



PBX interface

AA-11/PA

*for connection with analog extension
and PA amplification systems interface*



PBX / PA SYSTEM INTERFACE TECHNICAL MANUAL ADDENDUM

SW Version 3.4

Made in Italy by TEMA TELECOMUNICAZIONI S.r.l.

Recommendations

1. Use only original spare parts and consumables supplied by Tema Telecomunicazioni Srl for this equipment. The company shall not be held responsible for any damage caused by the use of materials that they have not supplied.
2. The device has been carefully manufactured and tested. In any case, the product is not recommended for use in situations in which incorrect operating may result in damage to persons and/or property.
3. We recommend that you carefully read all this manual before starting to use the device.
4. Do not expose the device to sunlight and protect it from sources of heat, dust, humidity and chemical agents.
5. This manual is the property of Tema Telecomunicazioni Srl and any duplication and reproduction even partial, as well as storage on any type of media is forbidden without written permission from Tema Telecomunicazioni Srl.

Revision	Date	Revision reason	Prepared	Checked/Approved
1	20/04/2016	Upgrade	GM	FL

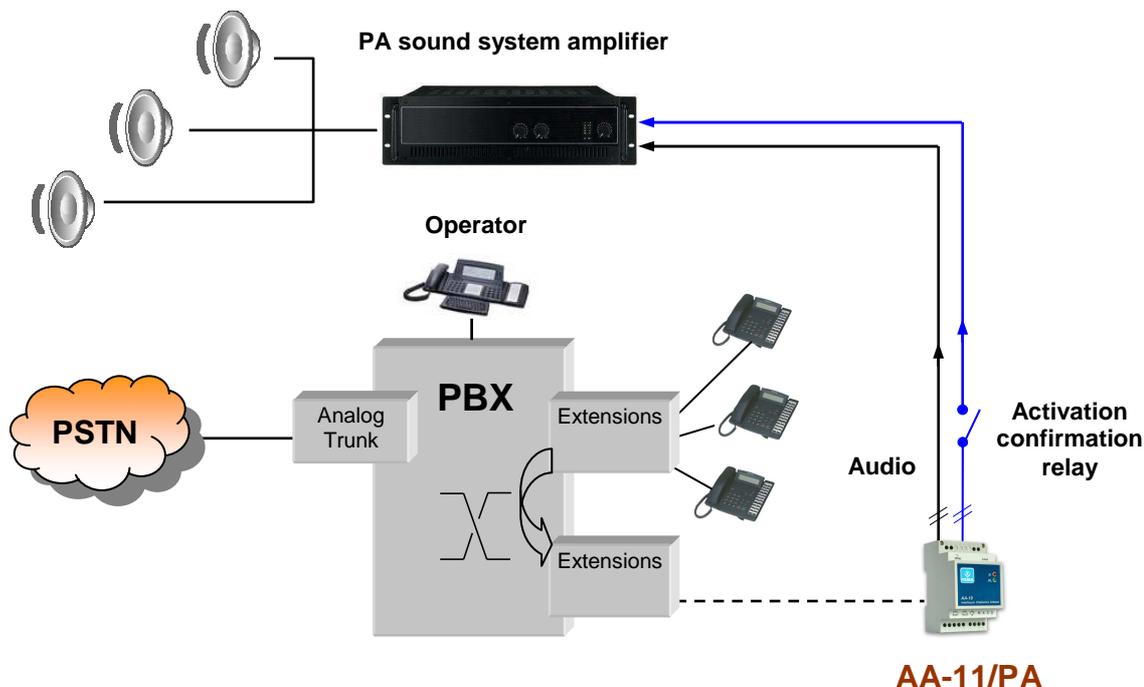
1. OVERVIEW

This addendum manual describes the use of AA-11/PA as interface between an internal extension of PBX to a generic audio messages diffusion system for people searching or public notices, a generic PA system.

All other informations about the AA-11 system are shown in the booklet that describes the system itself, such as technical characteristics, the relay contacts maximum load etc.

AA-11/PA does not generate any warn tone to the network speaker. An integrated relay closes and remains closed for the whole time of the broadcast, it is used to signal to the PA amplifier to take action for the message to be broadcasted over the network speakers.

The operator will be able to broadcast warning messages in the area intended for the service, simply by calling the extension where the AA-11/PA interface is connected and starting to talk. When the operator hangs up, the speaking of the message will be terminated after the recognition by AA-11/PA of the PBX reorder tone. The operator may also immediately terminate the call to the AA-11/PA interface (and then the announcement) by dialing a special DTMF command.



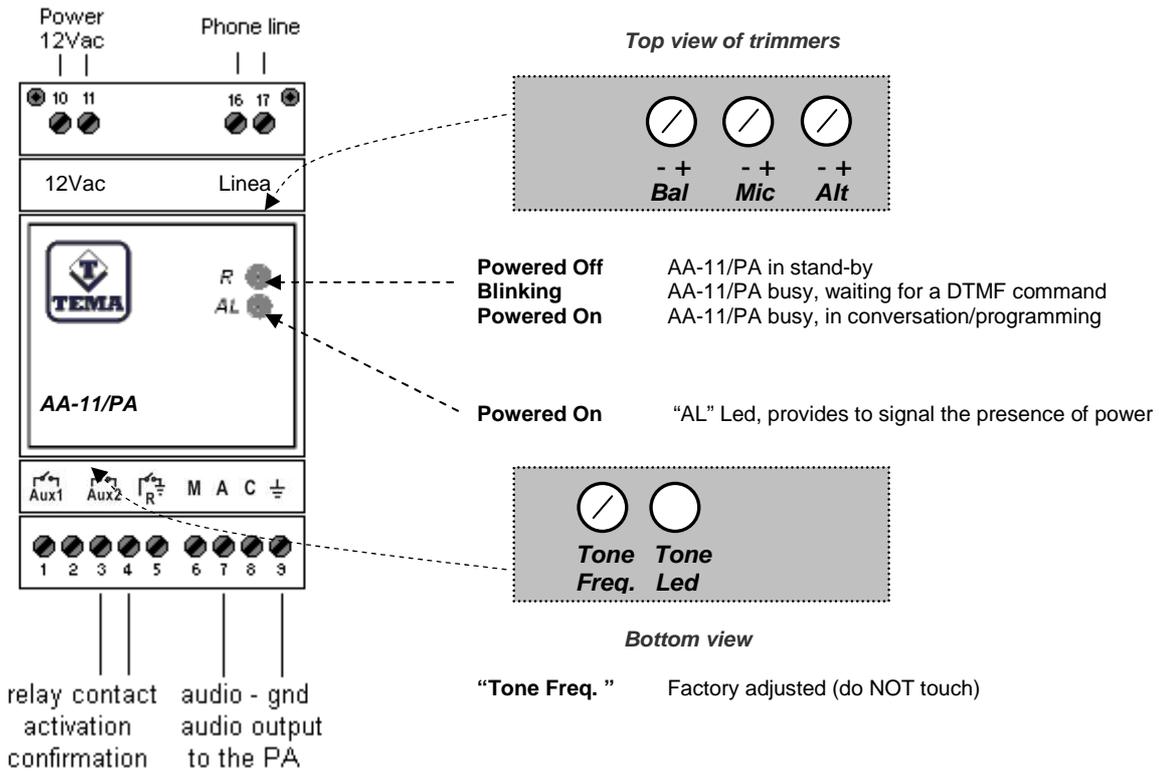
2. GENERAL FUNCTIONS

Every time AA-11/PA is called:

- Answers engaging the line after a programmable number of tings
- Signals its activation closing his embedded relay contact towards the PA amplifier
- It features the voice on his audio output to the PA system
- The operator spreads its announcement message
- Remains in this state until the operator hangs up at the end of announcement
- As the operator hang up, it frees the line, ready for a new announcement
- The caller can also interrupt the announcement with the DTMF command "9"

3. GENERAL DESCRIPTION AND INSTALLATION

3.1. AA-11/PA front view and signal terminals



Signal to / from the device

Screw terminals 10-11

Connect the power source of AA-11/PA

Screw terminals 16-17

Power supply range from 12V_{AC} to 18V_{AC}, or from 16V_{DC} to 28V_{DC}

Screw terminals 03-04

Connect the analog extension of the PBX

Screw terminals 07-09

Connect the PA system command (normally open contact)

Connect the audio input of the PA system, terminal 7 audio signal, terminal 9 common GND of the PA audio input

Output impedance <600Ω, adjustable signal level 0÷775mV

Screw terminals 1-2-5-6-8

Don't use

3.2. Adjusting Trimmers

On the top side of the system there are three trimmers. The **Alt** trimmer is for adjust the output audio volume towards the PA amplifier input while the **Mic** and **Bal** trimmers are not used. Before proceeding to the installation it is advisable to set the **Alt** trimmer to half range. Set also the PA amplifier volume at low levels. Then is necessary to make a test announcement, and adjust the volume using the **Alt** trimmer and PA volume in order to achieve the desired level of audio emission in the area served by the PA. To avoid the always possible establishment of hisses (Larsen effect), please maintain the output level to the lowest level among those required to enable a good listening without increasing too much the level itself. It is good that the user's phones performing ads are not directly audio influenced (the phone unit is not in the same environment where the message is being spread by the PA system). The "Larsen" effect is still dependent on sound environmental conditions. You may need to adjust the trimmer before applying AA-11/PA on DIN rail, depending on the conformation of the framework which will be installed. In this case, connect it, make adjustments and then secure it to the rail of the metal framework.

4. OPERATOR COMMANDS

The operator must call the internal extension where AA-11/PA is connected, in order to spread his announcement.

The operator can start to talk after the AA-11/PA reply. Once the message was announced and before hanging up, the operator must dial the digit "9" to end the connection with the PA amplifier system. AA-11/PA will immediately release the line and will be ready to handle another announcement.

Digit	Command	Description
9	End of announcement	AA-11/PA immediately closes the connection with the PA when receiving the command and release the line. (if parameter "#1=0")
1	Start of announcement	If the system was programmed to wait for the command to open the audio communication, the operator must dial this digit before making the announcement. (if parameter "#1=1")

If the operator does not dial the code to terminate the conversation, AA-11/PA will release the line for detection of the reorder tone. AA-11/PA has a maximum time (programmed and editable) given to the operator for the emission of the message and line releasing, and it will however release the line at the expiration of this time set (see parameter "0").

5. PARAMETERS PROGRAMMING

The table below lists all the programming parameters of AA-11/PA. The parameters are stored in a non-volatile memory and are not lost even in case of loss of power. To enter the programming mode:

- "Autoconnect" Mode - call the extension on which AA-11/PA is installed
 - dial "# #"
- "Normal" Mode - call the extension on which AA-11/PA is installed
 - dial "1 # #"

Digit	Parameter name	Description <i>Range = allowed values</i>	Default	Your setting
0 n	Call time/message spreading n = 1, (T=16 sec) n = 4, (T=32 sec) n = 7, (T=64 sec) n = 0, (T=192 sec)	T = time available for the attempt of the call to AA-11/PA and for the emission time of the message. <i>Choose the combinations among those available, fixed.</i> <i>Range: max 1 digit</i>	0 (192 sec)	
# 1 n	Operating Mode n = 1, "Normal" n = 2, "Autoconnect"	Defines the operating mode of AA-11/PA, especially if the audio with the PA amplifier must be activated on command or not. In practice defines whether the operator must dial the digit "1" to enable communication or if the communication shall be activated immediately after AA-11/PA answers the call(default mode). <i>Range: max 1 digit</i>	2 (autoconn.)	

Digit	Parameter name	Description <i>Range = allowed values</i>	Default	Your setting
# 2n	Reorder tone counting	Number of reorder tone sequences (cadence) that AA-11/PA will detect before closing the call. n=0 no reorder tone control n=1 will close after a counting sequence of 03 tones n=2 will close after a counting sequence of 05 tones n=3 will close after a counting sequence of 07 tones n=4 will close after a counting sequence of 09 tones n=5 will close after a counting sequence of 11 tones n=6 will close after a counting sequence of 13 tones n=7 will close after a counting sequence of 15 tones n=8 will close after a counting sequence of 17 tones n=9 will close after a counting sequence of 19 tones <i>Range: max 1 digit</i>	3	
# 3n	Reorder tone minimum duration	Indicates the minimum length that AA-11/PA must detect according to the PBX reorder tone cadence (in units of 100ms). CAUTION: Do not change these settings, the adjustment has been factory performed with international standards tones. n=0 no reorder tone control n=1 100 ms n=2 200 ms n=3 300 ms n=4 400 ms n=5 500 ms n=6 600 ms n=7 700 ms n=8 800 ms n=9 900 ms <i>Range: max 1 digit</i>	1	
# 4n	Reorder tone maximum duration	Indicates the maximum length that AA-11/PA must detect according to the PBX reorder tone cadence (in units of 100ms). CAUTION: Do not change these settings, the adjustment has been factory performed with international standards tones. This parameter, along with the previous one, define the detection window of the reorder tone by AA-11/PA. n=0 no reorder tone control n=1 100 ms n=2 200 ms n=3 300 ms n=4 400 ms n=5 500 ms n=6 600 ms n=7 700 ms n=8 800 ms n=9 900 ms <i>Range: max 1 digit</i>	6	
# 5n	Number of rings to answer	This parameter specify the number of rings after which AA-11 answers to an incoming call N=1 1 ring N=2 2 rings N=3 3 rings N=4 4 rings N=5 5 rings N=6 6 rings N=7 7 rings N=8 8 rings N=9 9 rings <i>Range: max 1 digit (1-9)</i>	1	

8	Reset all values to the factory default	WARNING: issue this command only if you want to reset all values to the factory default, losing your settings. This command acts without asking any confirmation: use it with care!	-	-
9	End programming	Immediately disconnects the call and saves any changes to the parameters. The settings are saved even without the “9” command, but the device would hang up and be available for new calls only after a longer timeout.	-	-

REMARKS