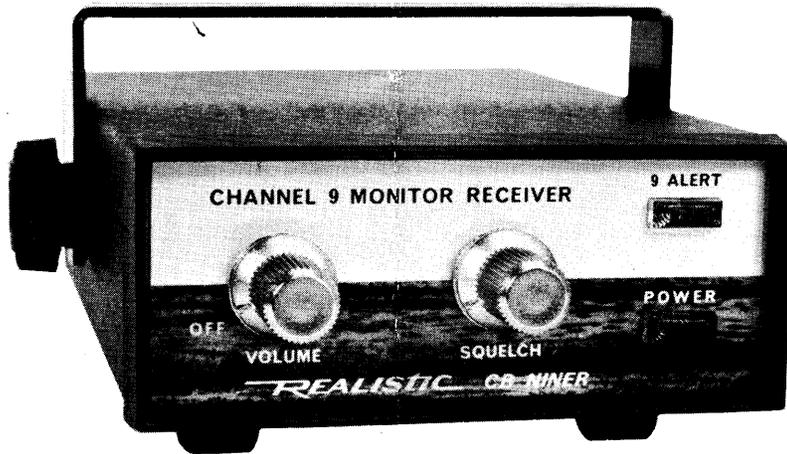


REALISTIC[®]

CB MONITOR RECEIVER

Model CB Niner

INSTRUCTION MANUAL



CAT NO. 21-159

CUSTOM MANUFACTURED FOR
RADIO SHACK  A TANDY CORPORATION COMPANY

GENERAL DESCRIPTION

Your Realistic CB NINER is a completely solid-state super-hetrodyne monitor receiver specifically designed to continually monitor Channel 9 of the Citizen's Radio Service (the HELP or emergency channel). It can be used by itself or in conjunction with an existing CB Transceiver.

The Federal Communications Commission has set aside Channel 9 for emergency communications only. There are thousands of CB clubs, state and local police and service stations which are constantly monitoring Channel 9 to provide emergency assistance. H.E.L.P. (Highway Emergency Locating Plan) and REACT (Radio Emergency Associated Citizens Teams) associates are located throughout the country constantly on the alert to aid motorists.

There are millions of CB Transceivers currently in use. General Motors Corporation has estimated that one out of every 55 automobiles on the highway today is equipped with a CB Transceiver. Over 4,000,000 calls for emergency service are initiated and responded to by operators of vehicles utilizing this radio service.

The CB NINER incorporates one stage of RF, 2 stages of IF amplification (with a mechanical filter for maximum adjacent channel rejection) and a push-pull audio output stage. Other features include adjustable Squelch, automatic gain control, automatic muting of CB NINER during transmission, built-in speaker and visual indication of emergency calls (9 ALERT lamp). It can be operated as a mobile unit from a 12 volt negative ground electrical system. Or, using a 9 volt AC adapter, it can be used in a base station situation and operated from a 120 Volt AC source.

With the CB NINER you can be sure you will never miss an emergency call on Channel 9. You can leave it on continuously and operate your CB Transceiver as you would normally. Should an emergency call be made on Channel 9, the "9 ALERT" lamp will light. Also, you will hear the message from the built-in speaker (unless you have the Volume turned down).

The CB NINER has been built in accordance with Radio Shack's exacting quality control standards. However, it should be treated with reasonable care accorded any electronic equipment.

GENERAL SPECIFICATIONS

This equipment is designed to operate from either 9V DC or 12V DC negative ground. If it fails to operate, and there is no clear reason for the failure, first check the ON-OFF switch. Also, before connecting the receiver to a DC power supply, check the voltage polarity. Attempting to operate the negative ground CB NINER from one of the rare positive-ground automotive or boat electrical systems, or from a wrongly connected battery, will at least blow a fuse. It may do further damage, so that expensive and time-consuming repairs are necessary before the receiver can be used again. The Radio Shack warranty does not apply to any damage caused by this, inadequate lightning protection, or other improper connections.

SPECIFICATIONS

Semiconductor Complement:	1 FET, 13 Transistors, 1 TTL IC, 16 diodes and 2 thermistors
Receiving Frequency:	27.065 MHz (Channel 9)
Sensitivity:	1 μ V at 10 dB S/N ratio
Selectivity:	40 dB at 10 KHz (with mechanical filter)
Squelch Sensitivity:	1 μ V
Audio Output Power:	0.5 watts maximum
Antenna Impedance:	50 ohms
Antenna Jack:	SO-239 receptacle
Power Source:	12 Volt DC, negative ground (mobile installations) or, from a 9 Volt AC adapter from AC power (base station installations)

LOCATION OF CONTROLS AND THEIR FUNCTIONS



1. VOLUME ON/OFF Control
2. SQUELCH Control
3. 9 ALERT Lamp
4. POWER lamp indicator
5. Mounting bracket screws
6. Mounting bracket

7. ANTenna coax input
8. TRANSCEIVER coax connector
9. Jack for external speaker
10. Jack for connecting an external 9 volt power source
11. Power cable with in-line fuse (for 13.8V DC)

Figure - 1

CONTROL FUNCTIONS AND OPERATING INSTRUCTIONS (Refer to Figure 1).

VOLUME ON/OFF Control (1):

Turn the CB NINER "on" using this control. Clockwise rotation of this control increases the sound level from the speaker.

SQUELCH Control (2):

The SQUELCH eliminates background noise until a signal is received. Slowly rotate the control clockwise (making sure there is no station transmitting on the frequency) until the background noise just disappears. If the control is increased past this point (clockwise), it will take a much stronger signal to override the squelch, thus not permitting weaker signals to be heard.

9 ALERT Lamp (3):

When a signal is received on Channel 9, the lamp automatically glows.

POWER Lamp Indicator (4):

When power is "on" this lamp will glow.

ANTenna Coax Input (7):

SO-239 antenna receptacle accepts PL-259 male coaxial plug-from your CB Antenna.

TRANSCEIVER Coax Connector (8):

When using your CB NINER in combination with a Transceiver, connect a coaxial cable from this connector to the Antenna connector on your Transceiver.

Jack for External Speaker (9):

You can connect an external or auxiliary 8 ohm speaker to this jack.

9 Volt DC Jack (10) (For Base Station use)

Connect an external source of 9 volts DC to this jack if you are using the CB NINER in the house or other place where 12 volts DC is not available. Use Radio Shack Catalog Number 270-1531 (120 volt AC to 9 volt DC adapter).

Power Cable (11) (For Mobile operation)

Connect the Red wire (with in-line fuse) to a + 12 volt connection point (accessory terminal on the ignition switch). Connect the Black Wire to the - side of the battery (or the metal frame of the vehicle).

Operating Notes:

You can use the CB NINER in conjunction with your CB Transceiver. They both can be operated from the same antenna. When transmitting, the built-in muting circuit will automatically mute the CB NINER.

When you have set SQUELCH properly, no sound will be heard from the CB NINER until a signal is received on Channel 9. When that happens, the 9 ALERT lamp will light and you will hear the signal from the built-in speaker. If you do not want to be annoyed by the sound (while operating on other channels), just turn VOLUME to minimum (don't turn power "off", just turn the VOLUME down so the sound does not bother you).

SPECIAL CONDITIONS

Strong CB signals may "overload" a CB receiver, including the CB NINER. Under such conditions you will hear a signal other than Channel 9 coming through your CB NINER. To compensate, set SQUELCH slightly higher than normal. Normal Channel 9 signals (except for the very weak) can still be monitored. Channel 9 signals will override overload signals and be heard properly.

INSTALLATION AND MAINTENANCE

MOUNTING – This unit may be installed in any 12 volt DC negative ground vehicle (be sure to connect red power cable to positive (+) and black power cable to negative ground (-). It should be mounted in an upright position, or as near to upright as practicable.

Before mounting, give careful consideration to the position—safety and convenience are of prime importance. After you have decided the best position, use the mounting bracket to mark out holes for drilling.

When drilling under the dash (or other place) take care that you do not drill into existing wires, trim or other parts. Use either self-tapping screws or screws, lockwashers and nuts for mounting.

For best results and to assure adequate ventilation, you probably will want to mount the CB NINER under the dash. Avoid mounting directly in the path of the heater air-flow (or in direct sun-lit areas -- excess heat can shorten the life of various components).

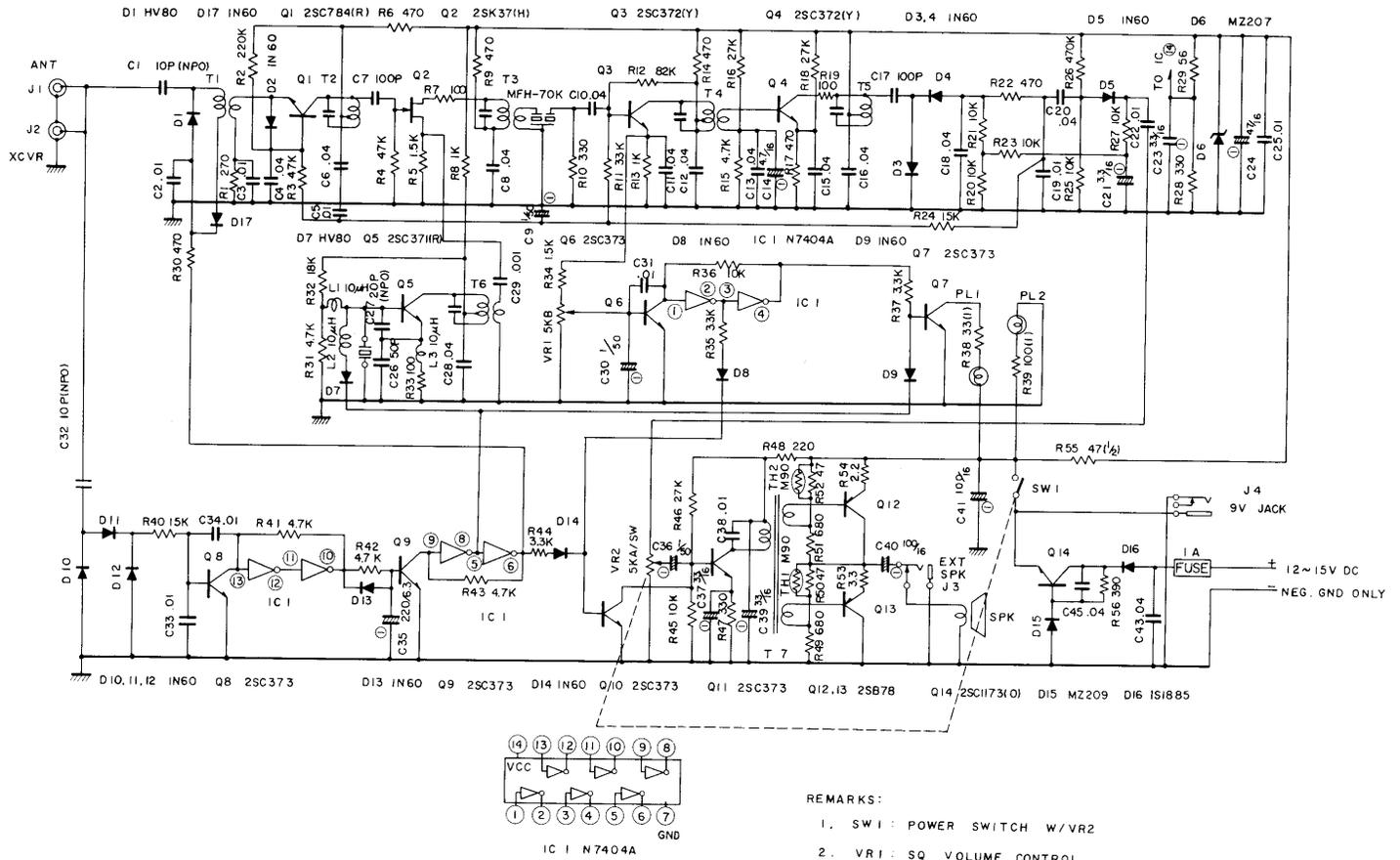
For operation with a Base Station, mounting is not a major consideration. Mount your CB NINER in any convenient place and connect 9 volt DC power from an AC Adapter such as Radio Shack Cat. No.270-1531 to the 9 volt power jack on the rear of the unit.

ANTENNA – Your choice of antenna type should be determined by location and conditions under which the equipment will be used.

Various types of antennas are available for mobile service. A full sized 102 inch whip, mounted on the rear fender, will give optimum results. However, a shorter, coil-loaded antenna will, in most cases, be satisfactory. Radio Shack carries both full length and loaded whips.

If you already have an antenna for your CB Transceiver, it is not necessary to purchase an extra antenna. Merely connect the antenna to the ANTENNA connector on the back of the CB NINER; then, connect a short piece of coax cable between the TRANSCEIVER connector on the back of the CB NINER to the Antenna connector on your Transceiver. Under these conditions, you can operate your transceiver as normal, and yet constantly monitor Channel 9 for emergency communications. When a signal comes in on Channel 9, the 9 ALERT light will come on, and you can switch over to channel 9.

CIRCUIT DIAGRAM



REMARKS:

1. SW 1 : POWER SWITCH W/VR2
2. VR 1 : SQ VOLUME CONTROL
3. VR 2 : AF VOLUME CONTROL
4. RESISTANCE VALUES IN OHMS. R=1000
5. CAPACITANCE VALUES IN MF. P=MMF
6. RATINGS OR TYPE NUMBERS OF COMPONENT PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT WITHOUT NOTICE.