

Figure 31: Radio Installation (E5 Dash Mount)

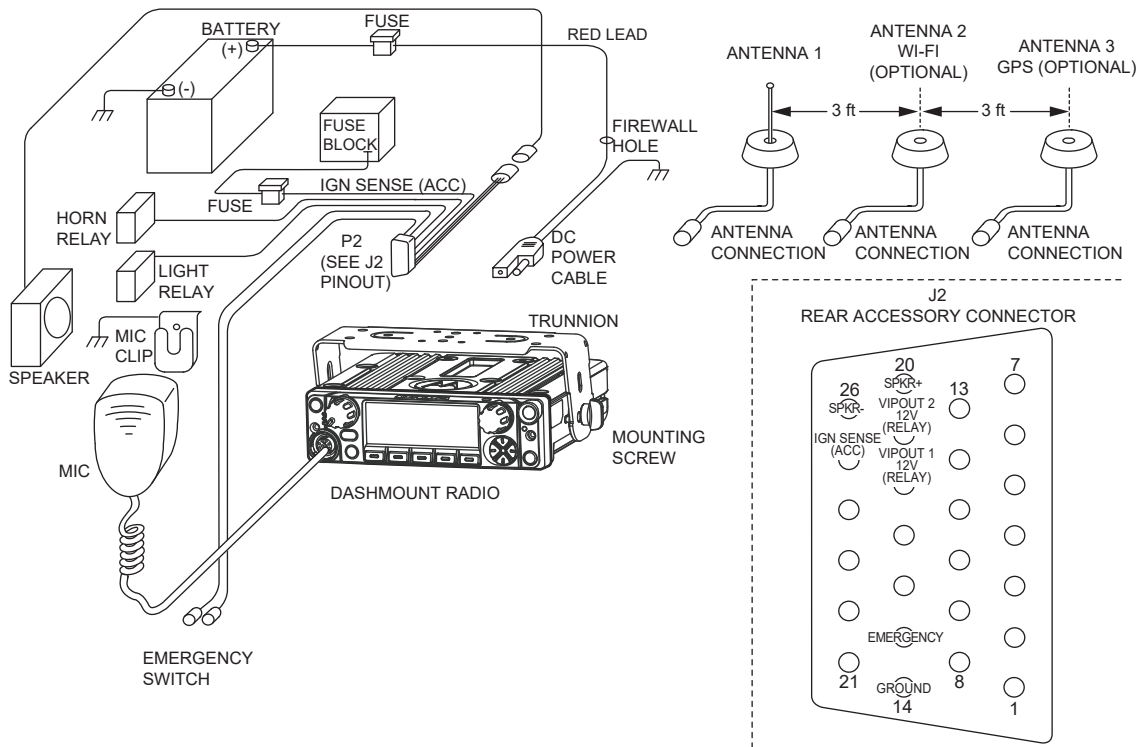
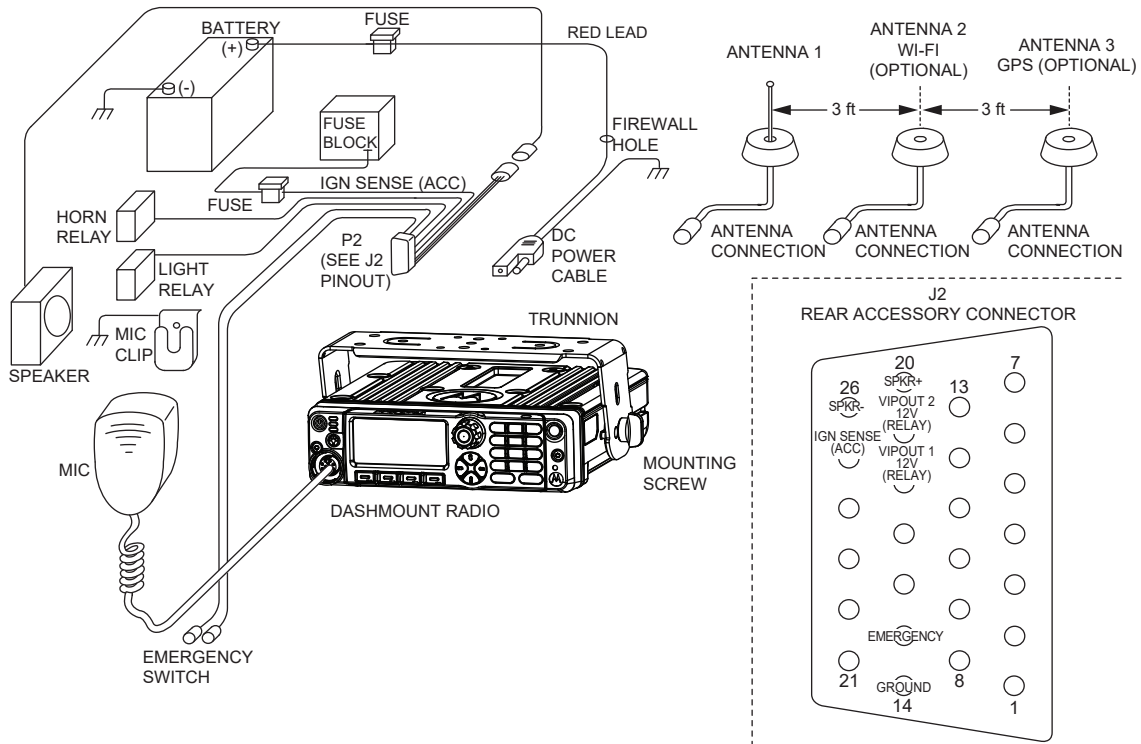


Figure 32: Radio Installation (O7 Dash Mount)





NOTICE: In dash mount configuration, it is mandatory that a rear accessory cable is attached to the back of a mid power radio, to ground the Emergency pin to ground (GND). Or, an emergency footswitch or pushbutton switch must be attached to the back of a mid power radio. If the emergency pin is not grounded, upon the attachment of the A+ cable at the DC connector, the radio detects **HIGH** for the emergency pin state, and assume that emergency has been activated. This condition is an attempt to power on the radio, and results in excessive current draw and incorrect radio operation. Refer to [Dash Mount: Power, Ignition, and Emergency Cable Installation on page 45](#) for further details and recommended wiring of Emergency in dash mount configuration.

Figure 33: Radio Installation (O2 Remote Mount)

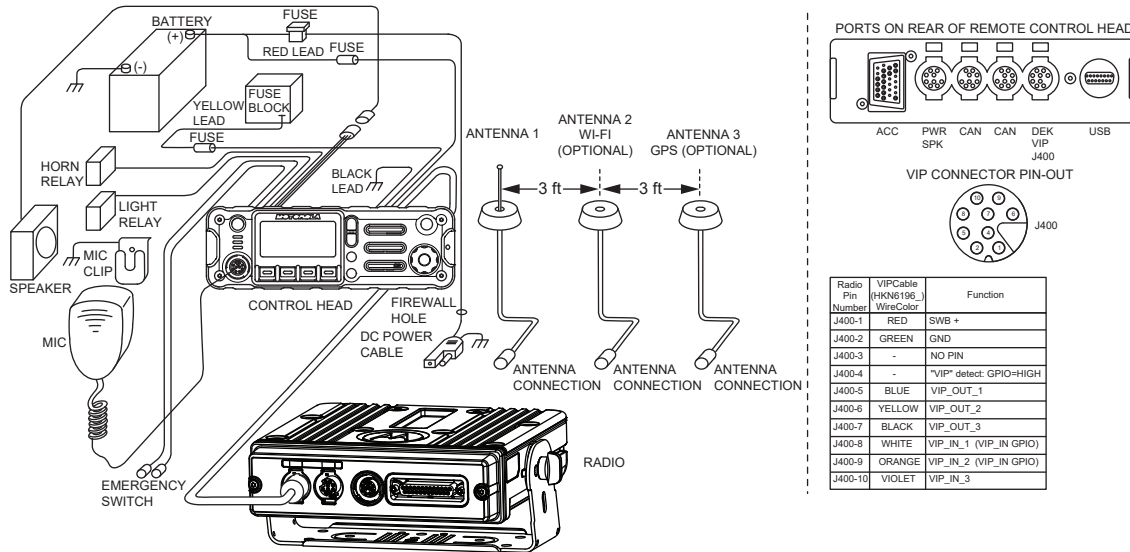


Figure 34: Radio Installation (O3 Remote Mount)

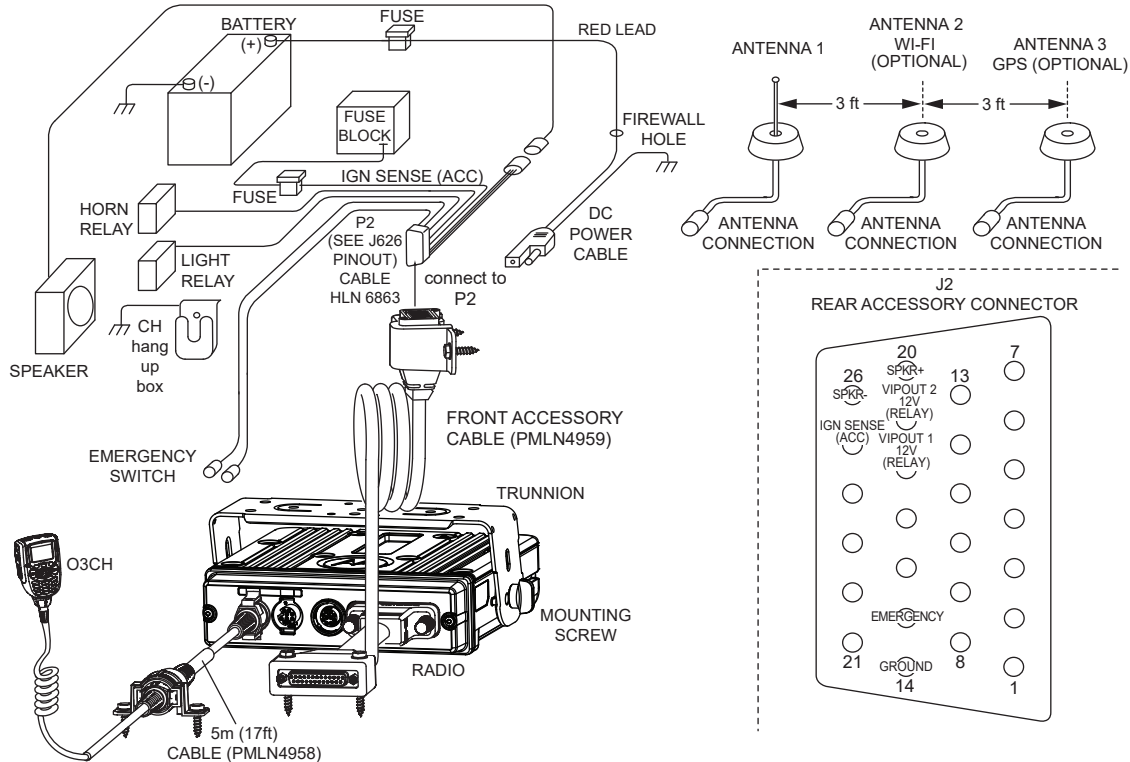


Figure 35: Radio Installation (O5 Remote Mount)

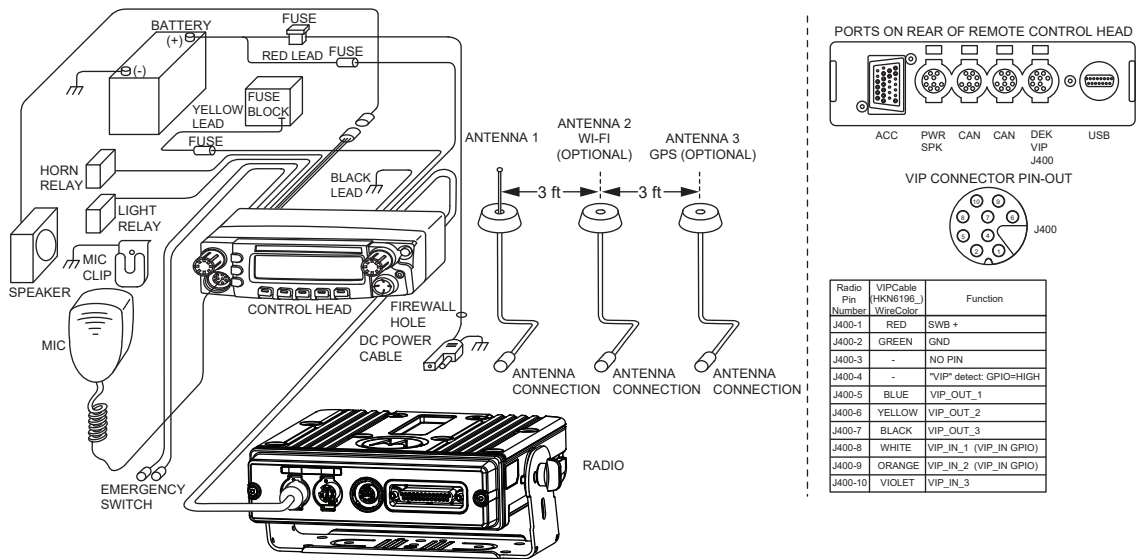


Figure 36: Radio Installation (E5 Remote Mount)

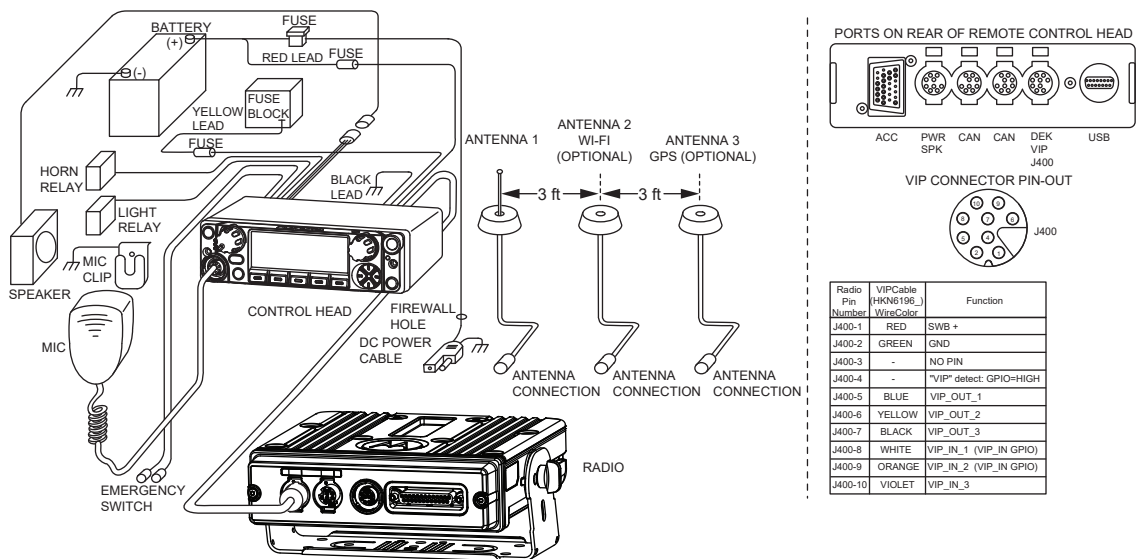


Figure 37: Radio Installation (O7 Remote Mount)

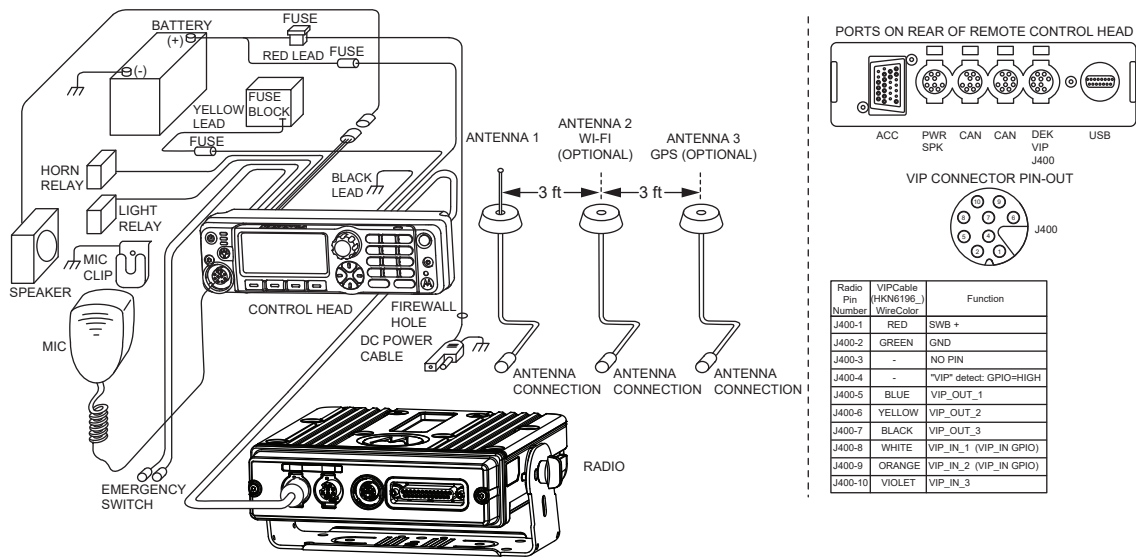


Figure 38: Radio Installation of O9 Remote Mount with Transceiver (URC is optional)

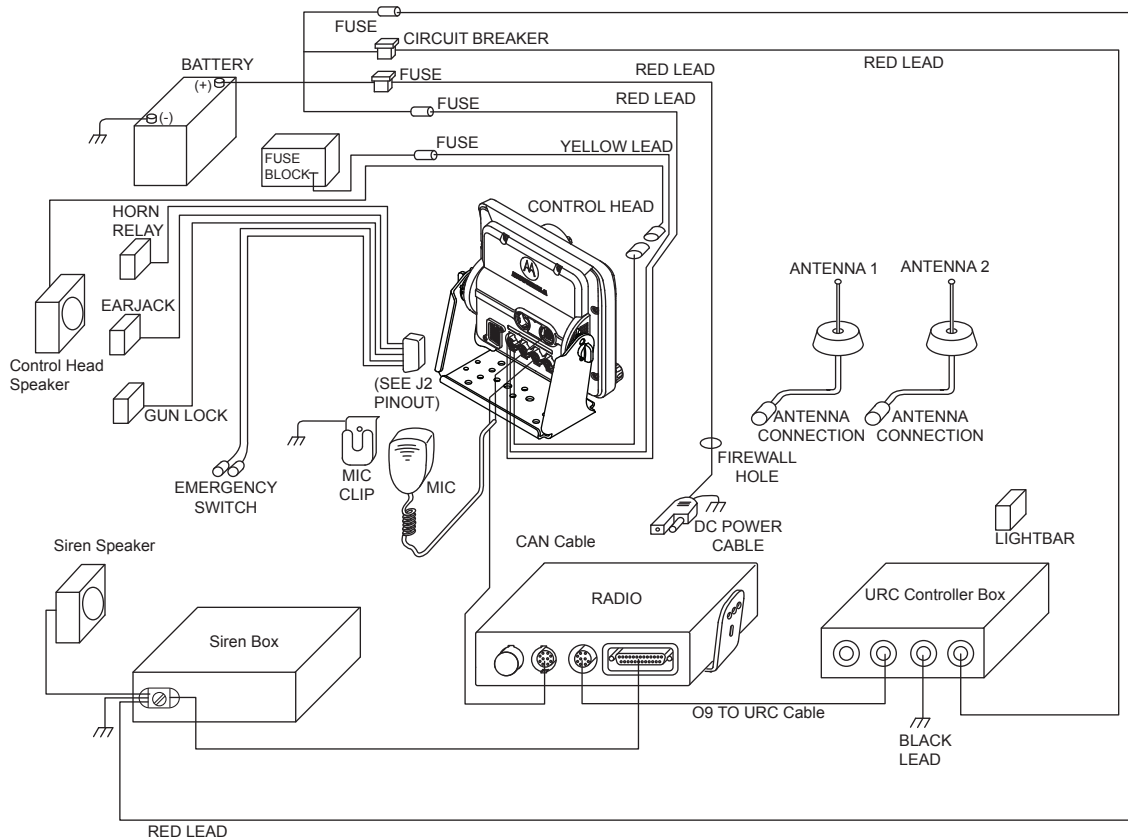
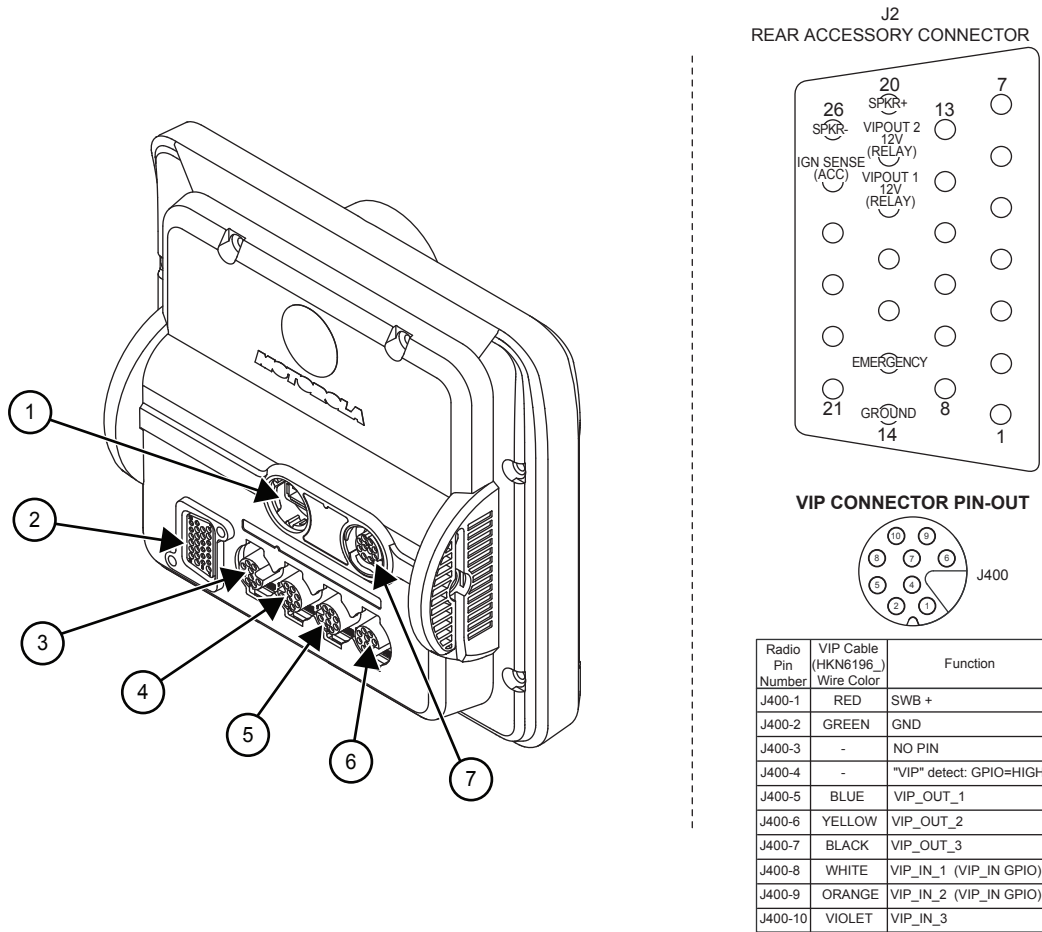
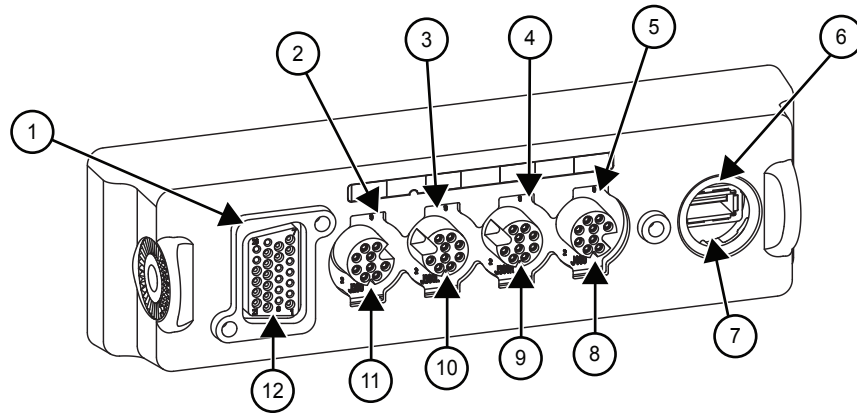


Figure 39: Radio Installation (O9 Remote Mount with Pinouts)



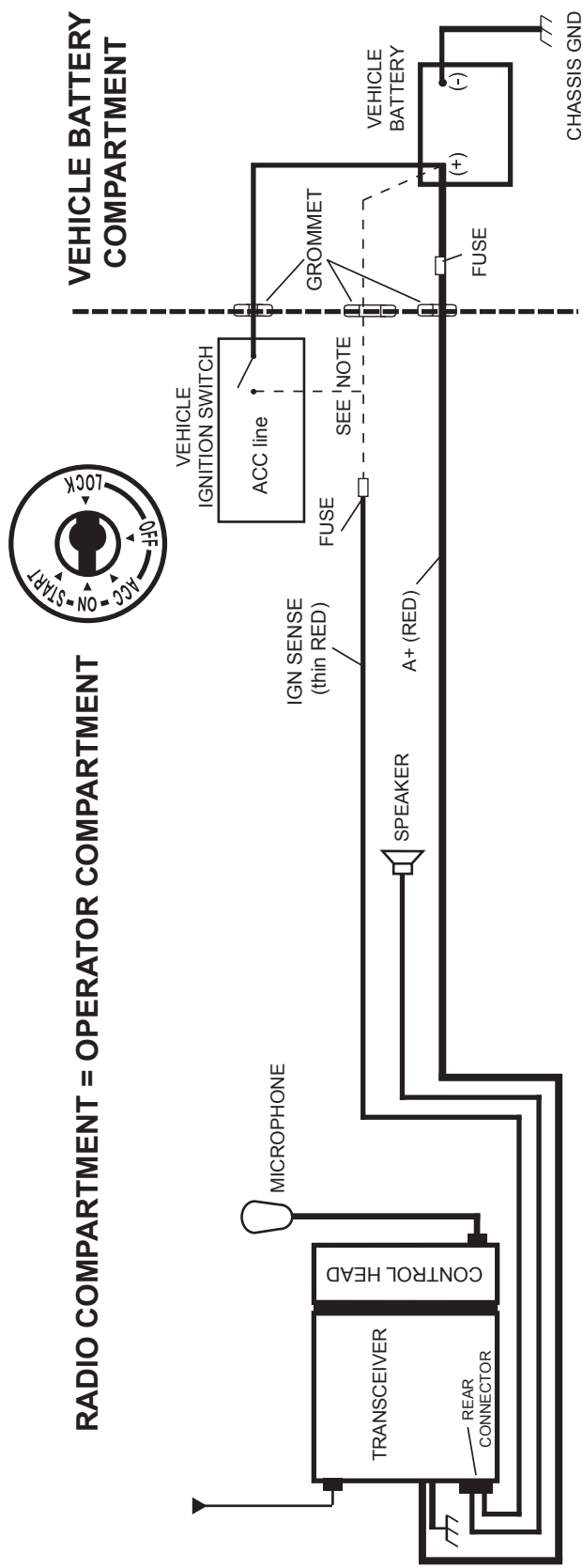
No.	Description
1	J500 USB
2	J100 M.A.P
3	J200 PWR/SPKR (RED)
4	J300L CAN (BLUE)
5	J300R CAN (BLUE)
6	J400 DEK/VIP (YELLOW)
7	GCAI

Figure 40: Remote Control Head Pinouts



No.	Description
1	J100
2	J200
3	J300L
4	J300R
5	J400
6	J500
7	USB
8	DEK VIP (YELLOW)
9	CAN (BLUE)
10	CAN (BLUE)
11	PWR SPK (RED)
12	M.A.P

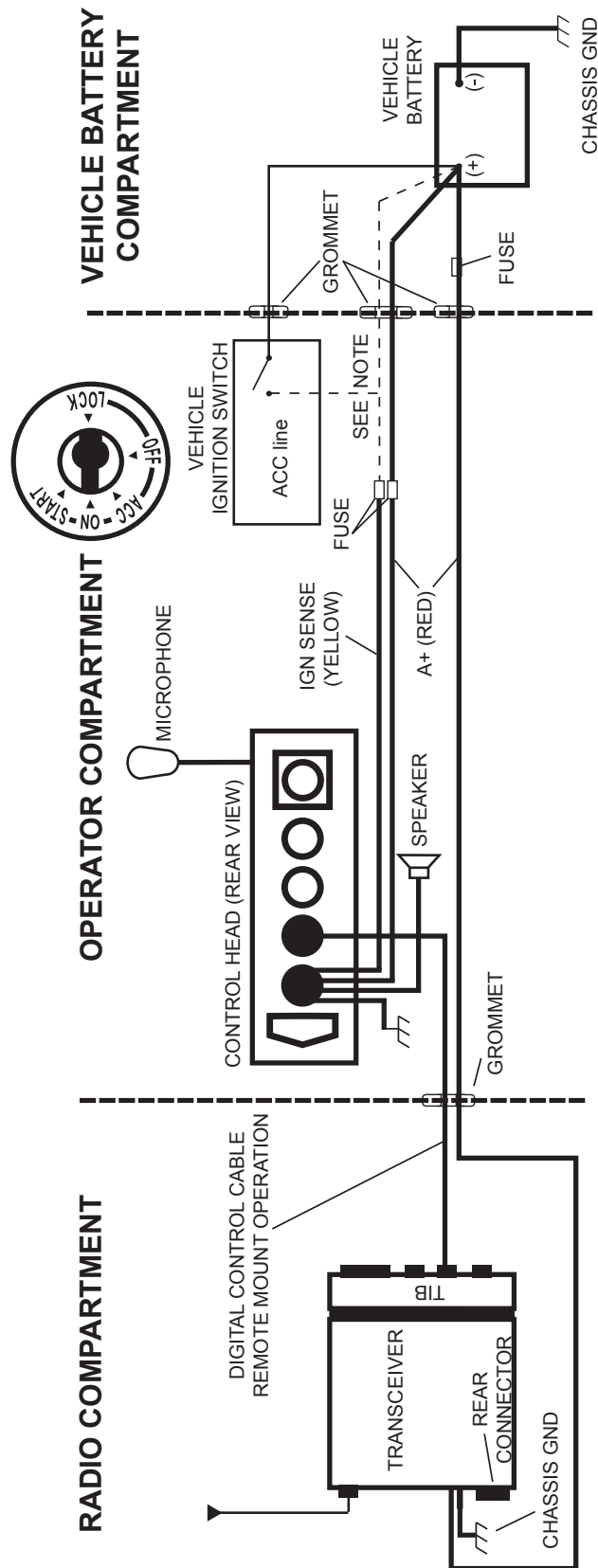
Figure 41: Cabling Interconnect Diagram for Dash Mount



NOTE:
See TABLE 2-1 for wiring of the thin RED wire. A good GROUND connection to the car chassis is required for correct radio operations.

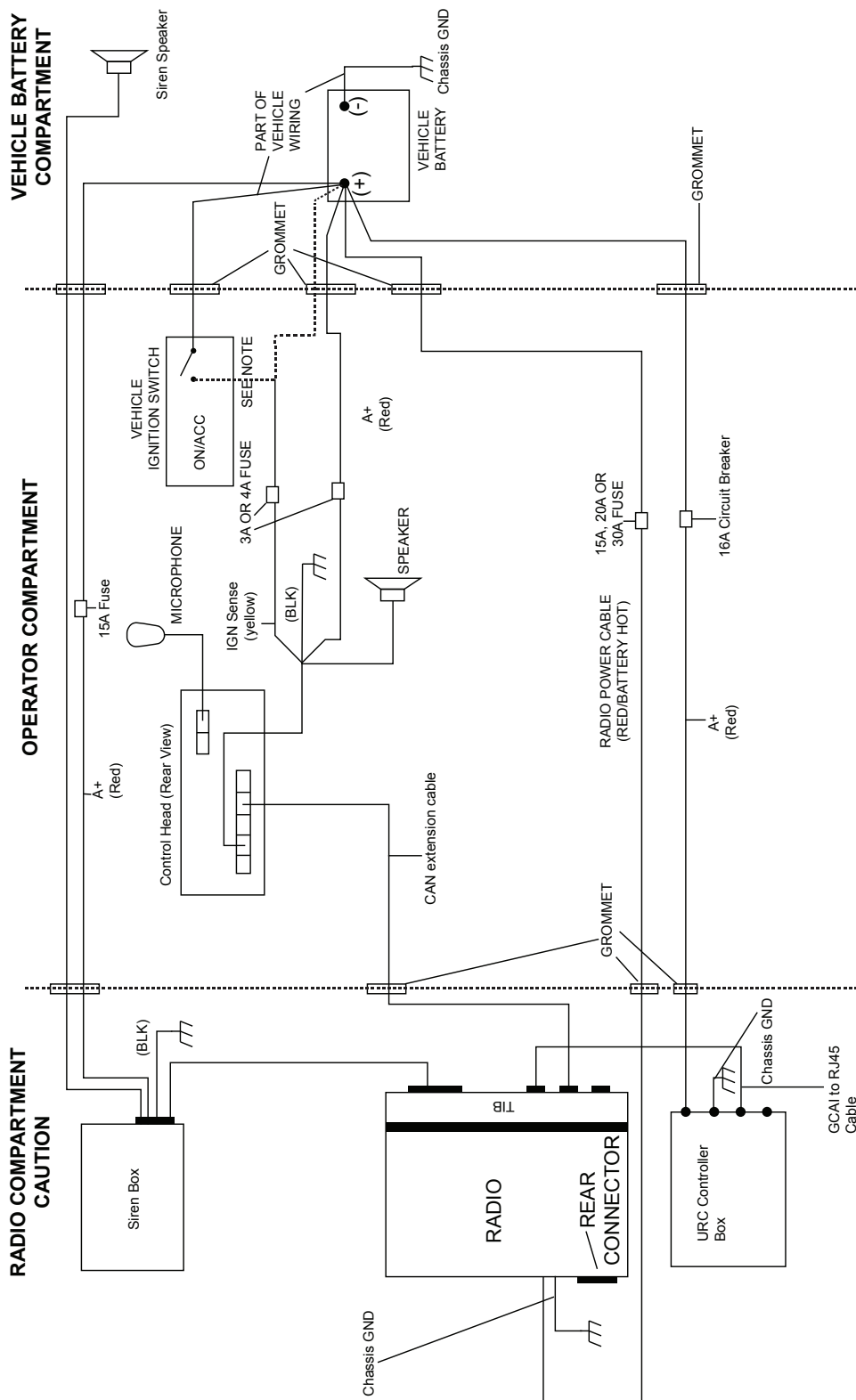
NOTE:
Ignition sense cable uses either 3-amp fuse (6580283E01) or 4-amp fuse (6580283E02)

Figure 42: Cabling Interconnect Diagram for Remote Mount



NOTE:
See TABLE 2-1 for wiring of the YELLOW wire. A good GROUND connection to the car chassis is required for correct radio operation.

Figure 43: Cabling Interconnect Diagram for O9 Remote Mount (URC is optional)



NOTE:
For remote mount configurations, do not supply IGNITION at the radio's rear accessory connector. IGNITION should be supplied according to TABLE 2-2. See TABLE 2-2 for combinations of wiring the RED and YELLOW cables.
The RED and YELLOW power cables connect to either the vehicle battery or the ignition switch. Connect the RED cable directly to the battery. The receiver operates when the control head is on. Connect the YELLOW cable to the ignition switch. The transmitter operates only when the ignition switch is on.
Alternate connections: Connecting both RED and YELLOW cables to the battery allows the control head to turn the receiver and transmitter on or off. Connecting both RED and YELLOW cables to the ignition switch allows the ignition switch to turn the receiver and transmitter on or off. Alternator whine and other noise problems may occur. Isolate the RED cable with a Motorola relay (5900813674).

2.1.3

Radio Operation Wiring for Dash and Remote Configurations

Determine the radio functionality you wish to achieve from the tables in [Remote Mount: Power, Ignition, and Emergency Cable Installation on page 45](#), which is the vehicle ignition switch state is controlling, the physical wiring of the radio ignition sense (ACC) wire, and by the programmed CPS setting. For more radio functionality as determined by the programming of the ignition switch in the CPS, refer to the **Help** menu in your CPS (Ignition as: Required, Blank, Soft Power Off, TX Inhibit, PTT TX Inhibit, Ignition Only Power Up).

Choose a clean ignition point which is not shared in the immediate vicinity by other high current accessories/devices. This choice helps to reduce the transients on the ignition line. Examples of high-current accessories/devices are air horn, relays, and lightbars. It is safe to wire to the vehicle ACC line, not the START, or the solenoid side of the ignition circuit. Refer to [Finishing the Installation on page 125](#) for best installation practices. The Ignition sense (ACC) cable uses either a 3 A fuse (6580283E01) or 4 A fuse (6580283E02).

2.1.3.1

Dash Mount: Power, Ignition, and Emergency Cable Installation

The standard dash mount rear ignition sense cable HLN6863 contains a “thin red” ignition wire, a jumper wire that shorts emergency to ground, and two gray wires attached to an external speaker plug. The thin RED wire is the ignition sense wire. Refer to the tables from [Remote Mount: Power, Ignition, and Emergency Cable Installation on page 45](#) for its correct wiring configurations.



NOTICE: This cable must be attached for the radio to operate in dash mount configuration regardless of how emergency is programmed in the CPS or wired inside the vehicle. Either the emergency jumper wire or an emergency accessory (footswitch or button) must be wired to the rear of the radio in dash mount configuration. Otherwise, upon attachment of the radio power cable to the vehicle battery, the radio incorrectly determines that emergency operation has been activated, such as when an emergency footswitch is de-pressed and the emergency pin is ungrounded.

2.1.3.2

Remote Mount: Power, Ignition, and Emergency Cable Installation

The single control head O2, O3, O5, E5, O7, and O9 remote mount configurations receive power from the J200 red and black wires connector. The yellow wire at J200 is an ignition sense wire.

On mid power radios, the J2 and J600 connectors can also be used for ignition sense. On high-power radios, the J200 yellow wire or the J600 connector can be used for ignition sense.

If HLN6863 is attached at J100 of the O2, O3, O5, E5, O7, or O9 control head, the “thin red” wire do not function as an ignition sense wire, since the J100 connector has no ignition sense electrical connection.



NOTICE: It is incorrect to attach the ignition sense wire to more than one wire or connector. Refer to the following tables for its correct wiring configurations.

The O3 control head receives its power down the CAN cable, and detects the ignition state by the ignition sense pin at either J2 or J600. On mid power radios, the J2 and J600 connectors can also be used for ignition sense. On high-power radios, only the J600 connector can be used for ignition sense.

In Multi-Control Head installations, the yellow ignition wire must be connected to the head assigned ID #1. See [Setting the Initial Control Head ID on page 56](#) for further information.

In remote mount O2, O3, O5, E5, O7, or O9, an Emergency jumper to ground is placed by default on the TIB (JU344) so that there is no need to attach a cable with an emergency accessory to either J2 or J600. This jumper must be removed if an emergency accessory (footswitch or button to Ground) is installed at either J2 or J600 (or J626 on the accessory cable). If the jumper JU344 is removed but no