

Product Brief

MIU Radio Interface Board (RIB)

700-16-03



Description

The Radio Interface Board (RIB) is one of a suite of option boards available for the Mercury Interface Unit.

The RIB provides a standard interface for up to 8 radios from a wide range of manufacturers. Half-duplex and full-duplex radios are supported. The RIB is commonly used to:

- Communicate with radios from your intercom-enabled workstation or laptop, telephone / VOIP telephone, or other types of voice communications equipment
- Establish Radio over IP
- Achieve radio interoperability between different radio types (frequencies / manufacturers)
- Enable radios with DTMF dialpads to make telephone calls to conventional or VOIP telephones
- Create radio talk groups between radios that are geographically dispersed

Key Features

- Interface up to eight (8) radios on each RIB
- Port-specific input and output level adjustments
- Up to two (2) seconds of audio delay on inputs and outputs
- Provides Push-to-Talk control (GPI Output) to place radio in transmit mode
- Accepts COR (Carrier Operated Relay) signal (GPI Input) to place radio in receive mode
- RJ45 connectors for easy cable construction
- Ideal for extending radio communications over IP



Trilogy has nearly a decade of experience with interfacing radios of all types, including:

- Conventional Radios
 - Simplex
 - Duplex
 - UHF
 - VHF
 - 800MHz
- Amateur Radios
- Public Safety / Civilian Radios (LMRs)
- Military Radios (SINCGARS, MIDS, AN/ARC-210, and others)
- Fixed Radios
- Mobile Radios
- Wireless Headsets with PTT features

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Specifications

Audio Input	Number of ports	8 per card. Max of 4 RIBs per MIU
	Type	Balanced audio on RJ-45
	Input impedance	> 10k Ω
	Nominal input level	0dBu
	Input level adjustment	Via software from -9dB to +12dB with additional +20dB boost feature
	Frequency response (3dB points)	<25Hz & >3200Hz (8kHz sampling) / <25Hz & >6600Hz (16kHz sampling)
	Distortion	<0.05% when routed locally
	Noise	< -60dB un-weighted
	Audio delay	Independent software adj. on each channel. 0-2000ms in 20ms steps.
	Filters	Audio inputs have selectable filters giving 3, 6 or 9dB cut/boost at 3kHz.
	Audio Output	Type
Output impedance		<60 Ω
Output level adjustment		Via software from -34.5dB to +12dB in steps of 1.5dB. Mute option.
Frequency response (3dB points)		<25Hz and >3200Hz (8kHz sampling)
(3dB points)		<25Hz and >6600Hz (16kHz sampling)
Distortion		<0.05% when routed locally
Noise		< -60dB un-weighted
COR (GPI input from radio)	Type	Grounding contact - external equipment must provide ground closure.
	Polarity	Software selectable
	Input voltage range "on"	-2V to +2V (nominal) with respect to MIU 0V
	Input voltage range "limits"	>-50V, <+60V
	Attack (de-bounce) time	Adjustable 0-1999ms in 1ms steps
PTT (GPI output to radio)	Type	Solid state relay - RIB provides ground closure
	Polarity	Software selectable
	Absolute maximum voltage	+60V peak (AC or DC)
	Max Current	500mA
VOX	Hold time	0-5000ms in 1ms steps
	General	All audio inputs can use VOX rather than PTT, software selectable
	Attack time	Software adjustable 10-5000ms in 1ms steps
	Release time	Software adjustable 750-5000ms in 1ms steps
RJ45 Connector Pinout	Threshold	Software adjustable -10 to 50dBu
	Pin 1	COR (GPI) Input
	Pin 2	COR/PTT Ground
	Pin 3	PTT (GPI) Output
	Pin 4	Audio In- (May be grounded if unbalanced audio is used)
	Pin 5	Audio In +
	Pin 6	Audio Ground
	Pin 7	Audio Out +
Environmental	Pin 8	Audio Out- (Must be grounded if unbalanced audio is used)
	Dimensions / Weight	142mm W x 210mm D x 17mm H / 200gm
	Operating temperature	0 to +50 °C. Storage -20 to +85 °C.
	Operating humidity	Relative humidity 0 to 90% non-condensing
Ordering Information	MTBF	80,000 hours
	700-25-01	Mercury Interface Unit (MIU)
	700-16-03	Radio Interface Board (RIB)

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