



IC-52B

TWO CHANNEL AUDIO INTERCOM AMPLIFIER

The IC-52B is the most versatile Audio Intercom ever built; yet it is also the easiest to integrate into your design. The audio quality of the IC-52B is superb. Noise and Distortion are very low. Selectable equalization optimizes voice communications. The Automatic Level Control assures optimum performance. There are separate controls for Audio Level, and Reach. Once set, the Audio Level remains constant over wide dynamic input range. The user may wander throughout the room, and still be heard at a nearly constant level without any operator adjustments!

The IC-52B incorporates 2 universal Microphone/Line Level inputs. Each input is jumper selectable for the input gain range desired for your project. Hands-Free operation is easily achieved with the IC-52. The selectable Voice Operation (VOX) operates smoothly and flawlessly. Electronic switching takes less than 3mS. Setup indicators make adjustments easy. The IC-52 incorporates two selectable Notch-Filters to reduce acoustic feedback. One filter has an optimized frequency range to compensate for poor room acoustics. The other has a higher frequency range to reduce microphone to wall/glass resonance.

The logic interface has a plethora of Inputs and Output Options. The Indicators are comprehensive, yet simple. The interface is fully configurable with jumpers, however common functions are preset.

Line Level, 0dBm Outputs may be configured for Paging, Monitoring or Logging. Jumpers allow for Audio Signal Selection, and Keying. The Tech Works PA-BUSS Line Level Output is fully configurable. Pre-emptive Music is accommodated using the Tech Works PA-402 Power Amplifier Modular Construction makes the IC-52 ideal for integrated designs. The unit is small; mounting is flexible, and easy. Power is from a Universal Plug-in D.C power adapter. All I/O is through Euro-Style connectorized barrier strips.

BENEFITS

- Very Versatile
- Easy to Use
- High Quality Audio
- Automatic Level Control
- Hands Free Operation (VOX)
- Simple or Full Duplex Operation
- Solid State Switch <3mS
- Universal Line / Mic Inputs
- Built in Notch Filters

Associated Equipment

ICM-8C	8-Station Intercom Master
DODC-1	Detention Desk Operator Console
DODC-2	Detention Desk Operator Console w/Hidden Mic

Design Information

Power	24V DC
Color	Grey Metal Enclosure
Mounting	Wall / Backboard / Under Desk
Dimensions	8.5" W X 6" D X 1.75" H
Weight	3 lbs.
Freq. Resp.	250 – 10k Hz
Output	Short Protected 10-W RMS Sine Wave, 25V (balanced)
Distortion	< 1% THD
Mic Input	Mic Level – 2 k/ohm Balanced Line Level – 2 k/ohm Balanced/1 k/ohms Unbalanced
Equalization	3-Settings

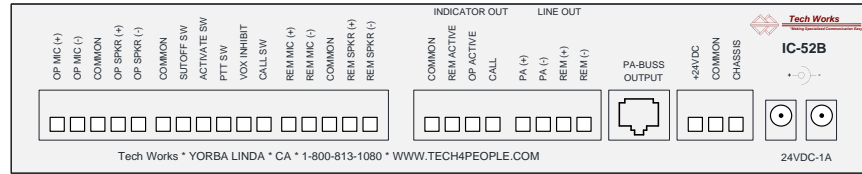


Tech Works®

"Making Specialized Communication Easy"



REAR PANEL CONNECTIONS



IC-52B Rear View

Audio I/O, Euro Style Barrier Strip

Operator Microphone/Line Input, Configurable, see Specifications, and Jumper Options

Operator Speaker Output (10 Watts @ 25 volts)

Remote Microphone/Line Input, Configurable, see Specifications, and Jumper Options

Remote Speaker Output (10 Watts @ 25 volts)

Page Output Line Level Output (transformer balanced), after signal processing, ~0dBm

Remote Microphone Line Level Output (transformer balanced), after signal processing, ~0dBm

PA-BUSS Output, RJ-45 Connector, signal pairs:

Power, 23 Volts, current limited, shared with IND PWR

Line Level Output, after signal processing, ~0dBm

ALERT, indicates attention is requested

Control Inputs, Euro Style Barrier Strip, common sensing for Switches, or PLC

Switch Common

Shutoff (Lowest Priority) - Active low, momentary, or sustained, Disables both Operator and Remote Speakers

Activate - Active Low, momentary, or sustained, Overrides "Shut Off", Cancels Call Tone (Jumper Option)

Push to Talk (PTT) - Active Low, momentary or sustained, Forces the Remote speaker on while depressed, Cancels "Call Tone" (Jumper Option), Activates the Intercom if Inactive,

VOX Inhibit - Active low, sustained, Defeats VOX while depressed, Provides privacy to the Operator microphone, when using VOX

Call - Active low, momentary, Causes 'Call Tone' to be sent to the Inside speaker, Causes Call Light to flash

Indicator Outputs, Euro Style Barrier Strip

Open Collector Transistors, Common sensing for Indicators, or PLC V<30Volts, I<200MA

Common

Remote Active, Remote Microphone Keyed, low when Keyed

Operator Active, Operator Microphone is Keyed, low when Keyed

Call Indicator, flashes Low when Call Tone is present

Power, Euro Style Barrier Strip, connected in parallel with Barrel Connector

+24 Volts, DC

Power Supply Return

Chassis

Barrel Connector, two in Parallel, PJ-102A, center connector positive

Options:

Three mounting options are available as standard configurations.



IC-52B-DM Desk Mount



IC-52B-WM Wall Mount (Under Counter)



IC-52B-RM Rack Mount

Architects' and Engineers' Specifications

The Dual Channel Audio Intercom Amplifier shall have two completely separate and discrete audio processing channels. The unit shall include all switching and logic control for full hands free operation without the use of push to talk (PTT) or push to listen (PTL) controls. All logic controls including PTT and PTL shall be available on the rear panel screw terminals. All logic and control connections shall be fully PLC compatible ground sensing. Both channels shall have Line Level or Microphone level inputs (selectable). Microphone inputs shall be 2000 ohms balanced, with selectable phantom power. Transformer balanced line level outputs shall be included for recording of all program selectable by jumpers. Each power amplifier shall deliver 10 watts continuous power at 25Volts at less than 1% total harmonic distortion. The Amplifier shall include all optional circuitry to allow full control of Music Ducking and line level audio input and output control without custom assemblies.

The Dual Channel Audio Intercom Amplifier shall be Tech Works Model IC-52B.

