

PMA 7000MS-CAP

Special Mission Audio Selector Panel



Communication is a vital part of any part of life, absolutely crucial to any flight, and never more so during critical missions. Yet cockpit communications should be as simple as a friendly conversation. That's why the PMA7000M-S is the best answer to any Cockpit Resource Management question.

The PMA7000MS-CAP is the logical extension of the revolutionary audio control system introduced by PS Engineering in the PMA7000. Where the last generation combined the functions of audio control, intercommunications, and stereo entertainment into a single unit, this new product brings even more capability. Capability that includes multiple combinations of three communications radios and push to talk intercom for exceptionally noisy conditions.



The PMA7000MS-CAP benefits from a dozen years of development in voice activated intercom squelch (VOX) and individual mic circuits. Operational simplicity is enhanced further by *IntelliVox™*, our revolutionary automatic intercom squelch. This circuit samples the ambient noise, adjusting the threshold so voices are easily heard, but the wind and engine are blocked out. This keeps unwanted noise out, while allowing easy conversation. The 6pole active microphone filtering makes communications crystal clear. Individual microphone circuits block all but the desired voice inputs. No more fiddling with knobs with *IntelliVox™* on the job.

When the mission gets tense, no one wants to be distracted by adjusting a squelch.

PS Engineering is proud to manufacture a version of the PMA7000M-S specifically for special missions such as Search and Rescue. This version is designed to interface with three transceivers, and has logic functions that will permit nine different configurations for the pilot and copilot microphones. The unit has a selectable ICS that also allows the crew to enable, or disable, intercom in the split mode. If desired, the PMA7000MS-CAP can be installed as a Push-to-Talk intercom, for ultimate control over the crew communications.

- Three transceiver capability
- 6-place Stereo Intercom
- *IntelliVox™*
- Swap Mode (US Patent 5,903,227)
- Split Mode with crew intercom
- Nine Transmitter combinations
- Positive transmitter indication
- Marker Beacon Receiver Option
- **Isolate, Crew and All** intercom modes
- No hassle 3 year warranty
- Selected receiver audio in Split Mode
- FAA-JAA TSO Approved (C50c, C35d) to latest specifications.
- Dual music input w/muting
- Backward compatible with PMA6000S & KMA24
- Fail-safe operation
- DRAWS (Digital Recorder and Audio Warning System) Option
- Available Tactical Radio Interface

Technical Specifications

| | |
|----------------------------------|--|
| Approval Basis | FAA-TSO C50d, C35d |
| Certification Documents | RTCA DO-160C, DO-178B, DO-143, DO-214 |
| Intercom | 6-place Stereo |
| Transceivers | 3 (Com 1, Com 2, Com 3) plus Swap modes |
| Receiver Inputs | 4 (Nav 1, Nav 2, ADF, DME) |
| Marker Beacon | Internal |
| Un-switched inputs | 2 |
| Power Required | 11-33 VDC, 1.5 A |
| Power consumption | Speaker on, 650mA typ. 1A peak Speaker off 350 mA |
| Output power Speaker: 14V 28V | 3 W into 4Ω 10 W into 4Ω |
| Headphone: | 38 mW into 150Ω w/o clipping 50 mW into 150Ω, <10% distortion |
| Audio Frequency Response | ±3dB, 300Hz-6,000Hz |
| Entertainment Frequency Response | ±3dB, 100Hz-18,000 Hz |
| Weight | 1.6 lb. |
| Dimensions | 6.25' W x 1.3" H x 6.8" deep behind instrument panel |
| Environmental Conditions | DO-160C A1D1/CA(MN)XXXXXXBBBBTBKXX |
| Temperature Range | -20 C to +55 , with transient operation at +70 C. |
| Altitude | 55,000 feet, unpressurized |
| Marker Receiver | 75 MHz crystal controlled receiver External marker lights and MM sense output |
| Software Certification | DO-178 Level D |

| Mic Selector | Normal | | Swap | |
|----------------|--------|---------|---------|---------|
| | Pilot | Copilot | Pilot | Copilot |
| Com 1 | Com 1 | Com 1 | Com 2 | Com 2 |
| Com 2 | Com 2 | Com 2 | Com 1 | Com 1 |
| Com 3 | Com 3 | Com 3 | No Swap | No Swap |
| Com1/2 | Com 1 | Com 2 | Com 2 | Com 1 |
| Com 1/3 | Com 1 | Com 3 | Com 3 | Com 1 |
| Com 2/3 | Com 2 | Com 3 | Com 3 | Com 2 |

PMA7000MS-CAP Transmitter Combinations

Blinking of the audio selector button when it is transmitting positively identifies the transceiver to prevent confusion.

The PMA7000M-S uses advanced surface mounted components to pack performance into a standard avionics form factor. An optional 75 MHz marker beacon receiver completes the package, allowing this important IFR function to remain in the traditional location. The lamps are labeled in the professional nomenclature and order. Besides the high and low marker sensitivity controls, the PMA7000MS-CAP has a test mode and a mute function to silence the audio after station acquisition.

An available Digital Recorder and Audio Warning System can be ordered that will store 60-seconds of radio traffic for instant replay. In addition, up to six alert messages can be programmed to direct the pilot's attention to out-of-limit conditions, if interfaced with compatible aircraft systems.

The system was designed for maximum ergonomic simplicity, with easy to see and use buttons in a natural configuration. The PMA7000MS-CAP represents another example of the logical application of technology for enhanced communications and safety.