Now it is time to think smart and combine battery charger capabilities with the integrated power amplifier. The DCA-2.500 amplifier not only drives the system up to an impressive 1000 Watt, but it also charges and surveys a scalable battery pack for a large group of amplifiers that are sharing their battery charging output. This not only reduces hardware and rack-space but most importantly, it decreases installation and operational costs whilst increasing reliability. Simple to configure with its easy to use GUI tool guiding software you create a systems solution with multiple Voice-Alarm zones, paging-zones and music areas in minutes. High quality DSP-processing guarantees state of the art audio performance throughout the building as well as highly intelligible pre-recorded and live message broadcast for both commercial and live-safety applications.

IMPACT comes with a wide range of emergency wall-box and desktop paging consoles. The Global-Network connects up to 254 nodes, consisting of CONTROLLERS, paging consoles, 4E-SW6 zone expanders, 4E-GPIO modules and COMPACT500s offering a staggering size of up to 1400 speaker-lines!

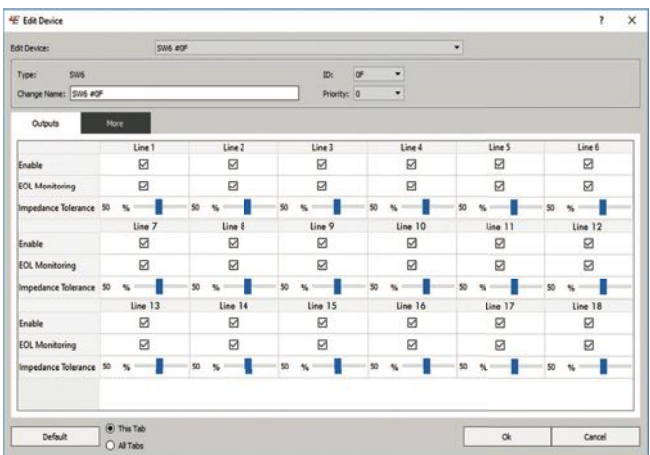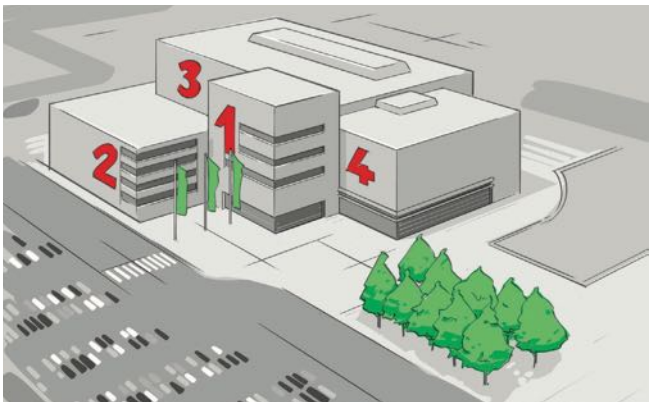| 4E-CMP	4E-CMT	4E-FM	4E-FMT	4E-FMTC	4E-FMWB
Commercial paging console with gooseneck microphone and push-button panel.	Commercial paging console with gooseneck.	Fireman-microphone, wall and desktop version.	Fireman-microphone with touchscreen control, wall and desktop version.	Fireman-microphone with touchscreen and gooseneck for commercial paging.	Fireman-microphone wall-box.

4EVAC MANAGER

4EVAC Manager is an overall programming application tool that provides a comprehensive application specific interface to your IMPACT and COMPACT500 networked system. The software provides an overview of your overall system status and makes system operation very easy through an intuitive and secure user interface configuration tool that makes complex programming and service easier than ever.

4EVAC Manager programming application for IMPACT and COMPACT500 system provides:

- Quick download and upload of the system configuration;
- Update of firmware and configuration over the Network to all-devices (Each CONTROLLER or COMPACT500 holds a complete copy of the system configuration file);
- Flashcard exchange protocol for quick system update / programming in case of computer access disability or emergency purpose.

CONTROLLER / Audio matrix

The CONTROLLER deals with inputs according to their own signal priority table, distributing the audio using the digital AMP-link module, which handles two prioritised audio streams through a dynamic assignment technique, to a maximum of 16 DCA-2.500 amplifiers per CONTROLLER.

The 4E-SW6 remote controlled zone expanders units, housed remotely in the easy-wire racks, work directly to the CONTROLLER. This set-up routes audio from the A and B channels of the amplifier into the required zones and speaker lines.

The CONTROLLER manages two simultaneous audio streams over an expandable switching matrix utilising 4E-SW6 modules. This facilitates expanding from a minimum of 6 speaker lines to a maximum of over 1400 speaker lines, which can be grouped into a system total of 254 virtual paging zones, using a maximum of 96 virtual paging zones per CONTROLLER.

The CONTROLLER provides all mandatory indicators according to the EN54-16 standard and provides GPI and GPO interfacing, global and local network ports, TCP-IP ports (for future expansion) and an AMP-link that interfaces directly with the DCA-2.500 amplifiers over a dedicated RS485 bus for audio and data control.

> The CONTROLLER integrates seamlessly with the COMPACT500 box-on-the-wall VACIE system, which offers maximum versatility and meets today's challenging market demands.

Offering 'dynamic-load-distribution' over the speaker lines from 1 Watt to 200 W, one CONTROLLER can manage up to 16 x DCA-2.500 amplifiers with a combined output power of up to 16,000 W.

The CONTROLLER uses the same 4EVAC Manager as the COMPACT500, making the interaction between the two systems straightforward and enabling them to be easily combined into one system.

EN 54-16

AMP-link with data and A&B audio

Alternative A&B audio input with level-control

AUX input for local source with level-control and routing selection. One balanced selectable source for L/R/L+R or two unbalanced sources for L & R

DCA 2.500 / D-Class Charger Amplifier

The EN54-16 and EN54-4 standard certified, lightweight DCA-2.500 D-Class amplifier provides powerful audio amplification. It delivers 2 x 500 W outputs and is housed in a 2U 19-inch rackhousing. Multiple DCA-2.500 amplifiers can be stacked together sharing a single battery pack, providing back-up power and collective recharging capabilities.

The amplifier has been designed along 'modern-art' lines and features a transformer-less design with not only a direct 100 V output for distributed loudspeaker systems, but also drives into a low-impedance source from 8ohm and up. With cutting-edge design, the DCA-2.500 sets a standard for the most demanding projects with demanding audio architecture.

The DCA-2.500 boasts a channel independant, dual voltage mains supply in combination with a secondary 24 VDC battery backup, crucial for ultimate reliability and durability in a VACIE system.

Each DCA-2.500 is equipped with a powerful 4A battery charger capable of charging into a single 100Ah battery set.

A Master/Slave system architecture, dictated by the AMP-LINK, regulates the battery-cluster charging procedure and status control. This way a single, larger battery pack can be shared with multiple amplifiers.

EN 54-4   **EN 54-16**

The IMPACT on the batteries.

No rack build, No engineering!

EN 54-16

4E-SW6 / Remote Controlled Zone Expander module

The 4E-SW6 Remote Controlled Zone Expander module is a simple and cost-effective way to distribute various loads over a multiple of 6-speaker lines / zones.

The IMPACT concept is simple yet powerful:
When combined with 4EVAC's DCA-2.500, or other third-party single high-power two-channel amplifier, the 4E-SW6 switching module generates simultaneous EVAC and ALERT announcements or paging messages and background music (BGM) into six switched speaker lines. By adding more 4E-SW6 switching modules, it is possible to produce any multiple of six speaker lines, which can be grouped in virtual paging zones.

More zones, Fewer amplifiers!

Powered by a single DCA-2.500 two channel amplifier, the 4E-SW6 switching module provides dual-simultaneous, uninterrupted signals for any combination of paging, BMG, EVAC and ALERT for six manageable speaker lines.
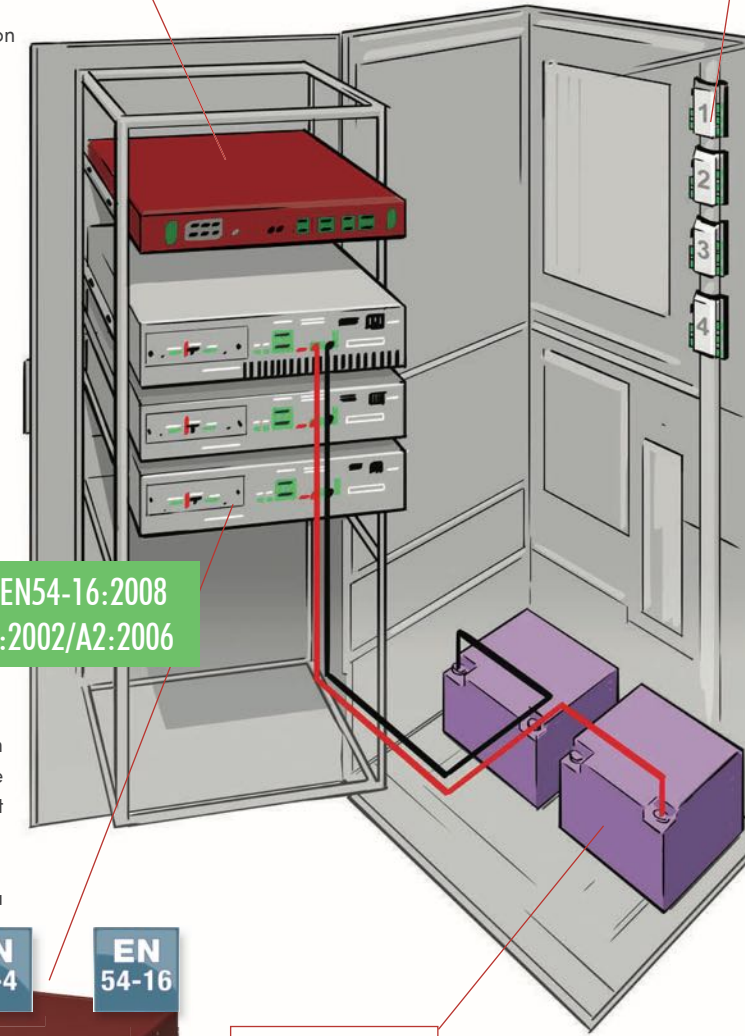
A third internal channel is used by the surveillance tone generator to continuously check the integrity of the cable and detects any faults. The third internal channel can also be addressed if the speaker lines need to be silenced.

The transmission-line detection is based on End-Of-Line (EOL) measurement. The 4E-SW6 generates a pilot tone that feeds into a tuned EOL. This way each speaker line of the 4E-SW6 is monitored for line-short and line-open faults.

The 4E-SW6 switching module is easy to install. It comes in a quick-snap DIN- rail housing and is supplied with speaker line connectors that directly accept external field cabling up to 2.5 mm²/12 AWG.
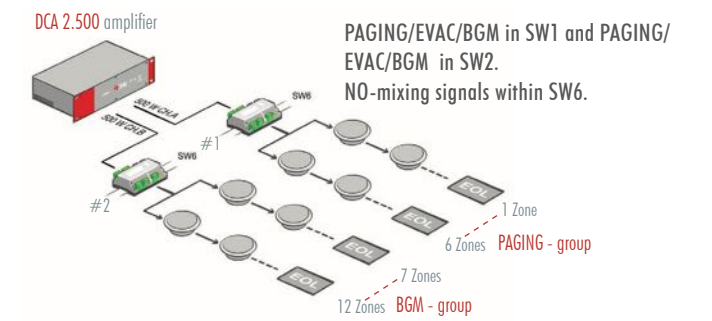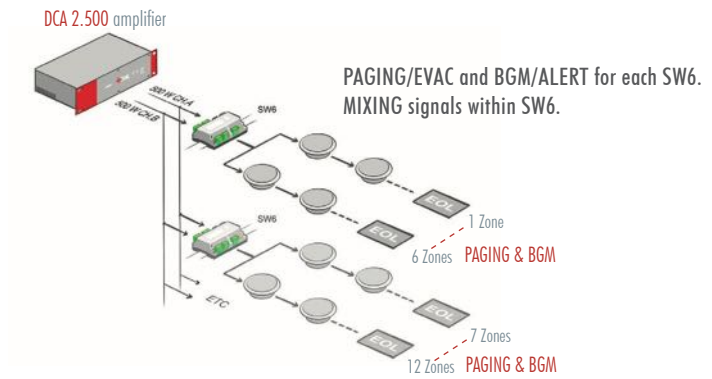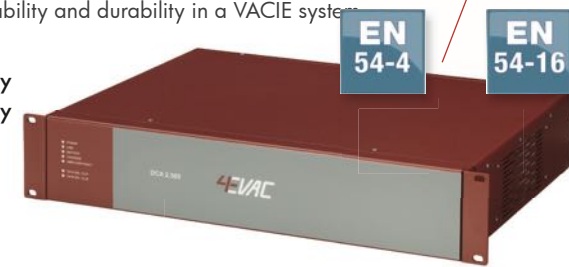
Each speaker line is able to support loads from as small as 1W to as big as 200 W, with a total load of 500W per 4E-SW6. This 'dynamic-load-distribution' makes IMPACT the most flexible and versatile VACIE system in the industry and optimises the use of all modules on the network.

> Using two amplifier channels of the DCA 2.500 amplifier, each 4E-SW6 switching module provides simultaneous paging and BGM, limited at 500 W for the whole system. This includes active back-up of Amplifier channel-A against channel-B, and channel-B against channel-A.

DCA 2.500 amplifier

> Using two amplifier channels of the DCA 2.500 amplifier, the 4E-SW6 switching module provides simultaneously paging in SW6 #1 and background music in SW6#2 with 500 W per 4E-SW6 switching unit. For back-up purposes, an extra amplifier channel can be used as 'shared back-up'.

EOL

PAGING/EVAC and BGM/ALERT for each SW6. MIXING signals within SW6.

1 Zone
6 Zones PAGING & BGM

7 Zones
12 Zones PAGING & BGM

DCA 2.500 amplifier

PAGING/EVAC/BGM in SW1 and PAGING/EVAC/BGM in SW2.
NO-mixing signals within SW6.

1 Zone
6 Zones PAGING - group

7 Zones
12 Zones BGM - group

CONTROLLER /
Audio matrix

EN 54-16

The **CONTROLLER** is the heart of the **IMPACT** system. Housed in a 1U 19-inch rack-mountable frame, it manages all **VACIE operations**. This involves the management and prioritising of audio streams coming from the network.
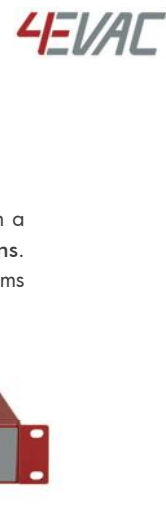
DCA 2.500 /
D-Class Charger Amplifier

EN 54-4 **EN 54-16**

Standing apart from any conventional power amplifier, the **DCA**2.500 features an in-built scalable battery charger with a temperature sensor that is **EN54-4** compliant.

4E-SW6 /
Remote Controlled Zone Expander module

The **4E-SW6** Remote Controlled Zone Expander module is a simple and cost-effective way to distribute various speaker loads dynamically over multiple speaker-lines.
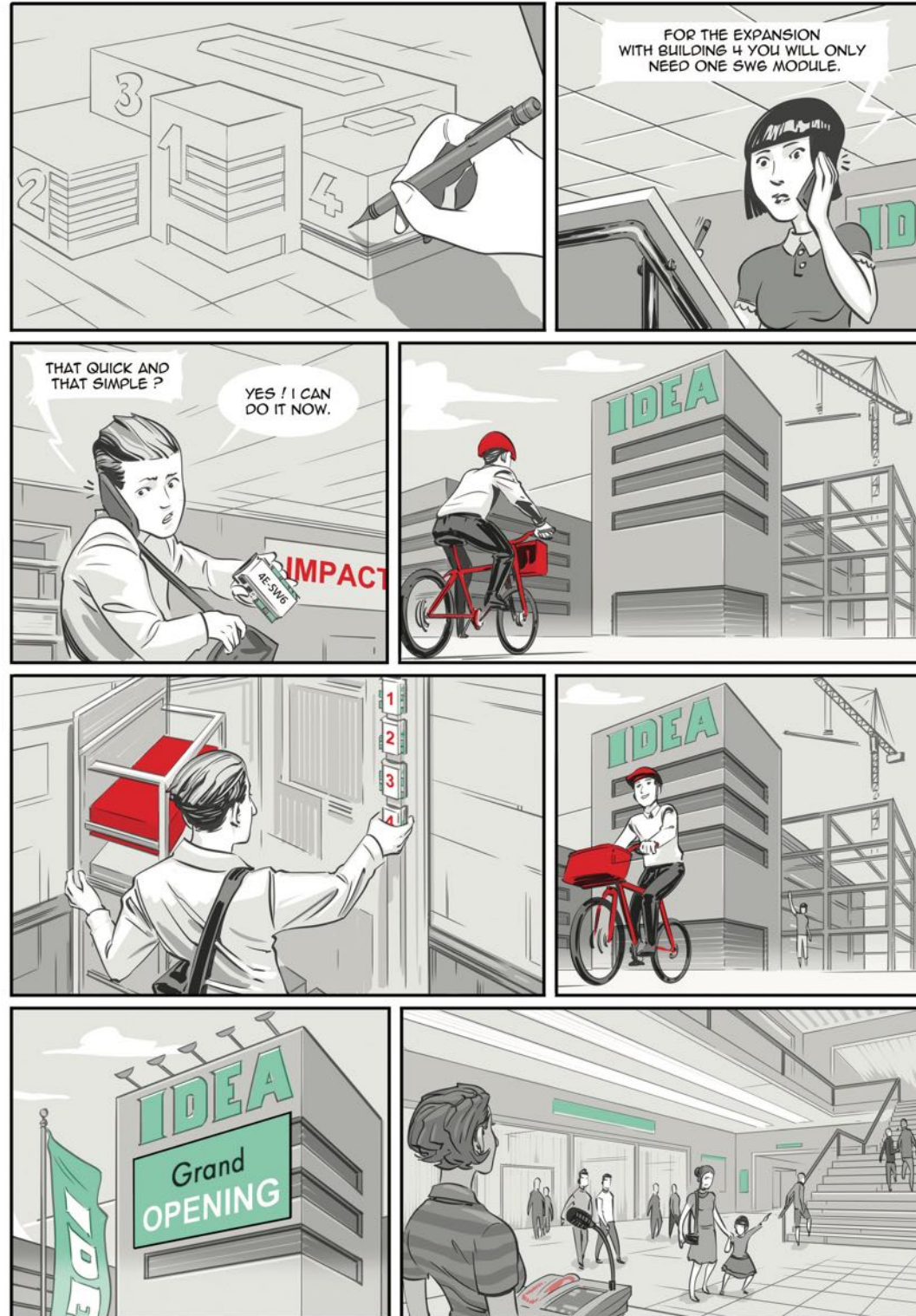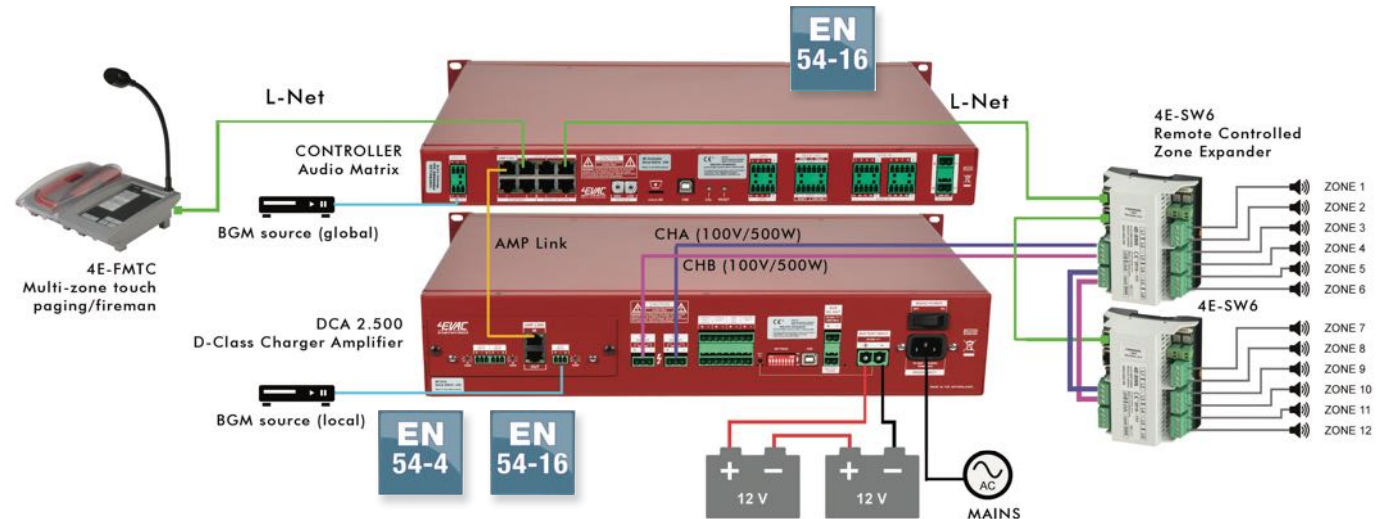
IMPACT system basic features complying to EN54-16:

- Power amplifier, 2 x 500 W
- Back-up amplifier included
- Battery charger for 30 min full-load and 24 hours standby
- 12-loudspeaker lines / zones with EOL using 4E-SW6
- Simultaneous Paging & BGM or EVAC & ALERT into all-zones
- Phased evacuation into all-zones
- Multiple message player
- 32 x GPIO for fire-panel triggering
- Local aux/music entry on amplifier for commercial use into all-zones.

Component used:
- 1 x CONTROLLER
- 1x DCA2.500
- 2 x 4E-SW6
- 1 x 4E-FMTC (optional Wallbox Fireman microphone)
- 12 x EOL module
- 2 x 12 VDC/38 AH batteries

IMPACT Voice Alarm Systems

EN 54-4 **EN 54-16**

The **IMPACT** on decreasing installation and maintenance costs.

The **IMPACT** of configurable modular design on space saving.

The **IMPACT** of technology on the environment.

BRACE YOURSELF FOR
IMPACT

Remote controlled Zone-Expander

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