

# Air Comm Systems, Inc.

PA/Siren Control Unit

Operations and Installation Manual

Revision 1.1

Model ACS 836-1

*Part No. 4003-001 (RHC Part No. A687-1)*

*FAA PMA PQ2074NM*



**AirComm**

Airborne Audio Products

**Air Comm Systems Inc.**

1640 W. Acoma Blvd., Suite A-118

Lake Havasu City, AZ 86403

Phone (928) 854-5402

FAX (928) 854-8919

E-Mail [aircomminc@aol.com](mailto:aircomminc@aol.com)

# ACS 836-1 Operations and Installation Manual

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Innerwiring Schematic	
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# ACS 836-1 Operations and Installation Manual

## Physical and Operating Specifications

### ■ Physical Specifications

*SIZE:* 4.00 in. (10.16 cm) W  
.50 in. ( 1.27 cm) H  
3.25 in. ( 8.25 cm) D

*WEIGHT:* .50 lb. (.23 kg)

*MOUNTING:* 2 hole mount

*CONTROLS:* Panel mounted - mode selector = rotary switch  
On/off and volume control = on/off volume potentiometer

*ILLUMINATION:* Edge lit front panel per MIL-P-7738E, type 3. Lamp is replaceable.  
Remove front panel light filter cap and replace with P/N 327 lamp (28V).

Lighting is capable of connection to dimmer bus for adjustment.

### ■ Operating Specifications

*DUTY CYCLE:* Continuous

*POWER REQUIREMENTS:* 14VDC or 28VDC +/- 10%

*MAXIMUM OPERATING ALTITUDE:* 16,500 ft.(5029 m)

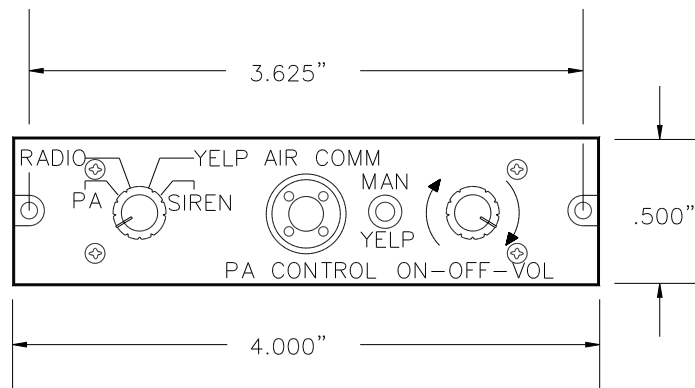
*OPERATING TEMPERATURE RANGE:* -40 C to +85 C (operating)  
-65 C to +125 C (storage)

*CURRENT DRAIN:* .1A at 14V or 28V

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## Physical Dimensions

### ■ Physical Dimension Outline for mounting



FRONT PANEL WIDTH – 2 HOLE MTG.



ALLOW UP TO 2.500" FOR REAR  
CONNECTOR AND CABLE CLEARANCE

### Physical Installation

The ACS 836-1 is designed to be panel mounted using the provided mounting holes and should be installed in the aircraft using the DC15SL-F Installation kit that is included. The above outline drawing of the unit with dimensions will facilitate the installation. The DC15SL-F Installation Kit consists of the following:

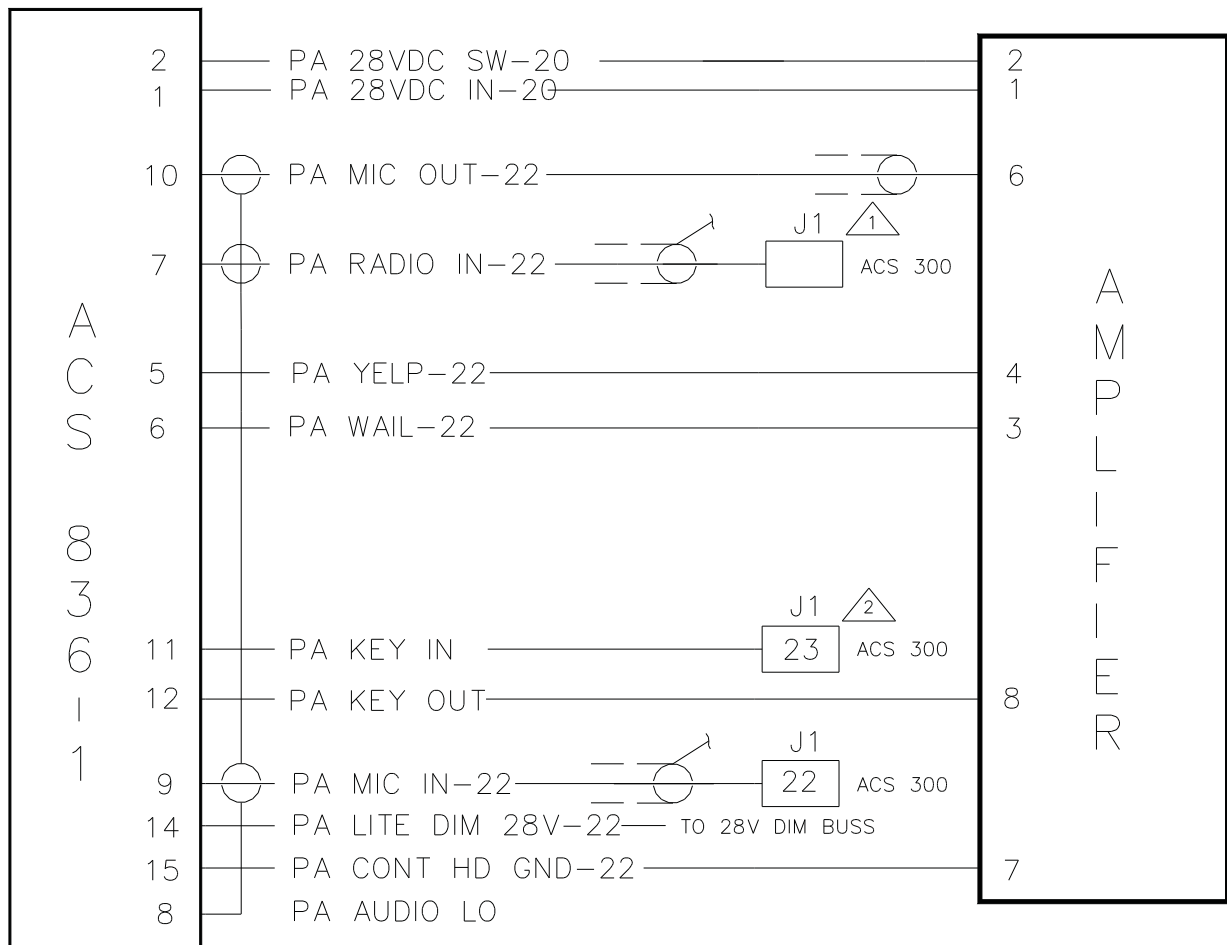
One (1) 15 pin AMP D-Subminiature female mating connector complete with crimp pins, hood, and slidelock.

The connector pin configuration of the ACS 836-1 rear connector and the recommended wire size for the aircraft cable harness is shown on the following page. Be sure that adequate clearance is allowed for the rear connector and cable harness.

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## Interface Schematic

### ■ Connector Pin-out



The ACS 836-1 wiring harness should be constructed of Tefzel aircraft wire (M22759/16 grade). 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.

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## Unit Operation

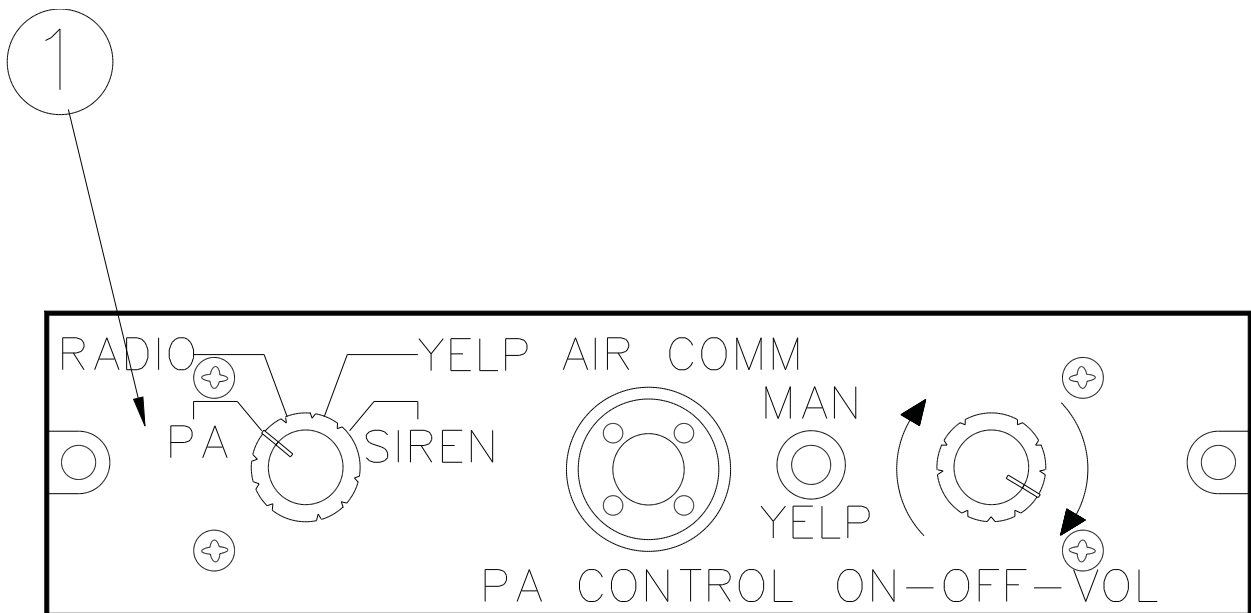
### ■ Description

The ACS 836-1 PA/Siren control unit is a compact, lightweight unit which provides full PA and Siren control for the aircraft when used in conjunction with an Audio Panel (if installed) and the Whelen WS-310 PA/Siren Amplifier. It has the capability to provide the user with three modes: PA, Radio, and Siren (wail or yelp).

### ■ 1 - PA Mode

To operate in the PA mode, the following steps must be taken:

- A) Turn the mode selector rotary switch to "PA".
- B) Turn the "ON-OFF-VOL" control knob clockwise to turn the unit on.
- C) Turn the aircraft Audio Panel (if installed, either ACS 300A Dual Audio Panel or ACS 775SL Single Audio Panel) mic selector knob to position number 4 (or PA).
- D) Press the microphone key and speak into the boom mic. Set the desired volume level using the "ON-OFF-VOL" control knob. Clockwise rotation increases the volume. Counterclockwise rotation decreases the volume.



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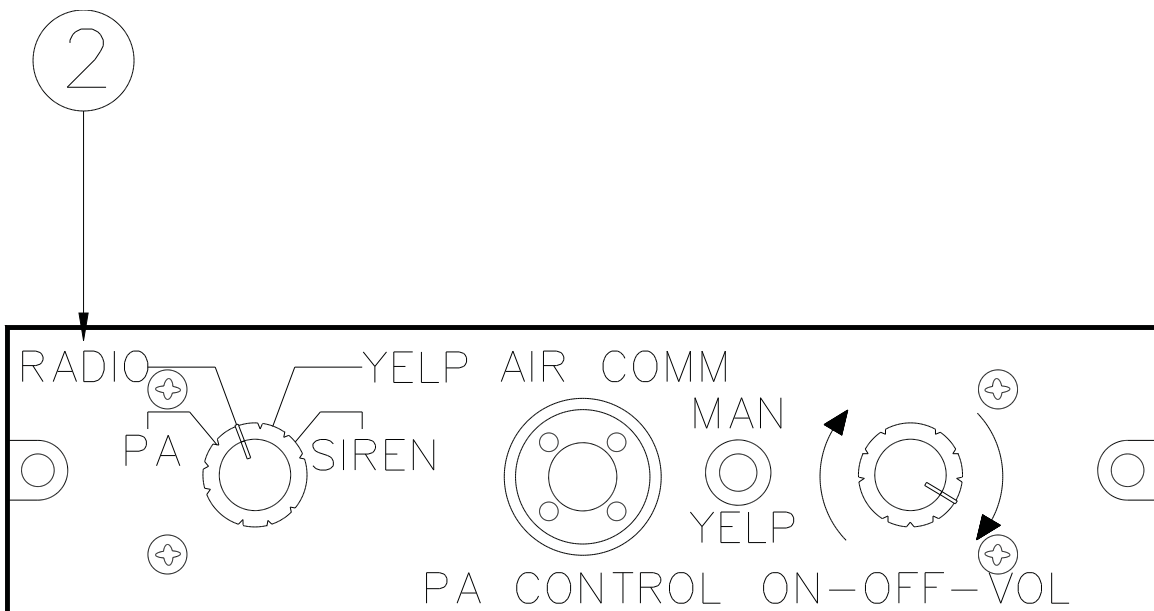
## Unit Operation

### ■ 2 - Radio Mode

To operate in the Radio mode, the following steps must be taken:

- A) Turn the mode selector rotary switch to "RADIO".
- B) Turn the "ON-OFF-VOL" control knob clockwise to turn the unit on.
- C) Turn the aircraft Audio Panel (if installed, either ACS 300A Dual Audio Panel or ACS 775SL Single Audio Panel) to the desired audio input (COM,1,2,3, etc.). The audio input selected will be broadcast out over the PA speaker.
- D) Set the desired volume level using the "ON-OFF-VOL" control knob. Clockwise rotation increases the volume. Counterclockwise rotation decreases the volume.

**NOTE: In the Radio mode, anything heard on the headset, including intercom and transmitter sidetone, will be amplified and heard on the PA speaker.**



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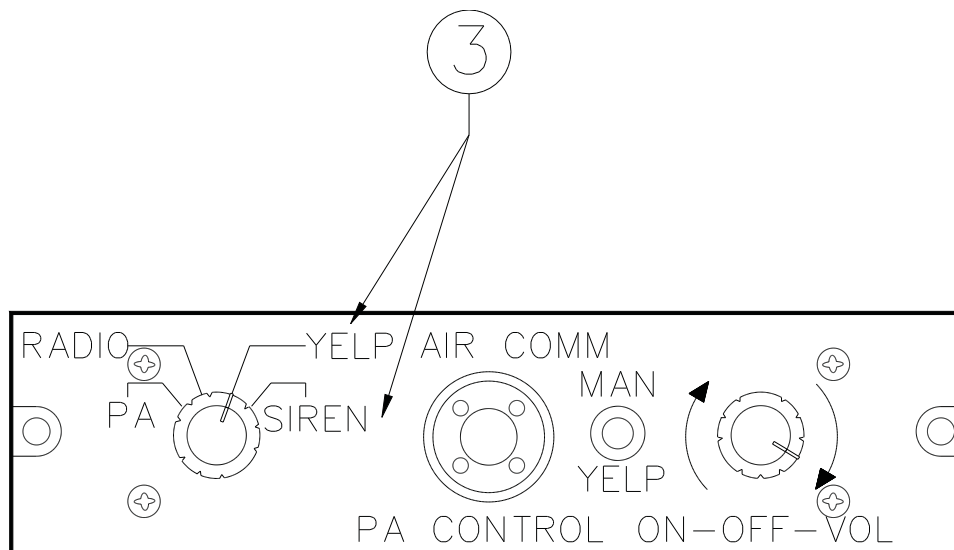
## Unit Operation

### ■ 3 - Yelp or Siren (Wail) Mode

To operate in the Yelp or Siren (Wail) mode, the following steps must be taken:

- A) Turn the mode selector rotary switch to “YELP” or “SIREN” .
- B) Turn the “ON-OFF-VOL” control knob clockwise to turn the unit on. Volume control has no effect on the output level.

**NOTE: When the Audio Panel is in the mic selector position number 4 (or PA) and the transmit (XMIT) key is pressed, the siren is muted and operates as in the PA mode until the transmit key is released.**



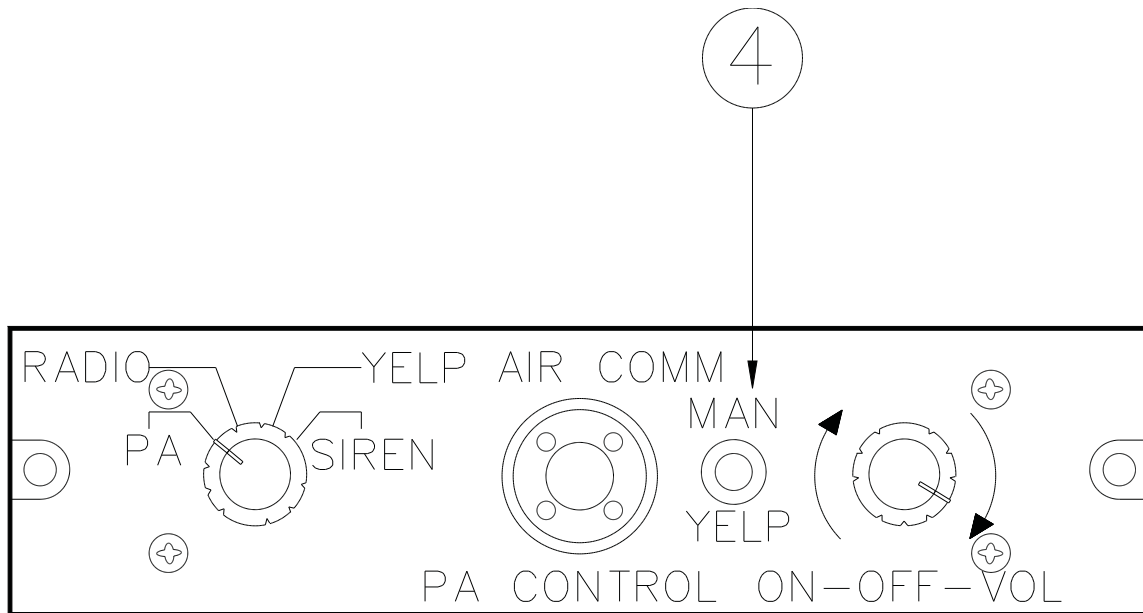
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## Unit Operation

### ■ 4 - Manual Yelp Mode

To operate in the Manual Yelp mode, the following steps must be taken:

- A) With the mode selector rotary switch in the "PA" or "RADIO" mode, pressing the "MAN-YELP" push-button will interrupt the PA, and the siren will yelp as long as the button is depressed. Once the button is released, the PA returns to the mode it was in.



## ACS 836-1 Operations and Installation 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.**

1640 W. Acoma Blvd., Suite A-118  
Lake Havasu City, AZ 86403  
Attn: Service Dept.

Phone (928) 854-5402  
FAX (928) 854-8919  
E-Mail [aircomminc@aol.com](mailto:aircomminc@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.