Model RPS-A77
Airborne Power Supply

Features

- **A Bendix PT02E-8-4P Mil-Type 4 Pin Receptacle. A 28 to 12 VDC Mil-Type DC/DC Converter and Regulator is contained inside the unit to permit 24 to 36 VDC operation of the camera system.**
- **A Two channel model RPS-77-2 is also available.**
- **Optimized for use with Sekai RSC-A Series Cameras**

General Description:

The RPS-A77 is a junction box and power supply that facilitates the use of SEKAI ruggedized camera systems and accessories in an aircraft or other vehicle's rugged environment. The RPS-A77 contains a DC/DC converter to permit the use of 28VDC power from the vehicle.

Basic SEKAI RPS-A77 Airborne Power Supply:

The RPS-A77 Airborne Power Supply provides power and signal access to the camera via standard CCXC-XX type cables. The following inputs/outputs are provided:

A. DC input, MIL-TYPE 4-pin locking connector
B. HD input via BNC
C. VD input via BNC
D. Video/Luminance OUT via BNC
E. Clock/Chrominance OUT via BNC

Electrical and Mechanical Characteristics:

DC/DC Converter: Conversion Devices Model 512S28 or equivivalent.

A. Power input +28VDC

B. Power output +12VDC, 5 watts (2 outputs, 5 watts each for RPS-A77-2)

C. Conversion efficiency up to 75%

D. Output Specifications

Voltage Accuracy:	±1.0%, max
Line Regulation (LL-HL):	± 0.03%, max.
Load Regulation (NL-FL):	±0.03%, max.
Ripple and Noise, 20MHz BW:	20mV, P-P
Temperature Coefficient @ FL:	±0.02%/^{0} of Vout, max.
Warm-Up Drift @ FL:	±1.0%, max. (Incl. TC)
Transient Recovery Time to:	1% of Final Value
NL-FL or FL-NL:	50µ sec, max.
Short Circuit Current Limit:	Iout+75%
Short Circuit Protection:	Indefinite
Short Circuit Restart:	Automatic

Note: In the case of the two-channel RPS-A77-2, there are four BNC connectors and one 12 pin camera on the opposite side of unit identical to, and in juxtaposition to those shown on this side.

E. Environmental Specifications

Operating Temperature Range:	-30^{0}C to + 75^{0}C
Storage Temperature Range:	-50^{0}C to + 125^{0}C
Derating of Output:	None
Humidity:	Up to 95% RH (Non-Condensing)
Cooling:	Free Air Convection or Bottom Conduction
EMI/RFI	Six-Sided Continuous

RPS-A77 Mechanical Considerations

Two adjustable brackets are provided with each RPS-A77 to facilitate attachment to a flat surface. Lock-Tite is applied to all screws to prevent back-out during vibration.

Metal Case

Size:	3.15"W x 1.57"H x 1.97"D (80mm) x (40mm) x (50mm)
Weight:	8.1 Oz., max. (229.6 gm.)
Case Material:	Steel

Power Connector Pins:

A: +28VDC
B: 28VDC Return (Ground)
C: Chassis
D: Not used

Specifications subject to change without notice. SE-122 2/04

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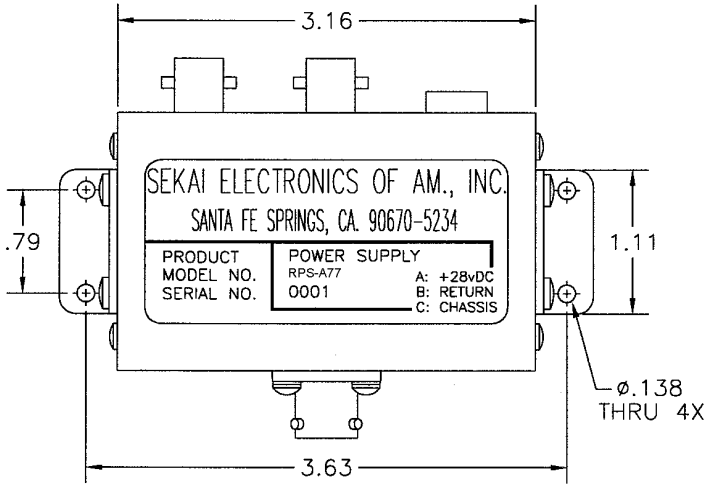
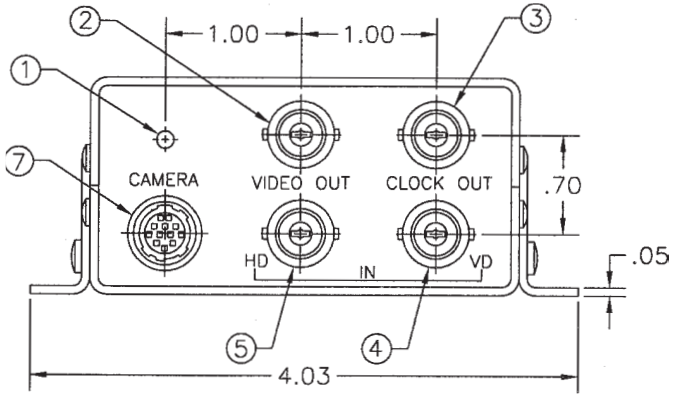
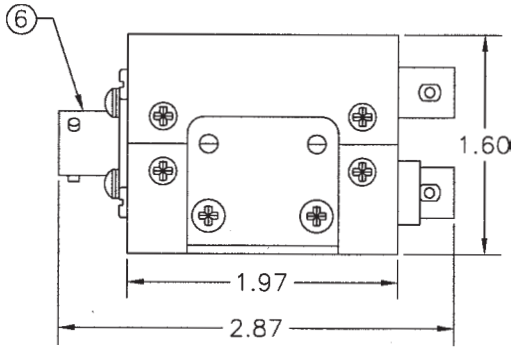
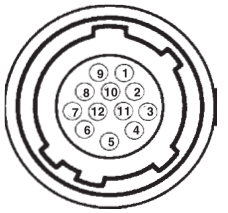






1. PILOT LAMP
2. VIDEO OUT (Video Output Signal) connector (BNC)(Also"Y"out)
3. CLOCK OUT CONNECTOR (Also "C" out)
4. VD IN CONNECTOR (BNC)
   VD or VBS signals are in put to the camera from from the exernal signal generator
5. HD IN CONNECTOR
   HD signal is input to the camera from the external signal generator
6. INPUT POWER (28VDC ± 4VDC)
   Pin Connections:
   A: +28VDC C: Chassis Ground
   B: Return D: N/C
7. Output Power; Video and Signals from camera



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Front view of receptacle on RPS-77

Signal / Pin No.	Pin Assignment of DC Out Video Connector		
	External sync Signal		Internal Sync Signal
	HD, VD	VS	
1	Ground	Ground	Ground
2	+12V	+12V	+12V
3	VBS/Y Output (ground)	VBS/Y Output (ground)	VBS/Y Output (ground)
4	VBS/Y Output (signal)	VBS/Y Output (signal)	VBS/Y Output (signal)
5	HD input (ground)	-	-
6	HD input (signal)	-	-
7	VD input (signal)	VS input (signal)	-
8	-/C output (ground)	-/C output (ground)	-/C output (ground)
9	-/C output (signal)	-/C output (signal)	-/C output (signal)
10	N/C	N/C	N/C
11	N/C	N/C	N/C
12	VD input (ground)	VD input (ground)	-

Dimensions are in inches	RPS-A77 ASSEMBLY		
XX = ± .01 XXX = ± .005 Angles = ± 1 Deg.	Scale: Date: 1-3-94	Approved By: LK	Drawn By: RY Revised: 7-3-98
	AIRCRAFT POWER SUPPLY		
	l s Electronics of America, Inc. 13570 Larwin Cir., Santa Fe Springs, CA 90670-5031		Drawing Number R77-001