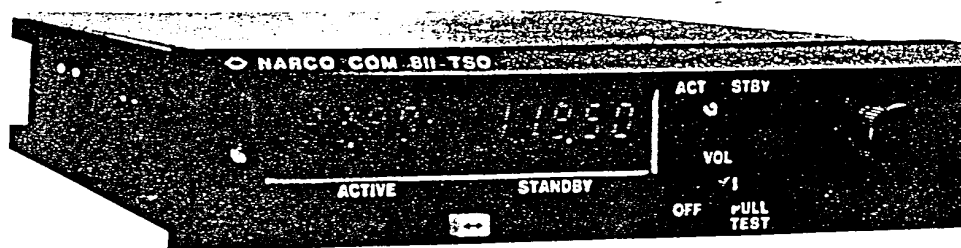


**NARCO AVIONICS
COM 810 TSO
AND
COM 811 TSO
VHF TRANSCEIVERS**



INSTALLATION/OPERATION MANUAL
MANUAL NO. 03114-0620



®NARCO AVIONICS INC.
270 COMMERCE DRIVE
FORT WASHINGTON, PENNSYLVANIA, 19034
U.S.A.

© COPYRIGHT, NARCO AVIONICS INC., 1981

PRINTED IN U.S.A.

MAY, 1981

2.7 OPERATION

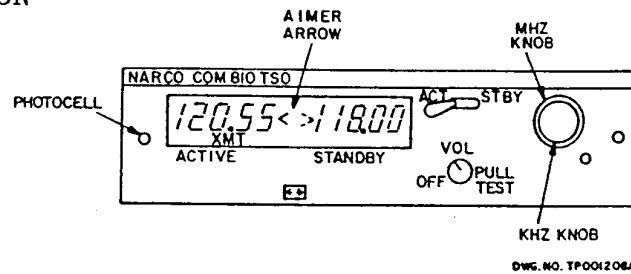


FIGURE 2-12. FRONT PANEL

DISPLAY

The left side of the display identifies: the Units Active communications frequency, an arrow to alert the pilot as to the setting of the Aimer Switch, and the legend XMT (when lit) to indicate that the Mike Key is depressed and the Unit is transmitting.

The right side of the display identifies the STANDBY frequency. Its Aimer arrow will light when the AIMER switch is set to STBY.

OFF-VOL-PULL TEST

OFF is the maximum counterclockwise rotation of this control. Clockwise rotation past the "click" turns the Unit ON.

VOL, once the Unit is turned ON, continued clockwise rotation increases the audio volume.

PULL TEST when pulled deactivates the squelch circuit.

AIMER SWITCH

This is a two position toggle switch. In order to change either the Active frequency or the Standby frequency the switch must be appropriately set.

Note that coincidentally with the toggling of the Aimer Switch, an arrow will be seen between the frequencies alerting the pilot which channel frequency will change when the KHz or MHz knob is rotated.

MHz/KHz CHANNEL SELECT KNOBS

Both these controls allow for continuous CW or CCW rotation. MHz frequency readout changes at a rate of 1 MHz per detent. Slow rotation of the KHz Knob steps the frequency readout at a change rate of 25 KHz per detent. However, due to adaptive rate tuning, a rapid spin (slew) permits larger KHz frequency changes (100's plus). Clockwise rotation increments the frequency, counterclockwise decrements the frequency.

TRANSFER

Pressing this white arrowed momentary switch "flips" the display - the STBY frequency becomes the Active and the Active becomes the Standby. A second depression once again exchanges the frequencies.

2.8 POST INSTALLATION TESTS

2.8.1 General Preflight Test

Exercise all aircraft flight controls to assure that they achieve maximum deflection and operate freely. Check the installation for loose hardware or missing cable ties.

With the aircraft engine(s), avionics equipment, and other on-board electronics operating, transmit and receive on several different frequencies. There should be no excessive interference and intelligible two-way communications should be demonstrated.

During this exercise make a panel illumination check:

READOUT SEGMENTS - Set 120.20 Active - 139.95 Standby, push arrowed white transfer button. If complete frequencies were seen in both positions - all segments are OK. (Transfer button does not illuminate.)

AIMER ARROWS - Setting the Aimer Switch to ACT will illuminate an arrow in the Active display window. Flipping the toggle to STBY will illuminate an arrow in the STANDBY display window.

XMT - "XMT" will be seen below the frequency in the Active window whenever the Mike Key is depressed.

DIMMING CIRCUIT - The photocell, being sensitive to light, will dim the display when an opaque material is placed upon it. The display will "come back" upon taking the material away.

KEEP-ALIVE/DEFEAT SWITCH - Set switch to KA position and COM Active window to 120.20 and Standby window to 139.95. Turn the COM OFF. Wait 15 seconds and turn the COM ON. The Active window should display 120.20 and the Standby 139.95. Put the switch in the Defeat position. Turn the COM OFF and then ON again. The Active window shall display 121.50 and the Standby 121.90. Put the switch back to the KA position.

2.8.2 Flight Test

After installation of the COM Unit a flight test should be performed to check the antenna pattern and system compatibility.

- 1) Flying at a altitude of 6000 feet establish two-way communications with a ground station facility at least 50 NM away.
- 2) With the aircraft flying at 6000 feet, in right and left banks (up to 10°), at 10 of 12 equally spaced headings establish two-way communication with a ground station at least 50 NM away.
- 3) At an altitude of 6000 feet and at a distance of 20 NM from the ground facility, fly directly toward the facility and for 20 NM beyond. Maintain satisfactory communications with the facility during the test run.
- 4) At a distance of 10 NM from the ground station put the landing gear and the aircraft in the approach configuration. Maintain satisfactory communications with the facility.