

Synthesized Personal Receiver

The PR-25 is a professional quality, wireless, headset monitor receiver designed to operate with the COMTEK BST-25 and BST-50b base station transmitters.

The standard PR-25 utilizes the unused TV channel 5 and 6 spectrum (76 to 88 MHz) under Part 74 of the FCC regulations. This receiver is used for TV studio production for IFB and talent cueing, local IFB with remote ENG truck, and in motion picture production for directors, boom-operators and for remote program monitoring or "Confidence Channel."

The PR-25 is also available in the 72 to 76 MHz frequency range which is used for assistive listening, tour guide, language translation and other remote monitoring applications under Part 90 of the FCC regulations.



COMTEK®

First Quality in Wireless Sound

OPERATING INSTRUCTIONS

Setup

a. Check to insure that the PR-25 receiver's radio frequency channel is the same as the COMTEK base station transmitter's channel. (Channels are indicated by the rotary switches on the back of the receiver.)

b. Remove the battery cover on the receiver and insert a new nine volt alkaline battery (Eveready E522 or equivalent). This type of battery will offer up to 20 hours of operation.

Replace the battery before *every* use if the demand for fail-safe operation outweighs battery cost. *The use of carbon batteries is not recommended.*

c. Connect the headphone to the receiver by inserting the headphone plug into the receptacle on the top of the receiver. The receiver is operating when the receiver power switch is turned on and the battery/squelch status indicator flashes or illuminates.

NOTE: The headphone cord also functions as part of the receiver's antenna system. For optimum performance, this cord should be fully extended. Coiling or bunching the headphone cord may reduce the range of the receiver. Also, coil-cord type headphone cords are *not* recommended. The receiver should be carried in a pocket or in the P-1 belt clip pouch.

d. Set the audio output level control to a comfortable listening volume. This control is turned clockwise for maximum output level.

Frequency Selection (76-88 MHz PR-25)

The PR-25 personal receiver has the ability to operate on one of 113 preset channels between 76.200 MHz and 87.8 MHz (TV channel 5 and TV channel 6). The BST-25 transmitter display both frequency and channel number. Channels which operate in the TV 5 spectrum are prefixed with a flashing "TV5" (5-50 is 81.100 MHz). Channels operating in the TV 6 spectrum are prefixed with a flashing "TV6" (6-50 is 87.100 MHz). This channel/frequency display of the BST-25 transmitter makes it easy to determine which TV band you are operating on. If you are using this system in an area which does not have a TV station operating on channel 5, you can use the channels in the TV 5 range. If the area does not have a station on TV 6, you can operate on one of the TV 6 channels.

It is unlawful to operate a transmitter in a band that is already occupied by a TV station.

After you have determined the channel on which you are going to operate, position the TV band switch on the back of the receiver to indicate the TV band you wish to use. Position the two rotary switches to indicate the channel. The left rotary switch is for *tens* and the right rotary switch is for *ones*. To select channel 6-17 (83.80 MHz), position the TV band switch to the right, indicating use of the TV 6 band. Position the left rotary switch to point to 1, and position the right rotary switch to point to 7. *Refer to frequency charts on pages 4 and 5 for preset selectable frequencies.*

OPERATING INSTRUCTIONS (continued)

Frequency Selection (72 MHz PR-25)

The 72 MHz PR-25 personal receiver operates on one of 88 preset channels between 72.020 and 75.980 MHz. After you have determined the channel on which you are going to operate the BST-25 transmitter, and have set the transmitter to that frequency, position the two "CHANNEL" selection rotary switches on the PR-25 receiver to indicate the same channel as the transmitter is set to. The left rotary switch is for *tens* and the right rotary switch is for *ones*.

Multiple Channel Operation

A starburst-shaped icon with the word "IMPORTANT" written inside in a bold, sans-serif font.

Simultaneous operation with more than two channels requires coordination of the frequencies that are used to avoid interference. This interference would result in poor or unusable performance. When multiple transmitters are broadcasting, the RF signals will "mix" together generating additional signals. If these product frequencies are too close to a frequency which you are using, the system on that frequency will experience interference. This condition is common to all radio receivers to some extent and is called *Intermod Interference*. This interference produces whistle and whine type sounds and/or reductions of range. **To avoid this type of interference, you should select frequencies from one of the standard groups (see frequency group charts on page 6), or you can use COMTEK's frequency selection guide software to determine appropriate frequencies.** (Contact COMTEK to obtain a free copy of the frequency selection software.)

Multifunction LED Indicator

The LED on the top of the receiver indicates the status of the receiver RF signal, the status of the battery, and that the unit is turned on. When first turned on, the LED illuminates for a few seconds indicating that the unit is on. After this initial time, the LED will stay on if the receiver is *not* receiving a signal or blink slowly to indicate that the receiver is receiving a signal from a transmitter operating on the receiver's frequency. If the battery is low the LED will blink rapidly to warn you that the battery will be dead soon.

PR-25 CONTROLS

1 TV 5 OR 6 SWITCH: This switch determines the band of the receiver. Set to the left for TV 5 band (76 MHz - 82 MHz). Set to the right for TV 6 band (82 MHz - 88 MHz). **NOTE:** This switch is not available on the 72 MHz PR-25.

2 CHANNEL SWITCHES: These rotary switches are set to the same channel as the base station transmitter or to the frequency selection chart to match the transmitter.

3 BATTERY COMPARTMENT: The battery compartment features a slide out cover with a thumb slot groove for easy removal.

4 BATTERY PULL TAB: The mylar pull tab allows quick and convenient extraction of the battery.

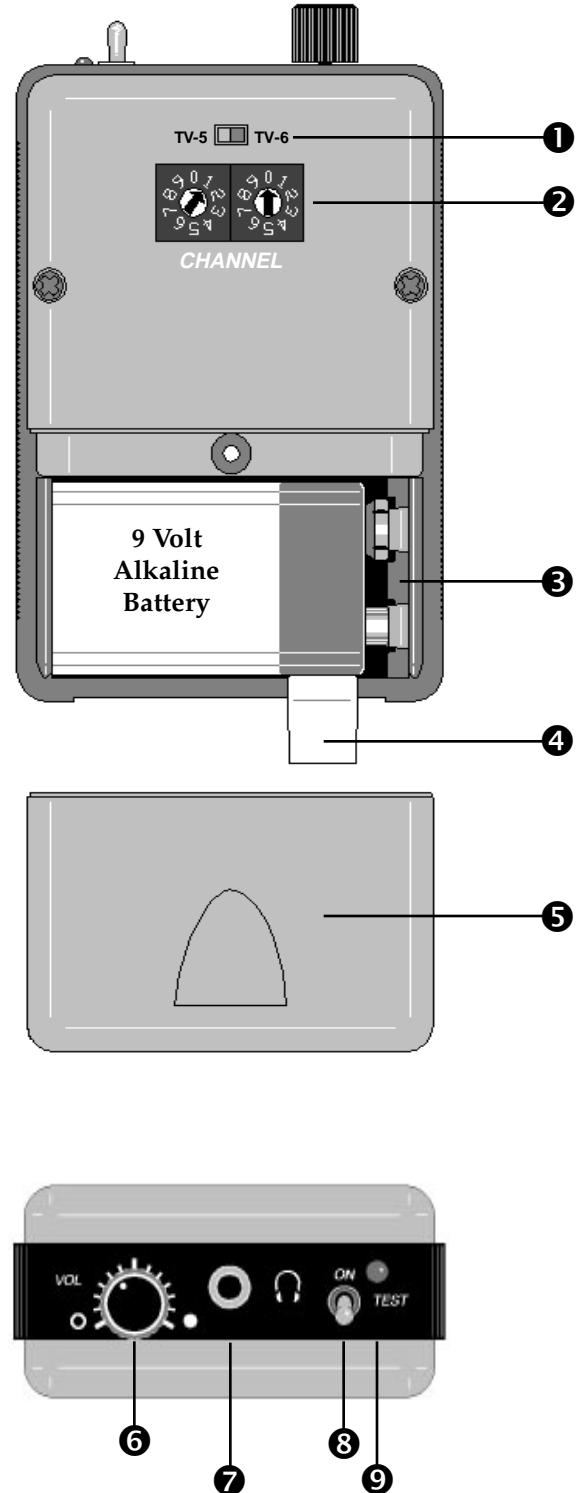
5 BATTERY COMPARTMENT COVER

6 VOLUME CONTROL: This control has 50 dB of range to adjust the audio output for a comfortable listening level (clockwise for maximum level).

7 AUDIO OUTPUT JACK: This stereo 3.5 mm audio output jack accommodates any low impedance headphone — either stereo or mono.

8 ON / OFF SWITCH: This switch turns the receiver on and off.

9 POWER / BATTERY / SQUELCH INDICATOR: This *multipurpose* red LED indicator shows that the receiver is on, the status of the battery, and RF signal presence. The LED will flash slowly when the receiver has sufficient signal strength from the transmitter for normal operation. If there is not sufficient signal strength the LED will illuminate continuously. When the battery voltage drops below 6 volts, the LED will flash *rapidly*, indicating that a new battery is needed.



PR-25
TV CHANNEL 5
FREQUENCY CHART

CHANNEL	FREQUENCY
5-1	76.200 MHz
5-2	76.300 MHz
5-3	76.400 MHz
5-4	76.500 MHz
5-5	76.600 MHz
5-6	76.700 MHz
5-7	76.800 MHz
5-8	76.900 MHz
5-9	77.000 MHz
5-10	77.100 MHz
5-11	77.200 MHz
5-12	77.300 MHz
5-13	77.400 MHz
5-14	77.500 MHz
5-15	77.600 MHz
5-16	77.700 MHz
5-17	77.800 MHz
5-18	77.900 MHz
5-19	78.000 MHz
5-20	78.100 MHz
5-21	78.200 MHz
5-22	78.300 MHz
5-23	78.400 MHz
5-24	78.500 MHz
5-25	78.600 MHz
5-26	78.700 MHz
5-27	78.800 MHz
5-28	78.900 MHz
5-29	79.000 MHz
5-30	79.100 MHz

CHANNEL	FREQUENCY
5-31	79.200 MHz
5-32	79.300 MHz
5-33	79.400 MHz
5-34	79.500 MHz
5-35	79.600 MHz
5-36	79.700 MHz
5-37	79.800 MHz
5-38	79.900 MHz
5-39	80.000 MHz
5-40	80.100 MHz
5-41	80.200 MHz
5-42	80.300 MHz
5-43	80.400 MHz
5-44	80.500 MHz
5-45	80.600 MHz
5-46	80.700 MHz
5-47	80.800 MHz
5-48	80.900 MHz
5-49	81.000 MHz
5-50	81.100 MHz
5-51	81.200 MHz
5-52	81.300 MHz
5-53	81.400 MHz
5-54	81.500 MHz
5-55	81.600 MHz
5-56	81.700 MHz
5-57	81.800 MHz
5-58	81.900 MHz
5-59	82.000 MHz

PR-25
TV CHANNEL 6
FREQUENCY CHART

CHANNEL	FREQUENCY
6-0	82.100 MHz
6-1	82.200 MHz
6-2	82.300 MHz
6-3	82.400 MHz
6-4	82.500 MHz
6-5	82.600 MHz
6-6	82.700 MHz
6-7	82.800 MHz
6-8	82.900 MHz
6-9	83.000 MHz
6-10	83.100 MHz
6-11	83.200 MHz
6-12	83.300 MHz
6-13	83.400 MHz
6-14	83.500 MHz
6-15	83.600 MHz
6-16	83.700 MHz
6-17	83.800 MHz
6-18	83.900 MHz
6-19	84.000 MHz
6-20	84.100 MHz
6-21	84.200 MHz
6-22	84.300 MHz
6-23	84.400 MHz
6-24	84.500 MHz
6-25	84.600 MHz
6-26	84.700 MHz
6-27	84.800 MHz
6-28	84.900 MHz
6-29	85.000 MHz

CHANNEL	FREQUENCY
6-30	85.100 MHz
6-31	85.200 MHz
6-32	85.300 MHz
6-33	85.400 MHz
6-34	85.500 MHz
6-35	85.600 MHz
6-36	85.700 MHz
6-37	85.800 MHz
6-38	85.900 MHz
6-39	86.000 MHz
6-40	86.100 MHz
6-41	86.200 MHz
6-42	86.300 MHz
6-43	86.400 MHz
6-44	86.500 MHz
6-45	86.600 MHz
6-46	86.700 MHz
6-47	86.800 MHz
6-48	86.900 MHz
6-49	87.000 MHz
6-50	87.100 MHz
6-51	87.200 MHz
6-52	87.300 MHz
6-53	87.400 MHz

PR-25
TV CHANNEL 5
FREQUENCY GROUPS

GROUP ONE

CHANNEL	FREQUENCY
5-3	74.400 MHz
5-6	76.700 MHz
5-10	77.100 MHz
5-15	77.600 MHz
5-21	78.200 MHz
5-34	79.500 MHz
5-42	80.300 MHz
5-56	81.700 MHz

GROUP TWO

CHANNEL	FREQUENCY
5-5	76.600 MHz
5-7	76.800 MHz
5-13	77.400 MHz
5-33	79.400 MHz
5-38	79.900 MHz
5-47	80.800 MHz
5-54	81.500 MHz
5-57	81.800 MHz

GROUP THREE

CHANNEL	FREQUENCY
5-2	76.300 MHz
5-8	76.900 MHz
5-11	77.200 MHz
5-16	77.700 MHz
5-18	77.900 MHz
5-29	79.000 MHz
5-41	80.200 MHz
5-58	81.900 MHz

PR-25
TV CHANNEL 6
FREQUENCY GROUPS

GROUP ONE

CHANNEL	FREQUENCY
6-4	82.500 MHz
6-7	82.800 MHz
6-9	83.000 MHz
6-13	83.400 MHz
6-20	84.100 MHz
6-30	85.100 MHz
6-38	85.900 MHz
6-50	87.100 MHz

GROUP TWO

CHANNEL	FREQUENCY
6-2	82.300 MHz
6-5	82.600 MHz
6-28	84.900 MHz
6-34	85.500 MHz
6-42	86.300 MHz
6-44	86.500 MHz
6-49	87.000 MHz
6-53	87.400 MHz

GROUP THREE

CHANNEL	FREQUENCY
6-1	82.200 MHz
6-3	82.400 MHz
6-6	82.700 MHz
6-10	83.100 MHz
6-16	83.700 MHz
6-24	84.500 MHz
6-36	85.700 MHz
6-52	87.300 MHz

PR-25 SPECIFICATIONS

Audio Output:

Headset output +16 dBu (low impedance)

Connector:

Stereo/mono 3.5 mm audio output connector

Indicators:

Power/Battery/Squelch Multi-function LED

Controls:

- Power On/Off switch
- Volume control (50 dB range)
- TV 5/TV 6 switch
- 99 position rotary channel selector switches

Audio Frequency Response:

50 Hz to 12 kHz ± 3 dB

Harmonic Distortion:

0.5% maximum below peak compression

Operating Radio Frequency:

- 76-88 MHz (TV 5 and TV 6)
- 100 kHz spacing
- Frequency synthesized

Frequency Stability:

0.002% frequency synthesized crystal controlled

RF Sensitivity:

0.3 μ V for 12 dB SINAD

Third Order Intercept:

-5 dBm

Adjacent Channel Rejection:

65 dB 50 kHz off channel

Image Response:

-45 dB

Spurious Rejection:

65 dB

Ultimate Quieting:

Better than 90 dB

Deviation Acceptance:

Up to ± 10 kHz

Antenna:

Integral with output cable (no external antenna)

Current Drain:

30 mA nominal (15 hours battery life)

Power Requirements:

9 volt alkaline battery, Eveready 522 or equivalent

FCC Compliance:

Certification under Part 15

Dimensions:

1 ¹/₁₆" x 2 ¹/₂" x 3 ¹/₄" (27 mm x 57 mm x 83 mm)

NOTE: Specifications subject to change without notice

WARRANTY

COMTEK transmitters and receivers carry a one-year warranty for parts and labor for repairs needed due to defects in material or workmanship. Items such as batteries, cords, earphones, neckloops and transducer coils are not covered by the warranty. Damage due to misuse, ill treatment and unauthorized modifications and repairs are not covered by this warranty. COMTEK is not liable for consequential damages arising out of any failure of the equipment to perform as intended. COMTEK shall bear no responsibility or obligation with respect to the manner of use of any equipment sold by it. COMTEK SPECIFICALLY DISCLAIMS AND NEGATES ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF SUCH EQUIPMENT INCLUDING, WITHOUT LIMITATION, ANY WARRANTY THAT THE USE OF SUCH EQUIPMENT FOR ANY PURPOSE WILL COMPLY WITH APPLICABLE LAWS AND REGULATIONS.

When returning units for service, use adequate packaging to prevent shipping damage. If in doubt as to which is defective, return both transmitter and receiver along with a note indicating trouble (cuts out, dead, distorted, etc.). Most units returned for service have dead batteries. PLEASE DOUBLE-CHECK BATTERIES BEFORE SENDING UNITS TO FACTORY FOR SERVICE.

In the event that a frequency change is needed, please contact COMTEK's service department. There may be a charge for this service. Also, units returned for performance verification are not covered by this warranty.

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