PS ENGINEERING® INCORPORATED

Sound Quality. Sound Engineering.

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PMA8000G

Audio Selector Panel with *IntelliAudio*®

Marker Beacon Receiver

Stereo Intercom System
with flightmate® and
Bluetooth® Connectivity

Pilot's Guide
and
Operation Manual

202-890-0913   **Bluetooth**®   June 2017

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PMA8000G controls

Power Switch (1) (EMG-Fail Safe Operation)

The power switch controls all audio selector panel functions, intercom and marker beacon receiver.

When the unit is turned off, either by pressing the volume control, *or if the* breaker is pulled removing power, the PMA8000G is in Fail-Safe mode. In this mode, the pilot's headset is connected to COM 1 for transmit and receive, and connected to unswitched input #1 for priority audio alerts. The fail safe audio will *only* be heard in the left ear of a stereo headset.

Communications Transmit (XMT) Selection (2)

To select COM 1 or COM 2 for transmit, press the XMT 1 or XMT 2 button on the bottom row. The bottom and top button indicators light, showing that you will transmit **and** receive on the selected radio.

The PMA8000G has an automatic selector system. Audio from the selected transceiver is automatically heard in the headsets and speaker (if selected). This guarantees that the pilot will *always* hear the audio from the transceiver selected for transmit.

In normal (not Split) modes, the PMA8000G gives priority to the pilot's radio Push-To-Talk (PTT). If the copilot is transmitting, and the pilot presses his PTT, the pilot's microphone will be heard over the selected com transmitter.

If the pilot is connected to a cell phone, the pilot PTT will switch the pilot microphone to the se-

lected com transceiver, and allow aircraft communications to continue.

The copilot will also be able to transmit on the selected radio with his PTT as well.

Split Mode

To activate the **split** mode, push both the XMT 1 and XMT 2 (bottom) buttons at the same time. All four indicators will come on. In the **split** mode, the pilot is on COM 1, while the copilot is on COM 2. In **split** mode, the intercom between pilot and copilot is off, as is the green ICS indicator. Press the MUTE button to restore intercom to the CREW mode if desired.

Select either of the com XMT buttons to exit the **split** mode. It is not possible to have the pilot on COM 2 and copilot on COM 1 in **split** mode.

NOTE: Due to the nature of VHF communications signals, and the size constraints in general aviation aircraft, it is probable that there will be some bleed-over in the Split mode, particularly on adjacent frequencies. PS Engineering makes no warranty about the suitability of Split Mode in all aircraft conditions.

Communications Receive (RCV) Selection (3)

To listen to the other radio, press the upper COM 1 or COM 2 button. When a com is selected for receive, it will stay selected until manually deselected, even if you select, and then deselect its transmitter.

When switching from COM 1 to COM 2 while Com 2 was not previously selected, COM 1 audio will be switched off. In essence, switching the mic selector will not override prior selection of COM receiver audio.

Unless the audio panel is in "split" mode, the PMA8000G gives priority to the pilot's radio Push-To-Talk (PTT).

When in a Telephone mode, the pilot is connected to the cell phone, but still hears the COM radios selected. The radio PTT will switch the mic to the selected com, and allow continued aircraft communications to continue.

IntelliAudio® HRTF (11)

When IntelliAudio®, Head Related Transfer Function (HRTF) processing is active, COM 1 audio will be presented in the 10 o'clock position, and COM 2 will be presented from the 2 o'clock position. IntelliAudio® is toggled on and off by pushing the HRTF button. This function requires stereo headsets, which are wired correctly.

Nav Audio Selector (4)

These buttons select the switched navigation receivers. The DME and ADF inputs (if present) are also shared with **AUX**. In SPLIT mode, only the pilot will hear selected navigation audio.

Cockpit Speaker (5)

This switch will place all selected radio audio on the cockpit speaker when this switch is selected. In "SPLIT" mode, the speaker carries the same audio as the pilot.

Depending on installation, important audio alerts such as radar altimeter or autopilot disconnect will come over the speaker even if it is not selected, while other unswitched inputs, will only be present if the **SPR** button is selected. Consult your professional avionics installer for these important configuration details.
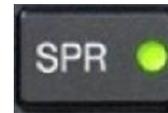
Intercom Operation

IntelliVox® VOX-Squelch

IntelliVox® is PS Engineering's proprietary intercom squelch control. Through the use of digital processors, each microphone is monitored, and opens instantly when human speech is detected. This results in seamless conversations aboard the airplane for crew and passengers, without syllable clipping or fatigue-inducing noise.

No adjustment of the *IntelliVox*® squelch control is necessary. There is no field adjustment. The system is designed to block continuous tones, therefore people humming or whistling in monotone may be blocked after a few moments.

For consistent performance, any headset microphone **must** be placed within **¼-inch** of your lips, preferably against them. It is important to have the microphone element parallel to your mouth, and not twisted inside the cover.

Note: For optimum microphone performance, we recommend use of a Microphone Muff Kit from Oregon Aero (1-800-888-6910, www.oregonaero.com). This will not only optimize VOX performance, but will improve the overall clarity of all your communications.

You should also keep the microphone out of a direct wind. Moving your head through an air stream may cause the *IntelliVox*® to open momentarily. This is normal. The *IntelliVox*® is designed to work with normal aircraft cabin noise levels (70 dB and above). Therefore, it may not always recognize speech and clip syllables in a quiet area, such as in the hangar, or without the engine running. This is also normal.

Intercom Volume Control (7)

The small volume control knob adjusts the loudness of the intercom for the pilot and copilot. It has no effect on selected radio levels, music input levels or passengers' volume level.

The larger, outer volume control knob controls intercom volume for the passengers. It has no effect on radio or music levels.

Mono Headsets in Stereo Installation

The pilot and copilot positions work with mono headsets. However, the IntelliAudio® feature will not function.

If a monaural headset is plugged in to a PMA8000G Stereo installation, one channel will be shorted and all passengers will lose one channel unless they switch to the "MONO" mode on the headset.

Intercom Modes (8)

The intercom has three modes. This button cycles through the intercom modes, from top to bottom and then back up. The description of the intercom mode function is valid only when the unit is not in the "**Split**" mode.

ISO: The pilot is isolated from the intercom and is connected only to the aircraft radio system. He will hear the aircraft radio reception (and sidetone during radio transmissions). Copilot will hear passengers' intercom and entertainment, while passengers will hear copilot intercom and entertainment. Neither will hear aircraft radio receptions or pilot transmissions. The pilot can hear music if desired by pressing the MUSIC button.

ALL: All parties will hear the aircraft radio and intercom. Crew and passengers will hear selected entertainment. During any radio or intercom communications, the music volume automatically decreases. The music volume increases gradually back to the original level after communications have been completed.

CREW: Pilot and copilot are connected on one intercom channel and have exclusive access to the aircraft radios. They may also listen to Entertainment 1. Passengers can continue to communicate with themselves without interrupting the Crew and may listen to entertainment as configured.

In **SPLIT** mode, the intercom, and the indicator are off for the crew. Pressing the **Mute** button enables the activates the intercom and indicator in the **CRW** mode.

Remote ICS Mode switch

If a remote SWAP switch is installed, the intercom mode can be changed by a long press (more than 1 second) of the swap button.

Alternate Intercom Function

This function controls the distribution of aircraft radio within the intercom, as well as passenger intercom muting, **when in the "ALL" intercom mode**. In the "*standard intercom function*" mode, aircraft radios are distributed to all, when the intercom is in the ALL mode. In CREW mode, only the pilot and copilot positions will hear aircraft radios.

When "Alternate Intercom" function is toggled (hold ICS button for more than three seconds in ALL mode) a voice announces "*Alternate Intercom Function*," and the passengers will NOT hear aircraft radios, even in the **All** intercom mode. They will be able to converse with the crew. However, when the aircraft radio becomes active, the intercom audio from the passengers is muted, allowing the crew to focus on the radio. The passengers will still be able to talk to each other. Pressing holding the ICS button for three seconds again switches the intercom back to "*Standard Intercom Function*."

Alternate Intercom mode is reset at power up.

Marker Beacon Operation (9)

The Marker Beacon Receiver uses visual and audio indicators to alert you when the aircraft passes over an ILS Marker Beacon transmitter.

The Blue, **O**uter Marker lamp has an associated 400-Hertz 'dash' tone. The lamp and tone will be keyed at a rate of two tones/flashes per second when the aircraft is in the range of the Outer Marker.

The Amber, **M**iddle Marker lamp is coupled with a 1300 Hertz tone, keyed alternately with short 'dot' and long 'dash' bursts at 95 combinations per minute.

The White, **I**nner marker lamp has a 3000 Hertz 'dot' tone, and will be keyed at a rate of six times per second.

Marker Beacon Receiver audio can be heard by a short press of the "**MKR**" push-button switch. The Audio (AUD) indicator will illuminate.

The **MKR** button is also used to set the receiver sensitivity and to test the indicator lamps mute the marker audio.

Short press- Controls Marker audio on/off. The top indicator (AUD) lights green when audio selected. Selection will be remembered during power cycles.

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Quick reference PMA8000G Operation

This pull-out section covers advanced operation of the PMA8000G.

flightmate®

The flightmate® is an audio storage system with three features, radio playback, stored audio playback for a checklist or reminders, and four audio messages can be triggered by external triggers, and acknowledged if desired.

Storing Alert Messages

The PMA8000G has four discrete messages that can be played when triggered by an external event. Refer to the installation manual for aircraft connections.

NOTE: THESE MESSAGES ARE SUPPLEMENTAL AND PILOT OPTION, AND SHALL NOT REPLACE ANY EXISTING ALERTS IN THE AIRCRAFT.

The recording time is limited to 5 seconds per message.

HTRF	NAV 1	NAV 2	AUX
Message 1	Message 2	Message 3	Message 4

Messages can be stored or changed at anytime, by pressing the front panel buttons below that correspond with that alert message. You will hear a "ding" letting you know that the recording process has begun. Speak the message into the pilot's microphone. Once recording is complete, release the button.

You can play back the message by holding down the button above. You will only be allowed to playback the message once. Any additional long presses of the button will activate the recording process again.

Once a message has started to play, pressing the **PLAY** button (or an external **ACK**nowledge button, if installed) will stop it. Message #1 is designed to only play when the trigger is valid, and stop when re-

moved, such as an autopilot disconnect alert.

flightmate® messages

The flightmate "scratchpad" recording offers 2 ½ minutes of recording time for checklists or other messages. To start recording, press and hold the flightmate "PLAY" button. A chime tone indicates the start of the recording. This recording can be played by pressing the PLAY button until the recording starts to playback.

Radio Playback

The radio recording portion is a continuous loop recorder, (last message received will be the first heard), the recorder has 45 seconds of recording time, or up to eight messages. There are no buttons to press to start recording. The system automatically begins to record the instant the radio selected for transmit becomes active. Only the pilot and copilot will hear the playback audio.

To play back the last recorded message, you quickly press PLAY. You must wait for the message to stop playing before accessing the prior message. To cancel the playback, quickly press the PLAY button again. The next time the button is pressed, the next earlier message will be heard. If the radio becomes active while a message is playing, the message playback will stop. The new audio will not be stored.

Messages are lost when a different radio is selected for transmit.

The playback will stop whenever there is more incoming selected com audio, and the message can be replayed from the beginning. **Note:** an external playback button may also be installed in a convenient location.

Bluetooth Connection

1. Turn on the PMA8000G.
2. From your Bluetooth enabled device, search for other devices, and select the PMA8000G.
3. The PMA8000G should connect automatically. The Bluetooth symbol will light up.

You can now make and receive calls with the audio directed through the audio panel, and stream music as Music input 1.

The PMA8000G can be paired with up to eight individual devices. When that number is exceeded, one device will be automatically unpaired to allow the new device. The device eliminated will be selected

at random by the Bluetooth module. *Hint, if your old phone is not recognized by the PMA8000G, you may simply need to re-pair.*

Reset Bluetooth devices

If the Bluetooth stops responding to paired devices, it may be because of corrupted device data. Simply reset the Bluetooth system as follows:

1. Power off audio panel
2. Put the pilot's headset on
3. Hold down NAV1 and NAV2 buttons at the same time
4. Turn ON the audio panel, and continue to hold down the two buttons for at least 5 seconds or there is a "ding" sound in headset, if you do not hear this chime start over.
5. Audio panel re-initiation is complete
6. Remove PMA8000G device from your smart phone
7. Search for Bluetooth devices from your smart phone
8. Select PMA8000G
9. If password is required try 0000
10. Once paired stream music and place phone call

Pairing separate music and telephone devices

It is possible to use a different music source (iPad, iPod with Bluetooth adapter, Bluetooth enabled laptop, etc) and telephone. However, the music source must be paired second, after the telephone, if the telephone also has music streaming capability. Otherwise, the Smartphone will also take over the music streaming.

Split Mode

The Split mode puts the pilot on COM 1, while the copilot can use COM 2 independently. To enter the split mode, press both the XMT 1 and XMT 2 buttons at the same time. To exit, press the desired COM 1 or COM 2 XMT button.

When you activate the Split mode, the intercom is inhibited to avoid confusion with multiple conversations. The ICS indicator goes off when Split mode is activated. To reactivate the intercom, press the Mute button, which places the intercom in CREW mode.

Note: Split Mode does not turn off selected navaid audio to pilot. However, the copilot will only hear the selected com receiver and unswitched inputs.

Alternate Intercom mode

The Alternate Intercom mode allows the passengers and crew to converse, in ALL intercom mode, without distracting the crew from radio duties. The passenger microphones removed from the crew when the radio is active, and the passengers never hear aircraft radios. Press and hold the **ICS** button until the audio annunciation starts (about 1 second) to activate the function, and you will hear "Alternate Intercom Function." Hold the button again to exit, and you will hear "Standard Intercom Function."

Music Muting

Music source #1 (Bluetooth and Music 1 input) has three muting modes, which are announced in the headset as they are activated. These are: Radio Mute (aircraft radio mutes music), Mute on (both radio and intercom mutes music), and Mute off (nothing interrupts music). Press the Mute button to cycle through the modes in sequence.

Music #2 has either Mute On or our Karaoke™ mode, which the AUX button can be used to control this mute mode. A dedicated switch may also be installed.

Music in pilot isolate mode

The pilot can elect to listen to Music 1. While already in the ISO mode, press and hold the **ISO** button until the indicator blinks. The ICS indicator will then blink every few seconds to indicate this mode is active. Music muting will follow the modes listed above. This mode resets with power cycle.

Music Distribution

The Music (DISTR) button has three states; **Standard Music Distribution, Music 1 Pilot** and **Music 1 All Headsets**.

Music 1 (the Bluetooth device *or* the Music 1 input on the rear connector) can be distributed to all headsets depending on intercom mode.

In *Standard Music Distribution,* Music 1 is provided to the crew, and Music 2 is independently provided to the passengers.

In *Music 1, Pilot*, the pilot hears Music 1, while the copilot and passengers hear Music 2

Medium press- Controls marker low & high sense change. When HIGH is
selected, the HIGH indicator will be lit in green. Se-
lection will be remembered during power cycles. Be-
cause LOW is default mode, the indicator will be nor-
mally off.

Long press– This mutes the marker beacon audio.
Also, as long the MKR button is held, the marker lamps activate and light
the T/M indicator next to the MKR button. When the button is released the

marker lamps will extinguish and the
TEST text will go back to white back
light.

It will stay muted until the pilot
reaches the next ILS marker indicator
and then it will un-mute. Cycling the
power will remove the mute mode.

Bluetooth® Telephone Mode

The telephone mode serves as a full duplex interface for telephone systems
such as cellular phones with Bluetooth® connectivity. When interfaced with
an approved airborne telecommunications system, the PMA8000G can serve
as an audio control and distribution center.

In **ALL** intercom mode, crew <u>and </u>passengers will be heard on the phone
when they speak. All will hear selected audio. Com audio is automatically
heard in the headsets.

In **CREW** mode, the pilot and copilot are connected to the telephone. The
pilot and copilot will have transmit capability on the other selected trans-
ceiver Com 1 or 2, simply by using their respective PTT switch.

In **ISO** intercom mode, when the PMA8000G is in the **TEL** mode, the pilot
position is in the "Phone Booth." Only the pilot will hear the telephone, and
only he will be heard. He will also have access to Com 1 or 2, and will trans-
mit on that radio using the PTT. All selected audio is provided.

Music and Music Muting

The PMA8000G has two independent music inputs at the rear connector.

The PMA8000G also has the ability to receive streaming music from a Blue-
tooth-enabled device.

Music 1 will be heard by the pilot and copilot positions. Music 1 can also be
distributed to the passengers using the MUSIC DISTR control. The Blue-
tooth streamed music in the PMA8000G is also handled as Music 1.

NOTE:

All music devices should be turned off for take off, landing, or any critical phase of flight. FAA Regulation 14 CFR 91.21 restricts the use of portable electronic devices.

§91.21 "(a) Except as provided in paragraph (b) of this section, no person may operate, nor may any operator or pilot in command of an aircraft allow the operation of, any portable electronic device on any of the following U.S.-registered civil aircraft. . .

"(b)(5) Any other portable electronic device that the operator of the aircraft has determined will not cause interference with the navigation or communication system of the aircraft on which it is to be used."

You can refer to Advisory Circular 91.21-1C for more information, at www.faa.gov.

The front panel "Mute" button has **three** modes, and controls the Mute function for Music 1.

The SoftMute™ circuit will mute the music whenever there is conversation on the radio, the intercom, or both, depending on the "Mute" mode selected. When that conversation stops, the music returns to the previous level comfortably, over a second or so.

The mute mode functions are controlled through sequential pushes of the MUTE button, and include annunciations of the mode selected. The PMA8000G always defaults to *Mute On* when turned on.

Mute On- music **will** mute with *either* intercom *or* radio - MUTE button is lit green. Voice annunciation is "mute on."

Mute Off - "Karaoke" mode - music will not mute except during outgoing radio transmissions.- MUTE indicator is OFF. Annunciation is "mute off."

Radio Mute - *Radio communications* will mute music, but intercom will **not** mute music - MUTE indicator is OFF. Annunciation is "radio mute."

The passenger's intercom also has a SoftMute™ circuit. If the passengers hear the radio, or talk on the intercom, the music will mute. If the audio panel is in CREW mode, then the radio reception will not affect the passenger music.

Passengers also have a **Mute Off** or "Karaoke" mode. If the passengers are listening to the music 1 input, their Mute Off is controlled by the front panel "Mute" button. If the passengers are listening to the music 2 input, their Karaoke Mode is activated by an external switch installed either in the panel, or connected to the AUX button logic output pin on the PMA8000G.

Music Distribution (DISTR)

The Music Distribution button allows you to either distribute the music 1 input to <u>all</u> intercom stations, all of the time, or have other distribution rules apply to your music inputs.

When "*Music one all headsets*" is selected (press and hold **MUSIC**), music 1 (from the rear connector input, Pins J2 23 & 24 only) or Bluetooth will be distributed to all headsets and is independent of the intercom mode switch. Therefore, even in the CREW mode, the passengers will hear Music 1, even though they will not hear the intercom or radios.

This mode allows you to use a single in-flight entertainment source aboard, and to send it everywhere, even in crew mode. The music muting will be normal, and follow the selected mode of the crew or passengers.

Press and hold **MUSIC** again, this will select "*Music one pilot*". This will allow the Music 1 and/or Bluetooth to be distributed to the pilot's headsets while the copilot and passengers listen to Music #2.

Press and hold **MUSIC** again, and you will hear "*Standard Music Distribution.*" In this mode, Music 2 becomes active, and will always be presented to the passengers on the intercom. Music 1 is only available to the pilot and copilot. The intercom mode switch doesn't have any effect on the music distribution.

When the music distribution is "standard," Music 1 will always go to the pilot and copilot positions, and is <u>never</u> heard by the passengers. Music 2 is always heard by the passengers, and never heard by the pilot and copilot.

This mode is useful if your passengers have a different interest in entertainment or are watching a DVD, but do not want to be excluded from the intercom conversations.

The pilot and copilot will always hear **Music 1** through the unit rear connector. This is present in ALL and CREW intercom modes, and available to the copilot position in ISO mode.

Music 2 is provided to the passenger positions regardless of intercom mode, when the audio panel is in *Standard Music Distribution*. The pilot and copilot can <u>never</u> hear **Music 2**, under any condition.

If the passengers always want to hear the source in **Music 1**, input through the rear connector, regardless of the intercom mode (ISO/ALL/CRW), select "*Music 1 all headsets*."

Pilot music on/off

A quick press if the MUSIC button will add music to the pilot headset, and the music button turns green. In this way, music is available to the pilot in

any intercom mode, including Isolate.

flightmate®

flightmate® is an audio storage system with three features, radio playback, stored audio playback for a checklist or reminders, and four audio messages triggered by external events, and acknowledged if desired.

Storing Alerts

The PMA8000G has four discrete messages that can be played when triggered by an external event. Refer to the installation manual for aircraft connections.

NOTE: THESE MESSAGES ARE SUPPLEMENTAL AND PILOT OPTION, AND SHALL NOT REPLACE ANY EXISTING ALERTS IN THE AIRCRAFT.

The recording time is limited to 5 seconds per message.

Messages can be stored or changed at anytime, by pressing the front panel buttons below that correspond with that alert message. You will hear a "ding" letting you know that the recording process has begun. Speak the message into the pilot's microphone. Once recording is complete, release the button.

You can play back the message by holding down the appropriate button. You will only be allowed to playback the message once. Any additional long presses of the button will activate the recording process again.

Once a message has started to play, pressing the PLAY button will stop it.

flightmate® messages

The flightmate "scratchpad" recording offers 2 ½ minutes of recording time for checklists or other messages. To start recording, press and hold the flightmate "PLAY" button. A chime tone indicates the start of the recording. See Quick reference to store messages.

This recording can be played by pressing the PLAY button until the recording starts, and release.

The Radio Recording System is a continuous loop recorder, (last message received will be the first heard), the recorder has 45 seconds of recording time, or up to eight messages. There are no buttons to press to start recording. The system automatically begins to record the instant the radio selected for transmit becomes active. Only the pilot and copilot will hear the playback audio.

To play back the last recorded message, you press PLAY button quickly. You must wait for the message to stop playing before accessing the prior message. To cancel the playback, press play button again. The next time the

button is pressed for one second, the next earlier message will be heard. If the radio becomes active while a message is playing, the message playback will stop. The new audio will not be stored. Press play to restart the message you were playing.

Messages are lost when a different radio is selected for transmit.

The playback will stop whenever there is more incoming selected com audio, and the message can be replayed from the beginning. **Note:** an external play-back button may also be installed in a convenient location.

Backlighting

The lighting in buttons, indicators, and backlit text is controlled by the panel light dimmer. If a dimmer is not used, the input wiring should be connected for daytime viewing.

Public Address Function

To enter PA mode, press **SPR** button for more than one second. The **SPR** LED will blink while the audio panel is in PA mode. The copilot can use the selected com while the pilot will be heard over the speaker. To exit push **SPR** again. This mode is also reset when power is cycled.

PS Streamer Operation
Part Number 050-890-0913 & -0914 Only

PMA8000G Streamer controls

The PMA8000G can be equipped with a PS Streamer audio module, part number 011-894-0000. This module provides a Bluetooth® output of selected signals from the audio panel. These can be streamed to compatible devices such as a GoPro camera equipped with a SEMA adapter.

Pairing

To pair the PMA8000G with PS Streamer, press and hold the **AUX** and **SPR** buttons (1) at the same time.

The Bluetooth indicator (2) will flash quickly, then more slowly as the pairing process progresses, and finally illuminate solid when the process is complete. This may take 30 seconds.

After the module is paired the first time, it will connect to that device each time it is activated.

Depending on the Bluetooth device receiving the audio, pairing may have to be initiated on the device, or the audio panel first.

NOTE: During the time that the Streamer module is in the pairing process, the main Bluetooth connection to the telephone/music is inhibited, so music and telephone will not be available. **You will need to** *reconnect* **your telephone and/or music device** *after* **pairing the streamer.**

Streamer on/off

The PS Streamer defaults to "off" when the audio panel is turned on each time. You will need to activate the PS Streamer for each flight is desired, but pairing will not be necessary. The module will reconnect when activated.

Press and hold the **AUX** and **SPR** buttons (1) at the same time to activate the PS Streamer when it has been turned off. If paired device is present the Bluetooth indicator will light.

VOLUME UP

VOLUME DOWN
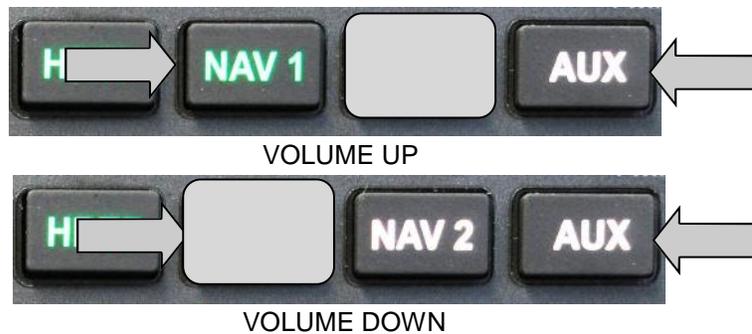
Volume

Momentarily press the following buttons at the same time until you hear a chime. The volume increases or decreases in 8 steps. Pressing **NAV 1** & **AUX** (3) buttons at the same time will increase all the audio being sent to the Bluetooth device. Pressing the **NAV 2** & **AUX** (4) at the same time will decrease the volume of all the audio sent to the Bluetooth device.

Source Selection

The output can contain either the audio heard by the pilot (radio, intercom, music, etc.) or communications radio audio.

Press and hold the **MUSIC** & **SPR** button until you hear "*COM Audio*" in the headset, to select communication radio only.

Press and hold the **MUSIC** & **SPR** button again until you hear "*Headset Audio*" in the headset, to select all audio heard by the pilot.

These audio messages are only heard by the crew.

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Warranty & Service

In order for the factory warranty to be valid, the installations in a certified aircraft must be accomplished by an FAA-(or other ICAO agency) certified avionics shop and authorized PS Engineering dealer. If the unit is being installed by a non-certified individual in an experimental aircraft, a factory-made intercom harness must be used for the warranty to be valid.

PS Engineering, Inc. warrants this product to be free from defect in material and workmanship for a period of three (3) years from the date of retail sale by authorized PS Engineering dealer. During the first **twelve (12) months** of the three-year warranty period, PS Engineering, Inc., at its option, will send a replacement unit at our expense if the unit should be determined to be defective after consultation with a factory technician. For the remaining **twenty-four (24) months** of the three-year warranty period, PS Engineering will send a no-cost replacement unit at customer shipping expense.

All transportation charges for returning the defective units are the responsibility of the purchaser. All domestic transportation charges for returning the exchange or repaired unit to the purchaser will be borne by PS Engineering, Inc. The risk of loss or damage to the product is borne by the party making the shipment, unless the purchaser requests a specific method of shipment. In this case, the purchaser assumes the risk of loss.

This warranty is not transferable. Any implied warranties expire at the expiration date of this warranty. PS Engineering SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. This warranty does not cover a defect that has resulted from improper handling, storage or preservation, or unreasonable use or maintenance as determined by us. This warranty is void if there is any attempt to dissemble this product without factory authorization. This warranty gives you specific legal rights, and you may also have other rights, which may vary from state to state. Some states do not allow the exclusion of limitation of incidental or consequential damages, so the above limitation or exclusions may not apply to you.

All items repaired or replaced under this warranty are warranted for the remainder of the original warranty period. PS Engineering, Inc. reserves the rights to make modifications or improvements to the product without obligation to perform like modifications or improvements to previously manufactured products.

Factory Service

The units are covered by a three-year limited warranty. See warranty information. Call PS Engineering, Inc. at (865) 988-9800 before you return any unit. This will allow the service technician to provide any other suggestions for identifying the problem and recommend possible solutions.

After discussing the problem with the technician and you obtain a Return Authorization Number, ship product to:

PS Engineering, Inc. Attn: Service Department
9800 Martel Rd.

Lenoir City, TN 37772
(865) 988-9800   FAX (865) 988-6619 Email: contact@ps-engineering.com

Units that arrive without an RMA number, or telephone number for a responsible contact, will be returned un-repaired. PS Engineering is not responsible for items sent via US Mail.