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PMA8000B

**Audio Selector Panel
Marker Beacon Receiver
High-fidelity Stereo Intercom System**



Flying Never Sounded So Good!™

Pilot's Guide and Operation Manual

202-890-0202

Revision 11

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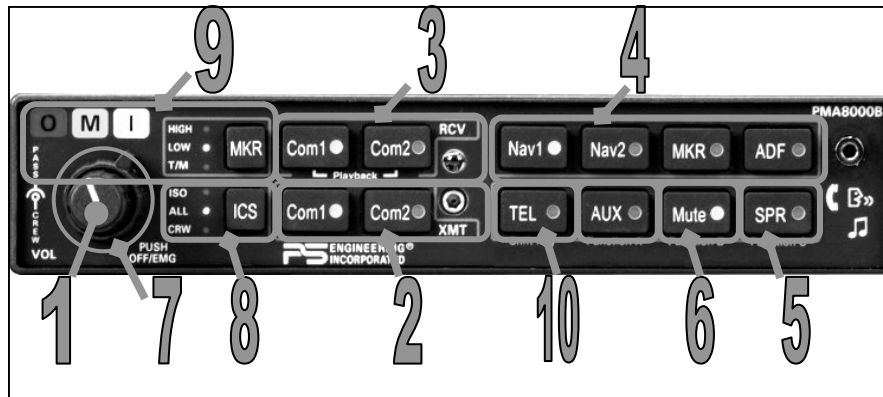
Applies to units with Serial Number Y04823 and above

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This pilot's guide provides detailed operating instructions for the PS Engineering PMA8000B Audio Panel. Please read it carefully before using the equipment so that you can take full advantage of its capabilities.

This guide is divided into operating sections such as Com Transceiver Selection, Audio Selector, Intercom, Marker Beacon Receiver, utility jack and the configuration buttons. The center section provides a handy reference that you can remove.



PMA8000B controls

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

Turn the unit on and off by pressing the volume control on the left side of the panel.

The power switch controls all audio selector panel functions, intercom and marker beacon receiver. The audio selections will be remembered and return to the last state when the unit is turned on.

When the unit is turned off, either by pressing the volume control, *or* if the breaker is pulled removing power, the PMA8000B enters the 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) (3)

There are two pushbuttons associated with each communication radio. The two lower buttons (# 2) (XMT) control which radio is selected for transmit. The top row of pushbuttons (# 3) (RCV) allows selection of the received audio.

To select Com 1 or Com 2 for transmitting, simply press the button on the bottom row, next to the XMT legend. Both the bottom and top button indicators will light, showing that you can transmit **and** receive on the selected radio. The audio panel automatically selects the receiver, and will not allow



you to transmit on a radio without being able to hear the receive audio.

Communications Receive (RCV) Selection (3)

To listen to the other radio, press the upper button, in the RCV (receive) section.

When you have select a com for receive, it will stay selected until you manually deselect it. For instance, if you set Com 1 for clearance delivery and Com 2 for Ground Control, transmit on Com 1 to get clearance, but want to contact ground you can switch between transmitters without having to re-select the receivers. In essence, switching the mic selector will not override prior selection of Com receiver audio.

If the **Monitor** function is activated (Function B), the audio from this radio will be muted when the primary radio (selected for transmit) is receiving a signal.

Unless the audio panel is in “split” mode, the PMA8000B gives priority to the pilot’s radio Push-To-Talk (PTT). If the copilot is transmitting, and the pilot presses his Push-To-Talk (PTT), the pilot is then heard over the radio.

In TEL mode, the pilot microphone and headphones are connected to the cell phone, but you still hear the Com radios selected. The radio PTT will switch the mic to the selected com transceiver, and allow continued aircraft communications to continue. (See Page 6—TEL—for more details)

Navigation Receiver Audio Selector (4)

You select the switched navigation receivers, **Nav 1**, **Nav 2**, **ADF MKR** (Marker) and **Auxiliary (AUX)** by pressing the desired button, and an indicator will show you which are turned on. Pushing the button again removes that audio from the selection. The DME input (if present) is also shared with **AUX**.

In SPLIT mode, only the pilot will hear the selected navigation audio.

Cockpit Speaker (5)

The **SPR** switch will place all selected audio on the cockpit speaker when this switch is selected. In “Split” mode, the speaker carries the same audio as the pilot hears.

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

Unswitched audio 1, 3 and 4 will come through the speaker regardless of the speaker button condition. Unswitched input 2 will be on the speaker only if the SPR is active.



Intercom Operation

IntelliVox® VOX-Squelch

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

No adjustment of the *IntelliVox*® squelch control is necessary. There is no field adjustment. Through three individual signal processors, the ambient noise appearing in all six microphones is constantly being sampled. Non-voice signals are blocked. When someone speaks, only their microphone circuit opens, placing their voice on the intercom.

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. (ref: *RTCA/DO-214, 1.3.1.1 (a)*). 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). This will not only optimize VOX performance, but will improve the overall clarity of all your communications.

It is also a good idea to keep the microphone out of a direct wind path. Moving your head through a vent 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 cabin, 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 or the passengers. It has no effect on radio or music levels.

Adjust the radios and intercom volume for a comfortable listening level.

Most general aviation headsets today have built-in volume controls; therefore, volume also can be further adjusted at the individual headset.

Mono Headsets in Stereo Installation

The pilot and copilot positions work with stereo or mono headsets. If a mon-



aural headset is plugged in to a PMA8000B Stereo installation, one channel will be shorted and all passengers will lose that channel unless they switch to the “MONO” mode on the headset.

Intercom Modes (8)

The “ICS” pushbutton switch selects the three intercom modes. The description of the intercom mode function is valid only when the unit is not in the "Split" mode. Then, the pilot and copilot intercom is controlled with the **Mute** button.

This button cycles through the intercom modes, from top to bottom and then back up. An LED shows the active mode.

ISO: The pilot is isolated from the intercom and is connected only to the aircraft radio system. He hears the radios (and sidetone during radio transmissions). The copilot and passengers will hear the music sources as configured by the audio panel configuration Function keys. See page 12 —Smart Function Keys for more details.

While in ISO Mode, the pilot can elect to hear music #1. First, be sure that the ISO mode is selected. Then press and hold the TEL button, and then hold the ICS mode button for more than one second. The ICS indicator will blink slowly to indicate music is present in ISO. The music muting will follow the selected modes.

ALL: All parties will hear the aircraft radio and intercom. Crew will hear Music 1, passengers can hear Music 1 or 2. The music mutes in accordance with the muting mode selected.

CREW: Pilot and copilot are connected on one intercom channel and have exclusive access to the aircraft radios. Again, the music that the crew and passengers will hear is determined by the Smart Function Keys.

Marker Beacon Operation (9)

The Marker Beacon Receiver uses visual and audio indicators to alert you when the aircraft passes over a 75 MHz transmitter. The receiver is on whenever the audio panel is turned on.

The Blue lamp, labeled “O,” is the Outer Marker lamp and has an associated 400-Hertz 'dash' tone. The lamp and tone will be keyed at a rate of twice per second when the aircraft is in the range of the Outer Marker Beacon.

The Amber lamp, labeled “M,” is the Middle Marker lamp and is coupled with a 1300 Hertz tone. It is keyed alternately with short 'dot' and long 'dash' bursts at 95 combinations per minute.

The White lamp, labeled “I,” is the Inner marker and has a 3000 Hertz 'dot' tone. The lamp and tone will be keyed at a rate of six times per second.

The audio from the Marker Beacon Receiver can be heard by selecting the "**MKR**" push-button switch.



A pushbutton is used to set the receiver sensitivity and to test the indicator lamps mute the marker audio.

Holding the MKR button for one second activates marker test lamp, labeled "T/M" and illuminates all three lamps simultaneously to assure the lamps (internal and external) are in working order. TST does not activate MM auto-pilot sense output. Releasing the button returns to the last sensitivity.

Pressing the marker mode select ("T/M") for one second will also cause the marker audio to mute for that beacon. The next beacon received will re-activate the audio.

There is a service adjustment located on the top of the unit for the marker volume.

Telephone (TEL) (10)

The TEL mode serves as a full duplex interface and distribution for telephone systems such as portable cellular phones with earpiece jacks. Pressing the TEL button connects the telephone to the users as follows:

In **ALL** intercom mode, all crew and passengers will be heard on the phone when they speak. Com and other selected radio audio is also heard in the headsets. If the pilot or copilot pushes the radio PTT, their mic will be transferred to the selected Com radio. The telephone party will not hear ATC communications, and vice versa.

In **CREW** mode, only the pilot and copilot are connected to the telephone. Passengers will not hear the telephone. The pilot and copilot will also have transmit capability on the selected Com transceiver.

In **ISO** intercom mode, when the PMA8000B 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 transmit on that radio using the PTT. All selected audio is provided to the pilot.

In cases where the cellular telephone doesn't provide sidetone, the audio panel can be configured, by holding the TEL and ADF buttons for more than one second, to create sidetone for you.

Split Mode

In the split mode, the pilot is on Com 1, while the copilot is able to transmit and receive independently on Com 2. Activating the split mode is straightforward — push both the Com 1 and Com 2 XMT (bottom) buttons at the same time. All four indicators will come on. Select either one 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

(Continued on page 11)

Quick reference PMA8000B Operation

This pull-out section covers advanced operation of the PMA8000B.

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 Com 1 and Com 2 XMT 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. To reactivate the intercom, press the Mute button.

Note: Split Mode does not turn off Nav, ADF, or Aux selected audio to the pilot. However, the copilot will only hear his selected Com receiver and unswitched inputs.



Telephone Operation

When the TEL button is active, the cellular telephone is added to the intercom loop, and who is connected to the phone depends on the intercom mode.

ISO – The pilot is alone on the telephone

All – Everybody is on the telephone.

Crew – Pilot and copilot on telephone, passengers are not.



Telephone	Pilot	Copilot	Passengers
ISO	☎		
ALL	☎	☎	☎
CRW	☎	☎	
	☎ On phone		
	Not connected		

Some cellular telephones do not provide sidetone (where you hear yourself speak). You can have the PMA8000B provide sidetone by pressing the TEL and ADF buttons for more than one second.

Music Muting

Music source #1 (front panel jack and Music 1 input) has four muting modes, which are announced in the headset as they are activated.

Annunciation	LED	Intercom	Radio
"Mute on"	on	Muted	Muted
"Mute off"	off	♪	♪
"Radio mute"	off	♪	Muted
"Intercom mute"	off	Muted	♪

These are: Radio Mute (aircraft radio mutes music), Intercom Mute (intercom conversation 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 muting on or off, and is externally controlled.

Music in pilot isolate mode

The pilot can elect to listen to Music 1, even in the Pilot **I**solate mode. While already in the ISO mode, press and hold the **TEL** (function) button, and press the **ICS** button. The ICS indicator will blink every few seconds to indicate this mode is active.

Function Configuration



Functions A, B, and C give the PMA8000B some special capabilities.

Function A AUX		Function B MUTE		Function C SPR		
Alternate Intercom Mode		Monitor Mode		Music Distribution		
State 1	State 2	State 1	State 2	State 1	State 2	State 3
Alternate intercom function	Standard Intercom Function	Monitor on	Monitor off	Standard music distribution	Alternate music distribution"	Music 1 all headsets

Function A allows the passengers and crew to converse, in ALL intercom mode, without distracting the crew from radio duties. The passenger microphones are cut out from the crew when the radio is active, and the passengers never hear aircraft radios. Press TEL and AUX buttons to activate Function A, and you will hear “Alternate Intercom Function.” Press these buttons again to exit, and you will hear “Standard Intercom Function.”

Function B activates a **Monitor Mode**. In this case, the audio from the Com radio that is selected for transmit will mute the other Com audio when it is active. For example, if Com 1 is selected to transmit to ATC, but Com 2 is receiving weather information; the ATC will mute the audio from the weather while ATC is transmitting. In Monitor mode, the RCV Com indicator will blink every few seconds as a status indication. Monitor mode is set to off when the unit is turned off.

Function C controls music distribution, and has three states; **Standard Music Distribution, Alternate Music Distribution and Music 1 All Headsets.**

Music 1 (the Music 1 input on the rear connector) can be distributed to all headsets regardless of intercom mode.

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

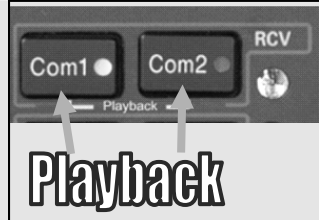
In *Alternate Music Distribution*, Music 1 is provided to everybody in the ALL intercom mode, and Music 2 becomes active, for the passengers only, when the intercom is in the CREW mode. The pilot and copilot can hear either Music 1 from the rear connector, or the front panel jack. In order for the passengers to hear the front panel music jack, the PMA8000B must be in Alternate Music Distribution, and in the ALL or CRW modes.

FCTN C	Pilot	Copilot	Passengers
Standard Music Distribution			
ISO	1*	1	2
ALL	1	1	2
CRW	1	1	2
Alternate Music Distribution			
ISO	1*	1	1 or FPJ
ALL	1	1	1 or FPJ
CRW	1	1	2
Music 1 all Headsets			
ISO	1*	1	1
ALL	1	1	1
CRW	1	1	1

*optional

“Smart” Front Panel Jack

When music 1 is actively playing through the rear panel input, the front jack automatically becomes an advisory audio input, and is NOT muted by radio or intercom conversations. This is useful for connecting portable traffic or terrain alert devices. NOTE: Music 1 must be actively playing, or else the input may mute if Mute selected, and alerts will not be heard.



Recorder Playback

The internal recorder is always storing the audio from the radio selected for transmit. To playback the last incoming audio, hold the RCV button on the radio selected to transmit for one second, and release. The playback will start. Playback stops when the radio is active, but the new incoming message will not be recorded. When the radio stops, press play and you will be in the same message you had playing.

To hear an earlier message, hold the Com RCV button until playback stops again, and then press again to begin playing the next earlier message. Repeat until you hear the message you wanted. Incoming new messages will stop playback, and you can then restart.

A remote playback switch may also be installed.

Note: when you switch from one transmitter to another, the recordings are lost.

Blinking indicators

This chart shows you what the blinking LEDs mean.

What is blinking?	How often	What it means
Com 1 or Com 2 XMT	Every 1 second	Pilot or copilot is transmitting
Com or Com 2 RCV	Every 3 seconds	Monitor mode activated
ICS mode	Every 3 seconds	Pilot has music in ISO
Mute and SPR buttons	Every 1 second	PA Mode active

(Continued from page 6)

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.

Utility Jack

The 2.5 millimeter (3/32") jack on the front of the PMA8000B has three distinct functions:

- Cell phone input
- Advisory audio input
- Music input

The use of this jack is controlled by three Function Keys controlled from the front panel. See below—Function Keys.

Cellular phone

When a cellular telephone is connected to this jack using an appropriate cord the PMA8000B audio panel will connect the intercom to the cell phone when the “TEL” button is pressed (9). When the TEL mode is off, the telephone ringer audio will be heard if it is present on the telephone’s output (ringer may be muted by radio and intercom).

Audio Advisory Input

The front jack can be used as a priority advisory input for auxiliary systems such as a GPS terrain advisory or portable traffic watch system. To prevent radio or intercom from muting this input, press the “Mute” button.

NOTE: *The front jack is no substitute for the certified installation of alerts such as the GPS waypoint or autopilot tones. These still must be hard wired into the back by your installer.*

Smart Jack Function

When the PMA8000B has a signal on music #1 input coming in from the rear connector, the front panel jack automatically becomes a Priority Advisory input, and is heard in the crew headphones. This input will NOT be muted by radio or intercom provided that music 1 on the rear connector has an active audio signal. If this signal is not present, this input may be muted, unless the Mute is deselected.

Music Input

When used as a music input, the front panel jack is treated as Music #1. However, thanks to the function controls, it can be distributed to all users, depending on the intercom mode.

Function Keys

With the audio annunciations provided, the configuration process is self-directed. Note: these annunciations will be stopped by any audio received on the Com radio selected for transmit.

These functions are non-essential and non-required and are only an accessory capability. They don't affect the primary function as a selector panel, aircraft intercom, or marker beacon receiver. You can't do anything with these buttons to prevent the PMA8000B from doing its main job.

Looking at the front panel you'll notice that the TEL, AUX, Mute and SPR buttons have "Function" assignments.

To use these function keys – press and hold "TEL" (Shift Key) and then press the desired key, Functions A, B, or C.

The volume of the function selection annunciations and recorder playback can be adjusted through a hole on the top of the unit marked "ANN VOL."

Function "A"

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

When Function A is toggled into "*Alternate Intercom Function*," the passengers will NEVER hear aircraft radios, even in the **ALL** mode. In addition, when in the **ALL** mode, passengers will be able to converse with the crew. However, when the aircraft radio audio becomes active, the intercom from the passengers is muted, allowing the crew to focus on the radio. Passengers will be always be able to talk to each other.

Function "B"

Function "B" turns the Monitor Function on and off. When you press TEL and Mute, the audio will announce "Monitor on," when activated, and "Monitor off" when deactivated."

When the Monitor is on, the audio from the Com that is selected for reception only (only top LED illuminated) will be muted when the radio that is selected to transmit (both LEDs on) receives a signal.

This function is useful if you are copying weather from AWOS on Com 2, but have clearance delivery on Com 1. With the monitor active, the AWOS audio will be silenced when clearance delivery starts to speak.

NOTE: This mode is NOT remembered through power cycles, to prevent inadvertent blocking of desired audio on your next trip.

Function "C"

Function "C" has three modes. The first allows you to either send music 1 to all intercom stations, all of the time, **or** have the normal rules apply.



When “*Music number one, all headsets*” is selected, music 1 source connected to the unit rear connector 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.

When you press Function “C,” again, you’ll hear, “*Alternate Music distribution.*” In this case, Music 2 will be active *only* when the intercom is in the CREW mode, and only the passengers will hear it.

Press 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 or the front panel jack is only available to the pilot and copilot. The intercom mode switch doesn’t have any affect on the music distribution.

When the music is standard distribution, Music 1 will always go to the pilot and copilot positions, and is never 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.

Music Distribution

The pilot and copilot will always hear **Music 1** through the unit rear connector, or a source plugged into the front panel jack. This is present in ALL and CREW intercom modes, and available to the copilot position in ISO mode.

The pilot can hear this music source in ISO mode, if desired. To activate, while in the ISO mode, hold the Shift Key (TEL) button, and press the ICS mode button for more than one second. The ICS mode LED will blink slowly to indicate music is connected to the pilot headset, although the intercom is not.

Music 2 is provided to the passenger positions regardless of intercom mode, when the audio panel is in *Standard Music Distribution*, and also in *Alternate Music Distribution*, but only if the intercom is in the CREW mode. The pilot and copilot can never 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.*”

If the passengers want to hear the music input through the front panel jack, the audio pane **MUST** be in *Alternate Music Distribution*, and the intercom must be in the ALL or ISO mode.



	Standard Music Distribution			Alternate Music Distribution			Music 1 All Headsets		
	All	Crew	ISO	All	Crew	ISO	All	Crew	ISO
Front Panel Jack	Crew	Crew	Copilot*	Crew & Pass	Crew	Copilot* & Pass	Crew	Crew	Copilot*
Music 1 Input	Crew	Crew	Copilot*	Crew & Pass.	Crew	Copilot* & Pass.	Crew & Pass.	Crew & Pass.	Copilot* & Pass.
Music 2 Input	Pass.	Pass.	Pass.		Pass.				

*Pilot has Music 1 option in ISO mode

Music Muting

There are two SoftMute™ muting circuits. The front panel "Mute" button has four modes, and controls the Mute function for music 1.

The SoftMute™ circuit will cut 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.

- Mode 1 - music **will** mute with *either* intercom *or* radio - MUTE button is lit. Voice annunciation is "mute on."
- Mode 2 - "Karaoke" mode - music will not mute except during transmissions.- MUTE LED is OFF. Annunciation is "mute off."
- Mode 3 - *Radio* will mute music, but intercom will **not** mute music - MUTE LED is OFF. Annunciation is "radio mute."
- Mode 4 - Radio will **not** mute music, intercom *will* mute music - MUTE LED is OFF. Annunciation is "intercom mute."

The passengers' 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.

If the passengers are listening to the music 1 input or front panel input, their Karaoke Mode 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 PMA8000B.

Music 1 Volume

The music level is set at the factory at a comfortable level. We recommend adjusting the entertainment volume at the sources. However, the Music 1 (on

rear connector) volume can be adjusted from the front panel, if desired, by pressing the combinations of keys listed. NOTE: Increasing this music level can increase the amount of aircraft electrical system noise as well.

Press and Hold **Shift Key** (TEL) and **SPR** for more than one second to increase music 1 volume. This will increase the volume three steps per second.

Press and Hold **Shift Key** (TEL) and **Mute** for more than one second to decrease music 1 volume. The music can be turned completely off, so if you aren't hearing what you expect, try increasing the volume.

It will take about 12 seconds to go from minimum to maximum volume.

Swap Mode (Switch from Com 1 to Com 2 remotely)

This optional switch is usually mounted on the control yoke or a convenient place by the pilot position. The "swap" button allows you to switch between the Com transmitters without having to reach up to the audio panel, and is a handy way to switch to Ground Control when exiting the runway.

Internal Recorder System

The Intercom Recording System allows automatic storage and playback of aircraft radio traffic. Operating as a continuous loop recorder, (last message received will be the first heard), the recorder has 40 seconds of recording time, or up to 16 messages. There are no buttons to press to start recording. The system automatically begins to record the instant the radio becomes active. Only the com radio selected for transmit is recorded, and only the pilot and copilot will hear the playback audio.

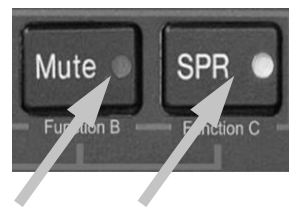
Playback

To play back the last recorded message, you press and hold the Com RCV pushbutton associated with the selected radio transmitter for about one (1) second. You must wait for the message to stop playing before accessing the prior message. To cancel the playback, press and hold the playback button for two seconds (2). The next time the button is pressed for one (1) 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 playback button may be installed in a convenient location.

Public Address Function (if enabled by installer)

To access PA function, press the **Mute** and **SPR** buttons simultaneously. The **Mute** and **SPR** LEDs will blink to indicate the PA mode. The copilot can continue to use the selected com radio while the pilot will now be heard over the speaker. To exit PA mode, push **Mute** and **SPR** again.





Backlighting

The text backlighting is controlled by the aircraft dimmer, while the indication LEDs are automatically controlled by the light sensor on the PMA8000B.

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 disassemble 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.

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