11 AC POWERCON RECEPTACLE. D LINE uses a POWERCON locking 3-pole AC mains. Always use the specific power cord provided in the package.

12 AC POWERCON LINK RECEPTACLE. Use this receptacle to link one or more units. Always make sure that the maximum current requirement does not exceed the maximum admitted POWERCON current.

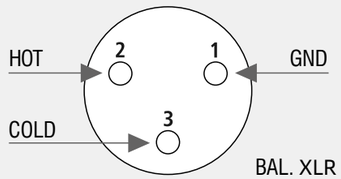
13 POWER MAIN SWITCH. The power switch turns the AC power ON and OFF. Make sure that the VOLUME is set to - when you turn on the speaker.

14 FUSE.

## CONNECTIONS

The XLR connectors use the following AES standard:

PIN 1 = GROUND (SHIELD)
PIN 2 = HOT (+)
PIN 3 = COLD (-)




## BEFORE TURNING ON THE SPEAKER

At this point you can connect the power supply cable and the signal cable, but before turning on the speaker make sure that the volume control is at the minimum level (even on the mixer output). It is important that the mixer is already ON before turning on the speaker. This will avoid damage to the speakers and noisy "bumps" due to turning on parts on the audio chain. It is a good practice to always turn on speakers at last and turn them off immediately after the show.
Now you can turn ON the speaker and adjust the volume control to a proper level.

## WARNING

**WARNING**: Always make sure that the maximum current requirement does not exceed the maximum admitted POWERCON current.

## VOLTAGE SETUP
(RESERVED TO THE RCF SERVICE CENTRE)

**230 Volt, 50 Hz SETUP**: FUSE VALUE T3,15A - 250V

**115 Volt, 60 Hz SETUP**: FUSE VALUE T6, 30A - 250V

## SIGNAL CABLES DAISY CHAINS

Audio signal can be daisy-chained using the male XLR loop through connectors. A single audio source can drive multiple speakers modules (like a full left or right channel made of 8-16 speaker modules); make sure that the source device is able to drive the impedance load made of the modules input circuits in parallel. The line arrays input circuit presents a 100 KOhm input impedance. The total input impedance seen as a load from the audio source (ex. audio mixer) will be:
- system input impedance = 100 KOhm / number of input circuits in parallel.

The required output impedance of the audio source (ex. audio mixer) will be:
- source output impedance > 10 * system input impedance;
- always make sure that XLR cables used to feed audio signal to the system are:
  - balanced audio cables;
  - wired in phase.

A single defective cable can affect the performance of the overall system!





# ACTIVE LINE ARRAY LOUDSPEAKER

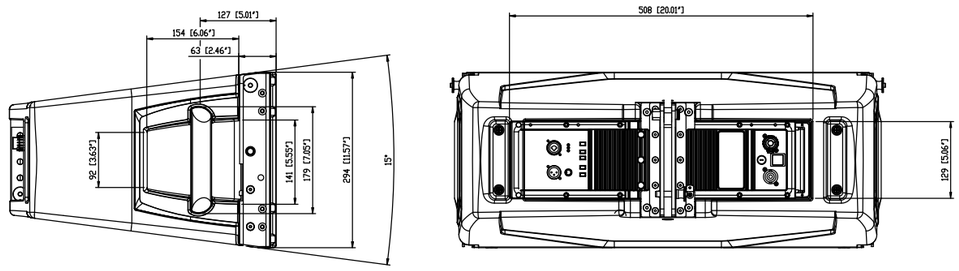
**Description**

The careful acoustic design, no compromise transducers and a unique, composite cabinet, design make this product the preferred tool of many professionals. Perfect in live sound reinforcement and reliable installed situations.
This product is the ideal choice when line array performance is needed and a fast and easy set up is a must. The system is powered from a 1400Watt Peak Power 2 way digital amplifier, sound is processed from a powerful DSP. The processing includes cluster and HF projection correction and special new presets for indoor and high curving situations. The system features state of the art transducers, two powerful 10" for a solid bass reproduction and a large format 3" voice coil compression driver to deliver vocal clarity and high definition with an incredible dynamic.

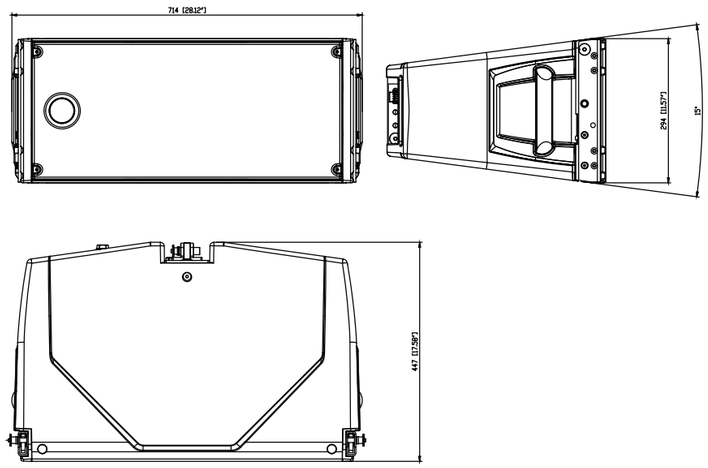
**Features**

- 1400Watt Peak power - 700 Watt RMS
- 135 dB max SPL
- 55 Hz 20 kHz frequency response
- 2 x 10" Woofers
- 1x 3" Compression Driver
- DSP controlled Input section with selectable presets
- Tour grade safe and solid variable mechanics
- Composite PP enclosure structurally wooden reinforced

**Size structure**



Line Ar t 2D




TECHNICAL SPECIFICA TIONS

| | | |
|---|---|---|
| Acoustical specifications | Frequency R esponse | 55 Hz ÷ 20000 Hz |
| | Max SPL @ 1m | 135 dB |
| | Horizontal co verage angle | 100° |
| | Ver tical co verage angle | 15° |
| Transducers | Compr ession Driv er | 1 x 2.0' ', 3.0' ' v.c |
| | Woof er | 2 x 10' ', 2.5' ' v.c |
| Input/Output section | Input signal | bal/unbal |
| | Input connectors | XLR |
| | Output connectors | XLR |
| | Input sensitivity | -2 dBu/+4 dBu |
| Pr ocessor section | Crosso ver Fr equencies | 800 Hz |
| | Pr otections | Thermal, RMS |
| | Limiter | Soft Limiter |
| | Contr ols | Cluster , HF, High curving, Indoor |
| Power section | Total Power | 1400 W Peak, 700 W RMS |
| | High fr equencies | 400 W Peak, 200 W RMS |
| | Low fr equencies | 1000 W Peak, 500 W RMS |
| | Cooling | Con vection |
| | Connections | Power con IN/OUT |
| Standar d compliance | Saf ety agency | CE compliant |
| Ph ysical specifications | Cabinet/Case Material | PP Composite |
| | Har dwar e | Rigging fl yw ar e |
| | Handles | 2 side , 2 back |
| | Grille | Steel |
| | Color | Black, |
| Size | Height | 294 mm / 11 .57 inches |
| | Width | 705 mm / 27 .76 inches |
| | Depth | 445 mm / 17 .52 inches |
| | Weight | 30.2 k g / 66.58 lbs |






1 MAIN XLR INPUT (BAL/UNBAL). The system accept male XLR/Jack input connectors with line level signals from a mixing console or other signal source.

2 LINK XLR OUTPUT The output XLR male connector provides a loop trough for speakers daisy chaining.

3 VOLUME. Controls the volume of the power amplifier The control ranges from - (maximum attenuation) to the MAX level ∞ (maximum output).

4 POWER INDICATOR. Power on indicator When the power cord is connected and the power switch is turned on this indicator lights green.

5 SIGNAL INDICATOR. The signal indicator lights green if there is signal present on the main XLR input.

6 LIMITER INDICATOR. The amplifier has a built in limiter circuit to prevent clipping of the amplifiers or overdriving the transducers. When the peak clipping circuit is active the LED blinks orange. It is okay if the limit LED blinks occasionally If the LED blinks frequently or lights continuously, turn down the signal level. The amplifier has a built in RMS limiter. If the RMS limiter is active the LED lights red. The RMS limiter has the purpose to prevent damages the transducers. The speaker shall never be used with the limit indicator red, continuous operation with the RMS protection active can cause damages to the speaker

7 HF. The switch gives the possibility to set high frequencies correction depending on target distance (air absorption correction):
- NEAR (used for pole mount applications or near field)
- FAR (for farthest field).

8 CLUSTER. The combination of the 2 switches gives 4 possibilities of mid low frequencies correction depending on cluster size.
- 2-3 modules (used for pole mount applications ground stacking)
- 4-6 modules (small flown systems)
- 7-9 modules (medium flown systems)
- 10-16 modules (maximum flown configuration).

9 HIGH CURVING. The switch gives the extra possibility to boost mid frequencies depending on a high curving cluster configuration of few pieces.
- OFF (not active correction)
- ON (for high curving).

10 INDOOR. The switch gives the extra possibility to set low frequencies correction depending on a indoor/outdoor use, in order to compensate room reverberation on lows.
- OFF (not active correction)
- ON (correction for reverberant indoor rooms).

# POWER REQUIREMENTS AND SET-UP

The line arrays Systems are designed to operate in hostile and demanding situations. Nevertheless it is important to take extremely care of the AC power supply and set up a proper power distribution.
The line arrays Systems are designed to be GROUNDED. Always use a grounded connection.

The amplifiers are designed to work within the following AC Voltage limits:
230 V NOMINAL VOLTAGE: minimum voltage 185 V, maximum voltage 260 V
115 V NOMINAL VOLTAGE: minimum voltage 95 V, maximum voltage 132 V.
If the voltage goes below the minimum admitted voltage the system stops working If the voltage goes higher than the maximum admitted voltage the system can be seriously damaged. To obtain the best performances from the system it is very important that the voltage drop it is as low as possible.

Make sure that all the system is properly grounded. All the grounding points shall be connected to the same ground node. This will improve reducing hums in the audio system.

The module is provided with a Powercon outlet to daisy chain other modules. The maximum number of modules that is possible to daisy chain is:
16 (SIXTEEN) OR 4 HDL 18-AS + 8 HDL 20-A MAXIMUM OR 8 HDL18-A.

**230 Volt NOMINAL VOLTAGE: minimum voltage 185 Volt, maximum voltage 264 Volt (for UK 240V+10%)**

**115 Volt NOMINAL VOLTAGE: minimum voltage 95 Volt, maximum voltage 132 Volt.**

A superior number of modules in daisy chain will exceed the Powercon connector maximum ratings and create a potentially dangerous situation.

When the line arrays systems are powered from a three phase power distribution it is very important to keep a good balance in the load of each phase of the AC power. It is very important to include subwoofers and satellites in power distribution calculation: both subwoofers and satellites shall be distributed between the three phases.

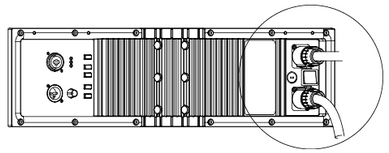


WARNING

VOLTAGE

GROUNDING

AC CABLES DAISY CHAINS



WARNING

POWERING FROM THREE PHASE



# SAFETY PRECAUTIONS

1. All the precautions, in particular the safety ones, must be read with special attention, as they provide important information.

WARNING: to prevent the risk of fire or electric shock, never expose this product to rain or humidity.

2. POWER SUPPLY FROM MAINS
a. The mains voltage is sufficiently high to involve a risk of electrocution; install and connect this product before plugging it in.
b. Before powering up, make sure that all the connections have been made correctly and the voltage of your mains corresponds to the voltage shown on the rating plate on the unit, if not, please contact your dealer.
c. This unit is CLASS I construction, so it must be connected to a MAIN socket outlet with a protective earthing connection.
d. Appliance coupler or PowerCon Connector is used to disconnect device from MAIN power. This device shall remain readily accessible after the installation
e. Protect the power cable from damage; make sure it is positioned in a way that it cannot be stepped on or crushed by objects.
f. To prevent the risk of electric shock, never open this product: there are no parts inside that the user needs to access.

3. Make sure that no objects or liquids can get into this product, as this may cause a short circuit.
This apparatus shall not be exposed to dripping or splashing. No objects filled with liquid, such as vases, shall be placed on this apparatus. No naked sources (such as lighted candles) should be placed on this apparatus.

4. Never attempt to carry out any operations, modifications or repairs that are not expressly described in this manual.
Contact your authorized service centre or qualified personnel should any of the following occur:
- The product does not function (or functions in an anomalous way).
- The power cable has been damaged.
- Objects or liquids have got in the unit.
- The product has been subject to a heavy impact.

5. If this product is not used for a long period, disconnect the power cable.

6. If this product begins emitting any strange odours or smoke, switch it off immediately and disconnect the power cable.

7. Do not connect this product to any equipment or accessories not foreseen.
For suspended installation, only use the dedicated anchoring points and do not try to hang this product by using elements that are unsuitable or not specific for this purpose. Also check the suitability of the support surface to which the product is anchored (wall, ceiling, structure, etc.), and the components used for attachment (screw anchors, screws, brackets not supplied ), which must guarantee the security of the system / installation over time, also considering, for example, the mechanical vibrations normally generated by transducers.
To prevent the risk of falling equipment, do not stack multiple units of this product unless this possibility is specified in the user manual.

8. Strongly recommends this product is only installed by professional qualified installers (or specialised firms) who can ensure correct installation and certify it according to the regulations in force.
The entire audio system must comply with the current standards and regulations regarding electrical systems.



WARNING

IMPORTANT

9. Supports and trolleys
The equipment should be only used on trolleys or supports, where necessary, that are recommended by the manufacturer. The equipment / support / trolley assembly must be moved with extreme caution. Sudden stops, excessive pushing force and uneven floors may cause the assembly to overturn.

10. There are numerous mechanical and electrical factors to be considered when installing a professional audio system (in addition to those which are strictly acoustic, such as soundpressure, angles of coverage, frequency response, etc.).

11. Hearing loss
Exposure to high sound levels can cause permanent hearing loss. The acoustic pressure level that leads to hearing loss is different from person to person and depends on the duration of exposure. To prevent potentially dangerous exposure to high levels of acoustic pressure, anyone who is exposed to these levels should use adequate protection devices. When a transducer capable of producing high sound levels is being used, it is therefore necessary to wear ear plugs or protective earphones. See the manual technical specifications to know the maximum sound pressure level.

IMPORTANT NOTES
To prevent the occurrence of noise on line signal cables, use screened cables only and avoid putting them close to:
- Equipment that produces high-intensity electromagnetic fields.
- Power cables.
- Loudspeaker lines.

## OPERATING PRECAUTIONS

- Place this product far from any heat sources and always ensure an adequate air circulation around it.
- Do not overload this product for a long time.
- Never force the control elements (keys, knobs, etc.).
- Do not use solvents, alcohol, benzene or other volatile substances for cleaning the external parts of this product.

IMPORTANT NOTES
Before connecting and using this product, please read this instruction manual carefully and keep it on hand for future reference. The manual is to be considered an integral part of this product and must accompany it when it changes ownership as a reference for correct installation and use as well as for the safety precautions. We will not assume any responsibility for the incorrect installation and / or use of this product.

CAUTION: to prevent electric shock hazard, do not connect to mains power supply while grille is removed



IMPORTANT NOTES

CAUTION



## BEFORE INSTALLATION - SAFETY - PARTS INSPECTION

Since this product has been designed to be lifted above objects and people, it is essential to dedicate particular care and attention to the inspection of the product's mechanics, accessories and safety devices in order to guarantee maximum reliability during use.

Before lifting the Line Array, carefully examine all mechanics involved in lifting including hooks, quick lock pins, chains and anchor points. Make sure they are intact, with no missing parts, fully functional, with no signs of damage, excessive wear or corrosion that could compromise safety during use.

Verify that all accessories supplied are compatible with the Line Array and that they are installed correctly according to the instructions provided in the manual. Make sure they perform their function perfectly and are able to support the weight of the device safely.

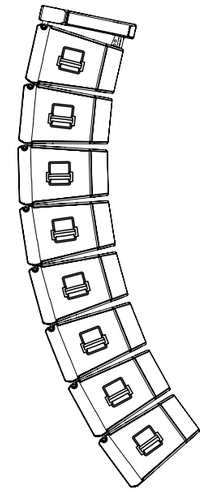
If you have any doubts about the safety of the lifting mechanisms or accessories, do not lift the Line Array and contact our service department immediately. The use of a damaged device or with unsuitable accessories can cause serious injury to you or other people.

When inspecting the mechanics and accessories, pay maximum attention to every detail, this will help ensure safe and accident-free use.

Before lifting the system, have all parts and components inspected by trained and experienced personnel.

Our company is not responsible for incorrect use of this product caused by failure to comply with inspection and maintenance procedures or any other failure.

INSPECTION OF MECHANICS, ACCESSORIES AND LINE ARRAY SAFETY DEVICES



## BEFORE INSTALLATION - SAFETY - PARTS INSPECTION

- Visually inspect all mechanics to ensure there are no desoldered or bent parts, cracks or corrosion.
- Inspect all the holes on the mechanics; check that they are not deformed and that there are no cracks or corrosion.
- Check all cotter pins and shackles and make sure they perform their function correctly; replace these components if it is not possible to fit them and lock them correctly on the fixing points.
- Inspect any lifting chains and cables;check that there are no deformations, corroded or damaged parts.

INSPECTION OF MECHANICAL ELEMENTS AND ACCESSORIES

- Check that the pins are intact and have no deformities
- Test the operation of the pin making sure the button and spring work properly
- Check the presence of both spheres; make sure they are in their correct position and that they retract and exit correctly when the button is pressed and released.

INSPECTION OF QUICK LOCK PINS