Installation/ Commissioning and Operators Handbook

AutroVoice BR-200 Voice Alarm System

AUTRONICA

116-P-BR200/IE - Rev. D, 2008-11-18

CE

Table of Contents

1. Installation

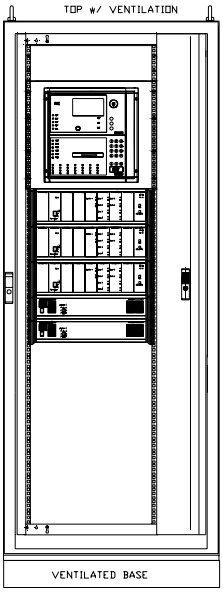
1.1 BR-200

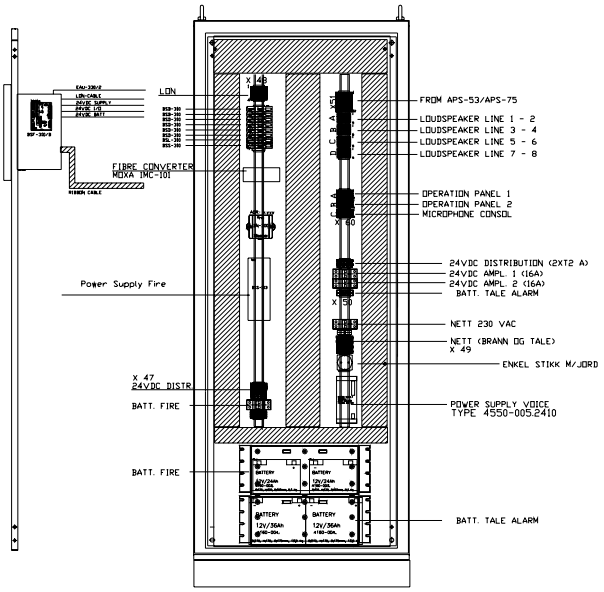
BR-200 AutroVoice comprises:

- Rack with amplifiers and modules for PA (Public Address).
- One or more operating panels BR-210
- Optional PA microphones
- External audio sources for background music etc.
- Loudspeakers.
- Other PA functionality devices

The PA rack is delivered in a 19'' rack, or prepared for rack mountintg.

CABINET 1, PLAN 1





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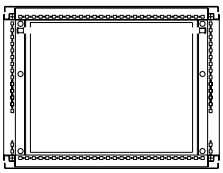


1.2 Location

The voice alarm equipment must be installed in a dry and dust-free environment. Under no circumstances should the ventilation openings be covered up. A reduction in the air circulation will result in the system being functionally affected and/or damaged by a temperature build-up.

If installed in a closed cabinet, sufficient ventilation MUST be ensured (vents in top and bottom as minimum).

The system requires a continuous mains voltage supply. Digital amplifiers have built-in 48V power supply/charging rectifiers connected to 48V battery backup. Analogue amplifiers provide 24V backup supply consisting of charging rectifiers and batteries.

The PA rack is best located in a technical equipment room or a similar area secured against access by unauthorised persons. If this is not possible the rack can be supplied with lockable door.

The operation panel shall be positioned in accordance with local fire regulations, e.g. in or close to an entrance to the building.
The operation panel may be located up to 750 metres (max.) from the rack unit.

The positioning of the units shall be agreed in consultation with the local fire service.

1.3 Mounting

The PA rack is delivered in a 19” rack or prepared for rack mounting.

If the PA rack is not delivered in a 19’’ rack, the PA rack is provided with a connection block on a mounting rail, plus a 3m multicable.

Fig. 1 - Rack

The operation panel BR-210 is mounted adjacent to the fire alarm control panel’s operation panel.

Fig. 2 - Operation panel with front open

1.3.1 Fixing holes

The operation panel has four (4) mounting holes in the rear wall. The uppermost holes are keyhole types.

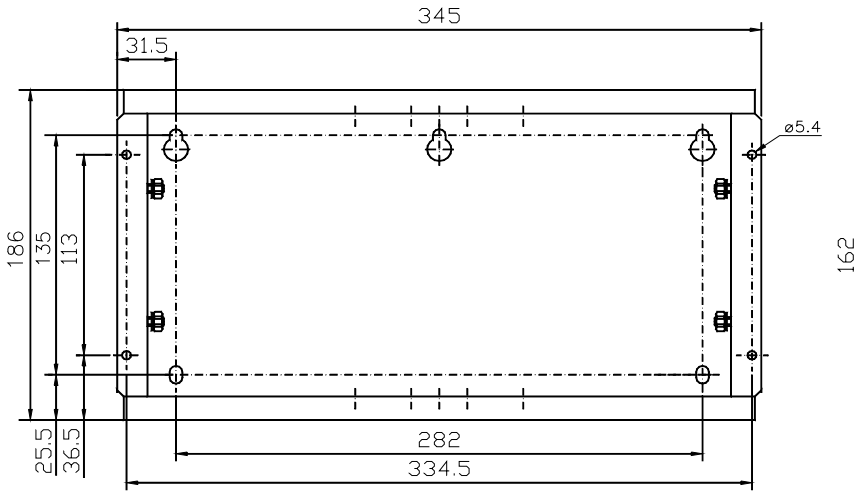


Fig. 3 - Fixing holes

1.3.2 Recess dimensions

The dimensions of the recess for receiving the steel cabinet are given in fig. 4.

The dimensions given allow for attachment of the front.

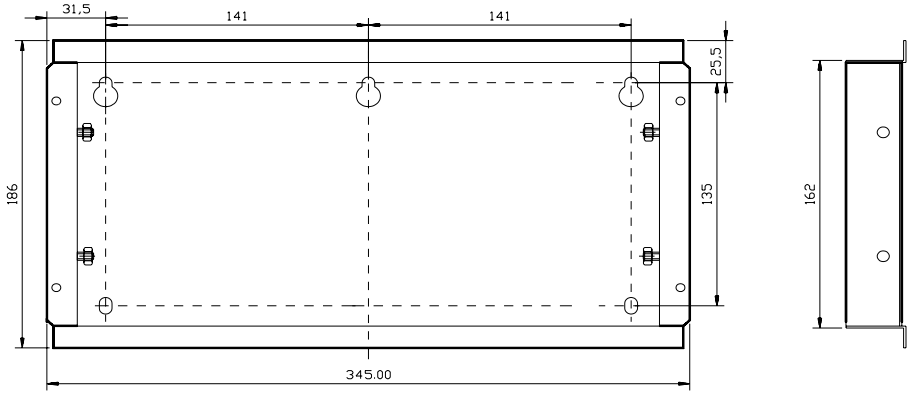


Fig.4 : Recess dimensions

1.3.3 Fixing screws

- Hang the cabinet on the two topmost screws, and check that the unit hangs horizontally.
- Screw in the two lower screws.
  Fasten all four screws.

1.4 Cable specifications

1.4.1 System cable

Cable (type BRG-GZ928) is run between the operation panel and PA rack. The cable is supplied by Autronica Fire and Security AS. The maximum distance between the PA rack and operation panel is 750 m. This cable is also used when connecting several operation panels and/or digital table microphones (BRG-APS308, BRG-APS316, BRG-APS324 BRG-APS388, etc). The connection can be made parallel with the operation panel (see chap. 1.6.4 for connecting up).

- Multi-cable (0.5 mm^2) is used between the PA rack and the fire alarm control panel. Number of wires will depend on functionality required. Normally 4 pairs are needed (LARGE ALARM, SMALL ALARM, RESET AND FAULT).

1.4.2 Loudspeaker cabling

The powerful loudspeaker signals are not affected by noise to any noticeable degree, and revolving and screening are therefore unnecessary. Concerning the type of cable, it is important that the cross-section is adequate and that the decay coefficient is not too low. Based on decay considerations, the following combinations are a guide for good results for 100V high-ohm speaker circuits.

Cable length	Cable diameter
< 300 m	0.75 mm^2
< 600 m	1.5 mm^2
< 1000 m	2.5 mm^2
< 1600 m	4.0 mm^2

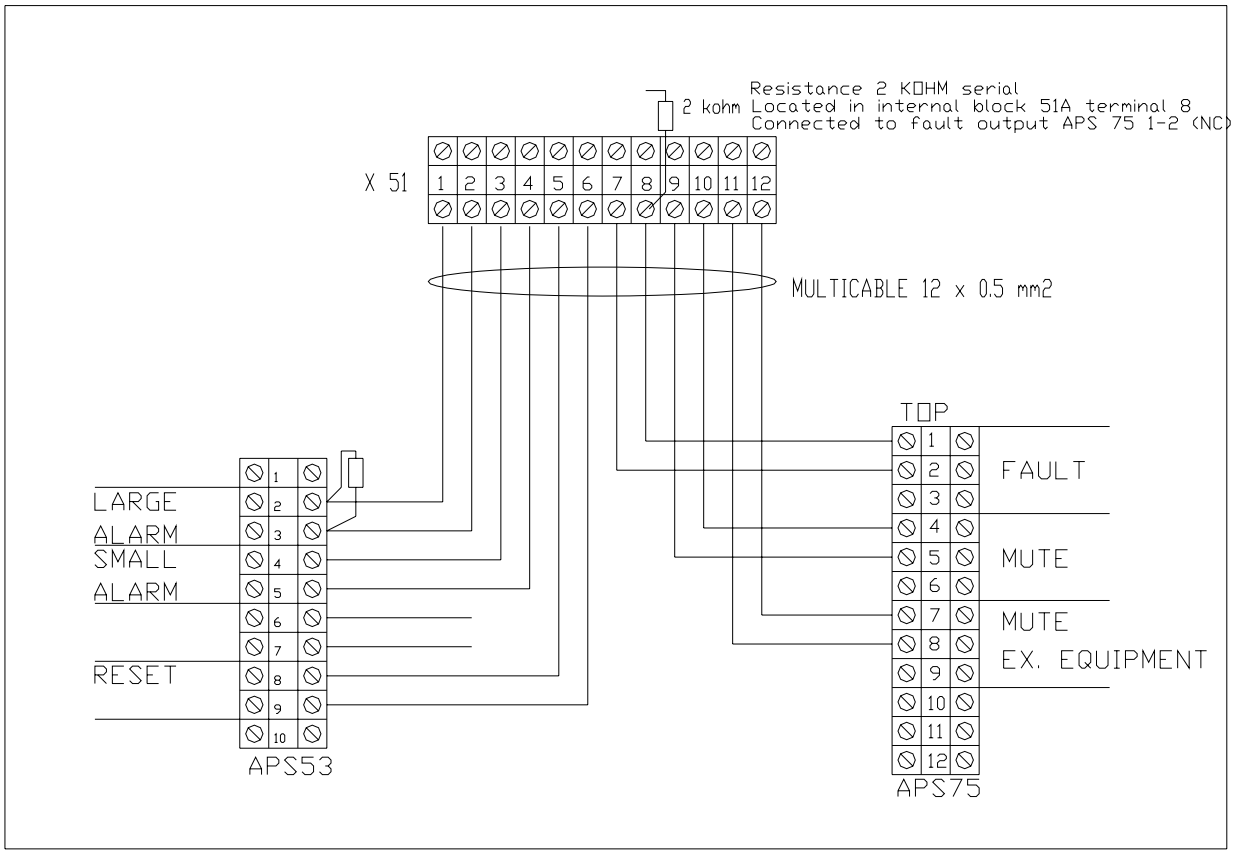
We recommend the use of multi-threaded (flexible) copper cable approved for 100V.

The cable diameter also depends on the load on the cable, and we emphasize therefore that the above matrix should only be regarded as a guideline.
Example: If 1.5 mm_2 cable diameter is required, FL-F 2x1.5 (EL-1096416) or equivalent can be used.

1.5 External connections

1.5.1 Connections BR-200/ Fire alarm control panel

Figure 5: Connections BR-200/ Fire alarm control panel



1.5.2 Connections to BS-100

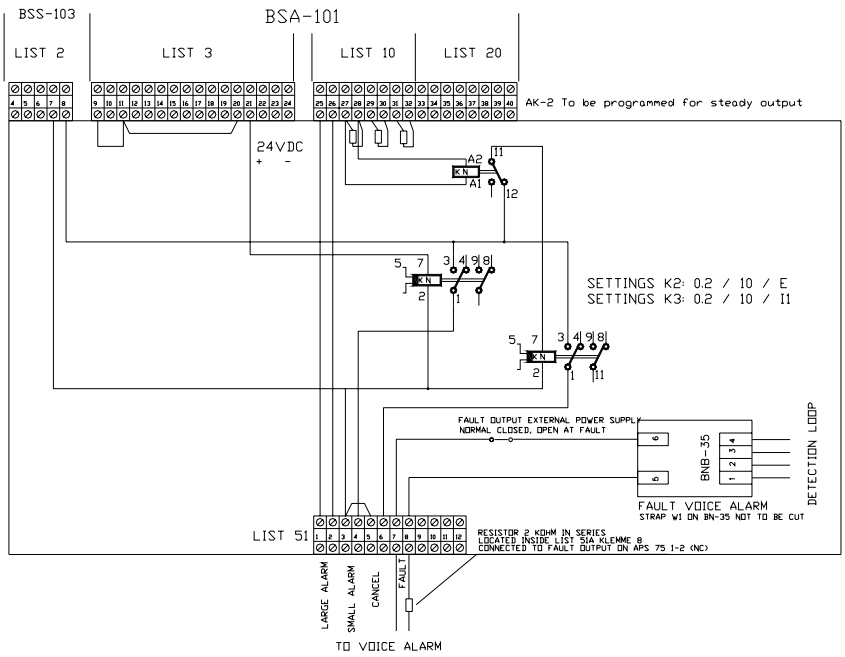


Figure 6: Connections BS-100

CONNECTION SPECIFICATION FOR BS-100/AUTROVOICE CONNECTION
Ref. Figure 6.

LARGE ALARM is started from sounder output (List10.25/26) Programmed for continuous or pulsating output.

SMALL ALARM is started from AUX (List3.21) via timing relay K2. The K2 timing relay is set to give a 2-second delay when the AUX output is activated. This is to prevent the Small Alarm message starting (first) when a manual call-point is activated. The alarm stops automatically once the programmed number of repetitions (normally 3 in AutroVoice) is played, <u>without</u> the fire alarm control panel being operated.

The **RESET** function is connected to sounder output (List10.27/28) via relay K1 and timing relay K3. The output should be programmed to a continuous signal (not pulsating). Relay K1 activates on alarm and the K3 timing relay loses its control voltage. When the system is reset at the control panel the K1 relay loses its control voltage and K3 gets its control voltage back. The timing relay then gives a 2-second pulse to RESET the input on the AutroVoice panel. LARGE ALARM and RESET can use the same sounder output.

The **FAULT output** from the AutroVoice control panel (APS 75 1-2 (NC)) is connected to a BN-35 address unit on the fire alarm control panel. Strap W1 will be complete on BN-35. This means a fault message is given with a break and short-circuiting (up to resistance). This address is programmed with suitable text, such as ”FAULT ON VOICE WARNING SYSTEM”.
For the voice warning control panel’s external 24V DC power supply, the same can be done with a separate BN-35 address unit, or the fault output on the power supply can be connected in series with the fault output on the AutroVoice control panel into the known address unit. Monitoring is integrated into the voice alarm system on equipment with 48V battery backup (digital amplifiers).

1.5.3 Connections to AutroSafe

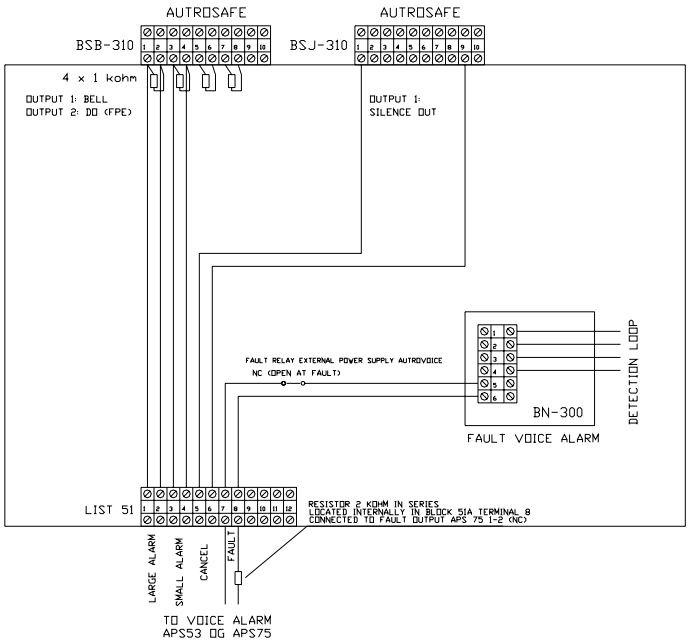


Figure 7: Connections AutroSafe

CONNECTION SPECIFICATION FOR AUTROSAFE/AUTROVOICE CONNECTION
Ref. Fig. 7

LARGE ALARM is started from BSB-310 module, sounder output (Bell). This is connected to 2 and 3 on APS53. Configured to continuous output. (It is also possible to use the pulsating output, but this will mean the relay on the input in AutroVoice will stop and pulsate while the alarm runs). In addition, the alarm zone (AZ) linked to this output is set to Qualified Action. Detection zones that activate AZ are set to Delayed. Digital out (FPE) can also be used, programmed to sounder output (off when RESET).

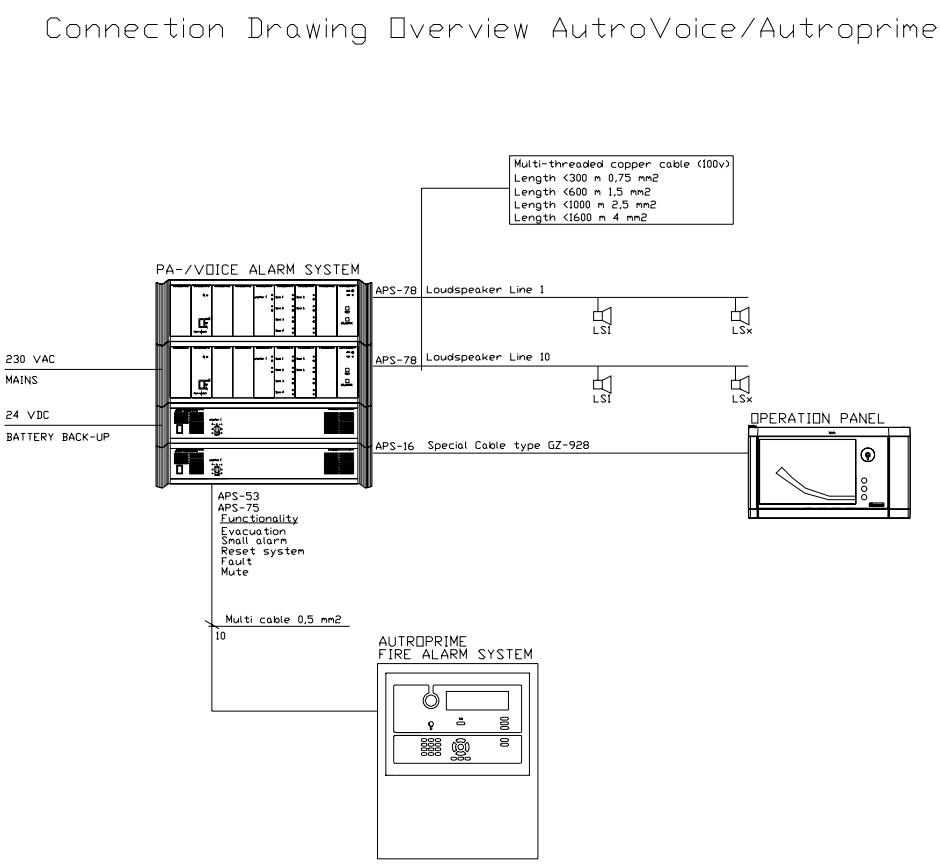
SMALL ALARM is started from BSB-310 module, digital out (FPE). This is connected to 4 and 5 on APS53. The output is configured with Activation Delay (under properties on DO) 3 sec. (this is to prevent the Small Alarm message starting when a manual call-point is activated. Activating Groups is configured with detection zones (DZ), Activating Alarm State is set to Alarm and DZ Activating State is set to Initial Delay (T1) (i.e. it starts immediately on alarm while T1 simultaneously starts to run).

The **RESET** function is started from BSJ-310 module, digital out. The connection is from 9 and 1 on this to 8 and 9 on APS53. The output is configured with Silence Out. As default, this output is given a 3-second pulse when Reset Sounder is operated.

RESOUND: When Resound is activated in the AutroSafe menu, the voice message will start anew.

The **FAULT output** from the AutroVoice control panel (APS-75 1-2 (NC)) is connected to a BN-300 input unit on the fire alarm control panel. This is located in a separate detection zone when configuring AutroSafe with text such as ” FAULT ON VOICE WARNING SYSTEM”.
For the voice alarm control panel’s external 24V DC power supply, the same can be done with a separate BN-300 input unit, or the fault output on the power supply can be connected in series with the fault output on the AutroVoice control panel. Monitoring is integrated into the voice warning system on equipment with 48V battery backup (digital amplifiers).

1.5.4 Connections to Autroprime



1.6 Internal Connections

1.6.1 Connection of loudspeaker circuits using APS-78 monitoring module

The number of terminals in a terminal block depends on the number of loudspeaker zones.

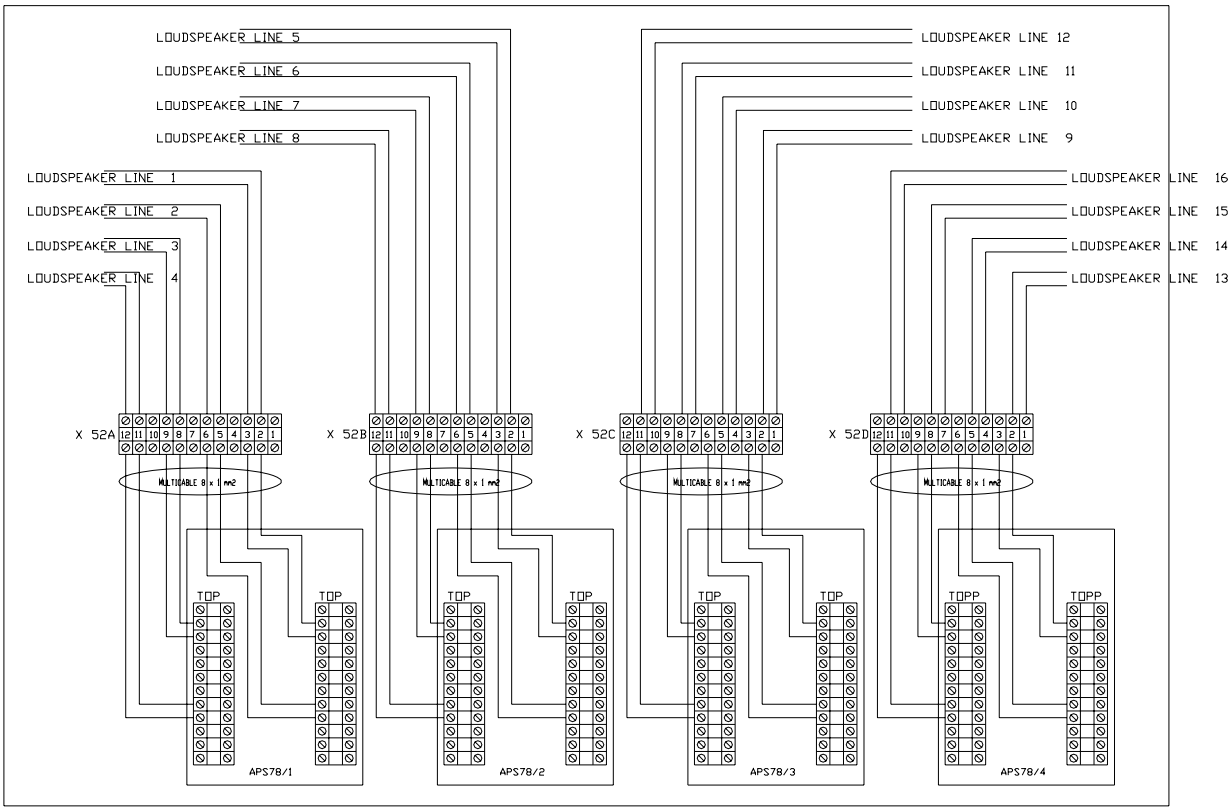
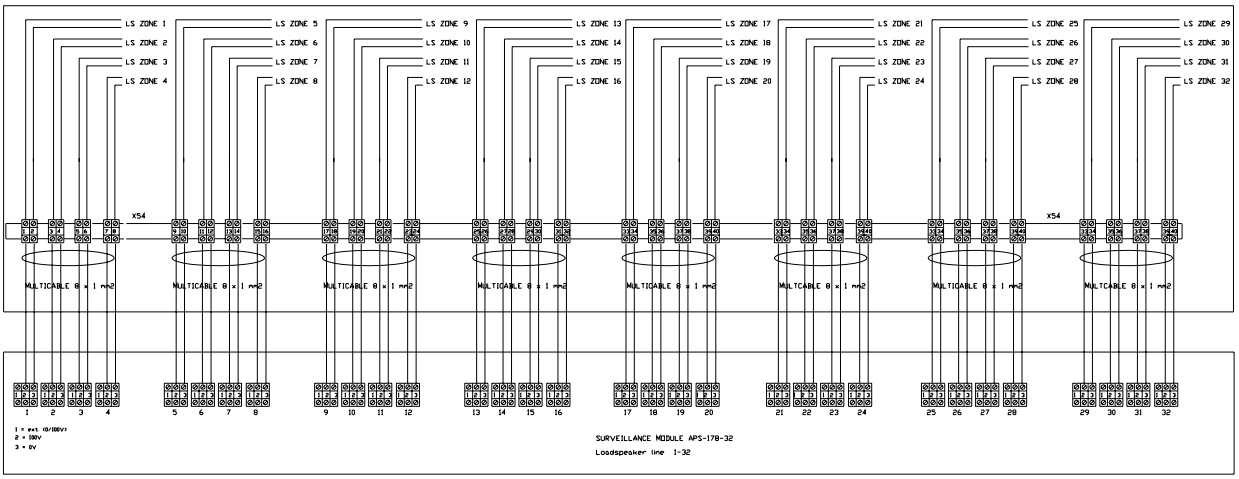


Figure 8: Connection of loudspeaker circuits. The third connection point on APS-78 module is used if external volume control is required.

1.6.2 Loudspeaker connection for use of APS-178 monitoring module

The number of terminals on connection block depends on the number of loudspeaker circuits.



1.6.3 Sectioning of alarm zones

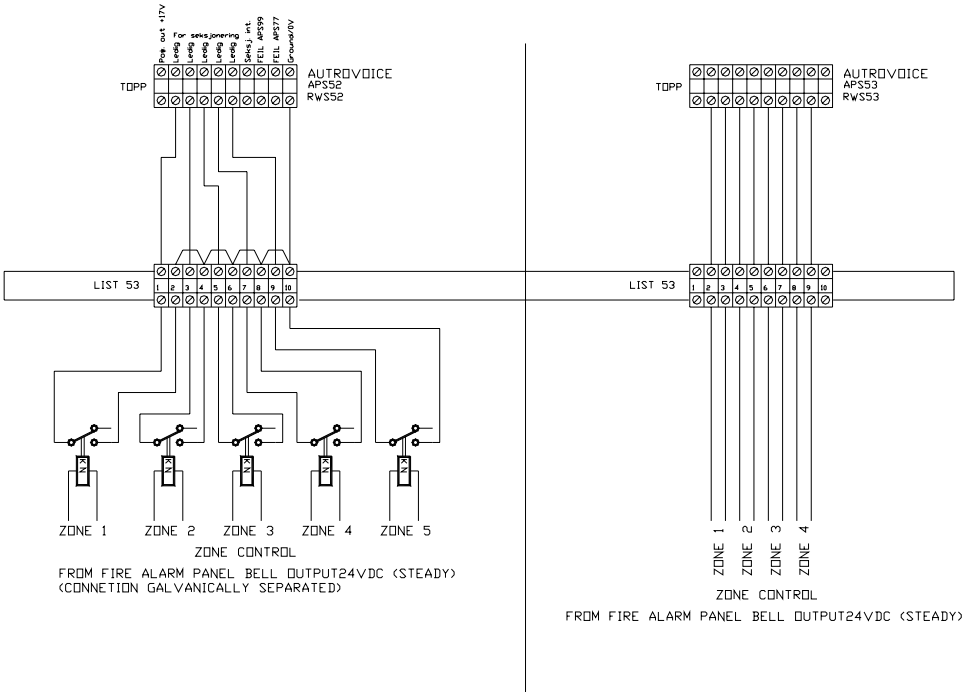


Figure 10: Sectioning of alarm zones

1.6.4 Connection of operation panel

The cable from the rack unit is connected to a 5-terminal contact after being fed into the operation panel.

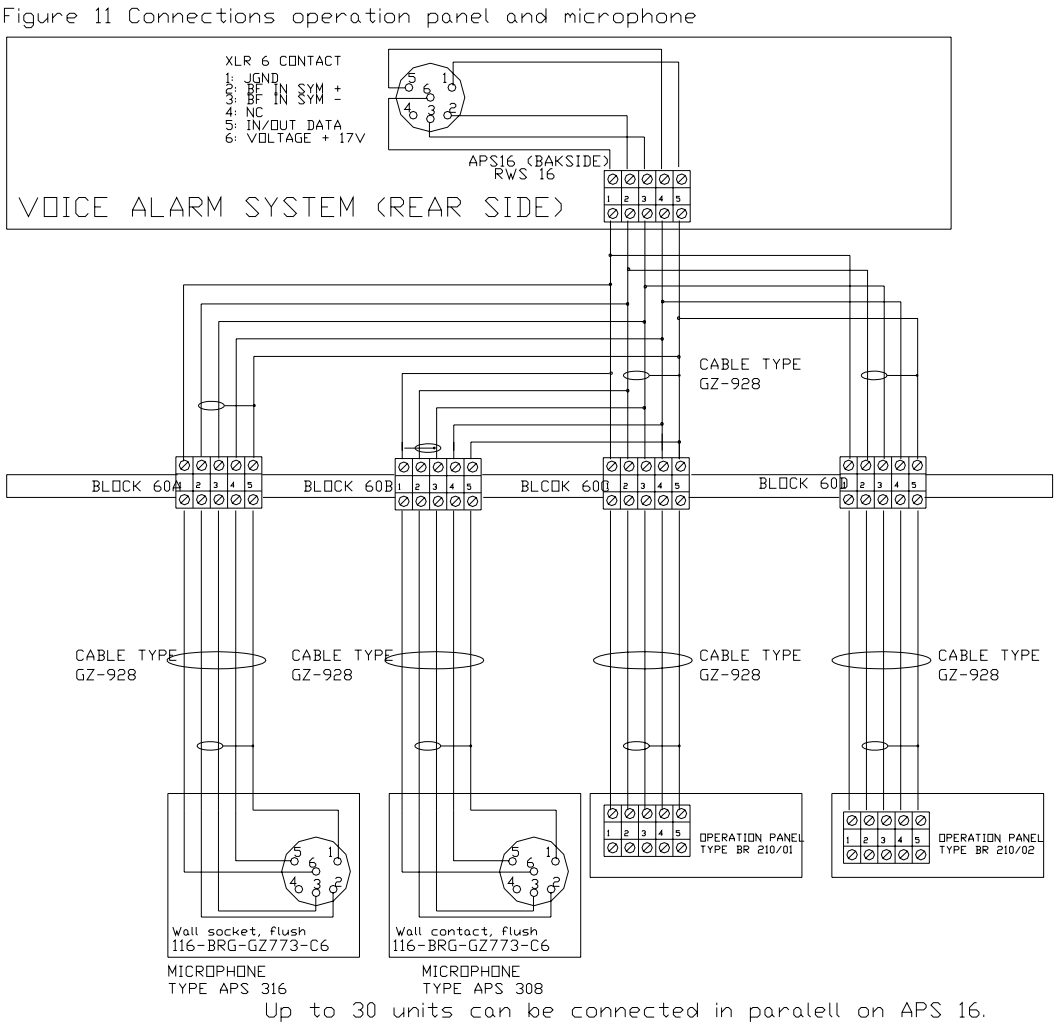


Figure 11: Connecting of operation panel

1.7 Connection of 230V and 24V power supplies

1.7.1 Analogue amplifiers, type BO-xx

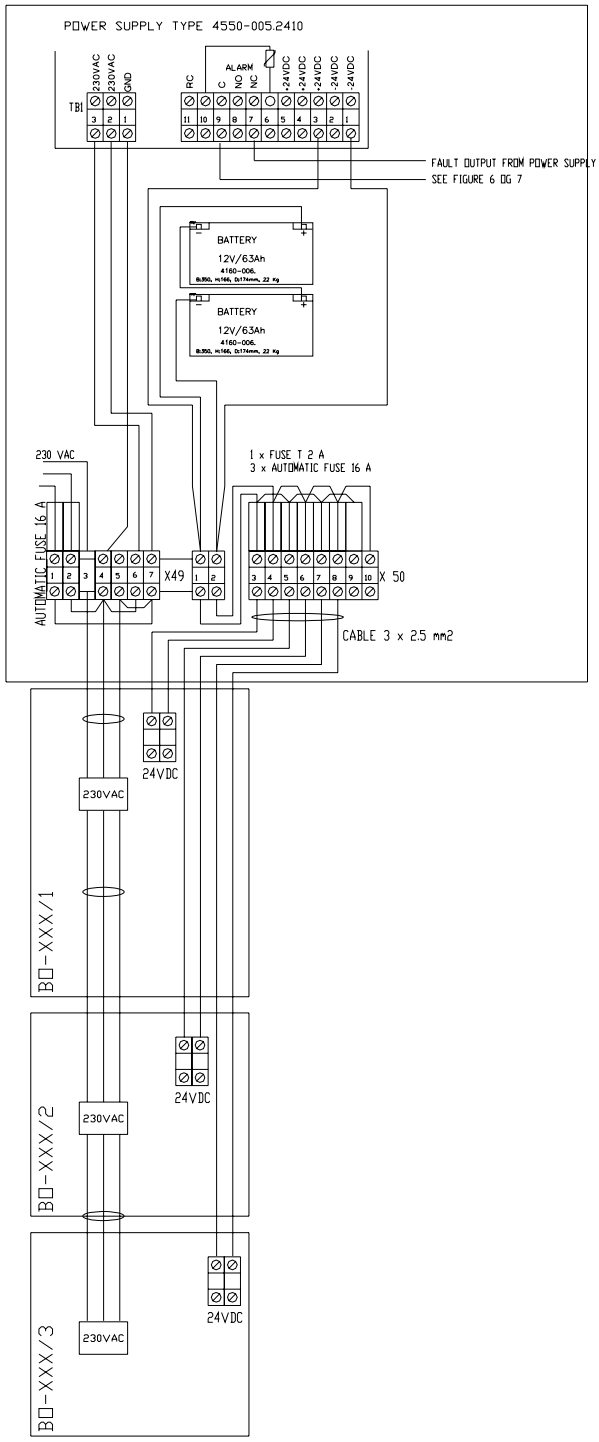


Figure 12: Connecting the power supply

1.7.2 Connection of 230V and 48V power supplies

Digital amplifiers, type BO-CD-xx/BO-CT-xx

Connection of temperature sensor.

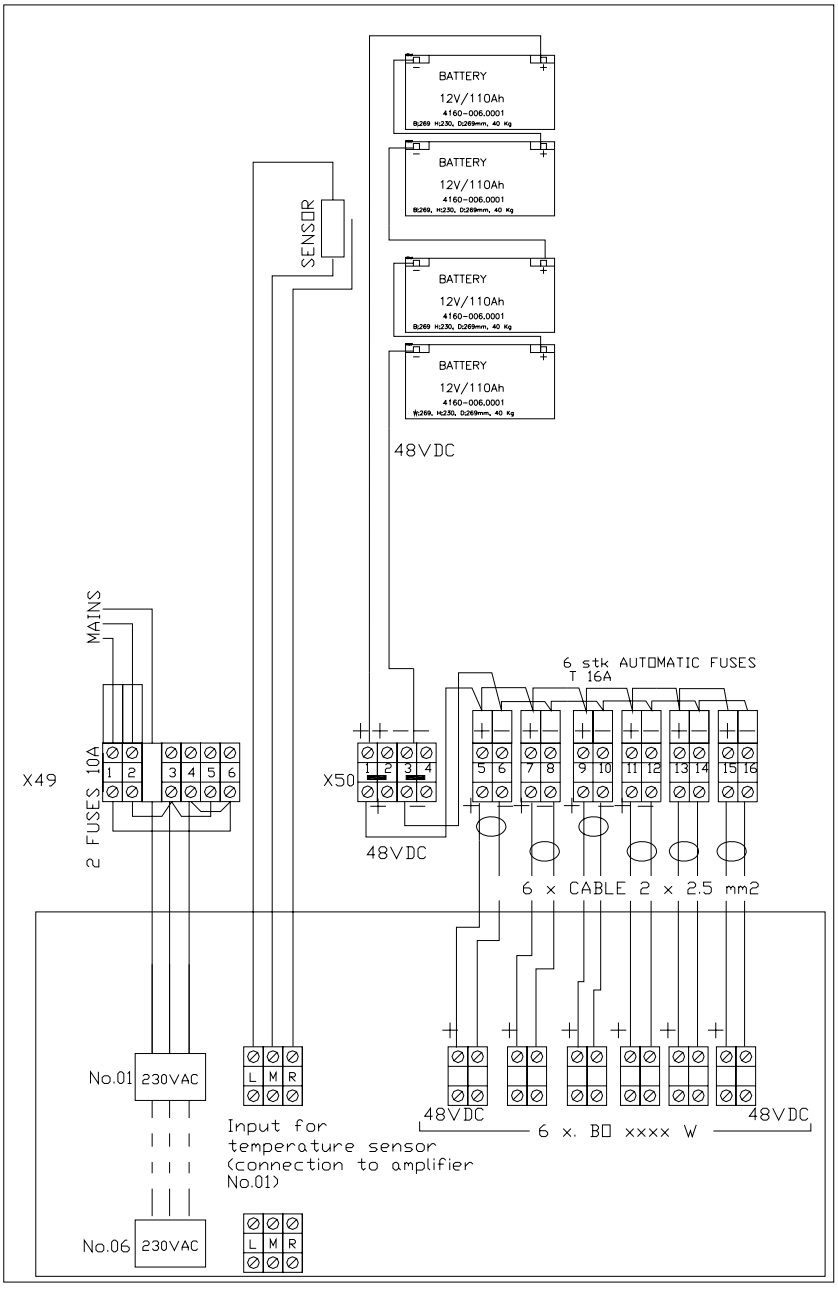


Figure 13: 48V Power Supply

1.7.3 Connection of music source (mono)

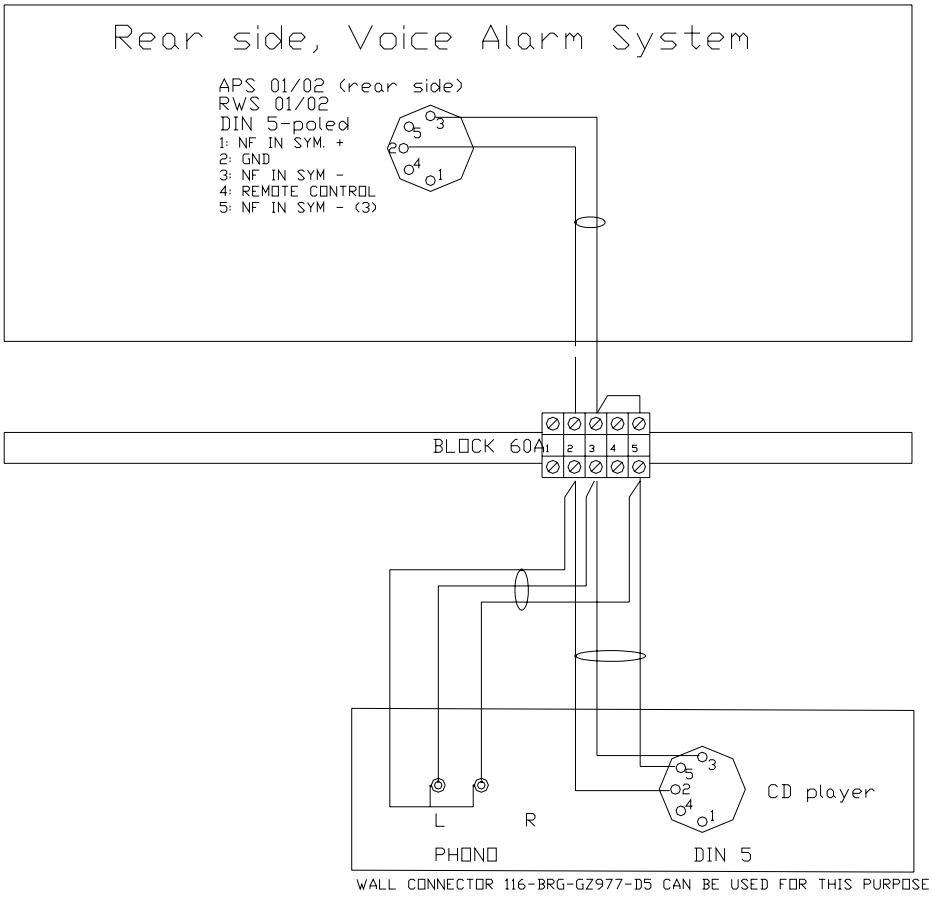


Figure 14: Connecting a music source

1.7.4 Connection of conventional microphone

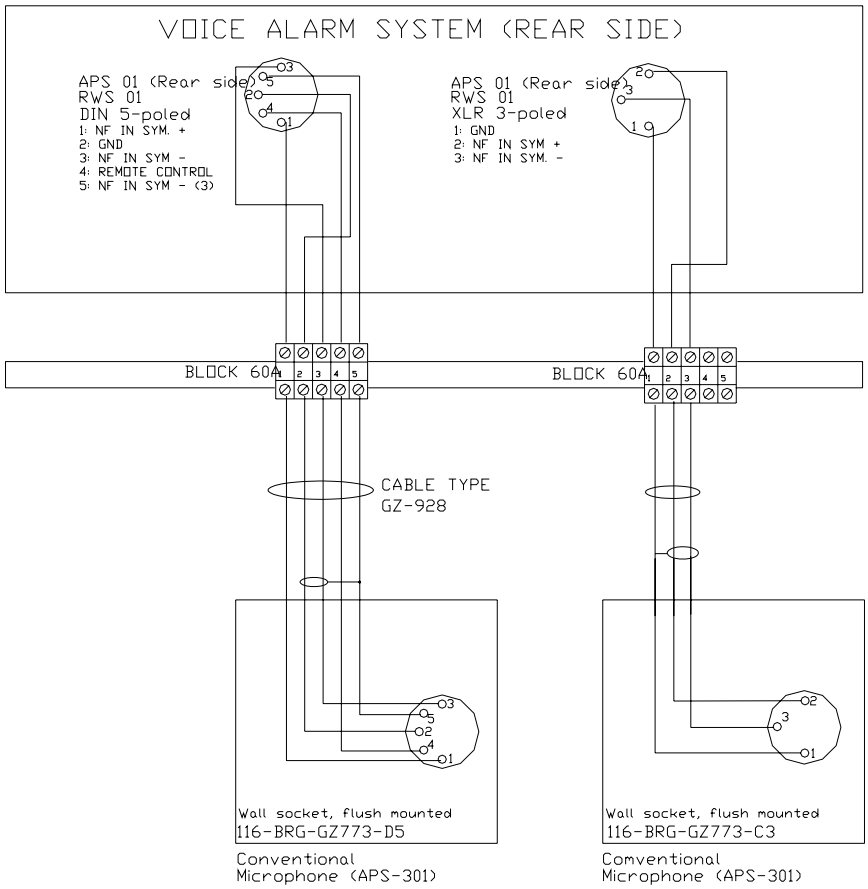


Figure 15: Connecting a conventional microphone

1.8 Connection of sensor microphone for background noise

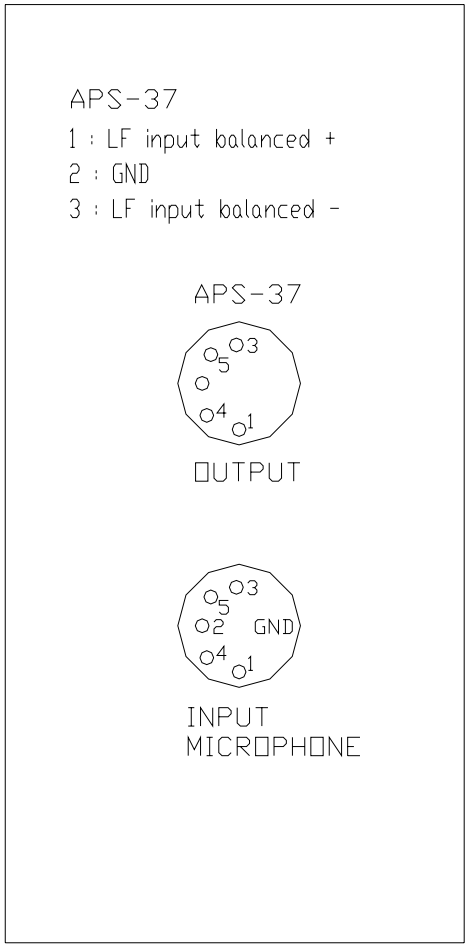


Figure 16: Connecting sensor microphone

1.9 Communication between panels

1.9.1 Communication between panels on LAN network

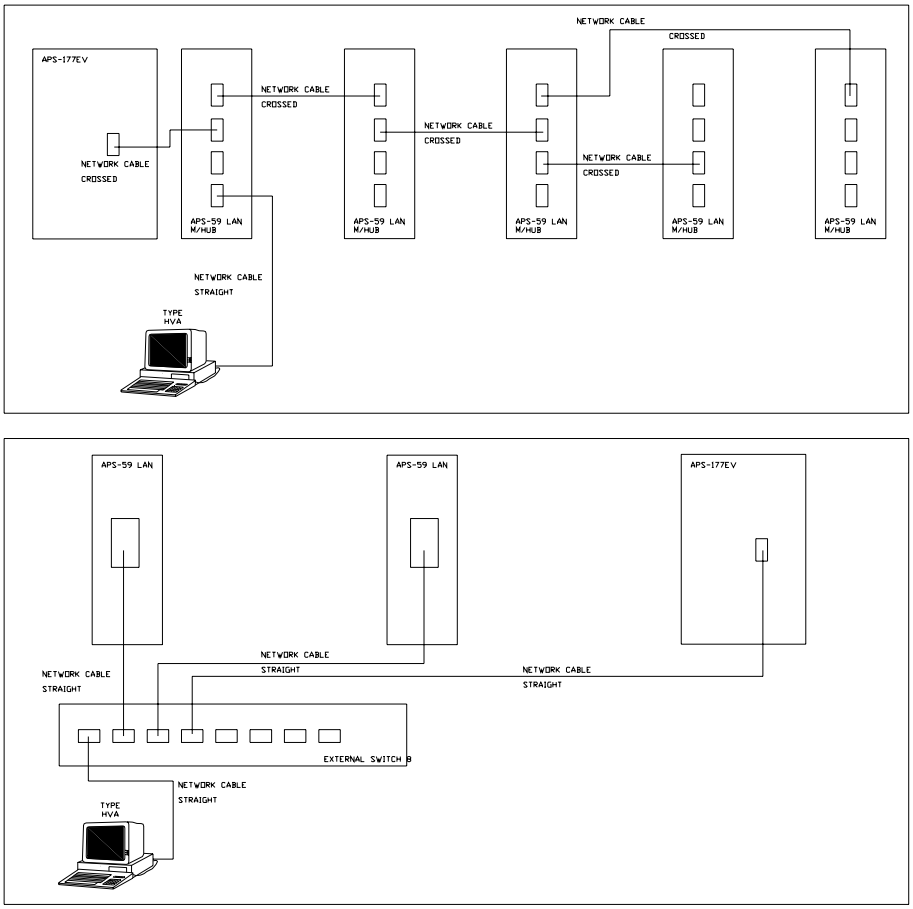


Figure 17: Communication LAN network

2. Commissioning

2.1 Use of the system

The operational elements and application of the system were defined during the planning phase. The system is designed for a specific use. Should any queries arise during practical implementation of the system that are outside the scope of information provided in the operating instructions or other documentation, please contact your Autronica representative.

2.2 Security

Standard safety regulations shall apply when working on the electrical components. The system must always be disconnected from the mains power supply during maintenance and servicing.

Uwanted objects must not enter the appliance.

The volume knobs on the front of the control panels may be removed to avoid incorrect setting. With the knobs removed all adjustments/operations have to be implemented using a screwdriver.

Blind plugs to hide the controls are available on request.

When the system (or parts thereof) is used for personal safety (as an alarm or for evacuation purposes) and such is activated relatively seldom, the system's functions must be tested regularly (e.g. every month) to ensure fault-free operation in emergency situations.

The system must be commissioned and adjusted by qualified personnel. All functions shall be tested and the positions of settings and switches marked as required. Designated system operations must receive full authorised training to avoid the system being operated wrongly.

The following equipment is needed to commission an AutroVoice system:

- PC with following software installed
    - o APS-Aprosys – configuration program for AutroVoice
    - o RS terminal
    - o LAN monitor for network systems
- APS-19 software for entering voice notifications if required
- Program file for system (can be downloaded from system)
- Cable for connection between PC and AutroVoice system (116 BRG GZ100)
- System data, drawings etc.
- Impedance meter

2.3 Commissioning

When commissioning, use the following procedure:

1. Check all loudspeaker circuits using an impedance meter. Measure the impedance and calculate power for each circuit using the formula:

Check calculated value for all loudspeakers and loss per circuit.

$$\frac{U^2}{R} = \frac{100V^2}{R} = \text{Power (W)}$$

Check power for each amplifier.

2. If checked power is OK, switch on current to system.
3. Perform provisional calibration of system using the APS-77 module or APS-178 module. (Depending on which solution is used)
4. Check all loudspeakers on the circuit work either using a signal from the impedance meter, or by starting a test notification on the system.
5. Adjust volume as described in chapter 2.4
6. Perform final calibration of system as described in chapters 2.6 and 2.7

2.4 Adjusting the sound of the voice alarm system

2.4.1 Adjusting the volume

The speaker circuits must be connected as required. The number and type of components that are in use in the system may vary.
All listed types are not necessarily present in every system.

- Adjust all amplifiers (BO..), normally to position 10 (max.).
- Connect a sound source (preferably music) to one of the inputs (recorded voice messages may also be used).
- Set the volume on the APS-62 and APS-64 step switches to 10 for the circuit which gives the lowest loudspeaker volume.
- Reduce the volume on the APS-62 and APS-64 step switches for the circuit which gives too high loudspeaker volume.
- Use the input module's volume control to adjust the maximum required volume for other sound sources that are used.

In general, the output settings should be as high as possible while inputs should be set as low as possible. The reason for this is as follows:

- The loudspeaker's output amplifier should only give as much power as is really necessary.
- It saves energy and the loading on the electronic components is less (longer lifetime).

2.4.1.1 Loadspeaker zones

This is accomplished using the volume controls on the APS-62 and/or the APS-64 modules. Each volume control is marked with a zone number/-name.

2.4.1.2 Operation panel

The signal level of the microphone on the operation panel and external microphones is adjusted using the APS-16 module.

Controls for: Volume

2.4.1.3 Pre recorded voice messages

The signal level of the Pre recorded voice messages is adjusted using the APS-19/APS-24 modules.
Controls for:

Volume
Bass
Treble

2.5 Subsequent adjustments, changes and extensions

Subsequent adjustments (e.g. volume changes) must be implemented gradually and carefully to avoid any undesirable effects.

If it is necessary to make changes to any of the functions, this can often be achieved from the software end.

There are two possibilities:

1. Change the processor module (APS-990) for a similar module with amended software, or
2. Download changes from a PC (including appropriate software) in site.

Software changes are also necessary when extending the system (adding components.

Components can only be changed when the system is shut down!

2.6 Calibration of the voice alarm system

Systems with APS-77/78/79 modules
After connecting up all loudspeakers and operation panels, the system is calibrated by pressing the red button on the APS-77 module.
The button is marked "Calibrate".

After Calibration, a list of impedance values for each loudspeaker circuit shall be added to the documentation. This is measured via APS-77.exe software.

NB; Never calibrate the system without first finding and rectifying the cause of the fault.

2.6.1 Calibration of Voice Alarm System. Systems with digital amplifiers and APS-177.2 LAN

After connecting all speakers and operation panels and making all adjustments, calibrate the system using the APS-177.2 LAN program or the following procedure*:
1. Turn key to "SERVICE"
2. Press all the buttons on the APS-177.2 module simultaneously and hold for 3 seconds.
3. APS-177.2 will acknowledge with a long tone
4. Start calibration with key turned to "Normal"
NB! In the event of an error, calibration of system must never be performed without establishing the cause.

*) Applies to APS-177.2 program version V2.0.025 or higher.

2.7 Changing messages in the voice text store

2.7.1 APS 19 MP3 Voice Text Store

The APS-19 Voice Text Store comes in two versions with room for 14 or 32 messages respectively. To record new messages or change existing messages, a list of where the various messages are located is required. Channels 1-14 (32). See documentation supplied with equipment.

To make changes to the Voice Text Store, use APS-19.exe. this program is supplied with main program APS-APROSYS for programming AutroVoice.

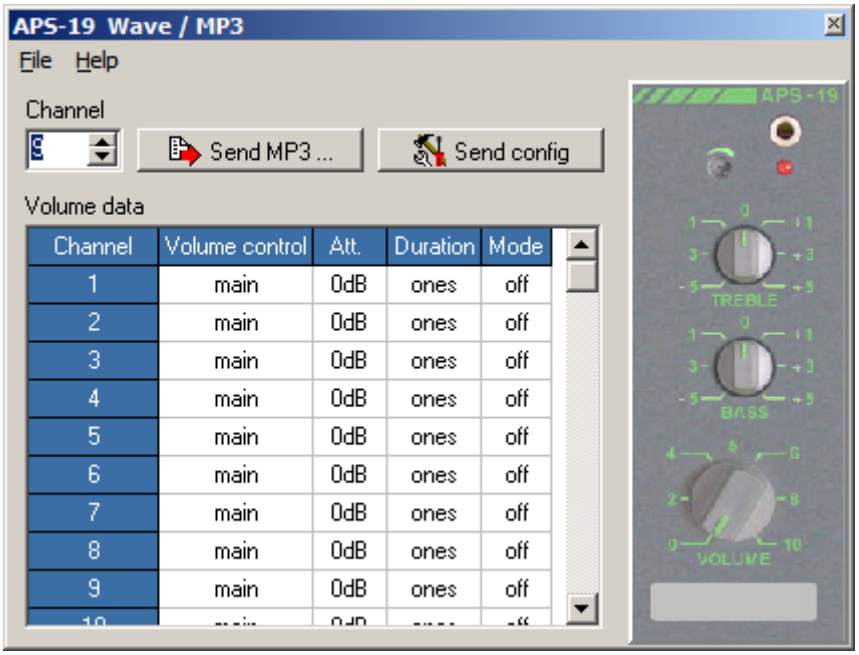
Use serial cable GZ-100 for communication between PC & APS-19.

Autronica Fire and Security AS has a database of standard messages which are used.
MP3 files must be loaded onto a PC before transfer can start.
New audio files to be entered must be stored in the following format:
48 Kb/sec, 22,050 Hz, Mono, 5Kb/sec.

2.7.2 Transfer of MP3 files to APS-19

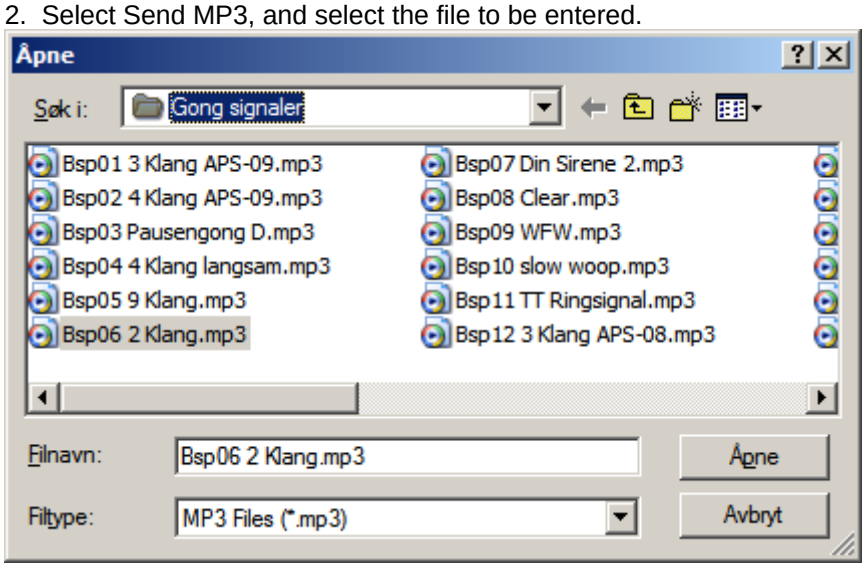
In this example, we will enter a new "Gong message" (message table no. 9) and select a message called "Bsp06 2 Klang.mp3".

Start APS-19.exe.
Connect cable from PC com port to socket on front of APS-19.

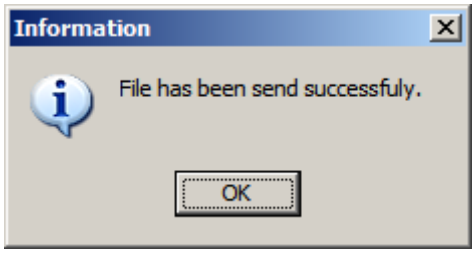


1. Select Channel. In our example Channel 9.

2. Select Send MP3, and select the file to be entered.



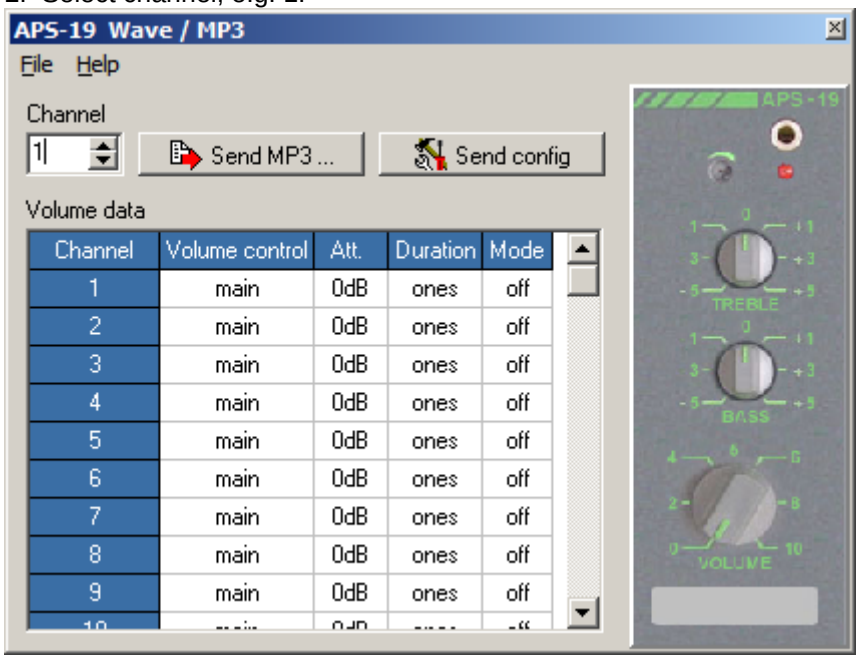
3. Click Open and transfer file. The program will acknowledge with:



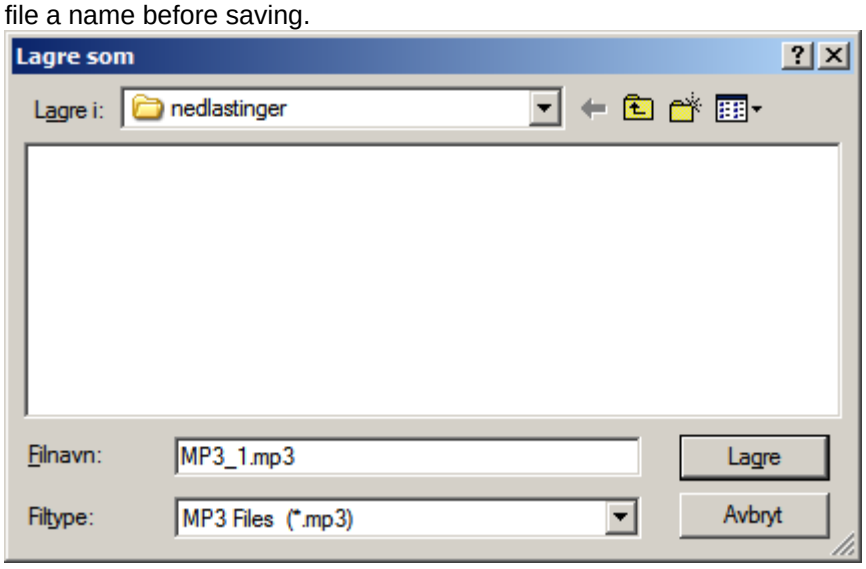
2.7.3 Extracting MP3 files from APS system

1. Connect cable to APS-19 and start program.

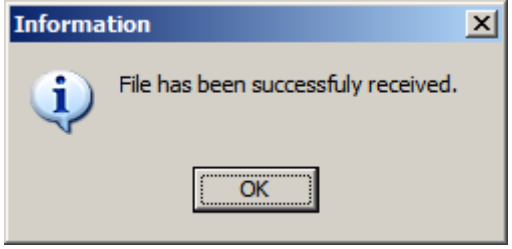
2. Select channel, e.g. 1.



3. Select File/Data Sound/Read MP3, and select location to store file on PC. Give file a name before saving.



4. When download is complete, the following message will appear.



2.7.4 Transferring/extracting message configuration from APS-19

In addition to transferring MP3 messages, a configuration parameter can also be set for each message.
Volume control and Att. can be altered for each channel.

Click on "Volume control" to the channel in question, select either "main" (the standard potentiometer marked VOLUME) or "screw type", which is the potentiometer at the top of the APS-19 unit.

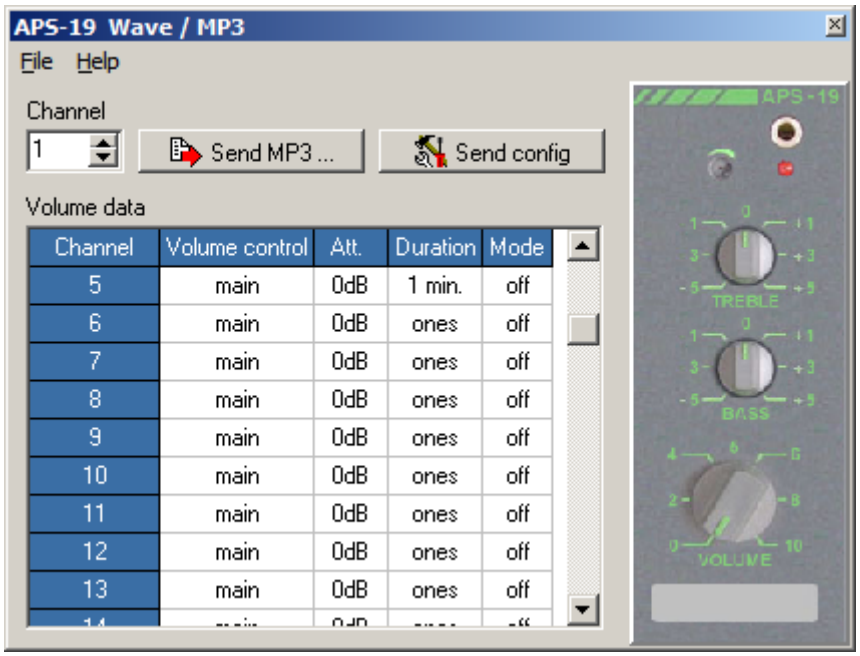
Using the screw type potentiometer is ideal for messages you do not want to adjust with the standard volume control, or to make another setting in relation to the remaining messages.

Att: means that by clicking the dB value field for a given channel, the signal level will be reduced by 3dB (to max. -18dB) by each mouse click.

Configdata is sent to APS-19 by clicking on the "Send Config" button or by selecting File/Data Volume/Send Data.

Configdata is read from APS-19 by selecting File/Data Volume/Send Data.

Configdata is sent to APS-19 by clicking on the "Send Config" button or by selecting File/Data Volume/Send Data.



2.8 Digital Signal Processing Module APS-37

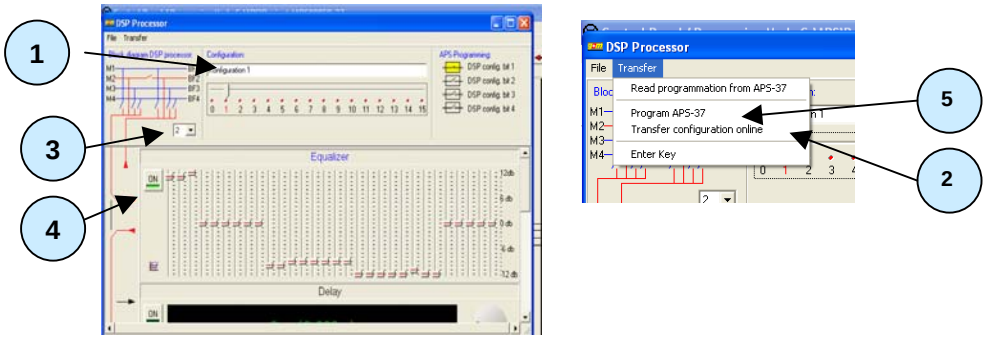
Up to 15 different adjustments/configuration of the APS-37 module can be made.

2.8.1 Equalizer

Used for adjusting the sound profile for best possible sound quality.

Programming:

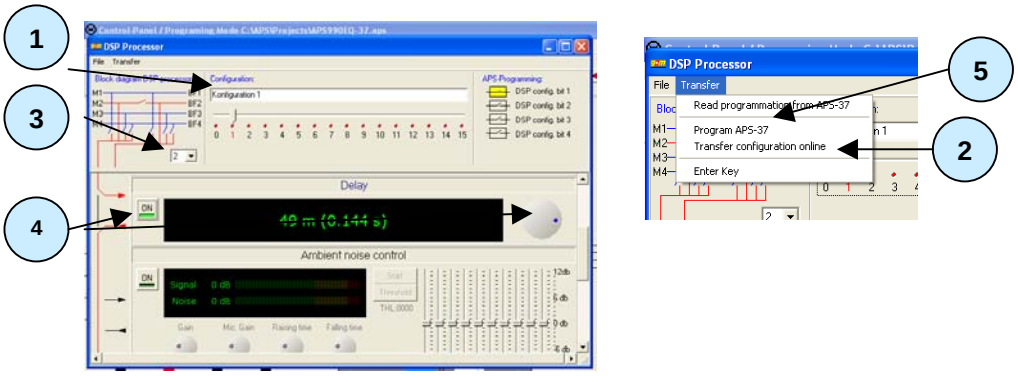
1. Select configuration 1-15
2. Switch mode to "transfer configuration online " adjust the volume button to verify if you are online.
3. Activate the bus you want to change
4. Activate equalizer and make the change
5. Transfer programming to APS-37



2.8.2 Delay

Used to delay sound in one area in relation to another (e.g. in a large hall with several levels).
Programming:

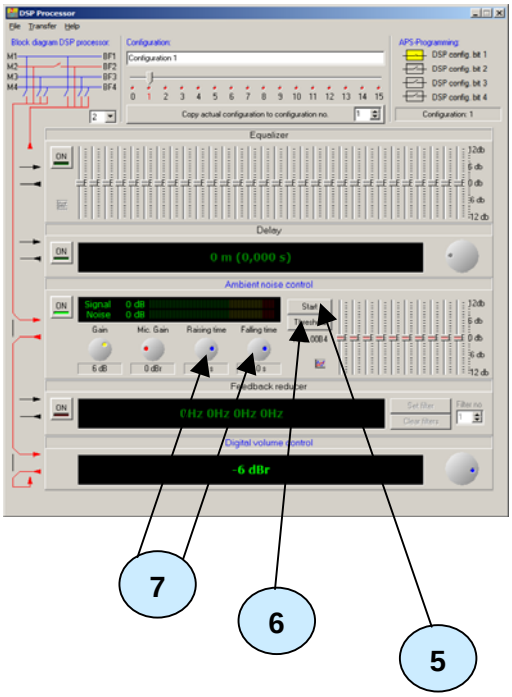
1. Select configuration 1-15
2. Switch mode to "transfer configuration online " adjust the volume button to verify if you are online.
3. Activate the bus you want to change
4. Activate function for delay and adjust setting (distance in metres/delay per second)
5. Transfer programming to APS-37



2.8.3 Compensation for background noise

Used to adjust the volume automatically in an area. A sensor microphone is mounted in the area to pick up noise. Volume is adjusted in amplifiers.
Programming:

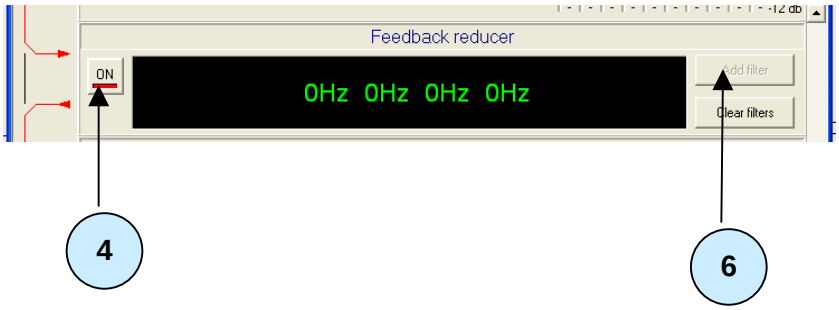
1. Select configuration 1-15
2. Switch mode to "transfer configuration online " adjust the volume button to verify if you are online.
3. Activate the bus you want to change
4. Activate function ANS and adjust amplifier settings (Gain: Same value as for "Gain" set using minus prefix on "Digital Volume Control")
5. Press start to measure background noise using microphone with minimum noise in area. Adjust equalizer if necessary.
6. Click on "Threshold"
7. Adjust time for activation and deactivation (Raising and falling time)
8. Transfer programming to APS-37



2.8.4 Feedback reduction

Used to filter out frequencies which cause problems with feedback of sound from speakers to nearby microphone. 4 different frequencies can be filtered out.

1. Select configuration 1-15
2. Switch mode to "transfer configuration online " adjust the volume button to verify if you are online.
3. Activate the bus you want to change
4. Activate function FBR and adjust settings
5. Increase microphone volume until resonance frequency is audible
6. Click on "Add fliter"
7. Repeat points 5 and 6 for all four filters
8. Transfer programming to APS-37



3. Operation

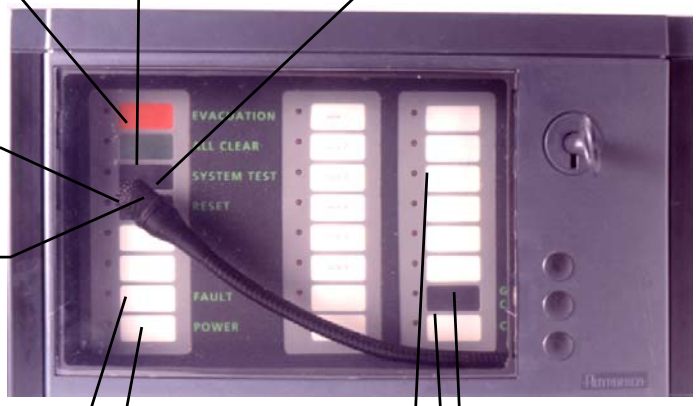
The operation panel comprises indicator lamps, operating buttons and a microphone.

EVACUATE
To start a recorded evacuation message in all loudspeaker zones. The indicator light comes on while the message is played continuous. The message and light are reset by operating the "RESET" button.

ALL CLEAR
To start a recorded alarm over message in all loudspeaker zones. The indicator light remains on until the message is played the required number of times, or until "RESET" is pressed.

SYSTEM TEST
To start a recorded system test message in all loudspeaker zones. The indicator light remains on until the message is played the required number of times, or until "RESET" is pressed.

RESET
Terminates the activated message. The indicator light is on when a message is activated and off when a message is finished or "RESET" is pressed.



FIREMAN'S MICROPHONE
This microphone has first priority and is operated by pressing one or more of the zone buttons and then holding in "SPEAK". NB: The light on the "SPEAK" button is on when the microphone is activated. There is a delay of a few seconds between the "SPEAK" button being pressed and the microphone being activated because of the "chime" signal.

ALL-ZONES BUTTON
Press "ALL ZONES" to select all zones in the system. The indicator light is on when this feature is selected and you can activate the microphone to make an announcement in all zones. The light goes out when the button is pressed again.

FAULT INDICATOR LIGHT
On when a system fault is detected. Goes out automatically as soon as the fault is rectified.

ZONE BUTTONS.
There is a button for each programmable loudspeaker zone. By pressing a zone button, that zone is selected for the microphone. The indicator light comes on when the zone is selected and goes out with a new press of the button. You can select as many zones as required.

SPEAK BUTTON
Press and HOLD IN to activate the "chime" signal and then activate the microphone in the selected zones. The indicator light is on when the microphone is active. The light goes out automatically when the voice button is released.
Fire Brigade function:
If no zone has been selected and the Voice button is activated, the system will send a message to all zones.

POWER LIGHT
On when the system is in normal operation.

Fig. 18 - Lamps, operating buttons and microphone.

4. Maintenance

Autronica Fire and Security's sound system requires little maintenance.

The only components that require regular maintenance are the mechanical drive mechanisms (CD player).

4.1 Problems / malfunctions

The fault output from the voice alarm system is normally connected to the fire alarm system. In the event of a fault warning, check which fault is indicated on the voice alarm system. The following indications can appear:

APS-990 Fault LED
APS-77,APS-78 Fault LED
APS-178 Fault LED / Display
APS-177.x Div LED.

In the event of other malfunctions, any externally connected components can be disabled in turn until the system functions normally again.

4.1.1 Malfunction in loudspeaker circuits

A malfunction in the loudspeaker circuits is indicated on the front panel of the PA rack by the use of light-emitting diodes (LEDs).
The APS-78 module has 2 LEDs for each loudspeaker circuit. These are marked with a zone number or zone name.

Fault is shown as follows:

Top LED on:	Impedance too high in the speaker circuit.
Possible causes:	Break in the loudspeaker circuit. Break in loudspeaker transformer.
Bottom LED on:	Impedance too low in the speaker circuit.
Possible causes:	Short-circuit in the loudspeaker circuit. More speakers connected after calibration. Short-circuit in loudspeaker transformer.
Both LEDs on:	Earth fault detected in the loudspeaker circuit.

The APS-178 module has a diode for each speaker circuit. In the event of a fault due to impedance being either too low or too high or a short-circuit to earth, the diode will light as a warning.

Details of the fault can be read off on the APS-178 module display. If using the APS-Aprosys program, the fault log can be read from APS-178.
The number of speakers connected or the sum of their power adjustment circuit must not exceed the max. power for the amplifier.

4.1.2 Amplifier malfunction. Analogue amplifiers/Digital amplifiers with no EV.

Amplifier malfunctions are indicated on the PA rack control panel by the use of light-emitting diodes (LEDs).
The APS-79 module is equipped with 2 LEDs for each amplifier. These are marked with an amplifier number.

Fault is shown as follows:

Top LED on:	Impedance too high in the amplifier.
Possible cause:	Volume in the amplifier has been turned up after calibration.
Bottom LED on:	Impedance too low in the amplifier.
Possible cause:	Volume in the amplifier has been turned down after calibration.

4.1.3 Errors on digital amplifier EV version

Amplifier faults are indicated by a Fault diode on the front of the amplifier.

4.1.4 Fault log Digital Amplifier EV version, Network APS-59LAN and APS-178 speaker monitoring

Faults are logged in the APS.177.2LAN module and can be read by the APS-APROSYS program.

Detailed logs of events which have affected speaker circuits can also be read in the fault log in APS-178.

4.2 Repair

The sound system is a top quality product. All functions are computer-tested several times before leaving the factory.

However, if a fault should arise that requires expert attention, please contact your nearest Autronica Fire and Security's service department.

The system must be disconnected from the power supply before changing any modules or cabinets!

4.3 Queries

Should any problems arise during operation, or if you have any queries, please contact your nearest Autronica Fire and Security's service department / Support Centre.

5. Alert alarm (Coded message)

If a fire is registered on the fire alarm control panel and the alarm organizing is in use, then «Alert alarm» is activated.
«Alert alarm» can be either an internal coded message to key personnel in the building or a public announcement advising that an emergency situation has arisen and that people should be prepared to evacuate the building.

The alarm organisation on the fire alarm control panel makes it possible to check the status of the fire before issuing orders to evacuate the building.

The message starts with a signal for a common group call + «selected message». See Annex 1.

The message is normally repeated 3 times at 20-second intervals.

The number of repeats and breaks between them can be individually programmed for each system.

The message may be interrupted/cancelled by pressing the «RESET» button on the BR-210.

5.1 In the event of a Alert alarm (coded message)

- Follow local fire instructions step by step.
- Follow the operational procedure for the fire alarm control panel.

If «SOUNDER SILENCE» is not activated on the control panel before expiry of T1 or T2, the message will be succeeded by a «evacuation alarm» message.

6. Evacuation alarm

Evacuation Alarm will be activated in the following instances:

- Fire is registered and T1 and T2 have expired.
- Several detectors report a fire.
- Manual call-points connected to the fire alarm control panel are activated.
- «Evacuate» button on front of the BR-200 panel is operated.

The message starts with a sounder/sirens + selected message. See Annex 1.

The sounder may be either a real sounder on the fire control panel or a digitally recorded alarm in the voice system.

The sounder signal and message are repeated until the «SILENCE» button on the fire alarm control panel or “RESET” on the BR-210 operation panel is operated.

If the message is started from BR-210 (front panel or direct input), the message may be cancelled by pressing the «RESET» button on BR-210.

6.1 In the event of a evacuation alarm:

- Follow local fire instructions step by step.
- Follow the operational procedure for the fire alarm control panel.

7. All clear message

This message is initiated by pressing «ALL CLEAR» on the BR-210 front panel.

The message starts with a common group call + selected message. See Annex 1.

The message is normally repeated twice with a 20-second intervals or until the «RESET» button is pressed.

However, the number of repeated messages and length of interval between each repeat can be programmed to suit each individual system.

8. System Test message

The message is activated by pressing «SYSTEM TEST» on the front panel.

The message starts with a common group call + selected message. See Annex 1.

The message is normally repeated at 5-second intervals until the "RESET" button on the front of BR-210 is pressed.

When the test is complete, a message may be given manually from the microphone on the BR-200 front panel.

However, the number of repeated messages and length of interval between each repeat can be programmed to suit each individual system.

9. Monitoring

9.1 Monitoring of PA rack unit

All modules in the PA rack unit are continuously monitored. If a fault is detected, a fault message is given on the operation panel and to the fire alarm control panel.

9.2 Monitoring of microphone connection

The operation panel/microphone connection is also monitored continuously.
A fault message will be given if there is a break of short circuit in the microphone cable.

9.3 Monitoring of loudspeaker circuits

Speaker monitoring is always performed by the APS-78 or APS-178 module.
A fault message will always be given if there is a break of short circuit in any of the loudspeaker circuits.
The sensitivity is programmable for each individual speaker circuit.
The default is 5%, which means that a fault on any one of 20 speakers will generate a fault message in the system.

If one loudspeaker circuit fails, all the other circuits connected will continue to function. A short-circuit will stop the whole speaker circuit from operating.

Please note that in areas with large noise variations, speaker impedance will be affected by the noise level in the room. It may therefore be necessary to increase sensitivity to avoid unwanted fault warnings in such areas. Typical locations can include areas of heavy traffic such as railway stations and shopping centres.

9.4 Monitoring of amplifiers

Initial monitoring is performed by APS-79 or APS-177.2LAN modules. If the output or a fault on an amplifier is detected, a fault message is given on the operation panel and to the fire alarm control panel.

A hot-standby amplifier can be installed on the system.
This will automatically be connected if a fault occurs in the prime amplifier.

Monitoring of the BR-200 system is programmable, i.e. together with the local fire service, a company/business can select its own time interval between tests.

9.5 British Standard

If requested, a special EV package can be delivered for the system for comply with the BS5839 part 8.

10. Voice message matrix

BR-200 AutroVoice - Voice messages

Msg.no.	Voice message
Early alarm (Message group 4)	
1	Codemessage A for security personell.
2	Codemessage A for security staff.
3	Codemessage A for janitor
4	Would the Janitor, please report to the reception (area).
5	An automatic fire warning is active. Please wait for further information.
6	An early alarm warning of the fire system is active, please wait for further instructions.
Evacuate (Message group 1)	
7	Attention Please: A fire has been reported in the building. Please leave the building immidiately, by the nearest exit or emergency exit.
8	Attention Please: A fire has been reported in the building. Please leave the building immidiately, by the nearest exit or emergency exit. Do not use the elevators
9	Fire alarm! Please leave the building through the nearest exit or emergency exit.
10	Fire alarm! Please leave the building through the nearest exit or emergency exit. Do not use the elevators.
System test (Message group 3)	
11	This is a test of the evacuation system. No evacuation is necessary.
12	This is a test of the evacuation system. No evacuation is necessary. We apologize for the inconvenience.
13	This is a technical test of the evacuation system. No evacuation is necessary. We apologize for the inconvenience.
All Clear (Message group 2)	
14	The situation is now under control. We apologize for the inconvenience, and welcome everyone inside again .
15	The situation is now normal. We apologize for the inconvenience.
16	The alerted fire alarm situation is now under control. We apologize for the inconvenience, and welcome everyone inside again.
17	The situation is now normal. We apologize for the inconvenience, and welcome everyone inside again.
18	The situation is now normal. We apologize for the inconvenience, and ask everyone to return to the building.
Other messages	
19	A prewarning is activated. Please wait for further instructions.
20	Attention please: A bomb warning is reported. Please leave the building immidiately, by the nearest exit or emergency exit.
21	Attention please: A bomb warning is reported in the building. Please leave the building immidiately, by the nearest exit or emergency exit.
22	We apologize for the inconvenience, and welcome everyone inside again.

11. Alarm Signals

Message no.	Signal
50	BBR-24 Bell pulsating
51	Roshni 5 pulsating
52	Roshni 14 pulsating
53	Roshni 4 pulsating
54	Roshni 19 pulsating
55	Roshni 20 pulsating
56	Roshni 21 pulsating
57	Roshni 24 pulsating
58	Roshni 23 pulsating

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All products are easily adaptable to a wide variety of applications, among others, hospitals, airports, churches and schools, as well as to heavy industry and high-risk applications such as power plants, computer sites and offshore installations, world wide.

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