Cobra 45XLR In-Dash 40-Channel CB 2-Way Mobile Transceiver With AM/FM/FM Stereo Radio



Cobra Communications Product Group
DYNASCAN CORPORATION
6460 W. Cortland Street
Chicago, Illinois 60635

Instruction Manual
for
Cobra 45XLR In-Dash
Mobile Transceiver
40-Channel CB 2-Way
With AM/FM/FM Stereo Radio



Cobra Communications Product Group
DYNASCAN CORPORATION
6460 W. Cortland Street
Chicago, Illinois 60635

TABLE OF CONTENTS

Page

SECTION I: Introduction
- Frequency Range 4
- Warning 5

SECTION II: Specifications 6

SECTION III: Installation
- Mounting and Connection 8
- CB Antenna 11
- Ignition Noise Interference 12
- FM Reception and Interference 12
- AM Reception 13
- Alternate Microphones and Installation 14

SECTION IV: Operation
- Controls and Indicators 17
  - A. Control Functions 17
  - B. Indicators 18
- Operating Procedure to Receive (CB) 19
- Operating Procedure to Transmit 19
- Operating Procedure to Receive AM/FM Stereo 20

SECTION V: Automobile Models & Mounting
- Automobile Model List and Code 21
- Shaft Adjustment (Fig. 4) 25
- Template (Fig. 5) 26
- Rear View Details (Fig. 6) 27
- Mounting Details (Fig. 7) 28

SECTION VI: Maintenance & Adjustment 29

SECTION VII: Appendix
- Ten Code 30
- A Few Rules That Should Be Obeyed 31
- How Your CB Can Serve You 32
- Use Channel 9 For Emergency Message 33

Warranty Service Instructions 34

Limited 90-Day Warranty 35

THE CB STORY

The Citizens Band lies between the shortwave broadcast and 10-meter amateur radio bands, and was established by law in 1949. The Class D two-way communications service was opened in 1959. (CB also includes a Class A business band and Class C remote control frequencies.) Acquiring the Class D license requires no detailed technical or Morse-code knowledge that is required for a "Ham" license.

In March, 1975, the FCC reduced the cost of a CB license from $20 to $4. One license can be good for any number of sets used by a given family or business. Once you receive your Class D license for your equipment, anyone may use it.

For example, though the equipment must be licensed to someone over 18 years of age, a child can use the equipment to talk to another child, or an employee can use the equipment as part of his or her routine services. However, final responsibility of legal operation rests with the CB licensee.

NOTE

FCC regulations permit only "transmissions" (one party to another) rather than "broadcasts" (to a wide audience). Thus, advertising is not allowed on CB channels because it is *broadcasting.*

HAVE
A GOOD DAY
TODAY
AND
A BETTER DAY
TOMORROW!

Section I
Introduction

FREQUENCY RANGE

The COBRA 45XLR is a professional-quality, 40-channel AM Citizens Band transceiver with a combined AM/FM multiplex radio. Features included in the AM/FM multiplex receiver are slide-type speaker balance, vernier-type dial, FM stereo indicator and tone control.

The COBRA 45XLR provides high-level, trouble-free performance in AM/FM multiplex broadcast listening as well as in the Citizens Band Radio Service. The CB band is composed of the following frequency assignments:

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

These frequencies are generated and accurately controlled by a phase lock loop (PLL) circuit, comprised of the latest state-of-the-art integrated circuit technology, thereby ensuring high reliability and excellent frequency stability on the above channels.

To obtain maximum performance from your COBRA 45XLR, please read carefully the following descriptions and operating instructions.

WARNING

1. Operation of this equipment requires a valid Station License issued by the Federal Communications Commission. Do not transmit with your equipment until you have received your License or complied with procedures explained on FCC Temporary License Form 555-B. A copy of FCC Application Form 505, FCC Temporary License Form 555-B, and Part 95 of the Commission Rules, are packed with this combination transceiver for your convenience.

2. You are required to complete FCC License Application Form 505 and submit it to the FCC, Gettysburg, Pa. 17362, in order to receive your license.

3. You are required to read and understand Part 95 of the FCC Rules and Regulations, before operating your station. FCC Rules require you to always have on hand a current copy of Part 95 of the FCC Rules, as part of your Station Records.

4. All transmitter adjustments other than those supplied by the manufacturer as front panel operating controls, must be made by, or under the supervision of, the holder of an FCC-issued 1st or 2nd Class Radio Operator License.

5. Replacement or substitution of crystals, transistors, regular diodes or other part of a unique nature, with parts other than those recommended by Dynascan, may cause violation of the technical regulations of Part 95 of the FCC Rules, or violation of the Type Acceptance requirements of Part 2 of the Rules.

Section II
Specifications

GENERAL

Input Voltage	13.8 VDC nom. (negative ground).
Current Drain	*Transmit:* 2.0A. *Receive:* 1.5A. *AM Radio:* 1.5A. *FM Radio:* 1.5A.
Size	7¼ x 2-3/10 x 7-1/8″.
Weight	3.3 lbs. (1.5kg.)
Antenna Connector	UHF, SO239.
Semiconductors	24 transistors, 3 field effect transistors, 20 diodes, and 8 integrated circuits.
Meter	Illuminated; indicates relative power output and received signal strength.

CB SECTION

TRANSMITTER

Power Output	4 watts.
Frequency Response	300 to 3000 Hz.
Output Impedance	50 ohms, unbalanced.
Harmonic Supression	Better than 60 dB.
Channels	40.
Frequency Range	26.965 to 27.405 MHz.
Frequency Control	Phase Locked Loop (PLL).
Frequency Tolerance	0.005%.

Operating Temperature Range	-30° to + 50°C.
Microphone	Plug-in type; dynamic; low impedance.

RECEIVER

Sensitivity	0.5μV.
Selectivity	5 kHz at -6 dB.
Image Rejection	-60 dB.
IF Frequency	Double conversion, 1st: 10.695 MHz 2nd: 455 kHz.
Audio Output Power	4 watts.
Frequency Response	300 to 3000 Hz.
Distortion	10%.

FM RADIO SECTION

FM Sensitivity	8μV.
FM Selectivity	300 kHz.
Stereo Separation	35 dB.
Audio Output	4 watts per channel.

AM RADIO SECTION

AM Sensitivity	20μV.
AM Selectivity	5 kHz at - 6 dB.

Section III
Installation

MOUNTING AND CONNECTION

CAUTION

The COBRA 45XLR will work only in a negatively grounded automobile. If the negative (-) lead from the battery is connected to the engine block or frame, proceed.

NOTE

Prior to installation, remove Fig. 4 from this manual. Cut the template at the prescribed areas and hold it up to the front of your existing radio or dash panel cutouts. If the holes in this template correspond to your radio knobs and nose piece (or the dash panel cut-outs behind the trim plate), proceed with the following mounting procedure:

You will need a few basic hand tools to perform this installation yourself. Careful removal of your existing radio will teach you just about all you need to know.

1. The first step is to remove the car battery cables from the battery. This may save you some blown fuses or a melted wire.

2. If your car has an existing radio, so much the better, because it will require you to learn how that radio is removed from the car. There are only two ways a radio can be installed or removed: from *behind* the dash, or through the *front* of the dash.

3. If your car does *not* have an existing radio, it will have a trim plate covering the mounting holes for a radio. Remove this and determine whether your COBRA 45XLR can be installed from the front through the dash or from behind the dash.

4. In many cars, the top of the dash will have to be removed to gain access to the back of the dash. The top section of the dash is usually screwed in place with visible screws.

5. When removing an existing radio, first remove the knobs on the radio by pulling them straight off. Located behind the knobs are two hex nuts which hold the radio in place. Remove these nuts. Since radios are heavy, they are usually supported at the rear by a brace of some type. Remove the bolt to the radio, and if necessary, the brace itself.

6. Disconnect any present wiring from your existing radio, as well as the antenna lead. Do not cut wires, as you connect your COBRA 45XLR to existing wires.

7. The radio should be ready to be removed from the dash.

8. Use your old radio to determine the shaft spacing on your COBRA 45XLR. Loosen the hex nuts at the base of each control knob shaft (Fig. 5), and the shafts will slide left or right to match up with your stock radio knob positions. Be sure to move lock tab washers with shafts and remember to move both shafts the same amount. Lock shafts in place by re-tightening hex nuts.

9. Now you should be ready to install the radio in your car. You have to support the rear of your COBRA 45XLR. You may be able to use the existing bracket that supported your stock radio, or you can use the mounting bracket supplied. Secure the unit to the instrument panel shown in Fig. 7.

10. Install your new CB antenna on your car in accordance with the antenna manufacturer's instructions. Refer to Fig. 6. Connect the CB antenna cable plug to the CB receptacle on your COBRA 45XLR. Most CB antennas are terminated with a type PL-259 plug and mate with the receptacle on the radio. Also connect the car radio antenna cable plug to the antenna receptacle on your COBRA 45XLR.

11. The COBRA 45XLR cable assembly is color-coded as follows:

BLACK	(-) Ground and speaker common.
RED	(+) Positive (hot) side of automobile battery (13.8 VDC).
GRAY	Speaker wire, right.
BROWN.....	Speaker wire, left.

12. Connect the red DC power input wire with the fuse to +13.8 VDC. This wire extends from the rear panel. In automobile installations, +13.8 VDC is usually obtained from the accessory contact on the ignition switch. This prevents the set from being left on accidentally when the driver leaves the car and also permits operating the unit without the engine running. Locate the accessory contact on most ignition switches by tracing the power wire from the AM broadcast receiver in the car.

13. Connect the black lead to -13.8 VDC (ground). This is usually the chassis of the car. Any convenient location with good eletrical contact (remove paint) may be used.

14. Be sure that the CB antenna installation and connection to your COBRA 45XLR is complete before attempting operating in the CB mode.

15. Mount the microphone bracket near the transceiver, using two screws supplied. When mounting in an automobile, place the bracket under the dash so that the microphone will be readily accessible.

CB ANTENNA

Since the maximum allowable power output to the transmitter is limited by the FCC, the antenna is one important factor affecting transmission distance. Only a properly matched antenna system will allow maximum power transfer from 50-ohm transmission line to the radiating element. In mobile installations (cars, trucks, boats, etc.), an antenna system that is non-directional should be used.

A vertically polarized quarter-wavelength whip antenna provides the most reliable operation and greatest 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 whips 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 at 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. The 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 is necessary to run a separate ground wire from the unit to a good metal electrical ground in the vehicle. When installed in a boat, the transceiver will not operate at maximum efficiency without a ground plate, unless the vessel has a steel hull.

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.

NOTE

3-Way Combination Antennas are available which allow operation of all three bands (AM-FM & CB), using a single antenna.

IGNITION NOISE INTERFERENCE

Use of a mobile receiver at low signal levels is normally limited by the presence of electrical noise. The primary source of noise in automobile installations is from the generator and ignition system in the vehicle. Under most operating conditions, when signal level is adequate, the background noise does not present a serious problem. Also, when extremely low level signals are being received, the transceiver may be operated with vehicle engine turned off. The unit requires very little current and therefore will not significantly discharge the vehicle battery.

Even though the COBRA 45XLR has a selective automatic noise limiter, in some installation ignition interference may be high enough to make good communications impossible. The electrical noise may come from several sources. Many possibilities exist and variations between vehicles require different solutions to reduce the noise. Consult your COBRA dealer or a 2-way radio technician for help in locating and correcting the source of severe noise.

FM RECEPTION AND INTERFERENCE

In order to ensure the best possible reception, it is necessary to extend the antenna to its maximum height. Any deviation from this could result in poor reception.

If you are located in an area which causes interference, adjust the tone control to the bass position; this will eliminate noise. When the car moves out of the noisy area, the control can be moved back to the desired position.

Due to transmitter station locations, occasionally the car will pass through a low signal area. For example, when passing underneath a viaduct, the noise level momentarily increases, causing a pop or short "hiss" in the speaker. This should not be confused with electrical interference sometimes experienced with AM radios.

Because the car is moving and the environment and reception conditions are constantly changing, it is easily seen why mobility can be a great enemy of good FM and FM stereo reception.

Operating your radio for a few days will familiarize you with FM reception in automobiles. The life-like sound quality and program content of FM will give you many hours of enjoyment.

AM RECEPTION

To receive in the AM (broadcast band) mode, simply switch the Band switch to "AM ".

If you are experiencing poor reception in this mode, proceed as follows:

A. Obtain a small flat-bladed screwdriver.

B. Adjust the tuning control to a weak station in the area of 1500 kHz and turn the "Trim" adjustment to the left or right until the station appears loud and clear.

This is all that is required; the "Trim" adjustment tunes your AM antenna to match the radio.

ALTERNATE MICROPHONES AND INSTALLATION

For best results, the user should select a low-impedance dynamic type microphone or a transistorized microphone. Transistorized type microphones have a low output impedance characteristic. The microphones must be provided with a four-lead cable. The audio conductor and its shielded lead comprise two of the leads. The third lead is for transmit control and the forth lead is ground (see schematic, Fig. 3). The microphone should provide the functions shown below:

4-Wire Mic Cable

Pin Number	Mic Cable Lead
1	Audio Shield
2	Audio Lead
3	Transmit Control
4	Receive Control

If the microphone to be used is provided with pre-cut leads, they must be revised as follows:

1. The leads should be cut so that they extend 7/16″ beyond the plastic insulating jacket of the microphone cable. See Fig. 1 below.

2. All leads should be cut to the same length. Strip the ends of each wire 1/8″ and tin the exposed wire.

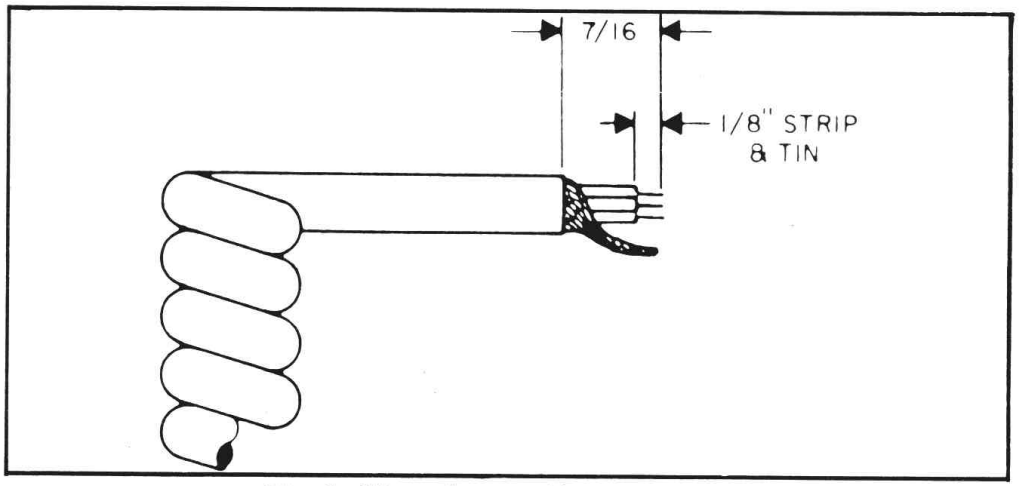


Fig. 1. Microphone cable preparation.

Before beginning the actual wiring, read carefully the circuit and wiring information provided with the microphone you select. Use the minimum heat required in soldering the connections. Keep the exposed wire lengths to a minimum to avoid shorting when the microphone plug is reassembled.

To wire the microphone cable to the plug provided, proceed as follows (see Fig. 2):

1. Remove the retaining screw.

2. Unscrew the housing from the pin receptacle body.

3. Loosen the two cable clamp retainer screws.

4. Feed the microphone cable through the housing, knurled ring and washer below.

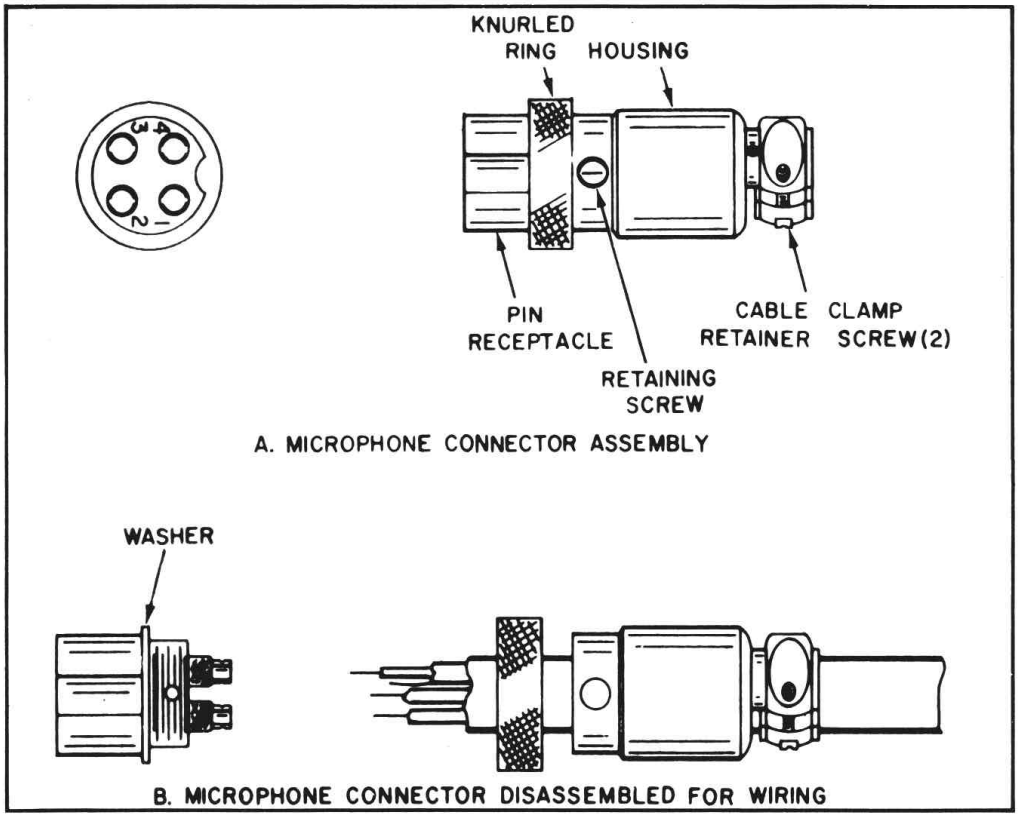


Fig. 2. Microphone plug wiring.

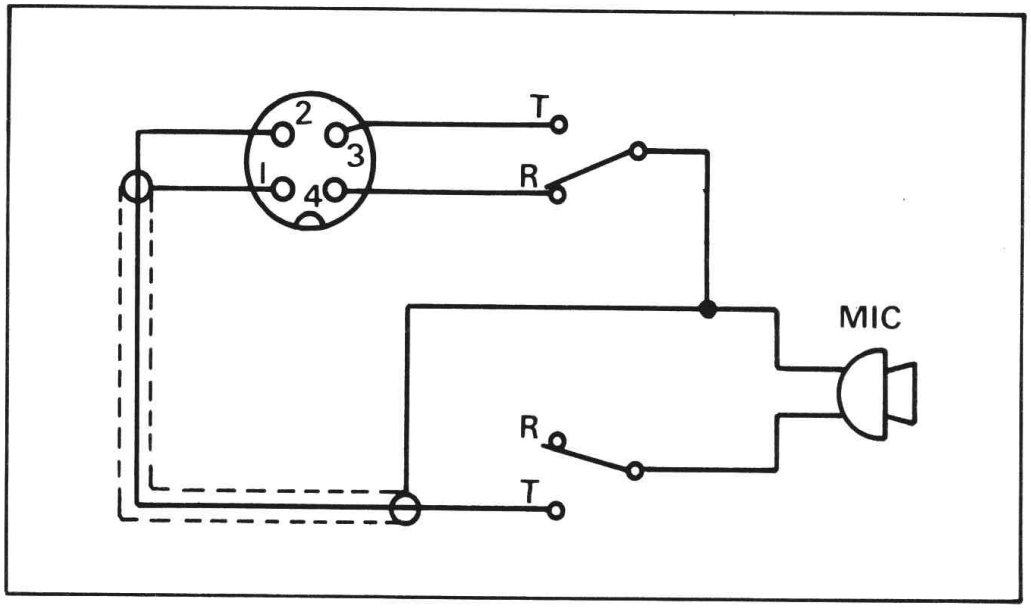
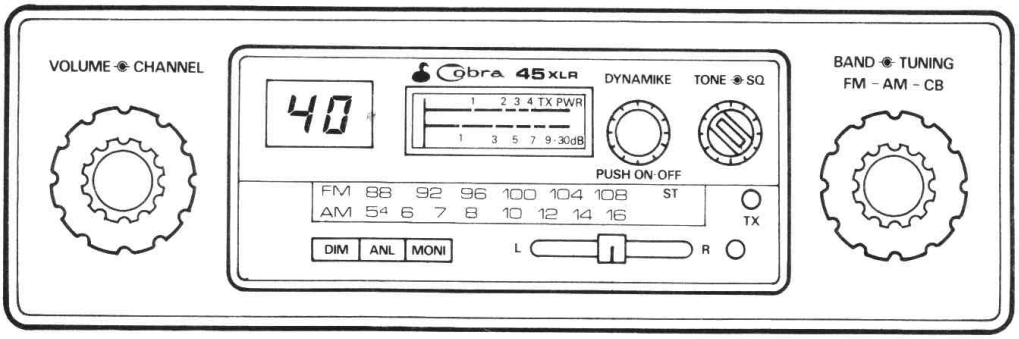


Fig. 3. Microphone and connector wiring diagram.

Section IV
Operation

CONTROLS AND INDICATORS

There are thirteen controls and five indicators on the front panel of your COBRA 45XLR.



A. CONTROL FUNCTIONS

1. **PUSH ON/OFF SWITCH.** Main Power ON/OFF Switch is provided on the *Dynamike* knob. Simply push it to apply power to the unit.

2. **VOLUME.** Clockwise rotation increases sound volume. Adjust to desired listening level.

3. **SQUELCH.** This control is used in the CB mode to eliminate background noise in the absence of an incoming signal. For maximum receiver sensitivity, it is desirable that the control be adjusted only to the point where background or ambient noise is eliminated. With no signal coming in, turn SQ knob fully counter-clockwise, then slowly clockwise until the receiver noise disappears. Any signal to be received must now be slightly stronger than the average received noise. Further clockwise rotation will increase the threshold level which a signal must overcome in order to be heard. Only strong signals will be heard at a maximum clockwise setting.

4. **ANL (Automatic Noise Limiter).** CB only. In the ANL position, the automatic noise limiter in the audio circuits is activated.

5. **TONE.** This control is used to tune the audio pitch to the operator's preference. Bass is increased by counter-clockwise rotation and treble is increased by clockwise rotation.

6. **CHANNEL SELECTOR.** This switch selects any one of the forty Citizens Band channels desired. The selected channel appears on the LED readout. Channel 9 has been reserved by the FCC for emergency communications involving the immediate safety of life or immediate protection of property. Channel 9 may also be used to render assistance to a motorist.

7. **BAND SWITCH.** This switch selects the mode of operation. In the CB position, the unit will transmit and receive on the selected frequency. For AM/FM broadcast reception, the switch is set to the desired mode.

8. **MON (CB Monitor).** With the monitor switch depressed, you will not only be able to listen to your favorite AM or FM station, but also keep your ear tuned to any action on CB.

9. **DIM (LED Dimmer).** Controls the brightness of the LED channel indicator for optimum intensity for day or night-time driving.

10. **DYNAMIKE.** This control is used to vary the amount of modulation when transmitting.

11. **BALANCE CONTROL.** On the AM or FM mode, move to left or right to balance volume from the speakers. In the CB mode, this control must be centered. CB reception will be heard from the righthand speaker.

12. **TUNING.** This control is for station tuning when in the AM or FM receiver mode.

B. INDICATORS

1. **PWR/S METER.** Shows relative transmitter power when transmitting and input signal strength when receiving. Illuminated when power is on in CB mode.

2. **TX LIGHT.** The red light is an output indicator device which is activated when the transmitter is keyed.

3. **FM STEREO INDICATOR.** This will illuminate when the program is being broadcasted in "FM Stereo".

4. **CHANNEL INDICATOR.** Indicates by illuminating the selected channel number.

C. **PRESS-TO-TALK MICROPHONE.** Receiver and transmitter are controlled by the press-to-talk switch on the microphone. When the switch is pressed the *transmitter* is activated. When the switch is released the *receiver* is active.

D. OPERATING PROCEDURE TO RECEIVE CB

1. Set BAND switch to CB.

2. Turn set ON by pushing PUSH-ON-OFF switch.

3. Set balance control to center position. Sound will be heard from the righthand speaker.

4. Rotate VOLUME control clockwise, until a comfortable listening level is heard.

5. Listen to the background noise from the speaker. Turn the SQUELCH control slowly clockwise, until the noise just disappears. (No signal should be present.) Leave the control at this setting. The SQUELCH is now properly adjusted. The receiver will remain quiet until a signal is actually received. Do not advance the control too far, or some of the weaker signals will not be heard.

6. Set the Channel selector switch to the desired channel.

E. OPERATING PROCEDURE TO TRANSMIT

1. Set BAND switch to CB.

2. Select desired channel of transmission.

3. Set the balance control to the center position to have maximum modulation allowed.

4. If channel is clear, depress PUSH-TO-TALK switch on the microphone. Hold the microphone two inches from the mouth and speak clearly in a normal voice. The output lamp will light.

CAUTION

Be sure the antenna is properly connected to the unit before transmitting. Prolonged transmitting without an antenna or with a poorly matched antenna (high SWR; over 3) can cause damage to the transmitter.

F. OPERATING PROCEDURE TO RECEIVE AM/FM STEREO

1. Set BAND switch to AM or FM.

2. Push PUSH-ON-OFF switch to ON.

3. Set VOLUME control to your desired listing level.

4. Turn AM/FM TUNING control to desired station, and adjust volume and balance control to desired levels.

Section V
Automobile Models and Mounting

Following is a list of automobiles into which your COBRA 45XLR will mount. Note the code after each model to determine the type of installation to expect; also, in some cases, we do not recommend your attempting to make the installation yourself – you should seek professional help with the installation, because of special problems involved.

CODE

A 45XLR can be installed easily with no modification to car dash, but in some models, a nose gasket may be needed.

B 45XLR can be installed with some modification such as shaft hole relocation, filing, etc.).

N/R Do-it-yourself installation not recommended; professional help should be sought to make these installations.

* The 45XLR can be mounted in these cars ONLY if no factory in-dash unit was previously installed in them.

AMERICAN CARS

AMERICAN MOTORS		
71-77	Gremlin Hornet–A/C	N/R
72-77	Gremlin Hornet	B
70-74	Matador	N/R
75-77	Matador	A
75-77	Pacer	A
77	Pacer Wagon	A

BUICK		
73-77	Century	A
73-77	Regal/Special	A
73-77	Skyhawk	A
73-77	Starfire	A
73-77	Apollo/Skylark	A
73-76	Riviera	A
73-76	Le Sabre	A
73-76	Electra	A

AMERICAN CARS (Continued)

CHEVROLET

69-77	Nova	A
69-77	Camaro	A
69-77	Vega	A
75-77	Monza 2+2	A
75-77	Monza Town Coupe	A
69-77	El Camino	A
73-77	Chev. Truck	A
73-77	Blazer	A
69-77	Van	A
76-77	Chevette	A
All LUV		B
71-77	Impala	A
71-77	Caprice	A
71-77	Monte Carlo	B
69-76	Chevelle	B

CHRYSLER

73-77	Imperial	*
73-77	Newport	*
73-77	New Yorker	*
75-77	Cordoba	*

DODGE

76-77	Aspen	*
73-77	Monaco	*
73-77	Coronet	*
73-77	Charger	*
73-77	Dart	B
73-77	Scamp	B
73-77	Van	*
73-77	Truck	*
74-77	Colt	B

FORD

71-77	LTD	A
77	LTD II	A
71-77	Torino	A
75-77	Granada	A
69-77	Mustang	A
70-77	Maverick	A
71-77	Pinto	A
75-77	Van	B
70-74	Van	B
73-77	Truck	B
69-73	Truck	B
71-77	Ranchero	A
73-77	Bronco	B
71-77	Thunderbird	A

LINCOLN/MERCURY

71-77	Continental	A
74-77	Mark IV	A
71-77	Marquis	A
71-77	Cougar	A
71-77	Montego	A
75-77	Monarch	A
71-77	Comet	A
75-77	Bobcat	A
72-77	Capri II	B
72-77	Capri II A/C	N/R

OLDSMOBILE

73 76	88/98	A
73-76	Toronado	A
73-77	Cutlass	A
75-77	Omega	A

AMERICAN CARS (Continued)

PLYMOUTH

73-77	Fury	*
76-77	Volare	*
73-77	Valiant	B
74-77	Duster	B
73-77	Voyager	*

PONTIAC

73-77	Grand Prix	A
73-77	Grand Am	A
73-77	Le Mans	A
69-77	Ventura	A
73-76	Bonneville	A
73-76	Catalina	A
73-75	Grandville	A
69-77	Firebird	A
75-77	Astre	A
76-77	Sunbird	A

IMPORTED CARS

AUDI

72-75	100LS	B
73-76	Fox	B
74-76	Austin Marina	B
69-76	Alpha Romeo	B

BMW

73-76	1600/2002	A
73-76	1600/2002 A/C	B
76	530	A
73-76	Bavaria	A

DATSUN

71-76	Z (240-260-280)	A
73-75	610	A
75-76	710	N/R
74-76	B-210	A
74-76	Pickup	A

FIAT

73-75	124 Sedan	A
73-75	124 Coupe	A
73-76	124 Spider	A
74-76	128 Sedan/Coupe	B
74-76	X-19	B
75-76	131	A
73-76	Honda	B
74-76	Jensen Healy	A

JAGUAR

74-76	XKE	A

MG

73-76	MGB	B
73-76	Midget	A

MAZDA

74-76	Pickup	N/R
73	Pickup	B
All RX-2/RX-3		A
74-76	RX-4	A

IMPORTED CARS (Continued)

PEUGEOT		
74-76	ALL	B
PORSCHE		
72-76	914	B
75-76	911 S&T	A
RENAULT		
74-76	ALL	B
SAAB		
73-76	ALL	B
SUBURU		
72-76	ALL	A
TRIUMPH		
69-76	Spitfire	A
73-76	TR6	A
75-76	TR7	A

TOYOTA		
72-74	Corolla	B
75-76	Corolla	N/R
75-76	Corona	A
73-76	Hilux	A
71-76	Celica	B
74-76	Landcruiser	B
VOLVO		
70-76	ALL	A
VOLKSWAGEN		
76	Dasher	N/R
74-75	Dasher	B
75-76	Scirocco	N/R
75-76	Rabbit	N/R
73-76	Super Beetle	N/R
68-76	Bug	N/R
68-76	Bug	N/R
71-74	SQ Back	A

NOTE

Cutting of the car dash to mount the 45XLR CB radio requires a certain amount of skill and familiarity with in-dash radio systems. It is therefore recommended that this radio be installed professionally. Dynascan Corporation assumes no responsibility or liability for any damages incurred, consequential or otherwise.

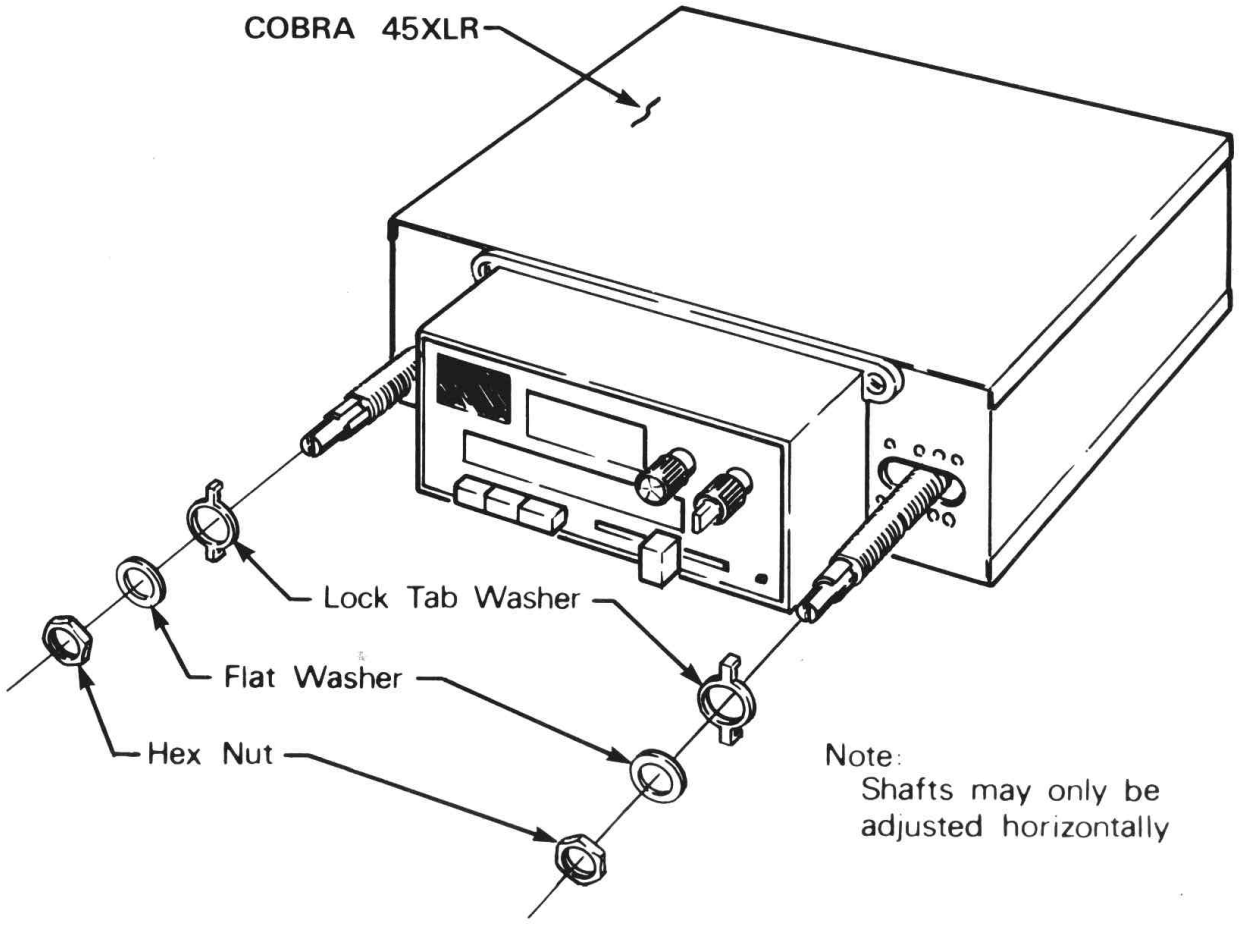
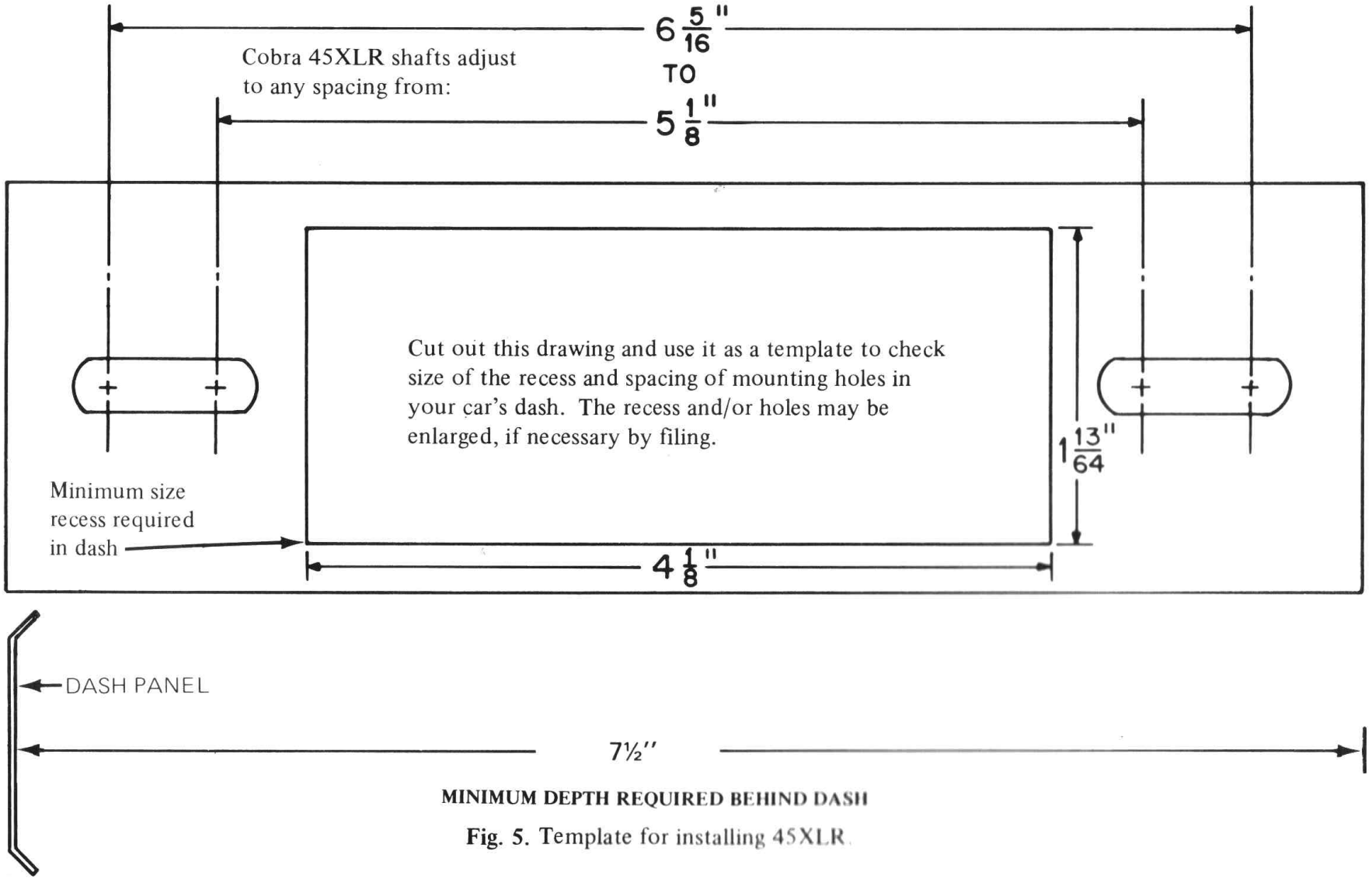


Fig. 4. Shaft adjustment



MINIMUM DEPTH REQUIRED BEHIND DASH

Fig. 5. Template for installing 45XLR.

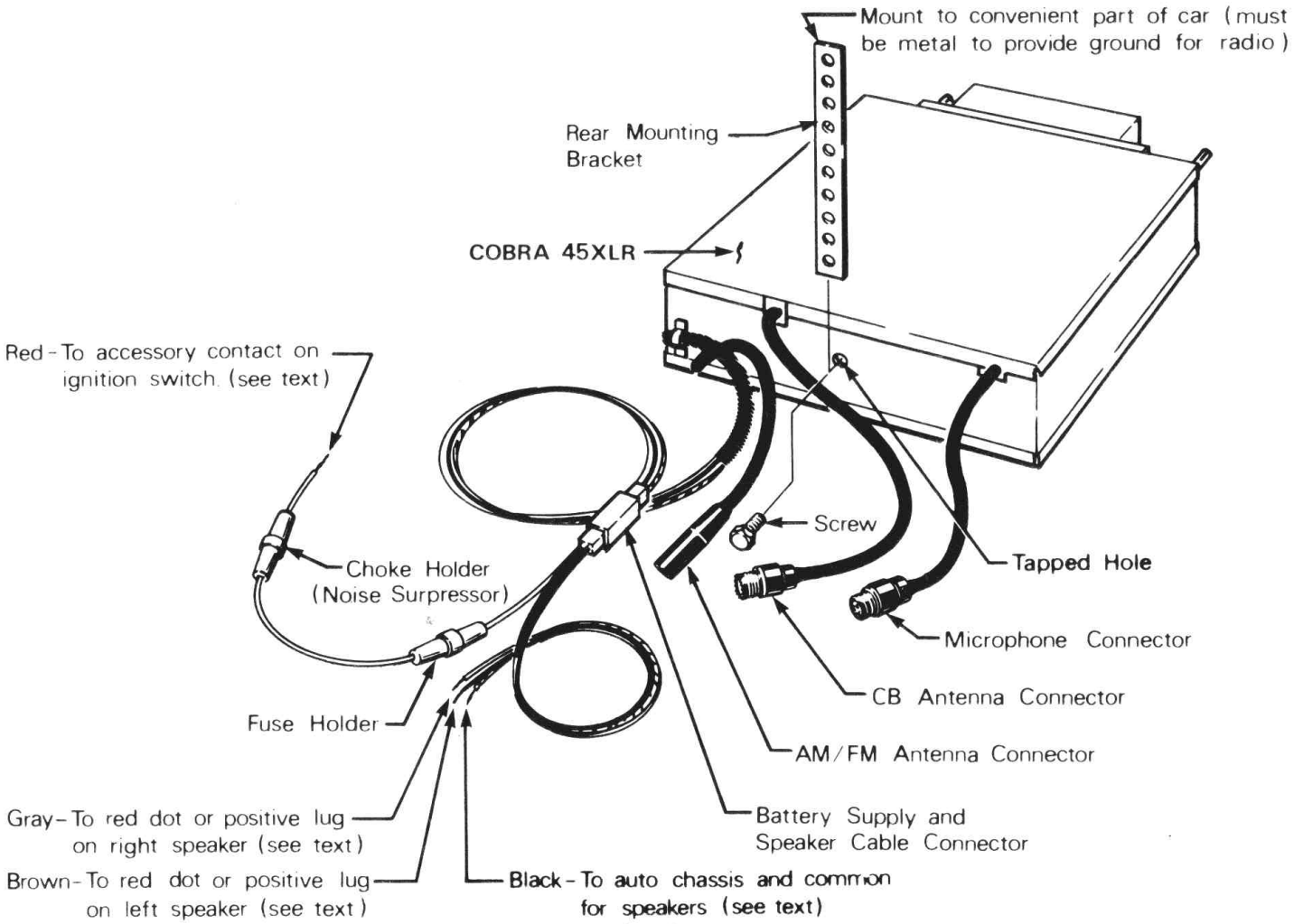


Fig. 6. Rear view details.

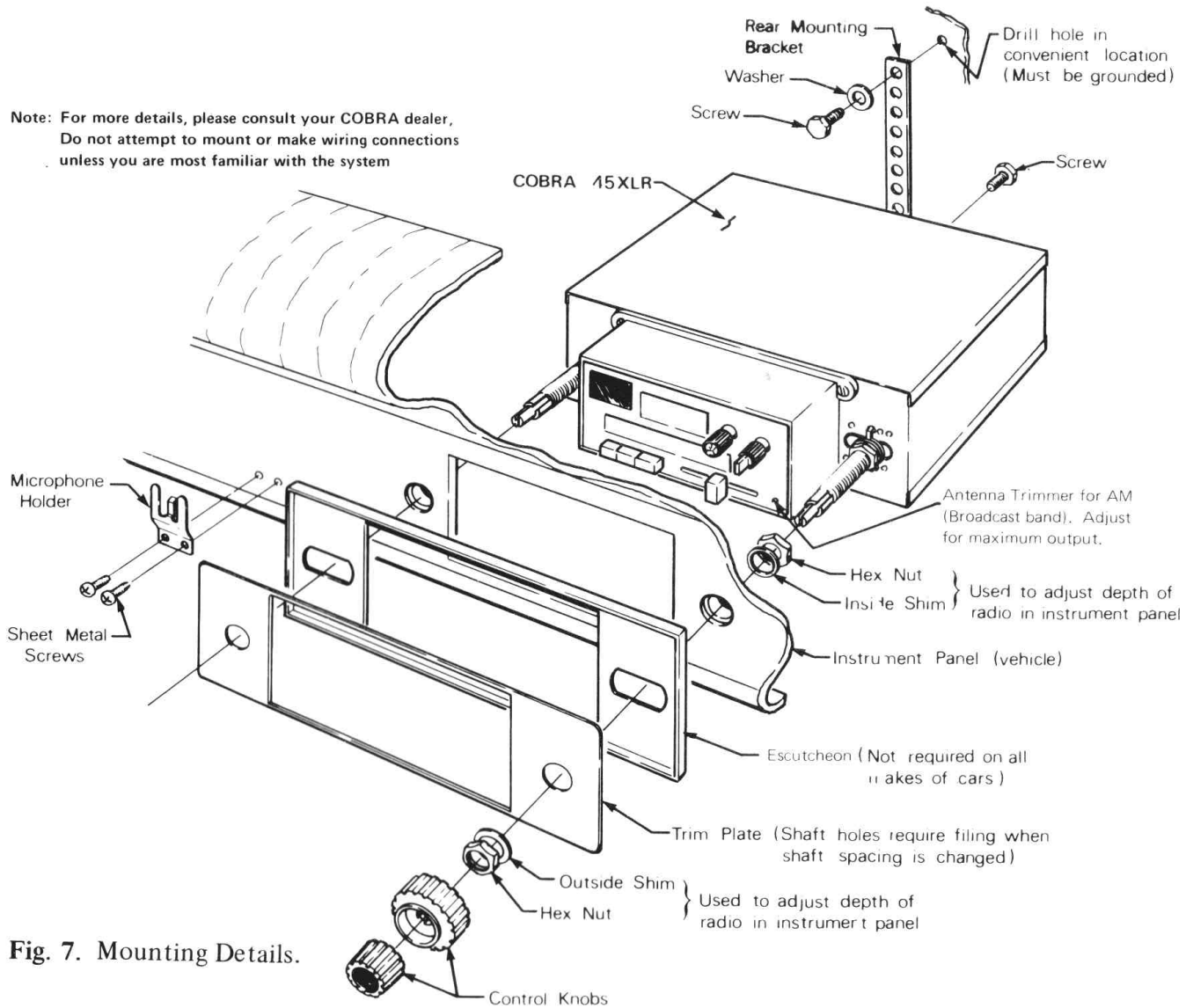


Fig. 7. Mounting Details.

Section VI
Maintenance and Adjustment

The COBRA 45XLR combination transceiver is specially designed for the environment encountered in mobile installations. The use of all solid state circuitry and its light weight result in high reliability. Should a failure occur, however, replace parts only with identical parts. Refer to the schematic diagram and parts list.

NOTE

If the performance described in the OPERATION and MAINTENANCE AND ADJUSTMENT section is not obtained, review the operating instructions to ensure that proper procedures were followed. If a problem still exists, refer to WARRANTY SERVICE INSTRUCTION on the last page of this manual.

FCC WARNING

Federal law (FCC part 95, Section 95.97d) states that only a United States licensed 1st or 2nd Class Radio Operator may tune the transmitter of this transceiver or make adjustments of the radio frequency section. Citizens Band operators may not make these adjustments, unless they hold a 1st or 2nd Class Radio Operator's license.

Section VII
Appendix

Citizens Band radio operators have largely adopted the "10-code" for standard questions and answers. Its use permits faster communications and better understanding in noisy areas. The following table lists some of the more common codes and their meanings.

10 CODE

Code	Meaning
10-1	Receiving poorly
10-2	Receiving well
10-3	Stop transmitting
10-4	OK, message received
10-5	Relay message
10-6	Busy, stand by
10-7	Out of service, leaving air
10-8	In service, subject to call
10-9	Repeat message
10-10	Transmission completed, standing by
10-11	Talking too rapidly
10-12	Visitors present
10-13	Advise Weather/Road conditions
10-16	Make pick up at
10-17	Urgent business
10-18	Anything for us?
10-19	Nothing for you, return to base
10-20	My location is
10-21	Call by telephone
10-22	Report in person to
10-23	Stand by
10-24	Completed last assignment
10-25	Can you contact
10-26	Disregard last information
10-27	I am moving to channel
10-28	Identify your station
10-29	Time is up for contact
10-30	Does not conform to FCC rules
10-32	I will give you a radio check
10-33	EMERGENCY TRAFFIC
10-34	Trouble at this station
10-35	Confidential information
10-36	Correct time is
10-37	Wrecker needed at
10-38	Ambulance needed at
10-39	Your message delivered
10-41	Please turn to channel
10-42	Traffic accident at
10-43	Traffic Tie up at
10-44	I have a message for you
10-45	All units within range please report
10-50	Break channel
10-60	What is next message number?
10-62	Unable to copy, use phone
10-63	Net directed to
10-64	Net clear
10-65	Awaiting your next message/assignment
10-67	All units comply
10-70	Fire at

10 CODE (Continued)

Code	Meaning
10-71	Proceed with transmission in sequence
10-73	Speed trap at
10-75	You are causing interference
10-77	Negative contact
10-81	Reserve hotel room for
10-82	Reserve room for
10-84	My telephone number is
10-85	My address is
10-89	Radio repairman needed at
10-90	I have TVI
10-91	Talk closer to mike
10-92	Your transmitter is out of adjustment
10-93	Check my frequency on this channel
10-94	Please give me a long count
10-95	Transmit dead carrier for 5 seconds
10-99	Mission completed, all units secure
10-200	Police needed at

A FEW RULES THAT SHOULD BE OBEYED

1. You must identify your official licensed call sign at the beginning and end of every conversation.

2. You are not allowed to carry on a conversation with another station for more than five minutes at a time without taking a one-minute break, to give others a chance to use the channel.

3. You are not allowed to blast others off the air by over-powering them with illegally amplified transmitter power, or illegally high antennas.

4. You can't use CB to promote illegal activities.

5. You are not allowed to use profanity.

6. You may not play music in your CB.

7. You may not use your CB to sell merchandise or professional services.

HOW YOUR CB CAN SERVE YOU

- Warn of traffic tie ups ahead.
- Provide weather and road information.
- Provide help fast in event of emergency or breakdown.
- Suggest good spots to eat and sleep.
- Make long trips more interesting, and help keep you awake.
- Provide direct contact with your office or home.
- Make friends for you as you travel.
- Provide "local information" to find your destination.
- Help law enforcement officers by reporting drunk and reckless drivers.

Colonel Samuel S. Smith of the Missouri Highway Patrol called the number of drunken drivers, wrong-way drivers and speeders reported by CBers as "amazing." He said, that even the "Smokey Bear" warnings don't shake their beliefs that "the potential benefits of CB radio to law enforcement are so great that they far outweigh the disadvantages." In regards to CB radar warnings to other CBers, Colonel Smith said cheerfully that "We've overheard warnings being relayed to truckers long after our operations have been discontinued . . . so we actually receive a residual benefit from these warnings."

USE CHANNEL 9 FOR EMERGENCY MESSAGES ONLY

FCC gives the following examples of permitted and prohibited types of communications for use on Channel 9. These are guidelines and are not intended to be all-inclusive.

Permitted	Example Message
Yes	"A tornado sighted six miles north of town."
No	"This is observation post number 10. No tornado sighted."
Yes	"I am out of gas on Interstate 95."
No	"I am out of gas in my driveway."
Yes	"There is a four-car collision at Exit 10 on the Beltway, send police and ambulance."
No	"Traffic is moving smoothly on the Beltway."
Yes	"Base to Unit 1, the Weather Bureau has just issued a thunderstorm warning. Bring the sailboat into port."
No	"Attention all motorists. The Weather Bureau advises that the snow tomorrow will accumulate 4 to 6 inches."
Yes	"There is a fire in the building on the corner of 6th and Main Streets."
No	"This is Halloween patrol unit number 3. Everything is quiet here."

WARRANTY SERVICE INSTRUCTIONS

1. Refer to the MAINTENANCE section of your Cobra instruction manual for adjustments that may be applicable.

2. Defective parts removed from units which are within the 90-Day Limited Warranty period should be sent PREPAID to the Service Department listed below. Be sure to state the model and serial number of the unit from which the parts were removed and date the unit was purchased. These parts will be exchanged at no charge, under the terms of the Warranty.

3. If the above-mentioned procedures do not correct the problem you are experiencing with your unit, pack it securely (preferably in the original carton or double-packed). Enclose a letter describing the problem and include your name and address. Deliver to, or ship PREPAID (UPS preferred) to the nearest Cobra authorized service agency (see list enclosed with unit).

If your list of authorized Cobra service agencies has been misplaced, contact your local dealer for the name of your nearest service agency, or write to:

Service Department

Cobra Communications Product Group
DYNASCAN CORPORATION
2815 West Irving Park Road
Chicago, Illinois 60618

NOTE

For future reference, jot down the serial and production numbers (shown on the rear of your Cobra 45XLR) below.

SERIAL NO._____

PRODUCTION NO. _____

LIMITED 90-DAY WARRANTY

DYNASCAN CORPORATION warrants to the original purchaser that its COBRA Citizens Band Radios, and the component parts thereof, will be free from defects in workmanship and materials for a period of ninety (90) days from the date of purchase.

DYNASCAN will, without charge, repair or replace, at its option, defective radios or component parts upon delivery to an authorized COBRA service contractor or the factory service department, accompanied by proof of the date of purchase in the form of a sales receipt.

To obtain warranty coverage, this CB radio must be registered by completing and mailing the enclosed warranty registration card to DYNASCAN Cobra Communications, P. O. Box 35148, Chicago, Illinois 60635 within five (5) days from the date of purchase.

Exclusions: This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. It is void if the serial number is altered, defaced or removed.

As indicated in your product instruction booklet, certain COBRA models are suitable for dash board installation without modification of the dash. In other cases professional installation is recommended. In either event, DYNASCAN is not responsible for damages to the product or the automobile resulting from improper installation.

DYNASCAN shall not be liable for any consequential damages, including without limitation damages resulting from loss of use or cost of installation. Some states do not allow limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific rights and you may also have other rights which vary from state to state.

For your convenience we suggest you contact your dealer, who may be authorized to make repairs or can refer you to the nearest service contractor. If warranty service cannot be obtained locally, please send the unit to Cobra Communications Service, 2815 West Irving Park Road, Chicago, Illinois 60618, properly packaged to avoid damage in shipment.



Cobra

Cobra Communications Product Group
DYNASCAN CORPORATION
6460 W. Cortland Street
Chicago, Illinois 60635

480-203-9-001

Printed in Japan