Dialgizmo
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Users Guide

www.dialgizmo.com

Pulse to Tone Converter for VoIP lines

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❶ Overview

The Dialgizmo Pulse to Tone Converter will convert the dialing signals from old style rotary pulse dial phones into modern DTMF tone dialing as used on any modern phone line, it even lets you dial ∗ and #.

Dialgizmo has been specially designed to tolerate the lower power levels found on most VoIP phone services.

- Easy to install, just plug it in and start dialing
- Requires no modifications to your old phone
- Supports all standard rotary phones
- Converts 0-9 Pulse/Decadic dialing to DTMF tone
- Allows you to dial ∗ and # on most rotary phones
- Six speed dial memories
- Last number redial feature
- Needs no batteries, no external power supply

- Advanced microprocessor control for accurate dialing
- Suppresses dial pulses on the line to stop double dialing faults
- Not effected by incorrect line polarity
- Configurable for non-standard dial layouts (Sweden, New Zealand)
- Does not interfere with ringer operation
- Supports a wide range of international telephone line voltages and currents
- Specially designed to tolerate low line voltages found on many on VoIP boxes and ATAs

Rotary phones use what is called Pulse, or Decadic dialing, where the phone sends a series of pulses or clicks down the line to represent the number dialed. However modern phones and telephone equipment use tone dialing, which is the familiar series of tones heard on the phone line where each tone represents a number dialed. Modern equipment like VoIP converter boxes or VoIP ATAs don't support pulse dialing, this is where Dialgizmo comes in. Dialgizmo connects between your old phone and the line or VoIP Box and changes the pulses from your old phone into tone dialing signals which are recognized by modern equipment.

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❷ Setup & Basic Dialing

To setup the Dialgizmo
Just plug it into your phone line, (where the phone normally connects), and then connect your old rotary telephone into the socket on the Dialgizmo. The Dialgizmo uses a modern 2 wire RJ11 connector, so you may need an adapter if your old phone does not have this type of connector.
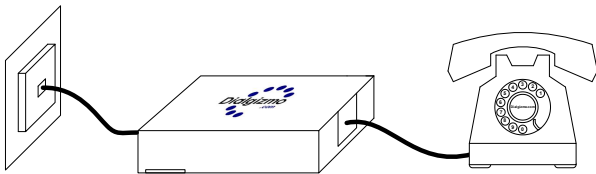
To dial a number
Just pick up the phone and dial as usual. When the dial is released and returns to its resting position, the Dialgizmo will produce the appropriate DTMF tone corresponding to the number you dialed. Wait until you hear this tone, and then proceed to dial the next digit of the phone number.

You can also dial a number while in the middle of a call. This is used to navigate the voice menus of some phone systems such as "press 1 for sales…."

When you pick up the phone and dial a number, it is saved into the last number redial (LNR) position, and can be accessed again later. The LNR stores the first 16 digits dialed of any call.

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❸ Dial-Hold Dialing

Dial-hold mode is used to access all advanced features. Dial-hold works by dialing a digit and holding your finger against the finger stop on the dial for 2 seconds before releasing the dial. So it's just like dialing a normal number, but with a 2 second delay before releasing.
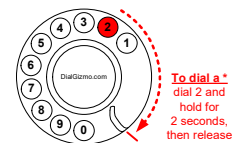
To dial a # (hash)
Dial 1, hold for 2 seconds and release.

To dial a # dial 1 and hold for 2 seconds, then release
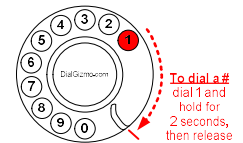
To dial a ∗ (star)
Dial 2, hold for 2 seconds and release.

To dial a ∗ dial 2 and hold for 2 seconds, then release

For last number redial
Pick up the phone and dial 9, hold for 2 seconds and release. Dialgizmo will then begin dialing the last number dialed.

For LNR Dial 9 and hold for 2 seconds, then release
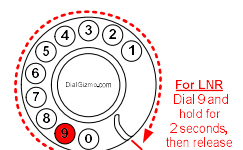
To dial a saved speed-dial
Dial a speed dial location (3, 4, 5, 6, 7 or 8) hold for 2 seconds and release. Dialgizmo will then begin dialing the number stored in that location.

Select a Speed Dial location Dial it and hold for 2 seconds, then release

④ Storing a Speed Dial

Dialgizmo can store up to 6 separate speed dial numbers. Each number can be up to 16 digits long. To store a new speed dial number, follow the steps below:

Step 1: To store a speed-dial number, Pick up the phone then dial 0 and hold for 2 seconds, then release. You will hear 3 quick beeps to indicate that it is ready to store a new speed-dial number.

Dial and hold for 2 seconds

Beep Beep Beep
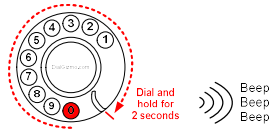
Step 2: Next dial the location in which you wish to store the speed-dial number, then release. Valid locations are 3, 4, 5, 6 ,7 and 8. You will hear 2 quick beeps to set you know that it is ready to store the number.

Select a Speed Dial location Dial it and release

Beep Beep
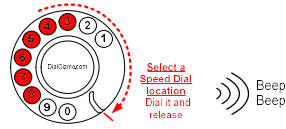
Note: 4 beeps means a bad location was selected. Valid locations are: 3,4,5,6,7 and 8.

Step 3: Now just dial the number to be stored. After each digit, you will hear a quick beep to let you know the number has been saved. You can store up to 16 digits in each speed-dial location.
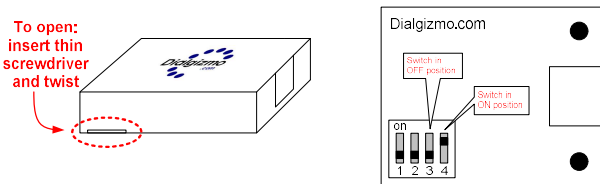
Dial the number to be stored as normal

Beep
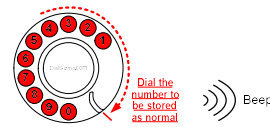
Step 4: When you have finished dialing the number, just hang up the phone. This completes the storing of the speed-dial number.

To delete a speed-dial number, just follow steps 1 and 2 above, then hang up the phone. The selected speed-dial location is now cleared.

There is no need to clear a speed-dial location before saving a new number in that location.

⑤ Troubleshooting

Dialgizmo should provide trouble free operation, however if something does go wrong…

Symptom	Problem
Three sets of 3 beeps are heard when the phone is picked up: *beep-beep-beep …* *beep-beep-beep …* *beep-beep-beep …*	Dialgizmo was not able to self adjust to the voltages on your phone line. This means that the dial-hold features will not be available with this combination of line and telephone. This happens in some rare cases where the line voltage is very low or the line current is in excess of 60mA. You will need to disable the dial-hold features by turning ON switch 1, see section 6 for details. Dialgizmo will still perform basic pulse to tone conversion in this mode.
No DTMF tone are heard when a number is dialed on the rotary dial is dialed.	If Dialgizmo has just been installed, then wait 30 seconds for the line voltage to stabilize before continuing.
Last Number Redial is not saved	The recently dialed number is stored into the Last Number Redial location by Dialgizmo when no new digit has been dialed for about 10 seconds.

For more additional support, see the Dialgizmo website at http://www.dialgizmo.com or email info@dialgizmo.com

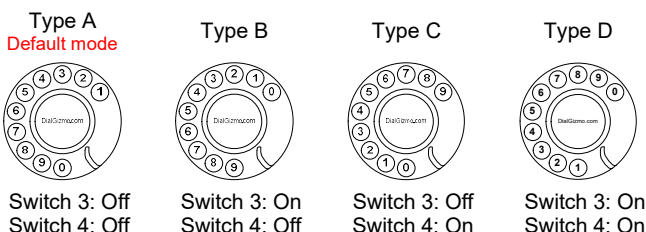# ⑥ Changing the Dial Settings

There are some options on Dialgizmo that can be changed by opening the case and changing the switch settings. To open the case, first disconnect from the phone and line, then insert a small screw driver or flat blade into the slot and twist as shown below. You will expose the circuit board and note the small set of 4 switches as per the diagram below:

To open: insert thin screwdriver and twist

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Switch in OFF position

Switch in ON position

on
1 2 3 4

	Off (Factory default mode)	**On**
Switch 1 – Dial Hold	Dial-Hold features enabled	Dial-Hold features disabled
Switch 2 – Reserved	Leave Off	N/A
Switch 3 – Zero Position	Zero is at far end of dial	Zero is at near end of dial
Switch 4 – Digit Order	Ascending	Descending

Different dial layouts
Throughout the world there are several different types of dial layout for rotary phones. Although rare, they do exist and if you are lucky enough to have one of these rare types, then you will need to change the dip switches inside of Dialgizmo in order to get correct dialing.

Type A
Default mode

Type B

Type C

Type D

Switch 3: Off
Switch 4: Off

Switch 3: On
Switch 4: Off

Switch 3: Off
Switch 4: On

Switch 3: On
Switch 4: On

NOTE: The relative positions of the dial-hold functions do not change, so for example Last Number Redial is accessed by dialing 9 in Type A, 8 in Type B, 1 in Type C and 2 in Type D.

⑦ Specifications

IMPORTANT NOTE: Dialgizmo has been specifically designed for use on VoIP services, while VoIP telephone services use similar currents and voltages to standard telephone lines, Dialgizmo is not approved for connection to standard PSTN telephone lines!

Phone line environment
On hook line voltage …………....… 18v to 65v
Off hook line current ……………… 7mA to 60mA
Ringing voltage …………………… max 250v

Dialgizmo
Power supply ……………………… Line powered
Line current draw (on hook) …….. Approx 100nA
Line current draw (off hook) …….. Approx 5mA
Operating temperature …………... 5°C to 35°C
Ringing pass-through ……………. 2 REN

For more information see the Dialgizmo website at:

http://www.dialgizmo.com

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For debug information: Dial-hold 0 (3 beeps), dial-hold 0 again (4 beeps), 3 sec silence then 12WPM Morse code debug data giving firmware version, adjusted vref and dip switch settings.

Manual revision 1.10 – October 2023