Owner's Manual

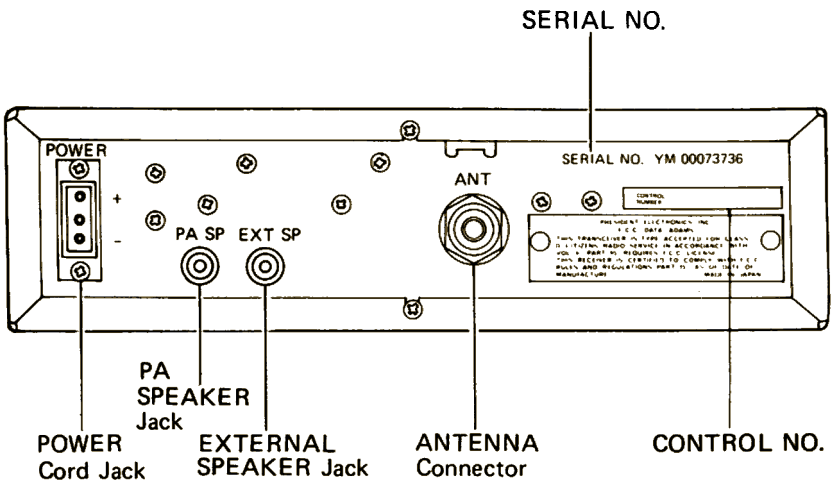
PRESIDENT™

Engineered to be the very best.

President Electronics, Inc., 16691 Hale Avenue, Irvine, California 92714

(714) 556-7355

RADIO BACK PANEL VIEW



IMPORTANT!

The above pictorial display shows the location of the various accessory, antenna, and power receptacles, as well as the SERIAL NUMBER and control number.

You are urged to record your model number and your SERIAL NUMBER in the spaces provided below:

Model _____

SERIAL NUMBER _____

SPECIFICATIONS

GENERAL

Channels	40 AM, 40 LSB, 40 USB
Frequency Range	26.965 to 27.405 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, 15.9 V max., 11.7V min. (positive or negative ground).
Current Drain	Transmit: AM full mod., 3 A SSB, 12 watts PEP output, 2.5 A Receiver: squelched, 1 A Maximum audio output, 2A
Cabinet Dimensions	2-1/2"H x 9"W x 10-9/16"L
Weight	7 pounds
Antenna Connector	UHF, SO – 239
Semiconductors	51 transistors, 8 field effect transistors, 9 integrated circuits, 87diodes and 4 light emitting diodes.
Meter	Illuminated; indicates relative power output received signal strength, modulation and standing wave ratio.

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 dB.
SSB Carrier Suppression	Better than -40 dB
Unwanted Sideband	Better than -45 dB
Frequency Response	AM and SSB: 450 to 2500 Hz.
Output Impedance	52 ohm, 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 ½ watt of audio output. AM: Better than .75 μV for 10 dB (S+N)/N at greater than ½ watt of audio output.
Selectivity	SSB and AM: 6 dB @ 4.2 KHz, 60 dB @ 7.0 KHz.
Cross Modulation	Better than 60 dB
Image Rejection	Better than 70 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 50,000 microvolts.
Squelch	Adjustable threshold less than .5 μV.
Noise Blanker	RF type, effective on AM and SSB.
Clarifier Range	±1.25 KHz
Audio Output Power	3.5 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	4 watts into external speaker.
External Speaker for PA	8 ohms (not supplied)

INTRODUCTION

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

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

FEATURES

- **ALL SOLID STATE:** IC and Transistorized construction, with low current drain, for maximum performance and reliability.
- **FULL 40-CHANNEL OPERATION:** PLL frequency synthesizer circuitry allows transmission and reception on all 40-channels on AM, USB and LSB without the purchase of any additional crystals.
- **LARGE LED CHANNEL DISPLAY:** Channel number is indicated 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 EXCEPTION:** Effective squelch and automatic noise limiting 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.
- **EFFICIENT TRANSMITTER:** Provides four watts maximum power to the antenna.
- **PUBLIC ADDRESS FUNCTION:** Useful for paging and announcements.

SCANNING SYSTEM

☆ Scans Channel 9, 19 or Channel selected by channel selector knob.

☆ Automatically monitors Channel 9, regardless of the position of channel selector knob, so that you will never miss important calls.

☆ Extra channel buttons enable you to select channel 9 and 19 very quickly.

CHANNEL INFORMATION

Channel	Channel Frequency in MHz	Channel	Channel Frequency in MHz
1	26.965	21	27.215
2	26.975	22	27.225
3	26.985	23	27.255
4	27.005	24	27.235
5	27.015	25	27.245
6	27.025	26	27.265
7	27.035	27	27.275
8	27.055	28	27.285
9	27.065	29	27.295
10	27.075	30	27.305
11	27.085	31	27.315
12	27.105	32	27.325
13	27.115	33	27.335
14	27.125	34	27.345
15	27.135	35	27.355
16	27.155	36	27.365
17	27.165	37	27.375
18	27.175	38	27.385
19	27.185	39	27.395
20	27.205	40	27.405

To insure that you obtain the maximum performance from this radio, please read carefully the following descriptions and operating instructions.

NOTE: This radio has been designed for F.C.C. Class "D" operation in the 11 meter Citizens Radio Service. It uses a frequency synthesizing circuit with Phase Locked Loop(PLL) techniques to provide crystal controlled transmit and receive operation on all 40 channels. The PLL circuitry assures ultraprecise frequency control. It is designed to meet the Federal Communications Commission requirements applicable to equipment operating in the Class "D" Service, and is not to be used for any other purpose. Part 95 of the F.C.C. regulations defines operation in this service, and you are required to read and understand these regulations prior to operating this equipment. You are also required to complete F.C.C. license application Form 505 and submit it to the F.C.C. GETTYSBURG, PA. 17326 in order to receive your license to operate this unit. While your Form 505 is being processed by the F.C.C., you may use F.C.C. temporary license Form 555-B as a temporary permit. YOU WILL BE IN VIOLATION OF PART 95 OF THE F.C.C. REGULATIONS IF YOU OPERATE THIS EQUIPMENT ON THE AIR PRIOR TO RECEIVING YOUR LICENSE AND CALL SIGNS OR IF YOU TRANSMIT WITH THIS UNIT WITHOUT COMPLYING WITH THE PROCEDURES EXPLAINED ON F.C.C. TEMPORARY LICENSE FORM 555-B. F.C.C. Forms 505 and 555-B as well as a copy of Part 95 of the Commissions Rules are packed with the transceiver for your convenience.

Warning: Transmitter section adjustments must be performed by qualified technician holding a valid First or Second Class F.C.C. Radiotelephone License.

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 under the dash panel with the microphone bracket beside it.

Mounting and Connection

This radio is supplied with a universal mounting bracket. The transceiver is held in the bracket by four bolts supplied, permitting adjustment to the most convenient angle. The bracket must be mounted with the machine screws and nuts supplied. The mounting surface must be mechanically strong and also provide a good electrical connection to the chassis of the vehicle. 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 installation, +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. Locate the accessory contact on most ignition switches by tracing the power wire from the existing broadcast receiver in the car.

NOTE: See "Ground Connection" under General Inforamtion for more detail.

4. Connect the black wire to ground. This is usually the chassis fo 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.

GENERAL INFORMATION

GROUND CONNECTION

This radio may be installed and used in any 12V DC negative or positive ground system vehicle. Most new U.S. 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 or (+)battery terminal.

ANTENNA

This radio is designed to operate into a 52 ohm CITIZENS RADIO antenna. Best results will be obtained by your transceiver if you use a good antenna, **properly installed.** (Refer to the antenna installation instructions included with your antenna.) See paragraphs 95.37, F.C.C. Rules and Regulations for F.C.C. antenna requirements.

A vertically polarized quarter-wavelength whip antenna provides the most reliable operation and greater range. The shorter loaded-type whip antennas are more attractive, compact and adequate for applications where the maximum possible distance is not required. Also, the loaded whip antennas do not present the problems of height imposed by the full quarter-wavelength whip.

Mobile whip antennas utilize the metal body of the vehicle as a ground plane. When mounted on a corner of the vehicle, they are slightly directional, in the direction of the body of the vehicle. For all practical purposes, however, the radiation pattern is non-directional. A slight directional characteristic will be observed only at extreme distances. A standard antenna connector (Type SO-239) is provided on the transceiver for easy connection to a standard PL-259 cable termination.

If the transceiver is not mounted on a metal surface, it will be necessary to run separate ground wire from the unit to a good metal electrical ground in the vehicle. When installed in a boat, the transceiver will perform most efficiently when the antenna used has been specifically designed for marine applications.

Before installing the transceiver in a boat, consult your dealer for information regarding an adequate grounding system and prevention of electrolysis between fittings in the hull and water.

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 four amps at a 13,8V DC output with a nominal input voltage of 120 volts AC, 50/60Hz. 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 117V AC. When AC power supply is used with the transceiver for base station operation, any Citizens Band beam, 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.

SELECTION OF ALTERNATE SCAN CHANNEL

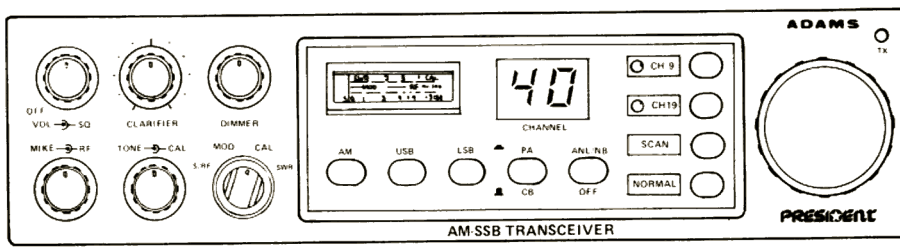
Your President ADAMS has been factory programmed to scan channel 9, channel 19 and the channel selected by the channel control knob.

Your local Warranty Service Center can, for a nominal charge, change the channel 19 selection to any other desired CB channel. Due to constraints imposed by the Federal Communications Commission, a properly licensed technician must perform such a change. Note that even though the programming may be changed, the "CH19" lettering on the front panel cannot be modified.

OPERATING INSTRUCTIONS

The ADAMS operates on 40 AM channels, 40 Upper Side Band channels and 40 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 it is listening to. The ADAMS is equipped with a Clarifier. By tuning the Clarifier, you can slightly change the frequency of the receiver. This allows you to obtain more natural sounding voice communications.



OPERATING CONTROLS

Your ADAMS, 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 level.
2. **CHANNEL SELECTOR:** This switch is used to select any one of the 40 Citizens Band channels. Since all necessary crystals are included for 40 channel operation, no additional crystals need to be purchased. Channel 9 has been reserved by the F.C.C. for emergency communications involving the immediate safety of life of individuals or immediate protection of property. Channel 9 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 eliminates undesired background noise with no signal present. With the audio 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 center position. This feature has several uses and can greatly enhance receiver operation. If a received signal is slightly off frequency, this control can be operated to optimize the received signal. This control is primarily intended to tune in SSB signals, but it may also be used to optimize 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 CONTROL:** This control is used to adjust the brightness of the LED channel display, and the meter, at night. Clcokwise rotation of this control 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 switch is placed in NB/ANL position, the RF Noise Blanker is activated on SSB mode. In AM mode, the Automatic Noise Limiter and the RF Noise Blanker are activated simultaneously.

10. **RF GAIN:** This control is used primarily to optimize reception in strong signal areas. Gain is reduced by counterclockwise rotation of the control.

11. **TONE:** This control is used to shape the audio response to the operators preference. Bass is increased by counterclockwise rotation and treble is increased by clockwise rotation.

12. **METER MODE SWITCH:**

    S/RF Position: Meter indicates relative transmitter output power when transmiting, input signal strength when receiving.

    MOD Position: Meter indicates average percentage of modulation.

    CAL position: Calibrate meter to measure correct SWR (Standing Wave Ratio) of antenna as follows: Select "AM" mode of transmission. With Meter Mode Switch in "CAL" position, depress "Push-to-talk" switch on microphone, and, with no voice input to microphone, adjust "CAL" control until meter pointer indicates "CAL" position on meter scale. Meter is now calibrated to read "SWR" when meter mode switch is placed in the "SWR" position.

    SWR Position: Meter indicates antenna efficiency during transmission when calibrated correctly as described in the preceding paragraph.

SCANNING SYSTEM OPERATION:

Provision has been made in your ADAMS for continuous scanning of three channels: Channel 9, (the Emergency channel,) Channel 19, (the truckers channel,) and one other channel as selected by the main channel selector knob. While scanning, the system automatically locks to an active channel for a minimum of three seconds, after which scanning resumes to the next active channel. However, **if there is activity** on Channel 9, the scanner will lock to Channel 9 and remain until the activity is terminated.

Four pushbuttons adjacent to the main channel selector knob control the scanning functions. The "Channel 9" pushbutton permits the operator to halt the scanner and to receive and transmit on Channel 9. The "Channel 19" pushbutton permits the operator to halt the scanner and to receive and transmit on Channel 19. The "Normal" pushbutton permits the operator to halt the scan and to receive and transmit on a channel selected by the main channel selector knob. The "Scan" pushbutton permits the operator to initiate the scanning function.

IMPORTANT:
The unit **will not transmit** when the "Scan" pushbutton is depressed! Transmissions can only be made when the "Channel 9," "Channel 19," or "Normal" pushbuttons are depressed.

When Channels 9 or 19 pushbuttons are depressed a corresponding indicator light glows. When scanning, the indicator light glows only during the instant that the channel is being scanned.

The operator is cautioned that squelch control requirements are not the same from channel to channel. The squelch control should be adjusted for proper squelch action on the channel with the least background noise level, usually Channel 9, or weaker signals may fail to activate the speaker, and the operator may not become alerted to their presence.

TX INDICATOR: The TX light in the upper right corner of the front panel comes on when the microphone button is pressed and transmitter 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 in a normal voice.

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.

WARNING

Operation of this equipment requires a valid station license issued by the Federal Communications Commission. Do not transmit with your equipment until you have filled out a temporary license Form 555-B. Also, complete F.C.C. form 505 then send it to the F.C.C. office indicated on the application. Illegal operation can result in severe penalties. (A copy of both forms are included with your new transceiver.)

You are required to maintain a current copy of Part 95 of the F.C.C. Rules as part of your station records. A copy of Part 95 is included with your new transceiver. Additional copies of Part 95 are available from the Superintendent of Documents, GPO, Washington, D.C., 20402. Be certain that you have read Part 95 of the F.C.C. Rules and Regulations before operating your station.

F.C.C. Rules require that ALL transmitter adjustments, other than those supplied by the manufacturer as front panel operating controls, be made by or under the supervision of the holder of an F.C.C. issued 1st or 2nd Class Radio Telephone License.

Replacement or substitution of crystals, transistors, regulator diodes or other parts of unique nature, other than recommended by us, may cause violation of the technical regulations of Part 95 of the F.C.C. rules or violation of the Type Acceptance requirements of Part 2 of the rules.

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, holding an F.C.C. first or second class Radiotelephone License. Repairs or adjustments by unauthorized persons can result in damage to the radio or illegal operation.

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 maintains a factory service center for the repair and service of your radio. If you desire this service, please pack your radio unit in its original shipping container, enclose a note describing the problem and return, (transportation prepaid) to:

PRESIDENT ELECTRONICS, INC.
16691 HALE AVENUE
IRVINE, CA. 92714

President Electronics has also established Authorized President Service Stations around the country for the repair and service of your radio. A list of these stations is enclosed. Service is obtained at these stations the same way as at the factory.

ONE YEAR LIMITED WARRANTY

PRESIDENT ELECTRONICS, INC., warrants to the purchaser of each new President radio that such product shall be free from defects in material and workmanship under normal use and service for a period of one (1) year from the date of sale to the purchaser providing that the properly completed Warranty Registration Card is returned to PRESIDENT ELECTRONICS, INC., within 10 days following the date of purchase.

This warranty will not apply if the radio has been subjected to neglect, misuse, accident, unauthorized modification, improper installation, or if the defect is the result of service by other than a PRESIDENT ELECTRONICS, INC. Authorized Service Station. PRESIDENT ELECTRONICS, INC., reserves the right to repair or replace, at its option, any radios found to be defective under the terms of this warranty.

To obtain warranty repair, the customer must return the radio properly packed, freight prepaid, to PRESIDENT ELECTRONICS or any Authorized PRESIDENT Service Station. It will be returned freight prepaid. A sales receipt must accompany the radio to validate date of purchase. Where permitted by law, this warranty is in lieu of all other warranties expressed or implied and no representative or person is authorized to assume for us any other liability. Some states do not allow limitation on implied warranties so the above limitation may not be applicable. You may have rights as defined by each state law.

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