T-GEN 50 Tone Generator

T-GEN 50 is a tone generator and PA amplifier module for use as an occupant warning system, providing 50 watts rms of tone into a 100 volt line. Several different tones can be selected including the AS 2220 Alert and Evacuate signals and the ISO 8201 Evacuate Signal.

Features

- Power output (rms) up to 50W alarm tone, 25W speech (sine wave) into 100V line load
- Higher power using Master/Slave operation
- Alert and Evacuate tones to AS 2220.1
- ISO 8201 Evacuate Signal (with keywords)
- RH3, HeeHaw and Wail alternative tones
- Optional Public Address (PA) microphone
- Six stage rising amplitude Alert tone
- No-tone version with recorded bell sound
- Programmable Alert to Evacuate time delay (0 - 600 sec, or manual)
- Pre-recorded "Alert" and "Evacuate" voice messages (two "Evacuate" options)
- Background music input
- Test Link for unobtrusive speaker tests

Description

The T-GEN 50 tone generator and Public Address amplifier module generates emergency warning signals for alarm and occupant warning systems where a full EWS to AS 2220 or AS 1670.4 is not required. Different tones can be selected including the AS 2220 Alert and Evacuate signals and the ISO 8201 Temporal pattern Evacuate Signal. T-GEN 50 provides speaker line fault supervision, public address facilities and pre-recorded voice messages. Readily available accessories ensure that installing the T-GEN 50 is quick and easy.

Part Numbers

T-GEN 50 Modules

PA0766	ISO 8201, Australian & NZ voice
PA0886	Bell, Australian & NZ voice, no tone

"Alert" and "Evacuate" voice messages are field re-recordable (requires ME0290 microphone).

Warning Systems

Specifications

Mechanical

Dimensions	125 x 195 x 55mm (HWD) Circuit Module
Weight	0.65 kg

Electrical

Supply Voltage	19.6 to 28.8 Vdc	
Quiescent Current	Lk1 on	Lk1 off (Lk1=bias link; off for PA Speech)
	32mA	47mA (add 17mA if Fault Relay is enabled)
Full Output Current	2.2A (50W tone) into 200 Ohm load at 24Vdc Supply	
Connections	Screw Type, 2.5mm^2	

Tone Options (these vary between models)

Emergency Warning	AS 2220 Alert & Evacuate, ISO 8201 Evacuate Signal
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
Alert to Evac Time	0, 30, 60, 90, 180, 300, 600 sec or Alert only
Recorded Messages	Two messages (Alert & Evac), 0 to 7 sec Evac, 0 to 4 sec Alert, field-recordable, standard messages supplied (Alert = Bell on PA0886), Recorded message option with all tones.
Indications	Fault LED, Record LED

Environmental

Operating Temp Range	-5°C to +45°C
Storage Temperature	-20°C to +70°C
Relative Humidity	0 to 95% non-condensing

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. 3V p-p into 40k for full output. Fault supervision on input (fault < 2.5Vdc)
Background Music	2.7V rms into 27k 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

Outputs

Line+/Line-	50W rms square wave, 25W rms sine wave into 200 Ohm load. 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
Def-	30Vdc max., 1mA transistor pulldown on fault
Speaker Output	Low level 6mW into 8 ohms to monitor recorded message, 2mm tab connectors

Field Adjustable Controls

8 Way DIP switch	Selects Alert to Evac time, Alarm Input fault supervision, Alarm Input latching, Evacuate tone (AS2220, RH3, ISO 8201, Wail, He-Haw), Mode
Links	Slave/Master, Low Level Test Tone, Bias, Select Fault Relay or Def-, Record Enable
Play Switch	Play back recorded message to local speaker output
PA Volume	Potentiometer on PCB
Speech Volume	Potentiometer on PCB

Master/Slave Operation

For higher power outputs T-GEN 50 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 supervised speaker lines, so all tones in the warning system are synchronised. A 100W (2x50W) bridge connection is also possible.

Accessories

Auto/Isol/Evac Switch on Bracket
Rotary switch pre-wired with 2metre flying leads.

Dim	100x100x50mm
Finish	Zinc plated steel Black on White polyester label
Part No	ME0291

Dynamic Microphone
Fitted with PTT switch & plug, 1.5m cord.

Dim	95x70x60 mm
Part No	ME0290

1U 19" Rack Control Panel
Includes Auto/Isol/Evac rotary switch, does not include T-GEN.

Dim	45x483x50mm (HWD), 0.3kg
Finish	Grey Gloss Powdercoat
Part No	ME0289

3U 19" Rack Control Panel
Includes T-GEN and mic; shown with optional A/I/E key switch.

Dim	134x483x80mm (HWD), 2kg
Finish	Grey Gloss Powdercoat
Part No	FP0698 (includes PA0766)

T-GEN Cabinet
Empty cabinet matching Series 1948 PSU. Space & mounting hardware for one T-GEN 50 module (not included).

Dim	295x240x85mm (HWD), 2.5kg
Finish	Cream Wrinkle Powdercoat
Part No	ME0292 (003 lock)