

PS ENGINEERING PCD7100 General Information



INTRODUCTION

Quality cockpit and cabin entertainment has long been an elusive dream in general aviation. From marginal performance to unapproved parts, pilots couldn't enjoy the same music in their aircraft as they could in family car.

The PCD7100-Series represents such a product. This one unit combines intercommunications and a compact disk player for ultimate functionality. Using proprietary IntelliVox® design, this intercom eliminates the requirements for intercom squelch adjustments. The CD player is designed for simple operation, avoiding any increase in cockpit workload from complicated controls.

Before installing and/or using this product, please read this manual completely. This will ensure that you will take full advantage of all the advanced features in the PCD7100.

SCOPE

This manual provides detailed installation and operation instructions for the PS Engineering PCD7100-series of CD Player/Intercom Systems.

EQUIPMENT DESCRIPTION

The PCD7100-series is a state of the art intercom with PS Engineering's proprietary IntelliVox® automatic voice activated (VOX) intercom system, that contains an integrated Compact Disk (CD) player.

A six-station voice activated (VOX) intercom is included in the PCD7100-I (p/n 11950, 11951, 11954, 11956). This system has PS Engineering's exclusive IntelliVox® circuitry that eliminates manual adjustments. The system contains six separate VOX mic circuits, and only opens the microphone channel in use.

The intercom system incorporates pilot isolate and crew modes.

There are two stereo music inputs with "Soft Mute." SoftMute is a circuit that automatically mutes the music during radio or intercom activity, and then slowly returns the music to full volume after the activity ceases.

Intercom control is through front panel-mounted volume knobs and 3-position mode switch. A single volume controls intercom level for the pilot and copilot. Passenger headphone volume is factory set, and adjusted in flight with headset-mounted volume controls. Passenger volume control is further adjustable through screwdriver access in the top of the unit. Intercom squelch is automatic.

APPROVAL BASIS

The PCD7100, is FAA approved under TSO C50c (Audio Amplifiers), /DO-178B (Software Considerations for Airborne Equipment) and DO-214 (Audio Systems Characteristics and Minimum Operational Performance Standards for Aircraft Audio Systems). In addition, the system is approved under Joint Aviation Authorities JTSA C50c.

All systems comply with relevant portions of EURO-CAE ED-14D/DO-160D (Environmental Conditions and Test Procedures for Airborne Equipment), ED12B/DO-178B (Software Considerations for Airborne Equipment) and ED-18/DO-214 (Audio Systems Characteristics and Minimum Operational Performance Standards for Aircraft Audio Systems).

Operation is subject to the following conditions: This device may not cause harmful interference. This device must accept any interference received, including interference that may cause undesired operation.



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Technical Specifications	
Audio Selector/Intercom:	9.5 V to 3.22 V DCC50c, Class A
APPLICABLE DOCUMENTS:	RTCA/DO-214 RTCA/DO-160D RTCA/DO-178B (Level E)
ENVIRONMENTAL Qualifications:	B1CABSRXXXXXXABBBBTMXE2
Temperature Range:	
Operating:	-15° C to 55°C
Storage:	-40° C to 85°C
Altitude:	Up to 25,000 feet in a non-pressurized area of the cockpit.
DIMENSIONS:	Height: 2.0 in. (5.1 cm) Width: 6.25 in. (15.9 cm) Depth: 7.8 in. (19.8 cm)
WEIGHT (With Rack & Connectors):	2.2 lb. (1.0 kg)
POWER REQUIREMENTS (Including Internal Lighting):	
Voltage:	11 to 33 VDC
Maximum Current: 11950, 11951 11952, 11953	2.0 Amp (Externally protected by a 3 Amp pull type circuit breaker. 1.5 Amp (Externally protected by a 2 Amp circuit pull-type breaker.)
Typical operating current:	800 mA
Mechanical dimens. - Front panel - Case depth	61.3 x 61.3 mm (H x W) (2.413 x 2.413 inch) 204 mm (8.031 inch)
Intercom Specifications	
Headphone Impedance:	150 - 1000
Headphone Output:	35 mW each headset channel, no clipping <1% THD
Microphone Impedance:	150 - 600
Intercom Positions (11950, 11951, 11954, 11956, 11957):	6 places (with individual IntelliVOX circuits)
Music Inputs:	2 (Stereo)
Music Muting:	>-50 dB "Soft Mute" when Com or intercom active.
Distortion:	<1% THD @ 35 mW into 150
Mic Freq. Response, 3 dB:	300 Hz - 6000 Hz
Music Freq. Response, 3 dB:	20 Hz -20 kHz