



FEDERAL "INTERCEPTOR"  
ELECTRONIC SIREN  
Model PA-1 Series B-1 and B-3

INSTRUCTIONS

MOUNTING

The Federal Siren and P.A. Unit can be mounted in any position, in any place within convenient and easy reach of the operator.

It should be mounted in such a way that the end serving as the control panel, is readily accessible.

To mount the unit, refer to page A illustration. Remove the Phillips-head screws which are at A-A, on the left side of the case as you face the control panel. Lift the lid free on the left side.

The cover, or lid, has tongue-hinges on the right side which slip into slots at B-B on the right side of the case.

Slide the cover to the left to remove it from the case. Perforations in this cover are for mounting screws.

Use a minimum of four screws to assure secure mounting.

Mount this conveniently on the underside of the dash, below instrument panel or similar location. (See illustration on page A.) Keep tongue-hinges to the right and screw closure portion to the left as you face the mounting location.

Use the cover as a template to lay out mounting holes, and when ready, screw it tightly to the surface above it. Be careful not to spring or twist the cover when mounting it.

Once the cover is so mounted, the slots in the case may be slipped over the tongues on the cover. The case can then be swung up against the cover and reinsertion of the two Phillips-head screws completes the mounting of the case.

The speakers are weatherproof and can be mounted between radiator and grille on many cars, under the hood on most, and anywhere on the exterior on all makes and models, wherever there is sufficient room.

## CONNECTION INSTRUCTIONS

## A. CONNECTING SPEAKER

**CAUTION** Do not turn on the set until all connections have been made properly. Do not turn on the set if speaker leads are not connected to the proper binding posts. Do not disconnect speaker leads while set is on, or attempt to operate set at any time with speaker leads disconnected or shorted.

1. Be sure speaker leads are connected to binding posts marked "Speaker" on left side of case.
2. It does not matter which lead attaches to which of the two terminals.
3. Be sure that attached leads do not short one another.
4. Be sure that neither of the two leads are in contact with or shorted on the metal case.

For your convenience, five terminal lugs are supplied with each unit to enable you to make all connections to the terminal board on the left side of the case.

## B. CONNECTING POWER SUPPLY

This siren is for a 12 volt system.

The black wire with the fuse cartridge in line, is the power lead.

The black power lead should attach to the + circuit or positive side of the battery.

**CAUTION** Do not install this set on a car which has the positive (+) side of the battery grounded to the vehicle. Most 1956 and all 1957 models have the battery connection + to instruments and negative to ground. Check carefully on any car models prior to 1956.

So the set will automatically be "off" when the car is not in use, make your power connection to the positive side of the ignition switch where other electrical devices, such as the radio, are connected.

Ground the case electrically by connecting a wire lead from the car frame to the terminal marked GND at the left rear of the amplifier case.

## C. CONNECTING RADIO INPUT

To put radio reception through the P.A. Speaker, run two wires from the voice coil of the loudspeaker on your radio receiver. Connect the other ends of the wires to the terminals marked "Radio" on the left side of the P. A. amplifier case.

THE VOLUME CONTROL OF YOUR CAR RADIO SHOULD BE USED TO CONTROL THE VOLUME OF MESSAGES AMPLIFIED BY YOUR P. A. SYSTEM.

The central terminal on the terminal block is connected in parallel to the manual button on the control panel.

If you want to operate the siren manually from a separate switch, such as a foot control or by the horn ring on your car, connect the lead on such a circuit to the middle terminal, marked "Auxiliary Siren Switch".

For horn ring operation a single pole double throw switch can be connected into the circuit, so that the siren or regular automobile horn can be operated by the horn ring at the driver's option.

#### OPERATION

Familiarize yourself with the controls, the functions of which are herein-after described. The left hand knob, normally in the off position, need only be turned to the right, to a selected position to have the unit in operation.

#### CONTROLS

On the control panel before you, are two rotary knobs and a push button.

THE LEFT HAND KNOB controls a five position switch. The five positions are "Off", "PA", "Radio", "Manual" and "Automatic".

The "Off" position is to cut off the set whenever it is not in use.

"PA" activates the amplifier and cuts the mike circuit in for public address operation.

"Radio" cuts in the circuit from your car radio, to send that reception, amplified, over your P.A. speaker. The volume control on your car radio will regulate the volume of your P.A. speaker when relaying radio messages.

"Manual" refers to manual operation of the siren thru the red push button in the lower center of the panel. In the "Manual" position your siren is ready for operation whenever you actuate the red button or alternate switch.

"Automatic" indicates automatic operation of the siren, up and down scale, continuing until shut off.

THE RIGHT HAND KNOB is the volume control, controlling the voice volume over your P.A. speaker, when you are using your P.A. microphone.

THE RED PUSH BUTTON is the manual control switch for your siren. When pressed, the siren tone rises: released, the tone comes down scale. The central terminal on the terminal block, marked "auxiliary siren control", is connected in parallel to the red button. This simplifies connecting your horn ring, or a foot switch, as an alternate means of sounding the siren manually.

The longer the button is held in, the higher the pitch, eventually reaching a frequency about double its maximum on automatic, and double that of conventional sirens.

Pushing this button will override the siren in "Automatic" operation.

## MODEL PA-1 Series B-1 and B-3

### THE MICROPHONE

This also falls under the subject of controls because the button in the mike controls the P.A. operation.

The microphone is normally carried on the hook on the right side of the case. It is an anti-feedback type, preferable for P.A. operation. It is equipped with a "push to talk" control button.

Since the siren volume is much greater than is normally required for voice, the VOLUME CONTROL KNOB is provided for adjustment of optimum voice volume and clarity.

When not in use, the mike should be placed on its holder to prevent accidental damage or breakage.

### SERVICE AND MAINTENANCE

This siren is guaranteed against defects of workmanship. Since the components are almost all standard commercial parts, the parts guarantee is limited to the original manufacturer's warranty.

With proper installation and care, this signal should not require servicing or maintenance beyond a minimum.

In case of difficulty, any obvious part can be replaced by standard items stocked in any radio supply house. Any competent radio repair man can install a replacement.

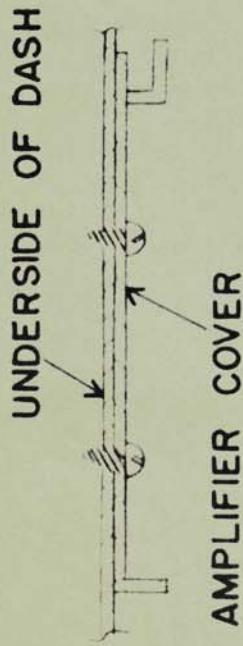
The transistors under the guard plate are held in place with two small screws. Transistors have "plug-in" connections. In making a replacement be sure not to lose or forget the little flat insulators that go between the transistors and bottom plate of the case.

In case of any questionable malfunction, the unit should be returned to Federal Sign And Signal Corporation, 136th and Western Ave., Blue Island, Illinois. It should be well padded and cushioned and shipped in a substantial carton or box, preferably by express prepaid. The microphone should be separately padded or wrapped to prevent damage in transit.

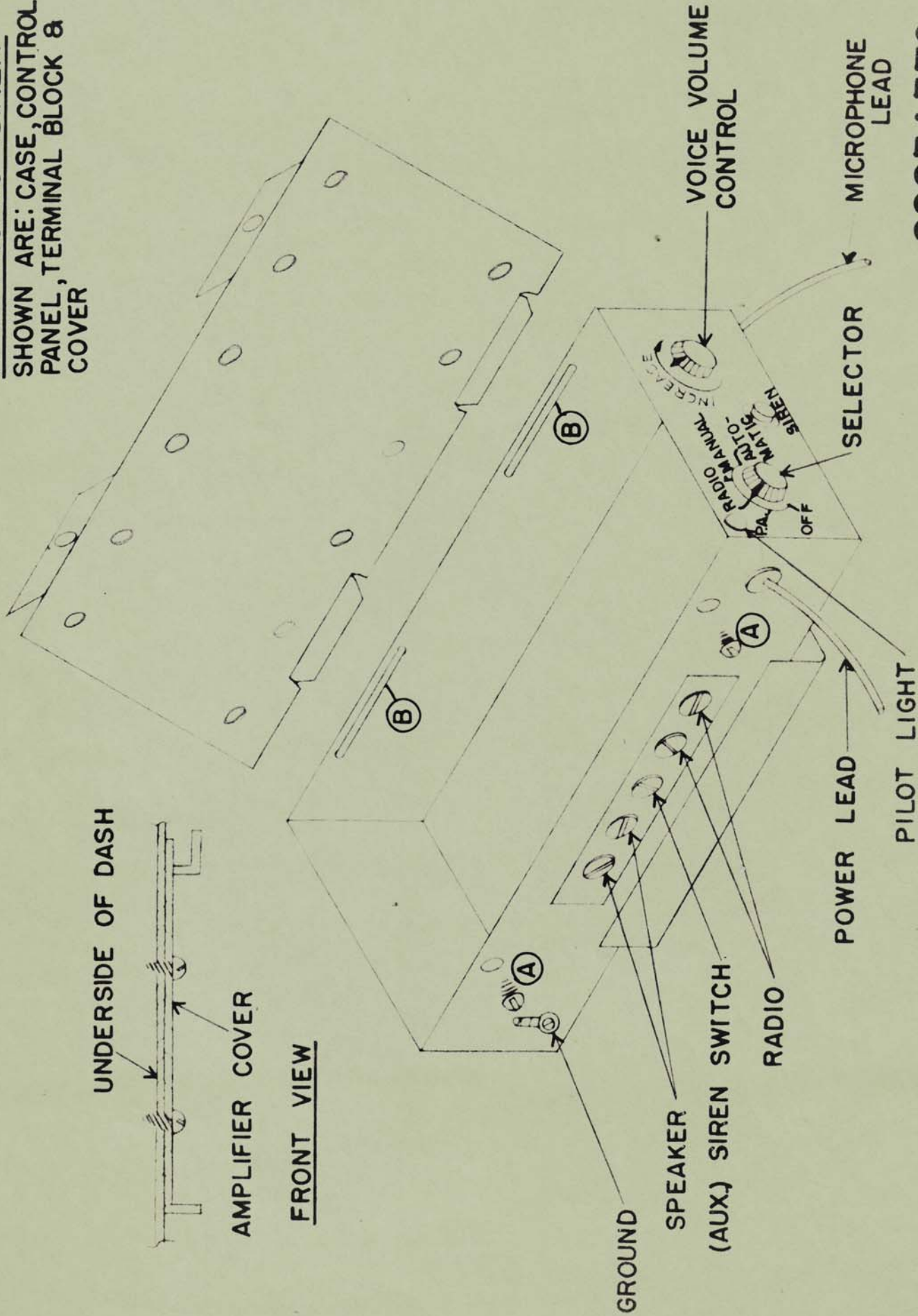
# FEDERAL SIGN & SIGNAL CORPORATION

8700 S. STATE ST. CHICAGO 19, ILLINOIS

PA-1 SERIES-B  
ELECTRONIC SIREN  
SHOWN ARE: CASE, CONTROL  
PANEL, TERMINAL BLOCK &  
COVER



## FRONT VIEW



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