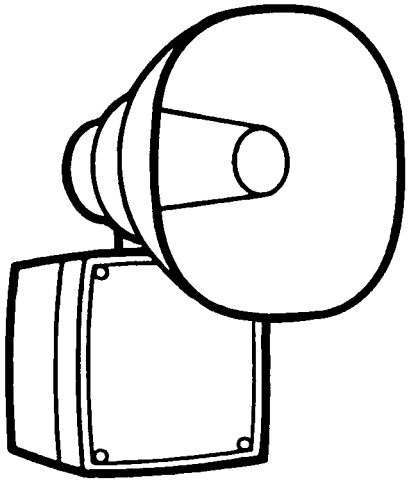
5530M and 5530MHV Adaptatone Installation Sheet



Description

Edwards Adaptatone is a heavy-duty, tone-selectable, stand alone, indoor/outdoor audible signaling device intended for industrial applications where high audible output and microcomputer reliability are required. Additionally, the Adaptatone Millennium series are UL and cUL Listed as Audible Signal Appliances for use in the following hazardous locations.

The Adaptatone operates from local power and sounds a high decibel signal determined by the setting of miniature programming switches inside the unit. The Adaptatone may be programmed for any of the 55 tones listed in Table 6.

Speaker direction and the output level are easily adjustable.

Installation

The Adaptatone may be mounted to any flat surface or may be used as a freestanding unit mounted to a rigid pipe. The Adaptatone must be installed in accordance with the latest edition of the National Electrical Code or other regulations applicable to the country and locality of installation and by a trained and qualified electrician.

For catalog numbers ending in "AQ", 24 VAC power must be transformer isolated from mains or line power.

WARNING: To prevent fire, shock and component damage, NO work, including circuit board removal, should be performed while the circuit is energized.

NOTE: Any kind of service or maintenance performed while unit is energized will void the warranty.

1. Mount Adaptatone as shown in Figure 2.
   a. **Flat Surface Mounting**. Secure unit to mounting surface using the (4) mounting holes in the mounting plate on the rear of the box. Use the #10 x 3" (76 mm) wood screws (furnished loose) or other hardware (not supplied) suitable for the mounting surface.
   b. **Rigid Pipe Mounting**. Loosen the (4) cover screws from the signal box and lift off signal box cover.

NOTE: Cover screws are captive. Do not remove from cover.

Remove the center knockout in lower wall of box and mount box to a 1/2” (12.7 mm) conduit pipe using suitable connector.

2. Wire in accordance with the instructions in “Wiring.”
3. Refer to Figure 14 and Table 6 and select desired tones. Set miniature programming switches on the input board.

WARNING: HIGH VOLTAGE is present when product is energized. High volume may cause harm to personnel in close proximity.

4. Adjust volume level, if desired, by turning potentiometer located on the main board (Figure 14).

WARNINGS: To ensure integrity of the enclosure: Ensure the cover gasket, part number P-007549-0069, is adhered into groove at cover perimeter before replacing the signal box cover.

Ensure that the (4) collar gaskets, part number P-041930-0362, are in place on each cover screw before securing the signal box cover.

When securing cover, start screws by hand, making sure they are threaded into tapped holes in housing bosses before securing with a screwdriver. Torque signal box cover screws to a minimum of 20 in-lbs. This ensures the required tight fit.

5. Tightly secure the signal box cover using (4) retained cover screws.

P/N 3100006 • REV 4 • ISS 09AUG10

6. Torque signal box cover screws to a minimum of 20 in-lbs.

WARNING: To ensure integrity of the Adaptatone assembly when adjusting the speaker direction, make sure threads in the enclosure remain fully engaged and do not turn speaker more than 360 degrees from the original factory installed position.

7. To adjust speaker direction, loosen large star nut (Figure 1) and turn speaker to the approximate desired position.
8. Regardless of speaker direction adjustment, it is important that the star nut be tightened wrench tight to ensure the speaker position is maintained securely.
9. Verify operability.

Wiring

1. Install wires through a knockout hole in the bottom of the box from a raceway that is, with its connections to the 1/2" (12.7 mm) conduit knockout hole, approved for the same degree of protection and enclosure type needed by the application. Use the provided plastic tie-wrap, on the barrier to the electronics, to separate incoming power leads from signal and tone initiating leads, per NEC (Figure 4).

WARNING: To prevent fire and shock, wire the Adaptatone only as described in this installation instruction.

2. Wire as follows referring to Figure 4.
   a. Connect green and yellow-striped earth-ground wires to earth-ground.
   b. Select the appropriate method for wiring to the input board from Figure 5 through Figure 13.
   c. Connect incoming power to wire leads using a butt splice or other method listed, certified, or otherwise approved by local authorities. Leads are both black for -AQ and -N5 models and are black and white for -Y6 models.
   d. Optional. Connect external 24V DC battery (not supplied) in series with separate diode assembly part 2600010 (supplied) to TB1 terminals 3 and 4 on the main board as shown in Figure 2 and Figure 3 and marked on the diode assembly.

NOTE: Terminal Block TB1 can be unplugged from the main board to complete wiring as shown in Figure 2.

Maintenance and testing

WARNING: To prevent fire, shock and component damage, NO work including circuit board removal, should be performed while the circuit is energized.

NOTE: Any kind of service or maintenance performed while unit is energized will void the warranty.

Examine the unit semi-annually for accumulation of dirt. Clean if necessary.

The Adaptatone should be tested annually or as required by the authority having jurisdiction to ensure continuous service.

Figure 1: Adaptatone mounting

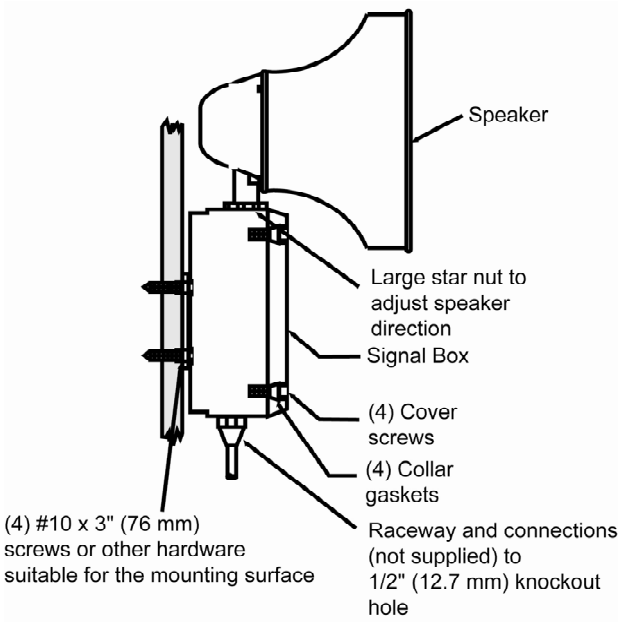


Figure 2: Terminal block TB1

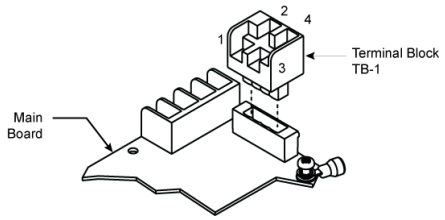


Figure 3: Wiring to terminal block TB1 input circuit

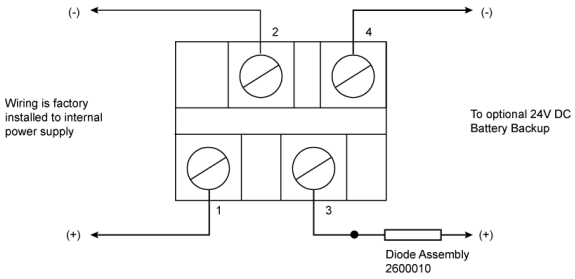


Figure 4: Wiring the Adaptatone

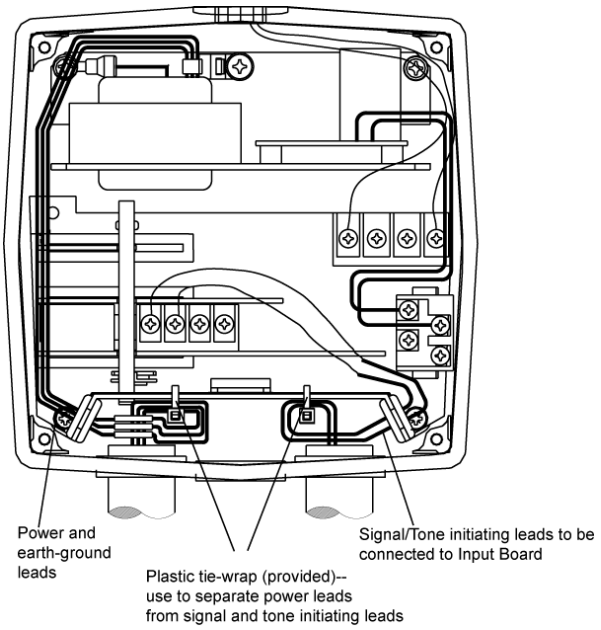


Figure 5: Wiring a dry relay contact to 24 V input board, method 1 (refer to Applications Engineering for compatibility with earlier versions of Adaptatone)

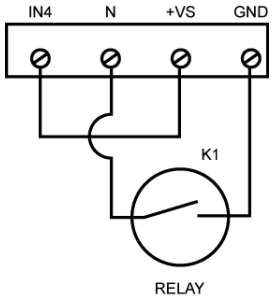


Figure 6: Wiring a dry relay contact to 24V input board, method 2

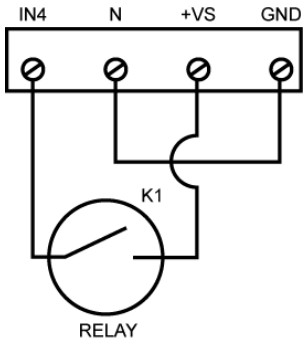


Figure 7: 24 VDC strapped input, 24 V input board

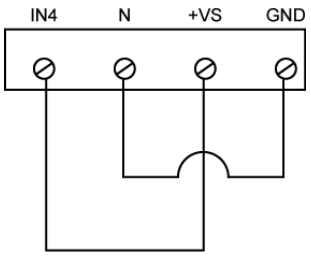


Figure 8: Wiring to 24 V input board with an open collector transistor

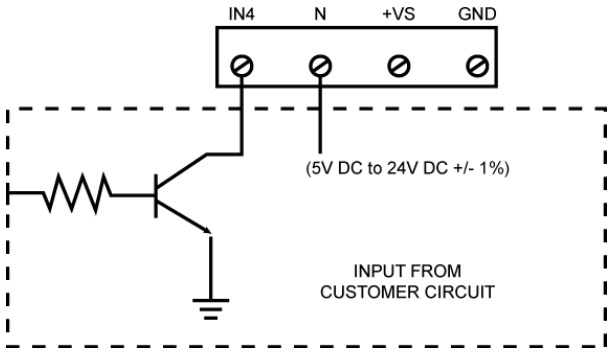


Figure 9: Connecting 24 V input board in parallel with Adaptatone "B" (limit of 5 "M" models)

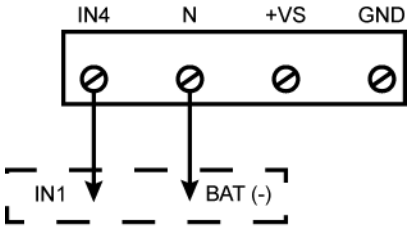


Figure 10: Connecting 24 V input board to a PLC. See Table 5

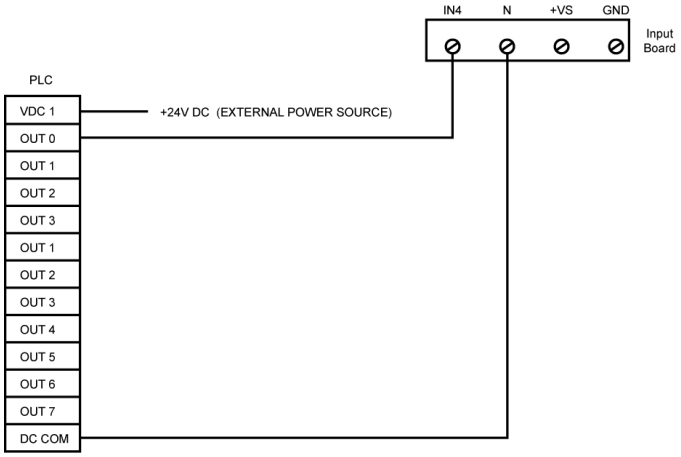


Figure 11: 120 VAC strapped input, 120 V input board

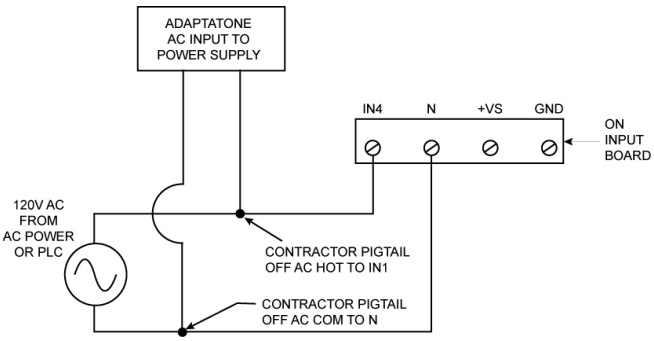


Figure 12: 120 VAC to 240 VAC or 120 VDC – 250 VDC, 120 V input board

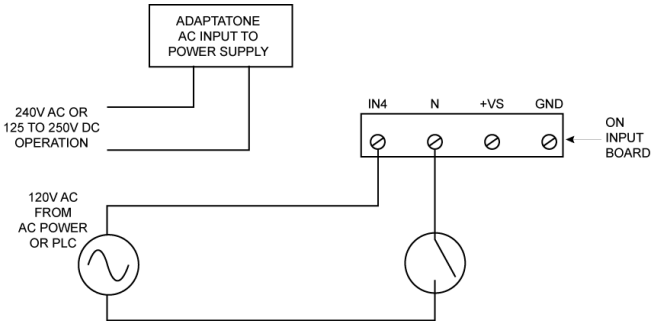


Figure 13: Connecting from a PLC to 120 V input board. See Table 5

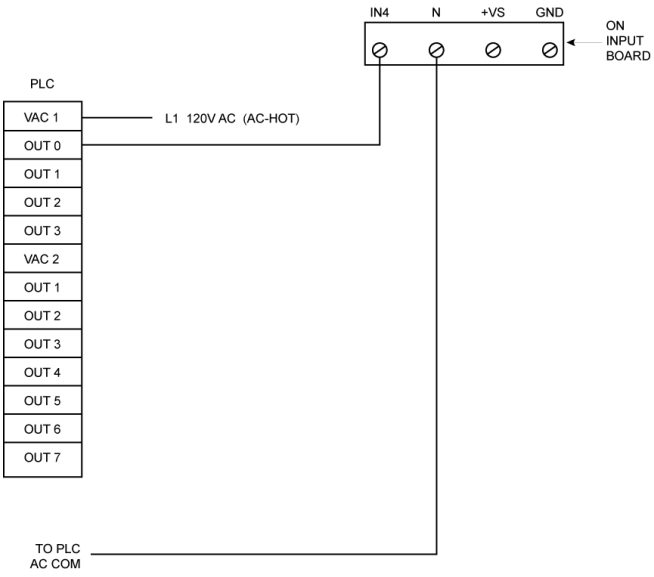
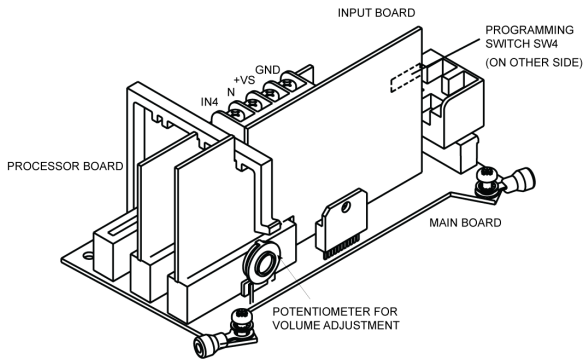


Figure 14: PC board locations



Specifications

Voltage	Refer to Table 2 and Table 3
Current	Refer to Table 2 and Table 3
Dimensions	Refer to Table 4 on page 5
Weight	9 lb (4.1 kg)
Hazardous locations Ambient temp.	-31 to 104°F (-35 to +40°C)
Non-hazardous locations Variable ambient temp	-40 to 151°F (-40 to +66°C)

Table 1: Operating temperature codes

Catalog number	Class I, Div. 2 Groups A, B, C, D	Class II, Div. 2, Groups F, G Class III, Div. 1 and 2
5530M-24AQ 5530M-24N5 5530MHV-24AQ 5530M-120N5	135°C (T4)	100°C (T5)
5530M-24Y6 5530MHV-24Y6 5530M-120Y6 5530MHV-120Y6	180°C (T3A)	100°C (T5)

Table 2: Input board

Catalog number	Voltage	Current
5530M-24AQ 5530M-24N5 5530MHV-24AQ 5530MHV-24Y6	24 VDC	6 mA
5530M-120N5 5530M-120Y6 5530MHV-120Y6	120 VAC 50/60 Hz	13 mA

Table 3: Main power

Catalog number	Voltage	Standby current	Tone on current
5530M-24AQ	24 VDC	0.10 A	0.74 A
	24 VAC 50/60 Hz	0.10 A	1.3 A
5530M-24N5	120 VAC 50/60 Hz	0.10 A	0.36 A

Catalog number	Voltage	Standby current	Tone on current
5530M-120N5	120 VAC 50/60 Hz	0.10 A	0.38 A
5530M-24Y6	125 VDC	0.10 A	0.20 A
	250 VDC	0.02 A	0.10 A
	120 VAC 50/60 Hz	0.10 A	0.32 A
	240 VAC 50/60 Hz	0.10 A	0.20 A
5530M-120Y6	125 VDC	0.10 A	0.20 A
	250 VDC	0.02 A	0.10 A
	120 VAC 50/60 Hz	0.10 A	0.31 A
	240 VAC 50/60 Hz	0.10 A	0.20 A
5530MHV-24AQ	24 VDC	0.10 A	1.5 A
	24 VAC 50/60 Hz	0.10 A	2.3 A
5530MHV-24Y6	125 VDC	0.10 A	0.39 A
	250 VDC	0.02 A	0.19 A
	120 VAC 50/60 Hz	0.10 A	0.56 A
	240 VAC 50/60 Hz	0.10 A	0.34 A
5530MHV-120Y6	125 VDC	0.10 A	0.40 A
	250 VDC	0.02 A	0.20 A
	120 VAC 50/60 Hz	0.10 A	0.62 A
	240 VAC 50/60 Hz	0.10 A	0.37 A

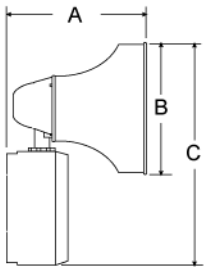


Table 4: Dimensions

	5530M	5530MHV
A	8 7/8” (225 mm)	11 1/2” (292 mm)
B	8 1/4” (210 mm)	9 3/4” (248 mm)
C	13” (330 mm)	14 1/4” (362 mm)

Table 5: PLC compatibility: PLC output to meet following product input parameters. Refer to Figure 10 and Figure 13.

Catalog number	Operating voltage	Max. off state leakage current	Continuous on current	Surge (inrush/duration)
5530M-24AQ	24 VDC only	2 mA	740 mA	8 A / 4 mS
5530M-24N5	120 VAC 50/60 Hz	2 mA	360 mA	2.82 A / 4 mS
5530MHV-24AQ	24 VDC only	2 mA	1500 mA	8 A / 4 mS
5530M-120N5	120 VAC 50/60 Hz	5 mA	380 mA	2.82 A / 4 mS
Input board circuit	24 VDC	2 mA	6 mA	--

Table 6: Tone programming

Tone	SW 4-6	SW 4-5	SW 4-4	SW 4-3	SW 4-2	SW4-1	Description	Hex
No Tone	OFF	OFF	OFF	OFF	OFF	OFF		00
Ding-Dong	OFF	OFF	OFF	OFF	OFF	ON	Percussive pairs of 700 and 570 Hz tones, each damped to 0	01
Warble	OFF	OFF	OFF	OFF	ON	OFF	575 and 770 Hz alternately, 87 ms each	02
Siren	OFF	OFF	OFF	OFF	ON	ON	600 – 1250 Hz up and down sweep in 8 s and repeat	03
Stutter	OFF	OFF	OFF	ON	OFF	OFF	Percussive 470 Hz, 83 ms on, 109 ms off	04
Slow Whoop	OFF	OFF	OFF	ON	OFF	ON	600 – 1250 Hz upward sweep in 4 s and repeat	05
Beep	OFF	OFF	OFF	ON	ON	OFF	470 Hz, 0.55 s on, 0.55 s off	06
Chime 1	OFF	OFF	OFF	ON	ON	ON	700 Hz percussive repeat at 1 Hz	07
Fast Whoop	OFF	OFF	ON	OFF	OFF	OFF	600 – 1250 Hz upward in 1 s and repeat	08
Hi/Lo	OFF	OFF	ON	OFF	OFF	ON	780 to 600 Hz alternately, 0.52 s each	09
Rapid Siren	OFF	OFF	ON	OFF	ON	OFF	600 – 1250 Hz up and down sweep in 0.25 s and repeat	0A
Yeow	OFF	OFF	ON	OFF	ON	ON	1250 – 600 Hz downward sweep in 1.6 s and repeat	0B
Horn	OFF	OFF	ON	ON	OFF	OFF	470 Hz continuous	0C
Air Horn	OFF	OFF	ON	ON	OFF	ON	370 Hz continuous	0D
Dual Tone	OFF	OFF	ON	ON	ON	OFF	470 – 500 Hz, 0.4 to 0.5 s cycle	0E
Chime 2	OFF	OFF	ON	ON	ON	ON	575 Hz percussive repeat at 1 Hz	0F
Westminster	OFF	ON	OFF	OFF	OFF	OFF	Two measures, 411 Hz, 520 Hz, 407 Hz, 312 Hz	10
Three Blind Mice	OFF	ON	OFF	OFF	OFF	ON	Four measures, 787 Hz, 714 Hz, 625 Hz, 952 Hz, 333 Hz	11
Phasor	OFF	ON	OFF	OFF	ON	OFF	416 – 625 Hz up and down sweep in 13 ms and repeat	12
Telephone	OFF	ON	OFF	OFF	ON	ON	570 and 770 Hz alternately, 50 ms each for 1.2s, 1.5s delay and repeat	13
Staircase	OFF	ON	OFF	ON	OFF	OFF	440 – 2000 Hz up and down steps, 750 ms delay and repeat	14

Tone	SW 4-6	SW 4-5	SW 4-4	SW 4-3	SW 4-2	SW4-1	Description	Hex
3 Tone Alert	OFF	ON	OFF	ON	OFF	ON	463 Hz, 641 Hz, and 896 Hz, 200 ms each, 1 s delay and repeat	15
RESERVED	OFF	ON	OFF	ON	ON	OFF	RESERVED	16
RESERVED	OFF	ON	OFF	ON	ON	ON	RESERVED	17
RESERVED	OFF	ON	ON	OFF	OFF	OFF	RESERVED	18
RESERVED	OFF	ON	ON	OFF	OFF	ON	RESERVED	19
RESERVED	OFF	ON	ON	OFF	ON	OFF	RESERVED	1A
NFPA Whoop	OFF	ON	ON	OFF	ON	ON	Three 422 – 775 Hz upward sweeps, 850 ms each, 1 s delay and repeat	1B
3 Pulse Horn*	OFF	ON	ON	ON	OFF	OFF	470 Hz, 3 0.5 s pulses separated by 0.5 s followed by 1.5 s delay and repeat	1C
3 Pulse Air Horn*	OFF	ON	ON	ON	OFF	ON	370 Hz, 3 0.5 s pulses separated by 0.5 s followed by 1.5 s delay and repeat	1D
3 Pulse Dual Tone*	OFF	ON	ON	ON	ON	OFF	450 – 500 Hz, 0.4 to 0.5 s cycle, 3 0.5s pulses separated by 0.5 s followed by 1.5 s delay and repeat	1E
3 Pulse Chime 2*	OFF	ON	ON	ON	ON	ON	575 Hz, 3 0.5 s pulses separated by 0.5 s followed by 1.5 s delay and repeat	1F
European Police	ON	OFF	OFF	OFF	OFF	OFF	969 Hz and 800 Hz alternately 0.250 s each	20
European Fire	ON	OFF	OFF	OFF	OFF	ON	982 Hz and 864 Hz downward sweep in 0.134 s	21
European Slow Whoop	ON	OFF	OFF	OFF	ON	OFF	658 – 1312 Hz upward sweep in 3 s followed by 0.5 s delay and repeat	22
European General	ON	OFF	OFF	OFF	ON	ON	1087 Hz for 0.5 s followed by 0.5 s delay and repeat	23
European Toxic	ON	OFF	OFF	ON	OFF	OFF	982 Hz continuous	24
European Police 2	ON	OFF	OFF	ON	OFF	ON	554 Hz and 440 Hz alternately, 0.8 s each	25
European Stutter	ON	OFF	OFF	ON	ON	OFF	3876 Hz for 0.146 s followed by 0.102 s delay and repeat	26
European Sweep	ON	OFF	OFF	ON	ON	ON	1315 Hz – 413 Hz downward sweep in 1.17 s and repeat	27
Telephone 2	ON	OFF	ON	OFF	OFF	OFF	Alternate tones at 567 Hz and 326 Hz	28
Buzzer	ON	OFF	ON	OFF	OFF	ON	1315 Hz and 746 Hz alternating for 0.003 s each	29
Genesis Horn Cont	ON	OFF	ON	OFF	ON	OFF	Continuous Genesis horn	2A
Genesis Horn Temp	ON	OFF	ON	OFF	ON	ON	Temporal Genesis horn	2B
Warning 1	ON	OFF	ON	ON	OFF	OFF	1207 Hz and 493 Hz, alternately 0.002 s each	2C
Warning 2	ON	OFF	ON	ON	OFF	ON	2336 Hz and 493 Hz, alternately 0.005 s each	2D
Warning 2 Beep	ON	OFF	ON	ON	ON	OFF	0.500 s of 2336 Hz and 493 Hz each alternating for 0.005 s followed by 1 s delay	2E
Caution	ON	OFF	ON	ON	ON	ON	453 Hz for 0.040 s, 235 Hz for 0.020 s, 235 Hz for 0.160 s, 260 Hz for 0.050 s, 260 Hz for 0.1009 s, 235 Hz for 0.050 s	2F
Multi-tone	ON	ON	OFF	OFF	OFF	OFF	376, 357, 352, 382, 355, 375, 384, 375 and 364 Hz alternately on for 0.050 s	30
Attention	ON	ON	OFF	OFF	OFF	ON	2232, 4545, 3704, 2777, 4347, 3704, 2500 Hz alternately on for 0.003 s	31
High Freq. Steady Alert	ON	ON	OFF	OFF	ON	OFF	2500 Hz continuous	32
High Freq. Fast Siren	ON	ON	OFF	OFF	ON	ON	2500 – 3048 Hz up and down sweep in 0.130 s	33
High Freq. Slow Siren	ON	ON	OFF	ON	OFF	OFF	2500 – 3048 Hz up and down sweep in 0.500 s	34
DIN PFEER	ON	ON	OFF	ON	OFF	ON	Ramp downward from 1336 Hz to 522 Hz in 1.2 s and repeat	35
NF S 32 001	ON	ON	OFF	ON	ON	OFF	584 Hz for 0.100 s and 461 Hz for 0.400 s	36
Ode to Joy	ON	ON	OFF	ON	ON	ON	6.45 s of melody followed by 1 s delay and repeat	37
Twinkle Little Star	ON	ON	ON	OFF	OFF	OFF	13.2 s of melody followed by 1 s delay and repeat	38
Dueling Banjos	ON	ON	ON	OFF	OFF	ON	10.84 s of melody followed by 1 s delay and repeat	39
La Cucaracha	ON	ON	ON	OFF	ON	OFF	7.10 s of melody followed by 1 s delay and repeat	3A
Yellow Rose of TX	ON	ON	ON	OFF	ON	ON	19.34 s of melody followed by 1 s delay and repeat	3B

*3 Pulse Tones are for Evacuation Use Only

CAUTION: The use of evacuation signals on this product, that is not specifically listed for fire alarm use, is subject to the approval of the authority having jurisdiction.

Regulatory information

Edwards Signaling	Edwards, A Division of UTC Fire & Security Americas Corporation, Inc. 8985 Town Center Parkway, Bradenton, FL 34202, USA
UL and cUL Rated	Audible Signal Appliance

Contact information

For contact information, see www.edwardssignaling.com.

P/N 3100006 OFFSET

INSTALLATION INSTRUCTIONS FOR CATALOG
SERIES 5530M ADAPTATONE

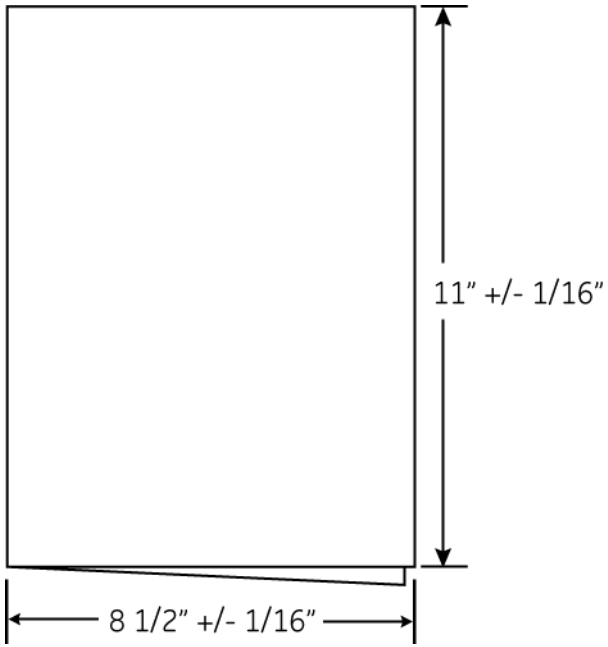
(2) 11” X 17” SHEET PRINTED BOTH SIDES. COLLATE AND FOLD IN HALF PER FOLD DETAIL WITH PART NUMBER ON THE OUTSIDE. SADDLE STITCH IN TWO PLACES.

MATERIAL: STANDARD WHITE OFFSET STOCK

CHARACTERS TO BE BLACK ON WHITE BACKGROUND

NOTE: MECHANICALS HAVE ALREADY BEEN REDUCED TO ACTUAL SIZE.

RETURN MECHANICALS TO:
TECHNICAL WRITING
EDWARDS SIGNALING
41 WOODFORD AVENUE
PLAINVILLE, CT 06062



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