



MOTOROLA

Conversion From Dash/Local
Mounting To Remote Mounting

**RETROFIT INSTRUCTIONS
FOR
MCS 2000 MOBILE RADIOS**

Kit Number H1634() for Model I
Radio
Kit Number H1635() for Model II
and Model III Radios

Introduction

NOTE: The empty parentheses at the end of the kit numbers and part numbers mentioned throughout this document stand for the alphabetical character (A, B, etc.) that denotes the revision level of the kit or part. The revision level of the kits and/or parts may change from time to time without affecting the validity of these retrofit instructions.

This document describes and provides user instructions for Motorola retrofit kit numbers H1634() and H1635().

Purpose of Retrofit
Kits

The purpose of the retrofit kits is to enable conversion of an MCS 2000 radio that is in the dash/local mounting configuration to the remote mounting configuration.

The difference between the two kits is the particular radio models to which each applies.

In the dash/local mounting configuration, the control head of the radio is attached directly to the radio body and the radio is situated in the vehicle so that its controls and indicators are accessible to the radio user.

In the remote mounting configuration, the control head of the radio is mounted where its controls and indicators are accessible to the radio user. However, the radio body is mounted in the trunk or other remote location in the vehicle.



There are two situations where these retrofit kits are used. The first is where the radio body remains where it is presently located (e.g., under the front seat or on the transmission hump) and just the control head is moved to a different location (e.g., under the dashboard). The other situation is where both the radio body and the control head are moved to different locations.

Retrofit Kit Applicability

Kit No. H1634()

Retrofit kit No. H1634() is applicable to MCS 2000 Model I Radio Models M01UGL6PW4_N (15W) and M01UJL6PW4_N (35W).

Kit No. H1635()

Retrofit kit No. H1635() is applicable to: MCS 2000 Model II Radio Models M01UGM6PW6_N (15W) and M01UJM6PW6_N (35W); and to MCS 2000 Model III Radio Models M01UGN6PW6_N (15W); M01UJN6PW6_N (35W).

Reference Publications

Refer to Installation Instructions Manual for MCS 2000 Mobile Radios, Motorola Stock No. 68P02058U20, for installation information not included in these retrofit instructions.

Retrofit Kit Contents

Kit No. H1634()
Contents

The contents of Retrofit Kit No. H1634() are listed in Table 1 below. Note from Table 1 that several items in the retrofit kit are themselves kits, which contain two or more items.

Table 1 Contents of Retrofit Kit No. H1634()

Part No.	Description	Quantity
GLN7290()	Kit containing: control head back housing and front gasket	1
GLN7291()	Kit containing: transceiver front housing; connector-header; and retainer	1
HKN4192()	Kit containing: remote mount power cable (7-meters long) and fuse adapter	1
HKN6112() or HKN6098()	Remote mount control head cable (5-meters long)	1
HLN6599()	Kit containing: control head trunnion; two (2) wing screws; two (2) fillister head screws; and two (2) connector gaskets	1

Table 1 Contents of Retrofit Kit No. H1634()

Part No.	Description	Quantity
HLN6603()	Kit containing two (2) (<i>identical</i>) external speaker connectors and one (1) jumper wire	1
68P81084C29	Retrofit Instructions	1

Kit No. H1635()
Contents

The contents of Retrofit Kit No. H1635() are listed in Table 2 below. Note from Table 2 that several items in the retrofit kit are themselves kits, which contain two or more items.

Table 2 Contents of Retrofit Kit No. H1635()

Part No.	Description	Quantity
SDHN4197()	Kit containing: control head back housing and front gasket	1
GLN7291()	Kit containing: transceiver front housing; connector-header; and retainer	1
HKN4192()	Kit containing: remote mount power cable (7-meters long) and fuse adapter	1
HKN6112() or HKN6098()	Remote mount control head cable (5-meters long)	1
HLN6599()	Kit containing: control head mounting trunnion; two (2) wing screws; two (2) fillister head screws; and two (2) connector gaskets	1
HLN6603()	Kit containing two (2) (<i>identical</i>) external speaker connectors and one (1) jumper wire	1
68P81084C29	Retrofit Instructions	1

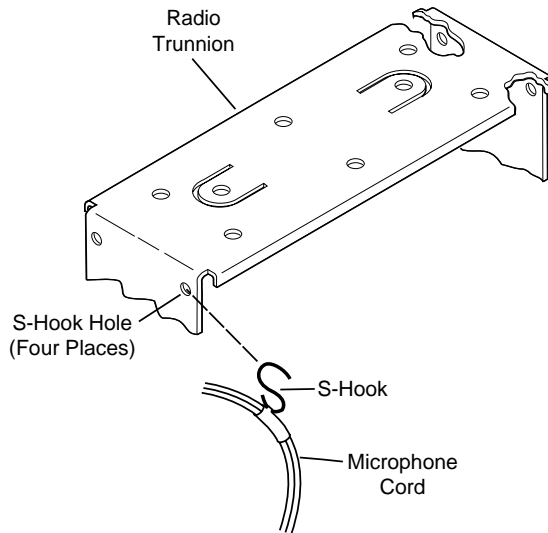
Retrofit
Instructions

To convert an MCS 2000 Radio from the dash/local mounting configuration to the remote mounting configuration, perform the following steps *in the order given*:

Removing Transceiver
From The Radio
Trunnion

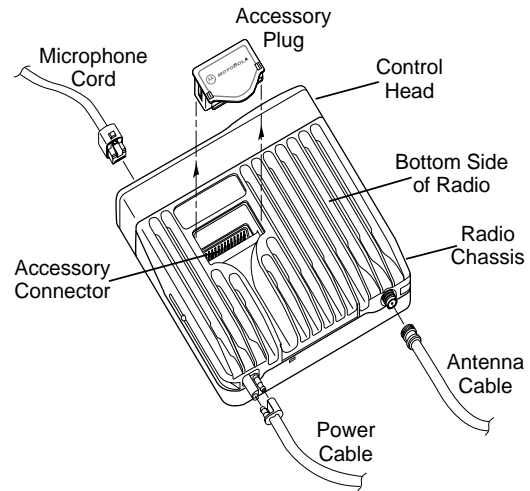
1. Turn off radio using power switch on control head.
2. Refer to Figure 1 and, at radio trunnion, disconnect S-hook on microphone cord from hole in trunnion.

NOTE: Microphone cord has a modular telephone type plug. That plug can be disconnected from its mating connector on control head of radio in the same way as a telephone handset cord can be disconnected from the telephone body.



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Figure 1 *Microphone Cord S-Hook Connected to Trunnion*



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Figure 2 *Disconnecting Accessory Plug and External Connections from Radio*

3. Refer to Figure 2 and, at control head of radio, disconnect microphone cord.
4. At rear of radio body, disconnect power and antenna cables.
5. At each side of radio, unscrew (counterclockwise) and remove the wing screw that attaches radio body to radio trunnion.
6. Slide radio out of radio trunnion.
7. If only the control head of the radio is to be relocated and the radio body is to remain where it is, skip the next two steps and proceed to step 1 of the paragraph titled "Reconfiguring Control Head" (Model I only or Models II and III only, as appropriate). Otherwise, continue with next step.
8. Remove radio trunnion from its present location by removing the four screws that attach it to vehicle.
9. Disconnect existing power cable from vehicle battery circuit. Then remove power cable from vehicle.

Reconfiguring Control Head (Model I only)

1. In Installation Manual 68P02058U20, refer to section titled "Control Head Remote Mount Installation".
2. Remove control head from radio body.

NOTE: The control head of the Model I radio has a built-in loudspeaker. An external loudspeaker can also be used with the Model I radio. However, the loudspeaker built-into the control head and an external loudspeaker cannot be used simultaneously. Step 3 below provides instructions for

disconnecting the loudspeaker built into the control head when an external loudspeaker is to be used.

3. If an external loudspeaker is to be connected, unplug connector on red loudspeaker wire inside control head from control head circuit card assembly. Cover plug with insulating tape then push wire back down into control head.
4. Reconfigure control head to remote mount configuration as shown in the document referred to in step 1.

NOTE: If the radio body is not being relocated, skip to the paragraph titled "Disconnecting Original Loudspeaker Wiring".

Reconfiguring Control Head (Models II and III only)

1. In Installation Manual 68P02058U20, refer to section titled "Control Head Remote Mount Installation".
2. Remove control head from radio body.
3. Reconfigure control head to remote mount configuration as shown in the document referred to in step 1.

NOTE: If the radio body is not being relocated, skip to the paragraph titled "Disconnecting Original External Loudspeaker Wiring".

Mounting Radio Body

1. Mount radio trunnion, removed from vehicle previously, in the new location for radio body. Use the four original attaching screws.
2. Route remote mount power cable (part of retrofit kit) from vehicle engine compartment to new location for radio body.

NOTE: The following section describes the reconfiguration of external loudspeaker Kit Numbers HSN4024() and HSN4025(). If no external loudspeaker is to be used, skip to the section titled "Mounting and Connecting Control Head".

Disconnecting Original External Loudspeaker Wiring

1. Refer to Figure 2 and on bottom side of radio unplug accessory plug from accessory connector.
2. Refer to Figure 3, squeeze tabs together, and lift off cover from accessory plug.

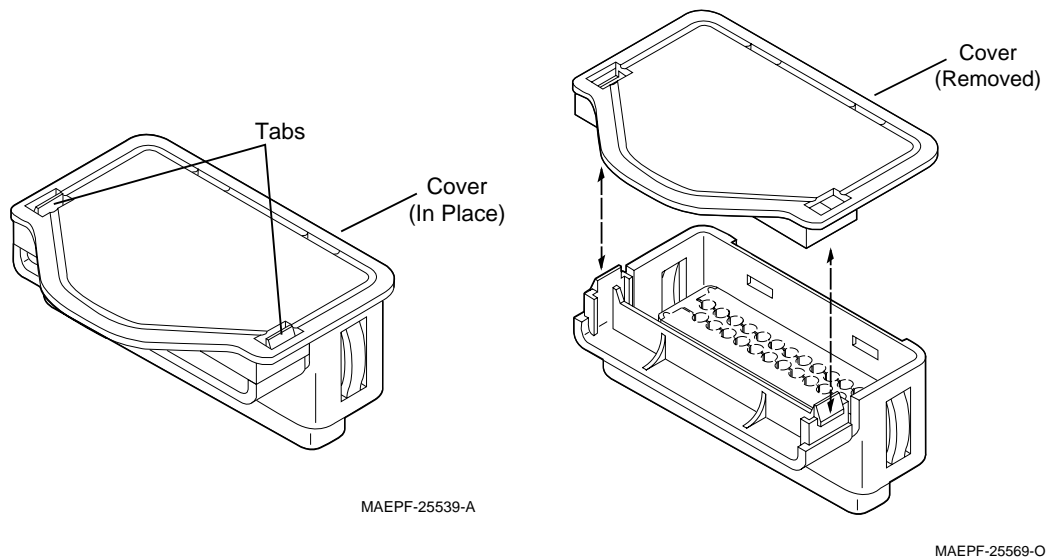


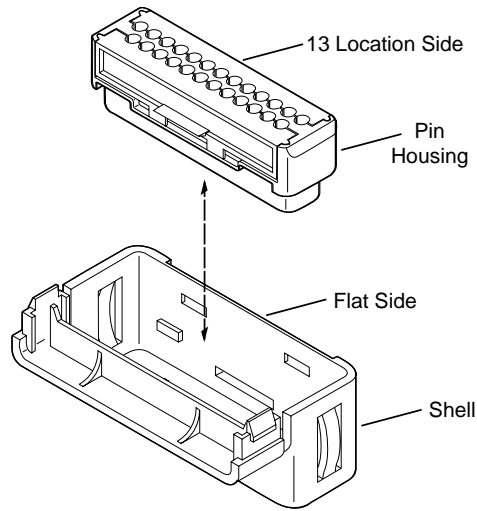
Figure 3 Removing Top Cover from Accessory Plug

3. Refer to Figure 4 and, using thumb pressure from bottom of shell, push pin housing out of shell.

NOTE: Numbers for pin locations in pin housing are visible only when pin housing is removed from shell and its wings are fully open.

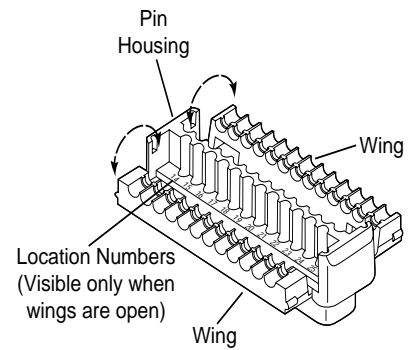
When 13-location side of pin housing is facing away from you, pin locations are numbered from 1 through 13 from left to right along 13-location side. Numbers continue from 14 through 25 from left to right along 12-location side.

4. Before performing next step, examine carefully and record all pertinent information about any wires from external accessories that are already connected to pins of accessory plug.
5. Refer to Figure 5 and hold accessory plug pin housing so that side with external speaker wires going into it faces upward. Then open both wings of pin housing.



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Figure 4 Removing Accessory Plug Pin Housing from Shell

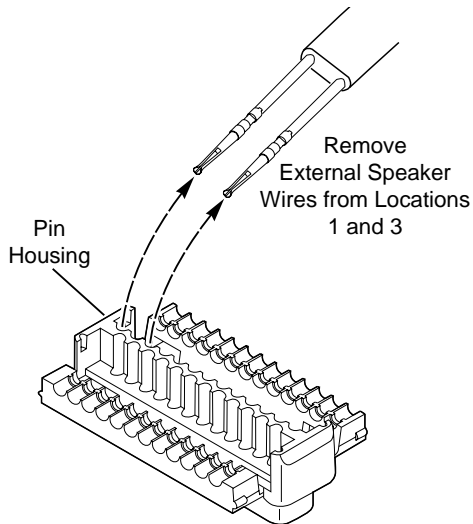


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Figure 5 Opening Wings of Accessory Plug Pin Housing

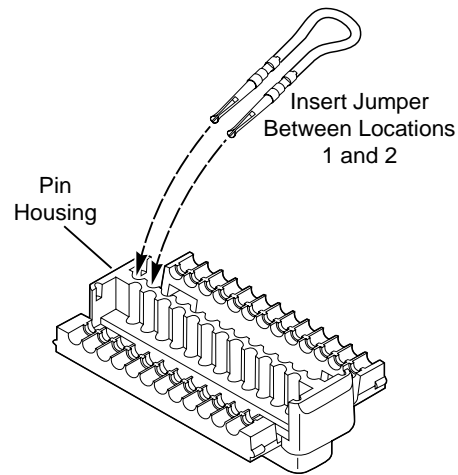
NOTE: Steps 6 and 7, which follow, re-route the external speaker audio signal to the pigtail wires near the control head end of the remote mount control head cable.

6. Refer to Figure 6 and remove the two wires of the external loudspeaker cable, with connector pins still attached, from locations 1 and 3 in pin housing.
7. Refer to Figure 7 and insert pins of a jumper wire (part of retrofit kit) into locations 1 and 2 in pin housing.



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Figure 6 Removing External Loudspeaker Wires from Connector Pin Housing



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Figure 7 Inserting Jumper into Pin Housing

8. If radio body is not being relocated, skip to step 10. Otherwise, continue with step 9.
9. Extend all accessory wires so that accessory plug will reach new location of radio body (see step 4).
10. Snap wings of accessory plug pin housing closed. Make sure that pins on jumper wire and any other pins are seated correctly in pin housing.
11. Insert pin housing back into shell in opposite way it was removed. Be certain that 13-location side of pin housing is facing flat side of shell. Also be sure that pin housing snaps securely into shell and is not cocked in shell.
12. Install top cover back onto accessory connector by snapping it over the tabs and pressing down.
13. Reroute accessory wires and accessory plug to new location of radio body.

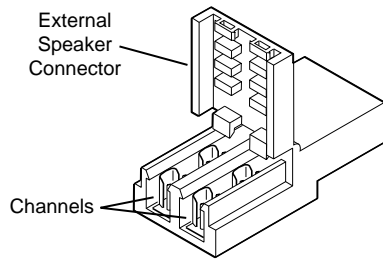
Modifying External Loudspeaker Wire

1. Clip off the accessory plug pin from each of the two conductors of the external loudspeaker wire.

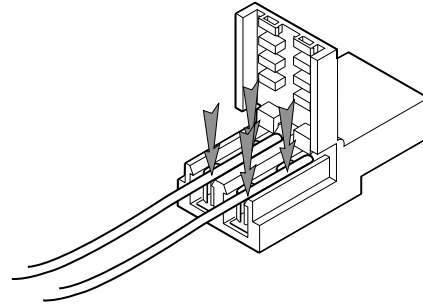
NOTE: The two external loudspeaker connectors included with the retrofit kit are identical.

2. Refer to Figure 8 and open the hinged door of one of the external loudspeaker connectors included in the retrofit kit.

NOTE: Do *not* strip insulation from conductors of external loudspeaker wire when performing next step.



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Figure 8 External Loudspeaker Connector with Door Open

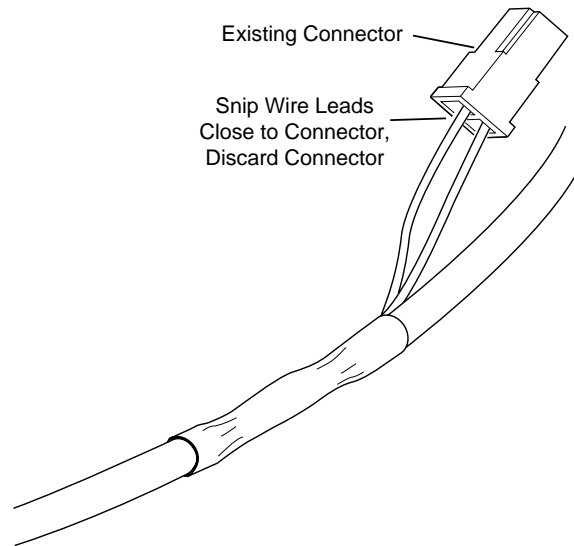
Figure 9 Pressing Unstripped Wires into Channels in External Loudspeaker Connector

3. Using a small screwdriver, press each of the two *unstripped* conductors of the external loudspeaker wire into one of the channels in the external loudspeaker connector. Then close hinged door of connector firmly and securely.

Modifying Remote Mount Control Head Cable

NOTE: In the next step, make sure to clip off pigtail wires as close to connector as possible.

1. Refer to Figure 10 and on control head end of remote mount control head cable (part of retrofit kit) clip off existing connector attached to pigtail wires that protrudes from side of cable.



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Figure 10 Removing Existing Connector from Remote Mount Control Head Cable

2. Refer to Figure 8 and open the hinged door of the remaining external loudspeaker connector included in the retrofit kit.

NOTE: Do not strip insulation from pigtail wires when performing next step.

3. Refer to Figure 9 and using a small screwdriver, press each of the two *unstripped* pigtail wires from the remote mount control head cable into one of the channels in the external loudspeaker connector. Then close hinged door of connector firmly and securely.

Mounting and Connecting Control Head

1. In Installation Manual 68P02058U20, refer to section titled "Control Head Remote Mount Installation".
2. Mount control head trunnion (part of retrofit kit) in selected location in vehicle using the two screws included with the trunnion.
3. Secure control head into control head trunnion using the two wingscrews included with the trunnion.
4. Route the remote mount control head cable from the radio body to the control head.
5. Connect remote mount control head cable to control head and to radio body.

Mounting and Connecting External Loudspeaker

1. In Installation Manual 68P02058U20, refer to section titled "Remote Mount Installation" and mount external loudspeaker in convenient location in vehicle.
2. Plug the new connector on external loudspeaker wire into new external loudspeaker connector on remote mount control head cable.

Completing Retrofit Procedure

1. At bottom of radio body, plug accessory plug into accessory connector.
2. At front of control head, plug in modular connector on microphone cord.
3. Refer to Figure 1 and at control head trunnion connect S-hook on microphone cable to trunnion.
4. If radio body has not been relocated in vehicle, skip remaining steps of this procedure. Otherwise, continue with step 5.
5. Extend and reroute antenna cable as required to reach new location of radio body.
6. At rear of the radio body, connect power cable and antenna cable.
7. In vehicle engine compartment, connect remote mount power cable to vehicle battery circuit.