

DTMF-ENC16

16 Button Keypad DTMF Encoder



Description

DTMF-ENC16 is an inexpensive, self contained, DTMF (dual tone multiple frequency) encoder board with a full size 16 button keypad. The board has a standard RCA audio out jack and can either be powered with a 9 volt battery or through the 2.1 mm DC IN jack.

Specifications

Dimensions:	2.8" x 3.0" x 1.5"
Weight:	4.2 oz. (without 9 volt battery installed)
Input voltage:	8.0 to 14.0 volts DC (17ma max, 10ma idle)
Operating temperature:	-20 C to +60 C
Output level:	Line Level 0 to -5 db (Default) Mic Level -45 to -50 db
Button contact life:	1,000,000 cycles per key
Keys:	0123456789ABCD*#

Configuration

The audio output level can be set to microphone or line level via internal jumper J1. To access the jumper remove the four screws on the two sides of the enclosure.

Jumpered:	Line Level 0 to -5 db (Default)
Unjumpered:	Mic Level -45 to -50 db

Applying Power

DTMF-ENC16 can be powered with a 9 volt battery or through the 2.1 mm DC IN jack. **Never attach both DC sources at the same time.** To install the 9 volt battery remove the four screws on the two sides of the enclosure.

Operation

While pressing any one of the 16 keypad buttons a mixture of two sinewave tones are generated on the “AUDIO OUT” jack. (e.g. pressing “9” produces a simultaneous 852 Hz and 1477 Hz tone).

If two or more buttons on the same row or the same column are pressed simultaneously then a single sinewave tone is generated (e.g. pressing “1” and “4” simultaneously produces a 1209 Hz tone, pressing “3” and “A” simultaneously produces a 697 Hz tone).

	1209 Hz	1336 Hz	1477 Hz	1633 Hz
697 Hz	1	2	3	A
770 Hz	4	5	6	B
852 Hz	7	8	9	C
941 Hz	*	0	#	D

Trouble Shooting Tips

Problem	Solution
Green LED off (won't power up)	<ul style="list-style-type: none">•Verify power switch is in “ON” position.•Verify battery voltage (8 - 9 VDC) or “DC IN” power supply voltage (8 - 14 VDC).•Verify battery or “DC IN” +/- polarity correct.
Output tones distorted	<ul style="list-style-type: none">•Verify battery voltage (8 - 9 VDC) or “DC IN” power supply voltage (8 - 14 VDC).

Warranty & Service

If the product fails to perform as described in our product description or specification, within 1 year from the date of shipment to the buyer, we will repair or replace the product and/or accessories originally supplied. Failure due to improper installation, misuse, abuse or accident is not covered by this warranty. Incidental and consequential damages are not covered by this warranty. The buyer must first obtain a Return Material Authorization number by calling (248) 588-4400, or send email to support@icircuits.com. Ship the defective product (with RMA number) to Intuitive Circuits, 3928 Wardlow Ct., Troy, MI 48083, freight prepaid.

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