



T-GEN 50 Tone Generator

T-GEN 50 is a tone generator and amplifier module for generating emergency warning signals in alarm and evacuation systems. It consists of a single printed circuit module suitable for mounting within other equipment, and provides 50 watts rms of alarm tone into a 100 volt line. Several different tones can be selected including the AS 2220 Alert and Evacuate signals. Enhanced models provide fault supervision, public address facilities and recorded speech message generation. Readily available accessories ensure that all models of T-GEN are quick and easy to install.

Applications

T-GEN is designed for use in fire alarm systems where the more specialised facilities of full Emergency Warning and Intercommunication Systems (EWIS) to AS 2220 are not required. This will normally be dictated by building codes or local authorities.

Three Models

- ◆ PA0764 is a tone generator and amplifier only
- ◆ PA0765 adds fault monitoring for the input, amplifier and speaker lines.
- ◆ PA0766 additionally provides recorded messages and public address.

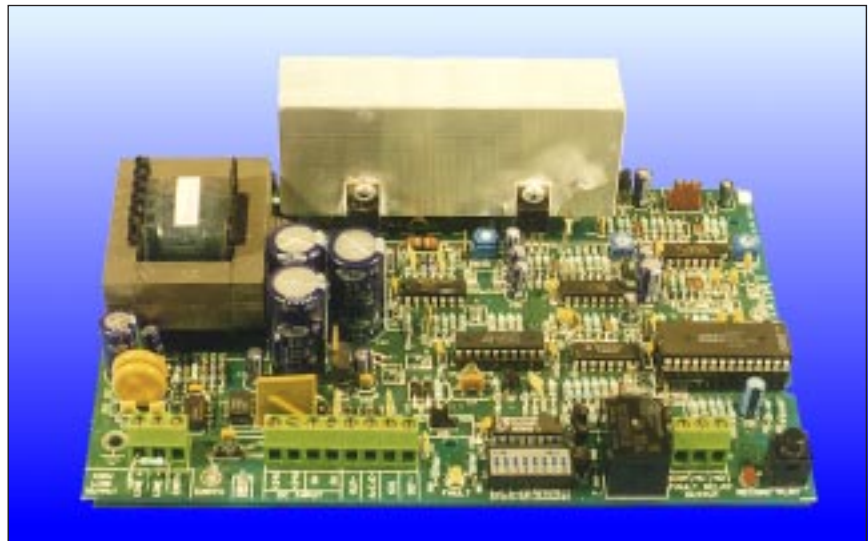
Master/Slave Operation

For higher power outputs T-GEN modules may be interconnected, with one module configured as the master and the others as slaves. The slaves deliver the amplified master signal to their own speaker lines. In systems with speech and PA, only the master unit needs to be the advanced model. The slaves can be either of the other two models as determined by the fault monitoring requirements. Master/slave operation is therefore an economical solution for systems requiring full public address and recorded speech facilities. It also ensures that all tones in the warning system are synchronised.

Features

- Single module 195 x 125 x 55mm
- 24Vdc operation (20-28V)
- 50W rms tone output @ 27Vdc
- 25W rms speech output @ 27Vdc (PA0764 & PA0765 slave mode only)
- Alert and Evacuate tones to AS2220
- Six stage rising amplitude Alert tone
- Low or high level Alert tone
- Programmable Alert to Evacuate time delay (0 - 600 sec or manual)
- Four Evacuate tones (AS2220, RH3, Hee Haw, Wail)
- Test Link for unobtrusive speaker tests
- Master or Slave operation
- Alarm Input selectable latching or non-latching
- Auto/Isolate/Evacuate control input
- Mounts on F/FP4000 Responder or F3200 module footprint
- Fits into F3200 card frame
- Background music input
- Alarm input fault supervision
- Slave input fault supervision
- Fault output relay (changeover contacts) or open collector transistor
- Speaker line fault supervision (2 branches)
- Amplifier monitoring
- PA microphone input
- Automatic gain control
- Dynamic or electret microphone
- Pre-recorded "Alert" voice message
- Pre-recorded "Evacuate" voice message
- Two field-recordable messages (0-8 secs each)
- Local Speaker Output to monitor messages
- Can play messages to Line Output
- Recording indication
- Non-volatile speech recording memory

	PA0764	PA0765	PA0766
Single module 195 x 125 x 55mm	√	√	√
24Vdc operation (20-28V)	√	√	√
50W rms tone output @ 27Vdc	√	√	√
25W rms speech output @ 27Vdc (PA0764 & PA0765 slave mode only)	√	√	√
Alert and Evacuate tones to AS2220	√	√	√
Six stage rising amplitude Alert tone	√	√	√
Low or high level Alert tone	√	√	√
Programmable Alert to Evacuate time delay (0 - 600 sec or manual)	√	√	√
Four Evacuate tones (AS2220, RH3, Hee Haw, Wail)	√	√	√
Test Link for unobtrusive speaker tests	√	√	√
Master or Slave operation	√	√	√
Alarm Input selectable latching or non-latching	√	√	√
Auto/Isolate/Evacuate control input	√	√	√
Mounts on F/FP4000 Responder or F3200 module footprint	√	√	√
Fits into F3200 card frame	√	√	√
Background music input	√	√	√
Alarm input fault supervision		√	√
Slave input fault supervision		√	√
Fault output relay (changeover contacts) or open collector transistor		√	√
Speaker line fault supervision (2 branches)		√	√
Amplifier monitoring		√	√
PA microphone input			√
Automatic gain control			√
Dynamic or electret microphone			√
Pre-recorded "Alert" voice message			√
Pre-recorded "Evacuate" voice message			√
Two field-recordable messages (0-8 secs each)			√
Local Speaker Output to monitor messages			√
Can play messages to Line Output			√
Recording indication			√
Non-volatile speech recording memory			√



T-GEN 50 Tone Generator

Specifications

Dimensions (mm):	195W x 125H x 55D.	
Mounting:	5 x 4mm holes in PCB, F3200 module compatible.	
Weight:	0.65 kg.	
Temperature:	Operating: -5°C to 45°C, Storage: -20°C to 70°C.	
Humidity:	0 to 95% RH, non-condensing.	
Operating Voltage:	19.6 to 28.8Vdc.	
Quiescent Current:	Lk1 on	Lk1 off (Bias link, off for PA/speech.)
	PA0764	20mA 35mA
	PA0765	25mA 40mA
	PA0766	32mA 47mA
	PA0765/6	Add 17mA if the Fault Relay is enabled.
Current (full output):	2.2A (50 watts tone).	
Terminals:	Screw type, 2.5mm ² unless noted otherwise.	
Tone Options:	AS 2220 Alert & Evacuate. RH3: 5Hz sweep, 500Hz to 1400Hz. Hee Haw: 1Hz alternating, 500Hz & 580Hz. Wail: 4 second sweep, 350Hz to 1300Hz to 350Hz. Test Tone: -20dB 500Hz, 0.5 sec on, 3.5 sec off. Recorded message option with all tones (PA0766).	
Alert to Evac. Time:	0, 30, 60, 90, 180, 300, 600 sec or Alert only	
Recorded Messages:	Two messages (Alert & Evacuate), 0-8 sec each, field-recordable, std messages supplied, (PA0766).	
Indications:	Fault LED (PA0765/6), Record LED (PA0766).	
Inputs		
Alarm:	O/C = Fault (if supervision enabled), 10k = Normal, S/C = Alarm.	
Auto/Isolate/Evac:	O/C = Auto, 10k = Isolate, S/C = Evacuate.	
Sig:	Slave input. 2.5V p-p into 40k for full output. Fault supervision on input (fault < 2.5Vdc).	
Background music:	1.6V rms into 24k for full output. Two way 0.1" connector.	
Microphone:	3mV - 100mV rms (AGC) into 6k6 for full output. Four way 0.1" connector includes PTT (PA0766).	
Outputs		
Line+/Line-:	50W rms tone, 25W rms PA @ 100V (all models). PA0765/6 permits two supervised branches, 1 x 56k or 2 x 100k EOL resistors.	
Sig:	Master output, 3V p-p tones, 2.5V p-p audio at full volume.	
Fault Relay:	Normally energised, changeover contacts, 30Vdc, 2A (PA0765/6).	
Def-:	24V, 1mA transistor pulldown (PA0765/6).	
Speaker Output:	Low level into 8 ohms to monitor recorded message, 2mm tab connectors (PA0766).	
Field-Adjustable Controls		
8 Way DIP Switch:	Selects Alert to Evac time, Alarm Input fault monitoring, Alarm Input latching, Evacuate tone type, Attenuated Alert.	
Links:	Slave/Master, Low Level Test Tone, Bias (all). Select Fault Relay or Def- (PA0765/6). Record Enable (PA0766).	
Play Switch:	Push button to play back recorded message to local Speaker Output (PA0766).	
PA Volume:	Potentiometer on PCB (PA0766).	
Speech Volume:	Potentiometer on PCB (PA0766).	

Accessories

A/E Switch & Bracket

Rotary switch pre-wired with 2 metre flying leads.

Dim: 100W x 100H x 50D.
Finish: Zinc plated steel with black on white polyester label.

Wgt: 0.1 kg.
Pt No: ME0291.



Dynamic Microphone

Fitted with PTT switch and plug for wiring to PA0766.

Dim: 70W x 95H x 60D.
Cord stretches 1.5m.

Wgt: 0.3 kg.
Pt No: ME0290.



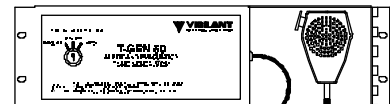
1U 19" Rack Control Panel



Does not include T-GEN. 3-position (A/E) rotary switch fitted & wired with 2 metre flying leads.

Dim: 483W x 45H x 50D.
Wgt: 0.3 kg.
Finish: Grey Gloss Powdercoat.
Pt No: ME0289.

3U 19" Rack Control Panel



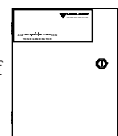
Includes T-GEN (PA0766), microphone (ME0290) and 3-position 003 keyswitch.

Dim: 483W x 133H x 64D.
Wgt: 2.0 kg.
Finish: Grey Gloss Powdercoat.
Pt No: FP0698.

T-GEN Cabinet

Has mounting holes and PCB standoffs to take any of the T-GEN PCB options. (Does not include T-GEN.)

Dim: 240W x 295H x 85D.
Wgt: 2.5 kg.
Finish: Cream Wrinkle Powdercoat.
Pt No. ME0292 (003 lock).
ME0293 (60124 lock).



T-GEN is a product of Vigilant Fire & Evacuation Systems.



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