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McKinley

18-Channel
Solid State CB Transceiver

Owner's Manual

P & T Approval No RB249159

PRESIDENT®

Engineered to be the very best

INTRODUCTION

PRESIDENT ELECTRONICS has combined superb workmanship and modern styling with the very latest state-of-art circuitry to bring you the new McKINLEY Citizens Band Transceiver. It has been especially designed to give you maximum performance and reliability. Your McKINLEY is completely factory aligned and quality assurance tested.

To obtain the maximum benefit and pleasure from your McKINLEY please read very carefully the contents of this manual before attempting to install or operate the transceiver.

SPECIFICATIONS

GENERAL

Channels	18 AM, 18 LSB, 18 USB
Frequency Range	27.015 to 27.225 MHz
Frequency Control	Phase Locked Loop (PLL) synthesized circuitry
Frequency Tolerance	0.005%
Frequency Stability	0.001%
Operating Temperature Range	−20°C to +50°C
Microphone	Plug-in type; dynamic with push-to-talk switch and coiled cord
Input Voltage	13.8V DC nominal, 15.9V max., 11.7V min. (positive or negative ground).
Current Drain	Transmit: AM full mod., 2.2A; SSB 12 watts PEP output, 2A. Receiver: AM & SSB with maximum audio output, 0.6A.
Cabinet Dimensions	19.2 cm W x 23.3 cm D x 5.6 cm H
Weight	2.23 kg
Antenna Connector	UHF, SO-239
Semiconductors	43 transistors, 1 field effect transistor, 6 integrated circuits, 51 diodes and 2 light emitting diodes.
Meter	Illuminated; indicates relative power output and received signal strength, green receive LED.

TRANSMITTER

Power Output	AM, 4 watts SSB, 12 watts, P.E.P.
Modulation	AM, high and low level Class B
Intermodulation Distortion	SSB: 3rd and 5th order, Better than −25 dB. 7th and 9th order, better than −35
SSB Carrier Suppression	Better than −55 dB
Unwanted Sideband	Better than −50 dB
Frequency Response	AM and SSB: 350 to 2500 Hz
Output Impedance	52 ohms, unbalanced
SSB Filter	7.8 MHz, crystal lattice type 6 dB @ 4.2 KHz 60 dB @ 7.0 KHz
Output Indicators	Meter shows relative RF output power; red transmit LED.

RECEIVER

Sensitivity	SSB: Better than .25 μV for 10 dB (S+N)/N at greater than $^1/_2$ watt of audio output AM: Better than .5μV for 10 dB (S+N)/N at greater than $^1/_2$ watt of audio output
Selectivity	SSB and AM: 6 dB @ 4.2 KHz, 60 dB @ 7.0 KHz
Cross Modulation	More than 50 dB
Image Rejection	More than 75 dB
I.F. Frequency	AM and SSB: 7.8 MHz
AM and SSB RF Gain Control	Adjustable for optimum signal reception
Automatic Gain Control	(AGC): Less than 10 dB change in audio output for inputs from 10 to 500,000 microvolts.
Squelch	Adjustable; threshold less than .5 μV.
Noise Blanker	RF type, effective on AM and SSB.
Clarifier Range	$\pm$1.0 KHz
Audio Output Power	3 watts into 8 ohms
Frequency Response	350 to 2500 Hz
Distortion	Less than 10% at 3 watts output
Built-in Speaker	8 ohms, round
External Speaker (Not Supplied)	8 ohms; disables internal speaker when connected

PA SYSTEM

Power Output	3 watts into external speaker
External Speaker for PA	8 ohms (not supplied)

FEATURES

- **ALL SOLID STATE:** IC and transistorized construction, with low current drain, for a long, trouble-free life.
- **FULL 18-CHANNEL OPERATION:** PLL frequency, synthesizer circuitry allows transmission and reception on all 18-channels on AM, USB and LSB without the purchase of any additional crystals.
- **LARGE LED CHANNEL DISPLAY:** Channel number is displayed by use of LED (light emitting diode) display for ease of channel selection.
- **CLEAN SIGNAL:** Transmitter audio processing circuitry produces a clean signal with maximum legal modulation, for best range.
- **QUIET RECEPTION:** Effective squelch and automatic noise limiter and an RF noise blanker for superior quieting.
- **EFFECTIVE AGC:** Receiver amplified automatic gain control (AGC) reduces the effect of differences in received signal strengths. No distracting "blasting" and "fading" of signals.
- **AN EFFICIENT TRANSMITTER:** Provides 4 watts on AM and 12 watts on SSB to the antenna.
- **PUBLIC ADDRESS FUNCTION:** Useful for paging and announcements.

CHANNEL INFORMATION

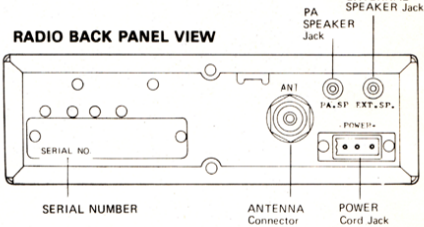
Channel	Channel Frequency in MHz	Channel	Channel Frequency in MHz
1	27.015	10	27.125
2	27.025	11	27.135
3	27.035	12	27.155
4	27.055	13	27.165
5	27.065	14	27.175
6	27.085	15	27.185
7	27.095	16	27.195
8	27.105	17	27.205
9	27.115	18	27.225

INSTALLATION

Location

Plan the location of the transceiver and microphone bracket before starting the installation. Select a location that is convenient for operation and does not interfere with the driver or passenger in the vehicle. In automobiles, the transceiver is usually mounted to the dash panel with the microphone bracket beside it.

RADIO BACK PANEL VIEW



Mounting and Connection

This radio is supplied with a universal mounting bracket. The transceiver is held in the bracket by the two thumb screws supplied, permitting adjustment to the most convenient angle. The bracket must be mounted with the machine screws supplied. The mounting surface must be mechanically strong. Proceed as follows to mount the transceiver:

1. After you have determined the most convenient location in your vehicle, hold the radio with mounting bracket in the exact location desired. If nothing interferes with mounting it in the desired position, remove the mounting bracket bolts. Before drilling the holes, make sure nothing will interfere with the installation of the mounting bolts.
2. Connect the antenna cable plug to the standard receptacle on the rear panel. Most CB antennas are terminated with a type PL-259 plug which mates with the receptacle on the rear panel.
3. Connect the DC power input wire with the fuse (red) to +12V DC. This wire extends from a plug which connects to the rear panel. In automobile

installations, +12V DC is usually obtained from the accessory contact on the ignition switch. This prevents the set being left on accidentally when the driver leaves the car and also permits operating the radio without the engine running. You can locate the accessory contact on most ignition switches by tracing the power wire from the AM broadcast receiver in the car.

Note: See ground connection under GENERAL INFORMATION for more detail.

4. Connect the black wire to ground. This is usually the chassis of the car. Any convenient location with good electrical contact may be used (remove paint).
5. Mount the microphone hanger on the side of the unit or near the unit, using two screws supplied. When mounting in an automobile, place the hanger on the dash so the microphone is easily accessible.

GENERAL INFORMATION

GROUND CONNECTION

This radio may be installed and used in any 12V DC negative or positive ground system vehicle. Most new Aust. and foreign made cars or small trucks use a negative ground system while some older cars and some newer large trucks may use a positive ground system.

1.
Negative ground system: Connect the Red power lead from the radio to the positive or (+) battery terminal or other convenient point, and connect the Black power lead to the chassis or vehicle frame or (−) battery terminal.

2.
Positive ground system: In the case of positive ground system, connect the Black power lead from the radio to the negative or (−) battery terminal or other convenient point, and connect the Red power lead to the chassis or vehicle frame of (+) battery terminal.

BASE STATION OPERATION

To operate the transceiver from your home or office, using regular house current as the power source, you will require a separate power supply capable of supplying 2.5 amps at a 13.8V DC output with a nominal input voltage of 240 volts AC, 50-60 Hz. Simply connect the red (+) and black (—) leads of the transceiver to the corresponding DC terminals of the power supply.

NOTE: Do not attempt to operate this transceiver by connecting directly to 240V AC. When AC power supply is used with the transceiver for base station operation any dipole, ground plane or vertical antenna may be used. A ground plane vertical antenna will provide the most uniform horizontal coverage.

REMOTE SPEAKER

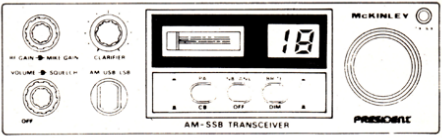
The external speaker jack (EXT. SPKR) on the rear panel is used for remote receiver monitoring. The external speaker should have 8 ohms impedance. When the external speaker is plugged in, the internal speaker is disconnected.

PUBLIC ADDRESS

An external 8 ohm 4-watt speaker must be connected to the (PA SPKR) jack located on the rear panel when the transceiver is used as a public address system. The speaker should be directed away from the microphone to prevent acoustic feedback. Physical separation or isolation of the microphone and speaker is important when operating the PA at high output levels.

OPERATING INSTRUCTIONS

The McKINLEY operates on 18 AM channels, 18 Upper Side Band channels and 18 Lower Side Band channels.
When you receive the SSB signal in the proper mode, audio sound may be either too high pitched or low pitched, indicating that your receiver may not be tuned to the exact same frequency as the transmitter to which it is listening. The McKINLEY is equipped with a Clarifier. By tuning the Clarifier, you can slightly change the frequency of the receiver, so you get a normal tone.



AM-SSB TRANSCEIVER

OPERATING CONTROLS

Your McKINLEY, designed for ease of operation, is provided with the following operating controls:

1. **OFF/ON VOLUME:** To turn the transceiver on, rotate the control clockwise past click. To turn the transceiver off, rotate the control counterclockwise past click. Rotate the control clockwise for a comfortable audio volume level.
2. **CHANNEL SELECTOR:** This switch is used to select any one of the 18 Citizens Band channels. Channel 5 has been reserved for emergency communications involving the immediate safety of life of individuals or immediate protection of property. Channel 5 may also be used to render assistance to a motorist.
3. **MODE SELECTOR:** This switch selects AM, USB or LSB mode of operation. This selector changes the mode of operation of both transmitter and receiver simultaneously. Set the selector to the mode on which you wish to communicate.
4. **SQUELCH:** The squelch control is normally set to a position which just eliminates undesired background noise with no signal present. With the audio volume adjusted to a satisfactory level, rotate the squelch control clockwise to the point where the sound from the speaker is cut off. In this position, there will be no sound from the speaker until a signal is received. In order to hear weak signals, it may be necessary to rotate the squelch control counterclockwise, allowing some background noise to be heard.
5. **CLARIFIER:** The clarifier is normally set to the centre position. This feature has several uses and can greatly enhance receiver operation. If a receive signal is slightly off frequency, this control can be operated to optimise the receive signal. This control is primarily intended to tune in SSB signals, but, it may be also used to optimise the AM signal.
6. **MIKE GAIN:** This control is used to adjust, as required, microphone input sensitivity for optimum amount of modulation in transmit. President Electronics citizen's band transceivers have been designed to permit the user to attain levels of modulation up to 100%, depending on the setting of the microphone gain control, using the microphone provided with the unit. President's automatic compression and peak limiting circuits assure maximum modulation with minimum distortion.
7. **DIMMER SWITCH:** This switch is used to adjust the brightness of the LED channel display and the meter. DIM position reduces brightness.

8. **PA-CB SWITCH:** This control engages the PA function. The PA function should not be used unless an external speaker is connected. In the CB position, the PA function is disabled and the radio will transmit and receive on the selected channel.
9. **NB/ANL SWITCH:** When the switch is placed in the NB/ANL position, both of RF Noise Blanker and Automatic Noise Limiter circuits are activated. The NB is very effective for repetitive impulse noise such as ignition noise. The ANL reduces annoying hash-type noises.
10. **RF GAIN:** This control is used primarily to optimise reception in strong signal areas. Gain is reduced by counterclockwise rotation of the control.

INDICATOR FUNCTION

1. **S/RF METER:** This meter displays relative transmitter RF output power when transmitting, and input signal strength when receiving. The meter is illuminated when power is on, the illumination can be adjusted by the DIMMER switch for optimum brightness.
2. **TX/RX INDICATOR:** The TX/RX light in the upper right corner of the front panel lights in red colour when the microphone button is pressed and transmitter is in operation. It lights in green colour when the microphone button is released and the receiver is in operation.

PRESS TO TALK MICROPHONE

The receiver and transmitter are controlled by the press-to-talk switch on the microphone. Press the switch and the transmitter is activated. Release the switch to receive. When transmitting, hold the microphone about three inches from your mouth and speak at a normal voice level.

RECEIVE OPERATING PROCEDURE

1. Place the CB-PA switch in CB position.
2. Turn the set on by turning the VOLUME CONTROL clockwise, past click.
   NOTE: Microphone must be plugged in for receiver to operate.
3. Set the VOLUME CONTROL to a comfortable level.
4. Set the Mode Selector Switch to the desired mode.
5. Listen to the background noise from the speaker. Turn the SQUELCH CONTROL slowly clockwise, until the noise just disappears. The squelch is now properly adjusted. The receiver will remain quiet until a signal is received. Do not advance the control too far, or some of the weaker signals will not be heard.
6. Set the Channel Selector to the desired channel.
7. Adjust the CLARIFIER to clearly receive SSB or AM signals.

TRANSMIT OPERATING PROCEDURE

1. Select the desired channel of transmission.
2. If the channel is clear, depress the push-to-talk switch on the microphone and speak in a normal voice.

MAINTENANCE AND ADJUSTMENT

This transceiver is especially designed for the environment encountered in mobile installations. The use of all solid state circuitry and its light weight result in high reliability. Should failure occur, however, replace parts only with identical parts. Do not substitute.

MAINTENANCE

All repairs on this radio should be performed by a qualified radio technician.

ADJUSTMENT

This transceiver is factory aligned and should not require any adjustment when used with a 52 ohm antenna. If an antenna other than 52 ohm impedance is used, adjustment of the transmitter output circuit may be made to obtain optimum power transfer to the antenna. This adjustment should be made only by a licensed person using a high quality in-line RF wattmeter which will not produce standing waves when inserted in the antenna cable.

SERVICE

PRESIDENT ELECTRONICS has established Authorised President Service Stations around the country for the repair and service of your radio. A list of these stations is enclosed. If you require service, please pack your radio unit in the original shipping container or any other suitable container which will provide adequate protection, enclose a note describing the problem and return (transportation prepaid) to your nearest warranty station.
President Electronics also maintains a factory service centre for the repair and service of your radio. Service may be obtained from the factory in the same way described for Authorised Service Stations except ship to:

Santronic Agencies Pty. Ltd., 24 Chapel Street,
Marrickville, N.S.W. 2204 Tel; 519 4011

SERVICE MANUALS

Detailed service manuals are available from the factory for a charge of $10.00 per copy.

PRESIDENT®

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SANTRONIC AGENCIES PTY. LTD.
24 CHAPEL STREET,
MARRICKVILLE 2204
Phone: 519-4011