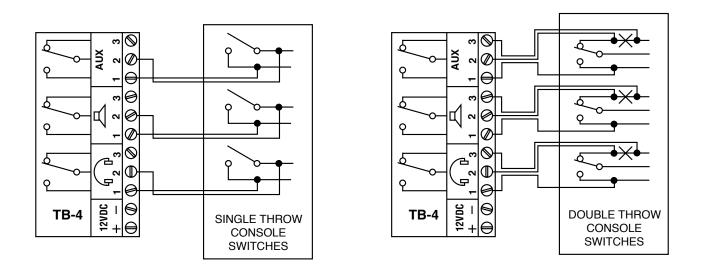
Brainstorm Electronics Inc. www.brainstormtime.com Los Angeles, CA - USA Tel: (323) 845-1171 TB-4 Communicator Infrared remote talkback

The TB-4 communicator is an infrared remote control system designed to interface with an already existing talkback system. It consists of a receiver and a transmitter. It should be installed by a qualified technician. Please read the following instructions carefully.

## **INSTALLATION INSTRUCTIONS:**

Place the receiver somewhere in the front of the room (i.e. on the front wall, on top of the console) and connect its power. The white stripe is plus (don't worry, the circuit is diode protected and inadvertent lead reversal won't damage the unit, it simply won't work). Test your receiver's location by walking around the control room and keying the transmitter, observing that each key press causes the receiver red LED to light up. Response should be quick (85 miliseconds). Slower reaction could be caused by external interference from bright spot lights directed at the receiver's input transducer (a slight downward tilt of the receiver should eliminate this problem) or sometimes by RFI radiation from digital equipment such as plasma displays (relocating the receiver a foot or so away from the emission usually is sufficient). Although the communicator's operating codes have been designed away from standard TV, VCR etc. codes, you should try all other remote controls used in the room to verify that they do not activate the receiver's LED.

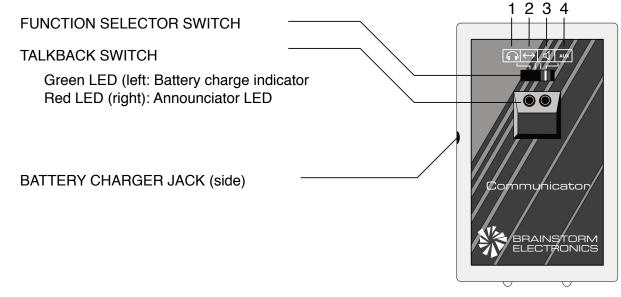


Next, connect the receiver's relay output to your console's talkback switches. The receiver has three SPDT relays rated at 28VDC and .25AMP. Both, single throw and double throw switches can be wired (see above diagram). The wire gauge is not critical. Typically the first relay connects to the headphone talkback switch and the second, to the studio speaker talkback switch. The third one can be used for any other talkback function (use caution if connecting it to the slate switch).

After you connect the communicator, your talkback switches on the console remain active. You are now ready to operate the communicator.

## **OPERATING INSTRUCTIONS**

The communicator features four selectable talkback functions: Positions 1,3 & 4 on the transmitter selector switch activate the console functions connected to the corresponding receiver terminals; position 2 combines positions 1 and 3 (i.e.: headphones and speakers). Simply select the desired function and press the talkback switch. The red LED on the transmitter will come on, telling you it is transmitting. The receiver red LED will also turn on, indicating the talkback is on. Just like on the console, the talkback switch is a momentary switch: as soon as you release it, the talkback will be off.



The transmitter is powered by a high performance 9v NiHm rechargeable battery. To charge, insert the wall transformer plug into the side jack. When the green LED on the talkback switch comes on, the battery is fully charged. You should charge whenever the communicator is not in use as it will perform best when the battery is fully charged. The transmitter has a "quick charge" circuit and is protected from damage even if the charger is plugged in for a long period of time.

The communicator has been designed to be reliable and convenient. The PCM code will assure its reliability and the powerful infrared bidirectional transmission makes aiming to the receiver virtually unnecessary.

HAPPY COMMUNICATING!

## **SPECIFICATIONS**

- System Response Time: 85ms typical
- Relays: SPDT, .25 amp @ 28 VDC 5 millions operations at rated load
- Power (Receiver): Approx. 1 Watt
- Battery (Transmitter): 9 volt ni-cad rechargeable
- Size (receiver & transmitter): 3 3/4" x 2 3/8" x 7/8"

## LIMITED WARRANTY

Brainstorm Electronics Inc. (BEI) warrants its products to be free from defects in workmanship and material for a period of one (1) year from the date of original purchase.

If warranty service is required, the purchaser must first notify BEI. After receiving authorization from BEI, the product must be returned prepaid to BEI along with a written description of the problems and a copy of the original bill of sale. Please do not return your unit to the factory without our prior authorization as your unit may not be accepted.

This warranty does not cover:

- damage due to accident, misuse, abuse or neglect including damage resulting from failure to follow instructions contained in the operation manual;
- damage resulting from repair or attempted repair by anyone not authorized by BEI;
- damage occurring during any shipment of this product claims must be handled directly with the carrier.

BEI's liability, for any defective product, is limited to repair or replacement of the product at BEI's option. BEI shall in no event be liable for any loss or damage, direct or consequential arising from the use or failure of these products except to the extent prohibited by applicable law and except for the limited warranty described above.