

# Sigtronics S-A-F-E Unit Operating Instructions

**INSTALLER:** Please give this copy of the safe unit operating instructions to the users of the safe system.



The following describes how to use and adjust the SAFE controls. It also explains exactly how the SAFE unit operates. This will allow you to easily set all unit functions to your specific needs. If you are not familiar with the SAFE operation, perform the next few steps while the vehicle is not in motion.

**Intercom operation and adjustment** can be performed by the following procedure:

1. Set the ON/OFF switch to the "ON" position and turn both RECeive VOLume controls all the way down (counter-clockwise).
2. Turn both intercom VOLume controls to the 10 o'clock position and both SQuelch controls all the way up (clockwise). Notice the intercom is now continually activated and you should be able to talk between headsets.
3. To adjust the intercom SQuelch controls for voice

activated operation (VOX), it is helpful to have some background noise present. It may also be necessary to turn up the intercom VOLume controls. Turn both intercom SQuelch controls all the way counter-clockwise. Now, without speaking, rotate one of the SQuelch controls clockwise until you hear the background noise in your headset. Next, using that same SQuelch control, rotate counter-clockwise small, incremental amounts until the background noise disappears. (This procedure is necessary because the squelch is a "fast on, slow off" system). That SQuelch control is now set.

4. Adjust the other intercom SQuelch control similarly by turning it clockwise until you hear background noise. Rotate counter-clockwise incremental amounts until the background noise disappears.

Small adjustments may be necessary if background noise changes significantly - such as from idle to full power.



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**Radio Selection** of both the A/C (Radio 1) and FM (Radio 2) radios are provided by two switches.

1. **XMIT SELECT** determines the radio you wish to transmit on.
2. **BOTH/OFF/AUTO** selects which radio(s) you receive or hear in your headset.
  - a) **"BOTH"** position permits you to hear both the radios at the same time.
  - b) **"OFF"** position disables the hearing of either radio.
  - c) **"AUTO"** position allows you to hear the radio that the XMIT SELECT switch is set to.

The AUXiliary audio source is selected by the AUX/OFF switch. In the "AUX" position, you can hear it, and in the "OFF" position you cannot.

**Receive Volume Controls (REC VOL)** are general volume controls, meant to provide overall listening level for all three radios simultaneously - A/C radio, FM radio, and AUXiliary radio. Finite volume adjustments of any individual radio should be done by altering the radio volume control at the radio itself.

Once the radios are selected, Officer 1 (right side) or Officer 2 (left side) can transmit at any time simply by pressing their PTT switch. The two Crew positions cannot transmit on the radios. When one position transmits, several things take place automatically to the transmitting side of the SAFE unit:

- The intercom between the two sides of the SAFE unit is turned off.
- The Auxiliary audio, if selected, is muted.
- The receive audio of the radio **not** selected by the XMIT SELECT switch is muted, regardless of the position of the BOTH/OFF/AUTO switch.
- If Officer 1 is transmitting, both Crew headset microphones are muted.
- The selected radio is put into transmit mode.
- The headset microphone audio (your voice) is sent to the selected radio.

- Sidetone is generated and sent to your headphones.\*

\* Sidetone is a portion of the transmitted voice signal sent back into your headset so that you can hear what you are saying while transmitting. The RECeive VOLume control adjusts the volume level of the sidetone that you hear in your headset.

The non-transmitting side of the SAFE is not affected (except for intercom) when the other side transmits. The non-transmitting side can monitor the transmissions of the other side by simply selecting the same radio on his side of the SAFE. Of course, when the PTT switch is released, (stop transmitting) all functions return to normal, instantly and automatically.

**Simultaneous Transmit** is the most attractive and powerful feature of the SAFE. Both Officers 1 and 2 can transmit at the same time – either on separate radios or on the same radio transmitter! When on different radios, neither Officer position will interfere with the other's communications. For example, if using the SAFE on an airport crash vehicle, Officer 2 can talk to air traffic control while Officer 1 talks on the emergency dispatch radio, or visa versa. On the other hand, they can also transmit on the same radio transmitter. If, for example, Officer 1 is talking on one of the radios, Officer 2 can jump right in and add to the conversation simply by pressing his PTT switch. Both voices will be heard by the receiving station.

**NOTE:** Only the A/C radio and the FM radio can be transmitted on. The AUXiliary input is for **listening only**. It can be used for listening to a scanner, monitoring the audio portion of a video camera, listening to background music, and many other possibilities.