



AEM

P139-HD

DIGITAL AUDIO SYSTEMS

DAY NIGHT
SYST LIGHT
INST LIGHT

GENE PILOT
FUEL P
HIGH
RTO
RTO P
RTO2
TFT CRP

TOT 20°C
VELOCITY 154
ENG OIL
TEMP 19°C
PRESS 0.0
W/BUS 28.2v
I/GEN +0A

GARMIN
1851
Published IFR by TS K34
With a Seven Post Physical Interface

TOPI-5000AV
A 06 DISPATCH 0 HBA
B 07 OPERATIONS 0 HBA
RCMP X301-4445144 0 LBB
Chan - 008
Zone Chan Scan

GPS Operable in VFR Conditions Only
P139 Consoles
P139 Consoles

MAP
SUBSOUND
DORNLINK

SWI COMPANY
SERIAL T FAN
LOGS PWR
CLOCK
LAMP CTRL
ADAPTERS
TRANSP
VHF2

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Industry-Leading Digital Audio Systems

The AEM Digital Audio System is the smallest, lightest and most capable Digital Audio System available today. Building on decades of audio system design, development, and manufacturing experience, the AEM Digital Audio System is perfect for operators and integrators who need crystal clear, mission-ready digital audio from a reliable manufacturer with world-class support. The P139-HD was designed in consultation with Completion Centers, Technicians, Operators, and TFOs in the Law Enforcement and Air Medical Transport sectors. The result is the industry's most capable, flexible, and practical digital audio system for special role aircraft.



G13116: 8 Transceiver Control Panel

- Controls up to 8 transceivers or receivers in any combination
- 6 additional switched receive channels for other mission equipment
- Full Multicast/Simulcast and radio relay capability
- NVIS-compatible lighting standard
- Custom engraved buttons standard
- Unused buttons may be used to control or trigger other mission equipment
- Less wiring than any other control panel available
- Installation connectors included
- Dimensions: H 2.21" x D 3.5" x W 5.75"



G13115: 16 Transceiver Control Panel

- Controls up to 16 transceivers or receivers in any combination
- NVIS-compatible lighting standard
- Full Multicast/Simulcast and radio relay capability
- Custom engraved buttons standard
- Unused buttons may be used to control or trigger other mission equipment
- Less Wiring than any other control panel available
- Installation connectors included
- Dimensions: H 2.85" x D 3.5" x W 5.75"



G13000: Digital Audio Router

- Up to 20 transceivers or receivers in any combination (G13160 = 30 xcvsr)
- 12 full capability headset ports standard (G13160 = 18 headset ports)
- 8 programmable alert tone generators with priority
- 48 KHz Digital Audio Processing
- Extra keylines for special functions or operation of other equipment
- Installation Connectors Included.
- No special software or cables for programming of levels, priorities, or alert tones. Uses a standard laptop, network cable and your internet browser (no web access required).
- Dimensions: H 8.4" x D 10" x W 2.6" (G13000)

Highlights

- Supports 10, 20 or 30 transceivers, receivers or other audio sources in any combination with a single router
- Supports 6, 12 or 18 headsets with ICS VOX, and ICS and transmit PTT using a single router
- Supports up to 36 control panels
- Multicast/Simulcast for any connected transceivers
- Bi-Directional radio relay with no additional components
- External mission equipment can be actuated using audio panel controls

Standard Features

- All connectors and mounts included at no additional charge
- Dual input power supply
- No external audio matching units required
- Internal emergency Com 1 and Com 2 isolation relays with ICS between Pilot and Co-Pilot in emergency mode
- Audio Router has multi-axis mounting points for any application
- Full 48KHz sampling for DVD-quality audio
- Robust RS-485 communications between control panels and router via a 4-conductor shielded cable to a standard-density DE-9 connector
- 8 full programmable alert tones with priority
- CVR and DVR outputs are both supported
- Multiple ICS zones with isolate, call and private ICS functions in a single router
- Custom functionality programming at no additional charge
- NVIS-compatible lighting at no additional charge
- Custom engraved control panels at no additional charge
- Built-in web-based configuration software allows user configuration of audio levels and other settings
- Removable memory card for firmware updates
- Two independent dimmer inputs for separate cockpit and cabin dimming

Available STCs

CERTIFICATION

FAA STC SR00521SE	AS350 B, BA, B1, B2, B3, C, D, D1 AS355 E, F, F1, F2, N Bell 206 A, A1, B, L, L1, L3, L4, 407 EC 135, P1, T1, P2, T2, P2+, T2+
TCCA STC SH09-17	EC135 P1, T1, P2, T2, P2+, T2+ AS350 B, BA, B1, B2, B3, D AS355 E, F, F1, F2, N Bell 206 A, A1, B, L, L1, L3, L4, 407
EASA STC 10036806	AS350 B, BA, B1, B2, B3, D AS355 E, F, F1, F2 EC135 P1, T1, P2, T2, P2+, T2+ Bell 206 A, B, L, L1, L3, L4, 407
ANAC STC 2007506-30	AS350 B, BA, B1, B2, B3 AS355 F, F1, F2, N Bell 206 A, B, L1, L3, L4, 407 EC135 P1, T1, P2, T2, P2+, T2+
FAA STC SR02270SE	MBB BK 117 A-1, A-3, A-4, B-1, B-2, C-1, C-2, D-2 Bell 204 B, 205 A, 205 A-1, 205 B, 212, 412, 412 EP, 412 CF Bell 214 B, B1, ST
TCCA STC SH14-33	MBB BK 117 A-1, A-3, A-4, B-1, B-2, C-1, C-2 Bell 204 B, 205 A, 205 A-1, 205 B, 212, 412, 412 EP, 412 CF Bell 214 B, B1, ST
EASA STC 10056456	MBB BK 117 A-1, A-3, A-4, B-1, C-1, C-2 Bell 204 B, 205 A-1, 212, 412, 412 SP, 214 ST
ANAC STC 2014511-01	MBB BK 117 A-3, A-4, B-1, B-2, C-1, C-2 Bell 212, 412, 412 EP, 204 B, 205 A, 205 A-1, 214 B, 214 B-1
JCAB STC STC-460-TYO	Bell 412EP

Environmental Qualifications

DO-160F ENVIRONMENTAL CAT. D1C4XXBAAU2(F)(F1)XXXXXXXXBXXBBZCTMA3D3XXXXXXXXAX

DO-160F ENV. CAT.	SECTION	CATEGORY	DESCRIPTION
Temp/Alt	4.0	D1C4	Equipment tested to Category D1 (50,000ft , non-pressurized, controlled temperature) and C4 (35,000ft, non-pressurized, non-controlled temperature)
Low Temperature	4.0	D1C4	Operating Temp: -20°C. Short-Time Operating: -40°C. Ground Survival: -55°C
High Temperature	4.0	D1C4	Operating Temp: +55°C. Short-Time Operating: +70°C. Ground Survival: +85°C
Loss of Cooling	4.5.4	Z	No Cooling Required
Temp. Variation	5.0	B	5°C minimum per minute
Humidity	6.0	A	Equipment tested to Category A
Shock	7.0	A	6G in any direction
Vibration	8.0	U2	Equipment tested to Category U2 (Robust Vibration Test)
Mag Effect	15.0	Z	Less than 0.3m
Power Input	16.0	B	Equipment tested to Category B
Voltage Spike	17.0	B	Equipment tested to Category B
Conducted Audio	18.0	B	Equipment tested to Category B
Induced Signal Susceptibility	19.0	ZC	Equipment tested to Category ZC
RF Susceptibility	20.0	TT	Equipment tested to Category TT
RF Emissions	21.0	M	Equipment tested to Category M
Lightning Induced	22.0	A3D3	Equipment tested to Category A3D3
ESD	25.0	A	Equipment tested to Category A

System Specifications

ELECTRICAL CHARACTERISTICS

Max. Input Voltage		32 VDC
Min. Input Voltage		14 VDC
Max. Input Current		4 A
Min. Input Current		1.2 A
Gnet Voltage	Supplied by G13000	24 VDC
Max. Gnet Current	Per Gnet bus	0.5 A
Max. Dimmer voltage	DC, AC or PWM input	28 V
Dimmer Buses (Independent)		2 EACH

AUDIO CHARACTERISTICS

Max. Microphone Input	MIC GAIN set to minimum	4.5 dBV
Microphone Input Impedance		500 Ω
Max. Earphone Output	EAR GAIN at maximum	13.5 dBV
Expected Earphone Impedance		150 or 600 Ω
Max. Receive Input	RX GAIN set to minimum	14.0 dBV
Receive Input Impedance		600 Ω
Max. Transmit Output	TX GAIN at maximum	6.0 dBV
Expected Transmit Impedance		150 Ω

KEYLINE CHARACTERISTICS

Headset PTT Key Voltage	Keyline must be pulled below this value to key	0.5 V
Max. Radio Keyline Voltage	Pull-up voltage provided by radio	28 V
Max. Radio Keyline Current		1 A
Max. Separate ICS Zones	No separate router required	9 EACH

Non-STC Airframe Installations

ROTARY WING

Bell 429	Airvan
Bell 505	Cessna Caravan
Bell UH-1	Cessna Citation
Eagle Single	Challenger
EC130	E-9A
H155	King Air
Hughes 369FF	PC12
K-MAX	Q200
MD500	Q300
R44	
S-76	
Super Puma	
UH-60	

FIXED WING