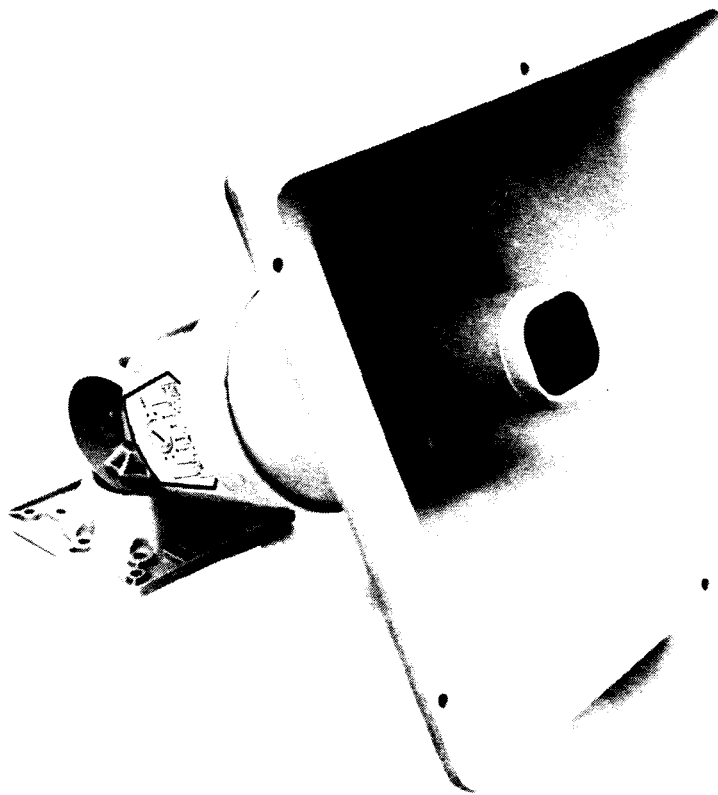
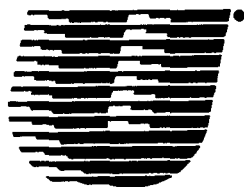


# The PA430T H.A.B.I.T.

(Highlighting Applications, Benefits, and Installation Techniques)  
Part I



July 1993  
Issue 1



**University  
Sound**  
A Mark IV Company

## Knowledge of Basics:

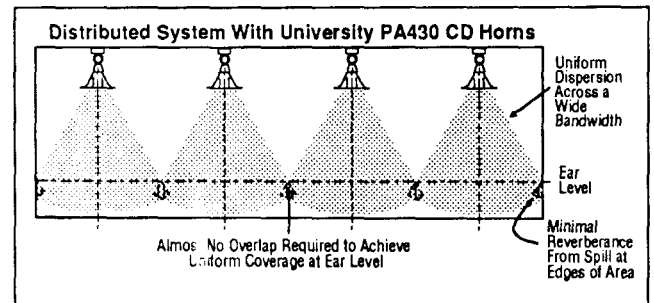
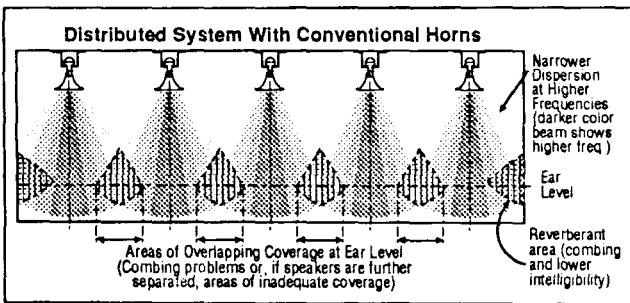
### I. Intelligibility

- A. Ability to distinguish a 'T' from a 'P' at a given point in the listening area
- B. It is generally accepted practice to have speaker output +10 dB above the ambient noise everywhere in the area
- C. The overlapping pattern necessary with non-CD horns decreases intelligibility.

### II. Ambient Noise

- A. Machinery, audiences, and heating/air conditioning cause ambient noise
- B. Flat, hard surfaces sustain ambient noise through reflections, reverberation, and echoes

### III. Constant Directivity



- A. A constant-directivity horn focuses the sound into an even, predictable field, much as a floodlight does with light. A typical, non-constant directivity horn gives uneven results with changing frequency, much like a floodlight flickers when its AC supply varies.
- B. Minimizes the need to overlap horn patterns
- C. Superior ability to control coverage
- D. Pattern control simplifies design

## Typical PA430T Installations

- I. **Small area, low ambient noise**  
Basketball and tennis courts, outdoor restaurant areas, school grounds and small playing areas, and miniature golf courses
- II. **Medium to large area, medium to high ambient noise**  
Malls and retail outlets, indoor/outdoor parking facilities, truck/train/bus terminals, military bases, indoor airport concourses and baggage handling areas, carnivals and fairgrounds, amusement parks, warehouses, outdoor storage facilities
- III. **Large area, high ambient noise**  
Factories, outdoor airport areas, racetracks (dog, horse)

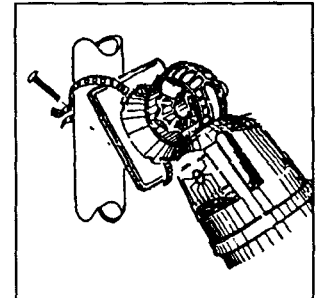
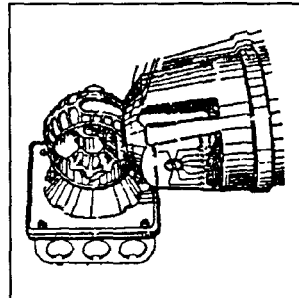
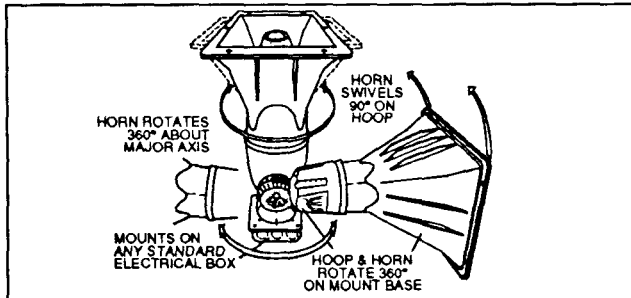
## Product Highlights and what they mean to you:

### I. Constant Directivity from 2 kHz to 10 kHz

- A. Improved intelligibility
- B. Greater control of sound dispersion
- C. Fewer horns needed to cover a given area
- D. Dual-slot phase plug is more advanced than those of other paging projectors, resulting in greater high-frequency output and lower overall distortion.

### II. Unique patented swivel-mount and base system

- A. Accurate aiming of the sound during installation, hand-tightened positioning nuts.
- B. Wide variety of mounting capabilities, including mounting to poles, I-beams, or electrical junction boxes, as well as the traditional surface mount to wall or ceiling.
- C. Face of horn has pre-drilled holes to accommodate flush mounting.



### III. Significant savings in installation costs

- A. Time-efficient mounting to a variety of surfaces and standard fixtures.
- B. Power tap externally adjustable with screwdriver or coin.
- C. Driver input leads pre-stripped and threaded through base of mount.
- D. The above advantages translate into a savings of about 10 minutes in installation time over the Atlas AP30T. At an estimated national average overhead rate of \$45.00 per labor hour, this results in a savings of \$7.50 per installed horn.
- E. Fewer PA430Ts than AP30Ts are required to meet or exceed spec on a given installation; fewer horns = less wire, less labor, and reduced installation cost.
- F. Less installation time means contractor can complete more projects in a given day. A more productive contractor means more product moving.

### IV. High-Impact Polycarbonate ASA and Nylon structural integrity

- A. Weighs less than metal - lower shipping costs, less weight up and down the installer's ladder.
- B. Two types of polycarbonate used to optimize the structure
  1. Nylon - used in base and hoop to provide strength. Hoop will take 160 lbs. of vertical stress.
  2. Expanded ASA Bell - Less tendency to resonate (ring) than metal.
- C. Horn is UV inhibiting. Will not rust or dent. Not affected by environmental extremes.

## Comparison and Contrast w/ Competition:

- I. Critical intelligibility range of 2 kHz to 5 kHz
  - A. PA430T exhibits a constant dispersion over this range
  - B. AP30 dispersion over this range is not constant
- II. Construction of horn
  - A. PA430T uses Polycarbonate ASA and Nylon optimized for structural integrity and acoustic performance.
  - B. AP30 uses hybrid metal/plastic construction for cost reduction, not improved performance
- III. Power Output
  - A. Both horns have 30 Watt rating
  - B. PA430T provides: 115 dB @ 1 Watt, 1 Meter, 1kHz  
126.8 dB @ 30 Watts, 1 Meter, 1kHz
  - C. AP30 provides: 113 dB @ 1 Watt, 1 Meter, 1kHz  
123.8 dB @ 30 Watts, 1 Meter, 1kHz

## Support During and After Customer's purchase:

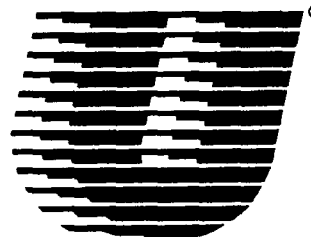
- I. Manufacturer's Support
  - A. Rigorous quality control standards.
  - B. Reliable stocking and on-time delivery.
- II. Technical Support
  - A. Full-time technical support with direct 800-line.
  - B. Applications and product selection assistance.
- III. Customer Service
  - A. Professional and reliable customer service department.
  - B. Accurate, timely response to inquiries.

## The Pricing!

Regular End-Column Price: \$ 48.50

100-piece scheduled order at 25-pieces per quarter: \$ 39.95

100-piece one-time order: \$ 38.95



**University  
Sound Inc.**

a MARK IV company  
13278 Ralston Avenue  
Sylmar, California 91342-7607  
FAX (818) 362-3463  
PHONE (818) 362-9516