The WAVES® Autonomous Control Unit (ACU-340) is an indoor Mass Notification System (MNS) for individual buildings.

**Description**

Cooper Notification’s WAVES (Wireless Audio Visual Emergency System) Autonomous Control Unit (ACU-340) is a supervised Individual Building Emergency Communications System, which provides supervised paging, background music, messaging, and emergency voice communications with 24 VDC battery backup. The ACU-340 is a UFC-compliant (Unified Facilities Criteria) Individual Building System, which provides full control of building notification appliances such as loudspeakers and strobe lights. The ACU-340, which includes a WAVES transceiver, interface, and antenna, can be controlled and monitored by a base-wide WAVES Mass Notification System (MNS). The WAVES base station can send messages to one ACU-340 or multiple ACUs and tie the indoor system to an outdoor MNS.

This single channel system is capable of delivering 40 watts of supervised high fidelity audio power and 2 amps of supervised 24 VDC synchronized strobe power. It comes standard with an on-board digital voice messaging system with 8 standard messages, a hand-held microphone, power supply/battery charger and numerous additional features. In a base-wide mass notification mode, the TRX-401 functions as the audio and data input/output link.

The ACU-340 is expandable to 5280 watts utilizing the ACU-PB80 (80 watts and 4 amps of strobe power), the ACU-PB160 (160 watts) or ACU-PB320 (320 watts) supervised audio power boosters. Additional expansion options include audio splitters, addressable paging splitter and telephone zone controller; supervised volume control and remote microphone; and a remote microphone expansion module.

The ACU-340 integrates with fire alarm systems and provides a signal for temporary deactivation of fire-alarm audible notification devices as required by UFC. The fire alarm system appliances are reactivated after the mass notification voice messages are delivered.

The ACU-340 also features real-time monitoring and reporting of all system components and is compatible with Cooper Notification power supply, speakers, strobes, and clusters.

- Can be fully integrated with a WAVES MNS for a base-wide or campus-wide indoor and outdoor alerting system
- Integrates with fire alarm systems
- Approvals: UL Standard 864, 9th edition; UL Standard 1711; California State Fire Marshal; and New York City, FCC Part 15
- OSHA 1910.165; ADA Compliant; and UFC compliant
- Continuously monitoring itself. BIT (Built-In Test) information from the WAVES ACU is transmitted to the WAVES Base Station
- Option to program predefined scripts in response to ACU fault and alarm events
- Full system supervision
- 8 digitally recorded voice messages
- Live microphone override

**Features & Benefits**

- Mass Notification
- Emergency Notification
- Voice Evacuation
- Indoor Warning
- Natural Disaster Alerting/Relief
- Industrial Disaster Alerting/Relief
- General Paging
- Background Music

**Applications**

- Mass Notification
- Emergency Notification
- Voice Evacuation
- Indoor Warning
- Natural Disaster Alerting/Relief
- Industrial Disaster Alerting/Relief
- General Paging
- Background Music
### Specifications

#### Performance
- **Audio Power:**
  - 40W supervised audio power
  - 25V or 70.7V, selectable
- **Speaker System:**
- **Frequency Response**
  - **Voice:**
    - 200-10 kHz +/- 3dB; meets UL Voice Evacuation Requirement of 800 - 2800 Hz
  - **Microphone:**
    - 225-8kHz +/- 3dB; meets UL Voice Evacuation Requirement of 800 - 2800 Hz
  - **Signal to Noise Ratio:**
    - better than 70 dB
  - **Dynamic Range:**
    - better than 65 dB
  - **Total Harmonic Distortion:**
    - less than 2%
- **Stand by Current Draw:**
  - 140 mA
- **Alarm Current Draw:**
  - 4.7 amps

#### Electrical
- **AC:**
- **Batteries:**
  - 24 VDC rechargeable battery back-up power circuitry built-in
  - Can be housed in the enclosure (Up to two 12 volt, 12 ampere hour batteries; Actual battery size required will depend on speaker and/or strobe load.)
  - 2 amps of synchronized strobe power on board with the option of adding additional out board strobe power supply
- **Strobe Power:**

#### Physical
- **Height:**
  - 21" (53 cm)
- **Width:**
  - 16" (41 cm)
- **Depth:**
  - 6” (15 cm)
- **Weight:**
  - 36lbs. (16 kg) (without batteries)
- **Door Lock:**
  - Cooper Notification key lock

#### Codes and Standards
- **Fire Code applications:** The system is listed under UL Standard 864, 9th edition delivering supervised audio and voice messaging with strobes and notification appliance circuits (NAC) for visual alerting.
- **Economic OSHA applications:** The system is OSHA 1910.165 compliant; this means that it does not require reliability inspections every two months, or the required spare parts inventory.
- **UFC Compliant**
- **American with Disabilities (ADA) compliant:** By synchronizing both audio and visual message transmissions to strobe lights.

#### Architect & Engineer Specifications
- **When specifying an Autonomous Control Unit such as Cooper Notification’s ACU-340, you should require the following:**
  - Compliant with the Unified Facilities Criteria (UFC) for Mass Notification Systems Independent Building System.
  - Provided with 8 pre-recorded emergency messages.
  - Capable of field integration with WAVES® base-wide Mass Notification System, including:
    - Providing status information identified to the major system element level.
    - Remote activation of any pre-stored message.
    - Delivery of live audio from the base-wide system.
  - Provide a single visual summary of the unit and connected equipment status.
  - Include 2 amps of synchronized strobe power on board with the option of adding additional out board strobe power supply.
  - Deliver 40W audio power with the option of adding additional outboard audio power supply.
  - Be field-configurable for 25 or 70.7 Vrms operation.
  - 110 or 220 VAC power.