ENGINEERING® INCORPORATED

Sound Quality. Sound Engineering.

9800 Martel Road
Lenoir City, TN 37772

www.ps-engineering.com

PM501
Low Cost 4-Place Intercom
Pilot's Guide
And
Operation Manual

July 2001

Introduction

Congratulations on your purchase of a PM501 intercom! We at PS Engineering welcome you to our family.

The PM501 is a panel mounted, 4-place intercom that offers an intelligent low cost alternative for budget minded pilots who still want quality sound and performance. This manual provides information on the operation of the PM501. Please read it completely to maximize your enjoyment of its use.

Description

The PM501 is a 4-place, panel-mount intercom with individual output amplifiers for the pilot, copilot, and passengers 1 & 2. The VOX (Voice Activated Squelch) circuit prevents mic audio from getting through the intercom until someone speaks and automatically opens the circuit. The volume control adjusts the level for all headsets and functions as a PUSH-ON/PUSH-OFF power switch.

The PM501 has an automatic, fail-safe connection to the aircraft radio. In the event that power to the intercom is lost, an internal relay will immediately connect the pilot's headset directly to the aircraft radio.

A provision for an entertainment input allows the pilot and passengers to listen to music during flight. During intercom activity, this music automatically mutes to allow communications without distraction. Note: the music is NOT muted during radio reception.

The 2-position switch acts as a mode selector. In the down position, the intercom is in the ALL mode. Each position will hear the aircraft radio, music, and each other. In the up position, (ISO mode) only the pilot is connected to the aircraft radio for undisturbed radio communications. In ISO, the pilot is no longer on the intercom. All others will continue to communicate with each other and listen to music if desired.

With the PM501, both the pilot and copilot have radio transmit

The radio traffic will not mute the music.

NOTE: When either the pilot or copilot PTT is depressed, all microphones are off except for the transmitting one.

Warranty

PS Engineering, Inc. warrants this product to be free from defect in material and workmanship for a period of one year from the date of installation. In certified aircraft, an FAA Form 337 must accompany the warranty card for this warranty to be in effect. During the warranty period, the unit must be returned to PS Engineering, Inc. and, at their option, it will send a replacement at no charge. The customer is responsible for shipping charges returning the unit to PS Engineering.

This warranty is not transferable. Any implied warranties expire at the expiration date of this warranty. WE SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. This warranty does not cover a defect that has resulted from improper 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 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 your state.

Service

Call PS Engineering, Inc. at (865) 988-9800 and ask for a technician. He may be able to diagnose the problem and offer a solution without the possible need for returning the unit. If the unit does need servicing, ship product in UPS approved packaging (not US Mail) to:

PS Engineering, Inc.
Attn.: Service Department
9800 Martel Road
Lenoir City, TN 37772
Phone: (865) 988-9800
FAX (865) 988-6619
www.ps-engineering.com/support.html

After the warranty period, PS Engineering offers a low flat-fee repair for the life unit. Contact the factory for details.

The volume control on the PM501 affects the volume level of the aircraft radio for the copilot and passenger . The radio volume is not affected for the pilot. This gives added flexibility for communications requirements. Note: Volume control is not affected by plugging in other headsets.

Adjusting The Squelch Control (2)

This VOX operated intercom keeps all microphone channels off while the pilot, copilot or passengers are not speaking. This reduces background noise from the aircraft. Only when someone speaks will their microphones automatically turn on, passing the audio through the system.

Set the Squelch control knob (2) by slowly rotating the squelch knob clockwise until you no longer hear the engine noise in the earphones. When the microphone is positioned properly near your lips, normal speech levels should open the channel. When you stop talking, there is a delay of about a second before the channel closes. This prevents closure between words and eliminates choppy communications.

Mode Select (3)

The center switch (3) is a 2- position mode switch that allows the pilot to tailor the intercom function to best meet the pilot's needs. Regardless of configuration, the pilot will always hear the aircraft radio.

ISO (Up Position): The pilot is isolated from the intercom and is connected to the aircraft radios only. He will hear only the aircraft radio reception and sidetone (only during radio transmissions). Copilot and passengers will hear the intercom and music but not the aircraft radio receptions or transmissions.
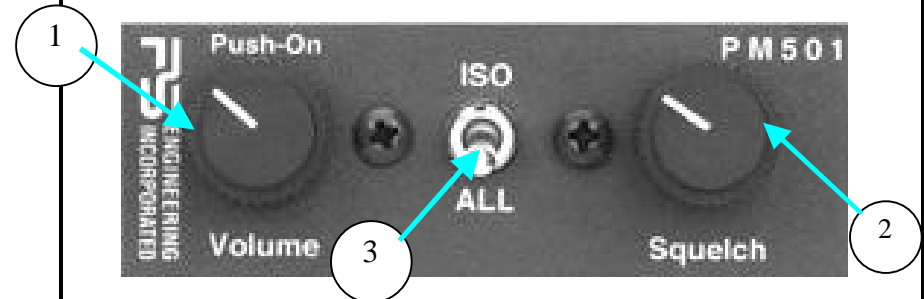
All (Down position): All parties will hear the aircraft radio reception and transmissions, intercom, and music. However, during any intercom activity, the music volume automatically decreases. The music volume increases gradually back to the original level after communications have been completed.

capabilities. Only the person who presses their Push To Talk (PTT) will be heard over the aircraft radio. If both pilot and co-pilot press the PTT, the copilot will override. The pilot regains priority by switching the unit off.

Specifications

Input power:	12-28 Volts DC
Current Drain:	< 70 mA: Externally fused at 1 Amp
Headphone Impedance:	150-1000 ΩTypical
Total audio power available:	225 mW
Audio Distortion:	<10% @ 75 mW into 150 Ω load
Aircraft Radio Impedance:	1000 Ω Typical
±3 dB Mic Frequency Response:	350 Hz-6000 Hz
±3 dB Music Frequency Response:	200 Hz - 15 kHz
Net weight:	8.5 Ounces (.340 kg)
Dimensions:	0.90" H X 2.60" W X 4.85" D
	(2.2 cm x 6.6 cm x 12.3 cm)

OPERATING INSTRUCTIONS

Turn the PM501 on pressing the volume control knob (left knob). This also engages the automatic fail-safe system.

Adjusting The Volume (1)

The volume control knob (1) adjusts the loudness of the intercom and music for all headsets. Turning the control clockwise increases the audio. Many headsets have volume controls on them. If it becomes necessary to reduce the volume for an individual passenger, the three others should be set at maximum, and the unit volume set for a comfortable level. The individual can then reduce their volume accordingly.