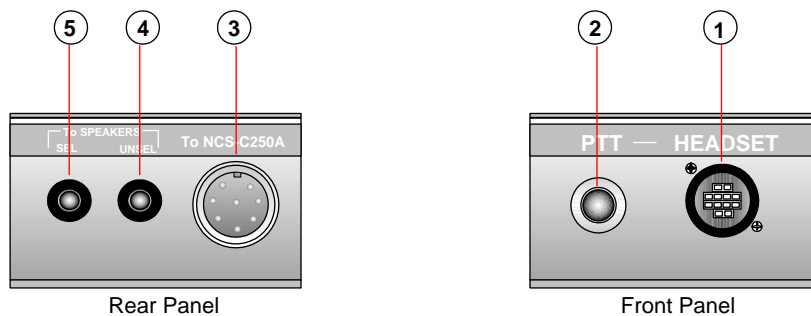# CO‖comm inc

NCS-C003 Headset Interface Box

1.0 Description

The NCS-C003 Headset Interface Box provides a convenient method of connecting a headset, PTT switch, and speakers to the NCS-C250 Mobile Multi-Switcher. A headset adaptor cable, designed to interface the headset in use to the NCS-C003, is required. An NCS-250-HIB1-XX cable to connect between the NCS-C003 and the NCS-C250 is supplied with the unit. The length of this cable is normally 6 feet.

Figure 1 – NCS-C003 Headset Interface Box

2.0 Front and Rear Panel Connector Identification

Rear Panel   Front Panel

Item	Description
1	Headset Connector, 12 Pin Female, Push-Push
2	PTT Switch Input Jack, ¼ inch Mono Phone Jack
3	Audio and Control Signal Connector, 8 Pin Male Foster Connector
4	Unselected Audio Speaker Jack, 3.5 mm Mono Phone Jack
5	Selected Audio Speaker Jack, 3.5 mm Mono Phone Jack

Figure 2 – Connector Identification

3.0 Headset, Speaker and PTT Switch Requirements

3.1 Headset

Most any headset can be accommodated by the NCS-C003. A Headset Adaptor Cable is required to interface the desired headset to the NCS-C003. Headsets with one or two earpieces can be used.

3.1.1 *Dual Earpiece Headset*
When a dual earpiece headset is used and is connected to the NCS-C003 using the required adaptor cable, both the Selected and Unselected speakers will be muted. The Selected and Unselected receive audio will be routed to the headset.

3.1.2 Single Earpiece Headset
When a single earpiece headset is used and is connected to the NCS-C003 using the required adaptor cable, the Selected speaker is muted. The Selected audio is routed to the headset earpiece. The Unselected speaker remains active whether or not the headset is connected to the NCS-C003.

3.2 Speaker

The speaker requirement is the same as that of the NCS-C250. The speaker(s) should have a nominal impedance of 4-8 Ohms. Maximum power output is achieved with 4 Ohm speakers. Speakers having an impedance of 4 Ohms should have a minimum power rating of 4 Watts-rms while speakers with 8-Ohm impedance should have a minimum power rating of 2 Watts-rms.

Speakers used with the NCS-C003 must be terminated in a 3.5 mm mono phone plug.

3.3 PTT Switch

Most any switch designed for PTT operation will function with the NCS-C003. The PTT switch must be terminated in a ¼ inch mono phone plug.

4.0 Installation

4.1 Electrical Connections

See Figure 3 below for a typical connection diagram.

4.1.1 Install the NCS-250-HIB1-XX (XX = Length in feet) between the NCS-C003 and the NCS-C250. This is accomplished by connecting the cable end with the 8 pin Foster female connector to the 8 pin male Foster connector located on the rear of the NCS-C003. **CAUTION** – Be sure to properly align the connector keyways before engaging the Foster connectors. Plug the other end of the cable (with RJ45 modular plug) into the MIC jack on the rear of the NCS-C250.

4.1.2 Connect the speakers to be used for *Selected* and *Unselected* receive audio to the 3.5 mm phone jacks on the rear panel of the NCS-C003.

4.1.3 Connect a PTT foot or hand switch to the ¼ inch mono phone jack on the front panel of the NCS-C003. This jack is labeled "PTT".

4.1.4 Plug the headset plug into the mating jack of the headset adaptor cable. Plug the 12 pin male connector on the other end of the headset adaptor cable into the mating connector on the NCS-C003.
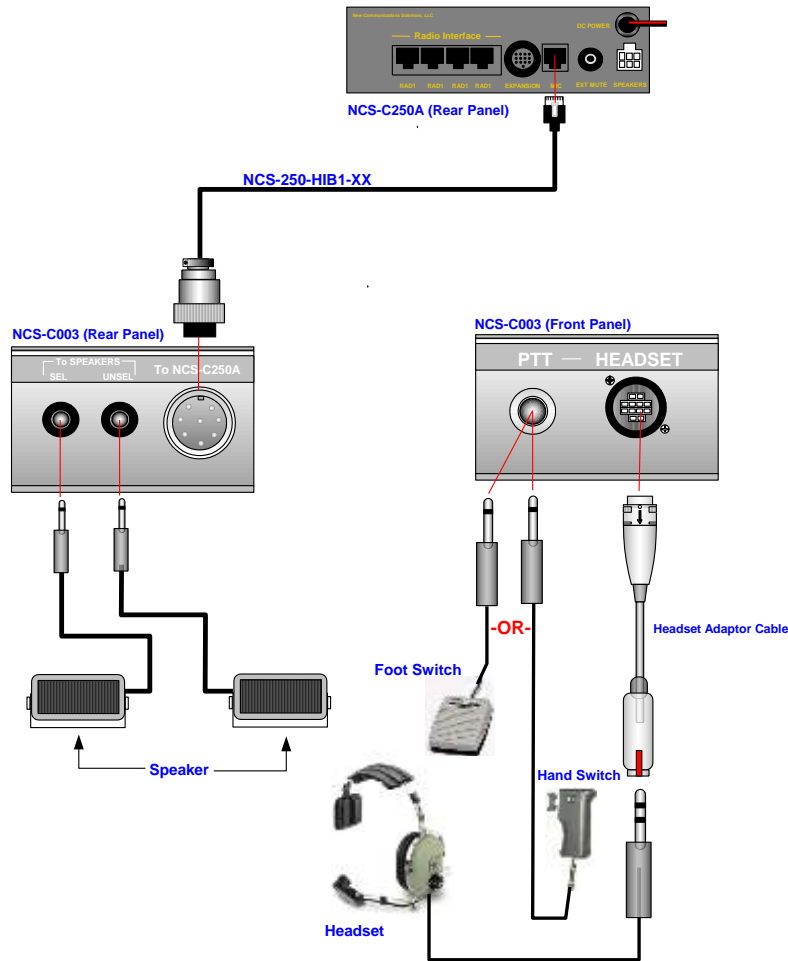

Figure 3 – Typical Connection Diagram

4.2 Mounting

The NCS-C003 is designed to be mounted on the underside of a tabletop. See figure 4 for mounting details.
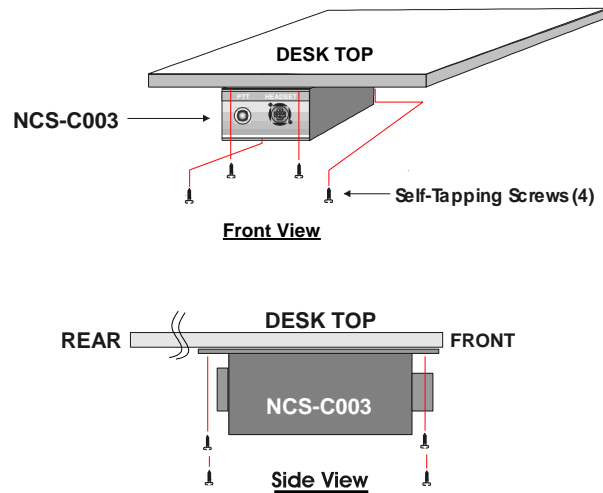
Figure 4 - Mounting

5.0 NCS-C003 Operation

The NCS-C003 requires no electrical adjustments prior to operating. Connect the NCS-C003 as shown in Figure 3.

5.1 Operation with Headset Disconnected
When the headset is disconnected from the NCS-C003 (Note: headset adaptor must be disconnected from the NCS-C003), *Selected* and *Unselected* receive audio should be present on their respective speakers.

5.2 Operation with Dual Earpiece Headset Connected
When a dual earpiece headset is connected via the appropriate headset adaptor cable to the NCS-C003, the *Selected* and *Unselected* speaker audio is muted. The *Selected* and *Unselected* receive audio is routed to the right and left earpieces of the headset.

5.3 Operation with Single Earpiece Headset Connected
With a single earpiece headset connected via the appropriate headset adaptor cable to the NCS-C003, the Selected speaker audio is muted and routed to the earpiece of the headset. The Unselected speaker audio remains active.

5.4 Volume and Muting Controls
Independent *Selected* and *Unselected* volume and muting controls are available on the front panel of the NCS-C250. These controls can be used to adjust the audio level or mute the audio to the speakers and/or headset.