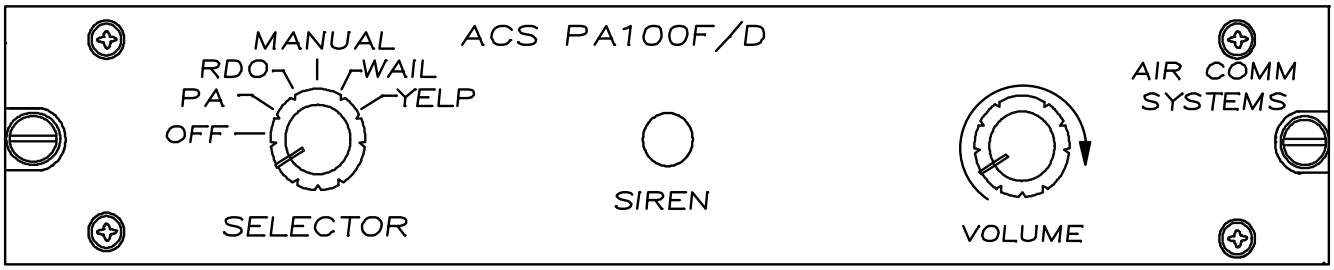
AIR COMM SYSTEMS, INC

AIRBORNE- AUDIO

Control Unit
Installation and Operations Manual

ACS PA100 F/D

Revision 1.1



Air Comm Systems, Inc
37610 Sky Canyon Dr., Hangar 51
Murrieta, CA 92563
Ph: 951-677-0101 ~ Fx: 951-677-0701
Info@AirCommSystems.com ~ www.AirCommSystems.com

ACS PA100 F/D Operations and Installation Manual Table of Contents

Installation **3**

- Physical Dimension Outline for Mounting 3

  Figure 1- Control Unit Physical Dimensions 3

- Physical Installation 3
- Interface Schematic 4

  Figure 2 - Front Panel Controls 4

Operation **5**

- Front Panels Controls 5

  Figure 3 - Front Panel Controls 5

Instruction for Continued Airworthiness **7**

- Instruction for Continued Airworthiness 7

Warranty Information **8**

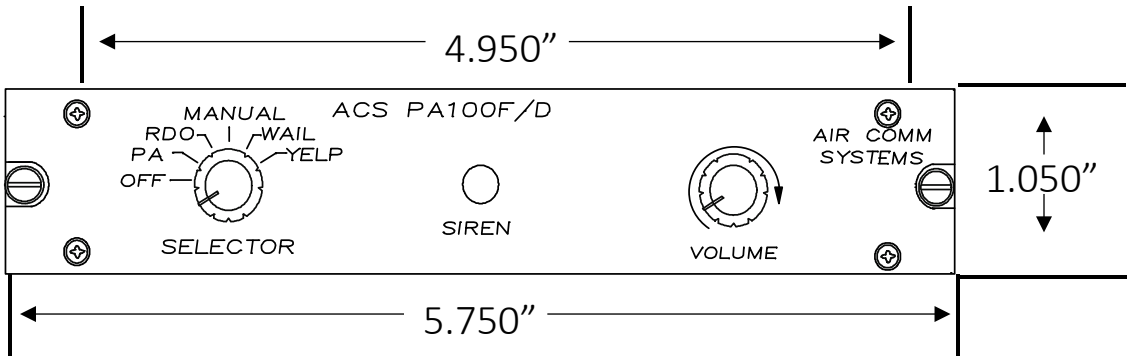
- Limited Warranty Information 8

ACS PA100 F/D Operations and Installation Manual
Physical Dimensions

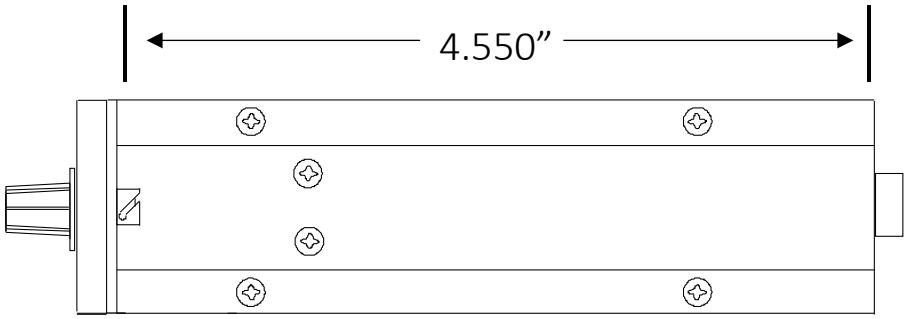
- Physical Dimension Outline for Mounting

Figure 1- Control Unit Physical Dimensions

****UNIT WIDTH BEHIND FACE PLATE****



****FRONT PANEL WIDTH – STANDARD DZUS MOUNT****



ALLOW UP TO 2.500” FOR REAR CONNECTOR AND CABLE CLEARANCE

- Physical Installation

The ACS PA100F/D Control Unit is designed to be Dzus mounted and should be installed in the aircraft using the DC25SL-F Installation kit that is included. The above outline drawing of the unit with dimensions will facilitate the installation. Be sure that adequate clearance is allowed for the rear connector and cable harness. The DC25SL-F Installation Kit consist of the following:

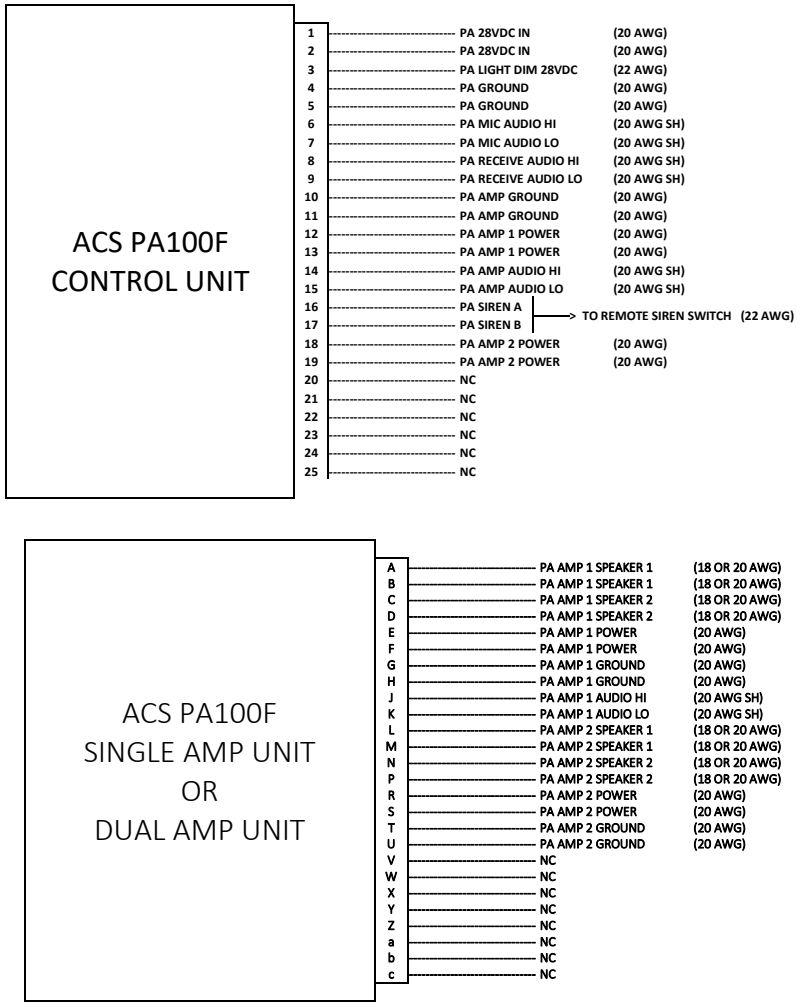
One (1) 25 pin AMP D-Sub miniature female mating connector complete with crimp pins, hood, and slide lock.

The connector pin configuration of the ACS PA100F/D Control Unit rear connector and the recommended wire size for the aircraft cable harness is shown on the following page.

ACS PA100 F/D Operations and Installation Manual
Interface Schematic

- Connector Pin-out

Figure 2 - Front Panel Controls

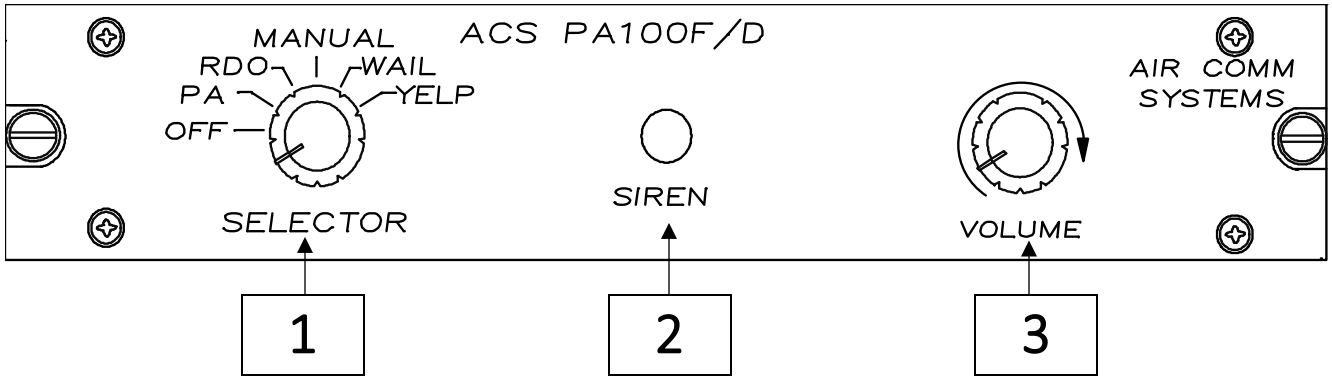


The ACS PA100F/D wiring harness should be constructed of Tefzel aircraft wire (M22759/16 grade). Power and ground wires should be 18 or 20 AWG, and all other wires may be 22 AWG. Shielded wires should be used where noted. Adequate protection against wear and chafing should be taken by using a braided cable sleeving or jacket. Before completing installation, verify that all cable connector pins are seated properly and that the connector is securely mounted to the unit mating connector. *Important* - please note the power of the unit before installing; it will be 14VDC or 28VDC and clearly marked as such on the unit's data tag.

Pre-fabricated cable harnesses are available from Air Comm to expedite installations. Consult our sales department for details.

ACS PA100 F/D Operations and Installation Manual
Front Panel Controls

Figure 3 - Front Panel Controls



Description

The ACS PA100(F/D) Control Unit is a compact, lightweight, panel mounted unit for use with the ACS PA100F or ACS PA100D remote mounted Amplifier. It is built to withstand demanding helicopter applications and is a proven performer in Law Enforcement, EMS, Forestry and Utility applications, and is approved for use on USFS contracts.

1 - SELECTOR Switch

The SELECTOR switch (Figure 3) is a six (6) position rotary switch used to select the mode of operation. The following are positions on the SELECTOR switch.

Method of Operation

- OFF
  In this position there is no power to the amplifier or circuitry in the control unit. Rotate unit selector to desire position to turn it on. To turn the unit off, rotate selector switch fully counter-clockwise.

- PA Operation
  Set the SELECTOR switch to PA. Adjust the VOLUME control (3) to a position just below the point at which feedback occurs. When maximum volume in the PA position is required, hold the microphone close to your lips and speak in a loud voice.

- RDO - Radio
  Incoming radio messages will be amplified by the electronic siren. Volume can be controlled by the VOLUME control.

- Broadcasting Radio Messages over the Loud Speaker
  Set the SELECTOR switch to the RADIO position. Set the VOLUME control (3) to desired level.

- Wail
  In this position the siren will produce a continuous “wailing” sound, up or down in frequency.

- Yelp
  In this position a continuous rapid “warbled” tone is generated.

- Manual Siren Operation
  In this position it is possible to operate the siren by depressing the front panel SIREN button. The siren can also be activated by means of an auxiliary switch such as a foot switch or a remote cyclic/collective switch.

2 - SIREN Button

The SIREN button, located in the middle of the front panel, is used to activate the siren when the SELECTOR switch is in the MANUAL position.

3 - VOLUME Control

The audio panel is lit by two 28V lamps (P/N 327) or 14V lamps (P/N 330) lamps which provide night time visibility for all panel legends. These lamps may be replaced in the event of a failure by unscrewing the front panel mounted filter cap, inserting a new lamp, and reinserting the filter into the front panel.

ACS PA100 F/D Operations and Installation Manual Instruction for Continued Airworthiness

Instruction for continued airworthiness for PA/Siren System Model ACS-PA100F Drawing Number 4000-000 PMA Approval Number PQ2074NM.

General Description:

The PA/Siren System consists of a Dzus mounted control unit which controls the functions of the PA/Siren output. The speaker(s) is either flush mounted to the aircraft airframe or externally attached to a hard point on the airframe.

The remote amplifier is remote mounted in a quick release tray. Cables with quick release connectors interconnect control, amplified speakers, circuit breaker and audio/mixer.

Purpose:

To provide instructions for the maintenance and inspection of the Air Comm Systems, Inc. Model ACS-PA100F PA/Siren System.

This manual provides instructions supplementing the aircraft maintenance manual. These instructions only supersede the aircraft manual in the indicated areas.

Operational Check:

The PA/Siren System should be checked prior to first flight each day per current operations manual.

Maintenance:

Check security and condition of Dzus mounted control unit, rack mounted remote amplifier speaker(s) with projectors and cones and associated wiring harness at periodic inspections such as annual/100 hour IAW FAR43 Appendix D(i).

On Condition:

Send control and amplifier to qualified repair facility for any repairs. Contact Air Comm Systems, Inc. Phone: 951-677-0101 or FAX: 951-677-0701 for authorized repair facility.

ACS PA100 F/D Operations and Installation Manual Warranty Information

- Limited Warranty Information

Air Comm Systems, Inc. warrants each new product to be free from defective material and workmanship and agrees to remedy any defect or to furnish a new part in exchange for any defective unit provided an examination discloses such defect occurred under normal use and service, and provided the defective unit is delivered to us, with transportation charges prepaid, within 1 year from the date of acceptance of equipment by the owner. Each unit required and claimed defective must be returned to:

Air Comm Systems, Inc.

37610 Sky Canyon Dr., Hangar 51 Murrieta, CA 92563
Ph: 951-677-0101
Fx: 951-677-0701
Info@AirCommSystems.com

This warranty does not extend to any products which have been subjected to misuse, neglect, accident, or in violation of instructions furnished, nor does it extend to units which have been repaired or altered outside of our factory except where such repairs are specifically authorized in writing by us.

This warranty is in lieu of all other warranties expressed or implied, and no representative or person is authorized to assume for us any other liability in connection with the sale of our products.