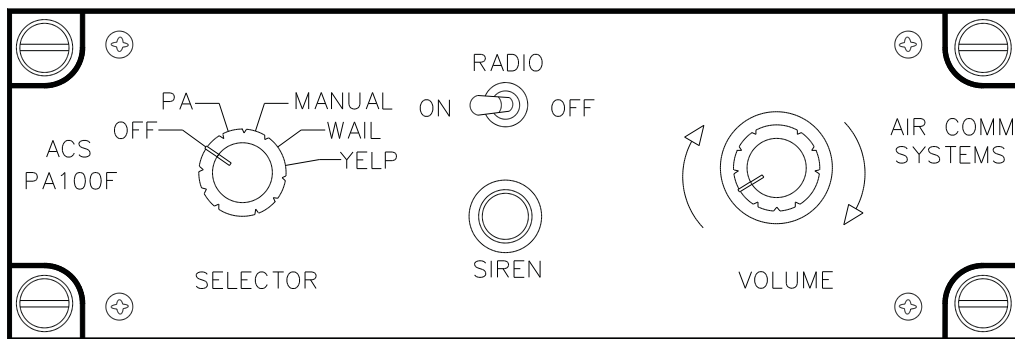


Air Comm Systems, Inc.

Installation and Operations Manual

ACS PA100F Control Unit



AirComm

Airborne Audio Products

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ACS PA100F Control Unit Installation and Operations Manual

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ACS PA100F Control Unit Installation and Operations Manual

Physical Dimensions

■ Physical Dimension Outline

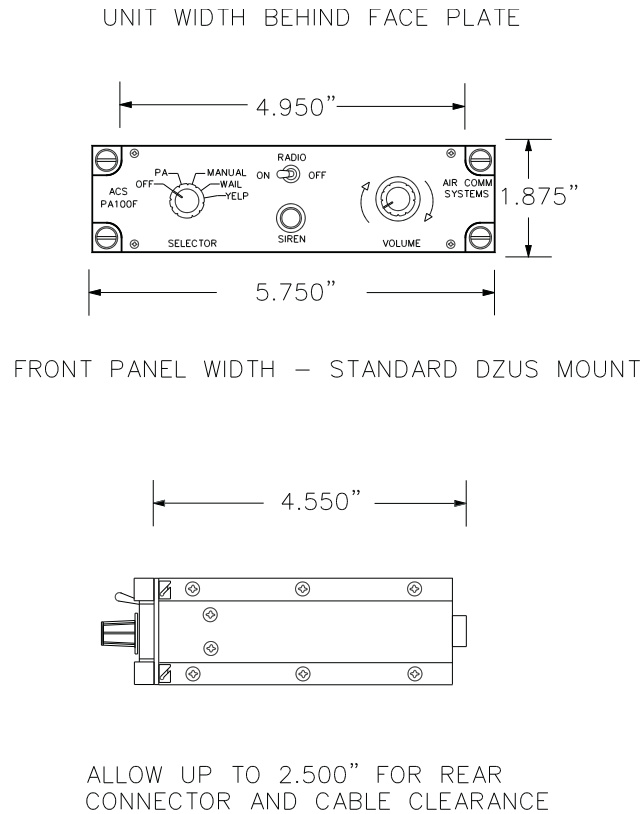


Figure 1 — Control Unit Physical Dimensions

■ Physical Installation

The ACS PA100F Control Unit is designed to be Dzus mounted and should be installed in the aircraft using the DC25SL-F Installation kit that was included with the unit. The above outline drawing of the unit with dimensions will facilitate the installation. The DC25SL-F Installation Kit consists 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 Control Unit rear connector and the recommended wire size for the aircraft cable harness is shown on the following page.

ACS PA100F Control Unit Installation and Operations Manual Interface Schematic

■ Connector Schematic

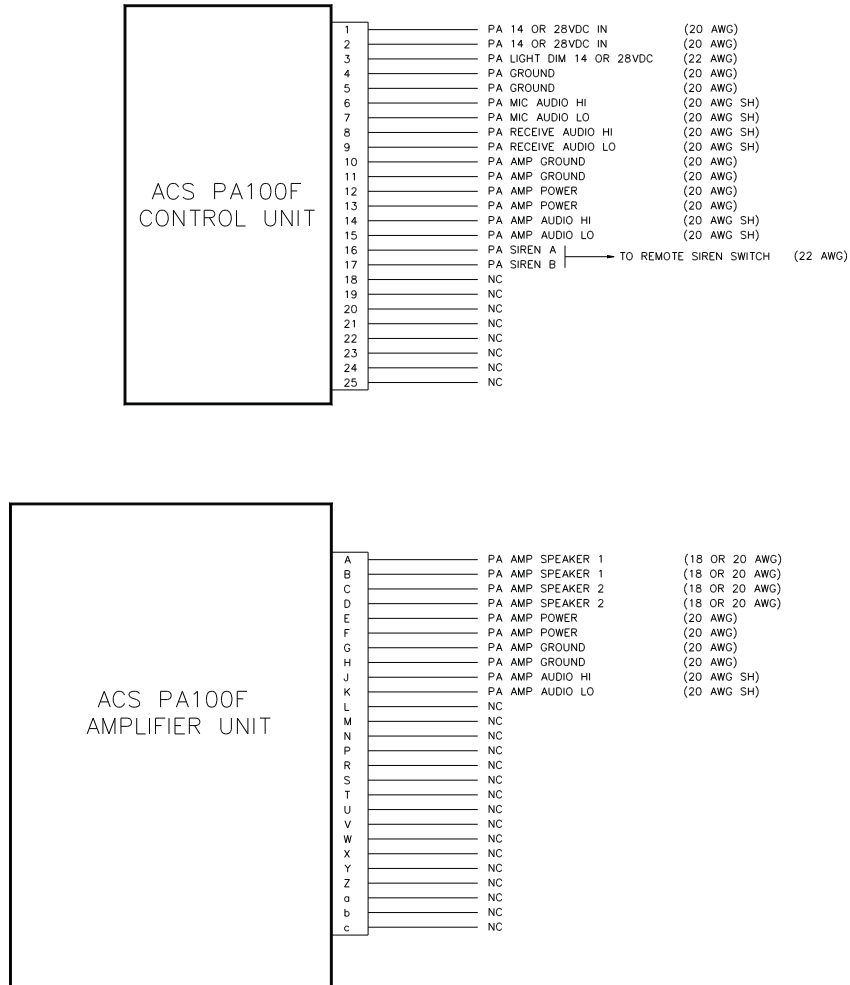


Figure 2 — Control Unit and Amplifier Connector Schematic

The ACS PA100F wiring harness should be constructed of Tefzel aircraft wire (M22759/16 grade). All wires to be the wire gauge as noted in the above connector schematic. 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 either 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 installation — consult our sales department for details.

ACS PA100F Control Unit Installation and Operations Manual

Operations of the ACS PA100F

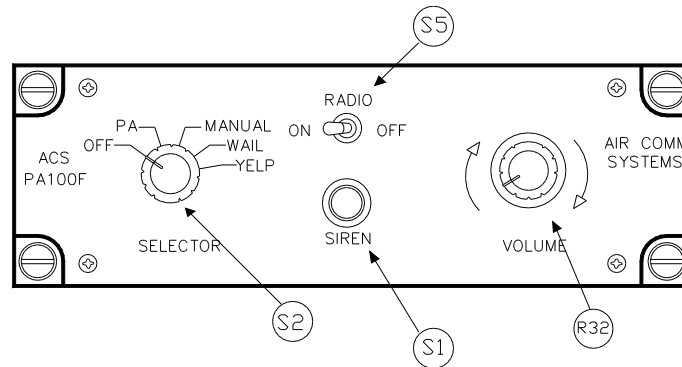


Figure 3 — Control Unit Front Panel

■ Description

The ACS PA100F 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.

■ Method of Operation

1 — Turning the Unit ON or OFF

To turn the unit on, rotate the SELECTOR switch (S2) clockwise to PA position. To turn the unit off, rotate SELECTOR switch (S2) fully counter-clockwise.

2 — PA Operation

Set the SELECTOR switch to PA. Adjust the VOLUME control (R32) 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.

3 — Broadcasting Radio Messages over the Loud Speaker

Set the SELECTOR switch to the PA or MANUAL position. Set the VOLUME control (R32) to desired level.

4 — Wail or Yelp

Set the SELECTOR switch to the desired position.

5 — Manual Siren Operation

Set the SELECTOR switch to the MANUAL position. Depress the SIREN button or, if connected, activate the auxiliary switch. The toggle switch (S5) must be in the RADIO OFF position.

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Operations of the ACS PA100F

■ Controls

All controls utilized during normal operation of the electronic siren are located on the front panel of the Control Unit (see Figure 3).

1 — VOLUME Control

The VOLUME control (R32) is used to control the volume when the electronic siren is used for public address or radio amplification. Clockwise rotation of this knob increases voice volume in the public address or radio amplification mode. The VOLUME control does not control the volume of the siren.

The maximum clockwise setting of the control will be determined, in most cases, by the point at which feedback or “squeal” occurs. This will depend upon the microphone gain, open windows, speaker placement or proximity of reflecting surfaces. Adjust VOLUME control to a position just below the point at which feedback occurs.

2 — SIREN Button

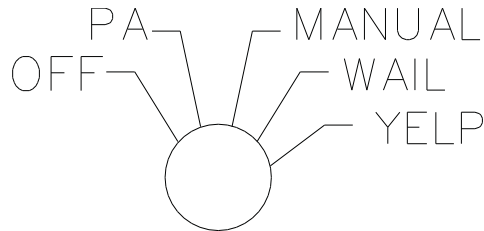
The SIREN button, located in the middle of the front panel, is used to activate the siren when the SELECTOR switch is in the MANUAL position. The RADIO switch can be in either the ON or OFF position when operating the siren manually.

3 — RADIO Switch

With the RADIO switch in the ON position, and the SELECTOR switch in either MANUAL or PA, incoming radio messages will be amplified by the electronic siren. When using the PA or siren functions, the switch should be in the OFF position. Volume can be controlled by the VOLUME control.

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Operations of the ACS PA100F



SELECTOR

Figure 4 — Selector Switch

4 — SELECTOR Switch

The SELECTOR switch (Figure 4) is a five position rotary switch used to select the mode of operation. The following are positions on the SELECTOR switch.

■ **A — OFF**

In this position there is no power to the amplifier or circuitry in the control unit.

■ **B — PA**

In this position the electronic siren may be used as a public address system. Volume is controlled by the VOLUME control. Also, the SELECTOR switch must be set to this position or the MANUAL position when the siren's radio broadcast function is to be used.

■ **C — MANUAL**

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. Also, the SELECTOR switch must be set to this position or the PA position when the siren's radio broadcast function is to be used.

■ **D — WAIL**

In this position the siren will produce a continuous "wailing" sound, up or down in frequency.

■ **E — YELP**

In this position a continuous rapid "warbled" tone is generated.

ACS PA100F Control Unit Installation and Operations 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 remote amplifier is remote mounted in a quick release tray.

The speaker (s) is either flush mounted to the aircraft airframe or externally attached to a hard point on the airframe.

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 supercede 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 928-854-5402 or FAX 928-854-8919 for nearest factory authorized repair facility.

ACS PA100F Control Unit Installation and Operations Manual Warranty Information

■ 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.

Air Comm Systems, Inc.
1016 E. Cooley Drive, Suite D/E
Colton, CA 92324
Phone 909-422-0463
FAX 909-422-05099
EMail aircommsys@aol.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.