

# **MULTIPLE TONE GENERATOR**

ENV-223

USER'S MANUAL

**DOC-044**

**Rev. 1.2**

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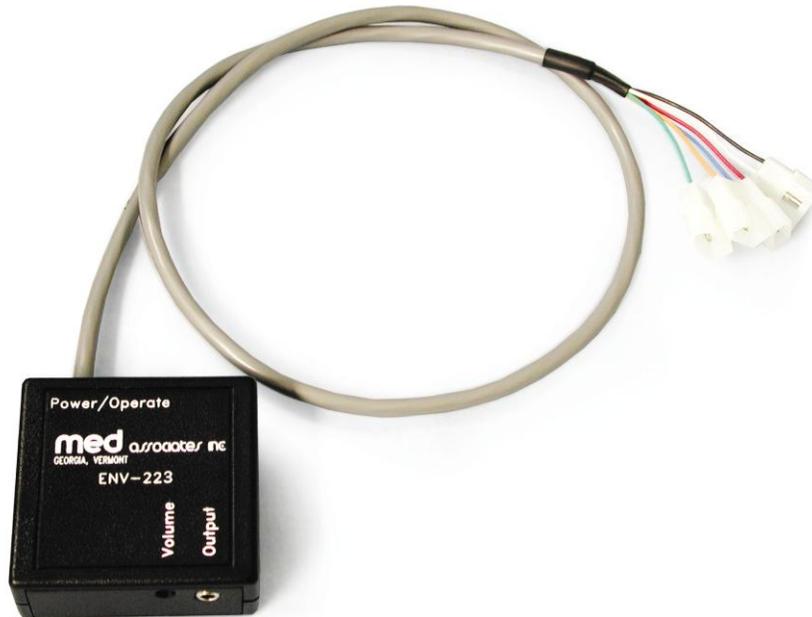
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## CHAPTER 1 | INTRODUCTION

The Multiple Tone Generator is wired to plug directly into a standard MED connection panel. It is powered by 28 Volts DC from the connection panel and can be enabled from any interface card. The multiple tone generator inputs are fed from four standard MED connection panel outputs to select between 15 different frequencies and OFF. The volume of the tones may be adjusted by using a small screwdriver to adjust the potentiometer on the side of the unit. The ENV-223 can be used with any 4  $\Omega$  or 8  $\Omega$  speaker, including the ENV-224AM, ENV-224BM, ENV-224CM, ENV-224DM, or ENV-324W, depending on the frequencies and volume desired. The tone generator is factory set to 80 dB at 5 kHz. This unit can be used to generate auditory stimuli of multiple frequencies, and is a more cost-effective, albeit less-flexible, alternative to the ANL-926 Programmable Audio Generator.



## CHAPTER 2 | CONNECTIONS

The ENV-223 control cable terminates with four 3-pin Molex connectors. The pin-outs for these connectors are shown in Table 2-1. The wiring diagram is shown in Figure 2-2.

Figure 2-1 – Numbered Molex Connector

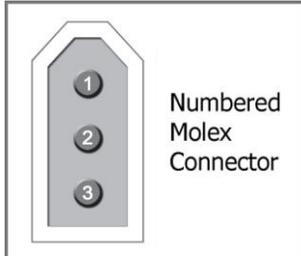
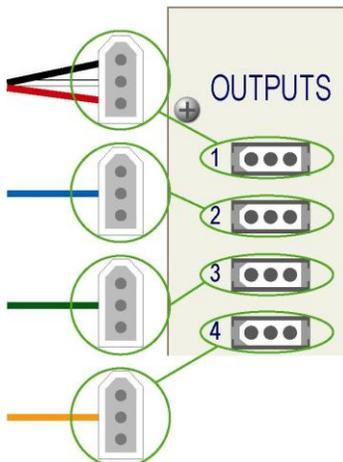


Table 2-1 – Control Cable Connector Pin-Outs

	Molex Pin	Wire Color	Function
Connector 1	1	Black	28 Volt Ground
	2	White	Operate
	3	Red	+28 Volts
Connector 2	1	Not Used	
	2	Blue	Operate
	3	Not Used	
Connector 3	1	Not Used	
	2	Green	Operate
	3	Not Used	
Connector 4	1	Not Used	
	2	Orange	Operate
	3	Not Used	

Figure 2-2 – Control Cable Wiring Diagram



## CHAPTER 3 | FREQUENCY CONTROL

The following table lists the fifteen available frequencies, plus OFF, along with the control logic.

*Table 3-1 – Binary Command Controls For ENV-223*

Frequency (kHz)	Wire Color			
	Orange	Green	Blue	White
OFF	0	0	0	0
1	0	0	0	1
1.5	0	0	1	0
2	0	0	1	1
2.5	0	1	0	0
3	0	1	0	1
3.5	0	1	1	0
4	0	1	1	1
5	1	0	0	0
6	1	0	0	1
8	1	0	1	0
9	1	0	1	1
10	1	1	0	0
12	1	1	0	1
15	1	1	1	0
20	1	1	1	1

0 = output OFF      1 = output ON

## **CHAPTER 4 | CONTROLLING THE ENV-223 USING MED-PC<sup>®</sup>**

MedState Notation™ sample files are included on the CD. These files can be modified or new files can be created. Refer to the **MED-PC IV Programmer's** and **User's Manuals** for more information.

## **APPENDIX A | CONTACT INFORMATION**

Please contact MED Associates, Inc. for information regarding any of our products.

Visit our website at [www.med-associates.com](http://www.med-associates.com) for contact information.

For technical questions, email [support@med-associates.com](mailto:support@med-associates.com).