15531 Cabrito Road
Van Nuys, CA 91406
www.eoninstrumentation.com
818-781-2185
3800 Oceanic Drive, #112
Oceanside, CA 92056

Audio Product Series (10-23-2018)

Model Number	Part Number
ACU-101	12801-300
ACU-117	20000-300
CAPP-101	12891
CSA-101	12890

ACU-101 (top), CAPP-101 (middle), CSA-101 (bottom) pictured

General

The ACU-101 Audio Control Unit is designed to combine audio signals from four input sources into a single mixed audio output signal. The audio output and all four audio inputs are coupled to the ACU-101's internal circuitry through 600 balanced transformers. Each of the four inputs have independent level controls located on the front panel.

The ACU-117 Audio Control Unit splits a single audio signal into 17 balanced outputs for recording.

The CAPP replaces the integral Public Address System Amplifier (PAA) impedance and power matching function installed on the baseline C-130J Inter-Communication System which is lost with the LRS modification to an integrated ICS. The CAPP passes and amplifies unencrypted audio from the MICS to the Public Address system PAA on the baseline HC-130J LRS. The CAPP is a portion of the communications subsystem used aboard the HC-130J Mission System.

The CSA Cockpit Speaker Amplifier is a component of an aircraft communications subsystem that integrates analog audio signals. The Cockpit Speaker Amplifier provides amplified audio signals to the cockpit speakers. The CSA operates as a light weight, airborne component of a shared-channel, internal aircraft communication system. The CSA will support two separate audio channel inputs and provide two separate speaker outputs. The Cockpit Speaker Amplifier provides signal level amplification and power filtering without selections and control functions.

Configuration

See the attached Outline and Mounting Drawings for the Standard Series. Custom audio control units can be designed upon request.

Specifications

- Bandwidth: 300 to 5000 Hz.
- Crosstalk: 100dB isolation at 1000Hz
- Amplification: 8.3 dB with 8. speaker impedance

- THD: < 7 %
- Output Noise: < 15mV RMS measured with 10 kHz filter
- Voltage Input: 28VDC
- Current: < 1 Amp.
- Weight: 2 pounds
- Convection Cooled
- Dimensions: 6.75L X 5.87W X 1.94H inches
- Connector: D38999/20WC98PN

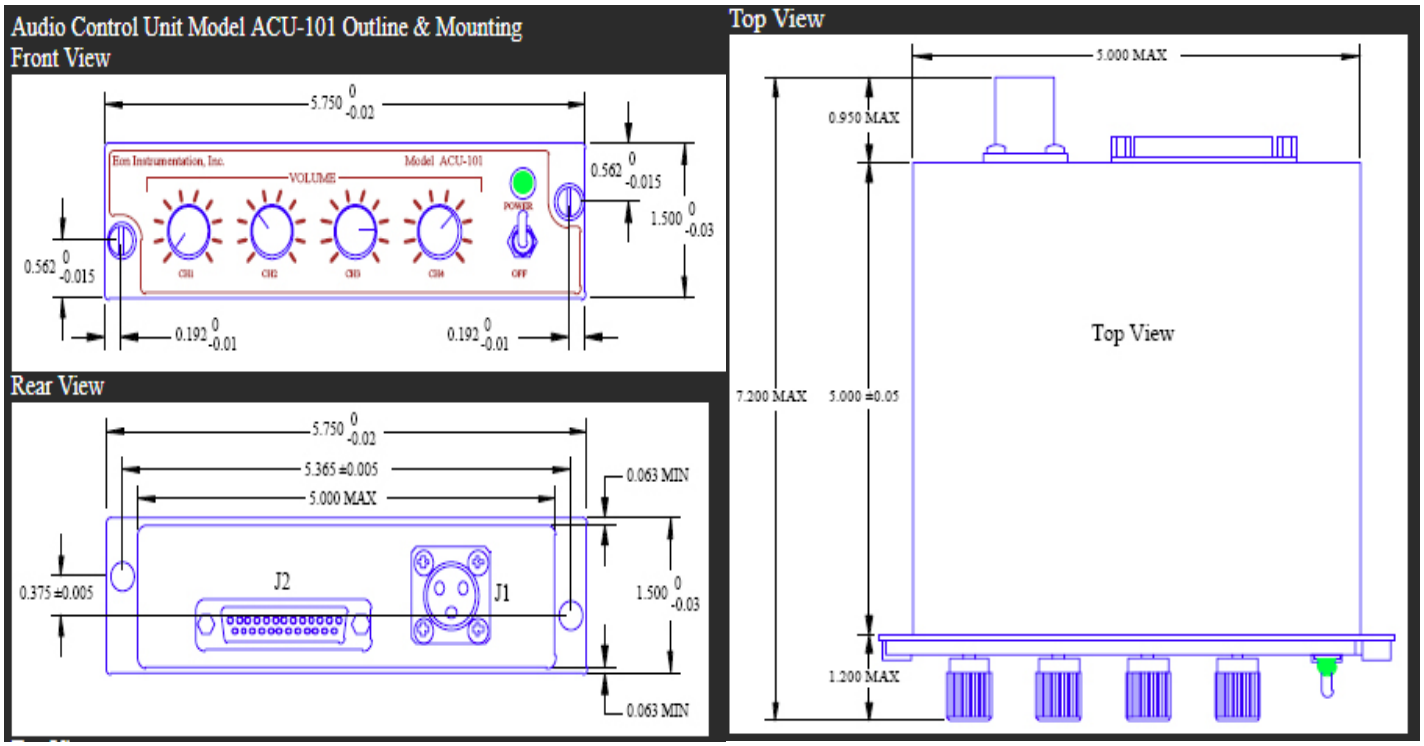
Environmental Specifications

- Limit Acceleration: Mil Std 810C, Method C Method 513.2 Proc. II
- Ultimate Acceleration: Mil Std 810C Method 513.2 Proc. I
- Vibration: 4.93 GRMS from 5—500 Hz
- Temperature/Altitude: Mil Std 810C Method 504.1
- Humidity: Mil Std 810E Method 507.3 Proc. I
- Shock: Crash Safety
- Salt Atmosphere: Mil Std 810E Method 509.3
- Sand And Dust: Mil Std 810E 510.3 Proc. I & II
- Explosive Atmosphere: Mil E 5400
- Lightning Protection: DO160E Sect.22 Cat. J
- EMI: Mil Std 461E CE101, CE102, CS101, CS114, CS115, CS116, RE101, RE102, RS101, RS103

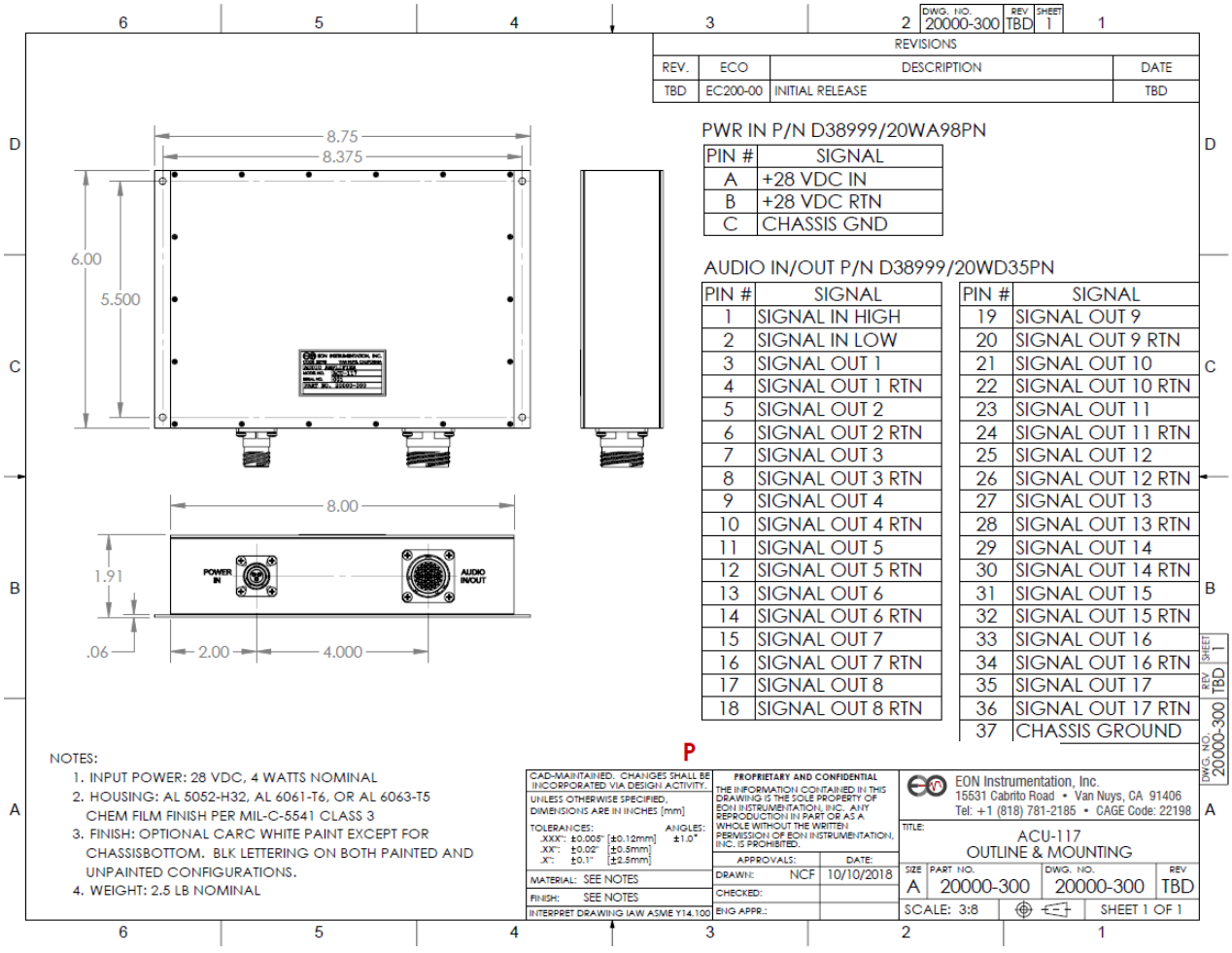
Transient Testing: Mil Std 704A

MTBF: 82,000

Outline and Mounting Drawings:



ACU-101 Outline and Mounting Drawing



REVISIONS			
REV.	ECO	DESCRIPTION	DATE
TBD	EC200-00	INITIAL RELEASE	TBD

PWR IN P/N D38999/20WA98PN

PIN #	SIGNAL
A	+28 VDC IN
B	+28 VDC RTN
C	CHASSIS GND

AUDIO IN/OUT P/N D38999/20WD35PN

PIN #	SIGNAL	PIN #	SIGNAL
1	SIGNAL IN HIGH	19	SIGNAL OUT 9
2	SIGNAL IN LOW	20	SIGNAL OUT 9 RTN
3	SIGNAL OUT 1	21	SIGNAL OUT 10
4	SIGNAL OUT 1 RTN	22	SIGNAL OUT 10 RTN
5	SIGNAL OUT 2	23	SIGNAL OUT 11
6	SIGNAL OUT 2 RTN	24	SIGNAL OUT 11 RTN
7	SIGNAL OUT 3	25	SIGNAL OUT 12
8	SIGNAL OUT 3 RTN	26	SIGNAL OUT 12 RTN
9	SIGNAL OUT 4	27	SIGNAL OUT 13
10	SIGNAL OUT 4 RTN	28	SIGNAL OUT 13 RTN
11	SIGNAL OUT 5	29	SIGNAL OUT 14
12	SIGNAL OUT 5 RTN	30	SIGNAL OUT 14 RTN
13	SIGNAL OUT 6	31	SIGNAL OUT 15
14	SIGNAL OUT 6 RTN	32	SIGNAL OUT 15 RTN
15	SIGNAL OUT 7	33	SIGNAL OUT 16
16	SIGNAL OUT 7 RTN	34	SIGNAL OUT 16 RTN
17	SIGNAL OUT 8	35	SIGNAL OUT 17
18	SIGNAL OUT 8 RTN	36	SIGNAL OUT 17 RTN
		37	CHASSIS GROUND

NOTES:
1. INPUT POWER: 28 VDC, 4 WATTS NOMINAL
2. HOUSING: AL 5052-H32, AL 6061-T6, OR AL 6063-T5 CHEM FILM FINISH PER MIL-C-5541 CLASS 3
3. FINISH: OPTIONAL CARC WHITE PAINT EXCEPT FOR CHASSISBOTTOM. BLK LETTERING ON BOTH PAINTED AND UNPAINTED CONFIGURATIONS.
4. WEIGHT: 2.5 LB NOMINAL

CAD-MAINTAINED. CHANGES SHALL BE INCORPORATED VIA DESIGN ACTIVITY.
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES [mm]
TOLERANCES: .XXX": ±0.005" [±0.12mm] .XX": ±0.02" [±0.5mm] .X": ±0.1" [±2.5mm] ANGLES: ±1.0°
MATERIAL: SEE NOTES
FINISH: SEE NOTES
INTERPRET DRAWING IAW ASME Y14.100

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APPROVALS:	DATE:
DRAWN: NCP	10/10/2018
CHECKED:	
ENG APPR.:	

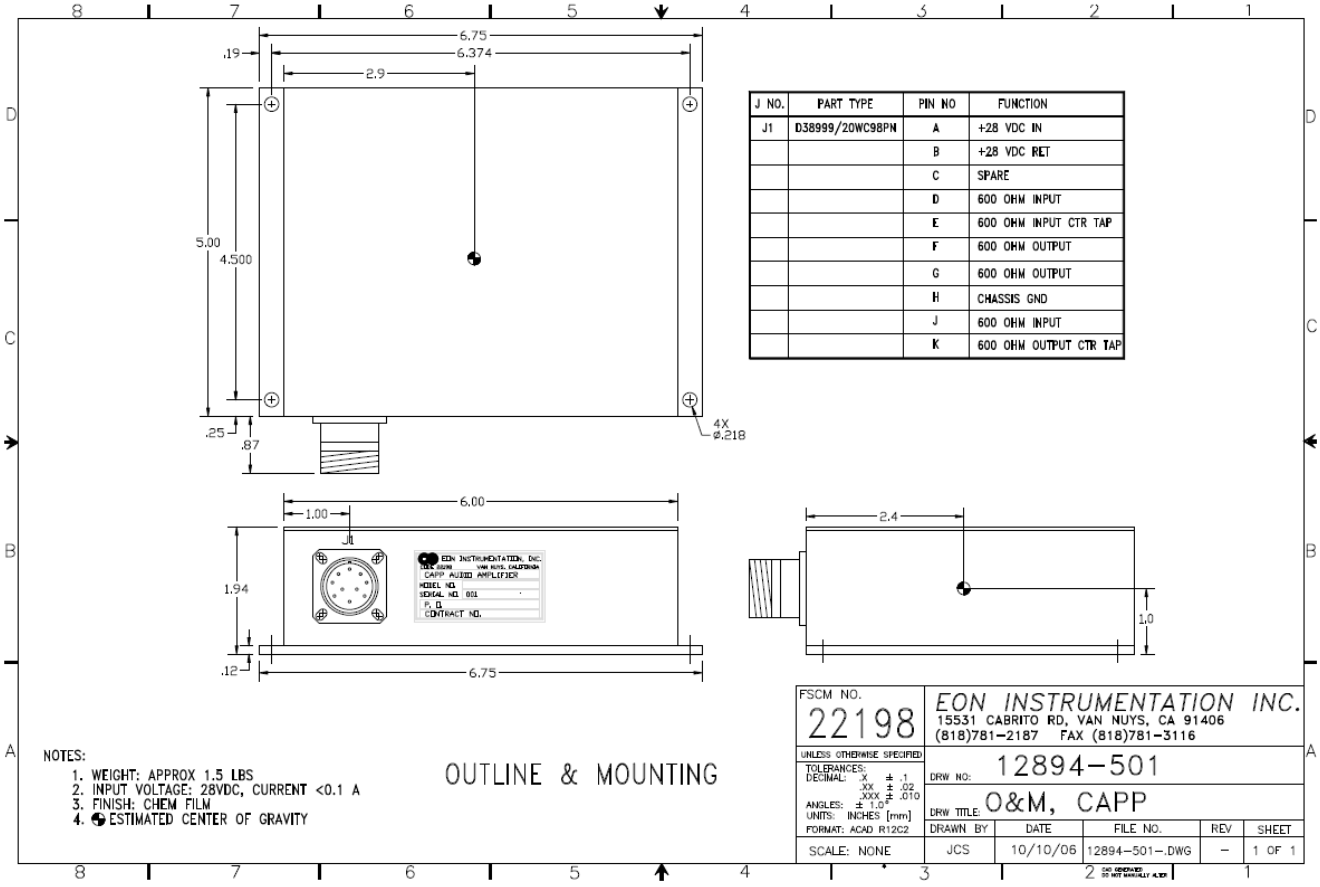
EON Instrumentation, Inc.
15531 Cabrito Road • Van Nuys, CA 91406
Tel: +1 (818) 781-2185 • CAGE Code: 22198

TITLE: ACU-117 OUTLINE & MOUNTING

SIZE	PART NO.	DWG. NO.	REV
A	20000-300	20000-300	TBD

SCALE: 3:8 SHEET 1 OF 1

ACU-117 Outline and Mounting Drawing



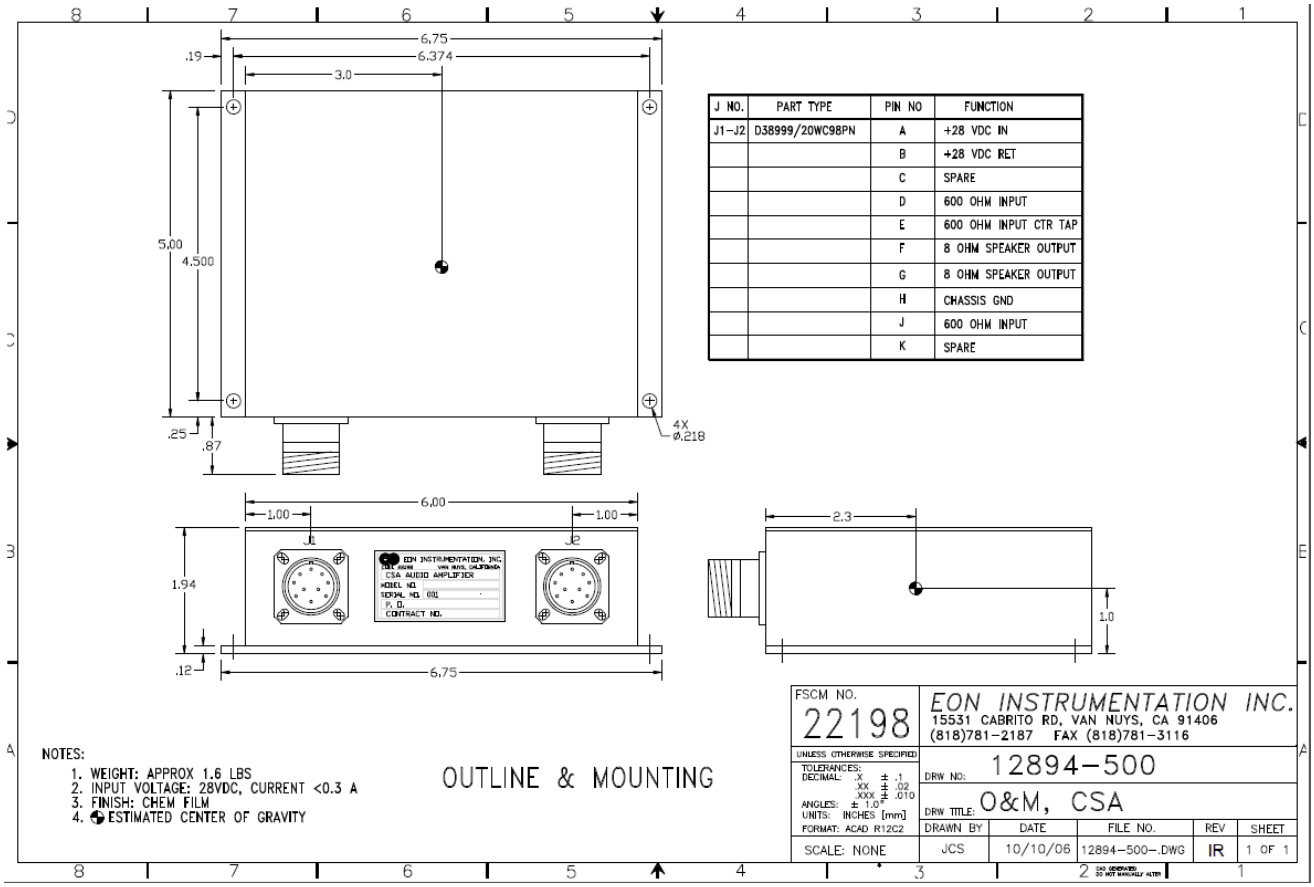
J NO.	PART TYPE	PIN NO	FUNCTION
J1	D38999/20WC98PN	A	+28 VDC IN
		B	+28 VDC RET
		C	SPARE
		D	600 OHM INPUT
		E	600 OHM INPUT CTR TAP
		F	600 OHM OUTPUT
		G	600 OHM OUTPUT
		H	CHASSIS GND
		J	600 OHM INPUT
		K	600 OHM OUTPUT CTR TAP

NOTES:
1. WEIGHT: APPROX 1.5 LBS
2. INPUT VOLTAGE: 28VDC, CURRENT <0.1 A
3. FINISH: CHEM FILM
4. ESTIMATED CENTER OF GRAVITY

OUTLINE & MOUNTING

FSCM NO. 22198	EON INSTRUMENTATION INC. 15531 CABRITO RD, VAN NUYS, CA 91406 (818)781-2187 FAX (818)781-3116			
UNLESS OTHERWISE SPECIFIED TOLERANCES: DECIMAL: .X ± .1, .XX ± .02, .XXX ± .010 ANGLES: ± 1.0° UNITS: INCHES [mm] FORMAT: ACAD R12C2	DRW NO: 12894-501 DRW TITLE: O&M, CAPP			
SCALE: NONE	DRAWN BY: JCS	DATE: 10/10/06	FILE NO.: 12894-501-.DWG	REV: – SHEET: 1 OF 1

CAPP-101 Outline and Mounting Drawing



CSA-101 Outline and Mounting Drawing