

Audible devices are part of the Moose family of high quality control products.

Over the years, the security industry has come to depend on the quality, reliability, and durability of Moose audible devices. Moose speakers, sirens and siren drivers are engineered to ensure years of problem-free operation. With Moose products you never get exaggerated claims of performance — Moose audibles meet or surpass their specifications.

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Moose offers audible devices for a broad range of applications, including several unique products for both residential and commercial installations. The line includes self-contained sirens for both indoor and outdoor environments; low current draw piezo sounders for high volume sound indoors; sirens and piezos for pre-alarm and special high security and fire applications; economical indoor and outdoor speakers; and highly reliable siren drivers.

Moose has been a leading supplier of stateof-the-art security equipment since 1972. This tradition of excellence continued in 1993 when Moose joined the Sentrol, Inc. family of security systems suppliers. As part of Sentrol, Moose continues to deliver the highest quality products.

Moose Audibles — the industry standard in sirens, speakers, piezo sounders and siren drivers.

# **Proven Performance fr**



# Indoor/Outdoor Self-Contained Sirens

The **MPI-37** and **MPI-38** are constructed of rugged, impact resistant plastic and are weather resistant.

#### MPI-37 High Quality Self-Contained 2-Channel Siren

- 6 to 13.8 V DC operation
- Current draw: 800 mA
- Sound output: up to 106 dB at 10 ft.
- · Metal tilt mounting base
- Dimensions: 6" D, 5.25" Dia. (15.2 cm D, 13.3 cm Dia.)

#### MPI-38 High Power Self-Contained 2-Channel Siren

- · 6 to 13.8 V DC operation
- Current draw: 1.6 Amps
- Sound output: up to 112 dB at 10 ft.
- Tilt-type mounting bracket and provision for plunger tamper switch.
- Dimensions: 9" D x 8" W x 6.25" H (22.9 cm D x 20.3 cm W x 15.9 cm H)



# Indoor Self-Contained Sirens & Piezo Sounders

#### MPI-36 High Quality Self-Contained 2-Channel Siren

- 6 to 13.8 V DC operation
- Current draw: 350 mA
- Sound output: up to 106 dB at 10 ft.
- Surface mounting with removable plate
- Dimensions: 1.7" D x 6.6" W x 4.1" H (4.3 cm D x 16.8 cm W x 10.4 cm H)

### MPI-47 Single Channel Piezo Sounder

- · 6 to 13.8 V DC operation
- Current draw: 175 mA
- Sound output: up to 106 dB at 10 ft.
- Alternating high/low sound
- Surface mounting with removable plate
- Dimensions: 1.5" D x 6.2" W x 4.2" H (3.8 cm D x 15.7 cm W x 10.7 cm H)

### MPI-47B, MPI-47C & MPI-47E High Quality Compact Economical Piezo Sounders (Available Summer 1996)

- 6 to 13.8 V DC operation
- Current draw: 175 mA
- · Sound output: up to 106 dB at 10 ft.
- Alternating high/low sound
- 47B mounts with a simple bracket.
- MPI-47C includes a round faceplate for ceiling mounting.
- MPI-47E mounts directly into a NEMA electrical box.

### MPI-46W Two-Channel Piezo Sounder

- · 6 to 13.8 V DC operation
- Current draw: 175 mA
- · Sound output: up to 106 dB at 10 ft.
- Bell and pulsing horn sounds
- Surface mounting with removable plate
- Dimensions: 1.5" D x 6.2" W x 4.2" H (3.8 cm D x 15.7 cm W x 10.7 cm H)



# Sirens & Piezos for Pre-Alarm & Special Applications

#### MA-2 Two Tone Piezo Pre-Alarm Sounder

- 4 to 24 V DC operation
- Current draw: 25 mA
- Sound output: up to 100 dB at 10 ft.
- Fits into single gang NEMA electrical box.
- Dimensions: 1.7" D x 2.7" W x 1" H (4.3 cm D x 6.9 cm W x 2.5 cm H)

### AE 912/924 Raucous Sounders for Fire and Security Applications

- 12 V DC (AE 912) or 24 V DC operation
- Current draw: 28 mA (AE 912), 24 mA (AE 924)
- Sound output:
  - 79 dB at 10 ft., measured by ANSI SI 21 method
  - 88 dB at 10 ft., measured by "free space" method
- Fits into single gang NEMA electrical box
- Dimensions: 1.2" D x 1.6" W x 3.6" H (3.0 cm D x 4.1 cm W x 9.1 cm H)
- UL STANDARD 464, FM, and CSFM listed

#### AS 395 High Security, Corrosion Resistant Outdoor Self-Contained Siren

- 10 to 14.5 V DC operation
- Current draw: 1.9 Amps
- Sound output: 112 dB at 10 ft.
- Dimensions: 3.5" D x 10.25" W x 10.75" H (8.9 cm D x 26.0 cm W x 27.3 cm H)
- Polycarbonate housing, rust proof screws, "potted" electronics, condensation drainage holes make the AS 395 extremely corrosion resistant.
- Protected against foam injection, removal of cover or prying from the wall.
- Unique "hold-off" circuit activates siren from internal battery if external wiring is cut.
- Optional strobe with no additional wiring.

MOOSE A product of sentrol. Inc

# m the Industry Leader



# Indoor/Outdoor Speakers

All Moose speakers are constructed of rugged, impact resistant plastic. They use heavy-duty high quality magnets and diaphragms and are weather resistant.

#### MPI-8 High Quality Economical Speaker

- Coil Impedance: 8 Ohms
- Rated 8 W nominal, 15 W peak
- Metal tilt mounting base
- Dimensions: 6" D, 5.25" Dia. (15.2 cm D, 13.3 cm Dia.)

### MPI-30 The Industry's Most Popular and Dependable 8 Ohm Speaker

- Coil Impedance: 8 Ohms
- Rated 30 W nominal, 50 W peak
- Metal swivel mounting bracket
- Dimensions: 11" D x 8.5" W x 6.5" H (28.0 cm D x 21.6 cm W x 16.6 cm H)

#### MPI-34 Compact High Power Speaker with Attractive Bell Design

- Coil Impedance: 8 Ohms
- Rated 30 W nominal, 50 W peak
- Metal bail-type mounting bracket
- Dimensions: 3.5" D x 4.1" W x 6.25" H (8.9 cm D x 10.4 cm W x 15.9 cm H)

### MPI-39 Speaker With Tamper Switch Provision

- Coil Impedance: 8 Ohms
- Rated 20 W nominal, 30 W peak
- Tilt-type mounting bracket and provision for plunger tamper switch
- Dimensions: 9" D x 8" W x 6.25" H (22.9 cm D x 20.3 cm W x 15.9 cm H)



# **Indoor Speakers**

The MPI-35 series of speakers are supplied in attractive low profile plastic housings to blend with any decor.

# MPI-35 Mylar Cone Speaker

- Coil Impedance: 8 Ohms
- Rated 10 W nominal, 15 W peak
- Surface mounting with removable plate
- Dimensions: 1.7" D x 6.6" W x 4.1" H (4.3 cm D x 16.8 cm W x 10.4 cm H)

## MPI-35F Flush Mounted Speaker

- Coil Impedance: 8 Ohms
- Rated 10 W nominal, 15 W peak
- Outer trim ring conceals mounting screws
- Dimensions: 1.5" D x 6.2" W x 5" H (3.8 cm D x 15.7 cm W x 12.7 cm H)



# **Siren Drivers**

Dependable operation and unique features have made Moose siren drivers the industry standard.

### MPI-11 The Industry Standard Siren Driver

 Small but powerful 2-channel driver with steady and yelp sounds.

### **JDS 100**

- High power 2-channel driver with steady and yelp sounds.
- Capable of powering from one source and triggering from another, low current source.

## JDS 102

 High power 2-channel driver with yelp and bell sounds

### **JDS 108**

- High power 8-channel driver
- Capable of powering from one source and triggering from another, low current source
- 8 distinct sounds, triggerable individually or in combination, make this the most versatile driver on the market. In all, 49 combinations are available.

# Which Product Should I Choose?

When planning an installation, it is important to select the right audible device for the application. Here are a few hints for making your selection.

## SIREN DRIVER/SPEAKER COMBINATION

Siren drivers are the "sound generators" of a security system. Speakers are the outlets for the sound generated by the driver. Most siren drivers provide two different sound outputs — most commonly, steady tone and yelp. The JDS 108 has eight sounds which can be triggered separately or in combination to provide up to 49 sounds — a superb device for use with newer controls that provide multiple outputs and multiple partitions.

# Where should I use the siren driver/speaker combination?

The siren driver/speaker combination is the correct choice whenever more than one sounder is required. It is more economical than purchasing multiple self-contained sirens, and may draw less current. If you need multiple sounds, select the JDS 108.

# Should I use a horn style or a decorative housing?

Use the horn style whenever aesthetics are not an important factor — in the attic or outdoors. Use the decorative housing in living areas, lobbies of commercial buildings, etc.

# How do I know if I'm using the right speaker for my siren driver?

There are a few golden rules that apply to all siren drivers and speakers. Most siren drivers today produce more than 18 Watts nominal power. Therefore, the speaker(s) should be able to handle at least 18 Watts. This can be achieved with speakers rated for lower wattage, such as the MPI-8 or MPI-35, by connecting two or more speakers in series. This configuration reduces the power delivered to each speaker. A common practice is to use a high wattage speaker (e.g. the MPI-30 or MPI-34) for outside and a lower wattage speaker (e.g. the MPI-8 or MPI-35) for inside.

Alternatively, a 5 Ohm, 10 Watt resistor can be connected in series with the speaker.

To achieve maximum sound, two high wattage speakers can be connected in parallel. This configuration draws the highest current, so the power available from the control should be considered.

# Why is impedance important?

All speakers are rated by their impedance in Ohms. A speaker's impedance tells you how much load it produces on a circuit. Never use a speaker load of less than 4 Ohms, as this can destroy both the speaker and the siren driver (lower impedance means higher current draw). All Moose speakers are rated at 8 Ohms. Wiring two Moose speakers in parallel, therefore, will halve the total load to 4 Ohms, the minimum allowable load. When connecting in parallel, select high wattage speakers.

# **SELF-CONTAINED SIRENS**

A self-contained siren is a speaker and a siren driver module housed together in one unit. Generally, higher wattage sirens draw more current and produce more sound. For instance, the MPI-37 draws only half the current of the MPI-38 and consequently has a lower sound output.

# Where should I use a selfcontained siren?

A self-contained siren is often the most economical choice for applications where only one sounding device is necessary. When more than one device is needed, the heavy current draw of self-contained sirens makes the use of a separate siren driver and speakers a better option. Also, multiple self-contained sirens do not produce synchronized sound patterns as do multiple speakers connected to a single siren-driver. Using multiple selfcontained sirens can lead to sound waves that cancel each other out, seriously reducing total sound output.

# When is a self-contained siren better than a piezo sounder?

If you need a loud sound that carries over long distances, such as in large buildings or in outdoor installations, use a siren rather than a piezo. The siren's lower frequency sound waves travel farther than the high pitched sound of the piezo.

# **PIEZO SOUNDERS**

A piezo sounder differs in two major ways from a siren: it draws less current and it emits a higher pitched sound.

# Where should I use a piezo sounder?

Piezo sounders are commonly used as pre-alarm devices. They are also used as full alarm sounders in small houses and apartments. The high frequency sound of the piezo is very loud when close up, but does not carry well over long distances. The lower current consumption of the piezo sounder makes it ideal for use with a control panel that provides only limited power to audible devices.



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