

# 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<br>EN 55103-2<br>EN 61000-3-2<br>EN 61000-3-3 |
| Environment | EN 50581   |
| US          | UL 60065<br>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

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

|   |  |
|---|--|
| <b>Performance</b>                                    |  |
| Frequency response                                    | Microphone inputs: 100 Hz – 15 kHz +1/-3dB<br>Line inputs: 50 Hz – 20 kHz +1/-3dB<br>(+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  |
| <b>Remote devices</b>                                 | 2 x  |
| Call station input                                    | RJ45 for PLN-6CS   |
| Wall panel input                                      | RJ45 for PLN-4S6Z  |
| <b>Microphone/Line input</b>                          | 6 x  |
| Input 1 (Push-to-talk contact for priority/ducking)   | RJ45 for PLE-1CS or PLE-1SCS<br>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   |
| <b>Battery power supply</b>                           |  |
| Voltage   | 24 Vdc (22 Vdc – 28 Vdc)   |
| Current   | 12 A   |
| <b>Music inputs</b>                                   | 3x   |
| 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   |
| <b>Emergency / telephone</b>                          | 1 x  |
| 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 |
| <b>Insert</b>                     | 1 x   |
| Connector                         | Cinch   |
| Nominal level                     | 1 V   |
| Impedance                         | >10 kohm  |
| <b>FM tuner</b>                   |   |
| 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)                                     |
| <b>AM tuner</b>                   |   |
| AM range                          | 530 - 1602 kHz  |
| Input sensitivity                 | 30 μV   |
| <b>Digital audio player</b>       | 1 x   |
| Frequency response                | 20 Hz to 20 kHz                                       |
| S/N ratio                         | >70 dBA   |
| Total harmonic distortion (1 kHz) | <1 %  |
| Supported formats                 | MP3, 32 - 320 kbps                                    |
| <b>Master/music output</b>        | 1 x   |
| Connector                         | 3-pin XLR, balanced                                   |
| Nominal level                     | 1 V   |
| Impedance                         | <600 ohm  |
| <b>Loudspeaker outputs 100 V</b>  |   |
| 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<br>(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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