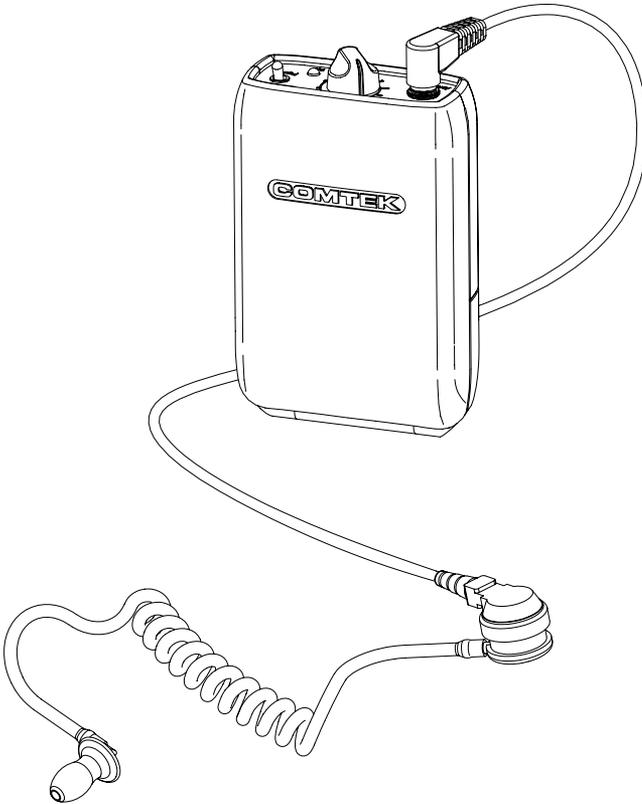


PR-216 / TV 5-6
High Performance
Personal Receiver



COMTEK[®]

INTRODUCTION

PR-216 / TV 5-6 ***High Performance*** ***Personal Receiver***

The PR-216/TV 5-6 is a professional quality, personal monitor receiver designed to meet the high demands of the TV, motion picture production, and entertainment industries.

In the motion picture industry, this receiver is used by directors and dignitaries for remote program monitoring, as well as for talent cueing and monitoring for boom-operators and crew members. It is used in TV production studios and ENG trucks for director IFB, talent cueing and camera crews.

The PR-216/TV 5-6 is our most advanced, high fidelity, personal monitor receiver incorporating both advanced digital and analog technologies. This receiver offers superior audio performance with the convenience of synthesized frequency agility to accommodate adverse multi-channel operation.



PR-216 / TV 5-6 CONTROLS

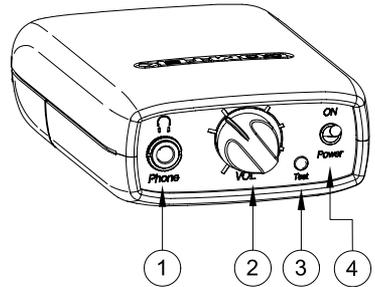
❶ AUDIO OUTPUT JACK: This stereo 3.5 mm audio output jack accommodates any low impedance headphone — either stereo or mono; also, charging input for rechargeable battery, and auxiliary power input.

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

❸ POWER / RECEIVER STATUS INDICATOR:

The LED test indicator displays three functions:

1. The indicator will illuminate continuously when unit is “ON” and NO signal is being received.
2. A steady slow flash indicates the receiver is receiving a signal on the tuned channel.
3. A rapid flash of the LED indicator and a subtle beeping signal indicates a low battery.



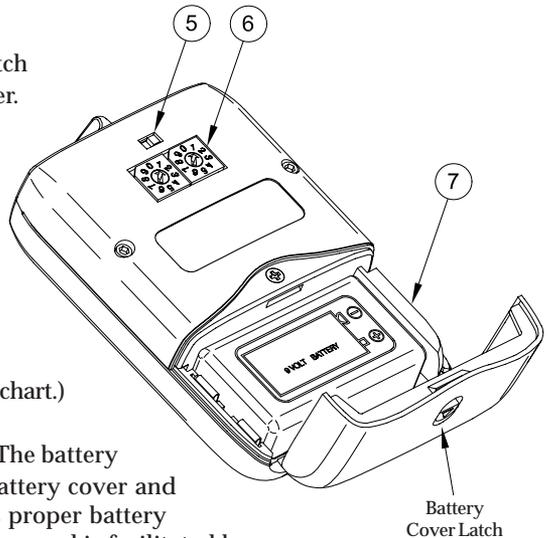
❹ ON / OFF SWITCH: This switch turns the receiver on and off.

❺ 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).

❻ CHANNEL SWITCHES:

These rotary switches select the channel. Channel must be the same as transmitter’s channel. (See page 6 for frequency selection chart.)

❼ BATTERY COMPARTMENT: The battery compartment features a hinged battery cover and an alignment system that ensures proper battery polarity. Battery installation and removal is facilitated by simply manipulating the rear of the battery.



PR-216 / TV 5-6 OPERATING INSTRUCTIONS

Setup

a. Check to ensure that the PR-216 receiver's radio frequency channel is the same as the associated COMTEK transmitter's channel.

(Channels are indicated by the rotary switches on the back of the receiver. See page 4.)

b. Open the battery cover on the receiver (see page 8) and insert a new nine volt alkaline battery (Eveready E522 or equivalent). This type of battery will offer up to 30 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.)*

NOTE: If a rechargeable battery is to be used, ensure that the battery has a full charge before use. (See page 9 for battery charger instructions.)

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 status on indicator 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 by the snap-on belt clip (included) or in a pocket or belt-clip pouch.

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

PR-216 / TV 5-6 OPERATING INSTRUCTIONS

Frequency Selection (TV channels 5 and 6)

The PR-216 personal receiver has the ability to operate on one of 112 preset channels between 76.200 MHz and 87.4 MHz (TV channel 5 and TV channel 6).

Channels are designated by both frequency and channel number. Channels which operate in the TV 5

spectrum are prefixed with a 5 (5-50 is 81.100 MHz).

Channels operating in the TV 6 spectrum are prefixed with a 6 (6-50 is 87.100 MHz). This channel rastering

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.

(NOTE: 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

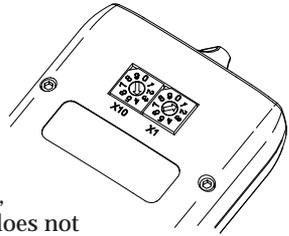
to indicate the channel. The left rotary switch is for tens and the right rotary switch

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 5 and 6 for preset selectable frequencies.



Multiple Channel Operation

Simultaneous operation of more than two channels

requires frequency coordination to avoid intermodulation

interference. This interference could 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,

you will experience this type of interference. This condition is common to

all radio receivers to some extent. 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 5), 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

or download it off the web at www.comtek.com/software.htm.



PR-216
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
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-216
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
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-216
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-216
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-216 / TV 5-6 OPERATING INSTRUCTIONS

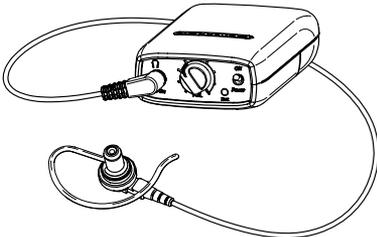
Monitoring Capabilities

Because each monitoring application requires a different headphone or transducer to best satisfy each listening need, the PR-216 can source a strong audio signal (+16 dBu) to either stereo or mono headphones with an impedance as low as 16 ohm. A hearing-aid type button receiver may be used with impedances as high as 2 k ohm and still produce a strong audio signal.

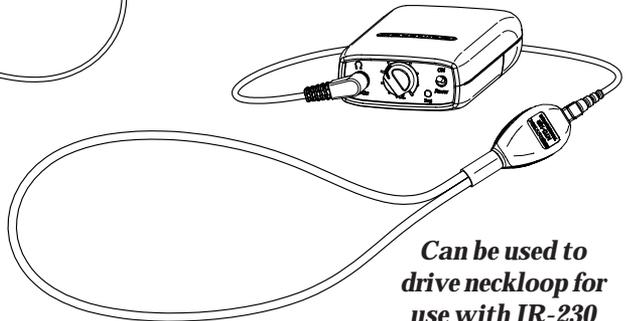
The PR-216 is ideal for use with the COMTEK NTC-102 neckloop transducer and wireless IR-230 miniature universal-fit ear canal inductor receiver or hearing aids having a "T" switch.



Can be used with consumer or professional headphones.



Can be used with hearing aid button receiver for assistive listening or acoustic ear tube for IFB application.

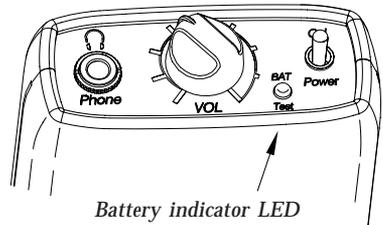


Can be used to drive neckloop for use with IR-230 inductor receiver or hearing aids.

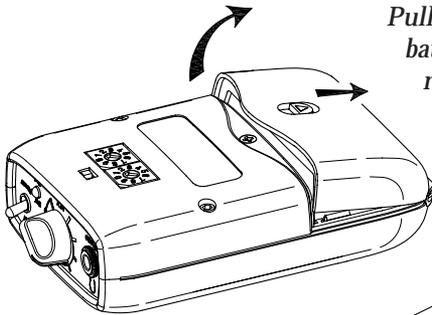
PR-216 / TV 5-6 OPERATING INSTRUCTIONS

Low Battery Indicator

The LED on the receiver is a multi-function indicator which includes low battery detection. When the receiver is first turned on, the indicator will illuminate continuously indicating that the unit is “ON” and NO signal is being received. When the receiver is receiving a signal on the tuned channel, the LED will show a steady slow flash indicating reception. A rapid flash on the LED indicator and a subtle beeping signal through the headphone indicates a low battery. Replace battery as soon as possible with a new alkaline battery or charge the rechargeable battery, as performance of the receiver will be unpredictable and may vary from audio distortion to complete failure to operate.

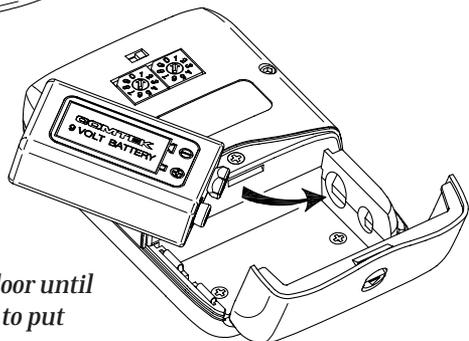


Battery Removal / Replacement



Pull back battery door latch and allow battery cover door to spring open. To remove battery, simply manipulate the bottom of battery out of the compartment and remove.

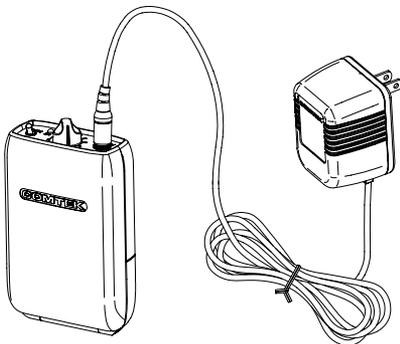
To insert battery, face battery with negative terminal in line with large hole in battery compartment, press battery into compartment and close battery door until it snaps shut. Note: It is not possible to put battery in backwards.



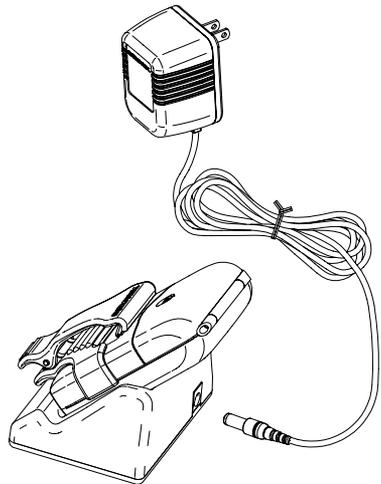
PR-216 / TV 5-6 OPERATING INSTRUCTIONS

Battery Charging

1. Make sure that a seven cell 9 volt Ni-MH rechargeable battery is used with a minimum of 150 mAh capacity. (Alkaline batteries must not be charged.)
2. Make sure the PR-216 is turned **OFF**.
3. Note that the red charging indicator on the charger is **ON** when the PR-216 is plugged into the charger through the audio output jack.
4. When using the NBC 9-2C charger allow the battery to charge for 12 hours for a full charge. Unit must then be unplugged. When using the NBC 9-3-1 digital fast charger the charger will automatically end the charge cycle and the red LED will change to green. With this charger the unit may be left in the charger until the unit is used.
5. Periodically open the battery compartment on stored COMTEK units to check for battery leakage. If a battery is leaking, it must be discarded, and the battery compartment must be cleaned or returned to COMTEK's service department for repairs.



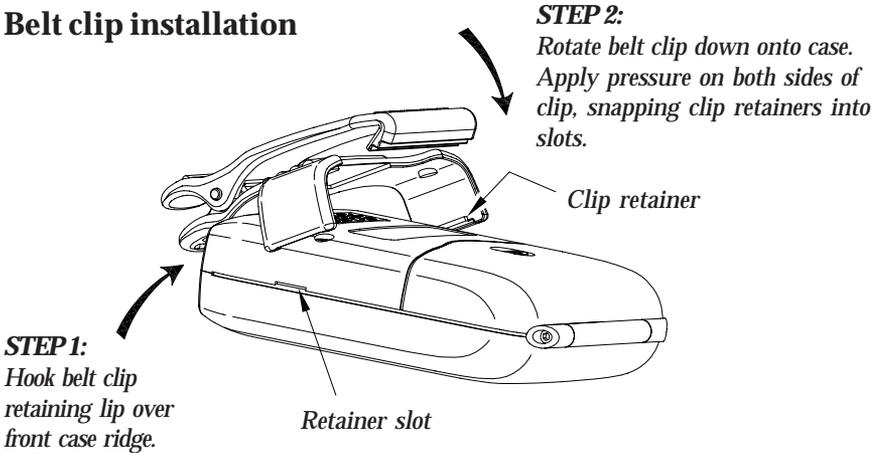
NBC 9-2C
12-hour charger



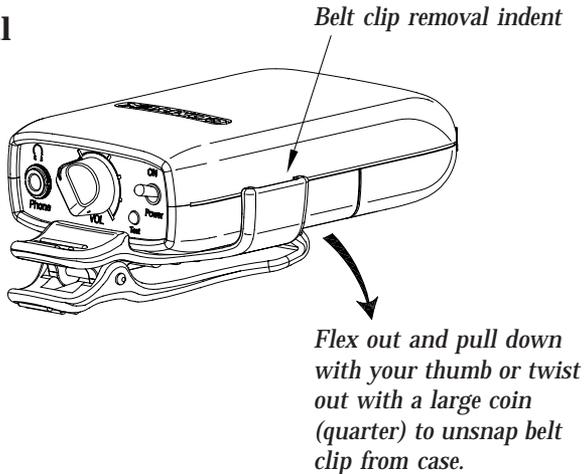
NBC 9-3-1
digital fast charger

PR-216 / TV 5-6 SNAP ON BELT CLIP

Belt clip installation



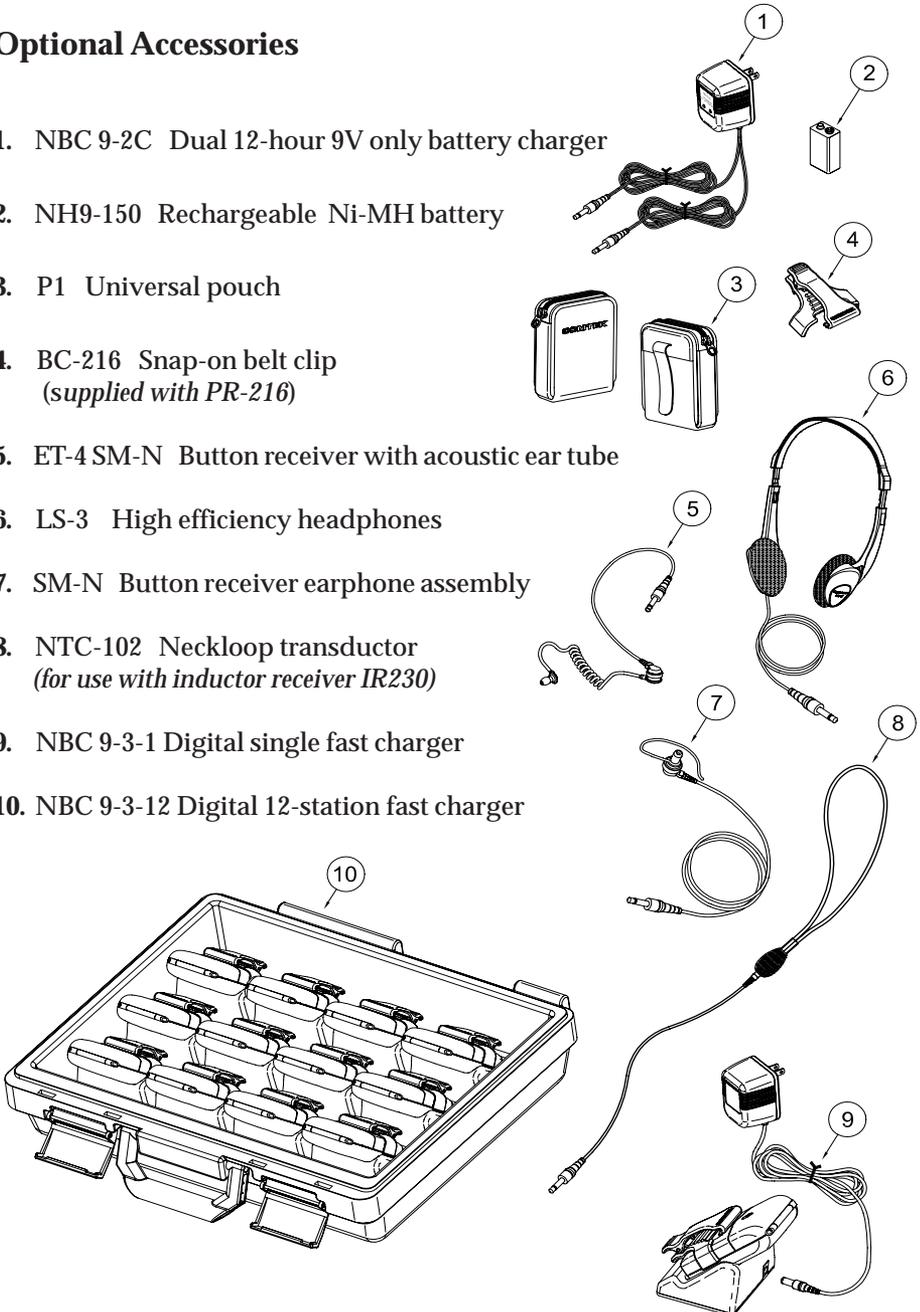
Belt clip removal



PR-216 / TV 5-6 OPTIONAL ACCESSORIES

Optional Accessories

1. NBC 9-2C Dual 12-hour 9V only battery charger
2. NH9-150 Rechargeable Ni-MH battery
3. P1 Universal pouch
4. BC-216 Snap-on belt clip
(supplied with PR-216)
5. ET-4 SM-N Button receiver with acoustic ear tube
6. LS-3 High efficiency headphones
7. SM-N Button receiver earphone assembly
8. NTC-102 Neckloop transductor
(for use with inductor receiver IR230)
9. NBC 9-3-1 Digital single fast charger
10. NBC 9-3-12 Digital 12-station fast charger



PR-216 / TV 5-6 SPECIFICATIONS

Audio Output:

Headset output +16 dBu
(low impedance)

Connector:

3.5 mm stereo/mono input used for:

- Headphone cord antenna to receiver
- Audio output to headphone
- Battery charger input
- Auxiliary power input

Indicators:

Three function LED

- Power
- Battery status
- R.F. signal ON and OFF

Controls:

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

Audio Frequency Response:

80 Hz to 12 kHz ± 3 dB

Harmonic Distortion:

Less than 1% (1 kHz tone 5 kHz deviation)

Operating Radio Frequency:

- 76 to 88 MHz
- Frequency synthesized

Frequency Stability:

0.002% frequency synthesized
crystal controlled

RF Sensitivity:

0.3 μ V for 12 dB SINAD

Adjacent Channel Rejection:

65 dB 50 kHz off channel

Spurious Rejection:

60 dB (image excluded)

Ultimate Quieting:

Better than 95 dB

Deviation Acceptance:

Up to 10 kHz

Antenna:

Integral with output cable
(no external antenna)

Current Drain:

15 mA nominal

Power Requirements:

9 volt alkaline battery,
Eveready 522 or equivalent
or 9 volt Ni-MH rechargeable

FCC Compliance:

Complies with Part 15
of FCC rules

Dimensions:

1 $\frac{1}{16}$ " x 2 $\frac{1}{2}$ " x 3 $\frac{1}{4}$ "
(27 mm x 57 mm x 83 mm)

NOTE: Specifications subject to
change without notice

COMTEK[®]

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