

Figure 1. Dimensions

**Description**

Edwards' DUOTRONIC signals are heavy duty, high decibel, UL listed signaling appliances intended for use in general signaling and alarm applications. The 5520 series of signals can operate either as a horn or a siren and provide a switch for selecting the desired operating mode. The 5521-S1 signal operates as a horn only. The horn and siren tones are produced electronically. Signals operating in the horn mode can be used in coded signaling applications.

The 5520 series of signals can be installed on any standard single gang, 3 1/4" (83 mm), 3 1/2" (89 mm), or 4" (102 mm) octagonal, or 4" (102 mm) square electrical box, or they can be installed outdoors using the Cat. No. 349 Weatherproof Box (ordered separately). Also, the Cat. Nos. 5520-AS and 5520-AQ signals can be direct wall mounted. The Cat. No. 5521-S1 signal can be installed indoors or outdoors and is supplied with a Cat. No. 349-R Weatherproof Box. The box must be used when installing the Cat. No. 5521-S1 signal indoors as well as outdoors because it contains a dropping resistor that is required for operation of the signal.

**Electrical Specifications**

Catalog Number	Rated Voltage	Current (A)
5520-AS	12V 60 Hz	1.3
	12V DC	0.7
5520-AQ	24V 60 Hz	0.85
	24V DC	0.35
5520-N5	120V 60 Hz	0.35
5520-P1	125V DC	0.1
5520-R5*	240V 60 Hz	0.1
5521-S1	250V DC	0.065

\*Requires a separately mounted Cat. No. 598Y transformer (supplied with signal) to convert 240V AC line voltage to 24V AC.

**Mechanical Specifications**

Dimensions ..... See Figure 1  
Weight ..... 7 1/2 Pounds (3.4 kg)

**Installation**

Install in accordance with the latest edition of the National Electrical Code and/or Iother applicable codes and standards.

For Catalog Series 5520, install as follows:

**⚠ WARNING**  
Before beginning the installation of the signal, ensure that the power source for the signal is disconnected.

- Loosen the screw at the bottom of the signal housing and remove the mounting plate from the signal (Figure 2).

**⚠ CAUTION**  
To prevent damage to the signal, always ensure that power is off before operating the horn/siren switch.

- Select the desired operating mode by sliding the handle of the horn/siren switch, located in the rear of the signal housing, to the applicable selection.

**NOTE:** For Cat. No. 5520-R5 signal, proceed to step 3. For all other 5520 Series models, proceed directly to step 4.

- Mount the Cat. No. 598Y transformer on an electrical box. Connect 240V AC power source wires to wire leads from primary side of transformer using wire nuts (not supplied) (Figure 4). Connect wires to be run to signal to 24V terminals on secondary side of transformer (Figure 4).
- Install wires from power source, or for Cat. No. 5520-R5 signal, install 24V power source wires from Cat. No. 598Y transformer. Install signal mounting plate using one of the following procedures:

**NOTE:** "TOP" on mounting plate and on inside of Cat. No. 349 Weatherproof Box indicates required position for installation.

- Direct wall mounting--Cat. Nos. 5520-AS and 5520-AQ only:

Bring power source wires through hole in wall and through center hole in mounting plate.

Fasten mounting plate to wall by installing the three #8 x 1 1/4" (32 mm) wood screws, supplied with the signal, through the appropriate holes in mounting plate as shown in Figure 3.

b. Mounting to electrical box:

Bring wires installed in step 4 through center hole of mounting plate.

Align appropriate holes in mounting plate with mounting screw holes in electrical box. Fasten plate to single gang box using the two #6-32 x 5/8" (16 mm) screws supplied with the signal, or fasten to octagon or square box using screws supplied with the box.

c. Weatherproof installation:

Fasten the Cat. No. 349 Weatherproof Box to the mounting surface by installing the three #8 x 1 1/4" (32 mm) wood screws and three fiber washers, supplied with the box, through the mounting holes in the rear of the box.

Bring wires installed in step 4 through 3/4" (19 mm)-14 NPT conduit and through conduit entrance hole into box. Secure conduit to box.

Align appropriate holes in mounting plate with mounting screw holes in bosses of box and fasten plate to box using the four #8-32 x 7/16" (11 mm) machine screws supplied with the box.

5. Connect wires from power source or transformer to the terminals of the plug receptacle on the mounting plate as shown in Figure 3.
6. Hook signal on mounting plate by engaging hanger on plate into slot in top of signal housing (Figure 3). Press signal flush to mounting plate to mate plug in rear of signal housing with plug receptacle on mounting plate. Tighten screw, loosened in step 1, to secure signal to plate.

For Cat. No. 5521-S1, install as follows:

1. Loosen the screw at the bottom of the signal housing and remove the mounting plate from the signal (Figure 2).
2. Fasten the Cat. No. 349-R Weatherproof Box to the mounting surface by installing the three #8 x 1 1/4" (32 mm) wood screws and three fiber washers, supplied with the box, through the mounting holes in the rear of the box.

3. Bring 250V DC power source wires through 3/4" (19 mm)-14 NPT conduit and through conduit entrance hole into box. Secure conduit to box.
4. Place resistor bracket assembly P-039964-0424 in box with resistor facing rear of box as shown in Figure 5. Connect the 250V power source wires to the terminals on the assembly (Figure 4).
5. Bring the two wire leads from the resistor bracket assembly through the center hole in the mounting plate. Align holes in bracket with mounting screw holes in lower bosses of box when upper conduit entrance hole is used (Figure 5). When bottom conduit entrance hole is used, bracket must be aligned with screw holes in upper bosses in box.
6. Align appropriate holes in mounting plate with mounting screw holes in bosses of box, and fasten plate and resistor bracket assembly to box using the four #8-32 x 7/16" (11 mm) machine screws supplied with box.
7. Connect wire leads from resistor bracket assembly to the terminals of the plug receptacle on the mounting plate (Figure 3).
8. Hook signal on mounting plate by engaging hanger on plate into slot in top of signal housing. Press signal flush to mounting plate to mate plug in rear of signal housing with plug receptacle on mounting plate. Tighten screw loosened in step 1 to secure signal to plate.

## Adjusting Speaker Direction

To adjust the speaker direction, loosen the nut shown in Figure 2. Rotate the speaker to the desired position and tighten the nut. The speaker position can be adjusted within a 90° range vertically and 180° range horizontally.

## Operational Test

Apply power to the signal and verify that it sounds. For models with horn/siren mode selection, verify that selected type of signal is sounding.

## Maintenance and Subsequent Testing

Examine the signal annually for accumulation of dirt. Clean if necessary.

Test the signal semi-annually or at the intervals required by applicable regulations and codes.

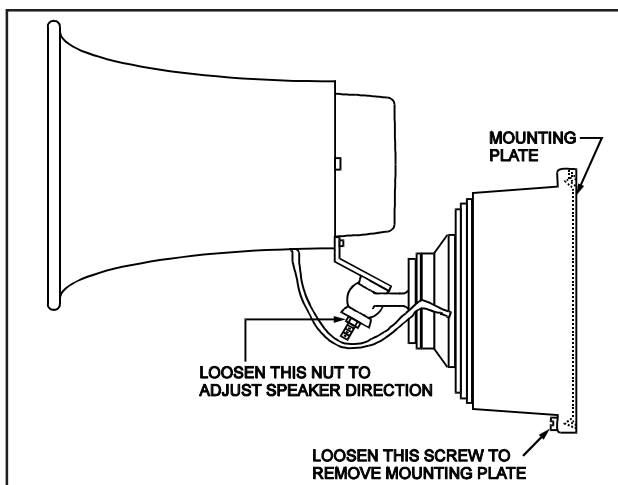


Figure 2. Mounting Plate Removal and Speaker Directional Adjustment

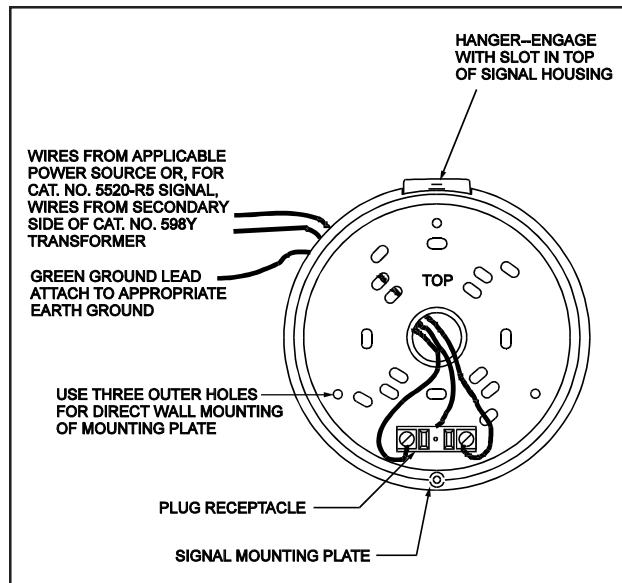


Figure 3. Mounting Plate Details

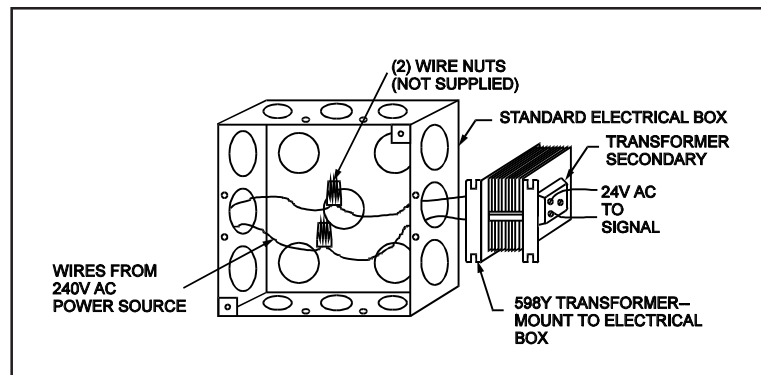


Figure 4. Wiring Installation

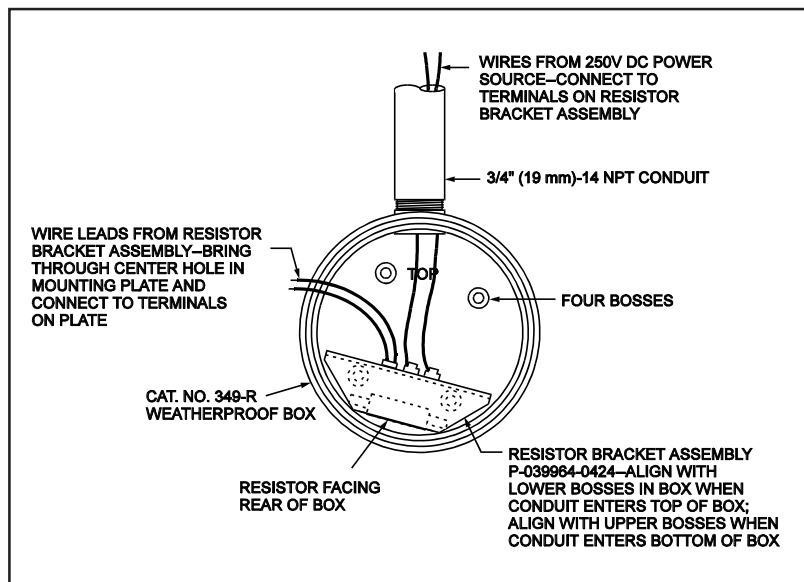


Figure 5. Resistor Bracket Assembly Installation