

Plena All-in-One Unit

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- ▶ All-in-One solution for background music and paging
- ▶ Six-zone paging system
- ▶ Built-in AM/FM tuner with presets
- ▶ MP3 player for USB device and SD card
- ▶ Optional Call Station and Wall Panel with local audio source and remote control

The Plena All-in-One System is a six-zone 240 W background music and paging system, which consists of the Plena All-in-One Unit, an optional remote Wall Panel, and one or more Call Stations. It is a cost-effective public address system for small to medium-sized venues that require an easy-to-use out-of-the-box solution.

System overview

The Plena All-in-One Unit can provide hours of uninterrupted music from USB or SD flash memory. The unit also has a built in AM/FM tuner with presets. To ensure for optimum performance, the All-in-One Unit has no moving parts, such as hard drives that can fail or wear out. It is compatible with SD, SDHC and MMC cards, and USB memory sticks. The unit is supplied with an IR remote control for controlling the music source. To enhance the performance of the public address system, the following optional products can be connected to the All-in-One Unit:

- One or more Call Stations for six-zones and all-call, so that calls can be made to any combination of zones or all zones. A maximum of six Call Stations can be connected in a loop-through arrangement to the same All-in-One Unit.

- A Wall Panel for enabling control of the background music from a remote location; the Wall Panel even allows a microphone or portable music player to be connected to the system.
- An additional power amplifier, so that music can be heard in one set of zones while calls can be made to another set of zones.

The All-in-One Unit is a 3 U high 19" wide rack-mount unit. The unit is supplied with detachable rack-mount brackets so that it can be used on a tabletop or installed in a rack.

Functions



Microphone and line inputs

The All-in-One Unit has six inputs that can be switched between microphone and line level sensitivity. Input 1 also accepts an optional all-call Call Station (PLE-1CS or PLE-1SCS). The inputs are balanced but can also be

used unbalanced.

Phantom power can be switched on to provide power to condenser microphones. The inputs can either be mixed or can be configured with different priority arrangements (serial/blocking/overriding), based on a signal detection at each input.

Call station input

A maximum of six optional Call Stations can be connected in a loop-through arrangement to the same All-in-One Unit. The PLN-6CS Call Station has a limiter and configurable sensitivity, a speech filter, and an attention chime.

Music inputs

The unit has three music inputs and an internal music source. The internal music source plays MP3 files from an SD/MMC card or USB device with a capacity of up to 32 GB. The player will automatically search and play all playable MP3 files and has repeat and random play modes. The following formats are supported: MP3 files with bit-rates from 32 kbit/s to 320 kbit/s, mono/stereo/joint-stereo, and continuous bit-rates (CBR) as well as variable bit-rate (VBR). If a microphone signal receives priority, the music is either muted or attenuated to an adjustable level (music ducking).

FM/AM Tuner

The digitally controlled tuner uses a frequency synthesizer and has presets to store favorite radio stations.

Output power

The built-in 240 W power amplifier of the All-in-One Unit makes this a complete single-channel audio system for music distribution and paging. To enable two-channel operation, an external power amplifier can be connected to the All-in-One Unit.

Zone outputs

The unit has six zone outputs for connection to different zones. The volume level of each zone can be adjusted separately.

Remote control Wall Panel input

An optional Wall Panel can be connected to the All-in-One Unit by use of a standard Cat-5 cable and RJ45 connectors. The Wall Panel provides remote control of the system, as well as an input for a remote music player or microphone. The Enable button on the remote Wall Panel can be pressed to gain control over the music selection and master volume. This makes it the perfect accessory for a small system that requires operation from a second location with local audio inputs.

Controls and indicators

Front panel:

- Power on LED
- LED VU meter for master output
- Master volume control
- Six volume-level controls for microphone inputs
- Separate bass and treble control per input
- Music source controls

Rear side panel

- On/off mains switch
- Priority mode and chime selector switches
- Chime level control
- Ducking level control
- Telephone/100 V input volume control

Certifications and approvals

Safety	IEC/EN 60065
EMC	EN 55103-1 EN 55103-2 EN 61000-3-2 EN 61000-3-3
Environment	EN 50581
US	UL 60065 FCC Part 15B
CA	CSA C22.2.60065
CN	CCC
AU/NZ	C-Tick

Region	Certification
Europe	CE

Parts included

Quantity	Component
1	All-in-One Unit
1 m	Cat-5 cable with RJ45 termination for adaptor
1	Adaptor to connect a PLE-1CS or PLE-1SCS desktop microphone via shielded Cat-5 wiring
1	AC power cord (for European mains sockets)
1	Safety Instructions
1	AM indoor antenna
1	Coax connector for FM antenna
1	Pair of brackets for 19" rack installation
1	Remote control unit (without batteries)
1	Installation and Operating Manual

Technical specifications

Electrical

Mains power supply	
Voltage	115/230 Vac +/- 15%, 50/60 Hz
Fuse rating	6.3 A (230 Vac) 10 A (115 Vac)
Power consumption	720 W max

Performance	
Frequency response	Microphone inputs: 100 Hz – 15 kHz +1/-3dB Line inputs: 50 Hz – 20 kHz +1/-3dB (+1/-3 dB @ -10 dB ref. rated output)
Distortion	<1% @ rated output power, 1 kHz
Bass control	+/- 8 dB @ 100 Hz
Treble control	+/- 8 dB @ 10 kHz
Remote devices	
Call station input	RJ45 for PLN-6CS
Wall panel input	RJ45 for PLN-4S6Z
Microphone/Line input	
Input 1 (Push-to-talk contact for priority/ducking)	RJ45 for PLE-1CS or PLE-1SCS 3-pin XLR, balanced, phantom
Input 2-6 (with signal detector for priority/ducking)	3-pin XLR, balanced, phantom
Sensitivity	1.5 mV (mic); 200 mV (line)
Impedance	>600 ohm (mic); >10 kohm (line)
S/N (flat at max volume)	>65 dBA (mic); >70 dBA (line)
CMRR (mic)	>40 dB (50 Hz to 20 kHz)
Headroom	>25 dB
Phantom power supply	18 V – No load
Level detector (VOX) on Inputs 1-6	Attack time 150 ms; release time 3 s
Battery power supply	
Voltage	24 Vdc (22 Vdc – 28 Vdc)
Current	12 A
Music inputs	
Connector	Cinch, stereo converted to mono
Sensitivity	500 mV (inputs 1/2) and 300 mV (input 3)
Impedance	10 kohm
S/N (flat at max volume)	>65 dBA
S/N (flat at min volume/muted)	>75 dBA
Headroom	>20 dB
Emergency / telephone	
Connector	7-pin, Euro style pluggable screw terminal
Sensitivity line input	100 mV

Sensitivity 100V input	100 V
Impedance line input	600 ohm
S/N (flat at max volume)	>70 dBA
Level detector (VOX)	Threshold 50 mV; attack time 150 ms; release time 3 s
Insert	
Connector	Cinch
Nominal level	1 V
Impedance	>10 kohm
FM tuner	
Distortion	<1 %
Total harmonic distortion (1 kHz)	< 0.8 %
FM range	87.5 - 108 MHz
Frequency response	60 Hz - 12 kHz
Intermediate rejection	≥ 70 dB
Image rejection	≥ 50 dB
S/N ratio	≥ 50 dB
Intermediate frequency	10.7 MHz
Input sensitivity	8 µV
Automatic tuning sensitivity	≤ 50 µV
Antenna input	75 ohms (coaxial)
AM tuner	
AM range	530 - 1602 kHz
Input sensitivity	30 µV
Digital audio player	
Frequency response	20 Hz to 20 kHz
S/N ratio	>70 dBA
Total harmonic distortion (1 kHz)	<1 %
Supported formats	MP3, 32 - 320 kbps
Master/music output	
Connector	3-pin XLR, balanced
Nominal level	1 V
Impedance	<600 ohm
Loudspeaker outputs 100 V	
Connector	Screw, floating
Total power	240 W

Direct outputs	100/70 V, 8 ohm
Zone outputs 1-6	100/70/50/35/25/17 V

Mechanical

Dimensions (H x W x D)	133 x 430 x 365 mm with feet (19" wide, 3 U high)
Weight	Approx. 18 kg
Mounting	Standalone, 19" rack
Color	Charcoal

Environmental

Operating temperature	-10 °C to +45 °C (14 °F to +113 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Relative humidity	<95% (non-condensing)

Generic performance specifications

Acoustic noise	< 45 dB SPL, measured at 1 meter above the unit
MTBF	1200000 hours at 25°C

Ordering information

Plena All-in-One Unit

All-in-One solution for background music (BGM), announcements, and paging people.

Order number **PLN-6AIO240**

Accessories

Plena All-in-One Call Station

Call station for six zones with unidirectional microphone and attention chimes.

Order number **PLN-6CS**

Plena All-in-One Wall Panel

Wired remote control for the Plena All-in-One Unit with local audio inputs.

Order number **PLN-4S6Z**

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