Remote Microphone and Switches Installation (optional)

It is recommended that the microphone is located away from any wind noise in a position suitable for the operator(s), e.g., near internal rear view mirror. The switch unit should also be located centrally for the operator(s) to access. A self-adhesive lead and loop patch is provided for mounting the remote PTT on a flat surface, e.g., dashboard.

Only one handheld microphone can be used in one call, which can be connected to either of two audio accessory interfaces.

Termination to console connector

The remote microphone is supplied terminated for ease of installation. To terminate to the console as shown below after the switch unit and microphone are positioned.

Cable entry - Standard Console

Dress the cables via the small guide channel at the bottom of the console. Fit the split bung and the cable to the guide around the cables. Press the bung firmly in the channel. Tighten the cable behind the bung to secure the cables and allow slack at the 15-way plug termination.

Note: when used in conjunction with a handset or fist microphone accessory the hands-free kit must be plugged into the Audio Accessory Interface 1 connector (15-way) to allow all cables to be routed correctly (see rear page illustration).

Cable entry - Handset Based Console

Dress the cables via the small guide channels at the bottom end of the console box (the microphone housing is a slight gap). The cables are clipped when the lid is secured.

Fist Microphone/Handset (optional)

The fist microphone and/or Handsfree kit is supplied to suit the operator(s) to access using the screw provided. Ensure that the cables are placed in the rear of the console box so that the grommets seal correctly.

Multiple Fist Microphones and/or Handsets may be connected in an installation, which may be connected to either audio accessory interface.

Loudspeaker

The loudspeaker should be positioned so that it faces the operator, but is out of the line of sight of the Remote Microphone.

Programmable I/O

The transceiver supports 4 programmable digital I/O lines: 3 inputs and 1 output. The following functions may be selected as inputs or are connected to inputs: External Alarm Input

External Input Triggered Status Messages

The following functions may be connected to the input line:

• External Input

• Status Message Triggered External Outputs

For details of how to programme the functions refer to the Sepura Programmer. For details of the signals and their characteristics, see table below.

<table>
<thead>
<tr>
<th>Wire Colour</th>
<th>Description</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange</td>
<td>Programmable Input 1</td>
<td>$V_{in} = 0$ to $5$ V</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$I_{out} &lt; 0.5$ mA</td>
</tr>
<tr>
<td>Green</td>
<td>Programmable Input 2</td>
<td>$V_{in} = 0$ to $5$ V</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$I_{out} &lt; 0.5$ mA</td>
</tr>
<tr>
<td>Red</td>
<td>Programmable Input 3</td>
<td>$V_{in} = 0$ to $5$ V</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$I_{out} &lt; 0.5$ mA</td>
</tr>
<tr>
<td>Black</td>
<td>Programmable Input 4</td>
<td>$V_{in} = 0$ to $5$ V</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$I_{out} &lt; 0.5$ mA</td>
</tr>
</tbody>
</table>

The cable entry for the Handset Based Console is the same as that for the Standard Console. However, to install a Handset Based Console kit, the microphone must be connected at the interface to connect the Handset to either the Standard Console or Handset Based Console. Each Handset Based Console can be connected to a Handset or Fist mic.

External Input Triggered Status Messages

To control devices from the programmable output which require more than 0.5 A, use a suitable automotive relay to ensure correct operation. Connect the relay coil between the output wire and the vehicle positive supply. The device must be protected by an appropriate fuse in the positive supply. Check with the local regulatory authority where the output is used to drive external apparatus such as home or office.

WARNING

Do NOT touch the antenna when the radio is turned on.
Mounting the Standard Console on the Dash

The standard console is mounted into the desired position utilising the Console Pivot. This consists of two main parts:

1. The transceiver is designed for nominal 12 V negative earth systems. This consists of two main parts:
   - The transceiver end of the power connector resting in its intended final position. Route the wire to the vehicle bodywork drawing the cable through the bulkhead if required (include the blue wire where ignition switching is not required).
   - The position power must include a fuse as close as possible to the power source. The negative power lead must be connected close to the battery or vehicle connection (not directly to the battery) and must not include a fuse.
   - If recommended that the power cables are kept as short as possible.
   - The blue wire provides an ignition sensing input. Ignition switching is required, the wire length is short so that it can be wired via a fuse, to the ignition switch using the splicing connector provided. Otherwise this must be connected via a fuse, to the permanent positive supply.
   - The fuse must always be fixed close to where the wire is connected.
   - Check the installation and all fuses

Installation Guidelines and Recommendations

- Relevant terrestrial operation will be achieved if the transceiver is mounted such that the finned heatsink receives a free flow of air, i.e., if it is mounted in the normal vertical orientation, i.e., in-line with the vents. The heatsink may become hot after long periods of transmission; therefore, make sure that the transceiver is not mounted in a position where a hot surface. Ensure sufficient air is provided above the installation to allow flow and removal of transceiver (see diagrams below).

- Orientation Considerations

1. With the transceiver the power connector resting in its intended final position. Route the wire to the vehicle bodywork drawing the cable through the bulkhead if required (include the blue wire where ignition switching is not required).
2. The position power must include a fuse as close as possible to the power source. The negative power lead must be connected close to the battery or vehicle connection (not directly to the battery) and must not include a fuse.
3. It is recommended that the power cables are kept as short as possible.
4. The blue wire provides an ignition sensing input. Ignition switching is required, the wire length is short so that it can be wired via a fuse, to the ignition switch using the splicing connector provided. Otherwise this must be connected via a fuse, to the permanent positive supply.
5. The fuse must always be fixed close to where the wire is connected.
6. Check the installation and all fuses

Location Considerations

- The transceiver must be fitted into the interior of the vehicle (excluding the engine compartment) and protected from the external environment and vehicle cooling operations. When fitted, no part of the transceiver may be allowed to obstruct the operation of the vehicle or impede the safety of any occupant.
- Locate the transceiver away from cables carrying very high currents, e.g., the starter solenoid, to avoid any effect on public broadcast radio security code, alarm systems and some telecommunications equipment. For best all round performance, the antenna should be fitted on the centre pin, 5 V supply. The coaxial feeder should be secured along its length to eliminate the possibility of damage during panel change.
- Location Considerations

- Fixing Points

For best all round performance of the product, the antenna must have been mounted on the centre pin, 5 V supply. The coaxial feeder should be secured along its length to eliminate the possibility of damage during panel change.

Antenna Installation

- For best all round performance of the product, the antenna must have been mounted on the centre pin, 5 V supply. The coaxial feeder should be secured along its length to eliminate the possibility of damage during panel change.

2. Ensure that there are no petrol leaks before commencing an installation involving the use of fuel systems. This consists of two main parts:
   - The transceiver end of the power connector resting in its intended final position. Route the wire to the vehicle bodywork drawing the cable through the bulkhead if required (include the blue wire where ignition switching is not required).
   - The position power must include a fuse as close as possible to the power source. The negative power lead must be connected close to the battery or vehicle connection (not directly to the battery) and must not include a fuse.
   - If recommended that the power cables are kept as short as possible.
   - The blue wire provides an ignition sensing input. Ignition switching is required, the wire length is short so that it can be wired via a fuse, to the ignition switch using the splicing connector provided. Otherwise this must be connected via a fuse, to the permanent positive supply.
   - The fuse must always be fixed close to where the wire is connected.
   - Check the installation and all fuses

Installation Precautions

- Prior to commencing an installation on such a vehicle, make sure that no relevant packaging or repair information is available.
- Operators must ensure that the equipment is installed in accordance with the instructions provided with the product.
- Ensure that there are no petrol leaks before commencing an installation involving the use of fuel systems. This consists of two main parts:
   - The transceiver end of the power connector resting in its intended final position. Route the wire to the vehicle bodywork drawing the cable through the bulkhead if required (include the blue wire where ignition switching is not required).
   - The position power must include a fuse as close as possible to the power source. The negative power lead must be connected close to the battery or vehicle connection (not directly to the battery) and must not include a fuse.
   - If recommended that the power cables are kept as short as possible.
   - The blue wire provides an ignition sensing input. Ignition switching is required, the wire length is short so that it can be wired via a fuse, to the ignition switch using the splicing connector provided. Otherwise this must be connected via a fuse, to the permanent positive supply.
   - The fuse must always be fixed close to where the wire is connected.
   - Check the installation and all fuses

Installation Instructions

- The desktop console is supplied with a magnetic mounting bracket and interface box. The mounting bracket can be mounted separately or over the box using the screws provided.
- All fixing bolt(s) should be fitted to the side of each of the screws that secure the DIN box, so that the the fixture is subsequently removed, the two lip-plates are provided from 51mm, the securing screws.
- Mounting the Desktop console to the Dash

Either the rear panel kit or the pivot mount kit may be fitted with the DIN fascia. The rear panel kit is provided. To prevent interference with any other electronic systems in the vehicle, the mirror or any other system which may add lead or impair the safety of any occupant is damaged.


cables

Both the remote console and keypad extension cables are colour coded blue at the transceiver end of the remote console and orange at the transceiver end.

- The handset based console is supplied with a magnetic mounting bracket and interface box. The mounting bracket can be mounted separately or over the box using the screws provided.
- All fixing bolt(s) should be fitted to the side of each of the screws that secure the DIN box, so that the the fixture is subsequently removed, the two lip-plates are provided from 51mm, the securing screws.
- Mounting the Desktop console to the Dash

Either the rear panel kit or the pivot mount kit may be fitted with the DIN fascia. The rear panel kit is provided. To prevent interference with any other electronic systems in the vehicle, the mirror or any other system which may add lead or impair the safety of any occupant is damaged.