GARMIN G1000 VHF COMMUNICATION SYSTEM - DESCRIPTION AND OPERATION

1. **General**

    A. This section gives a general description and operation of the Garmin G1000 VHF Communication System. The line replaceable units (LRU's) in the VHF Communication System are the Garmin GIA 63W Integrated Avionics Unit No. 1 and No. 2, the VHF 1 and VHF 2 (COM 1 and COM 2 respectively) antennas.

    B. The VHF COM 1, VHF COM 2 receiver/transmitter functions are found in the Garmin GIA 63W Integrated Avionics Units No.1 and No. 2, respectively. For a general overview of the GIA 63W unit refer to Garmin GIA 63W Integrated Avionics Unit - Description and Operation.

    C. Refer to Figure 1 for a general view of the VHF Communication System.

2. **Description**

    A. Primary very high frequency (VHF) voice communication is provided by a dual independent system. The VHF radio units are located in the Garmin integrated avionics units (GIA 63W). Each GIA 63W has a VHF communication transceiver that tunes from 118.000 to 136.992 MHz, giving 760 channels at 25 kHz spacing or 2280 channels at 8.33 kHz spacing. The GIA 63W communicates with other LRU's using the high-speed data bus (HSDB), RS-232, RS-485/422 or ARINC-429 data busses.

    B. VHF 1 and VHF 2 Antennas.

        (1) The Comant VHF 1 and VHF 2 antennas are connected to the GIA 63W No. 1 and GIA No. 2 , respectively, with a coaxial cable.

        (2) The antennas are installed above the cockpit for the Model 208B as follows:

            (a) At FS 198.28, between BL 16.20 and LBL 19.85 (left antenna), between RBL 19.85 and BL 28.85 (right antenna).

        (3) The antennas are installed above the cockpit for the Model 208 as follows:

            (a) At FS 174.75 between BL 16.20 and LBL 19.85 (left antenna), between RBL 19.85 and BL 28.85 (right antenna).

    C. The Garmin GMA 1347 Audio Panel is the primary control for the VHF 1 and VHF 2 radio transmission and reception selection. The primary flight displays (PFD's) and the multifunction display (MFD) also shows COM radio status and frequency selection at the top of the display.

    D. The VHF radios have an automatic squelch function to quiet unwanted static noise when no audio signal is received, while still providing sensitivity to weak COM signals. When the automatic squelch is disabled, COM audio reception is always on and continuous static noise will be heard over the headsets and speaker (if selected). Volume/Squelch knobs and Frequency Select knobs are found on the MFD. The COM SETUP page on the MFD can be used to setup COM squelch.

    E. There is a hand-held microphone installed on right side of the aft panel of the center pedestal. The hand-held microphone can be used for VHF transmission as well as other voice communications. The hand-held microphone installation includes the microphone, cable, microphone jack, and microphone bracket that holds the microphone in place when not in use.

3. **Operation**

    A. VHF Communication System.

        (1) To transmit on the active communication frequency, a push-to-talk (PTT) button is installed on the outboard sides of the pilots and copilot's control wheels. The PTT button is installed to be used with the index finger (left pilot's, right copilot's). Push and hold the PTT button for the period of time that you want to transmit. A TX indication will come on the pilots and copilot'sPFD's next to the active transmission frequency. If a headset is connected, the transmission and reception of messages will be heard through the headset microphone and earphones. If the SPKR button on the audio panel is pushed, the communication audio will be heard on the speakers in the cockpit and through the earphones on the headset.

        (2) To transmit through the hand-held microphone, remove the microphone from the bracket, hold the microphone close to your mouth, and push and hold the button on the unit for the period of time that you want to transmit. A TX indication will come on the pilots and copilot's primary flight displays (PFD's) next to the active transmission frequency. To use the hand-held microphone without headsets, the SPKR button on the audio panel must be on to listen to the transmissions.

Figure 1 : Sheet 1 : VHF Communication System

A99129

VHF 2 COM
ANTENNA

VHF 1 COM
ANTENNA

A

GIA 63W NO. 2

GIA 63W NO.1

GMA 1347
AUDIO PANEL

INSTRUMENT
PANEL

FWD

DETAIL A

2610T7001
A2618T1419