

# TECUM

**A NEW CLASS OF VOICE ALARM SYSTEMS THAT HAS 'IT ALL' IN A ONE BOX DESIGN!**

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50130-4



TECUM is a state-of-the-art and up-to-date commercial Voice-Alarm Control and Indication Equipment solution. Comprising of an extensive, fully-approved quality range of products, the manufacturing takes place in Europe. The technology expands in tandem with facilities and projects, taking into consideration Voice-Alarms and life safety systems for protection. TECUM is appealing to end users and installers, featuring sophisticated Voice-Alarm technology that is incredibly easy-to-install and comes in a single boxed solution. You now have the ability to adapt to everchanging technology while having complete control over your Voice-Alarm system.

## VOX, Distributed VACIE concept:

Utilizing a boxed-amplifiers concept, The **VCP XXX** Networked VACIE solution is an advanced digital audio-distribution technology. It includes numerous compact self-contained Wall-mounted Control and Indicating Voice-Alarm panels, ensuring that you have an efficient and easily manageable distributed VACIE solution.

Perfecting a 'system-in-a-box' concept, you gain the added simplicity of a singular conventional system, merged with the advantages of a global Network topology.

The **VCP XXX** has the capability of two 'live-stream' audio channels along with one derail date channel (RS485), functioning over a Global-Network-Loop within global zones. It also showcases 6-channel message players that send coordinated audio to local zones, enabling 6 different audio-streams playing at the same time within local zones. Each device has the required routing tools, enough to service up to 6 single zones of 6 x 100W RMS with the added benefit of an active back-up amplifier. Keeping 255 boxed-VACIE panels in a Global Network as its limit, with each servicing 6-zones, one installation has the capacity to affect over 1500 speaker lines, even further accumulated into several paging zones in an architecture of 256 priorities.

## Network topology:

The redundant token ring network topology of the **VCP XXX** offers a wonderful communication outlet for global event warnings, sharing a type of information that doesn't need a centralized processing solution.

Every **VCP XXX** includes an interchangeable SD card which has a copy of global system settings. This stays running despite a total communication loss. As such, you can merge unmatched survivability and functionality when compared to standard systems that are intertwined with a central control device. Such a reliable solution is available throughout the broad spectrum of our field devices.

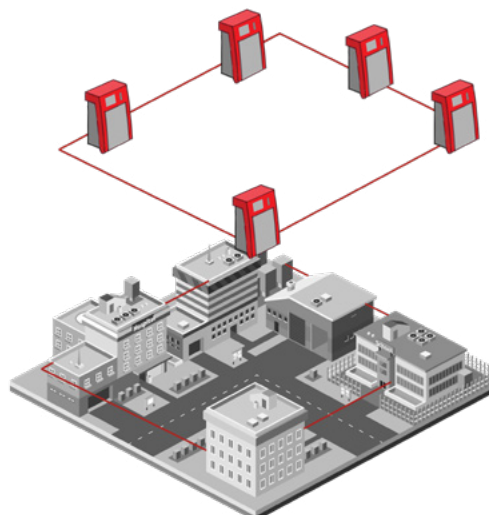
- Up to 255 nodes per system with 'peer to peer' system redundancy;
- Max distance between nodes: 250 m (standard FTP CAT5e cable);
- No practical limit to network loop length;
- 200 kbit datastream;
- 2 x 12 kHz audio live-streams;
- Redundant ring technology;
- 2 live anti-parallel audio streams.
  - Upstream priority channel;
  - Downstream second channel and/or back-up channel.



## Fully compliant:

To ensure top-quality performance for both installers and end user, TECUM products are completely compliant, third party approved and abide by the certified European standards.

The product's approvals go above and beyond the bare minimum, including EN54-16:2008, EN54-4:2006, and EN50130-4:2011. CPR number : 0560-CPR-152190001/00.



VCP XXX comprises of a broad spectrum of pre- and post- processing software modules including routing, mixing, switching, prioritizing and volume controllers. Furthermore, equalizers, limiters, delay-lines and other such processing components make this solution perfect for any job.

The integrated local Message storage modules (WAV-format), can be distributed all at once over 6 local output lines that have the capabilities of phased-evacuation, enhanced by the storage bandwidth of 16 audio files. Moreover, monitoring of the digital audio message storage and the messages also takes place.

These message-store modules are connected with several VCP XXX output lines, encouraging synchronization among large areas in terms of incident warning.

The recent range of products strictly adhere to reduced installation, maintenance and ownership costs. Created for universal use, it meets the basic requirements of end users to the extensive needs of engineers, electrical contractors, building owners, facility managers and more. The design is endorsed by experts in the fire-safety and voice-alarm markets.

## Technical specifications

Standalone system	
Number of zones	max. 6 local zones.
Total output power	600 W (Pink-noise)
Power amplifiers	6 x 100 W, modular (2 channels per module). bridgeable up to 3 x 200 W.
Standby power amplifiers	2 x 100 W / 1 x 200 W dedicated backup amplifiers.
Loudspeaker line monitoring	
Built-in	20 kHz AC monitoring with EOL module, short/open/impedance deviation
Loopdrive	loop DC monitoring with short-circuit isolators, short/open/earth leakage, EN54-17 certified.
Loudspeaker type	with 100 V step-down transformer.
Voice messages	
Storage	max. 16 audio files x 1 minute, micro-SD card with content monitoring
Message player	max. 6 simultaneous local message playback.
Controls and indications	
General controls / indications	Lamp test button, silence button, power, evac, fault (power supply/ system/network fault) LED indicators
Fault indications	Power supply, system, network and zone faults
Evac manual control	EVAC message, ALERT message, SILENCE, RESET, fireman mic with PTT button
Fireman microphone	Integrated Fireman Mic with priority and electrical monitoring
Power supply equipment	Built-in power supply system, EN 54-4 certified.
AC supply	110 – 230 V AC, 50/60Hz
AC current consumption	max. 5.3A @115V AC / 2.65A @230V AC
Inrush current	20A @115V AC, 40A @230V AC
Power supply protection	Overload current limiting, over voltage shutdown, over temperature shutdown.

Battery requirements	
Type	Sealed, rechargeable lead-acid battery for stationary use
Capacity	10 – 55 Ah
Charging time (80% capacity)	< 24 h
Rated voltage	24 V DC (2 x 12V)
Battery dimensions	2 batteries, each of max. 230 x 138 x 207 mm (LxWxH)
Battery weight	max. total 32.6 kg
Inputs	
2 x BGM	2 x independent balanced analogue in, line-level mono, 22kΩ input impedance
6x EVAC in, 1x SILENCE in, 1x RESET in	monitored logic inputs, 4.7kΩ +10kΩ EOL resistors
8 x GPI	unmonitored logic inputs (pull-down, configurable active low/h
Outputs	
EVAC out, FAULT out	Potential-free relay output (configurable NO/NC)
GPO	8 x Open collector output (configurable NO/NC)
Loudspeaker out	6 x 100V transformer output, 20 kHz AC monitoring with EOL
Amplifiers	
Type	Class D
Protection	over load shutdown, over temperature shutdown
Backup amplifiers	2 dedicated backup channels, auto backup at end stage failure, auto restore
Efficiency	80% @ rated power
Output voltage	max. 100V RMS
Rated power	100W per channel, 200W bridged
Output bandwidth	50 Hz – 20 kHz
SNR	>80 dB
THD + N	0.1% @ rated power

Audio	
Frequency response	50 Hz – 20 kHz (local BGM)
	100 Hz – 12 kHz (message player, network audio compressed)
Input- output latency	< 10 ms (stand-alone system)
Digital audio format	24 kHz sampling, ADPCM compressed
DSP features	HP/LP filter, multi-point parametric EQ delay.

Mechanical	
Dimensions (HxWxD)	80 x 52 x 28 cm
Packaging (HxWxD)	90 x 60 x 36 cm
Weight (full config, without batteries)	29 kg
Housing material	Steel / ABS
IP rating	IP 30
Mounting	Wall-mounted box

Network system		
Max. number of devices in the network	255	
Max. number of zones	255	
Max. total system output power	102 kW	
Number of simultaneous network audio channels	2	
Network audio transmission latency	0.3 ms per device	
Local network		
Architecture	Master-slave, up to 16 slave devices per C500 main unit	
Connection	3 x L-Net port, RJ-45, powered daisy chain, digital audio & control data	
Cabling	X-over FTP CAT5e (or higher)	
Current consumption	max. 500 mA (up to 8 slave devices) per L-Net port,	
Max. length of local bus	default	250 m
	with twisted-pair extender	500 m
Global network		
Architecture	Peer-to-peer, up to 255 C500 main units	
Connection	2 x G-Net port, RJ-45, powered redundant ring, digital audio & control data	
Cabling	X-over FTP CAT5e (or higher) / multimode optical fiber	
Current consumption	max. 500 mA per port, reserved only for network extenders	
Max. distance between devices	default	250 m
	with copper extenders	750 m
	with fiber extenders	2500 m

## Products related to this item

FMP-HH



FMP-WM



FMWTC



FMWTC-GN



TCM-GN



PCM-6



FMWB



## Paging Consoles/ Firemen - Microphones

The TECUM series of paging consoles have been designed to provide a flexible user interface to the **VCP XXX Voice Alarm systems**. The console layout is clean and uncluttered, but contains all the system functions and status indication required by EN54-16. The handheld firemen's microphone is protected by a transparent protection cover to provide access-level protection as well as protection against accidental operation. The handheld firemen's microphone has a large speak bar and operation is both simple and intuitive.

### FMP-HH

Firemen Panel microphone.



#### Contains:

Optional /  
service replacement device for  
the **VCP XXX** control-panel.

- Handheld firemen's microphone with ALL-CALL button;
- Curl-cord working length: 1.10 m;
- Electrical monitoring;
- Access-level protection by transparent protection cover;
- Dimensions: 160x50x40 mm (LxWxH);
- Weight: 175 gr.

### FMP-WM

Firemen-microphone, wall and desktop version.



#### Contains:

The TECUM series of paging consoles can be wired in a ring configuration for additional redundancy. The case has 2 x RJ45 entries to allow direct termination of the Local-Net interface cables for ring, spur or daisy-chain interfacing.

- Table-top extensions and wall-bracket are included;
- Handheld firemen's microphone with ALL-CALL button;
- Electrical monitoring;
- Curl-cord working length: 1.10 m;
- Mandatory indicators; Power, Evac, Fault, Busy;
- Access-level protection by transparent protection cover;
- Auto-gain control on microphone chip;
- Addressable 0 - 255;
- 2 x RJ45 for single-point, redundant-point or daisy chain interfacing;
- Dimensions: 270x220x80 mm (LxWxH);
- Weight: 250 gr.

### FMWTC

Firemen-microphone with touchscreen control, wall and desktop version.



#### Contains:

- Table-top extensions and wall-bracket are included;
- Handheld firemen's microphone with ALL-CALL button;
- Electrical monitoring;
- Curl-cord working length: 1.10m;
- Mandatory indicators; Power, Evac, Fault, Busy;
- Access-level protection by transparent protection cover;
- Addressable: 0 - 255;
- 2 x RJ45 for single-point, redundant point or daisy chain interfacing;
- Auto-gain control on microphone chip;
- Configurable 7" touchscreen for paging control and status information;
- Dimensions: 270x440x80 mm (LxWxH);
- Weight: 500 gr.

## FMWTC-GN

Firemen-microphone with touchscreen and gooseneck for commercial paging.



### Contains:

In addition to the FMWTC, being able to address commercial messages within selectable zones, the FMWTC can be expanded with a gooseneck microphone. This allows for a whole variety of NON-life safety messages for commercial use within the **VCP XXX** architecture.

- Table-top version;
- Electrical monitoring;
- Handheld firemen's microphone with ALL-CALL button;
- Curl-cord working length: 1.10 m;
- Mandatory indicators; Power, Evac, Fault, Busy;
- Access-level protection by transparent protection cover;
- Auto-gain control on microphone chip;
- Addressable 0 - 255;
- 2 x RJ45 for single-point, redundant point or daisy chain interfacing;
- Configurable 7" touchscreen for paging control and status information;
- 30 cm gooseneck with dynamic hyper-cardioid microphone;
- Dimensions: 270x440x80 mm (LxWxH);
- Weight: 600 gr.

## TCM-GN

Commercial paging console with gooseneck microphone and touch-screen.



### Contains:

Touch-screen controlled paging console being able to address commercial messages within the **VCP XXX** architecture.

- Table-top version;
- Auto-gain control on microphone chip;
- Addressable: 0 - 255;
- 2 x RJ45 for single-point, redundant point or daisy chain interfacing;
- Configurable 7" touchscreen for paging control and status information;
- 30 cm gooseneck with dynamic hyper-cardioid microphone;
- Dimensions: 270x220x80 mm (LxWxH);
- Weight: 350 gr.

## PCM-6

Commercial paging console with gooseneck microphone and push-button panel.



### Contains:

6-zones Push-button controlled paging console being able to address commercial messages within the **VCP XXX** architecture.

- Table-top version;
- Auto-gain control on microphone chip;
- Addressable: 0 - 255;
- 6-zone selection buttons and 1-PTT;
- 30cm gooseneck with dynamic hyper-cardioid microphone;
- 2 x RJ45 for single point or daisy-chain interfacing;
- Dimensions: 270x220x80 mm (LxWxH);
- Weight: 350 gr.

## FMWB

Firemen-microphone wall-box.



### Contains:

Low-cost and effective networked Fireman Microphone wall-box, easily integrates with both **VCP XXX** and IVC Voice-Alarm systems.

- Wall mounted version;
- Internal termination through gland plate using single or redundant L-Net;
- Addressable: 01 - 255;
- Power, Fault, EVAC, ALERT, BUSY indicators;
- Number of zones 255, 6-buttons;
- Dimensions: 385 x 440 x 140 mm (HxWxD);
- Weight: 12 Kg.



## Ordering Information

Part Number	Description
VCP200	Single cabinet, fully operational Voice Alarm System that includes; 200 WATT, 2Ch
VCP400	Single cabinet, fully operational Voice Alarm System that includes; 400 WATT, 4ch
VCP600	Single cabinet, fully operational Voice Alarm System that includes; 600 WATT, 6ch
VCP200/1A-1B	Single cabinet, fully operational Voice Alarm System that includes; 200 WATT 2ch, with additional SPARE amplifier
VCP400/2A-1B	Single cabinet, fully operational Voice Alarm System that includes; 400 WATT 4ch, with additional SPARE amplifier
VCP600/3A-1B	Single cabinet, fully operational Voice Alarm System that includes; 600 WATT 6ch, with additional SPARE amplifier
FMP-HH	Fireman Microphone Panel version, service replacement part
FMP-WM	Fireman-Microphone, wall and desktop version
FMWTC	Fireman-Microphone with Touchscreen, wall and desktop version
FMWTC-GN	Fireman-Microphone with Touchscreen and gooseneck for Commercial paging
TCM-GN	Touchscreen console with gooseneck for Commercial paging
PCM-6	Pushbutton console with gooseneck for Commercial paging
FMWB	Fireman Microphone in secured wallbox