

Panphonics AA-160e / AA-160mm amplifier

Remote Control (for advanced users)

AA-160 series amplifier can be connected into the standard Local Area Network (LAN) for controlling the parameters of the AA-160 series amplifier remotely. For handling these features some networking experience is required. If you are connecting the device into an already existing Network, please consult the Network administrator at the first place.

The remote control from the Network makes it possible to adjust the volume or put the amplifier into the standby mode or back into the operation. There are also a great number of sophisticated commands for adjusting the Automatic Volume Control -algorithm or change the input sensitivity. The full command reference is at the end of this manual.

Opening the Remote Connection

For TCP/IP control a telnet connection should be used. The default IP address of the unit is 192.168.1.111. and network mask is '255.255.255.0' The default Telnet password is 'passu'*. The device's IP address can be configured by using the following commands.

*If Mac OS X terminal telnet client is used, the password might be asked twice because of the echoing defaults

ip

Print current IP settings

Usage: ip

Output: IP 192.168.1.111 / 255.255.255.0 GW=192.168.1.1

ip x.x.x.x

Change current IP address, use IP address 0.0.0.0 for DHCP. The new value does not take effect until "ip update" command is sent. After "ip update" a new connection must be made and settings saved by issuing "save setup". If the new settings are not saved after "ip update" the unit will reboot after about 5 minutes and return back to the old settings.

Usage: ip 192.168.1.111

Output: OK

ip mask y.y.y.y

Change current subnet mask settings. The new value does not take effect until "ip update" command is sent. After "ip update" a new connection must be made and settings saved by issuing "save setup". If the new settings are not saved after "ip update" the unit will reboot after about 5 minutes and return back to the old settings.

Usage: ip mask 255.255.255.0

Output: OK

ip gw z.z.z.z

Change current gateway settings. The new value does not take effect until "ip update" command is sent. After "ip update" a new connection must be made and settings saved by issuing "save setup". If the new settings are not saved after "ip update" the unit will reboot after about 5 minutes and return back to the old settings.

Usage: ip gw 192.168.1.1

Output: OK

ip update

Take new ip settings in use. After "ip update" a new connection must be made and settings saved by issuing "save setup". If the new settings are not saved after "ip update" the unit will reboot after about 5 minutes and return back to the old settings.

Usage: ip update
Output: NA

ip password

Change password of the ip connection. New password must be repeated twice after the command, passwords are to be separated by a space character. The default password is 'passu'. Maximum length of the password is 16 characters.

Usage: ip password passu passu
Output: OK

Changing standby mode ON/OFF

The amplifier standby mode can be changed remotely using 'PWRON' / 'PWROFF' - commands. The current status can be checked by using 'STATUS' command.

STATUS

Amplifier status query, returns ON/OFF depending on the amplifier state

Usage: STATUS
Output: STATUS24,OFF

PWRON

Amplifier power on command

Usage: PWRON
Output: STATUS03,ON

PWROFF

Amplifier power off command

Usage: PWROFF
Output: STATUS49,OFF

Selecting Input

The input interface can be selected using the 'input' -command. The default input is RCA.

input x

Select audio input: 'input xlr', 'input rca'

Usage: input rca
Output: OK

Adjusting Volume

The current volume setting can be checked with 'VOLREAD' -command. The volume can be changed by commanding 'VOL00' - 'VOL37'. The minimum is 'VOL00' and the maximum is 'VOL37'. Any value between the 00 and 37 can be given. If the setting should be permanent (even during the power failure), use the 'VOLSAVE' -command to save the setting.

VOLREAD

Read current volume setting from the unit

Usage: VOLREAD
Output: VOL=22

VOLxx

Set volume VOL00-VOL37

Usage: VOL15
Output: STATUS00,ON

VOLSAVE

Save volume setting to Flash memory

Usage: VOLSAVE
Output: OK

Automatic Volume Control -Feature

Panphonics Automatic Volume Control feature adjusts the volume according to the ambient noise level. The built in calibration routine automatically detects the effects of the surrounds and takes these into account when making the adjustments. Ambient Control algorithm monitors the background noise level and starts to increase the volume after the noise exceeds the set base level. This enables an efficient adjustment of the volume level keeping the audio at a clearly audible yet comfortable level.

The remote calibration procedure is started using ‘amb calibrate’ -command. Please make sure that the installation is made correctly. For detailed instructions see the ‘Installation’ -section. Please note also that the calibration noise is played at relatively high volume and can be extremely painful right under the loudspeaker.

The base level (the ambient noise level parameter when the Automatic Volume Control -feature activates) is automatically set during the standard calibration procedure. In some circumstances the automatic base level setting will not give the optimal results. It is sometimes more convenience to setup the parameter manually e.g. when there is no background noise at all at the nighttime or there is an excessive non-stop noise during the installation.

The base level setting can be changed manually by ‘using amb baselevel xx’ -command. The numerical base level value is given in decibels (dB) range. The correct base level setting can be found out by using e.g. sound pressure level meter during the time of average background noise level.

```
amb calibrate
Run calibration routine for ambient control
Usage: amb calibrate
Output: NA
```

```
amb baselevel xx
Set ambient noise level where gain=0dB. Default. This parameter is automatically determined
during the calibration process but can be set also manually.
Usage: amb baselevel 40
Output: OK: Value set
```

After the calibration procedure the feature can be switched on or off by using the ‘amb on’ and ‘amb off’ -commands.

```
amb on
Set Ambient Control active
Usage: amb on
Output: OK
```

```
amb off
Set Ambient Control inactive
Usage: amb off
Output: OK
```

If the settings should be permanent (even during the power failure), use the ‘amb save’ -command to save the settings.

amb save
 Save ambient control parameters to Flash memory
 Usage: amb save
 Output: OK

If it’s needed to restore the factory parameter settings for the Ambient Control), use the ‘amb factory’ -command.

amb factory
 Restore Ambient Control factory settings and store parameters to Flash memory
 Usage: amb factory
 Output: OK

Changing input sensitivity with ‘PRE’-setting

The current input sensitivity setting can be checked with ‘PREREAD’ -command (default = 10). The sensitivity can be changed by commanding ‘PRE00’- ‘PRE20’. The minimum is ‘PRE00’ which corresponds the amplitude 1:1 and the maximum is ‘VOL20’ and it corresponds +20dB amplitude. Changing the PRE-setting affects to the actual sound pressure level as is presented in the following table.

RCA Input			
PRE	Max in Vp-p	Output Vp-p	SPL@1m
0	> 4	218	104
10	1.32	218	105
15	0.8	234	106
20	0.45	236	104
XLR Input			
0	> 4	190	102
05	2.50	220	103
10	1.60	248	106
15	0.78	200	103
20	0.45	202	106

Any value between the 00 and 20 can be given. If the setting should be permanent (even during the power failure), use the ‘PRESAVE’ -command to save the setting.

PREREAD
 Read current volume setting from the unit
 Usage: PREREAD
 Output: PRE=22

PRExx
 Set input sensitivity PRE00-VOL37 (default = 10)
 Usage: VOL15
 Output: STATUS00,0N

PRESAVE
 Save input sensitivity setting to Flash memory
 Usage: PRESAVE
 Output: OK

Remote Commands Reference list

adc

View last read rms values of line in and MIC.

Usage: adc

Output: OK: ADC media=-53, mic=49

RESET

Reboot the unit

Usage: RESET

Output: NA

VERSION

Get Firmware version number

Usage: VERSION

Output: v1.0i

VOLREAD

Read current volume setting from the unit

Usage: VOLREAD

Output: VOL=22

VOLxx

Set volume VOL00-VOL37

Usage: VOL15

Output: STATUS00,ON

VOLSAVE

Save volume setting to Flash memory

Usage: VOLSAVE

Output: OK

STATUS

Amplifier status query, returns ON/OFF depending on the amplifier state

Usage: STATUS

Output: STATUS24,OFF

PWRON

Amplifier power on command

Usage: PWRON

Output: STATUS03,ON

PWROFF

Amplifier power off command

Usage: PWROFF

Output: STATUS49,OFF

ip

Print current IP settings

Usage: ip

Output: IP 192.168.1.111 / 255.255.255.0 GW=192.168.1.1

ip x.x.x.x

Change current IP address, use IP address 0.0.0.0 for DHCP. The new value does not take effect until "ip update" command is sent. After "ip update" a new connection must be made and settings saved by issuing "save setup". If the new settings are not saved after "ip update" the unit will reboot after about 5 minutes and return back to the old settings.

Usage: ip 192.168.1.111

Output: OK

ip mask y.y.y.y

Change current subnet mask settings. The new value does not take effect until "ip update" command is sent. After "ip update" a new connection must be made and settings saved by issuing "save setup". If the new settings are not saved after "ip update" the unit will reboot after about 5 minutes and return back to the old settings.

Usage: ip mask 255.255.255.0

Output: OK

ip gw z.z.z.z

Change current gateway settings. The new value does not take effect until "ip update" command is sent. After "ip update" a new connection must be made and settings saved by issuing "save

setup". If the new settings are not saved after "ip update" the unit will reboot after about 5 minutes and return back to the old settings.

Usage: ip gw 192.168.1.1

Output: OK

ip update

Take new ip settings in use. After "ip update" a new connection must be made and settings saved by issuing "save setup". If the new settings are not saved after "ip update" the unit will reboot after about 5 minutes and return back to the old settings.

Usage: ip update

Output: NA

ip password

Change password of the ip connection. New password must be repeated twice after the command, passwords are to be separated by a space character. The default password is 'passu'. Maximum length of the password is 16 characters.

Usage: ip password passu passu

Output: OK

mac

Return MAC number of the unit

Usage: mac

Output: MAC 0-4-a3-34-f5-ac

amb calibrate

Run calibration routine for ambient control

Usage: amb calibrate

Output: NA

amb baselevel xx

Set ambient noise level where gain=0dB. Default (50dBA)

Usage: amb baselevel 40

Output: OK: Value set

amb on

Set Ambient Control active

Usage: amb on

Output: OK

amb off

Set Ambient Control inactive

Usage: amb off

Output: OK

amb save

Save ambient control parameters to Flash memory

Usage: amb save

Output: OK

amb factory

Restore Ambient Control factory settings and store parameters to Flash memory

Usage: amb factory

Output: OK

input x

Select audio input: 'input xlr', 'input rca'

Usage: input rca

Output: OK

mute x

Turn mute on or off 'mute on', 'mute off'

Usage: mute on

Output: OK

factory setup

Restore factory defaults for setup data

Usage: factory setup

Output: OK

save setup

Save current setup data

Usage: save setup

Output: OK

PREREAD

Read current volume setting from the unit

Usage: PREREAD

Output: PRE=22

PRExx

Set input sensitivity PRE00-VOL37 (default = 10)

Usage: VOL15

Output: STATUS00,0N

PRESAVE

Save input sensitivity setting to Flash memory

Usage: PRESAVE

Output: OK