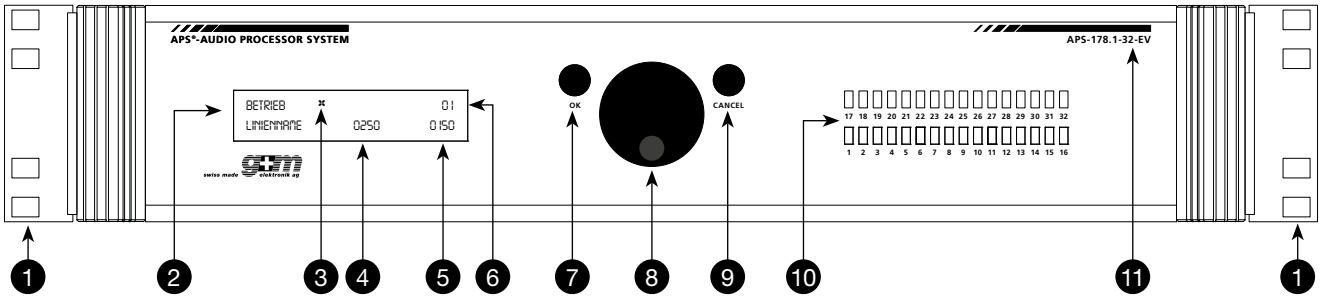
APS-178.1-6 | -16 | -32 | -EV

Loudspeaker monitoring with switching function



Front view

1 19" adaptor 2U (option MC-42)
2 LCD display for mode indication
3 Information for a new entry into the error list
4 Indication of the power
5 Indication of the angle
6 Number of the loudspeaker line
7 OK Button
8 Rotary knob
9 CANCEL button
10 Error displays for the loudspeaker lines
11 Model code

Description

Designation and function

Device with integrated output module for automatic loudspeaker monitoring, error feedback and switching of loudspeaker lines.

Use of the device

As part of an APS system

Adjustements

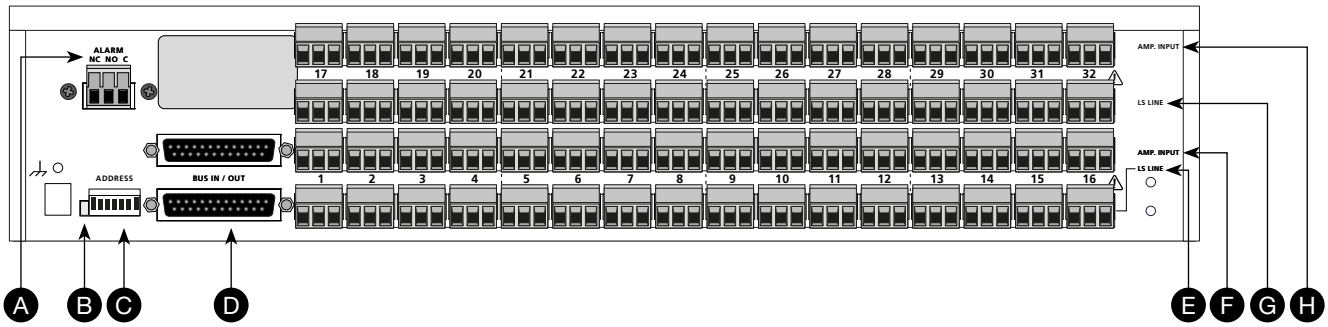
Manual adjustements at the device	Clock, Active lines, Tolerances, Device number
Manual releases at the device	Calibrate, Line mesurement
Manual displays at the device	Measurement values, Error list (for max. 99 errors)
Automatical displays at the device	Errors on the loudspeaker lines, information about a new entries into the error list (*)

Information

The operation is possible at the device or with an PC program. The calibration is possible only at the unit but not by PC program.

CAUTION!
Never do interventions in the equipment by yourself

- The unit is suitable for indoor use only. Protect it against humidity and heat.
- Do not operate the unit:
  - If there is visible damage to the unit
  - If a defect might have occurred
  - If malfunctions occur
- For cleaning only use a dry, soft cloth by no means – no liquids!



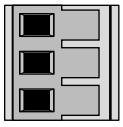
Rear view

A Potential free error contact
B LED indicator (DATA)
C Mini switches for addressing
D Socket D-SUB-25 for APS bus ribbon cable
(Bus connection with other APS system casings)
E Output terminals for the loudspeaker lines 1 to 16
F Input terminals for the amplifiers, lines 1 to 16
G Output terminals for the loudspeaker lines 17 to 32
H Input terminals for the amplifiers, lines 17 to 32

Technical specifications

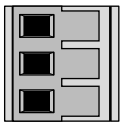
Connection diagram for connector block (A)

1 Normally closed contact (NC)
2 Normally open contact (NO)
3 Common contact (C)



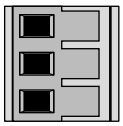
Connection diagram for connector blocks (E) and (G)

1 Ext. (0 / 100 V)
2 100 V
3 0 V



Connection diagram for connector blocks (F) and (H)

1 Ext. (0 / 100 V)
2 100 V, max. 250 W per line
3 0 V



Versions (Maximum 8 units per system)

- APS-178.1-6-EV:
  Monitoring up to 6 louspeaker zones
  (Weight 4.2 kg, Power consumption 100 mA / 17 VDC)
- APS-178.1-16-EV:
  Monitoring up to 16 louspeaker zones
  (Weight 4.2 kg, Power consumption 260 mA / 17 VDC)
- APS-178.1-32-EV:
  Monitoring up to 32 louspeaker zones
  (Weight 5 kg, Power consumption 420 mA / 17 VDC)

Monitoring

- Short circuits (with automatic deactivation)
- Interrupt (loudspeaker line and connection to the amplifier)
- Short-to-ground

Minimum power per line

10 W

Maximum power per line

250 W

Mini-switch for the addressing (C)

1 Address 1
2 Address 2
3 Address 4
4 Address 8
5 Address 16
6 Address 32
7 Address 64

WARNING
The APS address must be in accordance with the programming! At completely delivered systems, all mini-switches are in the right position. Do not alter! With only one switch in the wrong position, may be the system doesn't work correctly! The same is possible, if a casing without replacement is taken out of the system.

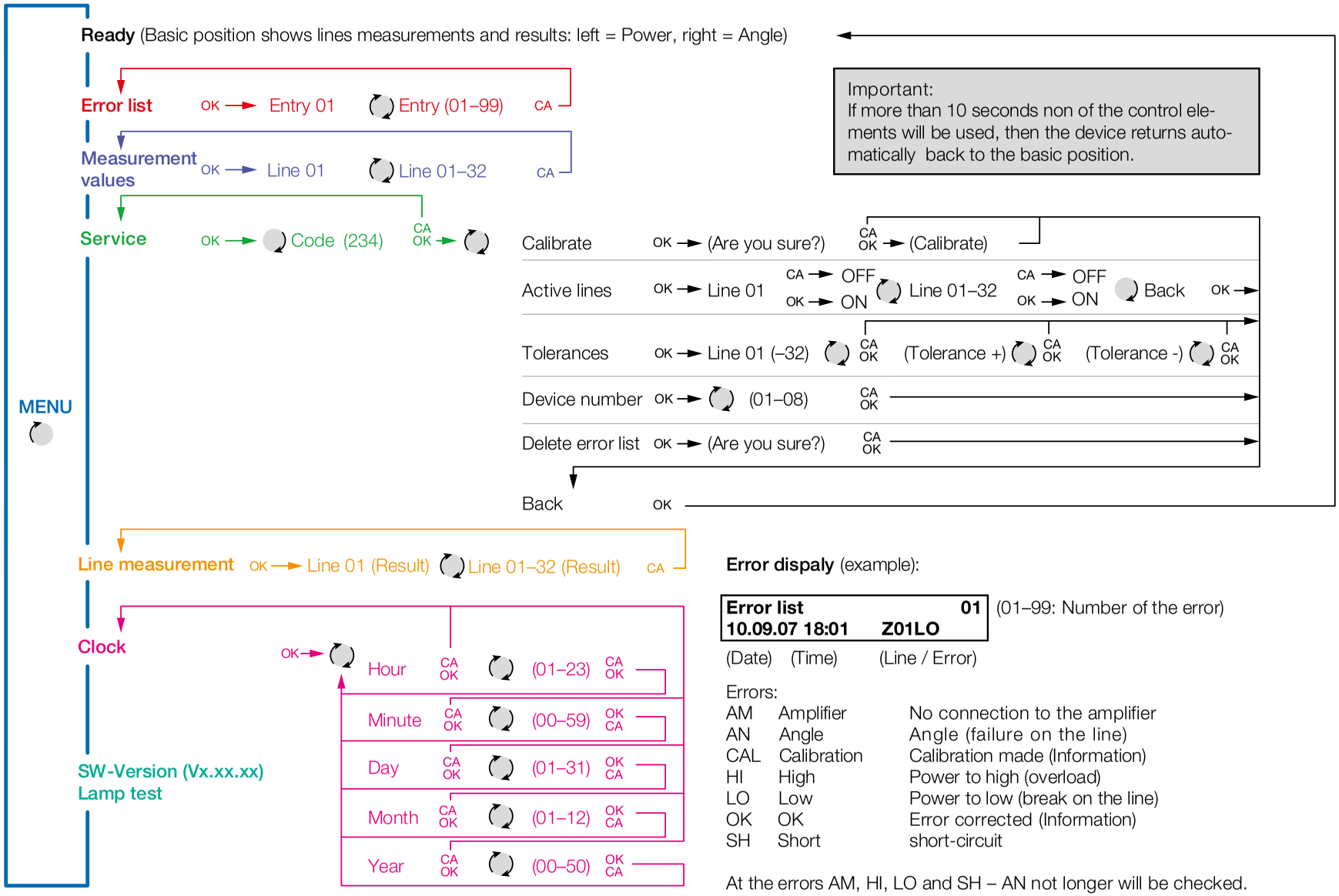
Operating mode

If the installation of the loudspeaker zones is finished, manual measurements of the zones are necessary to be able to set the values for the positive and the negative tolerances.

As the next step, the calibration must be made. The average value of the automatic measurements before will be the reference for the automatically measurements later. If the difference of the result of this measurements is bigger as the tolerances, then the error LED on the front will be visible, the error contact becomes active and an entry into the error list will be made. The errors are digitally transmitted to the APS-990 module. Additionally a star in the display informs about the new entry into the error list. This information is visible until to the use of a control element. Then the zones will be activated for the automatic measurements.

If the device is on the position «ready», then the measurements of all active zones will be made in periodical intervals. Measurements are made for the impedance, which is shown as power (on the left side), and for the angle, which is shown as difference of the phase between current and voltage (on the right side).

All values, including the tolerances, are not certain quantities, they are just steps in the particular range.



Error dispaly (example):

Error list	**01**
10.09.07 18:01	**Z01LO**
(Date) (Time)	(Line / Error)

(01–99: Number of the error)

Errors:

AM	Amplifier	No connection to the amplifier
AN	Angle	Angle (failure on the line)
CAL	Calibration	Calibration made (Information)
HI	High	Power to high (overload)
LO	Low	Power to low (break on the line)
OK	OK	Error corrected (Information)
SH	Short	short-circuit

At the errors AM, HI, LO and SH – AN not longer will be checked.
The tolerance of the angle measurements is given.

Legend:

OK = OK
CA = CANCEL

= Rotary knob to R or L
= Rotary knob to R
= Rotary knob to L

swiss made