

## TW-40 2-Way Radio Interface



TW-40 Front Panel

### FEATURES

- **Interfaces any 2-way radio to a Clear-Com, RTS®, or compatible system**
- **Accepts any walkie-talkie**
- **Powered by the intercom line**
- **Easy to interconnect**
- **Individual transmit and receive level controls**
- **Bi-color LED audio level indicator**
- **Small footprint—will fit anywhere**

### APPLICATIONS

- **Special event production and coordination**
- **Outdoor events**
- **Theatrical rehearsals**
- **Touring shows where all usable, licensed radio frequencies are already allocated**
- **House manager communications and tech rehearsals**
- **Wherever increased mobility and greater reach are required from the intercom system**

### DESCRIPTION

The TW-40 is a stand-alone interface designed to connect a 2-way radio or walkie-talkie into a single channel of a standard Clear-Com, RTS\*, or compatible 2-wire party-line intercom system. It provides both audio connection and “push-to-talk” transmitter keying, using standard Call signals.

The ability of a 1- to 5-watt walkie-talkie to both talk to and receive from the wired intercom system can greatly extend an intercom system’s capability, especially in very large indoor and outdoor facilities and venues. The TW-40

is powered directly from

the intercom line, and connection to the radio is via a single DB-9F 9-pin connector. The interface has extensive RF and EMI isolation to prevent the 2-way radio RF from radiating into the intercom system.

### INTERFACING

In order to accommodate the widest variety of 2-way radios, the TW-40 is supplied with a 9-pin connector and wiring diagrams for many 2-way radios. Users may then create custom cables for their particular radio(s).

The combination of internal jumpers (switches) and front panel “Transmit” and “Receive” level controls assures correct level matching to virtually any radio. Adjustments from -57 dB microphone level to +11 dB line level are supported. A bi-color LED provides a visual indication of audio level from the intercom line.

\* For RTS systems equipped with the Call Light feature.



TW-40 Rear Panel

**PLpro**®

PROFESSIONAL INTERCOM PRODUCTS

by Clear-Com

## SPECIFICATIONS

### GENERAL

Frequency Response,  
 Transmit: 100 Hz - 10 kHz,  $\pm 3$  dB  
 Receive: 100 Hz - 15 kHz,  $\pm 3$  dB  
 Distortion: < 0.5% THD  
 Clear-Com Line Level: -15 dBv nominal  
 Line Impedance: 15K  $\Omega$  bridging  
 Power Consumption, DC Current: 15 - 25 mA

### TRANSMIT

Switchable Gain, Transformer Isolated  
 Microphone Type: Carbon, dynamic,  
 or electret  
 Level: -57 dB to +11 dB

### RECEIVE

Transformer Isolated  
 Level: -8 dB to +23 dB  
 Impedance: 400  $\Omega$  bridging

### CONNECTORS

To Clear-Com or Other Intercom Line:  
 3-pin XLR-F  
 To Two-Way Radio: DB-9F  
 Supplied Connector: DB-9M

### DIMENSIONS

1.8" H x 3.95" W x 6.4" D  
 (46 x 100 x 163 mm)

### WEIGHT

1 lb, 4 oz (0.6 kg)

0 dBv is referenced to 0.775 volts rms

*All specifications are subject to change  
 without notice.*

## RADIO TRANSMITTER "KEYING"

A relay contact provides the required "Push-to-Talk" transmitter "keying" of the radio. This relay is activated by detecting the "Call Signal" on the intercom channel. The relay contacts, in conjunction with the custom-made radio cable, allow correct transmitter keying of virtually any type of radio. A "Transmit Key" LED indicates that the relay is active.

Certain Clear-Com stations can be set up so that the Call signal is activated automatically when the Talk button is pressed (Talk-on-Call). With these stations, the radio transmitter can be keyed by simply pushing the Talk button. The operation of the 2-way radio then becomes seamless and transparent to station users.

## BLOCK DIAGRAM

