

VA-300

ALERT MONITOR

OPERATION & INSTALLATION GUIDE

The purpose of this manual is to provide operation and installation information about the use of a Whelen Engineering Company, Inc. Model VA-300, Alert Monitor.

Prior to reading this manual or using this product you should be familiar with Whelen Engineering's family of High Power Voice and Siren Systems.

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VA300, 13267

Introduction

The VA-300 is a receive only Warning System Alert Monitor. The VA-300 is designed to follow Whelen's High Power Voice and Siren System activation 10 digit command sequence. The Programming section goes into more detail.

All Whelen 10 digit DTMF format command sequences are decoded by each VA-300 in a system. The VA-300 reacts to enabled, decoded commands by sounding a warning alert tone, for about 5 seconds, flashing an alert indicator and enabling an audio speaker to monitor radio activity.

The VA-300 is a stand-alone desk top unit. It operates from a nominal 12 volt DC, UL listed wall mount transformer. Optionally, an emergency, internal battery backup may be installed. A VA-300 must be ordered with a radio receiver and antenna. Two different versions are offered, as follows:

VA-300H	VHF high-band,	132-174 MHz
VA-300U	UHF,	403-430, 450-470 MHz

Operation

In normal operation, a VA-300 receives and decodes a DTMF data string. If the command has been Enabled, the VA-300 produces an alerting tone for about 5 seconds. At the same time, the red LED on the front of the VA-300 starts to flash. The audio monitoring path to the speaker is turned on. The LED and speaker remain active until one of the following occur:

1. The CLEAR pushbutton switch on the front panel is pressed.
2. A Clear (or Cancel) command is received and decoded.
3. A three minute time out occurs.

Note: Clear (or Cancel) commands 00,10 and 30 will clear all siren system activity and return the VA-300 to Stand-by Mode. Clear command 20 will only clear siren system activity. It will not clear VA-300 activity.

During the 5 second alert period, the VA-300 will respond to a new received command. If the received DTMF string is decoded as a valid command, the VA-300 starts a new 5 second alert period.

Controls

There are two pushbutton switches on the front panel of the VA-300, The switch functions are shown in the following table:

<u>SWITCH</u>	<u>FUNCTION</u>
CLEAR	Pressing this pushbutton will turn off the flashing LED and silence the alert tone. The speaker audio output is turned off.
TEST	Pressing this pushbutton will cause the VA-300 to enter into a Test Mode. The VA-300 will emit a 5 second alert tone and flash the LED.

LED Indicator

A red LED alert indicator flashes upon receipt of a valid command, and remains flashing until the CLEAR button is pressed or a Cancel command is decoded.

Rear Panel

The VA-300 is equipped with a wall mount transformer “POWER” connector, an AUDIO LO/HI switch, a BATTERY OFF/ON switch and a two position “SERIAL IN” connector. The “SERIAL IN” connector is used for programming the VA-300, as described in a later section.

The Audio Level may be set to either HI or LO, depending on background noise levels or user preference. For the Battery Back-up option, a “BATTERY OFF/ON” switch allows for completely disconnecting the battery. This is used for shipping or storage of the unit, to maximize battery life.

Battery Option

Full battery operation is an optional feature of a VA-300. The unit may be equipped with a simple, internal 9V battery. Typically, there is sufficient battery capacity for 3 minutes of warning at the end of a 24 hour AC power interruption. The battery option does not include a charger, the battery must be replaced when it is low. There is a BATTERY OFF/ON switch on the rear panel. The Battery is switched off during shipping.

Getting Started

Read this section to become familiar with the installation and set-up requirements of the VA-300. Some of the discussion pertains to options that may not be installed, therefore these sections may be skipped.

Installation

Select a location for the VA-300 where it can be seen and heard. A 115 volt AC outlet is required. It is important to have clearance around the unit of at least one foot, to avoid any problems with reception.

Connect the standard wall mount transformer to the POWER connector, in the left of the rear panel. If the Battery option is installed, switch the battery to ON.

Battery Option

A small 9 volt battery is available for emergency back-up of the VA-300. There is no recharge capability in the VA-300.

The “BATTERY OFF/ON” slide switch must be in the On position during operation of the VA-300.

Programming

The following VA-300 parameters are programmable:

Address
Substitute numbers (wild cards)
Enabled commands

The VA-300 is programmed through a two position connector, on the rear panel. The unit is programmed via an RS-232 receive signal, using standard ASCII data from a personal computer. The PC is used in a simple communication protocol. A programming cable kit, Model VA2PKIT, part # 46-0945805-00, is available to simplify the PC to VA-300 wiring.

To start programming the VA-300:

1. Connect the PC to the VA-300.
2. Turn on the PC and VA-300.
3. Enter a communication program.
4. Program the following parameters.

In general, each entry starts with an upper-case letter that designates a function, followed by an equals sign, then an entry and finally the ENTER key.

Note that the character before the equal sign must be upper-case.

Address

The address may be programmed to any of the 16 DTMF pairs. The address may be factory programmed, if the appropriate information is supplied with the order.

To program the address, type A=address, where address = 2 to 7 characters.

Whelen 10 digit example:

If the area code = 123 and the address = 4567, type A=1234567 and press ENTER.

Touch-tone 5 digit example:

If the address = 9876, type A=9876 and press ENTER.

The default setting is 1234567.

Substitute Numbers

The VA-300 may be programmed to respond to group calls by programming the unit to respond to a substitute number, or a "wild card". A substitute number may be programmed into any or all positions of the address. The # symbol is used to represent a substitute number.

To program a substitute number, type W=98## and press ENTER.

For example, assume the VA-300 is to respond to all addresses. Also assume an area code of 123. The entry would be W=123##### and press ENTER.

The number of characters after the equal sign must be the same as the number of Address digits (i.e. 7).

The default is no wildcards.

Reset

Typing R= and pressing ENTER will cause a VA-300 programming parameter reset. This function resets the VA-300 to the default conditions and it clears all programmed commands. Following this command the programming parameters are:

Number of Digits = 10
Address = 1234567
Substitute Numbers = none

Important: The reset process takes about 25 seconds. Do not press any Front Panel Controls during this time.

Enabling a Command

The VA-300 will respond (i.e. sound the alert tone, flash the LED and open the audio path) only if the received 10 digit command string is Enabled for alerting. To Enable a command, the VA-300 must be programmed.

To Enable a command, type Mn= press the SPACE bar, then press ENTER, where n = 1 to 60.

For example, M7= press SPACE BAR, press ENTER.

Enable as many of the commands as are required. Typically any Warning Tone and any Digital Voice Command in a system would activate the VA-300. Status or Test commands might not be Enabled.

COMMAND NUMBER TABLES

The following table shows the relationship between Whelen Siren System commands and VA-300 commands. For instance, DTMF commands 01 through 07 are the Siren standard warning tones. The VA-300 might be Enabled to act on these commands. Another example are the Digital Voice Messages. From the table, notice that Digital Voice Message 1 and M49 correspond to DTMF command 31. Enable M49 to activate on Digital Voice Message 1.

For Whelen 10 digit protocol -

<u>Message #</u>	<u>Siren System Command</u>	<u>Command #</u>
M1	Wail	01
M2	Attack	02
M3	Alert	03
M4	Public Address	04
M5	Air-Horn	05
M6	Hi-Lo	06
M7	Whoop	07
M8	Noon Test	08
M9	North	09
M10	East	0A
M11	South	0B
M12	West	0C
M13	Clockwise	0D
M14	Counter Clockwise	0E
M15	Silent Test	0F
M17	Digital Voice Message 13	11
M18	Digital Voice Message 14	12
M19	Digital Voice Message 15	13
M20	Digital Voice Message 16	14
M21	Rotor Position	15
M22	Counter	16
M23	Clear Counter	17
M24	Arm System	18
M25	Dis-arm System	19
M26	Siren On	1A
M27	Siren Off	1B
M28	Signal/Noise Request	1C
M29	Signal/Noise Status	1D
M30	Test Clear	1E
M31	Status Request	1F
M33	Battery/AC	21
M34	Battery/Temperature	22
M35	Instant Status	23
M36	Transmit Off	24
M37	not used	25
M38	not used	26
M39	Wind Shift	27
M40	Reset wind & temp.	28

M41	Reset rainfall	29
M42	Weather	2A
M43	Temperature	2B
M44	Wind	2C
M45	Rainfall	2D
M46	Humidity	2E
M47	Barometer	2F
M49	Dig. Voice Message 1	31
M50	Dig. Voice Message 2	32
M51	Dig. Voice Message 3	33
M52	Dig. Voice Message 4	34
M53	Dig. Voice Message 5	35
M54	Dig. Voice Message 6	36
M55	Dig. Voice Message 7	37
M56	Dig. Voice Message 8	38
M57	Strobe On	39
M58	Strobe Off	3A
M59	Dig. Voice Message 9	3B
M60	Dig. Voice Message 10	3C
M61	Dig. Voice Message 11	3D
M62	Dig. Voice Message 12	3E
M63	Active Status	3F

Note: The Clear (or Cancel) commands 00,10 and 30 will clear all siren system activity and return the VA-300 to Stand-by Mode. Clear command 20 will only clear siren system activity. It will not clear VA-300 activity. These commands correspond to M0, M16, M32 and M48.

VA-300 SPECIFICATIONS

GENERAL -

Input Power:	12 volt DC nominal. UL listed wall mount transformer.
Physical:	Desktop design, driftwood color. 2.3" H x 8.2" W x 4.4" D.
Environmental:	Operating temperature, 0 to 60 degrees C. Humidity, 0-95%, non-condensing.
Communication:	Radio receiver and antenna, Typical freq. ranges: 132-174 MHz 403-430, 450-470 MHz DTMF protocol, Whelen 10 digit format
Controls:	Clear, Test. LO/HI volume setting
Indicators:	Flashing, high intensity red LED.
Tone alert:	Piezo, 3.7 KHz tone.
OPTIONS -	
Battery:	9 volt back up. 24 hour stand by, followed by 3 minute warning activation.

