

PRICE \$2.00

# HEATHKIT<sup>®</sup> ASSEMBLY MANUAL



AMATEUR TRANSCEIVER

KL7 HAC

MOBILE MOUNT

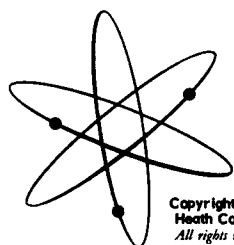
**KL7HAC**

MODEL SBA-100-1

013 4493

CHARLEY

595-760  
8-22-69


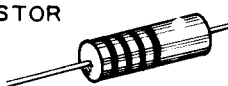
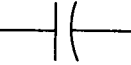
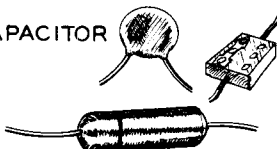
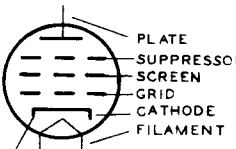

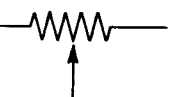
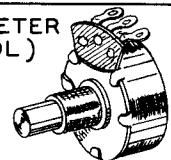
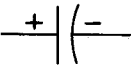
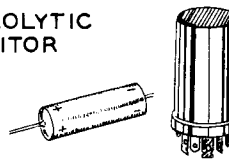


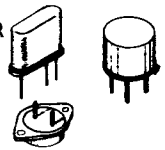
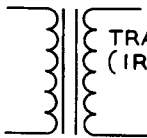
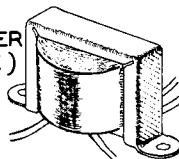

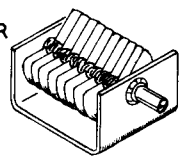

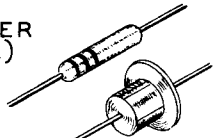
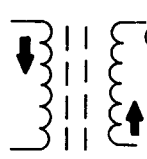

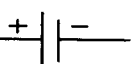
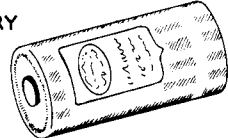
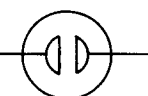
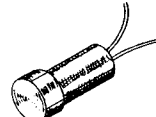
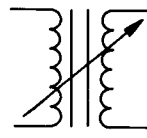

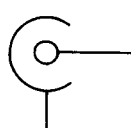
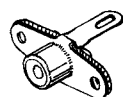
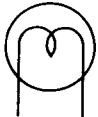
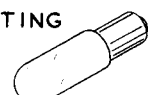
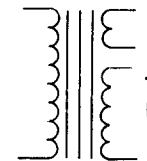
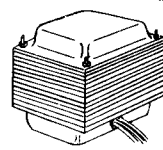
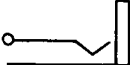
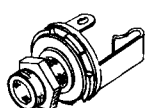
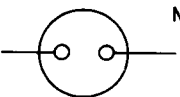
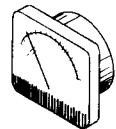

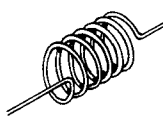
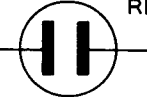
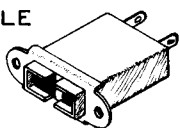

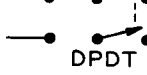
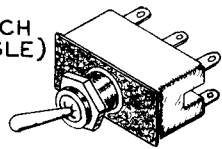
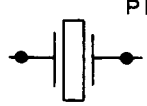

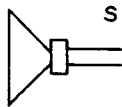
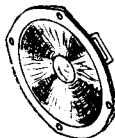
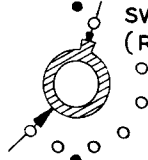


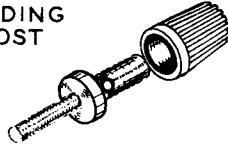
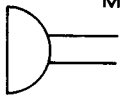
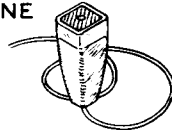

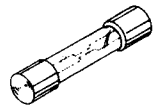






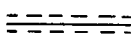


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# TYPICAL COMPONENT TYPES

This chart is a guide to commonly used types of electronic components. The symbols and related illustrations

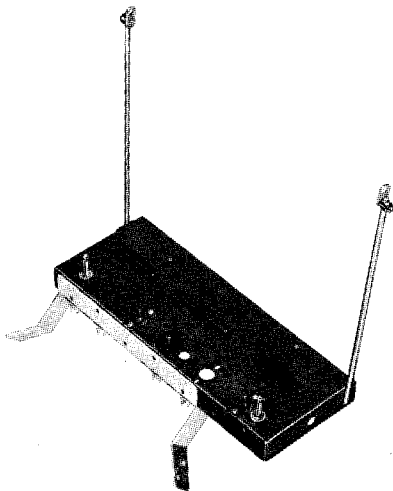
should prove helpful in identifying most parts and reading the schematic diagrams.

<b>RESISTOR</b>  	<b>CAPACITOR</b>  	 <b>TUBE</b> 
<b>POTENTIOMETER (CONTROL)</b>  	<b>ELECTROLYTIC CAPACITOR</b>  	<b>PNP TRANSISTOR</b>  <b>NPN TRANSISTOR</b>  
<b>TRANSFORMER (IRON CORE)</b>  	<b>VARIABLE CAPACITOR</b>  	<b>RECTIFIER (DIODE)</b>  
<b>TRANSFORMER (ADJUSTABLE POWDERED IRON CORE)</b>  	<b>BATTERY</b>  	 <b>NEON BULB</b> 
 <b>TRANSFORMER (ADJUSTABLE CORE)</b> 	 <b>PHONO JACK</b> 	 <b>ILLUMINATING BULB</b> 
 <b>POWER TRANSFORMER</b> 	 <b>PHONE JACK</b> 	 <b>METER</b> 
 <b>INDUCTOR (COIL)</b> 	 <b>RECEPTACLE</b> 	 <b>SPST SWITCH (TOGGLE)</b>  <b>DPDT</b> 
 <b>PIEZOELECTRIC CRYSTAL</b> 	 <b>SPEAKER</b> 	 <b>SWITCH (ROTARY)</b> 
 <b>BINDING POST</b> 	 <b>MICROPHONE</b> 	 <b>FUSE</b> 
 <b>GENERAL ANTENNA</b>  <b>LOOP</b>	 <b>EARTH GROUND</b>  <b>CHASSIS GROUND</b>	<b>CONDUCTORS</b>  <b>NOT CONNECTED</b>  <b>CONNECTED</b>  <b>SHIELDED</b>

# Assembly and Installation of the



## AMATEUR TRANSCEIVER MOBILE MOUNT MODEL SBA-100-1



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HEATH COMPANY  
BENTON HARBOR, MICHIGAN 49022

## INTRODUCTION

The Mobile Mount is used to install the Heathkit Model SB-110 or SB-100 Transceiver in your automobile. When this Manual refers to Model SB-100, it includes the Model SB-101 and the Model HW-100. Similarly, references to Model SB-110 apply also to the Model SB-110A.

Adjustable mounting brackets are provided so the Transceiver can be installed in a variety of

positions in your automobile. Quick-disconnect Transceiver mounting rods and mating connectors in the Mount allow you to quickly mount or remove the Transceiver, since the mobile power supply, antenna, and speaker are wired permanently to the Mount instead of to the Transceiver. Because of this mounting simplicity, it is convenient to use a single Transceiver for both mobile and fixed station operation.

## PARTS LIST

Unpack the kit carefully and check each part against the Parts List. The numbers in parentheses in the Parts List are keyed to the numbers on the parts drawings to aid in parts identification.

PART No.	PARTS Per Kit	DESCRIPTION
-------------	------------------	-------------

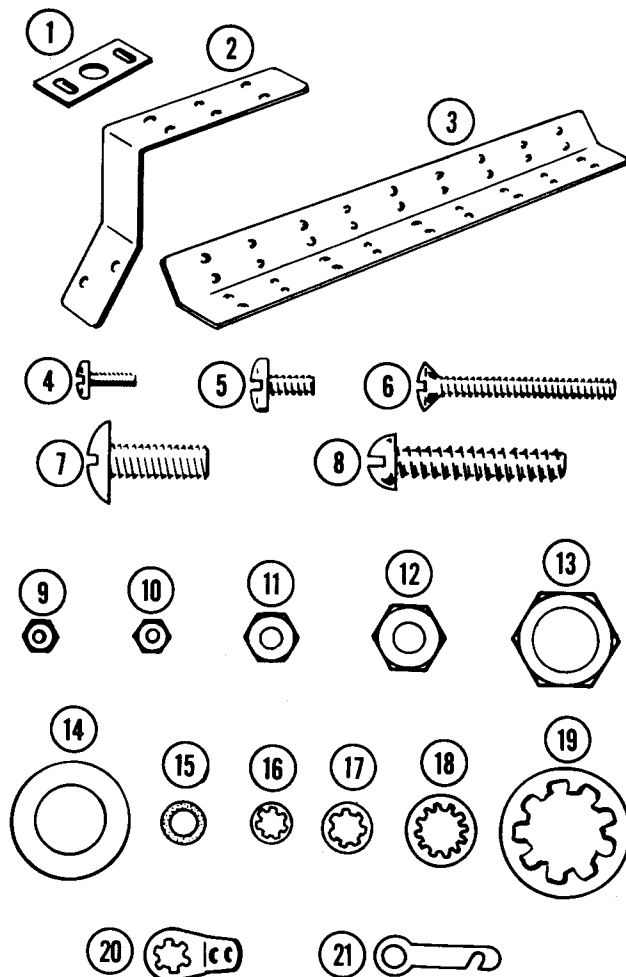
### METAL PARTS

(1) 205-487-1	3 ✓	Phono plug mounding plate
(2) 204-663	2 ✓	Adapter bracket
(3) 204-664	1 ✓	Angle bracket
482-4	2 ✓	Metal strap
410-2-1	1 ✓	Mounting base

### HARDWARE

(4) 250-49	2 ✓	3-48 x 1/4" screw
(5) 250-56	6 ✓	6-32 x 1/4" screw
(6) 250-281	2 ✓	8-32 x 1" screw
(7) 250-126	16 ✓	10-32 x 1/2" screw
(8) 250-128	8 ✓	#10 sheet metal screw
(9) 252-51	2 ✓	2-56 nut
(10) 252-1	4 ✓	3-48 nut
(11) 252-3	6 ✓	6-32 nut
(12) 252-5	16 ✓	10-32 nut
(13) 252-7	6 ✓	Control nut
(14) 253-10	2 ✓	Control flat washer
(15) 253-43	4 ✓	Fiber washer
(16) 254-7	8 ✓	#3 lockwasher
(17) 254-1	6 ✓	#6 lockwasher
(18) 254-3	16 ✓	#10 lockwasher
(19) 254-4	6 ✓	Control lockwasher
(20) 259-1	3 ✓	#6 solder lug
(21) 259-6	2 ✓	Small solder lug

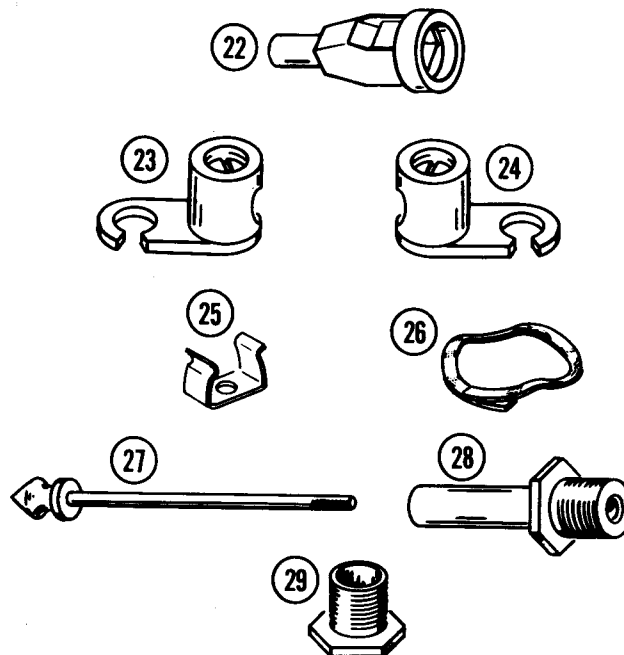
To order replacement parts, refer to the Replacement Parts Price List and use the Parts Order Form furnished with this kit.



PART No.	PARTS Per Kit	DESCRIPTION
-------------	------------------	-------------

**MISCELLANEOUS**

73-77	1✓	Rubber gasket
(22) 75-70	2✓	Plastic mount
(23) 207-43	1✓	Right-hand rod clamp
(24) 207-44	1✓	Left-hand rod clamp
(25) 260-29	2✓	Clip
266-84	2✓	Brace rod
346-1	1✓	Small sleeving
346-2	1✓	Large sleeving
434-118	1✓	11-pin socket
(26) 435-1	1✓	Socket mounting ring
436-20	1✓	Phone jack
438-25	3✓	Phono plug
(27) 438-35	2✓	Phone plug shaft
(28) 438-36	2✓	Phone plug sleeve
(29) 455-38	1✓	Bushing
490-4	1✓	9/64" drill
597-308	1✓	Kit Builders Guide
	1✓	Manual (See front cover for part number.)
		Solder

**ASSEMBLY NOTES**

The following instructions are presented in a logical step-by-step sequence to enable you to complete your kit with the least possible confusion. Be sure to read each step all the way through. When the step is completed, check it off in the space provided. This may prevent errors or omissions, if your work is interrupted.

The illustrations in this manual usually correspond to the actual configuration of the kit; however, in some instances the illustrations may be slightly distorted to allow all of the parts to be shown clearly.

The abbreviation "NS" indicates that a connection should not be soldered yet, as other wires will be added. When the last wire is installed, the terminal should be soldered and the abbreviation "S" is used to indicate this. Note that a number will appear after each solder instruction. This number indicates the number of leads that are supposed to be connected to the terminal before it is soldered. For example, if the instruction reads, "Connect a lead to lug 1

(S-2)," it will be understood that there will be two leads connected to the terminal at the time it is soldered.

Position the work, if possible, so that gravity will help to keep the solder where you want it. The joint to be soldered should be heated with the flat side of the soldering iron tip until the solder melts. Apply only enough solder to the heated terminal to thoroughly wet the junction. Remove the solder and then the iron when a smooth soldered junction appears. Do not move the leads until the solder is solidified.

ROSIN CORE SOLDER HAS BEEN SUPPLIED WITH THIS KIT. THIS TYPE OF SOLDER MUST BE USED FOR ALL SOLDERING IN THIS KIT. ALL GUARANTEES ARE VOIDED AND WE WILL NOT REPAIR OR SERVICE EQUIPMENT IN WHICH ACID CORE SOLDER OR PASTE FLUXES HAVE BEEN USED. IF ADDITIONAL SOLDER IS NEEDED, BE SURE TO PURCHASE ROSIN CORE (60:40 or 50:50 TIN-LEAD CONTENT) RADIO TYPE SOLDER.



## STEP-BY-STEP ASSEMBLY

### MOUNTING PARTS

Refer to Pictorial 1 for the following steps.

✓(4) Position the mounting base as shown in the Pictorial.

✓(4) Refer to Detail 1A and mount a clip at C. Install a 3-48 x 1/4" screw, #3 lockwasher and 3-48 nut on a clip; then mount the clip assembly to the mounting base with a #3 lockwasher and a 3-48 nut.

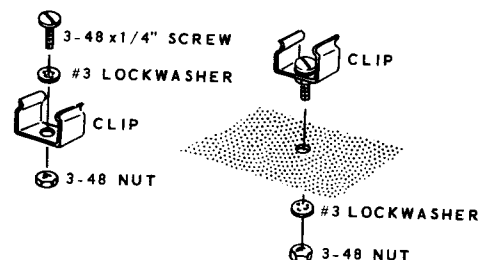
✓(4) Similarly, mount a clip at D.

✓(4) Mount an 11-pin socket at K. Use the socket mounting ring as shown in Detail 1B. Position the socket keyway as shown by the arrow in Pictorial 1.

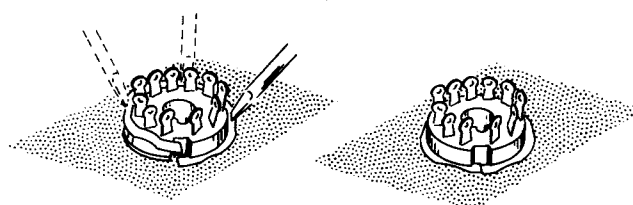
**NOTE:** The phone jack mounted in the next step will be used as a key jack in your Mobile Mount. Read the step carefully; this jack can be installed in two locations.

✓(4) Refer to Detail 1C and mount a phone jack with a control lockwasher, a control flat washer, and a control nut. Mount the jack at F for the Transceiver Model SB-110, or at A for the Model SB-100.

The next six steps are used to assemble two phone plugs as shown in Detail 2A. Each step is preceded by two checkoff spaces. Assemble one phone plug first, using one series of checkoff spaces. Then assemble the other phone plug using the remaining spaces.

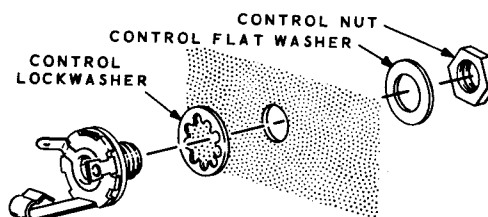


Detail 1A

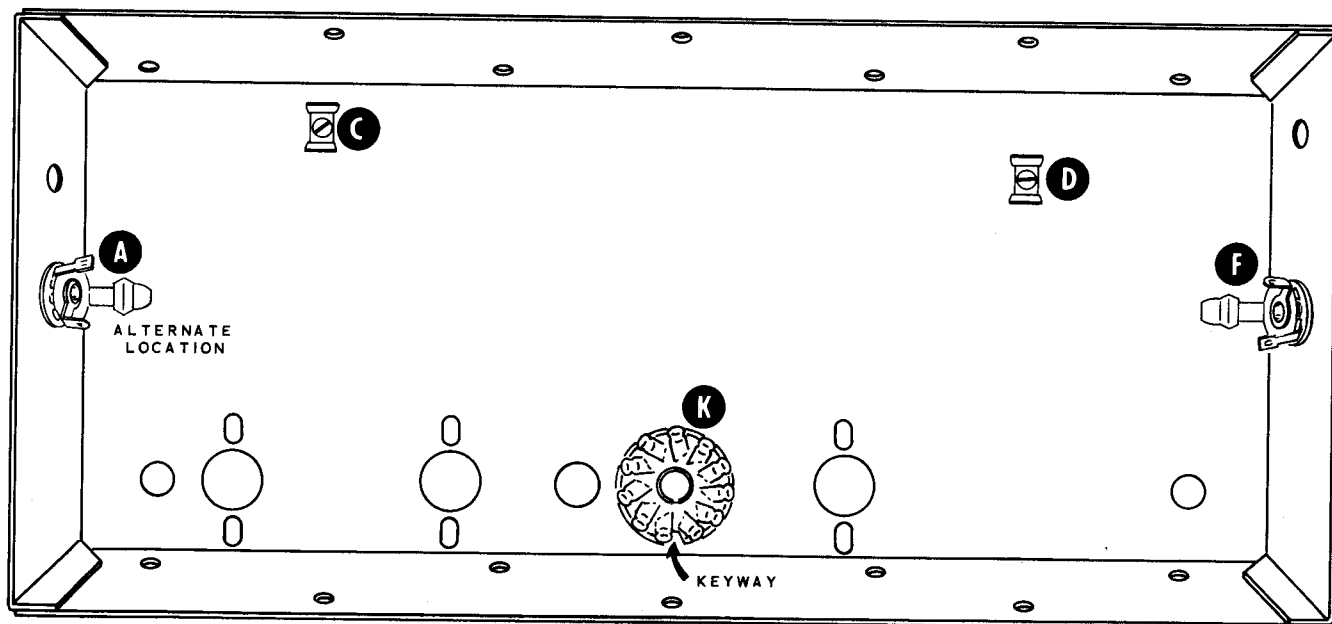


HOLD THE SOCKET IN THE CHASSIS HOLE AND PLACE ONE END OF THE RING INTO THE GROOVE OF THE SOCKET. USING A SCREWDRIVER, PRESS THE RING INTO THE GROOVE AROUND THE SOCKET.

Detail 1B



Detail 1C



PICTORIAL 1

✓ ✓  
 (✓) (✓) Push a 1-1/2" length of small sleeving on a phone plug shaft until one end of the sleeving is pushed against the tip.

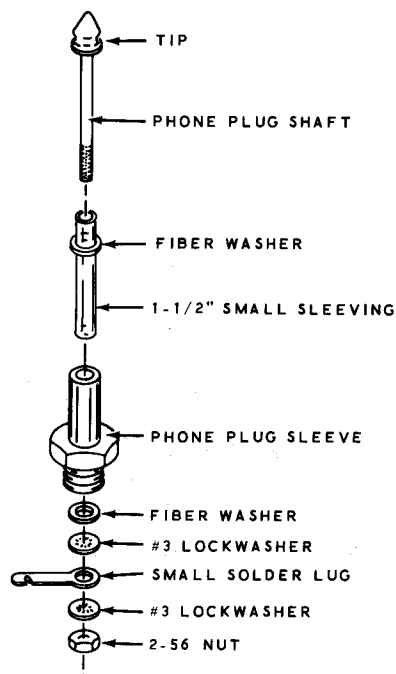
✓ ✓  
 (✓) (✓) Slide a fiber washer over the sleeving on this phone plug shaft and push it against the tip.

✓ ✓  
 (✓) (✓) Insert the phone plug shaft assembly in a phone plug sleeve as shown. The sleeving should extend just beyond the threaded end of the sleeve.

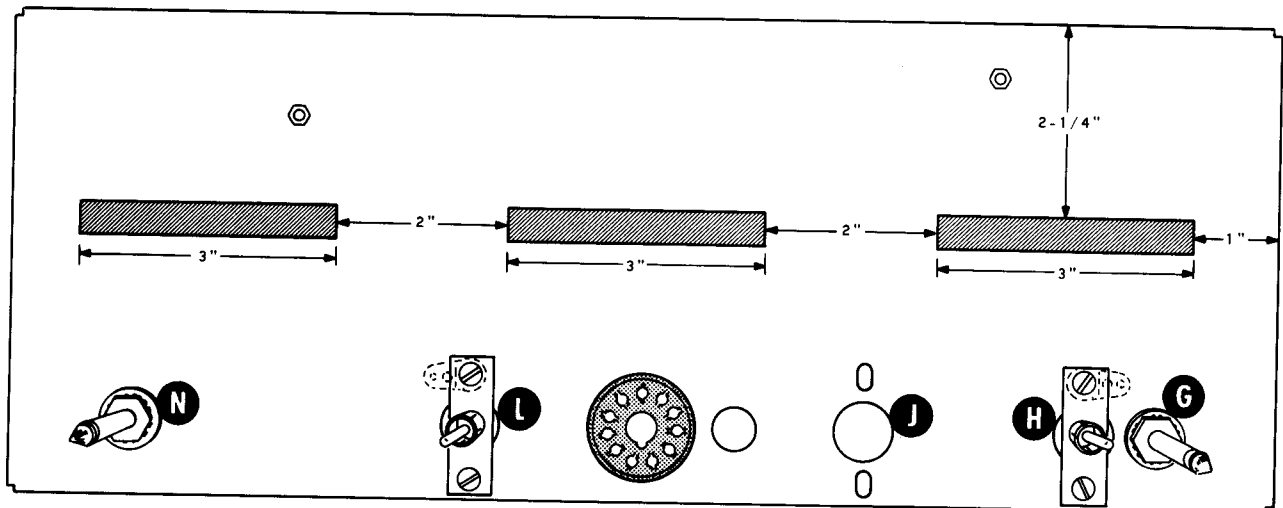
✓ ✓  
 (✓) (✓) Now place a fiber washer over the sleeving on this shaft.

✓ ✓  
 (✓) (✓) Place a #3 lockwasher, a small solder lug, another #3 lockwasher, and a 2-56 nut on the small threaded shaft of the phone plug assembly. Tighten the nut securely.

✓  
 (✓) Assemble the second phone plug by repeating the preceding five steps.



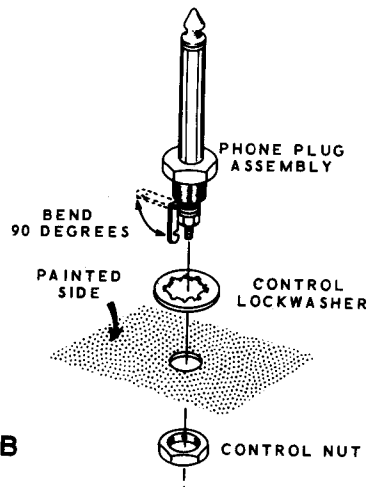
Detail 2A



PICTORIAL 2

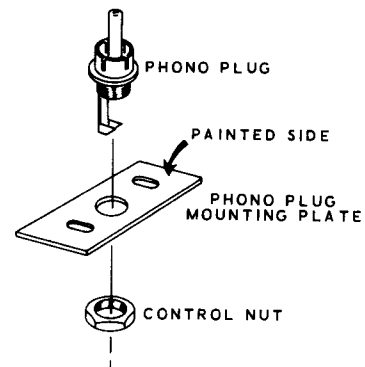
Refer to Pictorial 2 for the following steps.

- ✓(✓) Bend the solder lug on a phono plug assembly as shown in Detail 2B and mount this assembly at N. Use a control lockwasher and control nut, but do not tighten the nut at this time.



Detail 2B

- ✓(✓) Locate two phono plugs, then remove and discard the shield caps from each plug.
- ✓(✓) Refer to Detail 2C and mount each of the two phono plugs to the painted side of a phono plug mounting plate. Use a control nut on each phono plug.



Detail 2C

- ✓(✓) Similarly, bend the solder lug and mount the other phono plug assembly at G. Do not tighten the nut.

- ✓(✓) Mount one of the phono plug assemblies on the painted side of the mounting base at L. See Detail 2D. In the upper elongated hole, use a 6-32 x 1/4" screw with a #6 lockwasher under the head, a #6 solder lug,

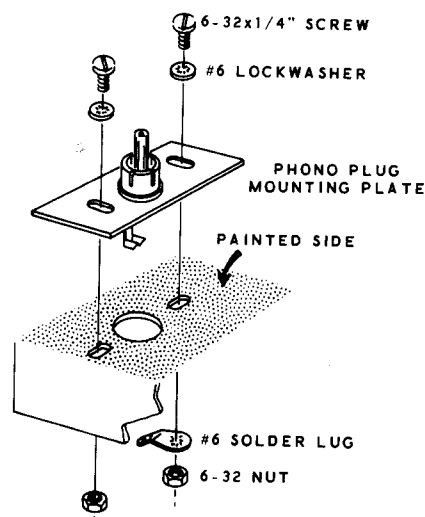


and a 6-32 nut. In the lower elongated hole, use a 6-32 x 1/4" screw with a #6 lockwasher under the head, and a 6-32 nut. Do not tighten the screws at this time.

- (✓) Similarly, mount the other phono plug assembly and a #6 solder lug at H. Do not tighten the screws.

Complete the next step, which involves hole J, only if the Heathkit Model SB-100 Transceiver is to be installed on the Mobile Mount. Hole J is not used for the Heathkit Model SB-110 Transceiver.

- ( ) Remove and discard the shield cap from a phono plug. Mount this phono plug to the painted side of a phono plug mounting plate. Then mount the phono plug assembly and a #6 solder lug to the mounting base at J. Refer to Detail 2D. Use the type of hardware shown in the Detail.



Detail 2D

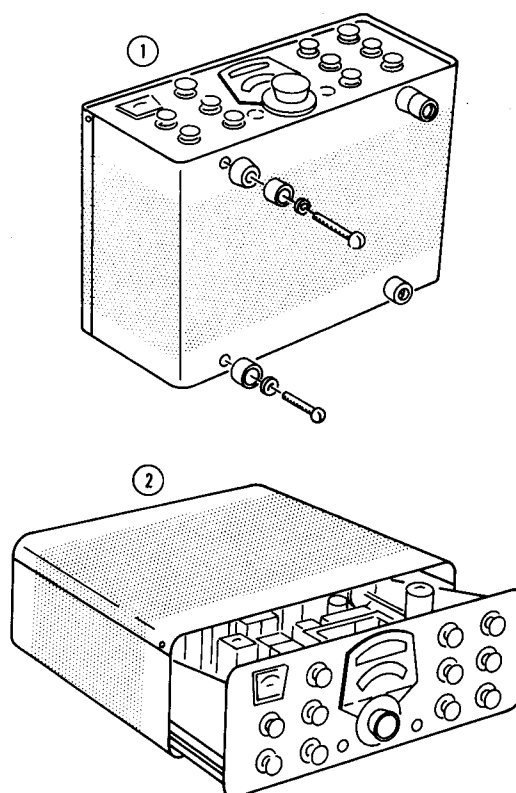
Complete the following steps for either the SB-100 or SB-110 Transceiver installation with the Mobile Mount.

- (✓) Locate the rubber gasket and cut-off six 3" lengths.
- (✓) Mark the mounting base as shown for the three locations of the lengths of rubber gasket.
- (✓) Remove the thin backing material from one length of rubber gasket. Then press the gummed side of the gasket to the mounting base at one of the marked locations.
- (✓) Remove the thin backing material from another length of gasket and press it in place on top of the gasket installed previously.
- (✓) Similarly, install two lengths of rubber gasket at each of the two remaining locations marked on the mounting base.

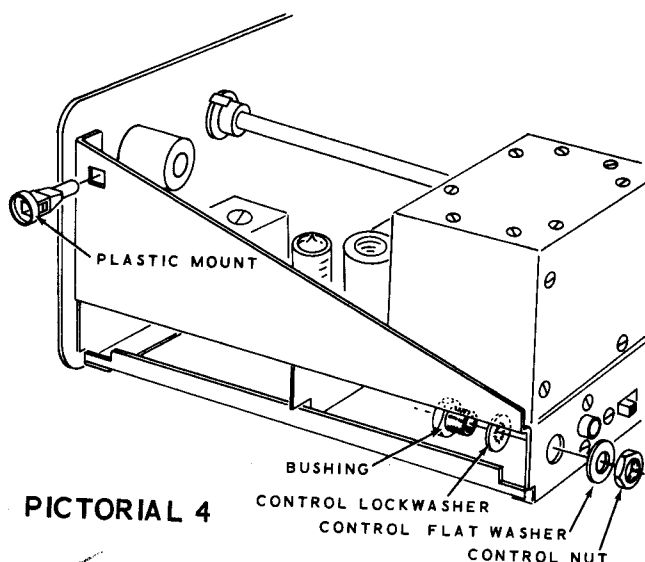
## TRANSCEIVER PREPARATION

Prepare the Transceiver as directed in the following steps before installing it on the Mobile Mount.

- (✓) Remove the Transceiver from its cabinet as shown in Pictorial 3.



PICTORIAL 3

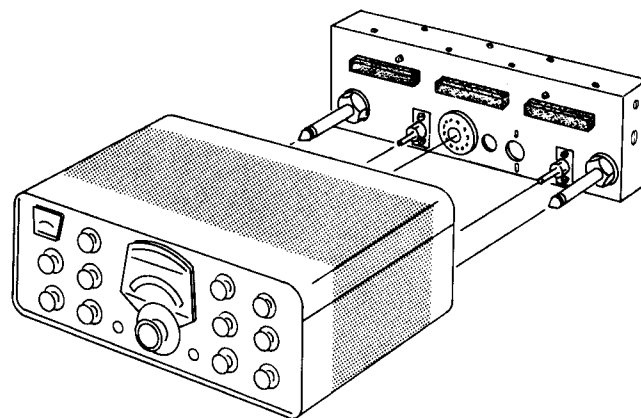


PICTORIAL 4

- (✓) Mount a bushing in the open hole at the rear of the Transceiver chassis. See Pictorial 4 for the location of this open hole on the Model SB-110. For the Model SB-100 this hole is located at the rear right-hand corner of the chassis. Use a control lockwasher, a control flat washer, and a control nut to mount the bushing.
- (✓) Install a plastic mount in the square hole on the right-hand side of the Transceiver, as shown in Pictorial 4. Push the plastic mount into the hole until it locks in place.
- (✓) Similarly, install a plastic mount on the left-hand side of the Transceiver.
- (✓) Reinstall the Transceiver in its cabinet, using the rubber feet and hardware removed previously.

### MOUNTING TRANSCEIVER TO BASE

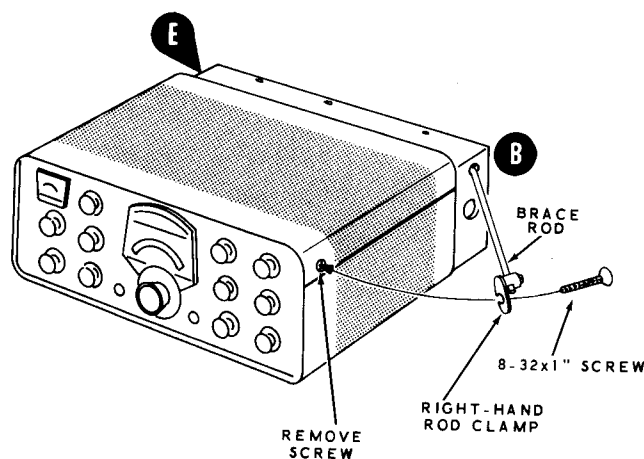
- (✓) Position the mounting base and Transceiver as shown in Pictorial 5, and carefully push the plugs and 11-pin socket into the sockets and 11-pin plug on the back of the Transceiver. Be sure all plugs line up with their respective sockets at the rear of the Transceiver.
- (✓) Tighten all of the mounting hardware on both phone plugs and on all phono plugs with the mounting base installed on the Transceiver. This will insure proper alignment of the plugs for easy installation and removal of the Transceiver.



PICTORIAL 5

Refer to Pictorial 6 for the following steps.

- (✓) Remove the oval head screw from the right-hand side of the Transceiver cabinet. This screw will be replaced with a longer screw.
- (✓) At the same location, press the Transceiver cabinet firmly against the plastic mount and start an 8-32 x 1" screw.
- (✓) Similarly, remove and replace the oval head screw at the left-hand side of the Transceiver cabinet with an 8-32 x 1" screw. Be sure to hold the cabinet against the plastic mount when the screw is installed.



PICTORIAL 6

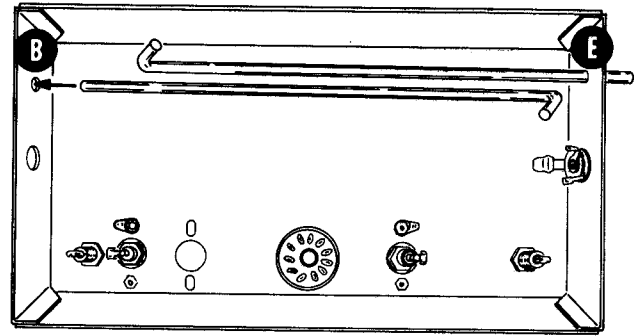
- (1) Refer to Detail 6A and insert the straight end of a brace rod into hole B of the mounting base. Push this brace rod through hole B until the bent end is hooked in this hole. See Pictorial 6.
- (2) Install the right-hand rod clamp on this brace rod as shown. Position the rod clamp on the brace rod so the clamp will slide down behind the 8-32 x 1" screwhead at the right-hand side of the cabinet. Tighten this screw securely in the cabinet.
- (3) Tighten the setscrew in the right-hand rod clamp while pushing the brace rod as far into the rod clamp as possible.
- (4) Refer to Detail 6A and insert the straight end of the other brace rod into hole E of the mounting base. Push this brace rod through hole E until the bent end is hooked in this hole.
- (5) Install the left-hand rod clamp on this brace rod. Position the rod clamp on the brace rod so the clamp will slide down behind the 8-32 x 1" screw head at the left-hand side of the cabinet. Then tighten the screw in the cabinet and tighten the setscrew in the rod clamp. Be sure to push the brace rod as far into the rod clamp as possible before tightening the setscrew.

This completes the mounting of the Transceiver to the mounting base. Be sure the Transceiver and DC power supply are operating properly before proceeding with the Initial Installation section.

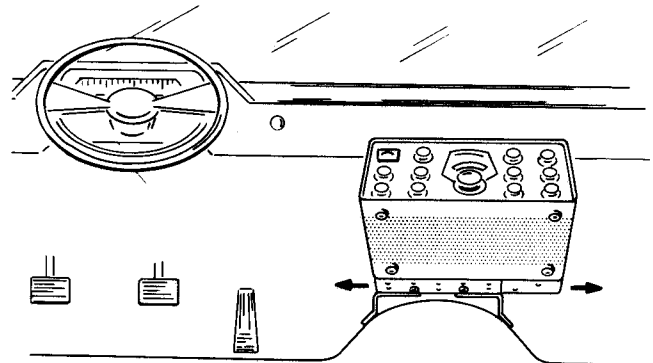
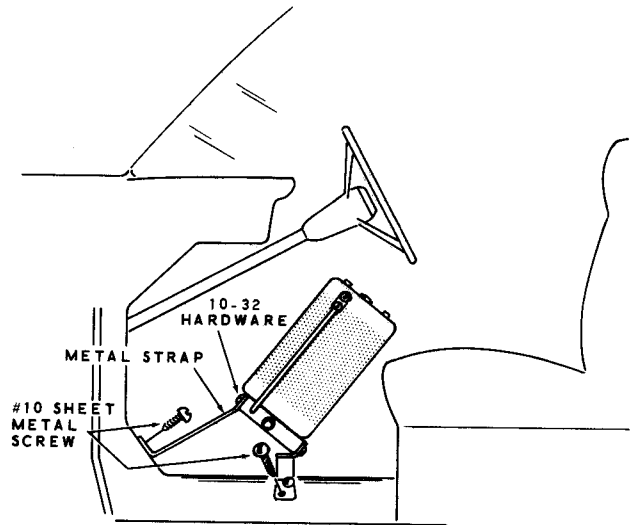
Also, if a linear amplifier will be used with the SB-100 Transceiver, check the operation of this linear amplifier with its DC power supply before beginning the installation.

## INITIAL INSTALLATION

Plan the locations for the Mobile Mount and Transceiver for your installation. Figure 1 shows a typical installation in an automobile.



Detail 6A



NOTE: MOUNTING BASE MAY BE MOVED IN EITHER DIRECTION.

Figure 1

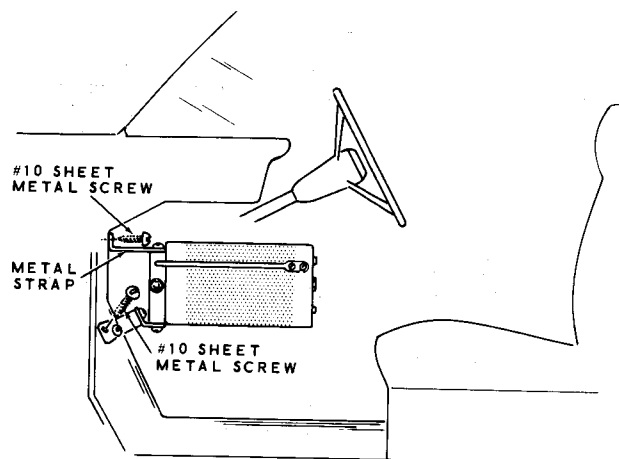


Figure 2

Figure 2 shows another type of installation. If the HA-14 Linear Amplifier is used with the SB-100 Transceiver, it may be mounted to the dash of the automobile as shown in Figure 3.

In the following steps, two adapter brackets and an angle bracket are used to install the Mobile Mount in your automobile. The angle bracket may be attached to the mounting base in ways that are different from the way shown in Pictorial 7. In some installations the angle bracket may not be needed; the adapter brackets are then mounted directly to the mounting base.

Refer to Pictorial 7 for the following steps.

- ( ) Assemble two adapter brackets to the angle bracket. Use 10-32 x 1/2" screws, #10 lockwashers, and 10-32 nuts. Your particular installation will determine the position of the adapter brackets on the angle bracket, the space between the two adapter brackets, and the amount of hardware needed for this assembly.

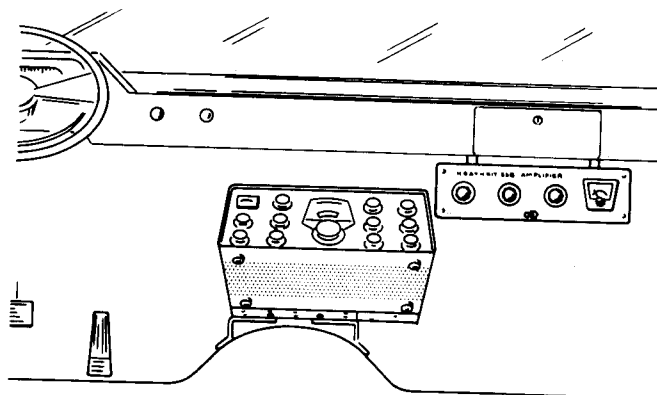
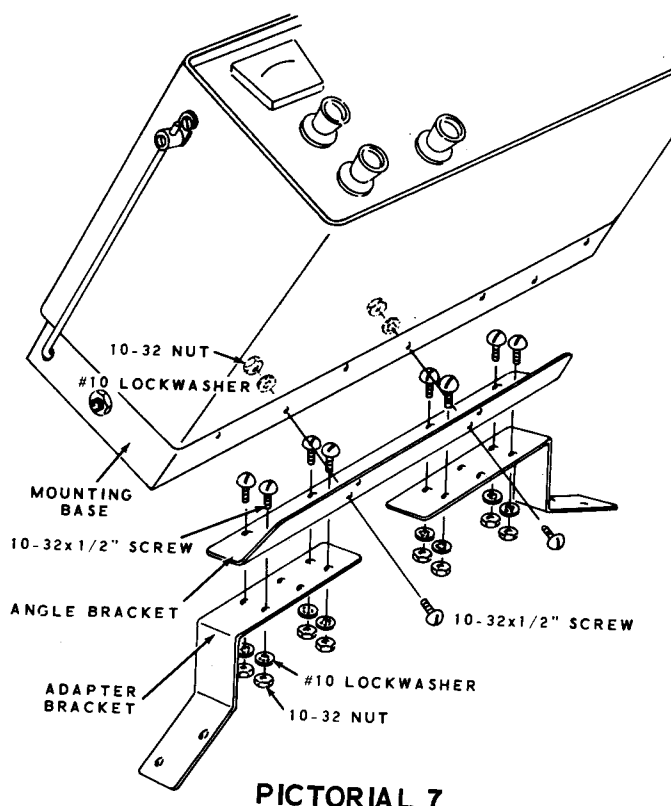


Figure 3



PICTORIAL 7

- ( ) Temporarily fasten the angle bracket and adapter bracket assembly to the mounting base. Use 10-32 x 1/2" screws, #10 lockwashers, and 10-32 nuts in two mounting holes. The position of the mounting base with respect to the angle bracket depends on the method of installation.
  - ( ) Position the front seat of your automobile as far forward as it will normally be adjusted by anyone driving this automobile.
  - ( ) Set the Transceiver and Mobile Mount in the automobile and hold it in the mounting position with a suitable support such as a box. It will be easier if one person holds the Transceiver and Mobile Mount while another person fastens them to the automobile.
  - ( ) Fasten the two adapter brackets to the floor or firewall of the automobile as follows:
    1. Mark the location for the four mounting holes; then cut a small hole in the floor covering at each location to prevent damage when drilling the holes. Use a sharp knife or a razor blade.
    2. Drill the four holes using the 9/64" drill. Be careful when drilling the holes, that the drill only goes through the floor or firewall.
    3. Use two #10 sheet metal screws to fasten each adapter bracket to the floor or firewall.
- NOTE: After fastening one adapter bracket, the mounting base and Transceiver may need to be removed from the angle bracket before the other adapter bracket can be mounted.
- ( ) Fasten either end of one of the metal straps to the top flange of the mounting base. Use a 10-32 x 1/2" screw, a #10 lockwasher, and a 10-32 nut in a hole near the left end of the mounting base.
  - ( ) Secure the other end of this metal strap with a #10 sheet metal screw to the desired location on the firewall, floor, or under the dashboard. Cut or bend the metal strap as needed.
  - ( ) Similarly, install a metal strap between the right end of the mounting base and the automobile.
  - ( ) Loosen the two screws that fasten the brace rods and clamps to the sides of the Transceiver. Then remove the Transceiver from the mounting base.
  - ( ) Remove the two screws holding the metal straps to the top flange of the mounting base. Then remove the two screws which fasten the mounting base to the angle bracket.
  - ( ) Push both brace rods into the holes on the ends of the mounting base; then push each rod into a clip on the rear of the mounting base as shown in Pictorial 8 on Page 13. If necessary, squeeze each clip together until the brace rod is held firmly in place. These clips will hold the brace rods in place after the Transceiver is removed from the mounting base.
- If it has not yet been installed, install the DC power supply for the Transceiver in the auto. The free end of the power supply cable should be located near the mounting base so it can be wired to the 11-pin socket. Also, if your installation includes a linear amplifier, its DC power supply and cable should be installed now.
- The Heathkit Model HP-13 is the recommended DC power supply for use with the Models SB-110 or SB-100 Transceivers. The Heathkit Models HA-14 Linear Amplifier and HP-14 DC Power Supply are the units recommended for mobile linear operation with the SB-100 Transceiver.

## WIRING

In the following steps, the DC power supply cable will be wired to socket K on the mounting base. The wire colors refer to the wires in the 8-wire cable from the HP-13 Power Supply, and the lug numbers refer to the lugs on socket K. If a different cable or DC power supply is installed, disregard the colors and use the information next to the lug numbers to wire socket K.

Refer to Detail 8A for the following steps.

NOTE: Save a 3" length of the 8-wire cable (or any suitable hookup wire) to be used to wire the phone jack in a later step.

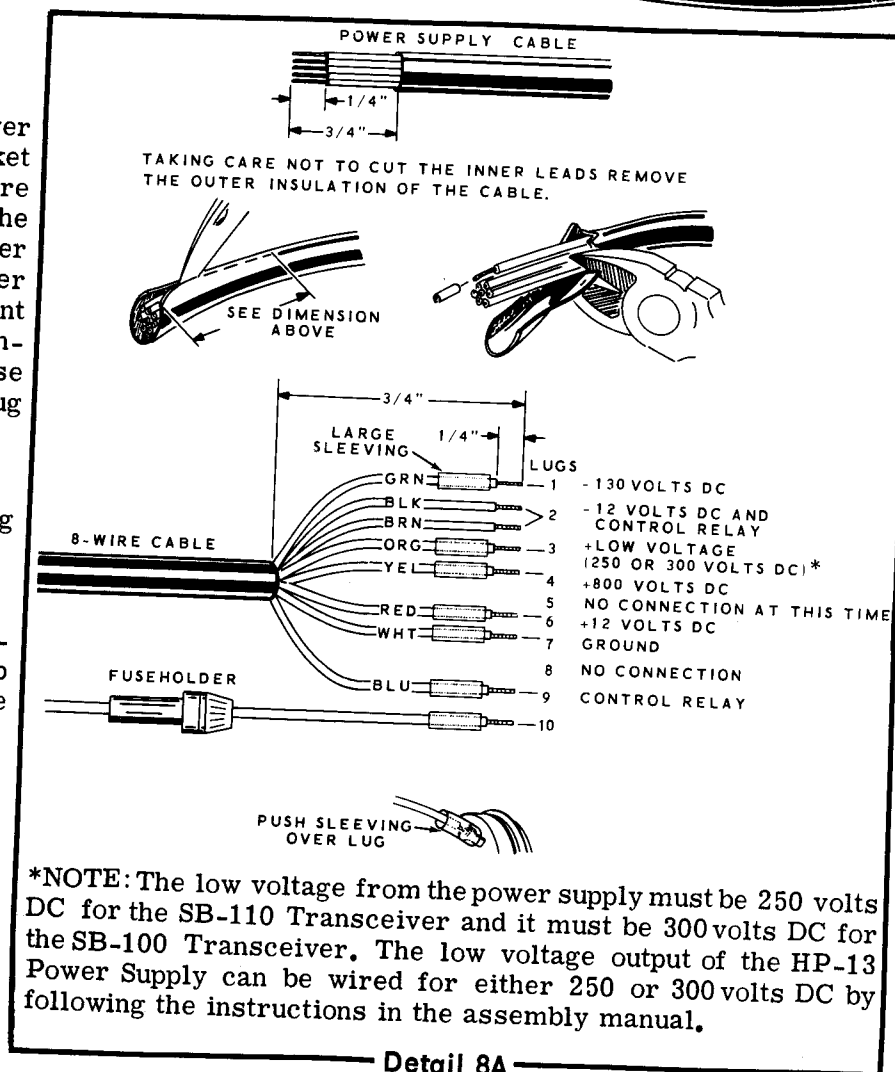
- ( ) Strip 3/4" of the outer insulation from the end of the 8-wire cable. Then strip 1/4" of insulation from the ends of the exposed wires.

- ( ) Melt a small amount of solder on the exposed wire ends.

- ( ) Cut six 7/8" lengths of large sleeving and slip them over the wires as indicated in Detail 8A.

Refer to Detail 8A and Pictorial 8 for the following steps.

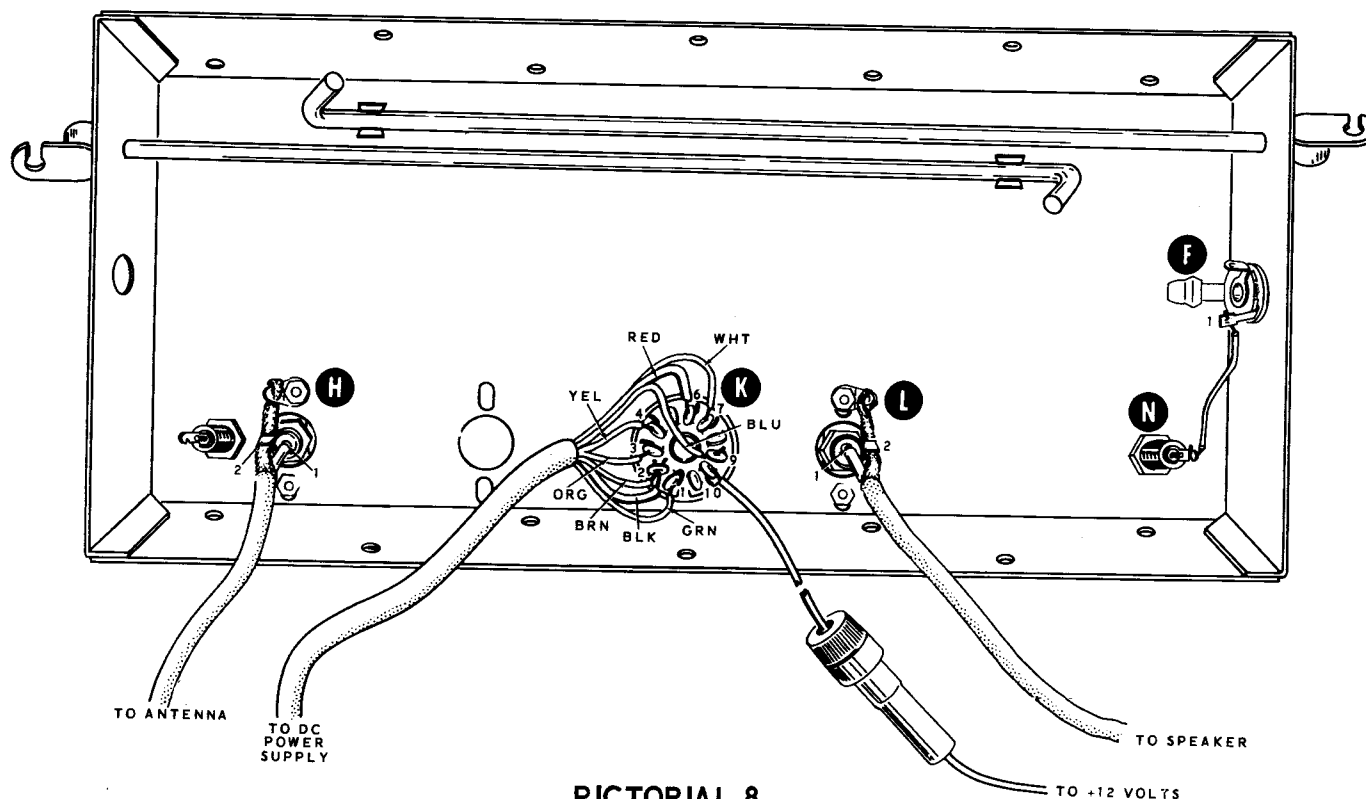
- ( ) Connect the wires of the 8-wire cable to socket K as shown. Solder each connection and push the length of sleeving over the lug of socket K.



Detail 8A

An in-line fuseholder and lead is supplied with the HP-13 Power Supply. This lead is used to furnish power to the control relay in the HP-13 power supply. Wire the leads of this fuseholder as directed in the next three steps.

- ( ) Cut a 7/8" length of large sleeving. Slip this sleeving over the lead from the cap of the fuseholder.
- ( ) Connect this fuseholder lead to lug 10 of socket K (S-1). Then push the sleeving over this lug.



- ( ) Connect the other fuseholder lead to a source of +12 volts DC. This lead may be connected to the accessory terminal of the ignition switch or to the positive (+) battery terminal in the automobile.

Final wiring of the Mobile Mount depends on the equipment used in the installation. Complete the steps under the SB-110 Transceiver section or the SB-100 Transceiver section. If the HA-14 Linear Amplifier is installed with the SB-100 Transceiver, then complete both the SB-100 Transceiver and HA-14 Linear Amplifier sections.

## SB-110 Transceiver

Refer to Pictorial 8 for the following steps.

- (1) Connect either end of a 3" length of hookup wire to phone plug N (S-1). Use a wire from the 8-wire cable or any other suitable hookup wire.

- (U) Connect the other end of this wire to lug 1 of phone jack F (S-1).

**NOTE:** Either hookup wire or shielded cable may be used in the next two steps to connect the speaker to the Mobile Mount. If shielded cable is used, the inner lead should be connected to terminal 1 and the shield should be connected to lug 2 and the solder lug of plug L.

- ( ) Connect a wire to either terminal on the speaker (S-1). Insert the other end of this wire into terminal 1 of plug L, and solder this connection at the tip of the phono plug (S-1).
- ( ) Connect a wire from the other terminal on the speaker (S-1) to lug 2 (S-1) and the solder lug (S-1) of plug L.

- ( ) Connect a wire from the other terminal on the speaker (S-1) to lug 2 (S-1) and the solder lug (S-1) of plug L.

In the following steps, connect the coaxial cable from the antenna to plug H as follows:

- ( ) Connect the inner lead to terminal 1 (S-1) and the shield to lug 2 (S-1) and the solder lug (S-1).

This completes the wiring of the Mobile Mount. Proceed to the Final Installation section.



## SB-100 Transceiver

Refer to Pictorial 9 for the following steps.

- ( ) Connect either end of a 4" length of hookup wire to phone plug G (S-1).
- ( ) Connect the other end of this wire to lug 1 of phone jack A (S-1).

NOTE: Either hookup wire or shielded cable may be used in the next two steps to connect the speaker to the Mobile Mount. If shielded cable is used, the inner lead should be connected to terminal 1 and the shield should be connected to lug 2 and the solder lug of plug H.

- ( ) Connect a wire to either terminal on the speaker (S-1). Insert the other end of this wire into terminal 1 of plug H and solder this connection at the tip of the phono plug (S-1).
- ( ) Connect a wire from the other terminal on the speaker (S-1) to lug 2 (S-1) and the solder lug (S-1) of plug H.

NOTE: If the HA-14 Linear Amplifier is installed with the SB-100 Transceiver, then omit the next step and proceed to the HA-14 Linear Amplifier section.

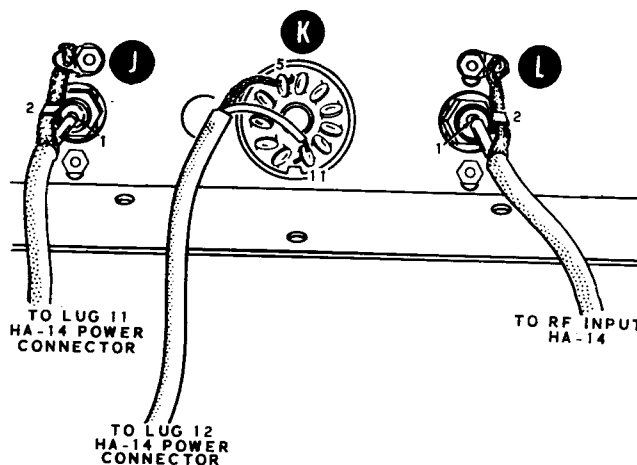
- ( ) Connect the coaxial cable from the antenna to plug L as follows: Connect the inner lead to terminal 1 (S-1), and the shield to lug 2 (S-1) and the solder lug (S-1).

This completes the wiring of the Mobile Mount. Proceed to the Final Installation section.

## HA-14 Linear Amplifier

Refer to Detail 9A for the following steps.

- ( ) Locate the coaxial cable coming from the HA-14 power cable that has the inner lead connected to lug 11 on the connector socket. At the free end of this cable, connect the inner lead to terminal 1 (S-1) and the shield to lug 2 (S-1) and the solder lug (S-1) of plug J.
- ( ) Locate the coaxial cable coming from the HA-14 power cable that has the inner lead connected to lug 12 on the connector socket. At the free end of this cable, connect the inner lead to lug 11 (S-1) and the shield to lug 5 (S-1) of socket K.



Detail 9A

- ( ) Connect the coaxial cables from the RF Input socket of the HA-14 Linear Amplifier to plug L as follows: Connect the inner lead to terminal 1 (S-1) and the shield to lug 2 (S-1) and the solder lug (S-1).

This completes the wiring of the Mobile Mount.

## FINAL INSTALLATION

NOTE: The blue and white identification label shows the Model Number and Production Series Number of your kit. Refer to these numbers in any communications with the Heath Company; this assures you that you will receive the most complete and up-to-date information in return.

( ) Install the identification label in the following manner:

1. Select a location for the label where it can easily be seen when needed. This location might be on the rear or top of the mounting base.

2. Carefully peel away the backing paper; then press the label into position.

( ) Use as many mounting holes as possible and reinstall the mounting base on the angle bracket. Use 10-32 x 1/2" screws, #10 lockwashers, and 10-32 nuts.

( ) Fasten the free end of each metal strap to the top flange of the mounting base with a 10-32 x 1/2" screw, #10 lockwasher, and a 10-32 nut.

( ) Check the position of the ANTENNA switch at the rear of the Transceiver. On the SB-110 Transceiver, push this switch to INT; on the SB-100 Transceiver, push this switch to COM.

( ) Reinstall the Transceiver in the Mobile Mount. Be sure to line up the plugs on the Mobile Mount with their respective sockets at the rear of the Transceiver.

( ) Remove each brace rod from its clip at the rear of the Mobile Mount. Fasten each rod clamp to the side of the Transceiver cabinet.

This completes the installation of the Mobile Mount. Before operating the equipment, be sure all plugs and cables are connected to the power supply, antenna, and battery. If a key will be used, the phone plug on its cable should be inserted into the key jack at the end of the mounting base.

All wires and cables have been connected to the Mobile Mount so the Transceiver can be quickly disconnected for use with an AC power supply or for servicing. After disconnecting the Transceiver, the two brace rods should be stored on the rear of the mounting base by pushing each rod into a clip.

NOTE: In an extreme case where you are unable to resolve a difficulty, refer to the Service and Warranty section of the "Kit Builders Guide", and to the "Factory Repair Service" information on fold-out from Page 16 of this Manual.

The Heath Company reserves the right to discontinue instruments and to change specifications at any time without incurring any obligation to incorporate new features in instruments previously sold.

## FACTORY REPAIR SERVICE

You can return your completed kit to the Heath Company Service Department to have it repaired for a minimum service fee. (Kits that have been modified will not be accepted for repair.) If you wish, you can deliver your kit to a nearby Heath Authorized Service Center. These centers are listed in your Heathkit catalog.

To be eligible for replacement parts under the terms of the warranty, equipment returned for factory repair service, or delivered to a Heath Authorized Service Center, must be accompanied by the invoice or the sales slip, or a copy of either. If you send the original invoice or sales slip, it will be returned to you.

If it is not convenient to deliver your kit to a Heath Authorized Service Center, please ship it to the factory at Benton Harbor, Michigan and follow the following shipping instructions:

Prepare a letter in duplicate, containing the following information:

- Your name and return address.
- Date of purchase.
- A brief description of the difficulty.
- The invoice or sales slip, or a copy of either.

- Your authorization to ship the repaired unit back to you C.O.D. for the service and shipping charges, plus the cost of parts not covered by the warranty.

Attach the envelope containing one copy of this letter directly to the unit before packaging, so that we do not overlook this important information. Send the second copy of the letter by separate mail to Heath Company, Attention: Service Department, Benton Harbor, Michigan.

Check the equipment to see that all parts and screws are in place. (Do not include wooden cabinets when shipping receivers, tuners, amplifiers, or TV sets, as these are easily damaged in shipment.) Then, wrap the equipment in heavy paper. Place the equipment in a strong carton, and put at least **THREE INCHES** of resilient packing material (shredded paper, excelsior, etc.) on all sides, between the equipment and the carton. Seal the carton with gummed paper tape, and tie it with a strong cord. Ship it by prepaid express, United Parcel Service, or insured parcel post to:

Heath Company  
Service Department  
Benton Harbor, Michigan 49022

## REPLACEMENT PARTS PRICE LIST

To order parts, use the Parts Order Form furnished with this kit. If a Parts Order Form is not available, refer to Replacement Parts in the Kit Builders Guide.

PART No.	PRICE Each	DESCRIPTION
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### METAL PARTS

205-487-1	.10	Phono plug mounting plate
204-663	.35	Adapter bracket
204-664	.40	Angle bracket
482-4	.40	Metal strap
410-2-1	1.15	Mounting base

### HARDWARE

250-49	.05	3-48 x 1/4" screw
250-56	.05	6-32 x 1/4" screw
250-281	.10	8-32 x 1" screw
250-126	.05	10-32 x 1/2" screw
250-128	.05	#10 sheet metal screw
252-51	.05	2-56 nut
252-1	.05	3-48 nut
252-3	.05	6-32 nut
252-5	.05	10-32 nut
252-7	.05	Control nut
253-10	.05	Control flat washer
253-43	.05	Fiber washer
254-7	.05	#3 lockwasher
254-1	.05	#6 lockwasher
254-3	.05	#10 lockwasher
254-4	.05	Control lockwasher
259-1	.05	#6 solder lug
259-6	.05	Small solder lug

PART No.	PRICE Each	DESCRIPTION
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### MISCELLANEOUS

73-77	.10	Rubber gasket
75-70	.10	Plastic mount
207-43	1.50	Right-hand rod clamp
207-44	1.50	Left-hand rod clamp
260-29	.25	Clip
266-84	2.00	Brace rod
346-1	.05/ft	Small sleeving
346-2	.05/ft	Large sleeving
434-118	.40	11-pin socket
435-1	.10	Socket mounting ring
436-20	.45	Phone jack
438-25	.50	Phono plug
438-35	.90	Phone plug shaft
438-36	1.10	Phone plug sleeve
455-38	.10	Bushing
490-4	.45	9/64" drill
331-6	.15	Solder
	2.00	Manual (See front cover for part number.)

The above prices apply only on purchases from the Heath Company where shipment is to a U.S.A. destination. Add 10% (minimum 25 cents) to the price when ordering from an authorized Service Center or Heathkit Electronic Center to cover local sales tax, postage and handling. Outside the U.S.A. parts and service are available from your local Heathkit source and will reflect additional transportation, taxes, duties and rates of exchange.