TECUM
Sound Intelligibility is Redefined

VOICE ALARM MANUFACTURER

Sound Intelligibility is Redefined

INTRO

TECUM AUDIO offers a new class of Voice-Alarm Control and Indication Equipment solutions, combining over 30 years of experience in the voice-alarm industry. Hacousto Holland BV's trading business, TECUM, is based in Rotterdam. TECUM is dedicated to creating cost-effective VACIE systems that break the mold of standard solutions. It is led by Albert van der Hout and his team.

Our goal is to provide a new generation of goods that are built on the 'plug and play' idea.

TECUM has created its solutions to fit the needs of installers and users alike, offering systems that are both compact and modular. TECUM has created the IVC VOICE ALARM SYSTEM family of devices with remote operated zone-expanders for both simplified zone switching (IVC-S) and complicated Multi-Media applications, demystifying classic 'rack-mounted' systems that rely on complex configuration (IVC-MM).

The VCP XXX is distinguished by its design, which has a small footprint and allows for simple, cost-effective installation and operation. The VCP XXX delivers a 'mean' and powerful system, enabling advanced digital audio-distribution on a networked VACIE solution, with self-contained compact Wall-mounted Control and Indicating Voice-Alarm panels.

TECUM provides unrivaled quality and reliability by designing and producing its products in Europe to strict requirements. Fully compliant with EN54-16 certification, all TECUM products are third-party approved and certified to all European standards, including EN54-4, EN54-16, EN54-17, and EN54-18, for added peace of mind.

ISO 9001 CERTIFICATE

Certificate of constancy performance - VCPXXX

Certificate of constancy performance - IVC

LOOPDRIVE

Short-circuit isolator system with complete line surveillance that is compatible with any PA/VA system on the market. Upgrade from EOL or impedance monitoring to the next generation.

VCP XXX

All-in-one Voice Alarm system in a tiny package. 600 watts into 36 zones from a single wall box, complete with battery, backup amp, fireman's microphone, GPIO, and other features. The network capabilities are incredible. Modular Voice Alarm Center installed in a 19" rack.

IVC-S

From a 33U block, you can have up to 96 zones and more than 15 kW of power. Up to 254 racks can be networked, and it's fully compatible with Compact.

IVC-MM

Lossless, low latency 250-channel audio via IP protocol, excellent DSP, and built-in Ethernet switches are all included in the IMPACT MM Multi-Media update of the IMPACT SW. Voice Alarm and Public Address work in perfect harmony with modern multi-channel broadcasting capabilities.

IP-BROADCAST NETWORK

IVC MM system Features TECUM's proprietary MAZE protocol: audio-over-IP transport platform.

IVC MM, equipped with MAZE network cards, enables Ethernet ports, through which the Voice Alarm system has access to 250 high quality, low latency audio channels over IP. Multiple sites with individual Voice Alarm installations can transmit and receive simultaneous background music programs via LAN. Built-in 100Mbps switch allows for point-to-point connections, without use of 3rd party switches or routers.

The MAZE IP broadcast network is an additional BGM Facility for most demanding modern audio distribution demands.
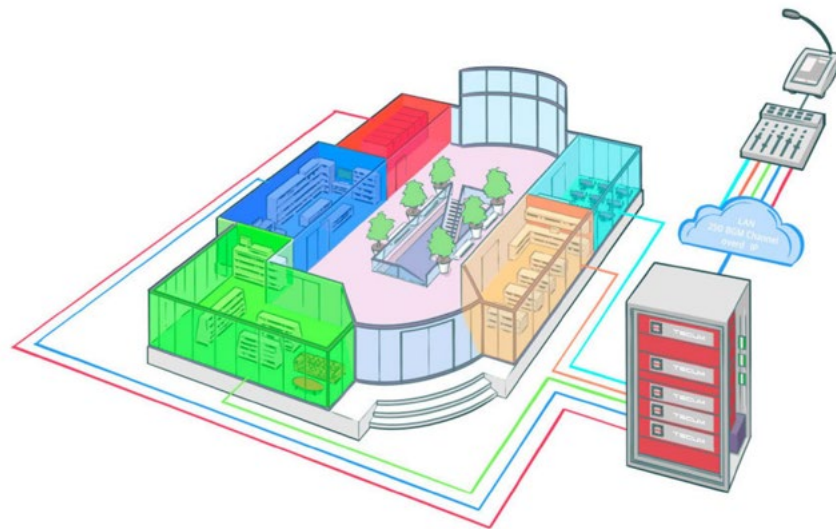
LOCAL NET

Local Net (L-Net) is a daisy-chain bus that connects the primary system unit to remote network devices like paging consoles or extra GPIO interfaces.

Each primary system unit's L-Net capacity is limited to the following:
- maximum 8 devices per port,
- maximum 16 devices per main unit

L-Net is a network that allows interfaces and control panels to be moved from the central system to remote control locations. The local network can be configured in a redundant-ring topology to provide two secure pathways to the remote device.
The maximum point-to-point distance over CAT5 cable is 250 meters, with multimode optical fiber extending up to 2000 meters.
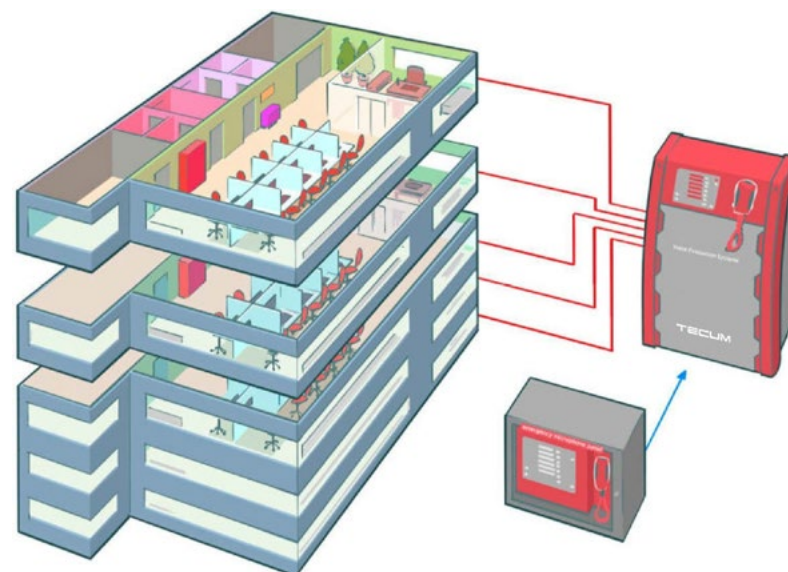
GLOBAL NET

G-Net is a redundant network ring that can connect several system controllers into a single, totally transparent system. It is used to synchronize data between all connected sites in a reliable manner.

G-Net acts as a redundant double ring between controllers, ensuring that the global system remains operational in the event of a link loss.

Similar to L-Net, the maximum point-to-point distance using CAT5 cable is 250 meters, with multimode optical fiber extending up to 2000 meters.
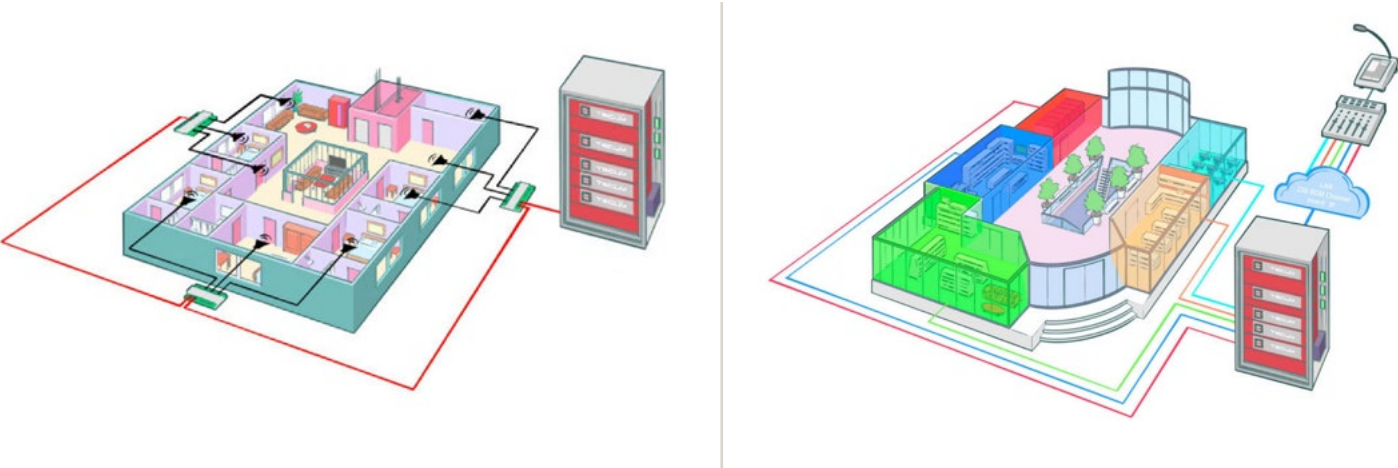
The network has a total capacity of 254 devices, including primary system controllers and peripherals like microphone stations.
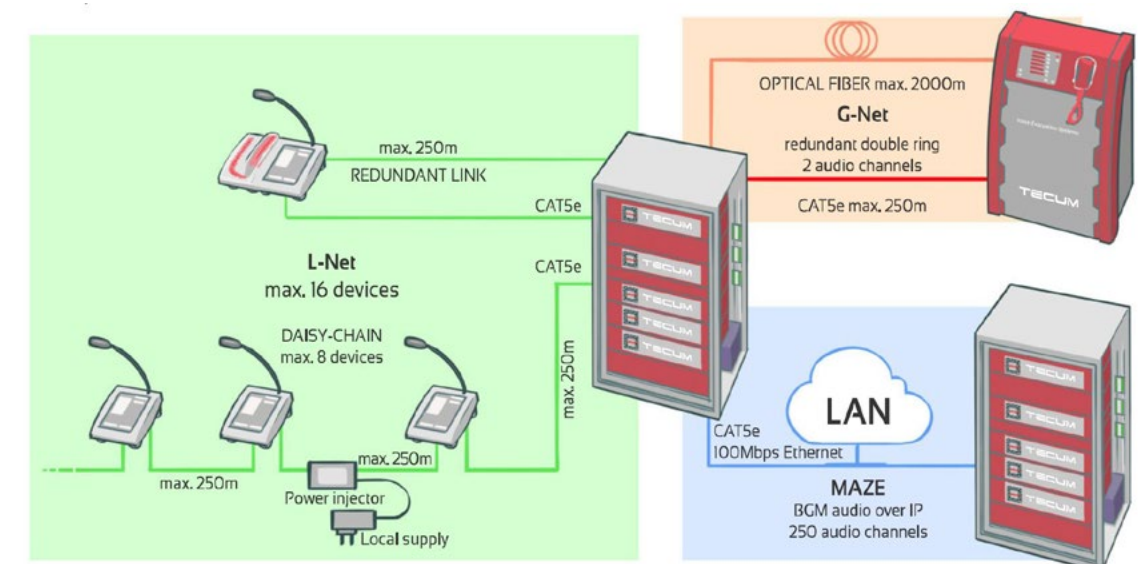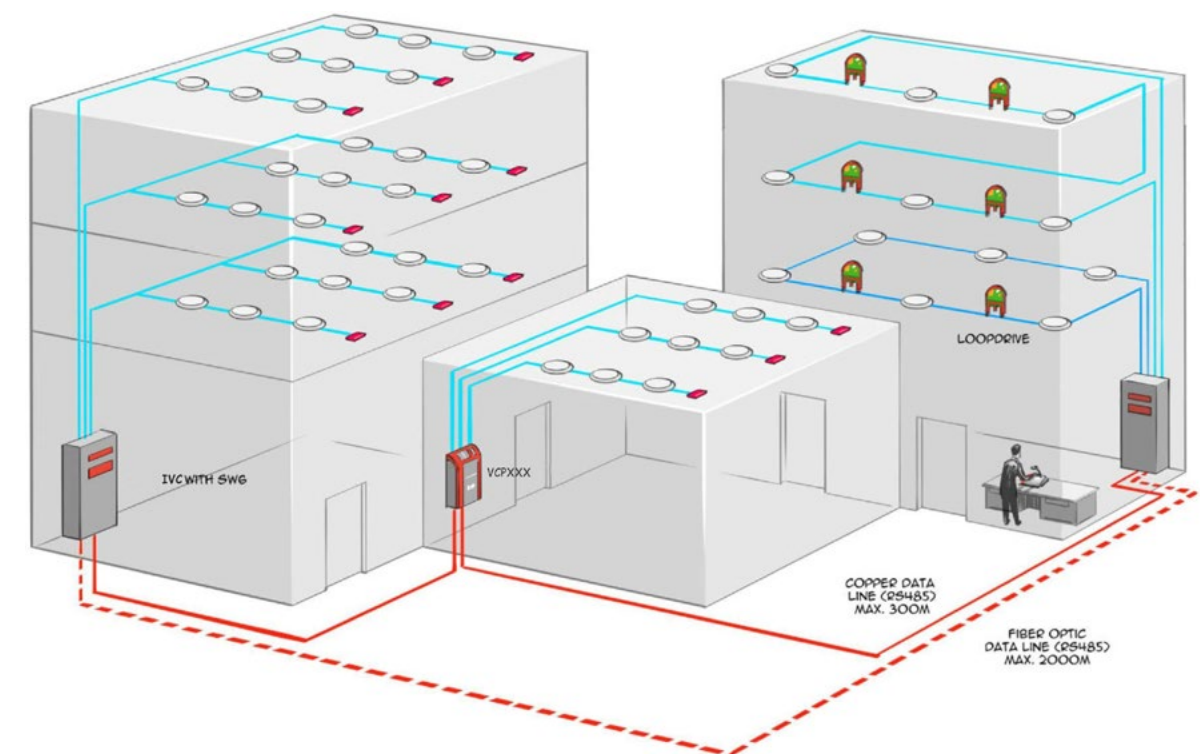
IVC-S

VS

IVC-MM

IVC-S

*VS*

IVC-MM

4 x 8 balanced audio Matrix with DSP, standalone audio processor for local AUX BGM injection to IVC-SW system

Full matrix + mixer, 5-point parametric EQ each IN / OUT, 16 s delay per output, Ambient noise sensing

4 programmable GPIO, RA485, expandable with 2in/2out MAZE card: total 6 IN x 10 OUT

message player with micro SD card storage

USB: settings (Windows app), firmware update

DIN rail mount, Supply voltage 10-30V DC
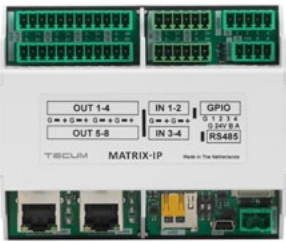
MATRIX processor unit equipped with 2in/2out MAZE card: lolal 6 IN x10 OUT IOOMbps dual Ethernet pon

Full integration with IVC-MM system for audio over IP broadcast

IVC-M

IVC-M, the brain and network hub of IVC Voice Alarm System

IVC-M-IP

IVC-M-IP, with enabled Ethernet ports and MAZE engine installed.

IVC-M-IP has additional access to 250 audio channels transmitted within the MAZE netwark, compared to conventional IVC

IVC-M-IP can receive simultaneously 2 BGM over IP, while the standard analog BGM inputs are still available.

2 channel AMP surveillance
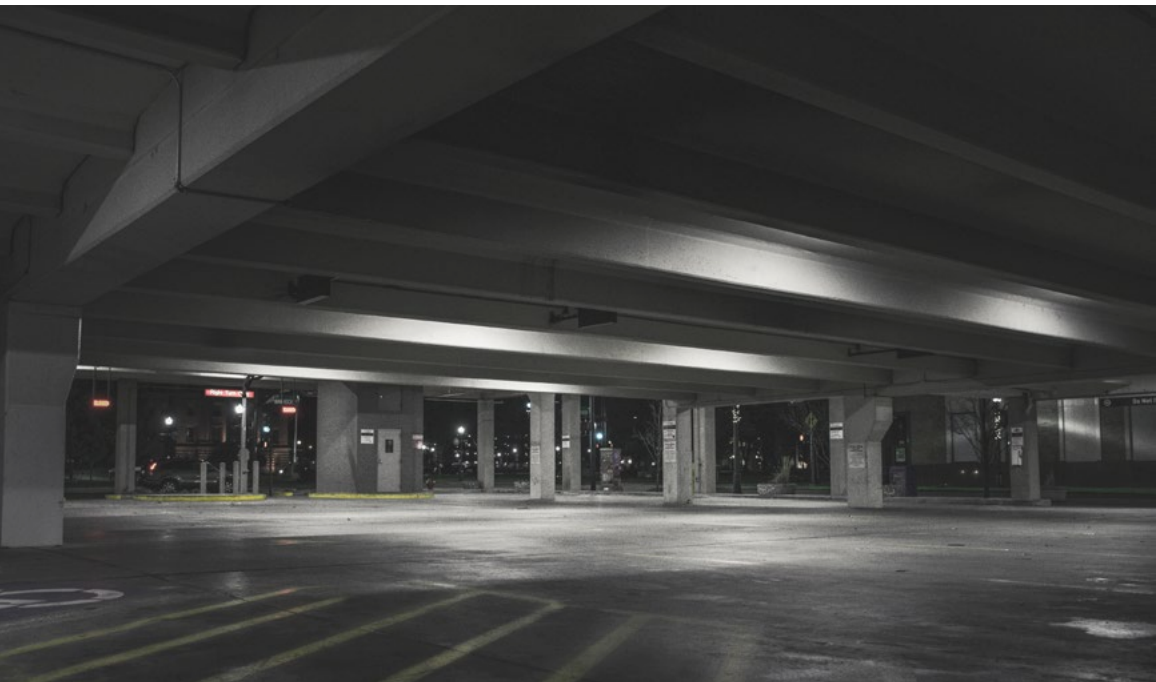6 x line surveillance
Backup amplifier management

4 channel AMP surveillance
8 x line surveillance
Backup amplifier management

IVC-X

IVC-X is an optional component of the 19'' rack mounted IVC-S and IVC-MM Voice Evacuation System. IVC-X is an additional network hub for the LNet devices, such as microphone stations

Voice Alarm - Paging Consoles

Din-rail Modules

The **LNET-RCZX6** is a 100V audio matrix with 2 inputs and 6 outputs that is devoted to TECUM VCP XXX and IVC systems. Two 100V audio inputs (CHA, CHB) link directly to amplifier outputs on the LNET-RCZX6. With separate surveillance and short-circuit isolator units, the LNET-RCZX6 increases the number of independent loudspeaker lines (Loopdrive). Each loudspeaker line can take a load of up to 200 W and can be assigned to its own zone. One input can only receive 500 W of electricity, which is also the maximum load for all six output lines combined.

FMWTC-GN is a desktop/wall mounted microphone station with touchscreen panel. Up to 255 zones can be triggered and every source or message available in the system can be processed. FMWTC-GN features a gooseneck microphone for general paging, as well as a fully monitored fireman's microphone (behind the transparent fireman's door).

FMWTC is a desktop/wall mounted microphone station with touchscreen panel. It can address up to 255 zones and trigger every source or message available in the entire system.

LNET-RCZX6-LITE has been developed to be used with Loopdrive LDB on the outputs only.

FMP-WM is a desktop or wall mounted emergency microphone station with high priority and fault surveillance. It can address any zone or set of zones in the entire system, including all call, for highest priority voice emergency. FMP-WM includes handheld microphone and monitored PTT TALK button.

LNET-GPIO is a DIN-rail mounted I/O interface with input surveillance and a redundant network link, dedicated to the TECUM system network. It features programmable 16 in / 16 out pins, mandatory EVAC and FAULT status output contacts, a monitored analogue audio input and a monitored RS-485 interface for integration with third-party external control panels.

FMWB is a low-cost and effective networked Fireman Microphone wall-box, it easily integrates with both VCP XXX and IVC Voice-Alarm systems.

T-AMP44/AB is a DIN-rail mounted surveillance box with 4 amplifier inputs and 4 A/B loudspeaker outputs, dedicated for IVC-S and IVC-MM voice evacuation systems. T-AMP44/AB is also the backup amplifier manager, and therefore features additional backup amplifier input, which is shared by all 4 primary amplifier inputs.

MATRIX-IP is a balanced audio matrix with 4 x 8 DSP and 2in/2out streaming to and from the IVC-MM system (total 6 IN x 10 OUT). 4xGPIO, RS485, USB port, 100Mbps dual Ethernet port, built-in message player with micro-SD card storage.

PCM-6 (six zones) Within the VCP XXX and IVC systems, a push-button driven paging console capable of addressing commercial architecture.

The **LNET-FPI** and **LNET-RPI** L-Net power injectors provide additional power injection point to the L-NET (Local Network bus of TECUM Voice Evacuation System), where an auxiliary DC power supply may be connected. Thanks to the L-net power injector, more L-Net devices with relatively high power consumption (such as touchscreen paging microphones) can be installed on the same CAT5e cable, devices can be installed in larger distances from the central equipment and further away from each other.

Within the VCP XXX and IVC architecture, the **TCM-GN** touch-screen-controlled paging console can address commercial messages.

LNET-FPI: Field mount Power Injector
LNET-RPI: Rackmount Power Injector.

GLOBAL NET

For Audio over IP applications, the IVC-MM Voice Alarm System offers a variety of EN54 approved options. IVC-MM adds a multi-channel IP streaming network platform to the IVC-S system. MAZE, a unique TECUM protocol, provides low-latency, lossless audio over IP broadcasting, allowing up to 250 audio channels to be disseminated within a LAN for multi-stream background music dissemination without sacrificing quality.

MAZE network, which may be configured through PC, provides two-way audio routing between IVC-MM Voice Alarm System components, with each having continuous access to numerous digital audio channels across the LAN. Each channel can be filtered, delayed, combined, and volume controlled separately. IVC-MM Voice Alarm devices with MAZE interface have a dual-port 100Base-T Ethernet interface and can be configured to access any channel in the MAZE network, making the platform fully equipped for large Voice Alarm applications requiring simultaneous multi-channel background audio broadcast for Public Address.

250 13GM audio channels
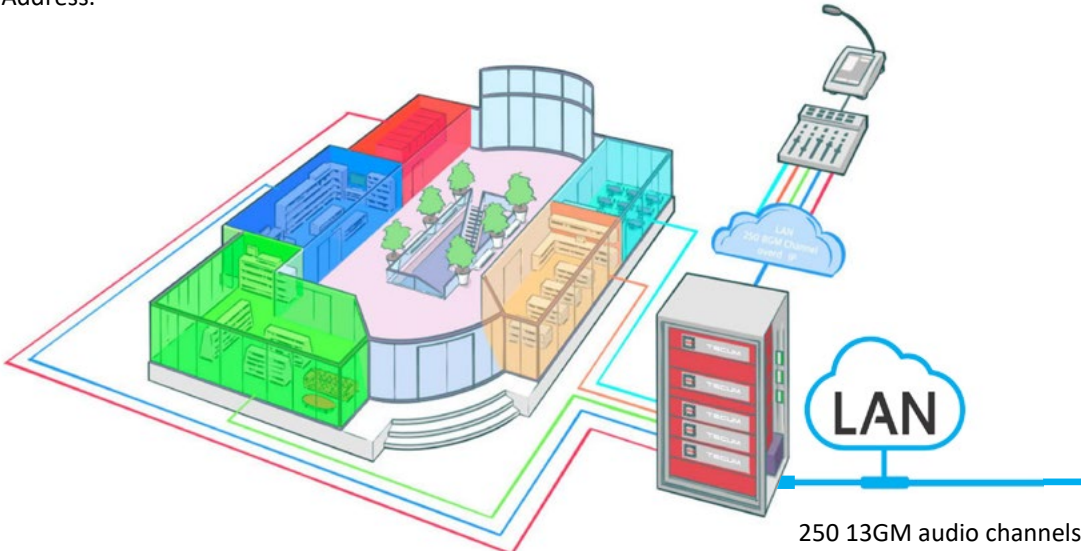
TECUM MAZE -
IVC-MM audio over IP platform

Global audio chonnels	250
Local audio chonnels	32 per device (receive + transmit)
Local analog in/out	2 input + 2 output per device
Samopling frequency	48 kHz
Bit resolution	16 bit / sample
Built in processing	
• Mix	up to max. 32 channels
• Volume control	-60 ... + 6 dB
• Dynamics	gate with adjustable threshold -60 ... + 0 dB
• EQ	5-point porometri EO with pre-defined IIR filters
• Delay	max. 16 seconds per channel
max. number of devices	3000
Latenacy	max. 10 ms
Network requirements	100/1000Mbps Ethernet all devices in the same LAN

IVC-MM components can be connected directly to each other without the use of an external switch or router, thanks to the dual port Ethernet switch included as standard. Every TECUM device having a MAZE interface and analog audio inputs can stream its local audio source to any of the 250 available LAN channels. Lossless, uncompressed audio streams are sent with minimal latency. Any system controller or amplifier linked to the MAZE network can then receive audio. The MATRIX-IP streaming DSP may stream additional audio signals into and out of the network.

Because TECUM systems are primarily intended for Voice Alarm, MAZE's IVC-MM features can be added as an optional feature to the basic functionality of Voice Alarm that complies with the EN54 series of safety standards. The necessary Voice Alarm functionalities will always take precedence in the architecture and processing included in TECUM devices.

IVC-M-IP
IVC-MM Voice Alarm System's brain and network hub is the IVC-M-IP. The IVC-M-IP provides direct access to 250 audio channels sent throughout the MAZE network thanks to enable Ethernet ports and the MAZE engine installed. While the usual analog BGM inputs are still accessible, the IVC-M-IP may receive two BGM channels over IP at the same time. Signals from local analog BGM inputs can also be broadcast simultaneously to the LAN by the IVC-M-IP, where amplifiers and other IVC-M-IP can receive them.

DCA2500-IP
IVC-MM amplifier, the DCA2500-IP, is the networked MAZE variant of the DCA2.500. Like IVC-M-IP, the DCA2500-IP has dual-port Ethernet interface with built-in 100Mbps switch and MAZE engine, which opens access to 250 audio BGM channels available in the MAZE network.
Each DCA2500-IP can also broadcast two digital audio streams to the MAZE network from its local BGM analog inputs. Thanks to dual-port switch onboard, multiple DCA2500-IP units can be daisy-chained with IVC-M-IP inside the rack, without extra switches or routers. DCA2500-IP can be used as a standalone amplifier for low priority PA sub-systems, sharing the same network with Voice Alarm rack.

MATRIX-IP
4 x 8 DSP-enabled balanced audio matrix with 2in/2out streaming to and from the IVC-MM system (total 6 IN x 10 OUT). 4xGPIO, RS485, USB port, 100Mbps dual Ethernet port, built-in message player with micro-SD card storage.

TCM-GN-IP
With the MAZE engine and complete access to all IVC-MM zones and sources, the TCM-GN-IP paging station serves as a general-purpose IP paging station. The TCM-GN-IP can be powered by PoE from a local switch using a 2-port Ethernet switch (simple daisy-chaining). Each TCM-GN-IP can transmit two audio streams: one from the gooseneck microphone and the other from the AUX 3.5mm input connector.
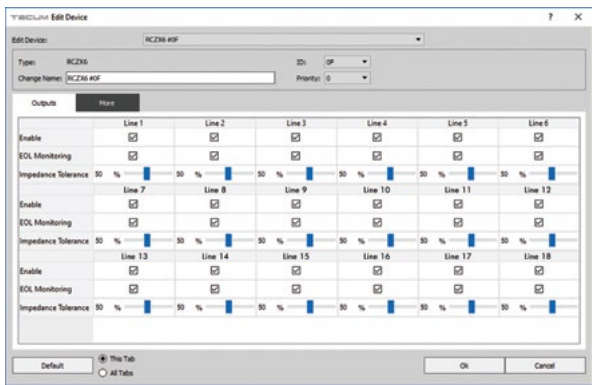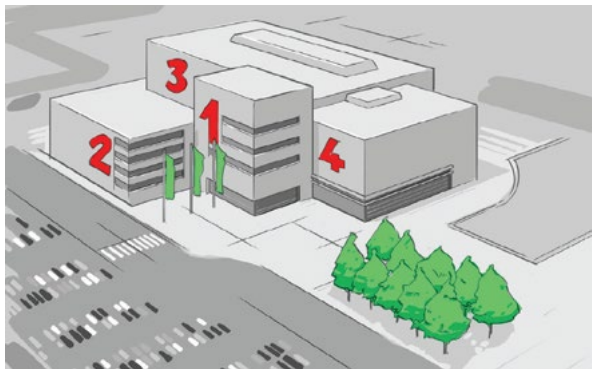
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IVC sets a new course for the Voice Alarm System industry, designed to meet the highest expectations while remaining user friendly, flexible, and cost effective.

The **IVC** system consists of only two chassis, one IVC-M that transfers network data to the amplifier and a DCA2500 amplifier outfitted with at least one LNET-RCZX6 module. The LNET-RCZX6 is a remote-controlled 2-into-6 zone expander and zoning module that divides broadcasts into multiples of six sub-areas. The LNET-RCZX6 has a built-in loudspeaker monitoring system.

Now it is the time to think smart and combine battery charger and integrated power amplifier capabilities. The DCA2500 amplifier not only powers the system up to 1000 Watt, but it also charges and monitors a scalable battery pack that can power up to three 1000 Watt amplifiers. Not only does this save money on hardware and rack space, but it also lowers installation and operational expenses while enhancing reliability. With its simple to use GUI tool guide software, you can quickly set up a system with various Voice-Alarm zones, paging zones, and music zones.

DSP processing of the highest quality is ensured. TECUM Manager is a general-purpose programming tool that gives a full application-specific interface to your IVC and VCP XXX networked system. The software gives you a quick overview of your entire system's condition and simplifies system operation with a simple and secure user interface configuration tool that makes sophisticated programming and service easier than before.

For the IVC and VCP XXX systems, TECUM Manager programming application provides:

- Quick download and upload of the system configuration.
- Firmware upgrades in the field (Each IVC-M or VCP XXX holds a complete copy of the system configuration file)
- Flashcard exchange protocol for quick system update / programming without the direct need for a computer.

IVC-M / Audio matrix

IVC-M handles inputs according to their own signal priority table, distributing audio to a maximum of 16 DCA2500 amplifiers via the digital AMP-link module, which handles two prioritized audio streams via a dynamic assignment mechanism.

IVC-X / L-Net expander

IVC-X is an optional component of the IVC Voice Evacuation System, which is installed in a 19" rack. IVC-M is identical to the IVC-X, but with major hardware and functional constraints.

DCA2500 / 2 x 500 Watt Power Amplifier

The DCA2500 is a two-channel, transformer-less (Direct-drive) 100V power amplifier with an integrated power supply and a 24V battery charger. EN54-4 and EN54-16 compliance was used in the design and certification of this product. The DCA2500 is a great addition to any voice evacuation system. Installation of a public address system that requires great dependability and safety.

IVC Cluster Charging

The lightweight DCA2500 D-Class amplifier is EN54-16 and EN54-4 standard approved and provides robust audio amplification. It is contained in a 2U 19-inch rack housing and delivers 2 x 500 W outputs. Multiple DCA2500 amplifiers can be stacked and shared a single battery pack to provide backup power and collective recharge.

The amplifier is built along 'modern-art' lines, with a transformer-free design that not only provides a direct 100 V output for dispersed loudspeaker systems, but also drives into low-impedance sources from 8 ohm and above. The DCA2500 establishes a standard for the most demanding applications with demanding audio architecture, thanks to its cutting-edge design.

Each DCA2500 comes with a high-capacity 4A battery charger that can charge a single 100Ah battery set.

The battery-cluster charging operation and status control are controlled by a Master/Slave system architecture mandated by the AMP- LINK. This allows numerous amplifiers to share a single, larger battery pack.
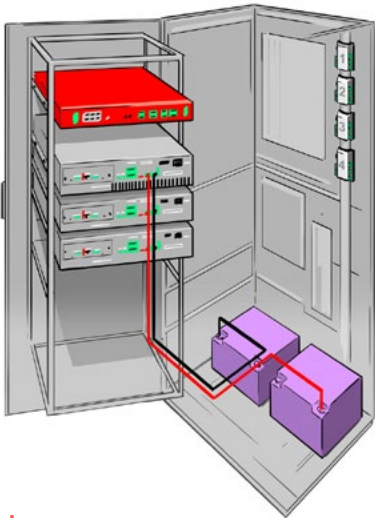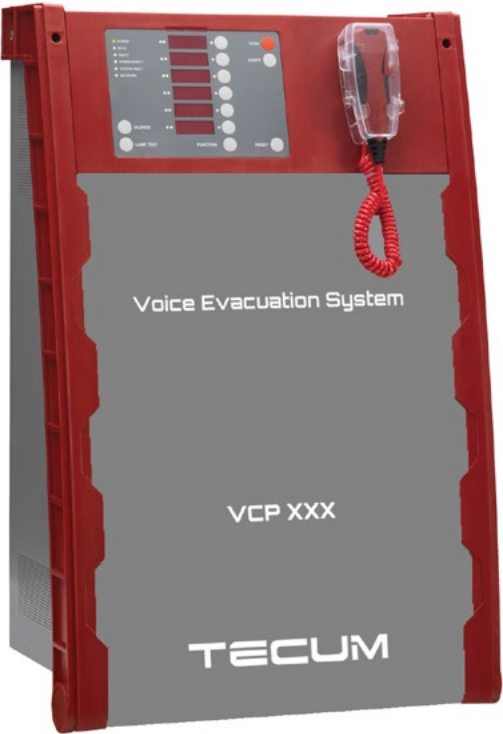
Remote Controlled Zone IVC-X module

The LNET-RCZX6 Remote Controlled Zone Expander module is a simple and affordable solution to distribute varying loads across multiple 6-speaker lines / zones.

The IVC concept is simple yet powerful:

The LNET-RCZX6 switching module generates simultaneous EVAC and ALERT announcements or paging messages, as well as background music (BGM), into six switched speaker lines when used with TECUM's DCA2500 or another third-party single high-power two-channel amplifier.It is possible to create any multiple of six speaker lines by adding extra LNET-RCZX6 switching modules, which can be grouped into virtual paging zones.
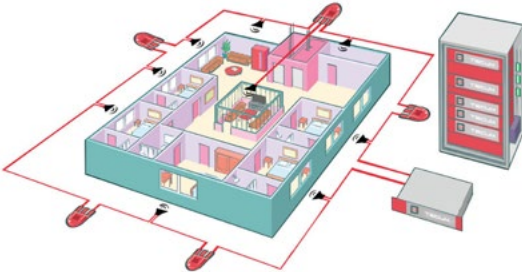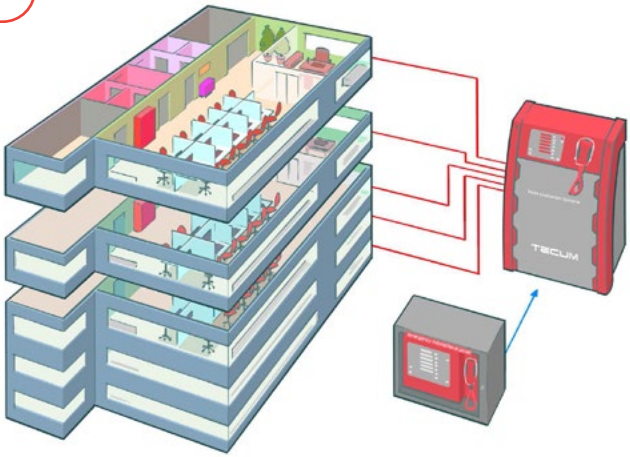
The LNET-RCZX6 switching module, which is powered by a single DCA2500 two-channel amplifier, offers dual-simultaneous, continuous signals for any combination of paging, BMG, EVAC, and ALERT for six managed speaker lines. The surveillance tone generator uses a third internal channel to continuously verify the integrity of the cable and detect any defects. If the speaker lines need to be hushed, the third internal channel can be used. End-of-Line (EOL/10) measurement is used to detect transmission lines. A pilot tone is generated by the LNET-RCZX6 and fed into a tuned EOL. This way each speaker line of the LNET-RCZX6 is monitored for line-short and line-open faults. Installing the LNET-RCZX6 switching module is simple. It comes with speaker line connectors that accept external field wiring up to 2.5 mm 2/12 AWG and is housed in a quick-snap DIN-rail enclosure. Each speaker line can handle loads ranging from 1 to 200 watts, with a total load of 500 watts per LNET-RCZX6.

This 'dynamic-load-distribution' makes IVC the industry's most adaptable and versatile VACIE system, maximizing the usage of all network modules.

PCM-6
Commercial paging console with gooseneck microphone and push-button panel

TCM-GN
Commercial paging console with gooseneck.

FMP-WM
Fireman-microphone, wall and desktop version.

FMWTC
Fireman-microphone with touchscreen control, wall and desktop version.

FMWTC-GN
Fireman-microphone with touchscreen and gooseneck for commercial paging.

FMWB
Fireman-microphone wall-box.

Voice Evacuation System

VCP XXX

TECUM

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.

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.

Comprising 6 evacuation zones, users install the wall-box in the main entry area for easy control and observation during incidents. Frontpanel controls boast sufficient access while the integrated firemens-microphone offers precise vocals in the evacuation zone.

This section displays a basic system configuration with a perfect fit for VCP XXX to serve a high-rise building.

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.

System configuration
• Zone 1: Parking area, 85 W (CH-1);
• Zone 2: Floor 1, 65 W (CH-2);
• Zone 3: Floor 2, 95 W (CH-3);
• Zone 4: Floor 3, 100 W (CH-4);
• Zone 5: Floor 4, 85 W (CH-5);
• Zone 6: Floor 5, 85 W (CH-6);

Materials
• 1 x VCP XXX;
• 3 x DAM200;
• 1 x DAM200 (back-up amp);
• 1 x Battery-set: 38AH.

Battery compartment

Control/Indications
& Firemen microphone at access level 2

Including a unique battery bracket that keeps batteries from the range of 12 V/10 AH to 12 V/55 AH, the VCP XXX has an integral battery charger or PSE, which is certified to power up to 12 V/55 AH in 24-hours.

For installations that are standard, including 3-DAM200 amplifiers along with a backup DAM200 amplifier, you would require 12 VDC 38 AH batteries, provided that the normative period is 30 minutes for a full load and 24 hours when inactive.

In situations where the VCP XXX doesn't have the most number of DAM200 amplifiers or isn't equipped to the full extent of 600W, you have a range of batteries to choose from including 12 V/10 AH to 12 V/55 AH. This applies also when you don't have a maintenance contract and need longer self-support.
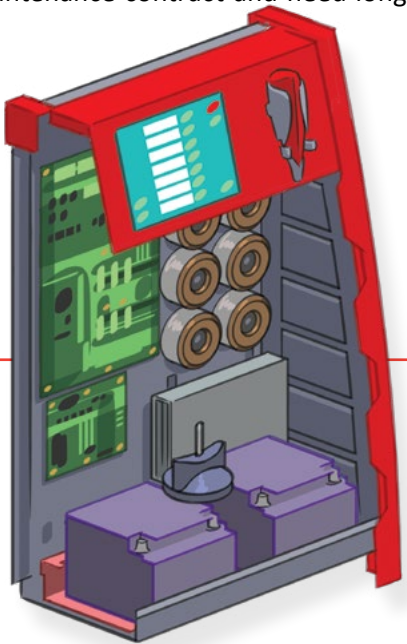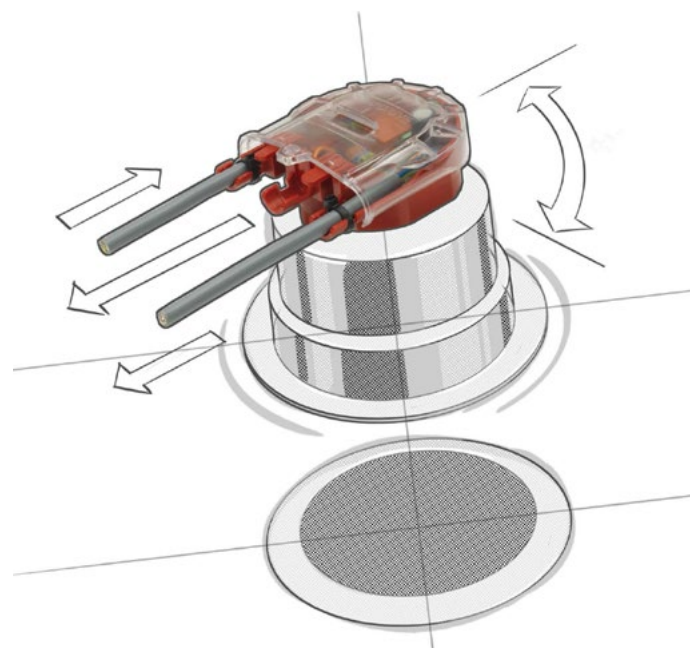

TECUM Manager
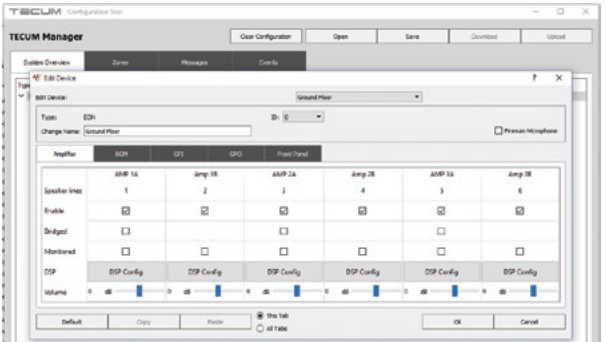
Offering an extensive application-unique interface for your VCP XXX network system, TECUM enables a direct and simple overview of your system's status. It makes operations fast and effective, leveraging on its intuitive capabilities and complete security, ensuring that intricate programming is easy.

TECUM Manager is the ideal addition to your VCP XXX system management in complex facilities.

• Configuration software supports all integrated system components;
• Firmware upgrades in the field;
• Flashcard exchange protocol for quick system update / programming without the direct need for a computer.

The Fault Isolator Module (FIM) for evacuation loudspeaker lines is the successor in our line of loudspeaker loop-isolator devices that use our patent technology to provide a greater level of availability of evacuation loudspeaker lines placed using the return-loop principle. Any loudspeaker failure in a defective part between any two FIMs in the loop is immediately identified and separated, ensuring optimal availability of the remaining loudspeakers on that loop. The loop integrity is protected by the FIM against open and wire-to-wire short circuits.

**DETECT, LOCATE AND ISOLATE IN LESS THAN 4 SECONDS...
WE BROADCAST**

Loopdrive assembly

Dismanteling tool   FIM01 + FIM-ADP-G   FIM01 + FIM-ADP-S

The FIM T-branch output links with the single loudspeaker input without interruptions, enabled through the Loopdrive housing fixing-hole and compression gland.

**No extra cable!
No extra junction box!**

THE FIM IS EQUIPPED WITH WAGO PUSH-TERMINALS THAT ACCEPT UP TO 2,5 MM2 CORE INSTALLATION CABLE. A LOOPDRIVE HOUSING.

Certificate FIM : EN54-17:2005 - 0560-CPR-142190002 - EP 0967833B1

Other loops style: Utilized at the T-Branch for a single or group of loudspeakers, the FIM promotes the ability to limit current effects to the main loop device.

Note: There is no maximum limit of loudspeakers between FIMs within an upper-limit of an 800W LOOP-load, but national standards might limit this across isolators.

Loopdrive FIM-VC60 and Loopdrive FIM-RC are two modules that allow differentiated control between background music and zone calls using existing 2-wire infrastructures.

The LDB or Loop Drive Booster is at the core of the Loopdrive system, operating up to 200 FIMs on a dual-core cable. Passing 800 W of audio signal through an amplifier, one LDB can simultaneously inject DC to loop for operating and accelerating FIM modules.
A single amplifier channel can be divided into numerous LDB at the same time, making a multi-loop feature with exclusive surveillance for multi-zone paging applications.

By clicking on a DIN-rail that hosts DC-power, the housing also accounts for a RS485 data connection and General-Fault contact up to a limit of 32-LDBs on a single DIN-rail. Buttons on the front and related indicators let you have easier access to numerous functions and indications of the Loopdrive system.

SNIFFER not only provides a visual medium for myriad commissioning procedures but also offers an efficient methodology to find faults and device-allocating without the requirement of a digital communication protocol over a 2-wire audio line. It goes beyond your expectations.
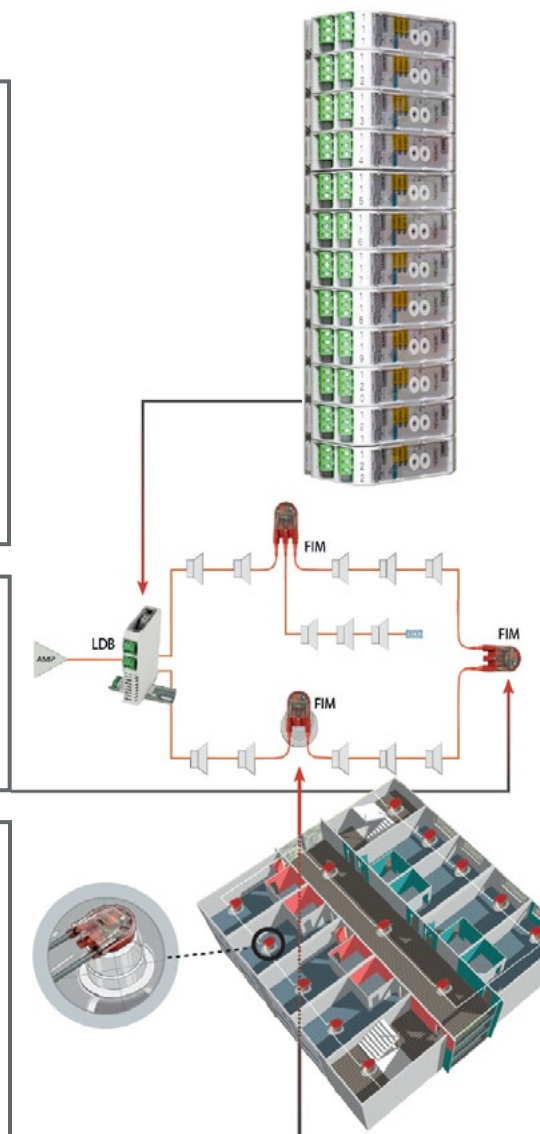
The FIM-VC60 is a T-branch field-isolator-module with integrated T-branch speaker load volume control. When a pilot tone is sent over the speaker line, the FIM-VC60 enters 'override' mode, causing the associated Volume control to go to MAX audio level. Mutes any local music source connected to the FIM-VC60 via the AUX input.

A 11-step wall-controller is included with the FIM-VC60: -9 / MAX / AUX. The FIM-VC60 volume controller has an AUX input for a local

During a live-broadcast of an evacuation event, the FIM-RC works as a remote contact interface that can activate or deactivate a third-party instrument or equipment that has to be triggered.
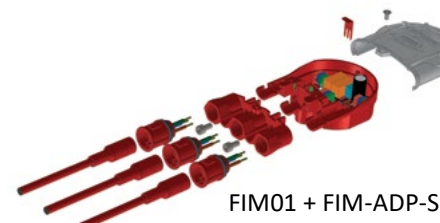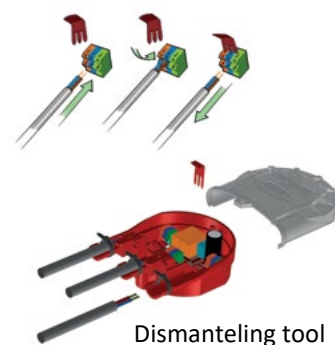
The FIM-RC sits in the LOOP and listens to the audio message that has been broadcast. The FIM-on-board RC's relays will change state to 'override' mode as soon as the broadcast audio message contains a 20 kHz pilot-tone. As long as the pilot-tone is received, the state change is locked.

The FIM-RC provides two potential free NC and NO switching contacts, depending on the function of the third-party instrument or equipment.
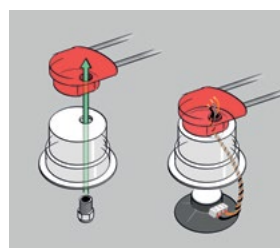
Single-gang flushmount box (optional) V60

FIM-RC   FIM-VC60

Background music is imperative for shopping malls, hotels, restaurants and more. However, perhaps you don't want the audio level to be the same in each area of the building.
Loopdrive FIM-VC60 offers local background music volume control in tandem with a paging-override, all setup with a 2-wire infrastructure.

Features of the FIM-VC60 include a 50 Watt T-branch loudspeaker capacity, 8-step volume control and an AUXILIARY local audio source input. As such, it is perfect for shops that make selections from an in-house entertaining feed to a music player inside the store. During incidents and emergencies, the in-store music player will be overridden, and messages will originate from the in-house voice-evacuation system.

In case of a short and/or cable open faults, the FIM-VC60 takes after the Loopdrive solution and works as an isolator. The override function is operated by an additional 20kHz carrier that is combined with the paging and emergency broadcast.

Main benefits:
- Emergency paging and BGM over a 2-wire system
- No need for any additional 24VDC override cable
- Local volume control and local music entry (AUX)
- Quick and simple to install.

Technical data:
- Trigger threshold: 7.5Vrms (20kHz)
- Inrush period for override: 0.3sec
- Fade-out period after override: 1.0sec.

FIM-VC60 contains:
- 1 x single gang flush mount Volume controller V60 (60W).
- 1x surface mount FIM-VC60 controller.
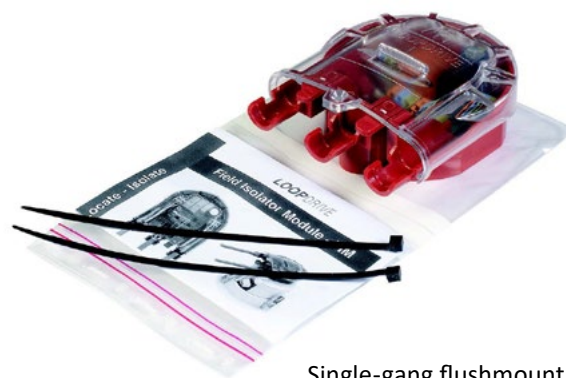
Single-gang flushmount box (optional)

SNIFFER is an extensive and detailed Graphical User Interface (GUI) which enables automation and installation of the Loopdrive system, having a capacity of around 256 LDB-units with a single RS486 connection.

SNIFFER not only provides a visual medium for myriad commissioning procedures but also offers an efficient methodology to find faults and device-allocating without the requirement of a digital communication protocol over a 2-wire audio line. It goes beyond your expectations.

Settings and commands that are available from the various menu's are:
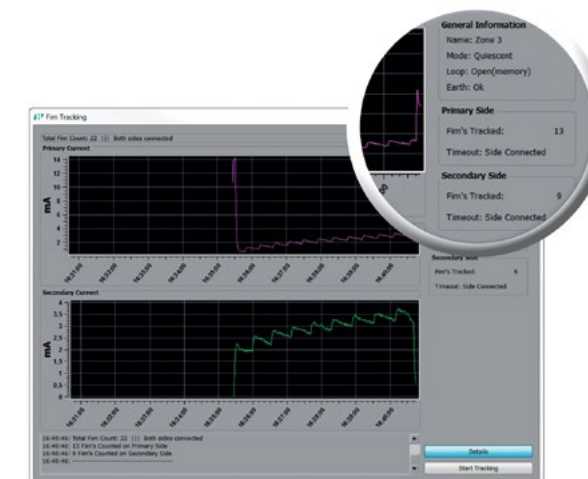
- FIM reset
- LDB reset

Basic settings like:

- General Fault Contact status
- Audio mute
- Earth-loop detection

And special service functions such as:

- Service mode
- Audio output switching
- FIM Tracking mode

As one of the most useful features on Loopdrive, FIM-Tracking-Mode starts the FIMs in a sequential order, all with a click of a button. This can track the FIM numbers in the PRIMARY (send) and SECONDARY (return) line during the initial commission, through the registering, measuring and counting of the inrush current.

You will get a signal during Tracking-mode when the loop is closed and perked for operation. The complete number of Tracked FIMs are displayed in information fields and stored in a connected LDB to check at a later stage.

In instances where a faulty section in the line is recognized as the Tracking-mode activates, your operator is given a signal, along with the precise location of the section, shown by the number of the last successful started FIM on the Primary or Secondary loop area.

The Sniffer app can scan and detect multiple or single cabling twisting, ensuring that the right signal phase is provided across the loop.

Main operating window   Log-file window

![TECUM - Sound Intelligibility is Redefined]
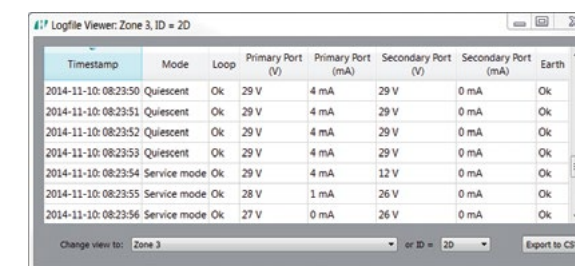
Al Maryah Vista – Al Maryah Island
Abu Dhabi, UAE

The Gate – Masdar City
Abu Dhabi, UAE

DAFZA - Dubai Airport Free Zone
Dubai, UAE

Sky Tower
Dubai, UAE

DAMAC Sales Office – AKOYA
Dubai, UAE

Mama Shelter Hotel
Dubai, UAE

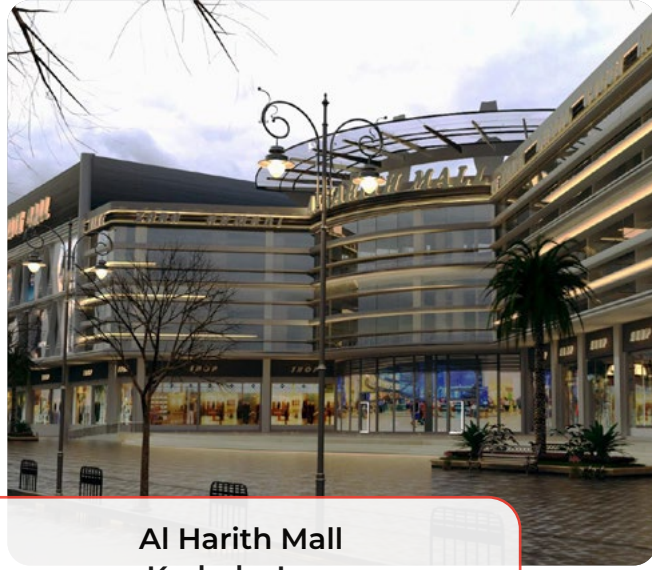Ibn al-Athir Teaching Hospital for
Children - Mosul, Iraq

Al Nabaa Al Adheem Private
Hospital - Basra, Iraq
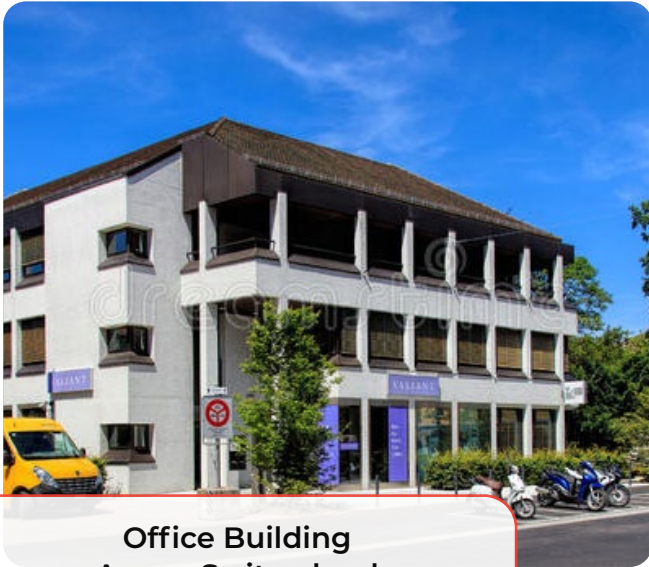

Staff Accommodation – Union Coop
Dubai, UAE

MAG City – Meydan Area
Dubai, UAE

Al Harith Mall
Karbala, Iraq

Abu Dhabi Islamic Bank (ADIB)
Baghdad, Iraq

TECUM
Sound Intelligibility is Redefined

Office Building
Aarau, Switzerland

Lakeview Apartments
Dubai, UAE

Public Building - G+1+2R
Spain

Residential Building - G+9+Roof
Spain

Al Ghurair G+6 Building
Dubai, UAE

Eden Apartments
Dubai, UAE

Triple One Somerset,
Singapore

Residential Building G+6+Roof
Dubai – UAE

FOZ Building
Amsterdam, The Netherlands

Residential Building - G+8
Spain

Al Batool Hospital
Baqubah, Iraq

Dijlah Tourist Village
Baghdad, Iraq

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