

SIGTRONICS "TRANSCOM" INSTALLATION AND OPERATING INSTRUCTIONS (PERMANENT)

Transcom is a voice actuated aircraft intercom with the capability for transmitting through the aircraft radio by the mere push of a button. It was designed for simplicity of use. Three controls are provided on the front panel. (See Figure 1)

POWER SWITCH — Turns unit on and off.

VOLUME CONTROL — Controls the intercom volume. (The radio volume is controlled conventionally.)

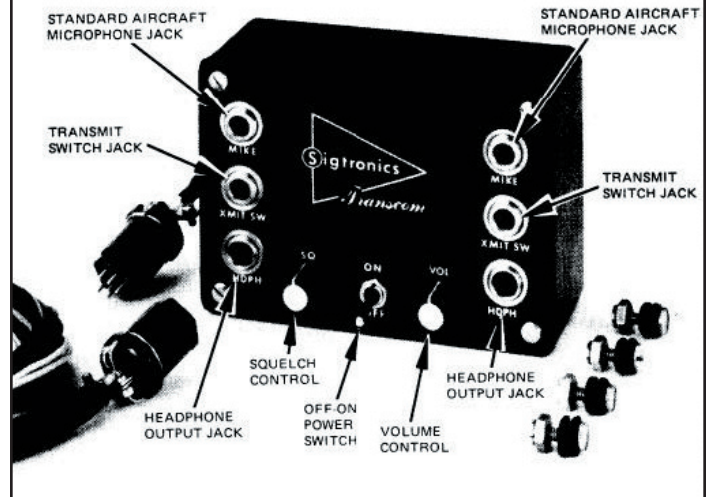
SQUELCH CONTROL — Controls the threshold of amplifier turn-on. This control is normally used to adjust for variations in background noise found in different aircraft.

Two Microphone Input Jacks, labeled **MIKE**, are provided. They accept the standard aircraft mike plugs (i.e. carbon or amplified dynamic microphone.)

Two Output Jacks are provided, labeled **HDPH** which accept the standard .250" aircraft headphone plug.

Two jacks are provided on the panel, labeled **XMIT SW** which accept the standard aircraft .206" mike plugs: found on aircraft

FIGURE 1



SIGTRONICS TRANSCOM CONNECTION SCHEMATIC

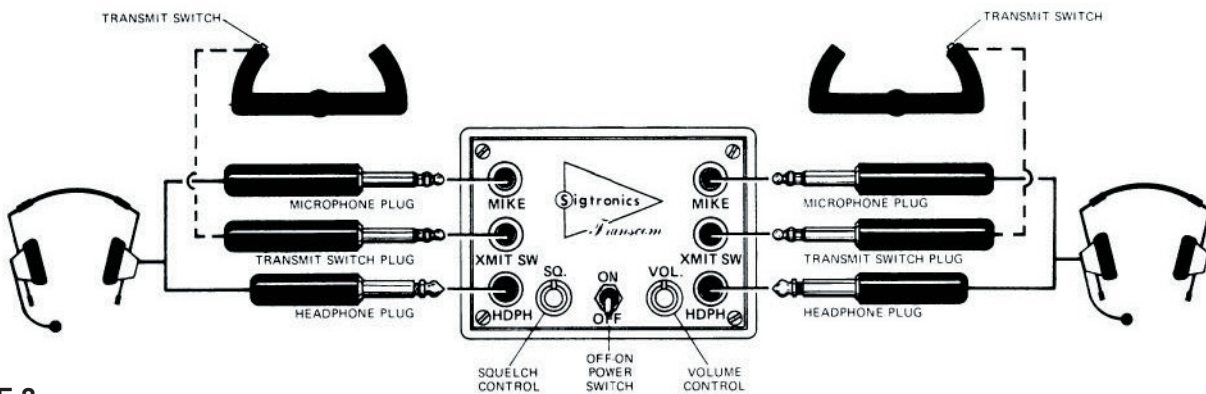


FIGURE 2

push-to-talk switches. These are normally not used in the Permanent TRANSCOM, since provisions are made for hard wiring the push-to-talk functions to the aircraft. However, they may be used as an option with portable aircraft push-to-talk switches. Transmitting from both positions is possible on a one-at-a-time basis. Each position disables the other while transmitting.

OPERATING INSTRUCTIONS

After the intercom is installed per the instructions above, it is ready for use. Figure 2 illustrates the connections between the TRANSCOM and headsets. In addition, push-to-talk switches are shown in Figure 2 with dashed line for reference only. Portable push-to-talk switches may be plugged in as shown, if it is not desired to connect the orange and yellow wires as shown in Fig.3.

STEP 1 — INTERCOM MODE

- A. Turn the power switch on.
- B. Set the volume control to a low level.
- C. Adjust the squelch control clockwise until background noise increases or the voice is heard by speaking into mike. Rotate the squelch counterclockwise until noise diminishes. Then make small adjustments until the voice triggers the unit on satisfactorily. Small adjustments may be necessary if the aircraft background noise changes significantly, such as from idle to full power.

STEP 2 — TRANSMIT MODE

When ready to transmit, depress the Transmit Switch and your voice is automatically transmitted via the aircraft radio.

STEP 3 — RADIO MONITORING

When the unit is connected as shown, radio monitoring is automatic. The radio monitor circuit is always active, even with the TRANSCOM Power Switch in the OFF position.

HELPFUL HINTS

Position the boom mike in close proximity to the mouth, as is the practice with a hand held mike, for best results.

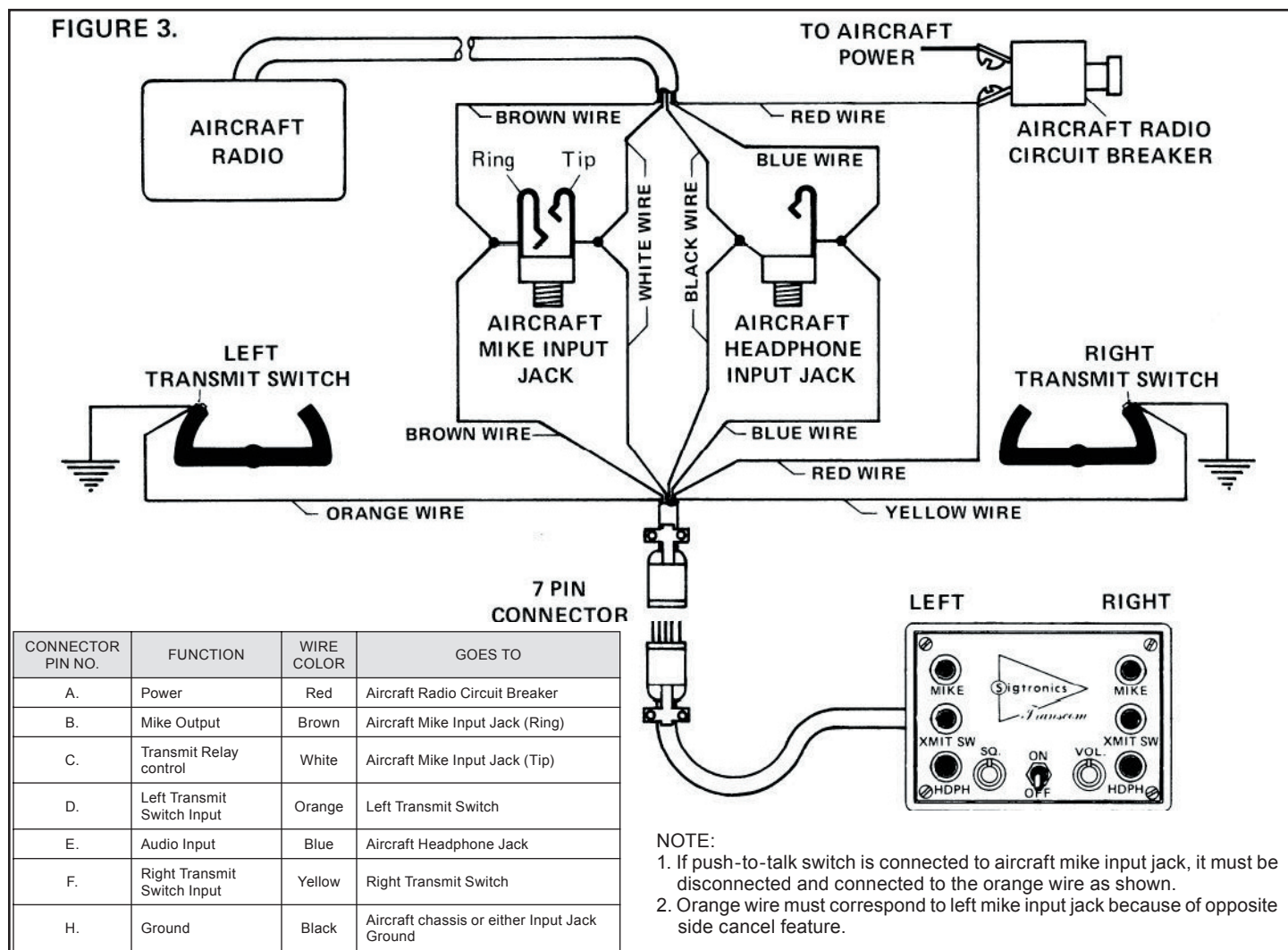
Maintain minimum acceptable volume when using TRANSCOM — particularly in low noise environments.

A fuse is located within the unit and may be replaced by a qualified person should the need arise.

The hand held mike may be left plugged into the aircraft mike input jack and used conventionally. However, the TRANSCOM must be switched off during transmitting. Radio reception will continue through the headphone, even with TRANSCOM switched off.

When transmitting the intercom is automatically switched **OFF** and your voice is heard via the aircraft radio sidetone return. In cases where there is no sidetone return, nothing will be heard.

The push-to-talk switch circuit must have less than 5 ohms resistance for satisfactory operation.



CHASSIS INSTALLATION

Your TRANSCOM has been supplied with:

- 4 mounting grommets,
 - 4 6/32" machine screws,
 - 4 locking nuts
- for mounting the intercom case.

1. Remove the 4 corner panel screws from the face panel.
2. Remove the intercom from the case.
3. After selecting a suitable mounting location in the aircraft, bore four 1/4" holes in the case. (The TRANSCOM may be mounted by securing to the case front or back sides, or bottom.)
4. Bore a 3/4" hole to provide a means of penetrating the case with the 7 pin connector and cable. (If the front or rear case surface is selected for the 3/4" hole, locate the hole toward the case bottom to minimize interference between the cable and intercom circuit board.)
5. Insert the 4 grommets into the 1/4" holes.
6. Drill aircraft with same hole pattern as in the intercom case, but use a No. 27 drill. (Clearance drill for 6/32")
7. Secure case to the aircraft with screw heads inside the intercom case. (For circuit board clearance)

WIRING INSTRUCTIONS

Your TRANSCOM has been supplied with:

- One 6 inch 7 conductor cable, terminated in a 7 pin connector, One 4 ft. 7 conductor mating cable, for wiring the unit to the aircraft.
- The wires are color coded to conform with standard aircraft radio color coding, where applicable.

Figure 3 is a schematic illustration of the TRANSCOM wiring connections to be made to the aircraft.

A Table is also presented in Fig. 3 which outlines the connector pin numbers, along with the function, color and destination of each wire in the cable. It is important to note that the orange and yellow wires must be connected to the corresponding push-to-talk switches as shown, because of the "opposite side disable" feature. In addition, if the aircraft already has a push-to-talk switch hard wired to the mike input jack, it must be disconnected from that mike input jack and connected, as shown in Fig. 3 to the orange wire. When wiring is completed, tape or otherwise insulate metal parts on connector plug to prevent their contact with other aircraft electrical equipment.

NOTE: Care should be taken to verify that the aircraft radio wiring conforms to the standard color code.

A trimmer pot is provided inside the unit to adjust radio mike input level. Appropriate adjustments can be made to compensate for over or under modulation. Clockwise rotation increases mike output level of intercom to radio.

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