Series 63 Wired Motorcycle Cable Kit

Installation and User Guide

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1.0 GENERAL

- Before installing your cable kit, read these instructions carefully.
- Each cable kit includes the following components (see Figure 1a):
  - Control box (part number 25-2700);
  - Multi-connect cable assembly (part number 25-3002);
  - Radio Cable specific to your type of Mobile Radio
  - Push-to-talk cable assembly including toggle switch, mounting bracket and cable (part number varies by motorcycle type (see Figure 2);
  - Break-away cable assembly (part number 25-0732);
- Please confirm that you have received all listed components before starting the installation.
- An optional helmet extension cable (part number 25-0733, see Figure 1b for usage) may be used in place of a Series 63 SuperMic and is sold separately. This is also used in headset-only systems with no SuperMic.

2.0 INSTALLATION

2.1 Component placement and cable routing

- Find a mounting location for the control box (25-2700) and plan a cable routing path through the motorcycle. Setcom **strongly** recommends that the control box be mounted in the motorcycle's radio box where it is protected from the elements. The control box's enclosure is **not** weatherproof.
- **Note:** *Avoid routing paths that expose the cables to excessive heat.*

2.2 Control box (25-2700) installation

- Disconnect the break-away DC power cable from the control box and leave disconnected until later instructed.
- Connect break-away power cable to the motorcycle's wiring system:
  - Red: +12v – This lead is supplied with a 1 A automotive type fuse, **do not** use a larger fuse.

    Black: Ground – You may need to try various ground connections to find the most noise-free one, particularly if the motorcycle is equipped with the Harley-Davidson "Tail Light Y-Cable Adaptor". Connecting to a point on the frame near the battery usually works well. Note that you may need to scrape the area free of paint to make a good connection.

  - **Note:** *Setcom recommends using the accessory or ignition lead so the system powers down with the motorcycle. Another option is to add a power switch to the +12V lead, mounted wherever is convenient, if the power lead is connected directly to the Battery + terminal or a fused 12V bus point.*
- Mount the control box (25-2700) with Velcro strips, so that it is easily accessible in the motorcycle's radio box.

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2.3 Multi-connect molded cable (25-3002) installation

- Plug the 25-pin connector of the 25-3002 cable assembly into the control box (25-2700).
- Mount the push-to-talk (PTT) cable assembly on the motorcycle's handlebars using the supplied bracket and mounting hardware. See Figure 2.
- Run the PTT cable (10 feet in length) from the front of the motorcycle to the radio box, where it will mate with the multi-connect cable (25-3002).
  - **Note:** *Avoid routing paths that expose the cable to excessive heat.*
  - Connect the 3-pin mini-XLR at the end of the PTT cable assembly to the mating connector of the 25-3002 cable.
- Plug the round twist-lock 6-pin connector of the 25-3002 cable assembly into the mobile radio cable supplied with the kit, make connections to the radio with the other end of the radio cable.
- On the 25-3002 cable assembly, there is one 5 foot cable length terminated with a 4-pin mini-XLR jack. Run this cable from the radio box to a convenient location at the motorcycle's mid-point, typically underneath the seat. Plug the break-away cable (25-0732) into the 4-pin mini-XLR jack.
  - **Note:** *Avoid routing paths that expose the cable to excessive heat.*
- SuperMic (SMA-63_) configuration:
  - The loose end (Nexus plug) of the 25-0732 break-away cable is the connection point for the SuperMic and should exit between the seat and the gas tank.
  - **Note:** ***Do <u>not</u> plug the Helmet Kit directly into the 25-0732 break-away cable.***
  - **Note:** *The helmet extension cable (25-0733) is not used in this configuration.*
- Helmet Extension Cable (25-0733) configuration:
  - Connect the Helmet Extension Cable (25-0733) to the 25-0732 break-away cable.
  - **Note:** ***Do <u>not</u> plug the Helmet Kit directly into the 25-0732 break-away cable. The 25-0733 must be used in this configuration.***
- Public Address (PA) connections (*optional*):
  - Red: Microphone audio into the PA system
  - White: Push-to-talk (PTT)
  - Black & Shield: Tie together and connect to PA Ground
  - **Note:** *The PA volume level is usually adjusted on the PA unit. Additional level adjustment can be made in the control box (25-2700). Remove the plug nearest the DC power cables to expose the level adjustment trim pot. Re-install the plug when finished.* ***For Code 3 PA units, there is an internal DIP Switch setting that may need to be made – open the 25-2700 unit by removing the 4 screws on the bottom side and lifting off the top cover, locate the 8-position DIP Switch, and set switch position 1 to ON, then replace the top cover and screws.***

2.4 Finishing the installation

- Secure loose cables and leave a proper length of the break-away cable exposed near the seat for the SuperMic or helmet extension cable.
- Connect the break-away DC power connection from the motorcycle to the control box (25-2700).
- Secure and weatherproof all mini-XLR connections by wrapping them with electrical tape.
- **<u>Test system functionality prior to re-assembling the motorcycle! This can save a lot of time spent troubleshooting!</u>**

3.0 OPERATION & USE

3.1 Portable Mode – SuperMic not connected to the bike

- The SuperMic functions as a standard shoulder microphone when connected to the portable radio.
- Audio automatically switches to the helmet kit when it is plugged into the SuperMic; the SuperMic's speaker and microphone are then muted.

3.2 Mobile Mode – SuperMic connected to the break-away cable (25-0732)

- Mobile radio audio now passes to the SuperMic and on to the helmet kit (if one is plugged in).
  - Audio and power for the SuperMic are automatically switched from the portable radio to the mobile radio and motorcycle power.
  - The portable radio can remain on or be switched off.
- The SuperMic push-to-talk button is not functional in this mode. Push-to-talk function for the mobile radio and public address system is controlled by the handlebar switch.
- When a helmet kit plugs into the SuperMic helmet connection, audio switches to the helmet kit automatically; the SuperMic's speaker and microphone are muted.
- When the SuperMic is plugged into the motorcycle cable kit, audio from the SuperMic (if no helmet kit is plugged in) or from the helmet kit (if one is plugged in) will be routed to the mobile radio when the push-to-talk toggle is pushed and held to the left. Audio from the SuperMic or helmet kit will be routed to the public address system when the toggle is pushed and held to the right.

3.3 Mobile Mode – Helmet extension cable (25-0733) plugged into the break-away cable (25-0732)

- Mobile radio audio is passed to the helmet kit through the helmet extension cable.
- Audio from the helmet kit (when one is plugged into the extension cable, 25-0733) will be routed to the mobile radio when the push-to-talk toggle is pushed and held to the left. Audio will be routed to the public address system when the toggle is pushed and held to the right.

4.0 SUPPORT

For technical support, please contact Setcom by phone or email. Please have your sales or purchase order number when contacting support.

650.965.8020 x603 or tech@setcomcorp.com

5.0 WARRANTY

Setcom's Standard Limited Warranty covers this product. For more information on Setcom's warranty, see:

http://www.setcomcorp.com/warranty.html

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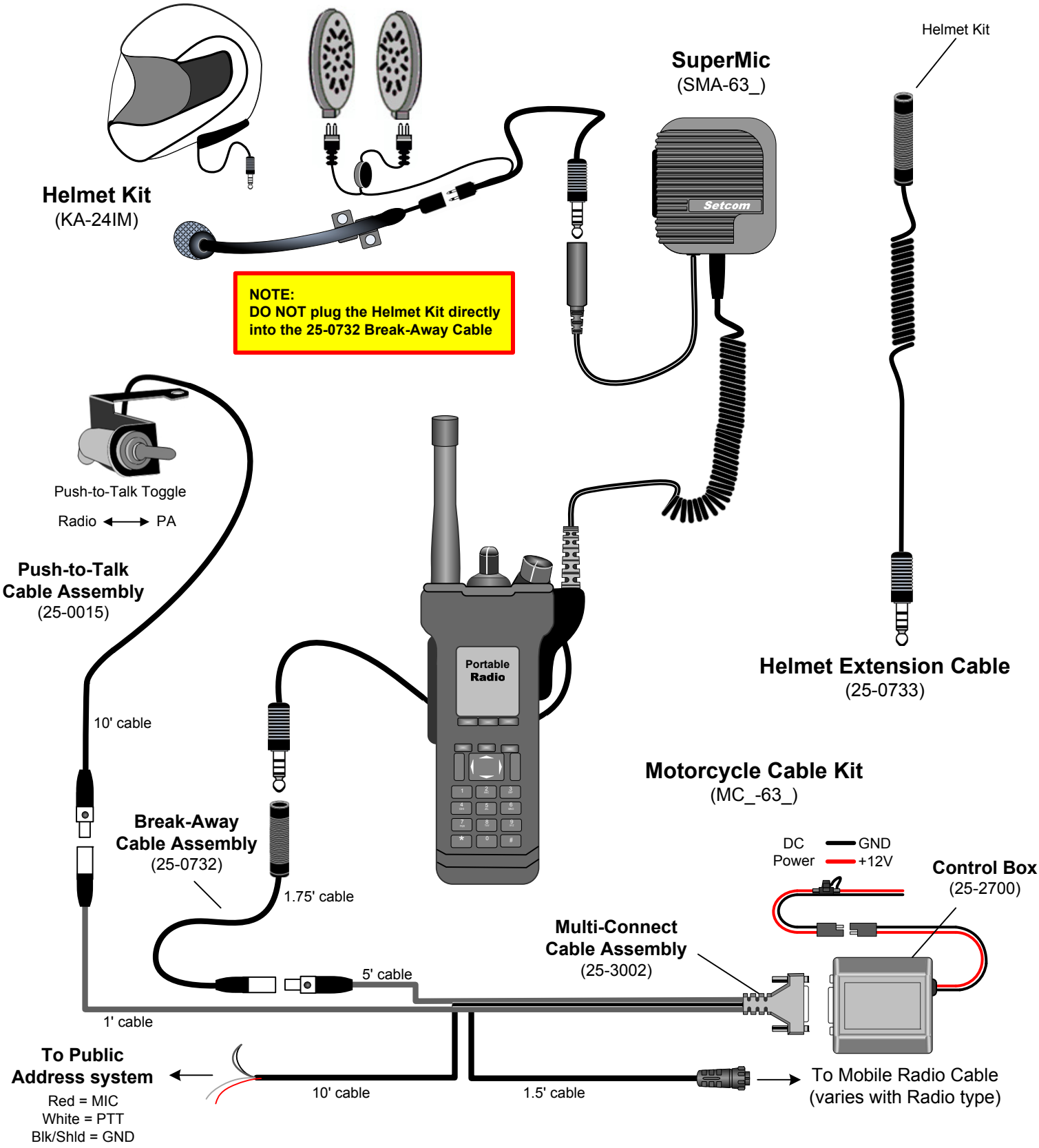
Figure 1a: Series 63 Motorcycle ComKit - Illustrative Diagram



Setcom

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Figure 1b: Series 63 Motorcycle ComKit - Illustrative Diagram

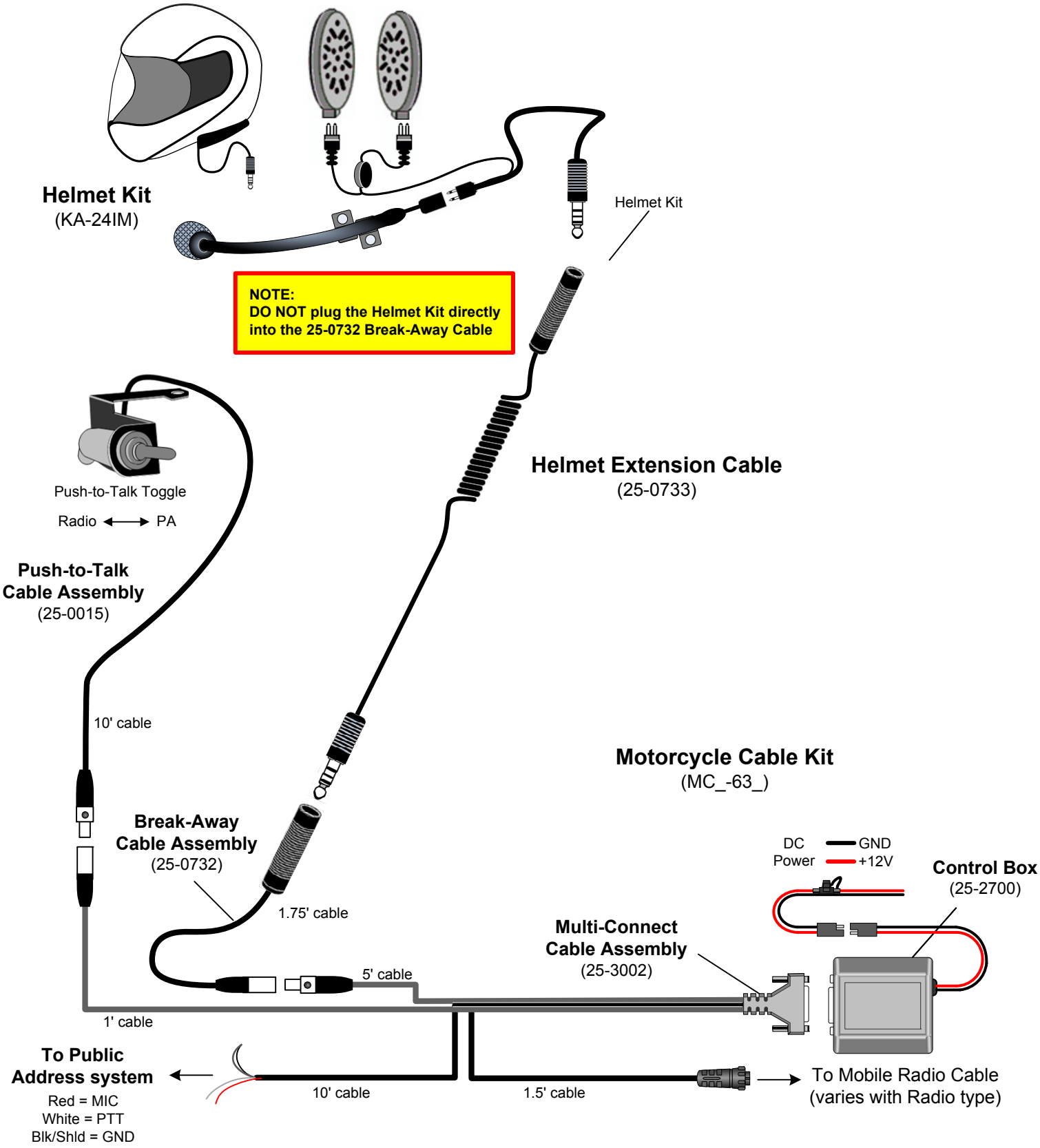
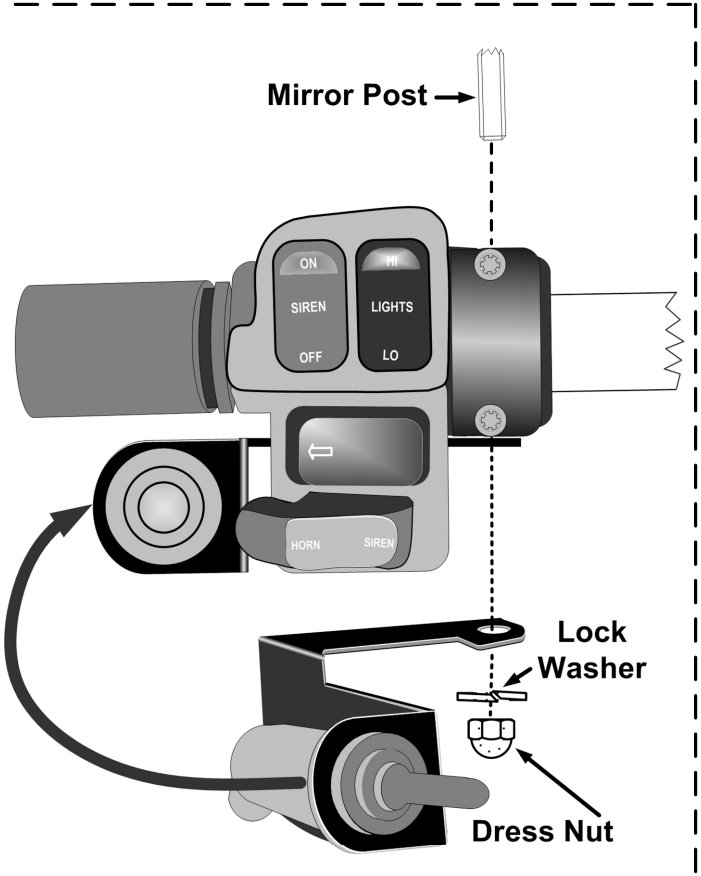


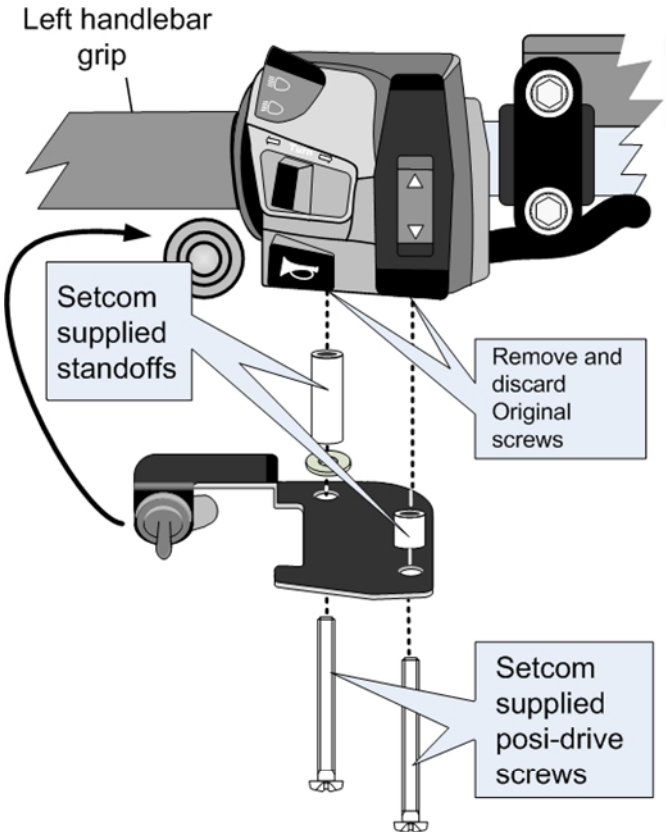
Figure 2: Push-to-Talk Cable Assemblies/ Bracket Installation

The 25-0015 Push-To-Talk Cable Assembly is used in all configurations shown here



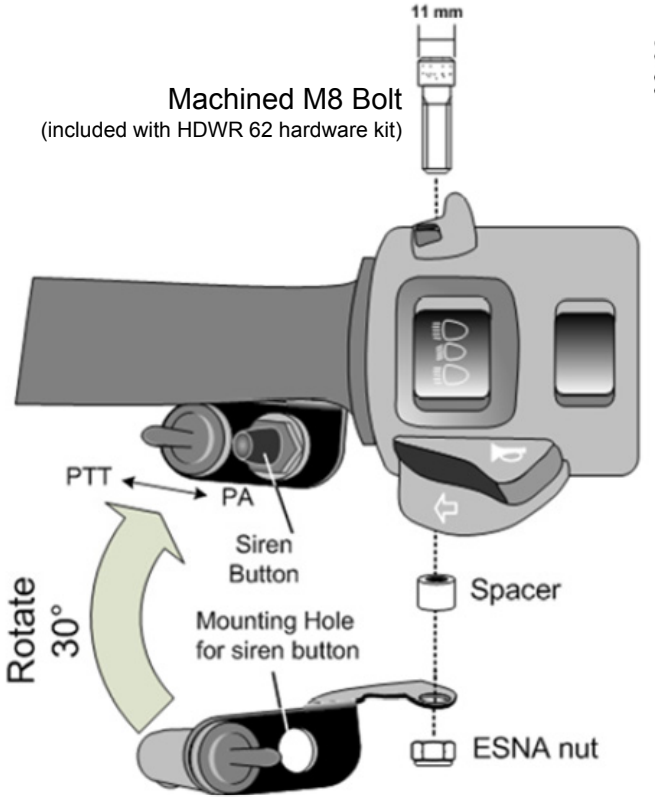
Harley-Davidson

(Bracket Part #: 14-0048)



Honda 1300

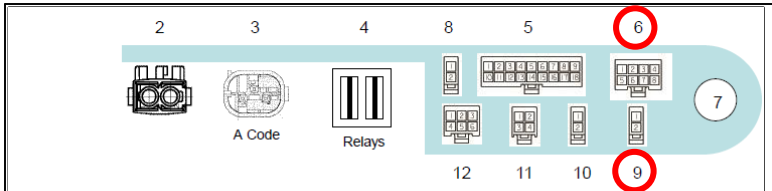
(Bracket Part #: 14-0072B)
(Hardware kit HDWR 51 included with Bracket)



BMW 1200

Used in pre-2015 BMW models
(Bracket Part #: 14-0074S)
(Hardware kit HDWR 62 included with Bracket)

Install guide for Setcom 63-series cable kits on BMW 2015+ motors



1
A Code

1-Gun Lock (6A)
2-Radio (15A)
3-Auxiliary Rear LED Lights
(mounting location only)
4-Relays (radio power, radio speaker cut-out)
5-LED Flasher Connection (10A + 6A)
* 6-Helmet Headset Interface (2A)
7-Lighter Socket (6A)
8-Accessory I (2A)
* 9-Accessory II (2A)
10-Accessory III (2A)
11-Radar Connection (6A)
12-Fairing Speakers

* = Connection Points

BMW Interface Panel

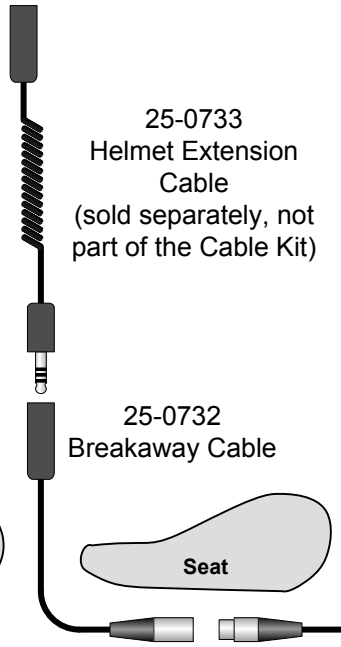
Radio Cable Types

25-3100 = Motorola Spectra, Astro Spectra, Syntor X9000, XTL5000
25-3101 = Kenwood TK-5710B, TK5710H(B), TK-5720, TK-5810B
25-3102 = Harris M7300
*25-3103 = Harris M7100 with Control Head OPT Port
25-3104 = Kenwood TK-690, TK-790, TK-890
25-3105 = Motorola CDM-750, 1250, 1550, PM1200 and others
25-3106 = Motorola Maxtrac, M100, M208, M216, M120, M10, M1225, GM300, CM200, CM300, SM120, PM400, EM200, EM400
25-3107 = Motorola XPR4300, 4500, 4550
25-3108 = Vertex VX5500
25-3109 = Motorola MCS2000
25-3110 = Kenwood TK-980
25-3111 = Kenwood TK-8180
25-3112 = Kenwood NX-700

*25-3103 = Harris M7100 with Control Head OPT Port is a 10 foot cable that connects to the control head at the front of the motorcycle

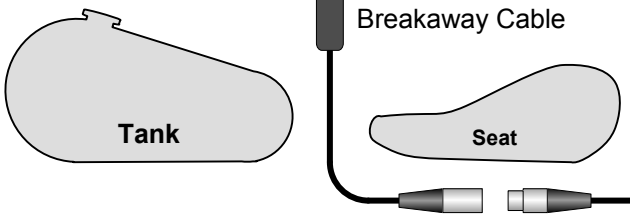
The 25-0733 Helmet Extension Cable is used with Mobile-Only systems.

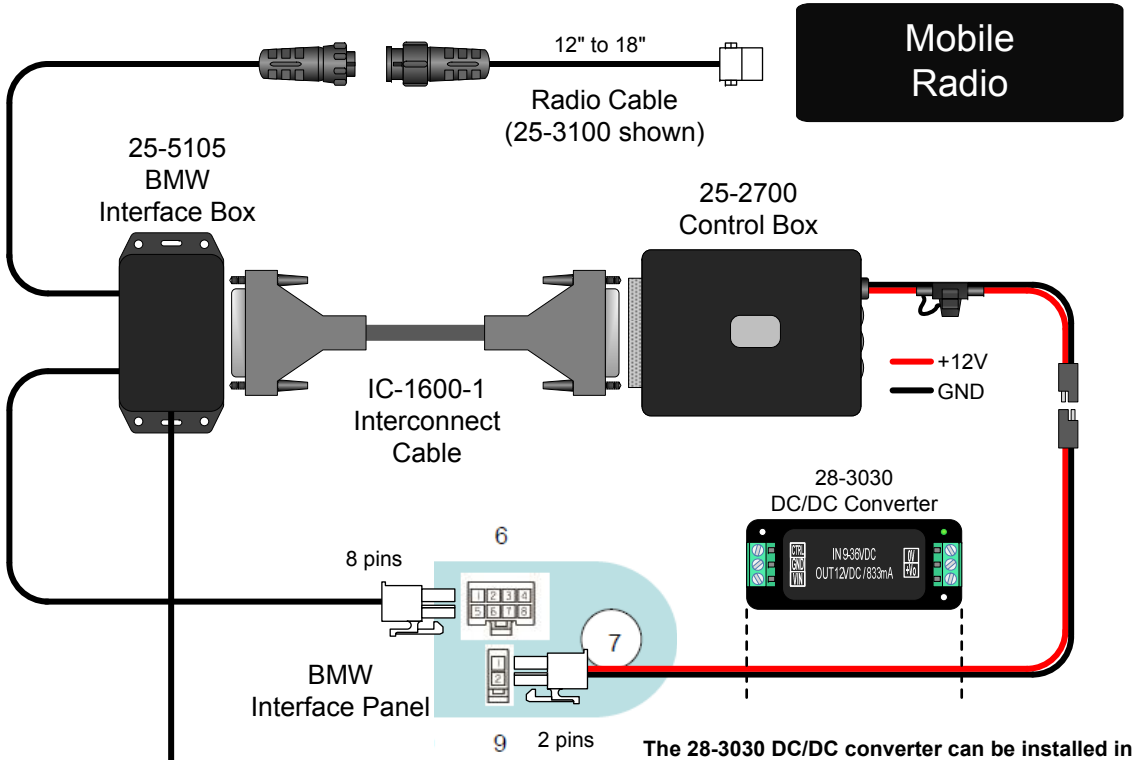
For Mobile-Portable systems, the SpeakerMic plugs directly into the 25-0732 Breakaway Cable



25-0733 Helmet Extension Cable (sold separately, not part of the Cable Kit)

25-0732 Breakaway Cable





The 28-3030 DC/DC converter can be installed in the 25-2700 DC Power leads to prevent electrical noise – this is strongly recommended – see page 2

Inside Radio Box

NOTE:

The installation kit includes 6 pieces of SelfLock Adhesive Fastening strips.
Setcom recommends using 1 pair each to mount the 25-5105, 25-2700 and 28-3030 units inside the motorcycle radio box.

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Setcom® Corporation 2015

Date M/Y	By	Rev.	Revision Description
		A	Initial Release

Drawn by: SBH Date 7/14/15
Eng. Approval Date
Manf. Approval Date

Setcom® CORPORATION
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Austin, TX 78741
Phone: (650) 965-8020

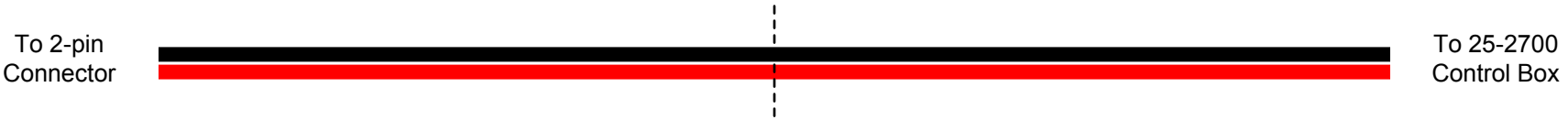
Description: MCB15-63xx Installation Instructions

REV A

Dwg. # **MCB15-63xx_Installation**

1

- Select mounting location for 28-3030, preferably close to the 25-2700 for minimum wire length
- Mount in place using SelfLock Adhesive Fastening Strips (provided in kit)
- Cut DC Power Cable in appropriate place to allow connections to BMW Interface Panel and 25-2700 Control Box

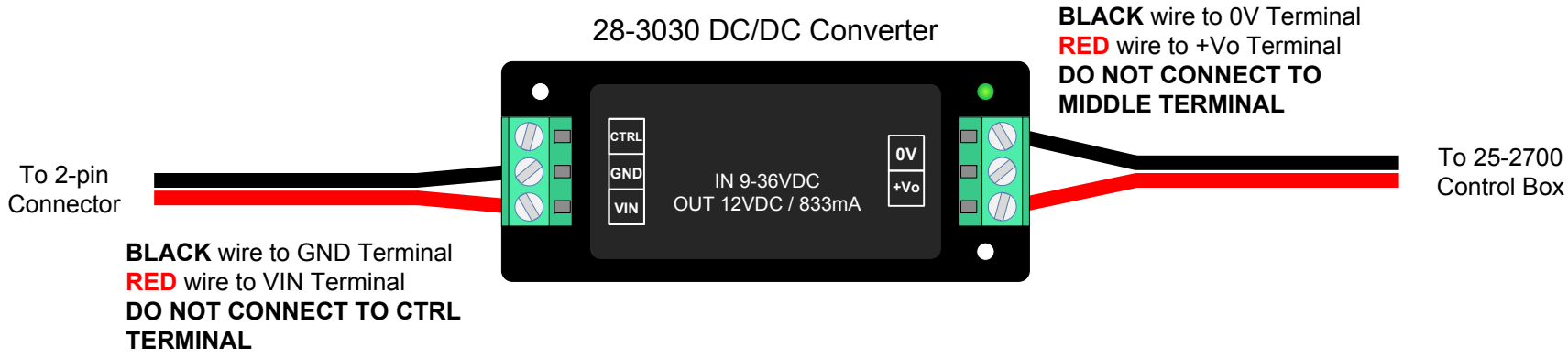


2

- Strip wire ends 3/8”
- Twist stripped ends tightly together to prevent loose strands from shorting to other connections

3

- Insert stripped wire ends into terminals as shown and tighten screws to secure wires and make good contact



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Drawn by: SBH Date 7/14/15	Setcom® CORPORATION	3019 Alvin DeVane Blvd. Ste. 560 Austin, TX 78741 Phone: (650) 965-8020	
Eng. Approval Date			
Manf. Approval Date	Description MCB15-63xx Installation Instructions		
REV A	Page 2 of 2	Dwg. # **MCB15-63xx_Installation**	

Series 63 Radio Cable Examples

25-3100: for Motorola APX and XTL radios, requires Motorola 3080010R04 Motorcycle Accessory Cable

25-3102: for Harris XG-100M, XG-25M, XG-75M radios

NOTES:
Radio must be programmed for PTT on INP1, configure via the "Auxiliary Input 1" in Radio Personality Manager's (RPM's) External I/O dialog Box.

XG-25M must also be programmed to enable external speaker via Radio Personality Manager: to support the external speaker, the radio must have the EXT SPKR (External Speaker) function programmed to a radio button and/or menu. With this programming, the external speaker can be toggled on and off by pressing the button programmed with this function, or by selecting the function on a menu. When the external speaker is on, the radio's internal speaker remains off/disabled.

25-3112: for Kenwood NX700, NX800, NX900, NX-500, NX-5700, NX-5800 Radios.

NOTES:
Radio must be programmed as follows:
- MIC IN: Pin 6, "MI2", default gain setting
- PTT: assigned to Pin 12, "AUXIO7"

This is in regard to the 25-pin Accessory Connector. Make these settings in the "Extended Function" dialog box, under the "AUX" tab, in the programming software

For information on other radio manufacturers/model numbers,
call Setcom Tech Support (650-965-8020 ext. 703).

Series 63 PA Connections

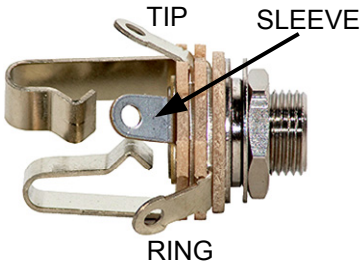
PA Cable section of 25-3002
Multi-Connect Cable Assembly

To adjust PA volume, use the adjustment control provided on the PA unit – if needed, the 25-2700 PA output level can also be adjusted, see the installation instructions.

Whelen Engineering PA UNITS (typically on Harley-Davidson motorcycles):

Some installations will have a Phone Jack mounted on the fairing – to use this connection, wire as shown below: (Note: if this connection is used, the Whelen-supplied hand-mic should not be used).

Setcom Wire	Jack Solder Lug	Harness Wire (2015 and later models)
Red	Tip	Pink/Brown
White	Ring	Pink/Green
Black/Shield	Sleeve	Pink/Black



Whelen WS320 and WS321 Siren Amplifier:

Setcom Wire	J1 pin on Siren/Amp	Harness Wire (2015 and later models)	HD Wiring Manual pin (2015 and later models)
Red	F3	Pink/Brown	3F
White	D2	Pink/Green	2D
Black/Shield	E1	Pink/Black	1E

Whelen BETA Series Siren Amplifier:

Setcom Wire	BETA 9-pin Connector Wire
Red	White/Blue
White	White/Violet
Black/Shield	White/Black

For more information please contact Whelen Engineering or your Harley-Davidson dealer.

Code 3 Models 3951 and 3955 Siren Amplifiers

Contact Code 3 or call Setcom Tech Support (650-965-8020 ext. 703) for an Installation Guide.
For other Code 3 models contact Code 3.

Federal Signal Siren Amplifiers

Contact Federal Signal for wiring instructions, Setcom Tech Support (650-965-8020 ext. 703) may be able to help with certain models.

For help with wiring other Siren Amplifiers, please contact the manufacturer of the unit.

PROBLEM	Probable Solutions
Nothing working at all	Is the system getting power? • Check if Ignition or Accessory switch is ON • If a separate power switch is installed, check if it is ON • Pull apart DC connector, check for 12V with a Voltmeter on power source side • Check in-line fuse (use 1 A fuses ONLY) • Is Portable Radio ON? (if in Portable Mode) • Is Mobile Radio ON? (if in Mobile Mode) • Are all system components installed and connected correctly?
Portable Mode:	*Portable Radio is ON, valid channel selected*
No Receive Audio from SuperMic speaker	• Check position of Portable Radio Volume Control • Is the Radio Adaptor properly attached to Radio? • Is a headset plugged into the SuperMic? (unplug it to verify SuperMic operation) • Is the SuperMic plugged into the Cable Kit on the motorcycle? (unplug it for Portable Mode)
Weak Receive Audio from SuperMic speaker	• Check position of Portable Radio Volume Control • Is the Radio Adaptor properly attached to Radio?
No Transmit Audio from SuperMic microphone	• Is the Radio Adaptor properly attached to Radio? • Is a headset plugged into the SuperMic? (unplug it to verify SuperMic operation) • Is the SuperMic plugged into the Cable Kit on the motorcycle? (unplug it for Portable Mode) • Is the PTT button on the SuperMic fully pressed?
Weak Transmit Audio from SuperMic microphone	• Is the Radio Adaptor properly attached to Radio? • Is the microphone positioned correctly? (the mic is in the upper left corner of SuperMic housing, it should be no more than 1” from lips, talking “across” the mic at an angle helps reduce breath noise)

PROBLEM	Probable Solutions
Portable Mode: *(continued)*	*Portable Radio is ON, valid channel selected*
No Receive Audio in Headset speakers	• Check position of Portable Radio Volume Control • Is the Radio Adaptor properly attached to Radio? • Is the headset fully plugged into the SuperMic headset connector? • Is the SuperMic plugged into the Cable Kit on the motorcycle? (unplug it for Portable Mode)
Weak Receive Audio in Headset speakers	• Check position of Portable Radio Volume Control • Is the Radio Adaptor properly attached to Radio?
No Transmit Audio from Headset microphone	• Is the headset fully plugged into the SuperMic headset connector? • Is the Radio Adaptor properly attached to Radio? • Check microphone connector (small plastic 2-pin connector) in headset wiring harness, insure that it is fully seated

Weak Transmit Audio from Headset microphone	• Is the headset fully plugged into the SuperMic headset connector?
	• Is the Radio Adaptor properly attached to Radio?
	• Is the microphone properly positioned?
	  ○ the mic should be close to the lips, so that pursing one's lips would touch the windscreen
	  ○ check that the mic boom isn't twisted – an arrow and the letters "756-22" should be visible and should be facing the lips

PROBLEM	Probable Solutions
Mobile Mode:	*Mobile Radio is ON and set to a valid channel, Portable Radio can be ON or OFF, SuperMic is plugged into Cable Kit on motorcycle, Headset may or may not be plugged into SuperMic, or if not using SuperMic, Headset is plugged into 25-0733 Headset Extension Cable – **DO NOT** plug the Headset directly into the 25-0732 Break-Away Cable*
Weak or No Receive Audio in SuperMic speaker or Headset speakers	• check position of Mobile Radio Volume Control • check that all cable connectors are fully plugged in – SuperMic into Cable Kit, Headset into SuperMic (or Extension Cable) if Headset is being used

Weak or No Transmit Audio from SuperMic microphone or Headset microphone
 	
(Continued on page 4)
	• Is the PTT button on the handlebar bracket fully pulled and held to the left? (Is the Mobile Radio indicating a Transmit condition by an LED or other light?)
	• check that all cable connectors are fully plugged in – PTT cable plugged in, SuperMic plugged into Cable Kit, Headset plugged into SuperMic (or Extension Cable) if Headset is being used
	• Is the SuperMic microphone positioned correctly? (the mic is in the upper left corner of SuperMic housing, it should be no more than 1" from lips, talking "across" the mic at an angle helps reduce breath noise)
	• Is the Headset microphone properly positioned?
	  ○ the mic should be close to the lips, so that pursing one's lips would touch the windscreen
	  ○ check that the mic boom isn't twisted – an arrow and the letters "756-22" should be visible and should be facing the lips

PROBLEM	Probable Solutions
Mobile Mode: *(continued)*	*Mobile Radio is ON and set to a valid channel, Portable Radio can be ON or OFF, SuperMic is plugged into Cable Kit on motorcycle, Headset may or may not be plugged into SuperMic, or if not using SuperMic, Headset is plugged into 25-0733 Headset Extension Cable –* ***DO NOT*** *plug the Headset directly into the 25-0732 Break-Away Cable*
Weak or No Transmit Audio from SuperMic microphone or Headset microphone *(continued)*	• If the system is connected to a PA unit, is the PA audio present and of adequate volume? • If PA is working, but Transmit Audio through the Mobile Radio is absent or low, then the problem is NOT with the SuperMic or Headset microphone - the problem is either with the radio cable (Setcom 25-31xx), or with the Mobile Radio. • A useful test would be to disconnect the Setcom radio cable, and plug an OEM hand mic into the radio (typically supplied with the radio and testing the transmit function – if there is still no Transmit Audio, then the problem is with the radio itself.

Noise on Receive or Transmit	• Noise may be caused by the engine ignition system, or by certain lighting systems on the motorcycle
	• Check if the noise is present when engine and lighting are OFF
	• If the noise changes pitch with engine RPM's then the engine ignition system is the cause
	• Possible Remedies:
	  ○ changing the ground point where the 25-2700 Control box is connected
	  ○ using an automotive DC power filter
	  ○ adding a Setcom 28-3030 DC Isolator (contact Setcom customer service)