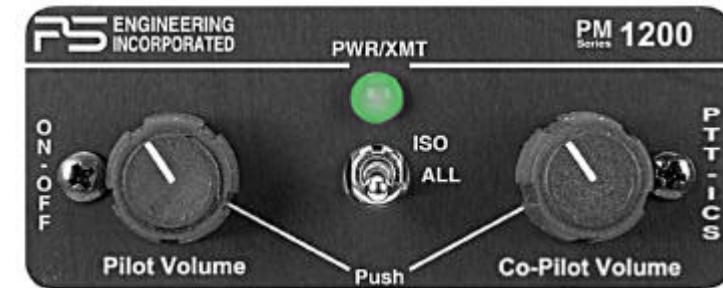


*Flying Never Sounded So Good!™*

**PS ENGINEERING<sup>®</sup>**  
**INCORPORATED**

***Sound Quality. Sound Engineering.***



**PM1200**

**Panel Mounted Intercom with  
IntelliVOX<sup>®</sup>  
for High Noise Application**

**Part No. 11960**

Includes 11961

**Pilots Guide**

**PS ENGINEERING, INCORPORATED**  
9800 Martel Road  
Lenoir City, TN 37772  
Phone (865) 988-9800 FAX (865) 988-6619  
[www.ps-engineering.com](http://www.ps-engineering.com)

reception (and sidetone during radio transmissions). Copilot and passengers will hear themselves and music but not the aircraft radio traffic.

**ALL** (Middle position): All parties will hear the aircraft radio, intercom, and music. However, during any ICS or radio communications, the music volume automatically mutes. The music volume increases gradually back to the original level after communications have been completed.

## Warranty and Service

### Warranty

In order for the factory warranty to be valid, the installations in a certified aircraft must be accomplished by an FAA- 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 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 one year from the date of installation. During this one year warranty period, PS Engineering, Inc., at its option, will send a replacement unit to the PS Engineering dealer, if the unit should be determined to be defective after consultation with a factory technician. PS Engineering will not ship to the end user under warranty, unless authorized by the dealer.

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 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.

### Factory Service

The **PM1200** is covered by a one-year limited warranty. See warranty information.

Call PS Engineering, Inc. at (865) 988-9800 before you return the 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 Road  
Lenoir City, TN 37772  
(865) 988-9800 FAX (865) 988-6619.  
[www.ps-engineering.com/support.shtml](http://www.ps-engineering.com/support.shtml)

NOTE:

**PS Engineering is not responsible for units shipped US Mail.**

If no method of payment is provided, the units will be returned COD. If no RMA or description of problem is present, the shipment will be refused.

[www.ps-engineering.com/  
support.shtml](http://www.ps-engineering.com/support.shtml)

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**NOTICE:** Warranty is not valid unless this product is installed by an Authorized PS Engineering

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## General Information

### Introduction

The **PM1200** is a panel, or blind mounted, 2-place (expandable with IntelliPAX) monaural intercom system (ICS) designed specifically for high-noise aircraft.

In addition to IntelliVOX® (PS Engineering's proprietary intercom squelch protocol), the PM1200 includes Active Microphone Processing (AMP). This signal processing is specifically designed to improve the intelligibility of human speech, so don't expect the PM1200 to sound like a normal intercom. All of the intercom audio power of the unit is focused in the voice range, while the music fidelity remains unaffected.

Please read this manual completely to become familiar with all the features.

### Scope

This manual contains operational instructions for the following PS Engineering units:

Part Number	Description
11960	Push to talk intercom for use in noisy cockpits
11961	Same as above but remote (blind) mounting

### Description

The **PM1200** is a 2-place (unless expanded), panel-mounted intercom with PS Engineering's proprietary IntelliVOX® intercom protocol. The audio has been further enhanced with extra audio filtering for the microphones, and added headphone audio power.

The unit can be used as either voice-activated, or push to talk intercommunications, by simply pushing a front panel switch.

A front panel mode switch allows the pilot

to select multiple intercom configurations:

The **PM1200** has an automatic fail-safe interconnect to the aircraft radio. If power to the intercom is disrupted, an internal relay will connect the pilot's headset to the aircraft radio. This allows continuous radio communications. Note: The copilot will no longer hear aircraft radio when power is removed.

An entertainment input is provided, allowing the users to listen to music during flight. During intercom or aircraft radio activity, this music is automatically muted to allow communications without distraction. When the activity ceases, the Soft Mute circuit gradually returns the music to the original volume.

Both pilot and copilot have transmit capabilities over the radio. The **PM1200** allows only the person who presses their radio PTT to be heard over the aircraft radio. If both pilot and copilot press the PTT at the same time, the pilot will override.

### Approval Basis \*None\*

The **PM1200**, 11960 or 11961, are NOT FAA Approved. It is the installers responsibility to determine suitability for use.

### Specifications

Input power:	13.8 - 27.5 Volts DC
Current Drain:	< 250 mA (Externally fused at 1 Amp)
Output	120 mW into 150Ω @ 27.5 VDC 70 mW @ 13.75 VDC
Headphone Impedance:	150-1000 ohms typical
Aircraft Radio Impedance:	500- 1000 Ω typical
3 dB Music Frequency Response:	200 Hz to 15 kHz
Unit weight:	12 Ounces (0.35 kg)
Dimensions:	1.25" H x 3.00" W x 5.80" D (3.2 x 7.6 x 14.7 cm)
Temperature	-20°C to +55°C
Altitude	50,000 ft.

## OPERATION

With the installation complete, turn the **PM1200** on by pressing the pilot's volume knob. This also engages the automatic fail-safe system. The pilot's volume control does not control the volume of the aircraft radio, allowing an additional degree of aircraft radio listening flexibility.

**NOTE: Blind mounted units will have same functions, but the controls will be located on the panel. Consult your installer for details.**



### On/Off and Volume

Press the left hand knob to turn the unit on and off. This is also the fail-safe position. Whenever the unit is off, or power removed, the pilot's headset is connected directly to the aircraft audio system.

The pilot volume control knob adjusts the loudness of the intercom and music for the pilot's headset only. It has no effect on aircraft radio volume level. The co-pilot volume control adjusts the intercom volume for the copilot.

The green LED will illuminate when power is on, and turn red in transmit.

### Squelch

The PM1200 incorporates both a Push-to-talk intercom, and PS Engineering's revolutionary *IntelliVox*™. No adjustment of the squelch control is required. Through individual signal processors, the ambient noise appearing in both microphones is constantly being sampled. Non-voice signals are blocked. When someone speaks, only their microphone circuit opens,

placing their voice on the intercom.

#### NOTE:

The headset microphone must be placed within ¼ inch of your lips, preferably against them. 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.

*For optimum microphone performance, PS Engineering, Inc. recommends installation 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*

### Push-to-Talk Intercom

Under extremely high noise conditions, it may be desirable to have a push to talk (PTT) intercom mode, instead of relying on voice-activation (VOX). In the PM1200 the PTT intercom capability is user selectable .

To activate the PTT-ICS Mode, push the PTT-ICS override switch on the copilot volume control. Using the *separate* ICS PTT (not the radio PTT) button for pilot and one for the copilot will allow their voice on the intercom.

### Intercom Mode Select

The center switch is a mode control that allows the pilot to tailor the intercom function to suit flight conditions. Regardless of configuration, the pilot will always hear the aircraft radio. NOTE: If there is a power failure to the **PM1200**, or if the power switch is turned off, the copilot will not hear the aircraft radio. Only the pilot is connected directly to the aircraft radio.

**ISO (Up Position):** The pilot is isolated from the intercom and is connected only to the aircraft radios. He will hear the aircraft radio