



Tone Ringer

Technical Training Manual

ACCESS
COMMUNICATIONS PTY LTD

33 Alleyne Street, Chatswood, NSW 2067, Australia
P.O. Box 231, Northbridge, NSW 1560, Australia
Phone: +61 2 9414 8888 Fax: +61 2 9414 8800
www.accesscomms.com.au

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OVERVIEW



Provides:

- An alarm for incoming exchange calls.

A REN of 1.9 allows connection of the Tone Ringer with up to two standard telephones whilst still providing acceptable loading of the exchange line for incoming ring signals.

Suitable for:

- Office, retail, light manufacturing and home use where ambient noise is not unusually loud.

Accept inputs from:

- One exchange line, analog telephone or other analog device.

Connect:

- An optional 8 ohm speaker.

COMPONENTS

Tone Ringer



Horn Speaker
(optional)

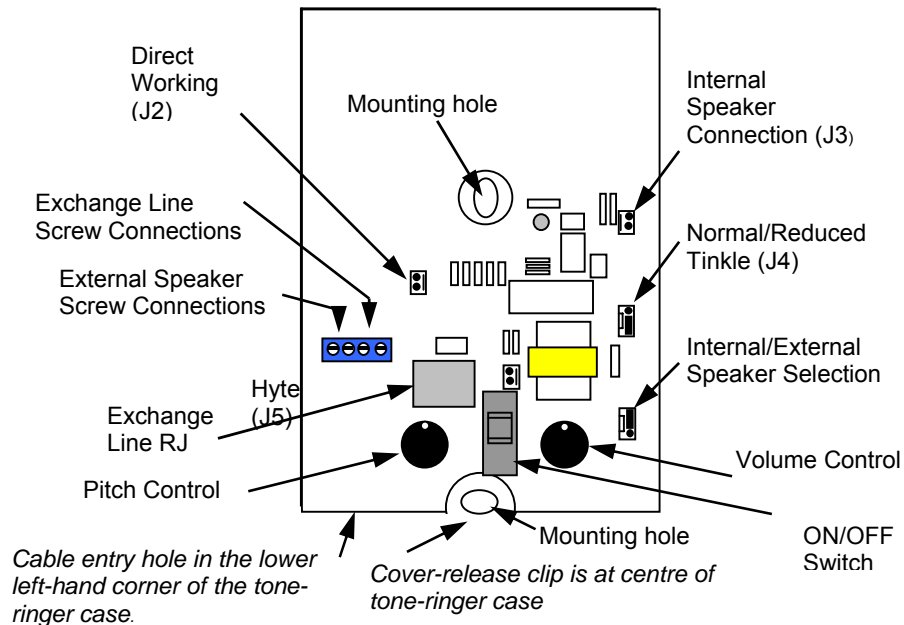


LAYOUT

FRONT VIEW

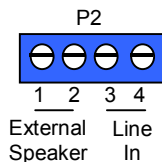


PCB LAYOUT



SCREW TERMINALS

Four screw terminals are provided on terminal block P2.

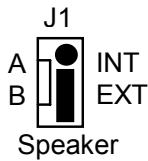


The left hand pair are used to connect an optional external horn speaker (Cat # K3505). The Internal/External speaker selection jumper (J1) must be moved to "EXT" (position B) if an external speaker is used.

The right-hand pair can be used to connect the ringer to the telephone line. The tone-ringer is wired in parallel across the exchange line (or analog telephone socket).

The tone-ringer can also be connected to the telephone line by using a 6 position U.S. modular plug. The connection to the telephone line is wired to pins 3 & 4 (the centre two contacts) of the RJ plug. The RJ plug is then simply inserted into the RJ "Line In" socket on the tone-ringer PCB .

JUMPERS and CONTROLS



Jumper J1 (Speaker) is used to select either internal or external speaker operation. The default setting is for the Internal speaker with the link bridging the top two pins (position A). If an external speaker is used, the link must be moved so that it bridges the bottom two pins (position B).



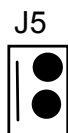
Jumper J2 (Direct) is used only if the tone-ringer is operated by a DC source (instead of the normal AC ring voltage). The default setting is for an AC ring supply (link open). If a DC source is used, the two pins on jumper J2 must be bridged.



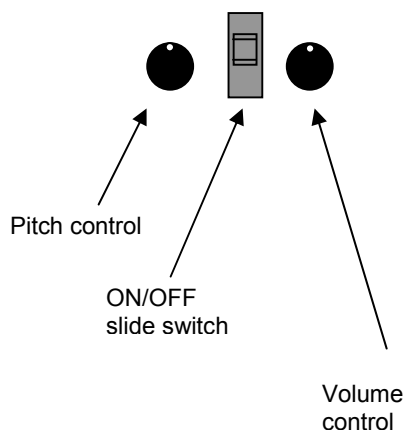
Jumper J3 (Speaker) is used to connect the Internal Speaker that is mounted in the front-cover of the tone-ringer to the PCB. Check that the speaker wires are plugged into this link-block before replacing the cover on to tone-ringer.



Jumper J4 is used to select either “normal” or “reduced tinkle” operation. The default setting is “normal” with the link bridging the bottom two pins (position B). If “reduced tinkle” operation is required the link must be moved so that it bridges the top two pins (position A). The “normal” position is used for the majority of installations.



Jumper J5 (Hytel) is not used.



These three controls are accessible from outside the tone-ringer and give the end-user control over basic functions.

The pitch control varies the pitch of the tone-ringer’s signal.

The ON/OFF slide switch is used to activate or silence the tone ringer. Slide the switch down to the bottom position to activate the tone-ringer or up to the top position to prevent the tone-ringer from operating.

The volume control is used to set the loudness of the tone ringer’s speaker (either internal or external). Turning the control clockwise (towards the right) increases the volume of the speaker. Turning the control anti-clockwise (towards the left) decreases the speaker’s volume.

INSTALLATION INSTRUCTIONS

COVER REMOVAL

Insert a small flat-bladed screwdriver into the latch-release slot as shown opposite and lift the front cover off. Lift the front panel off (bottom edge first) and unplug the internal speaker wires from jumper J2.



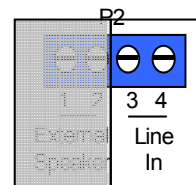
WALL MOUNTING

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.

WIRING CONNECTIONS

The tone-ringer is wired in parallel across an exchange line or on analog telephone by:

- (a) Using the "LINE IN" screw terminals (screws 3 and 4 on the right-hand side) on the blue-coloured screw-terminal block. Strip the conductor ends and insert them into connectors 3 & 4 and tighten the two screws.



- (b) Using the RJ socket on the tone-ringer PCB. This 6P2C socket uses the two centre contacts (3 & 4) for the exchange line connection. Use a standard 6P modular line cord to connect the tone ringer to the exchange line or analog telephone.



RJ socket

COVER REPLACEMENT

Refit the Internal Speaker connector to jumper J3. Insert the two clips on the top of the cover into the slots at the top of the case. After depressing the catch at the bottom centre of the cover, push the cover firmly onto the case.

TONE ADJUSTMENT

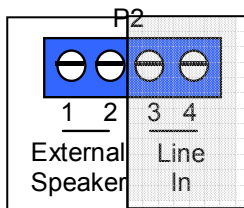
Slide the switch to the "ON" position and adjust the Pitch and Volume controls for the desired tone and volume.

TECHNICAL NOTES

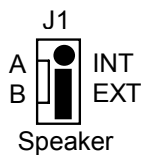
CONNECTING A HORN SPEAKER

- An optional horn speaker (nominal impedance 8Ω) may be connected to the Tone Ringer to provide a “directed” audible output. The in-built speaker is disabled if an external speaker is used.

Two steps are involved to connect an external speaker:



- (1) Strip the conductor ends, insert them into connectors 1 & 2 (EXTERNAL SPEAKER) on the left-hand side of the blue-coloured screw-terminal block and tighten the two screws.



- (2) Move the link on jumper J1 to the “EXT” position (the lower two pins).

DIRECT WORKING



If the ringer needs to operate from a DC source instead of AC (as sometimes occurs when using the “alarm contacts” from a PBX) jumper J2 must be bridged