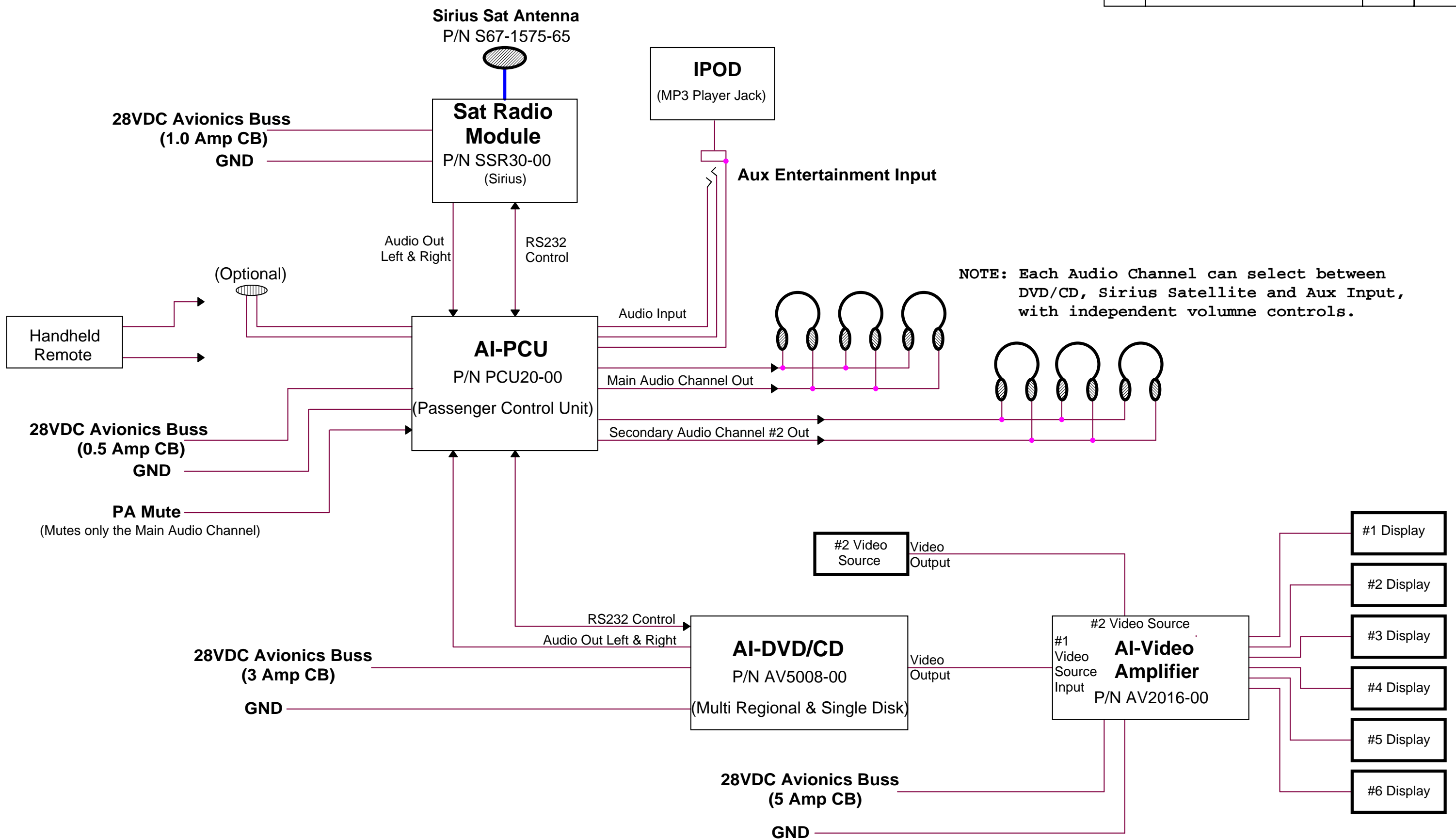
Light Guide  
Installation



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		UNLESS OTHERWISE SPECIFIED:		DATE	NAME	Avionics Innovations TITLE: LIGHT GUIDE	
		DIMENSIONS ARE IN INCHES		DRAWN	01/14/08		McLane
		TOLERANCES:		CHECKED			
		FRACTIONAL ±		ENG APPR.			
		ANGULAR: MACH ±		MFG APPR.			
		BEND ±		Q.A.			
		TWO PLACE DECIMAL ± 0.01		COMMENTS:			
		THREE PLACE DECIMAL ± 0.005					
		INTERPRET GEOMETRIC TOLERANCING PER:					
		MATERIAL --					
NEXT ASSY	USED ON	FINISH --				SIZE DWG. NO. REV B ICE-8010-16 A	
APPLICATION						SCALE: 4:1 WEIGHT: SHEET 7 OF 16	

REVISIONS			
REV.	DESCRIPTION	DATE	APPRVD
A	INITIAL RELEASE	3-10-06	



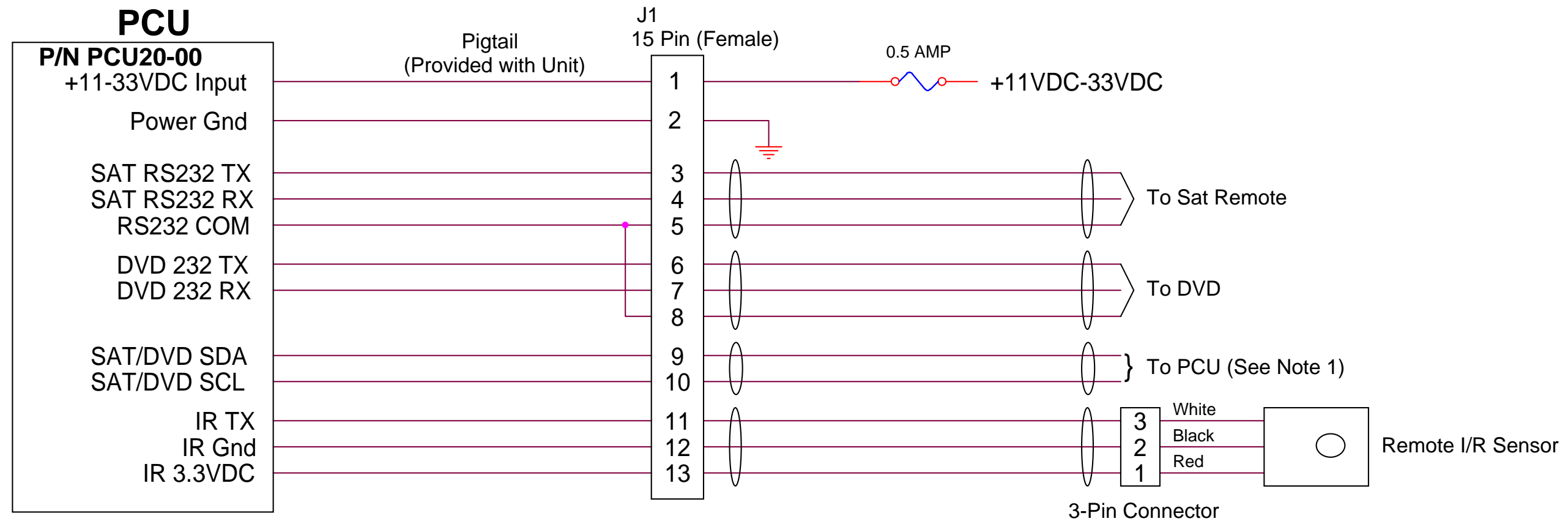
NOTE: Each Audio Channel can select between DVD/CD, Sirius Satellite and Aux Input, with independent volume controls.

**"ICE"**  
**Integrated Cabin Entertainment**

DRAWN	M Mahan	DATE	01-30-06	TITLE	
CHECKED		DATE		I.C.E. Functional Block Diagram	
APPROVED		DATE		SIZE	DRAWING NO.
ISSUED		DATE		ICE 8010-6	
FILE NAME: TL DWG ICE8001				SHEET	8 OF 16
				REV	A

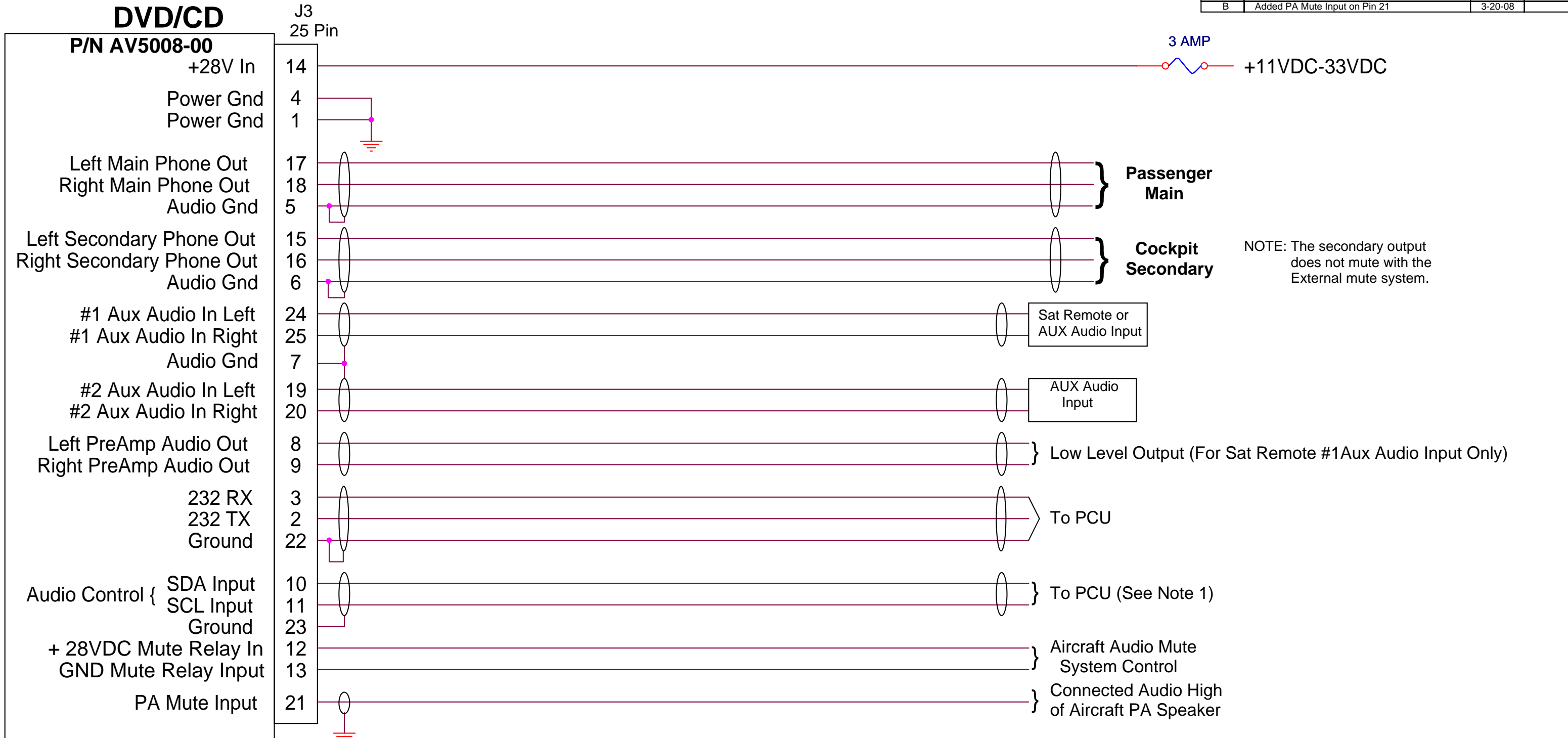


REVISIONS			
REV.	DESCRIPTION	DATE	APPRVD
A	INITIAL RELEASE	3-10-06	



<b>AVIONICS INNOVATIONS</b>			
Category ICE Interconnect			
Title PCU Control Head			
Size B	Document Number	Rev	
	<b>ICE 8010-7</b>	<b>A</b>	
Create:	Mod:	Sheet 9	of 16

REVISIONS			
REV.	DESCRIPTION	DATE	APPRVD
A	INITIAL RELEASE	3-10-06	
B	Added PA Mute Input on Pin 21	3-20-08	



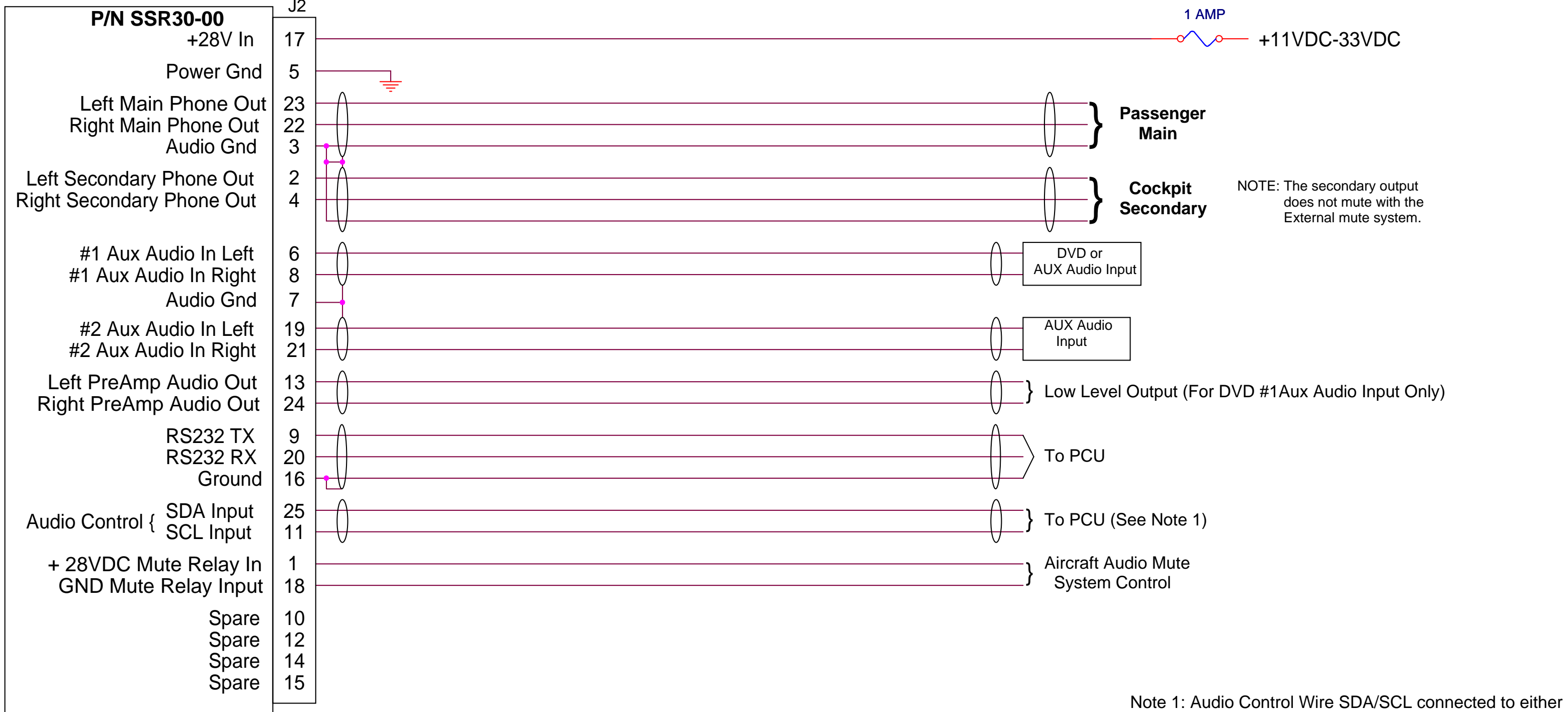
NOTE: The secondary output does not mute with the External mute system.

Note 1: Audio Control Wire SDA/SCL connected to either DVD or SAT Remote. Do Not Connect to Both or Parallel

<b>AVIONICS INNOVATIONS</b>			
Category ICE Interconnect			
Title DVD/CD Player			
Size B	Document Number ICE 8010-8	Rev B	
Create:	Mod:	Sheet 10 of 16	

REVISIONS			
REV.	DESCRIPTION	DATE	APPRVD
A	INITIAL RELEASE	3-10-06	

# Satellite Remote Receiver



Note 1: Audio Control Wire SDA/SCL connected to either DVD or SAT Remote. Do Not Connect to Both or Parallel

<b>AVIONICS INNOVATIONS</b>			
Category: ICE Interconnect			
Title: Satellite Remote Receiver			
Size B	Document Number	Rev	
	<b>ICE 8010-9</b>	<b>A</b>	
Create:	Mod:	Sheet 11 of 16	

REVISIONS			
REV.	DESCRIPTION	DATE	APPRVD
A	INITIAL RELEASE	3-10-06	
B	Changed Power Input and Added Switch Select	3-10-08	

# Video Amplifier

**P/N AV2016-00**  
**(S/N 2000 & UP)**  
 +28V Power In Video  
 +28V Power In Video

P7  
 26 HD



Momentary or SPST  
 Switches

(Open) for Momentary Switch Input  
 (Ground) for direct Switch Input

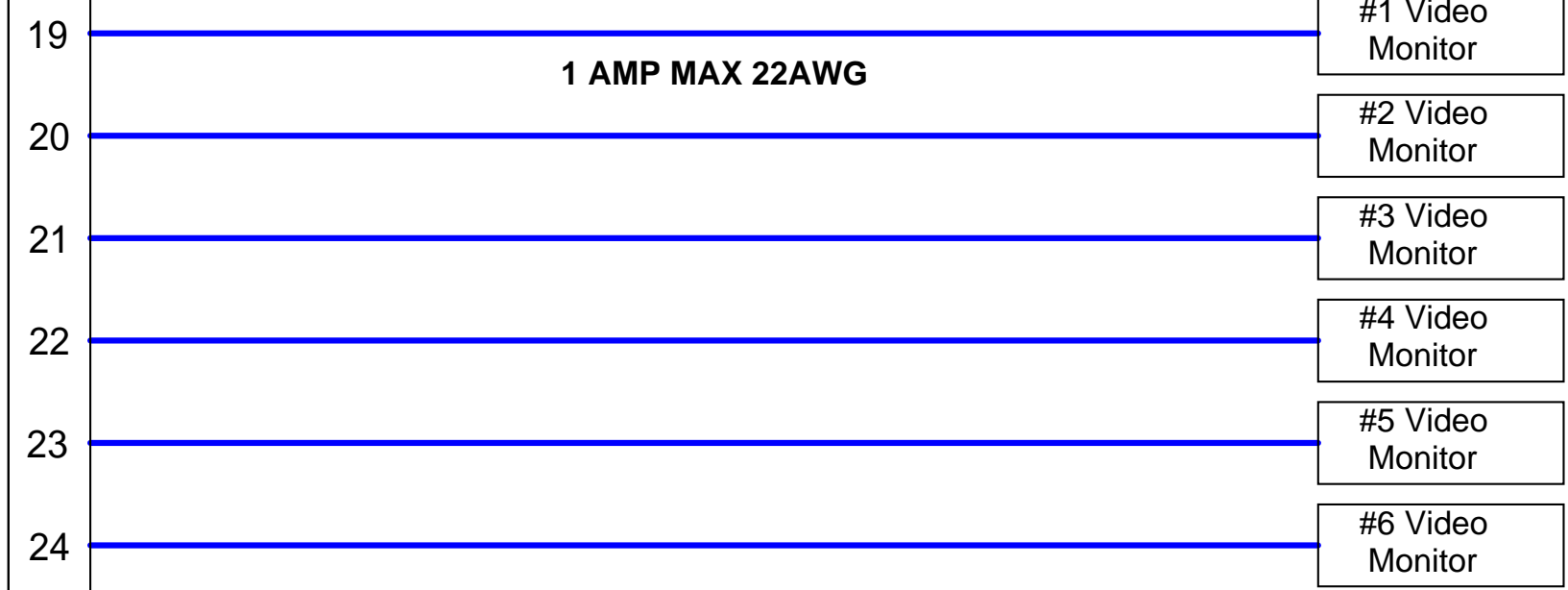
See Note 1:

+28V Power In +12VDC Out  
 +28V Power In +12VDC Out



Video Amp  
 5 AMP  
 +11VDC-33VDC

#1 +12VDC Out  
 #2 +12VDC Out  
 #3 +12VDC Out  
 #4 +12VDC Out  
 #5 +12VDC Out  
 #6 +12VDC Out



1 AMP MAX 22AWG

Notes:  
 1. Ground pin 7 if you are using a toggle ON/OFF switch for selection of Video 1 or 2.  
 Leave Pin 7 Open if you are using a momentary switch to select the Video 1 or 2.

<b>AVIONICS INNOVATIONS</b>			
Category ICE Interconnect			
Title Video Amp			
Size B	Document Number <b>ICE 8010-10</b>	Rev <b>B</b>	
Create:	Mod:	Sheet 12 of 16	

REVISIONS			
REV.	DESCRIPTION	DATE	APPRVD
A	INITIAL RELEASE	3-10-06	

# Video Amplifier

**P/N AV2016-00**

#1 Video Input

#2 Video Input

#1 Video Out

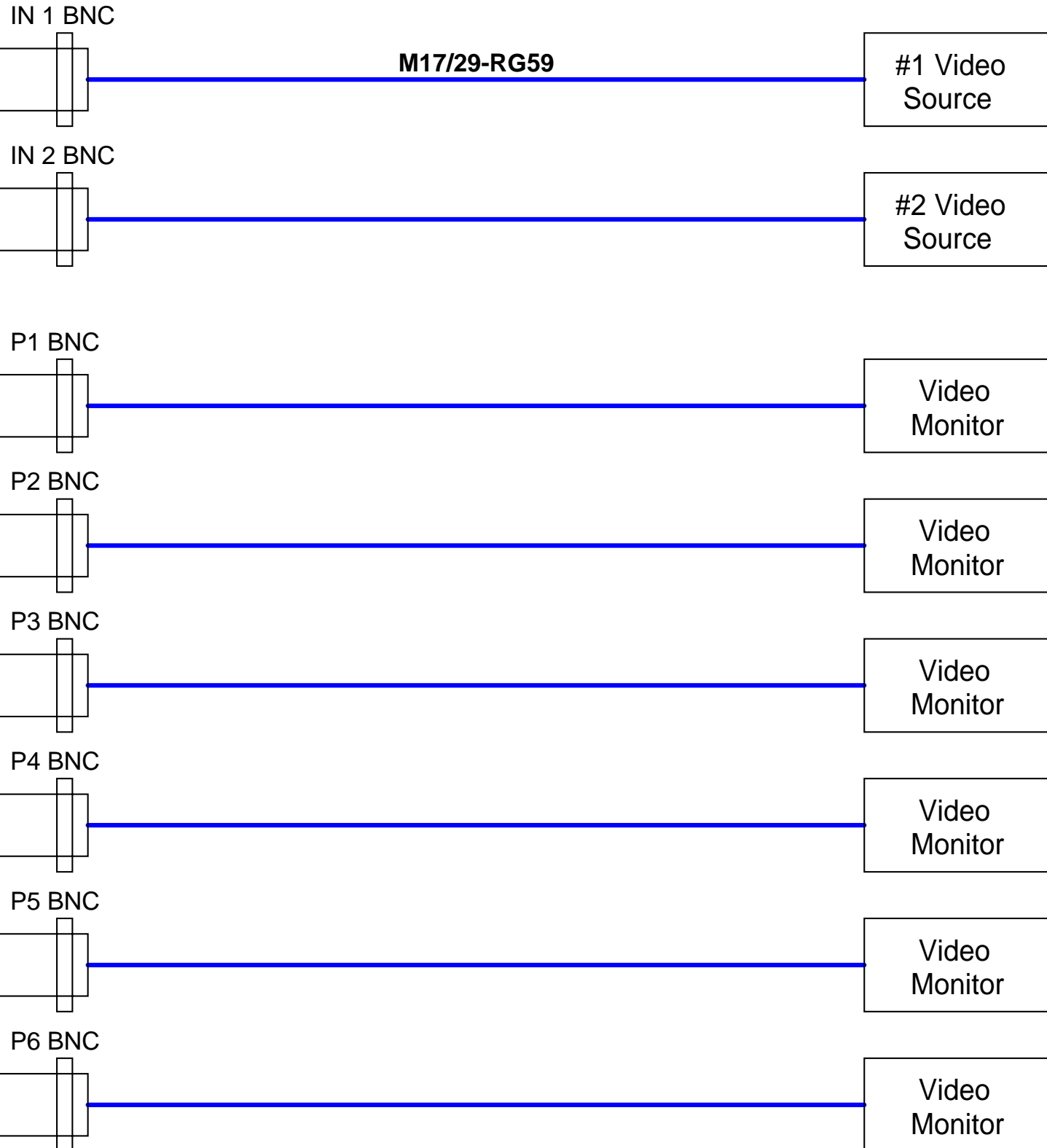
#2 Video Out

#3 Video Out

#4 Video Out

#5 Video Out

#6 Video Out



**AVIONICS INNOVATIONS**

Category ICE Interconnect

Title Video Amp

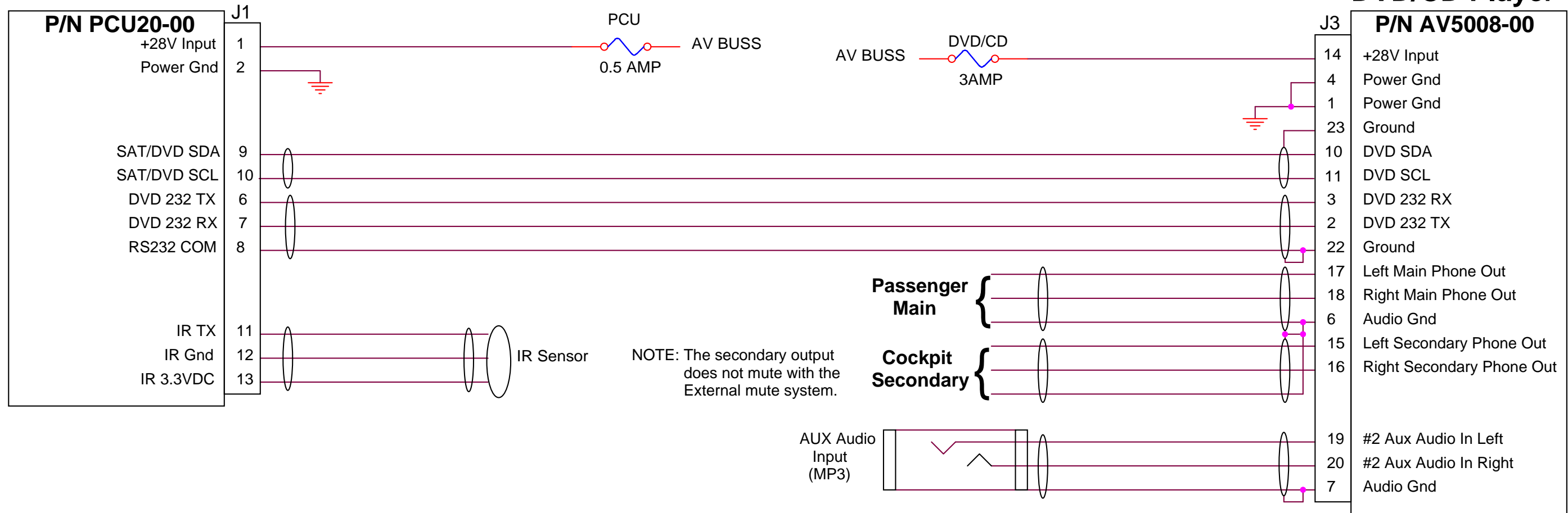
Size B	Document Number <b>ICE 8010-11</b>	Rev <b>A</b>
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Create: Mod: Sheet 13 of 16

REVISIONS			
REV.	DESCRIPTION	DATE	APPRVD
A	INITIAL RELEASE	3-10-06	

# Passenger Control Unit (PCU)

# DVD/CD Player



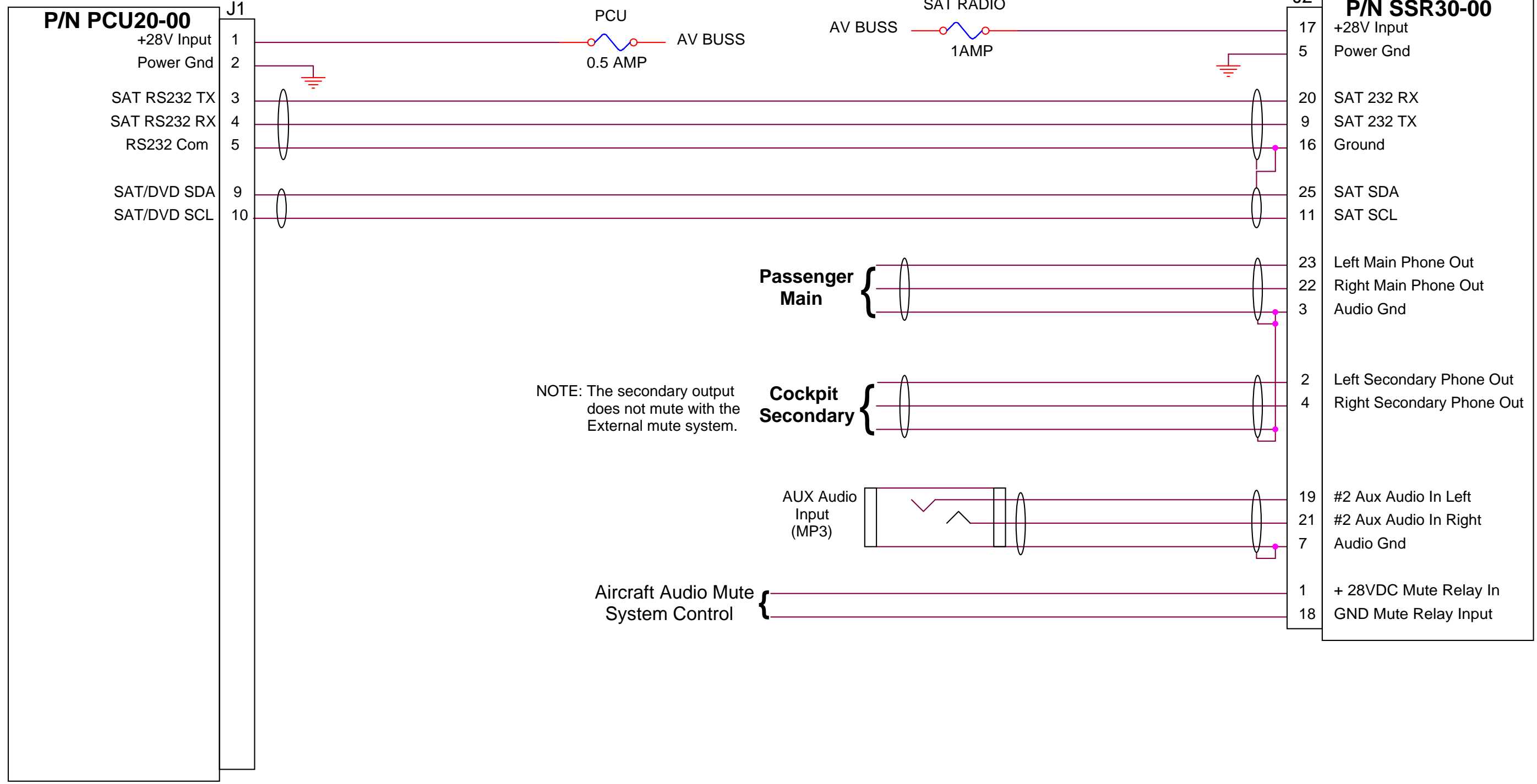
Connectors  
 1) J1 15 Pin Female D-Sub  
 2) J3 25 Pin Female D-Sub

<b>AVIONICS INNOVATIONS</b>			
Category <b>ICE Interconnect</b>			
Title <b>PCU &amp; DVD Interconnect</b>			
Size B	Document Number <b>ICE 8010-12</b>		Rev <b>A</b>
Create:	Mod:	Sheet 14 of 16	

REVISIONS			
REV.	DESCRIPTION	DATE	APPRVD
A	INITIAL RELEASE	3-10-06	

# Passenger Control Unit (PCU)

# Satellite Radio Remote



Connectors  
 1) J1 15 Pin Female D-Sub  
 2) J2 25 Pin Female D-Sub

<b>AVIONICS INNOVATIONS</b>			
Category <b>Ice Interconnect</b>			
Title <b>PCU &amp; Satellite Interconnect</b>			
Size B	Document Number	Rev	
	<b>ICE 8010-13</b>	<b>A</b>	
Create:	Mod:	Sheet 15 of 16	

REVISIONS			
REV.	DESCRIPTION	DATE	APPRVD
A	INITIAL RELEASE	3-10-06	

# Passenger Control Unit (PCU)

# Satellite Radio Remote

**P/N PCU20-00**

+28V Input 1  
 Power Gnd 2  
 SAT RS232 TX 3  
 SAT RS232 RX 4  
 RS232 Com 5

SAT/DVD SDA 9  
 SAT/DVD SCL 10  
 DVD 232 TX 6  
 DVD 232 RX 7  
 RS232 COM 8

IR TX 11  
 IR Gnd 12  
 IR 3.3VDC 13

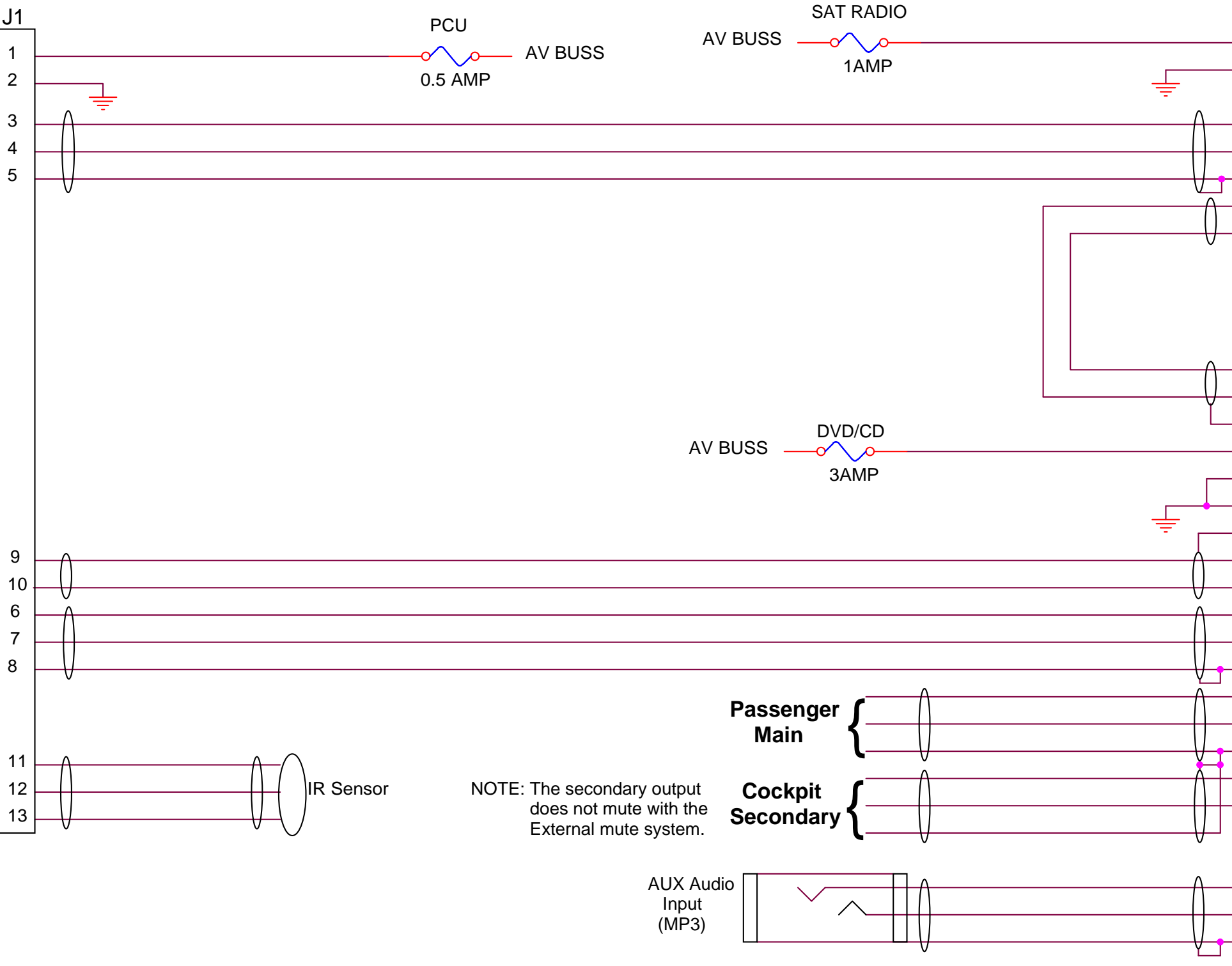
**P/N SSR30-00**

+28V Input 17  
 Power Gnd 5  
 SAT 232 RX 20  
 SAT 232 TX 9  
 Ground 16  
 Left PreAmp Audio Out 13  
 Right PreAmp Audio Out 24

**P/N AV5008-00**

#1 Aux Audio In Right 24  
 #1 Aux Audio In Left 25  
 Audio Gnd 5  
 +28V Input 14  
 Power Gnd 4  
 Power Gnd 1  
 Ground 23  
 DVD SDA 10  
 DVD SCL 11  
 DVD 232 RX 3  
 DVD 232 TX 2  
 Ground 22  
 Left Main Phone Out 17  
 Right Main Phone Out 18  
 Audio Gnd 6  
 Left Secondary Phone Out 15  
 Right Secondary Phone Out 16

#2 Aux Audio In Left 19  
 #2 Aux Audio In Right 20  
 Audio Gnd 7



NOTE: The secondary output does not mute with the External mute system.

- Connectors**
- 1) J1 15 Pin Female D-Sub
  - 2) J2 25 Pin Female D-Sub
  - 3) J3 25 Pin Female D-Sub

**AVIONICS INNOVATIONS**

Category: **Ice Interconnect**

Title: **PCU, DVD & Sat Interconnect**

Size B	Document Number <b>ICE 8010-14</b>	Rev <b>A</b>
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Create: \_\_\_\_\_ Mod: \_\_\_\_\_ Sheet 16 of 16