



***Universal Loud
Sounding Alarm
Technical Training Manual***



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OVERVIEW



Provides:

- A loud alarm for incoming exchange calls
- Front door bell chimes
- Building entry alarm via reed switch or PIR sensor

A REN of 0.1 ensures compatibility with existing devices and minimal loading of the exchange line for incoming ring signals.

Connect:

- One or two (parallel) 8 ohm speakers. Any speaker combination may be connected providing that the total load is greater than 4 ohms
- Up to six 12-volt strobe lights
- One 8 ohm speaker and up to two 12-volt strobe lights
- To the unbalanced 10K Ω auxiliary input of a P.A. amplifier
- To any auxiliary device that can be driven by dry contacts.

Accept inputs from:

- Up to two exchange lines, each with it's own set of four different selectable alarm-tones
- A front-door push button – giving a distinctive “door-chime tone”
- Passive infra-red sensors in either normally-open or normally-closed configuration
- Reed-switches using either normally-open or normally-closed configuration
- PABX system dry relay contacts.

COMPONENTS

Universal Loud
Sounding
Alarm



Power Adaptor
(included)



Horn Speaker
(optional)



Strobe Light
(optional)



INSTALLATION INSTRUCTIONS

COVER REMOVAL

Insert a small flat-bladed screwdriver into the latch-release slot as shown opposite and lift the front cover off.



WALL MOUNTING

Using the two mounting holes in the base, screw the tone-ringer to a vertical surface using suitable hardware. The two mounting hole centres are 84mm vertically apart.

POWER CONNECTION

The 12V DC 1 Amp power pack (T1210P21) wires are connected to screw terminals 1 & 2. The power input is not polarity sensitive.

SPEAKER CONNECTION

An 8 ohm speaker (Access Cat # K3505) is connected to screw terminals 7 & 8. Maximum cable run is 15 metres. Up to two 8 ohm speakers may be connected in parallel (giving a 4 ohm load on the tone ringer).

ALARM-TONE SELECTION AND TESTING

Each exchange line is allocated 4 unique alarm-tones. These are selected by dip-switches at the top right of the ringer.

The top two switches are for exchange line 1 and the bottom two switches are for exchange line 2.

There are two push buttons immediately below the dip switches that are used to test the tones. The left hand "test" button is for exchange line 1 and the right hand "test" button is for exchange line 2.

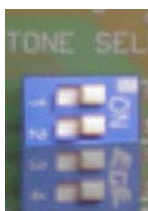


Line 1
Tone selection switches
and test button



Line 2
Tone selection switches
and test button

To test the alarm-tones, connect the speaker and connect power to the tone ringer (the LED should light). Set a pair of dip-switches (either 1 & 2 or 3 & 4) to one of the four possible combinations for that pair.



POSITION 1



POSITION 2



POSITION 3



POSITION 4

Momentarily press the corresponding "test" button. Repeat this procedure until you get a suitable alarm-tone. If you are connecting only one exchange line and prefer the alarm-tones for Line 2, simply use the Line 2 RJ socket instead of using the Line 1 socket.

TECHNICAL NOTES

SPEAKERS

- A horn speaker (available separately) must be connected to the Universal Alarm to provide an audible output. There is no in-built speaker.
- Nominal horn speaker impedance is 8Ω and up to two 8Ω speakers can be connected in parallel.
- It is possible to connect up to four 16Ω speakers in parallel. Remember that the total load must not be less than 4 ohms.
- Maximum cable run is 15 metres.
- A single speaker connected to the Universal alarm recorded “loudness” measurements of 110db (test average) with a maximum of 117db (c-weighted results).

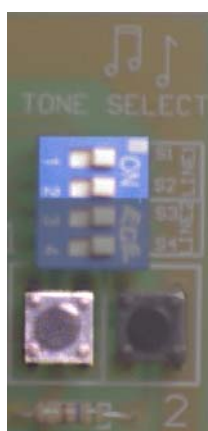
EXCHANGE LINES

- Connected via the two 6P6C sockets near the top left-hand side of the PCB. Only the two centre contacts (pins 3 & 4) are used.
- Link J2 must be open.
- Each line has four distinctive alarm-tones selected by dip-switches on the top right-hand side of the PCB.

The top two switches are for “Line 1” and the bottom two switches are for “Line 2”.

- There are two alarm-test buttons below the switches.

The left-hand button is for “Line 1” and the right-hand button is for “Line 2”.



**Line 1 switches
and test button**



**Line 2 switches
and test button**

PIR SENSORS AND REED SWITCH INPUTS

- The device is connected to screw terminals 3 & 10
- 12V power for the PIR sensor can be supplied from terminals 3 (-12V) and 6 (+12V).
- If the device offers a “normally-closed” condition, link J2 must be bridged.
- If the device offers a “normally-open” condition, link J2 must be open.
- If the device is configured for “normally-open” condition, the position of link J1 determines the type of alarm-signal tone:

If J1 is bridged, the door-alarm tone is provided.

If J1 is open, the “Line 1” alarm-tones are used.

- If the device is configured for “normally-closed” condition, the position of link J1 determines the length of time the alarm sounds:
 - If J1 is bridged, a momentary alarm tone is heard.
 - If J1 is open, the alarm-tone is heard as long as the device remains in its “operated” state.

DOOR CHIME INPUT

- Independent of “Line 1” and “Line 2” inputs.
- Has its own distinctive (non-changeable) tone.
- The door push-button must be “normally-open”.
- Link J1 must be bridged.
- Terminal 3 (-12V) and 6 (+12V) can be used to power a light in the push-button.
- The alarm-signal tone lasts as long as the button is pressed.

DIRECT-WORKING INPUT

- Dry relay contacts or a push-button are connected to terminals 3 and 10.
- Link J1 must be open (to disconnect the door-bell tone)
- Alarm signal-tone is selected by the “Line 1” selection switches.
- The “line 1” exchange input can also be used as well but it will obviously have the same alarm-signal tone as the direct-working contacts.
- The “Line 2” input can be used to provide a different alarm-signal tone for exchange line calls.

STROBE LIGHT OUTPUT

- Up to 6 strobe lights can be connected to terminals 3 (-12V) and 5 (+12V). To connect one of our "Access" strobe lights, make sure the black lead from the strobe is on terminal 3 and that the blue lead is on terminal 6.
- Link J3 must be bridged.
- If a single speaker is connected to the Universal Alarm, a maximum of only two strobe lights can be connected. If two speakers are connected to the Universal Alarm, no strobe lights should be connected.
- A typical strobe light is rated at around 2 watts, drawing about 160mA at 12 volts.

The Universal Alarm's power supply is rated at 12 watts. A horn speaker draws around 7 watts leaving only 5 watts to power up to two strobe lights.

Lower or higher wattage strobe lights can be connected. Just remember that the total load (including speakers and strobe lights) must not exceed 12 watts.

INCANDESCENT LAMP OUTPUT

A standard 12 volt incandescent light can be operated from the strobe-light terminals (3 & 5). The light will operate on an incoming call and remain lit until the call is answered or the incoming ring ceases.

If one horn speaker is connected to the Universal Alarm, you are limited to a 4 watt globe. If no horn speaker is connected, a 12 watt globe can be used.

P.A. AMPLIFIER OUTPUT

- A P.A. system amplifier can be used to generate a signal for any Universal loud Sounding Alarm input condition (including exchange lines, PIR sensors, door bells etc).
- The tone generated by the P.A. system is the same as that provided to the horn speaker.
- Connection is via screw terminals 3 and 9.
- The amplifiers unbalanced auxiliary input ($10K^{\Omega}$) should be used.

DRY CONTACT OUTPUT

- A dry contact output is provided from terminals 4 and 5.
- Link J3 must be open.
- The contacts are rated to carry up to 5 amps at up to 24 volts Dc or AC.
- The dry contact output can be used in conjunction with an external power supply to power any device (light etc) up to a maximum of 120 watt load.
- The dry contacts can be used to operate any self-powered device such as piezo sirens, burglar alarms etc, allowing these extra alarms to be used in conjunction with the horn speakers.