g+m
swiss made    elektronik ag

# APS®-APROSYS

Modular system solutions

# Swiss Made

Often invisible. But always loud and clear. That's more than 49 years of innovative ideas of g+m elektronik ag. With our electroacoustic developments we continue to set new standards in the markets. Far beyond the borders of Europe.

Our brand stands for Swiss values and Swiss quality. In our house we develop, design and manufacture trendsetting solutions that have made us what we are: a market leader.

# CONTENT

# Uncompromising and advanced

## APS® TECHNOLOGY CONNECTS

With this APS® generation we have developed a smart system solution for you, a system that is typically what we produce at g+m elektronik ag: Swiss precision, completely user-friendly and ideally positioned for the future. Thanks to features such as LAN networking and DSP technology, our APS® technology meets your very high demands. Made in our own plant this brand sets standards globally.

**Simple ease of use**

In the APS® technology we have consistently implemented our principle of «the more complex the system demands, the more user-friendly our solutions». Large overall systems can be easily operated using the APS® technology. You enjoy the highest degree of user convenience with your system solution that can be individually configured from over 100 modules.

**Open system architecture**

The open and modular overall system for acoustic systems, PA and voice alarm as well as emergency warning systems has many different interfaces. It offers you maximum flexibility in case you would like to link additional systems. With it you can easily integrate fire alarm systems, building management systems or controllers and monitoring of non-acoustic systems.

**Secure interfaces**

Smart also means that you can directly access the user guide as well as system feedback with guaranteed error detection during interface disruptions. The automatic and continuous monitoring of these interfaces guarantees the prescribed system availability even in emergencies:
• RS-232 interfaces to the report output
• LAN connections with software interfaces
• 100 Volt interfaces
• Telephone interfaces
• 0 dB interfaces
• Monitored, potential-free contacts

**Clear advantages at a glance**
• Free, modular system architecture
• Versatile operation
• Highest degree of system flexibility
• Cost-effective and efficient
• Logical and intuitive
• Optimum integration
• Expandability
• EN 54-16 / EN 50849 certified

**Flexibility for complex challenges**

# High-performance and multi-talented

The APS® technology is characterized by its versatility in every field of application. Whether in public areas or in the company, in outdoor spaces or inside a building – our system solution has demonstrated its reliability and flexibility anywhere where many people come together.

**Where is the APS® technology used?**



SHOPPING Do your purchases in a relaxed atmosphere – it invigorates stores and makes cash registers ring out more often. Public address systems of g+m elektronik ag play their role here with pleasant music and a soundtrack of advertising announcements. Integrated in the on-site security arrangement, they contribute to people's enjoyment of the shopping experience.



CATERING Discreet music can get visitors' taste buds watering. Depending on style, be it young and modern or from classy to elegant. With the appropriate background music an electroacoustic system from g+m elektronik ag provides an inviting ambiance in every restaurant or hotel.
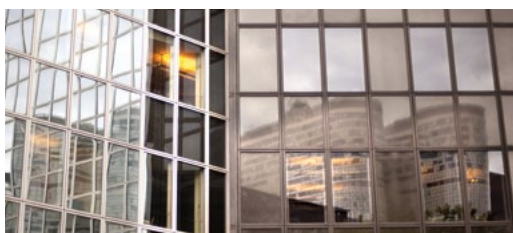


PUBLIC BUILDINGS In the museum, in the theatre, in a multi-purpose hall or in an office building – everywhere where many people come and go everyday, easily understandable information is in demand. Musical recordings also boost trust and comfort in public areas.



PUBLIC TRANSPORT Anyone who wants to ride a bus or train relies on accurate information. Every minute counts in order to make the connection on time or to be on the right station platform. g+m elektronik ag wishes you a good journey!



SPECIALITIES Each space has its own particular acoustics. Sometimes professional technology is needed to achieve commercial objectives or ensure public safety, and at other times there is private preference for the perfect sound experience. g+m elektronik ag always offers a custom solution.

**OFFICE BUILDINGS** Success has a good ring to it, especially in places where motivated top-level performance is provided. Whether in production venues or in the office, public address systems from g+m elektronik ag can help save time, effort and expense with important information, ensure safety and increase enjoyment at work.

**CHURCHES** A space for reflection, a space for taking time to pause, a space for celebration. Church interiors emanate a totally unique atmosphere. A public address system from g+m elektronik ag meets the highest requirements to cope with the sacred nature of events in every situation.

**SCHOOLS & UNIVERSITIES** Anywhere where people are learning new things together, that is where «adaptive» electroacoustic systems from g+m elektronik ag are also in demand. They can be used in many versatile ways. They can be integrated based on individual requirements and pass every test when it comes to on-site security.

**SPORTS CENTRES & FACILITIES** When it's about valuable points, decisive seconds or shooting for the goal, acoustics always play in the big leagues. The acoustics can motivate the athlete or fill the public with enthusiasm. Public address systems from g+m elektronik ag meets every sporting challenge.

**HOSPITALS** First aid is also a question of easily understandable information. Public address systems from g+m elektronik ag prove to be valuable anywhere where health has the topmost priority be it in the maternity ward or the operating room. They convey safety and support the hospital team as they do their day-to-day work.

**HOMES FOR THE ELDERLY** Presentations and music worth listening to keep people young. Whether for therapy, events or information purposes – in facilities for seniors public address systems from g+m elektronik ag have demonstrated that they cope with the acoustic needs of each age.

# Sophisticated operation

**It's this simple to use the APS® technology**

### Simple and clear

Emphasis placed on practice: even complex systems can be operated almost intuitively. As a user you can control and monitor the APS® technology centrally by computer or through a building's master control system. You select functions such as announcements or alarm signals directly on a display screen. Error messages are logged with specific details and even time-stamped central announcements can be automatically archived thanks to the open system.



**Easy fault correction**

### System analysis and remote maintenance with innovative tools

Our convenient APS® software tools make the monitoring and remote maintenance of your system very easy. You can quickly and efficiently analyse all functions of the overall system from a remote computer with modem and integrated RS-232 interface. Possible errors or changes are immediately located and rectified using practical diagnostic tools. You then minimize critical downtimes and reduce maintenance costs.

### Powerful programming software

Our new programming software also promises maximum efficiency: it is tailored precisely to top performance 16-bit processors. The perfect base for efficient programming of the entire APS® system. You need to make changes later on? On-site or remote options give you all the choices you need.
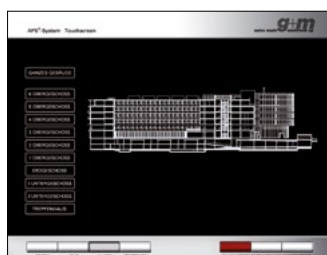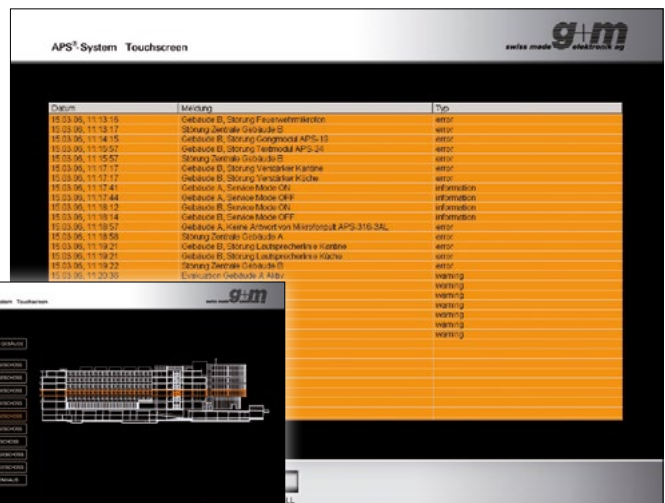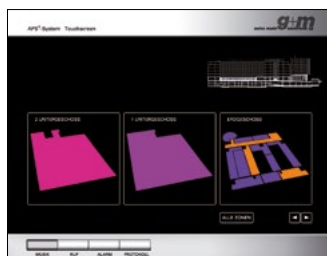
### Equipment that you listen to

Our modern digital microphone consoles guarantee the highest degree of convenience. They are individual programmed according to your needs and can be integrated into your system with a bus system or LAN connection.

With a graphical user interface operation via touch screen or PC our smart models also are suited for integration into building management systems or touch screen terminals. Existing software interfaces provides for smooth integration into the network.

### Digital microphone consoles

Freely programmable digital consoles with direct LAN or bus system connection. Up to 255 consoles per bus!

### Graphical user interface

Operation from touch screen or computer with LAN/RS-232/RC-16 bus connection or integrated into an existing building management system.

### Firefighters microphone-panel

Programmable Firefighters microphone-panel (VACIE) compliant with the EN 54-16 standard.

# Strong network architecture

The APS® technology helps you save networking costs. A standard network connection via Local Area Network (LAN) is enough to transmit data and digitalized audio signals simultaneously over large distances.

**Cost-optimized LAN networks**

You can also expand the system at will at any time using standard network components. Ongoing digital monitoring of networks boosts your system's security. In addition, take advantage of the option of connecting to redundant fibre glass cables, thereby minimizing the risk of failure of your overall system.

**100 % security**
thanks to digital
line monitoring

**Simple operation**
through a graphical
user interface

**CD sound quality**
thanks to digitalization (MP3)

**LAN network module
APS-59-LAN**
32 parallel audio channels transferable!

**Digital microphone-
consoles**
with direct LAN connection

**Remote maintenance**

**Cost-optimized
installation**
of speaker lines
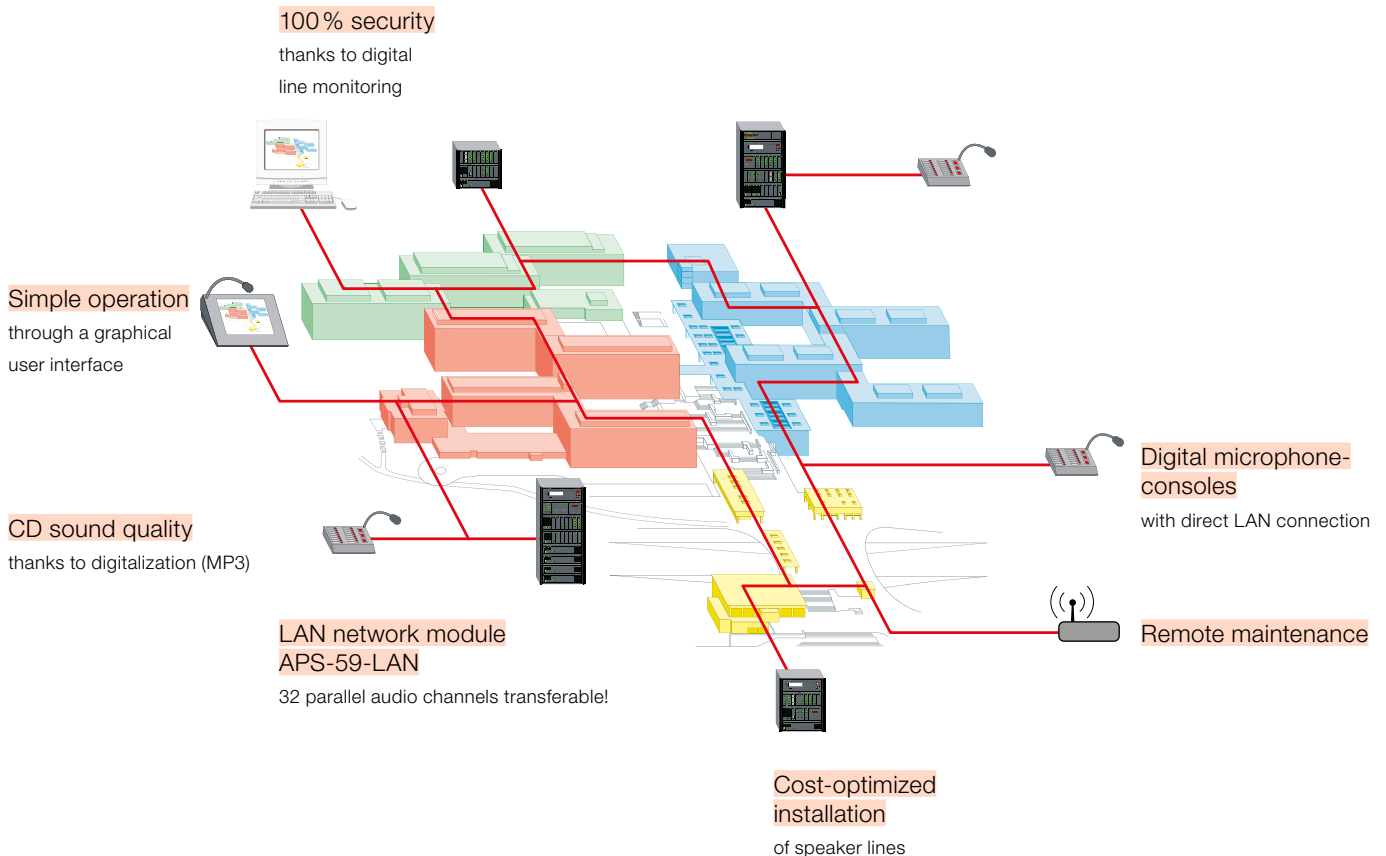
# One technology, many possibilities

**Free selection from over 100 modules**

Every project is different, and every system as well. Therefore our APS® technology developers have provided a multitude of standard modules. The over 100 hardware components always ensure a custom solution, whatever applications and functions you want.

Modules are easily configured in the respective system with the help of our APS® software. Upgrades and improvements can be made simply and quickly at any time. We call that flexibility.

**Our APS® module families**
- Input modules for input signal processing
- Output modules for audio signal transmission to other systems or speaker groups
- Music and signal source modules for generating electronic MP3 audio signals and optimizing general audio signals
- Function and control modules for binary command networking and generation (interfaces)
- Monitoring modules for system function monitoring according to the EN 54-16 standard

Each individual smart module constantly communicates via the digital bus

**Freedoms from which you benefit**
- Any number of modules can be combined depending on configuration
- Can be expanded very simply and cost-effectively at any time
- Considerable cost saving through minimum wiring work
- Individually programmable to customer specifications
- Very efficient diagnostic possibility

# Sound experience

Now it's time for a unique module series from g+m elektronik ag: with the APS®-ARIA family you experience sound in the right dimension. At a push of a button you can customize the smart acoustic system at any time to the number of listeners or the respective room size. A valuable expansion especially in separable rooms.

With every APS®-ARIA module you digitally control 4 independent channels with DSP functions such as dynamic response, delay, equalizer and volume. Stored settings can be retrieved at any time. That is smart and perfect acoustics.

**APS®-ARIA modules**



### Input module APS-11-4

The 4-channel input module has 4 selectable line or microphone inputs. You can easily adjust the respective microphones with the help of specific parameters. You control preamplification and volume individually using the keys and rotary dial.

For churches, gyms and auditoriums



### Output module APS-33-4

You can use up to eight 4-channel DSP output modules per APS® system. Two different volumes for voice and music can be set in each of the four independent output channels of the module.

For large church interiors (cathedrals), tunnels and train stations



### System module APS-46.1-EQ-RC

With the APS®-ARIA system model APS-46.1-EQ-RC you customize your acoustic system optimally to the given spatial acoustics and to the number of listeners present. Divisible rooms can be provided with their own individual sound depending on the division.

For churches, gyms, auditoriums, conference rooms and shopping centres

**Digital amplifier BO-CD-100-4-EV**

As an EV variant this compact digital multiple amplifier is the optimal solution for a voice alarm system inside a complex space situations pursuant to EN 54-16. The innovative DSP technology makes this possible. The 4-channel DSP amplifier has four independent output channels where you can set two different volumes for voice and music.

For churches, shopping centres and conference rooms

**WITH THE APS®-ARIA FAMILY YOU GET THE CONSUMMATE SOUND EXPERIENCE:**

**Echo prevention (delay)**
Time delays of sound waves at different acoustic levels are balanced very accurately. No interfering echo, instead you get perfect comprehensibility in the entire space.

**Acoustic signal optimization (dynamic response)**
Peak levels are attenuated to prevent over modulation of the audio signal and to accentuate quiet passages. Voice and music then become a joy to hear.

**Audio fine-tuning (equalizer)**
The frequency response is individually adapted to the acoustic relationships to produce a suitable sound. This makes the tone quality of voice and music into a perfect sound experience!

**Volume customization (level)**
The volume is optimally adjusted for every individual channel according to the different space conditions and is immediately switched in case of emergency announcements.

Simple and convenient handling: The volume is individually adjusted, preset parameters are called up and stored messages and functions are activated through the ARIA remote control.

With connection to RC16 bus (ARIA):



**GM-7420**
Volume control

**GM-7421**
4-button module

**GM-7422**
Source selection and volume control

**GM-7429-BRIDGE**
For media control system

# Secure sound reinforcement

**Speaker line monitoring**

### Standard

Up to 32 speaker lines can be monitored without interruption. Short circuits, interruptions, ground connection and impedance modification are automatically located even during musical productions.



APS-178.1-32-EV

### Loop system

Speaker lines can be integrated into the system using standard cables. Pursuant to the NEN and VDE user standards, you can do without the required functional integrity in loop wiring systems if the system can ensure that an individual fault does not affect the function of the voice alarm system.



APS-180-LOOP

- No expensive E 30 cabling
- Optimal safety through redundant connection (loop)
- Uninterruptible location of short circuit, interruption and ground connection
- Automatic isolation of the problem zone

- Up to 12 loops per device
- Up to 400 isolators per system
- Bidirectional communication between system and isolator unit
- Loop length up to 600 m
- Via 2-wire cabling
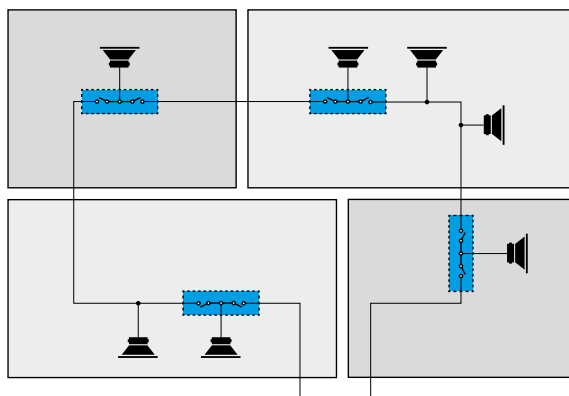


■ Isolator unit

# Extra power

We amplify the strengths of our APS® solutions. Based on this principle we have outfitted our systems with the state of the art digital amplifiers. The 100 Volt amplifiers with class D technology are an additional guarantee of top quality. With 50 percent higher efficiency they clearly overtake the previous analog technology.

Additional plus: The devices reduce the demand for emergency power by half and require only half as much space compared to conventional analog amplifiers. The new compact high-tech amplifiers with their PFC switched-mode power supply guarantee 100 percent constant power at full capacity utilization thanks to our class D cutting-edge technology.

**Amplifiers**

### Single amplifiers
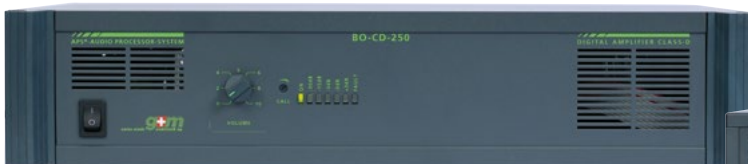
| | | |
|---|---|---|
| BO-CD-100 | Digital class D amplifier | 1 × 100 W |
| BO-CD-150 | Digital class D amplifier | 1 × 150 W |
| BO-CD-250 | Digital class D amplifier | 1 × 250 W |
| BO-CD-500 | Digital class D amplifier | 1 × 500 W |

### Dual amplifiers

| | | |
|---|---|---|
| BO-CD-100-2 | Digital class D amplifier | 2 × 100 W |
| BO-CD-150-2 | Digital class D amplifier | 2 × 150 W |
| BO-CD-250-2 | Digital class D amplifier | 2 × 250 W |

### Quadruple amplifier

| | | |
|---|---|---|
| BO-CD-100-4 | Digital class D amplifier | 4 × 100 W |
| BO-CD-200-4 | Digital class D amplifier | 4 × 200 W |

# Reaching your target market

Let your advertisement speak for itself. With the digital APS-24.2 message player you can freely choose when and where to play which advertisements. Various texts and text groups can be individually configured so that you can convince customers always at the right time in the right place with your advertising message.

From the grouping of advertising text files, to the timetable and targeted zone selection for your recording – you simply choose all the functions of the APS® system through the graphical user interface on the display screen.

**Message player**

**Real-time clock**
with summer / winter time switching

**LAN connection**
to import by central customer specific data via internet

**Access levels**
facilitate user-friendly operation

**Very simple configuration**
via web browser

**Time-controlled activation**
of advertisement blocks thanks to the integrated time planner

**Manual triggering**
of advertisement blocks via microphone console or 4-button module GM-7421

**Freely definable advertisement files**
in any length and order

**Zone-specific advertising texts**
at individual times, in certain zones

**Configuration sample**

### webGUI Configuration

de | en | fr | Manual

Logout

Device
State
LAN
Backup/Restore
Clock
User manager
TS – APS Interfaces
MT – APS Interfaces

Audio
Folders
Files

Time schedule (TS)
Time schedule

Manual triggering (MT)
Manual triggering

**System: Time schedule**

| Not breakable | Start date | End date | Active from | Active until | Active on | Rhythm of rep. Slowly | Fast | Folder / File | Gong signal | Current State | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| no | always | always | 08:00 | 18:00 | Mo Tu We Th Fri Sa So | 00:15 | 00:01 | File: Why | 4-klang Gong kurz | active | ⊘⊗ |
| yes | 01.06.2016 | 31.08.2016 | 16:50 | 16:51 | Mo Tu We Th Fri Sa So | 00:01 | 00:01 | File: Glöckli | 4-klang Gong kurz | active | ⊘⊗ |
| no | always | always | 19:00 | 19:01 | Mo Tu We Th Fri Sa So | 00:01 | 00:01 | File: Break chime | 4-klang Gong kurz | active | ⊘⊗ |
| | | | | | | | | | | | ⊕ |

gm-elektronik.swiss | adm@gm-elektronik.swiss

SERVICE

LAMP
TEST

FAULT
RESET

SILENCE
BUZZER

230V AC POWER ON
230V AC POWER FAULT
DC POWER
DC POWER FAULT
BATTERY FAULT
APS-990 FAULT
100V AUDIO FAULT
MESSAGE FAULT
MICROPHONE FAULT
APS-177 FAULT
COMMON FAULT

POWER

ON

OFF

CE

main switch

PREV   NEXT   PLAY/P

002

SanDisk

USB

USB-Player

-1        +3
-5        +5
TREBLE

0
-1        +1
-3        +3
-5        +5
BASS

4    5    6
8
0        10
VOLUME

-3        -3
-5        +5
TREBLE

0
-1        +1
-3        +3
-5        +5
BASS

4    5    6
8
0        10
VOLUME

interface

-3
TREBLE

BASS
5
4        6
2
0      10
VOLUME

chime | message

APS²-AUDIO PROCESSOR-SYSTEM

Bereit                    01
Gebaeude A      015 109

gsm

OK          CANCEL

17  18  19  20  21  22

1   2   3   4   5   6

APS²-AUDIO PROCESSOR-SYSTEM

BO-CD-250-2

gsm

5
4        6
8
10

CALL   ON -30dB -15dB -3dB -0dB +3dB FAULT

ampli 1
Gebäude A

5
4        6
2
8
0        10

CALL   ON -30dB -15dB -3dB -0dB +3dB FAULT

ampli 2
Gebäude B

APS²-AUDIO PROCESSOR-SYSTEM

BO-CD-500

gsm

5
4        6

CALL   ON -30dB -15dB -3dB -0dB +30dB FAULT

# Easy to control

An acoustic system is only as secure as when it can be operated easily via remote control. User-friendly convenience is the magic word to which we at g+m elektronik ag especially dedicate ourselves in the development of our remote controls. The secret of our successful devices lies in the fact that only the most important controls are accessible and erroneous handling is virtually ruled out.

Our remote controls can be connected to microphones and musical instruments where volume and resonance can be individually regulated. You activate your acoustic system simply by pressing an illuminated pushbutton.
In addition, you have a choice of programming possibilities available such as phantom power or priorities.

**Remote controls**

**Remote control
consoles**



APS-442
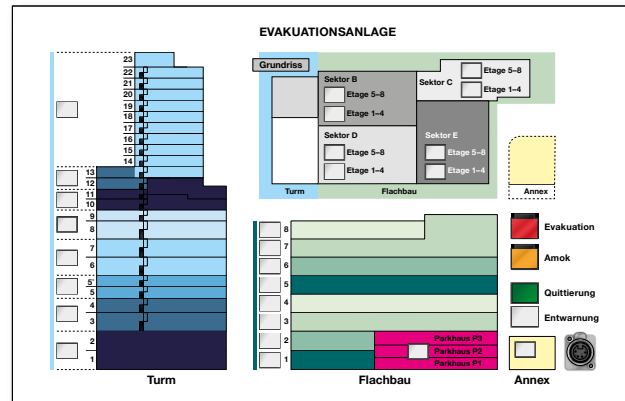


Project based Control Panel



APS-441-2U incl. GM-7421-ARC / GM-7420-ARC



ARC-Console incl. GM-7421-ARC / GM-7420-ARC

# Safety
# with system

**Voice alarm systems compliant with the EN 54-16 standard**

When it comes to the safety of people, quick and comprehensible information can save lives during emergencies. Acoustic voice alarm systems are used in such an emergency situation. These are sound amplification and sound distribution systems which are part of fire alarm systems and meet the respectively applicable national or international standards and regulations.

### Top priority: comprehensibility

The acoustic voice alarm allows the quick notification and alerting of persons who are in the danger zone inside or outside a building. Previously recorded or situation-dependent texts ensure that accurate messages are disseminated. This can be done in several languages as well.

The topmost priority of the system is to transmit information smoothly and comprehensibly during an emergency. People in danger can then identify the situation, take it seriously and then act accordingly. The spoken word has been demonstrated to be of great importance during emergencies. Panic can be avoided, people escape more quietly and orderly, and the speed of escape increases.

### Information that arrives selectively

Acoustic voice alarm systems are used in places where higher safety requirements apply. This applies mostly to buildings and spaces where many people who are unfamiliar with on-site escape routes congregate. This includes shopping centres, hospitals, office buildings, senior homes, factory halls, schools and universities, banks, sports facilities, hotel and conference buildings, administrative buildings and train stations, among others.

**Product standard EN 54-16**

The acoustic voice alarm system is an important part of the entire safety concept. Therefore, the system must be guaranteed, available and fail-safe as stipulated by the EN 54-16 standard. Ongoing self-monitoring of the audio signal path and the absolutely necessary periphery allows the acoustic voice alarm system to identify safety-related faults within 100 seconds and display these to the system technician.

In concrete terms this means that the system - from the microphone capsule, the input modules and amplifiers to all the speaker lines - is monitored independently.
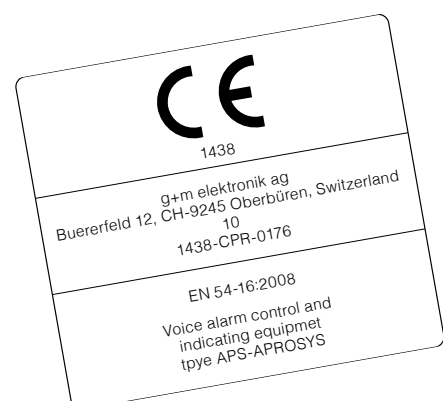
This also includes the digital memories of the audio signal sources for alarm texts. The likewise controlled periphery consists of the main power supply, the emergency power supply as well as the battery charging, among others. If faults occur during monitoring, these are logged in the system at any time in a traceable manner.

**User standards
VDE 833-4
NEN 2575
BS-5839
...**

The planning, installation and operation of acoustic voice alarm systems pursuant to EN 54-16 are defined in the country-specific standards.

As of April 1, 2011 only voice alarm systems that have an official EU certificate of conformity and bear an appropriate CE label may be used in Europe. These certificates may be issued only by specific European inspection authorities (www.ec.europa.eu).

CE

1438

g+m elektronik ag
Buererfeld 12, CH-9245 Oberbüren, Switzerland
10
1438-CPR-0176

EN 54-16:2008
Voice alarm control and
indicating equipmet
tpye APS-APROSYS

# CERTIFIED HARDWARE MONITORING

☑ These applications are monitored as per the EN 54-16 standard

☑ **Central**
processor control, line voltage,
emergency power supply, fault logging

☑ **Fire department microphone**
microphone capsule,
signal amplifier, line

☑ **Digital text device**
voice mail, signal amplifier,
control

**Fire alarm**

☑ **Fire alarm interface**

☑ **Alarm signal generator**
generator, signal amplifier,
control

☑ **Evacuation console**
microphone capsule, signal amplifier,
analog and digital line

EN 54-24 CERTIFIED CERTIFIED

☑ **Speaker lines**
speaker impedance, short-circuit
and ground connection

☑ **Amplifiers**
output signal, excess tempera-
ture, line and battery voltage

☑ **Emergency power supply**
battery capacity, line voltage and
charging current

CERTIFIED EN 54-16 CERTIFIED

Monitoring modules:

| | |
|---|---|
| APS-178.1-XX | Impedance monitoring unit for up to 32 speaker lines without music interruption |
| APS-177.2 | Central unit for EV monitoring EN 54-16 |
| APS-177.2-LAN | Central unit for EV monitoring EN 54-16, including LAN monitoring |

# APS® modules

| | | |
|---|---|---|
| **Music and signal sources, programmable** | APS-19.2 | MP3 chime and siren module, 30 melodies |
| | APS-24.2-LAN | LAN text unit for recording and playback of an unrestricted number of texts of unrestricted length – configuration by means of Web browser |
| | APS-25.2 | Digital VHF tuner, 50 stations, channel search |
| | APS-26 | USB media player module |
| | GM-1525 | Internet radio with FM / RDS / DAB / DAB+ |
| **Function / control modules, programmable** | APS 46.1 | 4-channel DSP module, with equalizer, delay, volume control, dynamic and remote control |
| | APS-50.1 | Universal switching and control module with 8 illuminated pushbuttons |
| | APS-52 | Control module for 8 functions from external buttons, contacts |
| | APS-53-SEC-XX | Switching and control module, for 4 control circuits from external voltages (12 / 24 / 48 V) |
| | APS-54 | Switching and control module with 4 illuminated pushbuttons, for special functions, with remote activation |
| | APS-56.1-NL | Control module with 8 monitored inputs |
| | APS-57.1 | Master clock with 8 circuits |
| | APS-58 | Communication module for RS 232 interface, 8 conditions, 8 outputs |
| | APS-59.1-LAN | Data and LF interface module for multiple systems, LAN configuration type |
| | APS-59.1-SEC | Intelligent fire alarm interface |
| | APS-60 | Control loudspeaker with amplifier, selector switch LF bus 1–4 |
| **Power supply modules** | APS-90.2 | Power module 230 V AC / 48 V DC, 3 A |
| | APS-151.1 | Emergency power supply 48 V DC, 24 Ah, 3 units height, 19" |
| **Output modules, programmable** | APS-31.1 | LF output module with additional Open Collector, VU meter and volume control |
| | APS-33-4 | 4-channel DSP output module with delay, equalizer, compressor / limiter, volume control |
| | APS-64.1 | Module with 4 controllable and switchable loudspeaker lines 100 V, including int. / ext. control bypass, 250 W |
| | APS-74.1 | Module for switching 4 groups 100 V, including external control bypass, 250 W |
| | APS-75 | Relay module for controlling special functions (4 relays) |

Other modules and components can be found on our website gm-elektronik.swiss

| | | |
|---|---|---|
| **Monitoring modules in accordance with EN 54-16** | APS-177.2-EV | Central processor monitoring module in accordance with international safety standards (EU Standard) |
| **EN 50849 BS 5839** | APS-178.1-6/16/32-EV | Digital line / impedance monitor, switchable, 6 / 16 / 32 channel |
| **NEN 2575** | APS-180-Loop | Interruption free line monitor with 2-wire loop line |
| **Processor modules** | APS-990 | Central processor module with data memory, freely programmable |
| **System housings MC-03** | | 8 module slots with I²C bus connection<br>1 module slot without I²C bus connection |
| **System housings with integrated mixing amplifier AM-CD-XX** | | 5 module slots with I²C bus connection<br>1 module slot without I²C bus connection |
| | AM-CD-150 | 150 W Content power (Sinus) |
| | AM-CD-250 | 250 W Content power (Sinus) |
| **System output stages BO-CD-XX** | BO-CD-100 | 100 W Content power (Sinus) |
| | BO-CD-150 | 150 W Content power (Sinus) |
| | BO-CD-155 | 150 W  Content power (Sinus) for induction loops |
| | BO-CD-250 | 250 W Content power (Sinus) |
| | BO-CD-500 | 500 W Content power (Sinus) |
| | BO-CD-100-2 | 2 × 100 W Content power (Sinus) |
| | BO-CD-100-4 | 4 × 100 W Content power (Sinus) |
| | BO-CD-200-4 | 4 × 200 W Content power (Sinus) |
| | BO-CD-150-2 | 2 × 150 W Content power (Sinus) |
| | BO-CD-250-2 | 2 × 250 W Content power (Sinus) |
| **Programmable input modules for APS® central control panels** | APS-01-EV | In accordance with Standard EN 54-16, with preamplifier, for dynamic microphone, capacitor microphone symmetrical, AUX asymmetrical |
| | APS-04.1 | For remote controls APS-440, APS-451, APS-340 and ARC-340 |
| | APS-11-4 | 4-channel DSP input module, selectable microphone or audio-inputs with delay, equalizer, compressor / limiter, volume control |
| | APS-16.2 | Input module with interface for up to 32 parallel, digital microphone command consoles |
| | APS-18.4 | Digital telephone interface (SIP) from any number of telephone stations to PA system |
| | APS-40.1 | Electronic program-selection module with preamplifier, for 4 music sources |

Acoustics | Clocks | Evacuation

swiss made    elektronik ag

g+m elektronik ag
CH-9245 Oberbüren
T +41 71 955 90 10
F +41 71 955 90 20

g+m elektronik ag
CH-5504 Othmarsingen
T +41 62 896 02 08
F +41 62 896 02 68

g+m elektronik ag
CH-1607 Palézieux
T +41 21 791 63 06
F +41 21 791 63 08

Swiss Systems B.V.
NL-4206 CC Gorinchem
T +31 (0)183 513 153
F +31 (0)842 105 651

g+m électronique S.A.R.L.
F-21202 Beaune Cedex
T +33 (0)3 802 50 551
F +33 (0)3 802 50 5522

**International Partners:**
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