

PKSOUND™
Ts15
Intelligent Subwoofer



USER MANUAL
v1.0

Table of Contents

1. Important Safety Information.....	1
1.1 Additional Power Safety Instructions.....	2
2. Approvals	3
2.1 EU Declaration of Conformity & CE Marking:	4
3. Power Requirements.....	5
3.1 Voltage & Current Requirements	5
3.2 AC Input Connectors	5
3.3 Electrical Safety	6
3.4 Environmental Constraints	6
4. Rigging	7
4.1 Rigging Overview.....	7
4.2 Mechanical Limits.....	9
5. .dynamics Remote Software.....	10
5.1 Prerequisites	10
5.2 Installation Procedure.....	10
5.3 Updates.....	10
5.4 User Manual.....	10
6. Local Control	11
6.1 Ts15 Menu Map.....	11
6.2 DSP Adjustments	12
6.3 Ts15 Settings Descriptions	12
6.4 Operation Status Alerts	13
7. Amplification & Audio	14
7.1 Overview	14
7.2 .dynamics Audio Functions	14
7.3 Status Monitoring.....	14
7.4 Thermal & Electrical Protections.....	14
8. Connectivity	16
8.1 Audio Connectors	16
8.2 Cabling Recommendations.....	17
9. Transportation.....	19
9.1 Caster Kit	19
9.2 Covers	20
10. Care & Cleaning.....	21
11. Specifications	22
12. Dimensions	23



1. Important Safety Information

1. Read all instructions thoroughly and keep this manual close at hand.
2. Do not use this module near water.
3. Clean only with a dry cloth.
4. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions and local authority having jurisdiction.
5. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
6. Use a proper polarized or grounding-type plug. If the provided plug does not fit into your outlet, consult an electrician.
7. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
8. Only use attachments/accessories specified by the manufacturer.
9. Use only with the Cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the module. When using a Cart, use caution when moving the Cart/module combination to avoid injury from tip-over.
10. Unplug this module during lightning storms or when unused for long periods of time.
11. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged; liquid has been spilled or objects have fallen into the apparatus; the apparatus has been exposed to rain or moisture; does not operate normally; or has been dropped.
12. The means of disconnection from the live power source is the chassis power connector or main plug. One of these devices must remain accessible when the apparatus is in use.



CAUTION: Do not open the back shell of amplifier assembly. No user-serviceable parts inside. Refer servicing to qualified service personnel. Email support@pksound.ca for service.



WARNING: Failure to follow the instructions in their entirety could result in serious injury or death. Follow all local safety practices and due diligence in ensuring safe working conditions while using the Ts15.



WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.



1.1 Additional Power Safety Instructions

The unit must be powered exclusively by an earth-connected mains socket within an electrical network compliant with IEC 364 or similar local regulations. The user must verify this fundamental safety requirement. If in doubt, consult qualified personnel to inspect the installation before use.

The means of disconnection from the mains is the mains plug. We strongly recommend that you power the unit from a professionally installed mains supply with an easily accessible on/off switch or circuit breaker.

Before powering the unit via the Neutrik® powerCON TRUE1 connector, make sure that the unit is supplied with the correct mains operating voltage:

100 – 240 VAC, 50 – 60 Hz, minimum 12.5 A capacity.

Only power the unit using an input supply cable rated as follows:

- 110-130 VAC: 15 A or higher rated cable
- 200-240 VAC: 20 A or higher rated cable

Only power the unit using a circuit with sufficient load capacity:

- 110-130 VAC: 15 A or higher rated circuit
- 200-240 VAC: 20 A or higher rated circuit

The power section is protected by two non-user serviceable fuses:

- Type 5HT 10 A 250 V Slow Blow

Power Consumption for 1 Unit, No Passthrough Devices Connected: 440 W

Do not exceed 1040 W on passthrough connector @ 120 VAC.

Do not exceed 2056 W on passthrough connector @ 208 – 240 VAC.



CAUTION: Do not block or restrict airflow from the front of the module, doing so will negatively impact performance of the unit.



WARNING: Do not use this unit if the electrical power cord is frayed or broken.



WARNING: Never spray water directly into the front of the module, doing so will expose electronic components to moisture and damage the internal equipment.

2. Approvals

Safety & Compliance:

CSA22.2 No. 62368-1:14

UL 62368-1

IEC 62368-1

EN 61000-4-2 - Electrostatic Discharge EN 61000-4-3 - Radiated Immunity EN 61000-4-4 - EFT EN 61000-4-5 - Surge EN 61000-4-6 - Conducted Immunity EN 61000-4-8- Power Line Magnetic Fields EN 61000-4-11- Voltage dips, short interrupts EN 61000-3-2/3 - Current Harmonics & Voltage Fluctuations FCC18/ICES-001/BSMI/VCCI/EN 55011 - Class A Conducted Emissions FCC18/ICES-001/BSMI/VCCI/EN 55011 - Class A Radiated Emissions Reports: BSMI, VCCI, FCC15, ICES-001, BS/EN55011 & EN61326-1

Environmental:

IP54

Mechanical Strength:

European Machinery Directive 2006/42/EC

CSA C22.2 No.62368-1:19 + UL 62368-1

Risk Assessment:

DIN EN 12100

Country of Origin:

Canada

This is a Class A product. In a domestic environment, this product may generate electromagnetic interference (EMI) in other products, requiring the user to take mitigative efforts.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

2.1 EU Declaration of Conformity & CE Marking:

This declaration applies to the following products manufactured by PK Sound Corp. and includes all types listed below.

Product Name:

- Ts15 (905-0011)

We herewith declare that said products are in conformity with the provisions of the following EU directives, including all applicable amendments:

2014/35/EU, LVD Directive

- EN 62368-1 2014

2014/30/EU, EMC Directive

- EN 55103-1:2009 +A1:2012
- EN 55103-2:2009

2011/65/EU, RoHS Directive

- EN 63000:2018

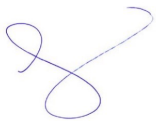
2006/42/EC, European Machinery Directive

- Ts15 Bracket Set (923-0010)

Manufacturer:

PK Sound Corp.
235075 Ryan Rd.
Rocky View, Alberta, Canada
T1X 0K3
www.pksound.live

All production versions of these types are included, provided they correspond to the original technical version and have not been subject to any later design or electromechanical modifications. PK Sound Corp. accepts responsibility for this declaration.



Jeremy Bridge P.Eng
CEO

Signed June 1, 2025, in Rocky View, Canada

3. Power Requirements

3.1 Voltage & Current Requirements

The Ts15 operates safely and continuously with a supplied mains input between 100-240 VAC at 50 or 60 Hz. The loudspeaker allows any combination of voltage to ground (neutral-line-ground or line-line-ground). If the voltage exceeds 275 V, the power supply could become damaged.



CAUTION: To ensure that Ts15 performs as specified, without interruption, and without damage to its power supply, its power source must operate within the required voltage window (100–240 VAC) and its AC cable length and gauge must be such that peak voltage drops do not exceed 5 percent of its voltage.

When Ts15 modules are powered from a three-phase power source, it is very important to keep a good balance in the load of each phase of the AC power. It is also necessary to include subwoofers, array sources, and other loudspeakers in any power distribution calculations.

3.2 AC Input Connectors

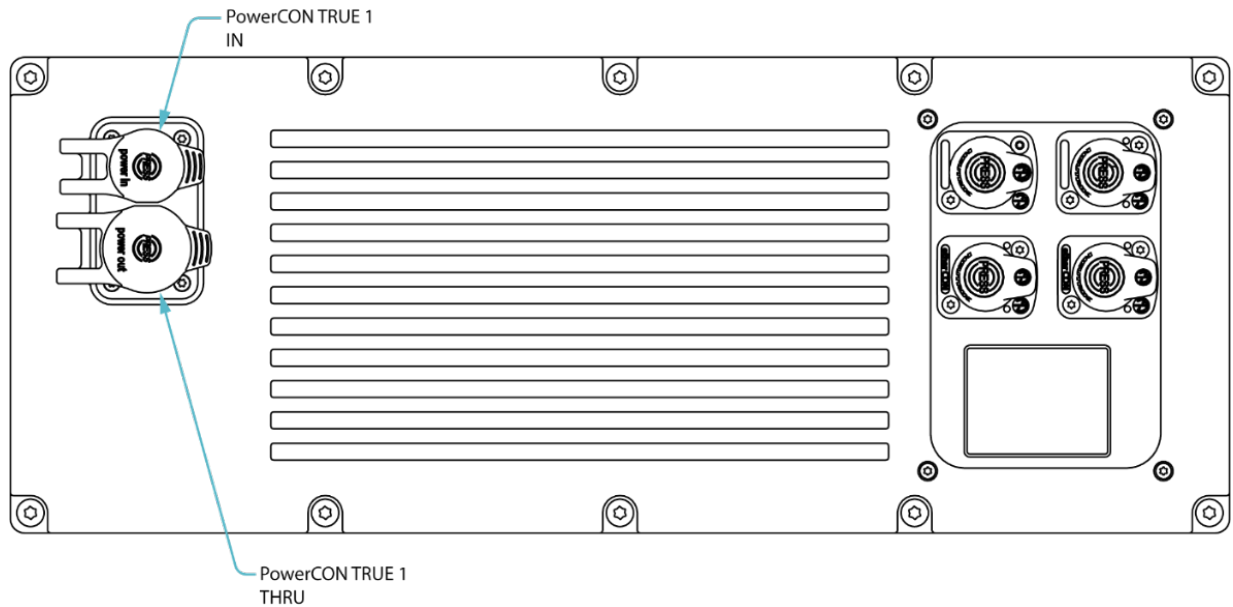
Each Ts15 module has Neutrik powerCON TRUE1 NAC3PX inlet-outlet to supply power and daisy chain other modules. The NAC3PX is rated for 16A.

The maximum recommended number of modules per circuit is as follows:

- 240 VAC, 20 A circuit: 12 Modules
- 208 VAC, 20 A circuit: 10 Modules
- 120 VAC, 20 A circuit: 6 Modules

Exceeding this limit may engage circuit breakers in high-output use cases.

The Neutrik powerCON TRUE1 connector is rated at IP65 when mated. Unmated connections are not IP rated.



3.3 Electrical Safety

Pay close attention to these important electrical and safety guidelines.

1. Ts15 requires a grounded outlet. Ensure the presence and functionality of the ground in connected circuits, as well as in all outlets and cables used.
2. Do not use a ground-lifting adapter or cut the AC cable ground pin.
3. Ensure the AC power cable for the loudspeaker has a power plug suitable for the operating region.
4. Do not operate the module if the power cable is frayed or broken.
5. Keep all liquids away from Ts15 modules to avoid hazards from an electrical shock.

3.4 Environmental Constraints



WARNING: Never spray water directly into the front of the module, doing so will expose electronic components to moisture and damage the internal equipment.



WARNING: Never disconnect, attach or interconnect cables when the cable or module is wet. In the event the module becomes wet, the user must ensure all power has been removed prior to disconnecting or reconnecting.

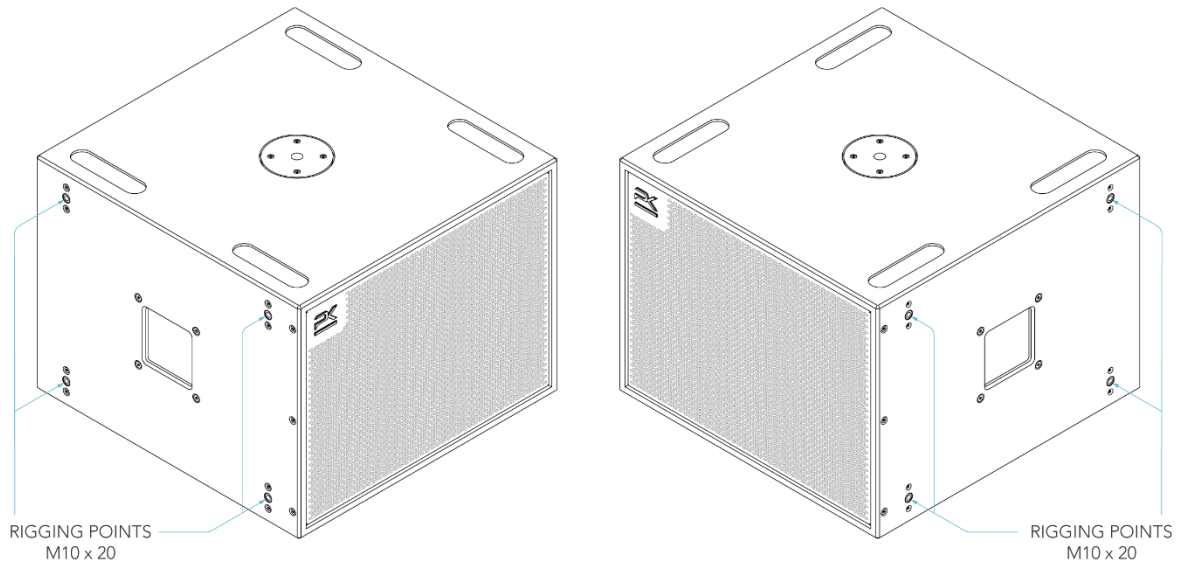
NOTE: For any permanent installation the user must consult the manufacturer.

Support@pksound.ca

4. Rigging

4.1 Rigging Overview

The Ts15 features 8x M10 rigging points, these are located on the side faces for ceiling mounting or suspension.



CAUTION: Do NOT hang speakers from handles. Use only designated rigging points.



CAUTION: Ensure all rigging components, including eye bolts, cables, and anchor points, are rated to support the total system weight and comply with local laws and safety regulations. Use only hardware that meets or exceeds the required load-bearing capacity.

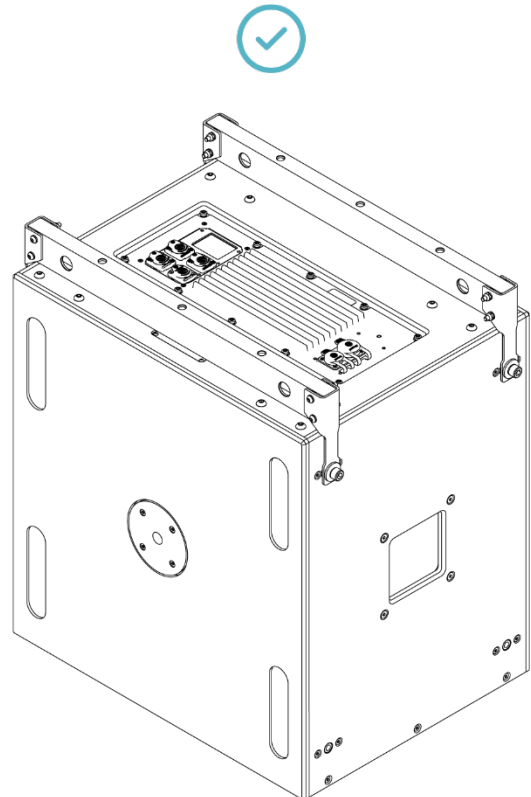
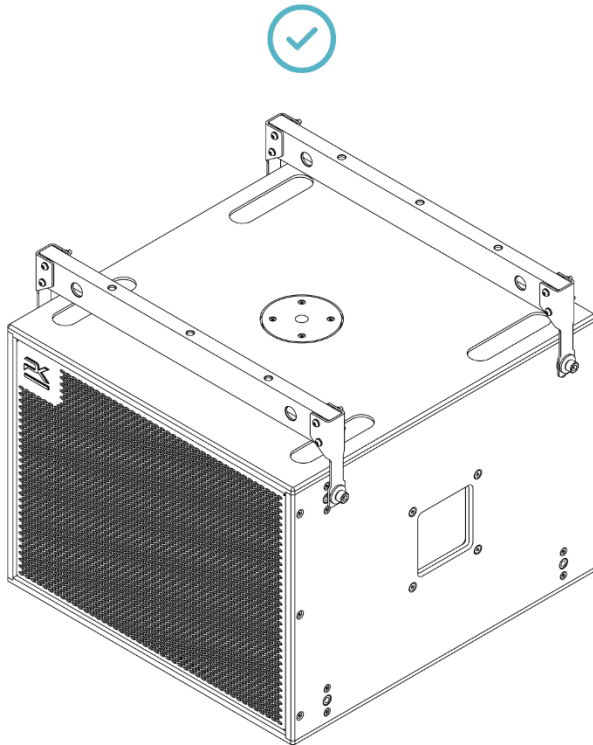


CAUTION: Rigging lines must be secured to a load-bearing structural element only. Do not attach to drywall or other non-structural materials.

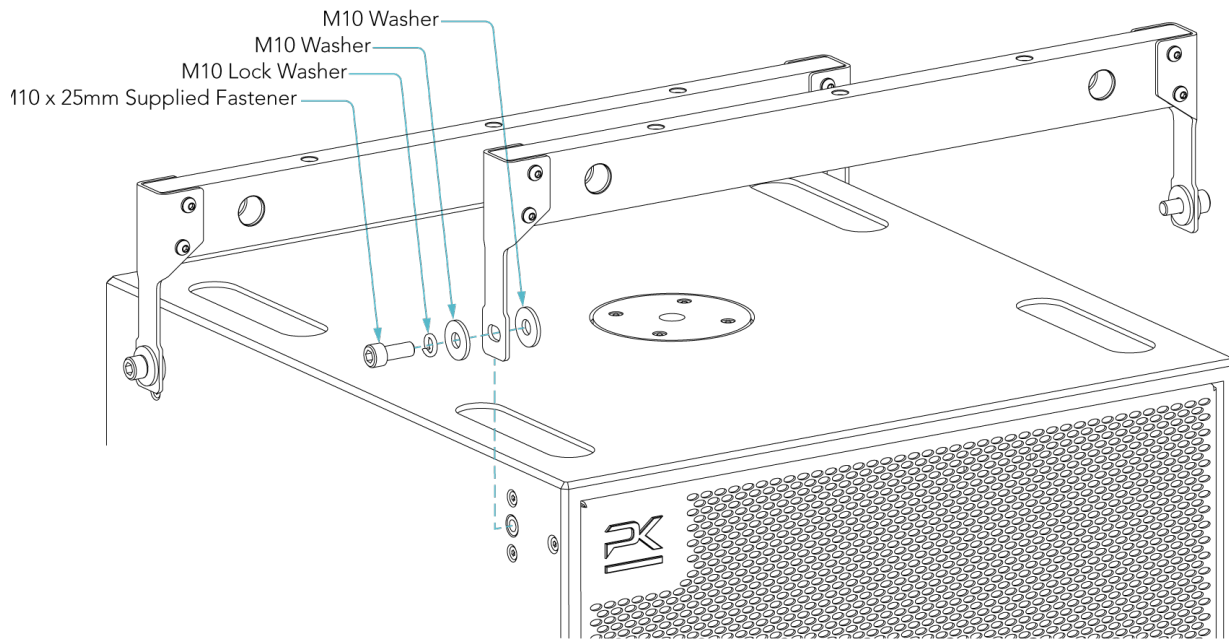


CAUTION: Verify all rigging points are properly engaged before applying any load.

The images below illustrate approved rigging configurations using the Ts15 Bracket Set [923-0010] (sold separately) and M10 rigging points.



The M10 Bolts included with the Ts15 Bracket Set must each be torqued to 36N/m. It is recommended that they are tightened by hand using a torque wrench to avoid galling.



CAUTION: Wall mounting is not permitted.



CAUTION: Only single unit hangs are permitted.

4.2 Mechanical Limits

The Ts15 rigging system complies with **CSA C22.2 #62368-1:19 (IEC 62368-1:2018, MOD)**

5. .dynamics Remote Software



WARNING: Never adjust the system while playing music or with any person or object within 2m of the loudspeaker.

5.1 Prerequisites

The .dynamics software is required to remotely manage your Ts15 modules and access the full range of its functionality.

5.2 Installation Procedure

The latest release of the .dynamics software can be downloaded at:

<https://pksound.live/product/dynamics>

5.3 Updates

.dynamics will automatically prompt the user to update to the latest released version if there is an internet connection available. Follow the in-app prompts to complete the update. The new version will be available upon relaunching the software.

5.4 User Manual

The **.dynamics** User Guide is included in every release of the software. To access it, download and install **.dynamics**, then select File > User Guide.

6. Local Control

If a computer with .dynamics is not available, or in case of a network error, it is possible to operate each Ts15 module through the LCD touchscreen user interface on the back of each module. Swiping left, right, up, down, or tapping the screen allows for navigation through the local control menu options.

6.1 Ts15 Menu Map

- DSP
 - Input Trim
 - Gain
 - [0.0 dB - 10.0 dB] $\pm$ 0.1 dB
 - Delay
 - [0 ms – 1000 ms] $\pm$ 50 ms
 - Mute
 - On
 - Off
 - Input
 - AES
 - Milan
 - Analog
- Settings
 - Network
 - Back
 - Service Note
 - Set
 - Edit
 - Back
 - LED Logo
 - Colour
 - [White, Red, Green, Blue, Orange, Yellow, Lime, Cyan, Purple, Pink, Glacial, Navy]
 - State
 - [On, Off, Blink]
 - Back
 - Screen
 - Backlight
 - Audio

- On
- Off
- Dark Mode
 - On
 - Off
- Portrait
 - On
 - Off
- Back
- About
 - Back

6.2 DSP Adjustments

DSP adjustments can be made using the local controls by selecting the *DSP* tab. The settings which can be adjusted are:

- Muting or unmuting the Ts15 module
- Adjusting gain from 0.0 dB to 10.0 dB in increments of 0.1 dB
- Adjusting delay from 0 to 1000 ms in increments of 50 ms
- Changing the input type to AES, Milan, or analog

6.3 Ts15 Settings Descriptions

Menu Item	Sub-Menu Item	Description
Network	-	Displays the current IP address, net mask, gateway, and MAC addresses.
LED Logo	State	Allows the user to change the PK logo light on the front of the Module to either ON, OFF, or BLINK.
	Colour	Allows the user to change the colour of the PK logo light on the front of the Module.
Screen	Backlight	Allows the user to select the mode of the LCD backlight to OFF/ON/Audio Status.
	Dark Mode	Allows the user to change the display dark mode of the LCD to ON or OFF.
	Portrait	Allows the user to change the display of the LCD to portrait or landscape orientation.

Menu Item	Sub-Menu Item	Description
Service Note	-	Previously added service notes can be viewed and cleared. If a module is malfunctioning, the service flag can be set (and correspondingly cleared) through this menu. If the service flag is set, the LCD will display a yellow backlight to let the user know that the box was flagged.
About	-	Displays the current product, firmware versions, component serial numbers, and component MAC addresses for the Ts15 module.

6.4 Operation Status Alerts

During operation, the LED display will change colour depending on the status of the Ts15 module. The following table summarizes the statuses associated with specific display colours ordered from lowest to highest display priority.

Display Colour	Module Status
Purple	Idle
Blue	.dynamics Connected
Green	Playing Audio
Yellow	Service Flag
Red	System Failure

7. Amplification & Audio

Powerful signal processing tools are employed to optimize acoustic performance, including high-quality equalizers, limiters, delays, and FIR filters. The amplifier is also equipped with extensive protection circuitry: power limiters, thermal shutdown, short circuit and overload protection and a clip limiter.

7.1 Overview

The Ts15 subwoofer is powered by an integrated Class-D amplifier specifically designed for multi-way loudspeakers and asymmetric loads. It can deliver up to 2400 W granting the highest power available for driver. This amplifier features dual-mode active cooling via fans and routed port flow to maximize thermal dissipation. As a result, the Ts15 delivers unparalleled transients and consistent output.

Patented built-in PFC (Power Factor Correction) allows the amplifier to achieve optimal, consistent performance in all operating conditions worldwide. Intelligent rail management technology maximizes the efficiency of the system and drastically reduces power consumption at any load condition.

7.2 .dynamics Audio Functions

The Ts15 features a complete suite of onboard DSP functionality, configurable through the .dynamics software. This includes subwoofer presets, gain, delay, and filters.

Please refer to the .dynamics software's user manual (accessible from the .dynamics software interface) for further details.

7.3 Status Monitoring

Status monitoring is similarly performed using .dynamics. Module input levels, output levels, gain reduction, limiting, and protections are all provided per speaker. Additionally, the color of the LED logo may be changed (or turned off entirely) to aid in module identification.

Loudspeaker service notes and "Service Required" flags may also be saved to the amplifier to indicate service history or a need for immediate service. Refer to the .dynamics user manual.

7.4 Thermal & Electrical Protections

Temperature Warning – When the Ts15 module heats up to 65°C, a yellow warning light will flash on that module's workspace visual representation in .dynamics to indicate to the technician that the module is 15°C away from a thermal protect scenario.

Thermal Protect – When the Ts15 amplifier's internal temperature exceeds 60°C., a temperature-controlled fan is engaged. When the amplifier reaches 70°C, the amplifier engages a progressive thermal limiter that increases gain reduction with higher temperatures. At 85°C the system shuts off completely to prevent damage. The yellow warning indicator will be replaced with a red indicator in the .dynamics workspace visual.

Output Loading Error – The amplifier will automatically detect problematic loading scenarios, such as damaged voice coils or a missing driver. Upon detection of such a load, the output amplification is immediately

disabled. Dynamics functionality is unaffected by this shutdown, and the amplifier will restart if the condition clears.

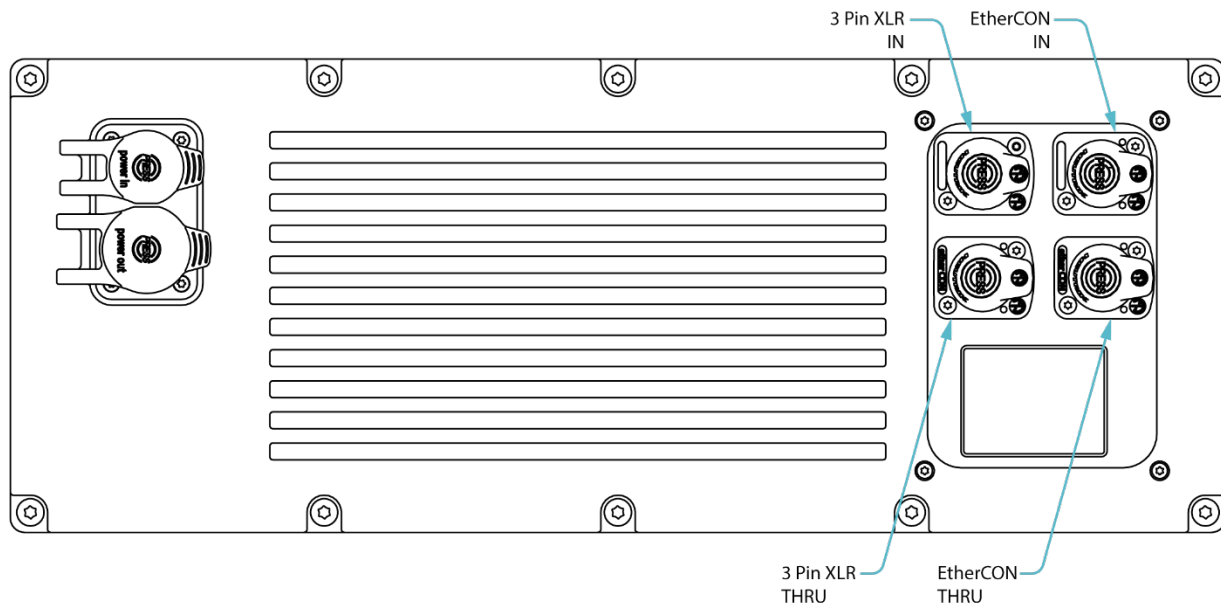
Output Protection – The amplifier outputs are monitored, and limiters will engage to prevent overloading of mains voltage inputs and damage to the loudspeaker.

Clipping – Limiters are used to prevent signals from exceeding rated limits.

Input Overvoltage and Overcurrent Protection – if AC mains inputs exceed 280 VRMS, the loudspeaker will automatically shut down and periodically attempt to restart.

8. Connectivity

The Ts15 rear panel utilizes PK Sound's VE30 amplifier which provides analog, digital AES3, and ethernet connectivity and allows configuration of the loudspeaker via PK's .dynamics software. There are 3-pin XLR & EtherCon, input and pass-through jacks, for analog audio.



8.1 Audio Connectors

etherCON Input – The etherCON cable provides a CAT-5 input into the Ts15 via the EtherCon connector. The CAT-5 ethernet input allows for connection to the .dynamics software network while also accommodating Milan/AVB. The etherCON cable can also provide AES3 input in certain configurations. To maintain the IP rating of the connector, mate with only Neutrik TOP or DR connectors. Ensure the Cover is in place when not in use.

Audio Input (XLR 3-Pin Female) – The audio input is a three-pin XLR female connector which accepts balanced audio signals with an input impedance of 10 k Ω . It uses the following wiring:

Pin 1 – 220 k Ω to chassis and earth ground

Pin 2 – Positive polarity signal (+)

Pin 3 – Negative polarity signal (-)

Case – Earth (AC) ground and chassis

Note: Analog input signals over 16 dBu (4.8 Vpk) will engage limiters or clip.

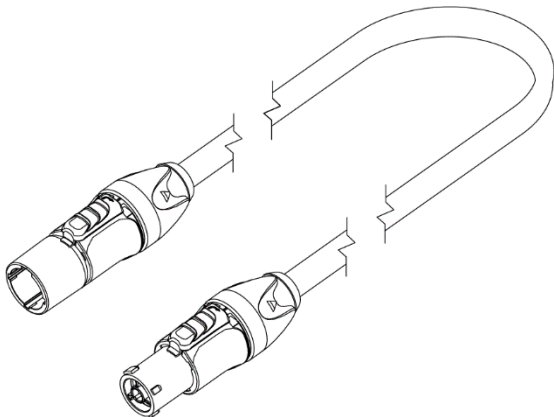
Digital Input AES (AES 3-Pin Female) – A secondary digital audio input is provided as a redundancy. This is a 3-pin XLR female which accepts digital AES data. AES uses 110 Ω shielded twisted pair (STP) cable with XLR connectors up to a distance of 100m. It uses the following wiring:

Pin 1 – 220 k Ω to chassis and earth ground

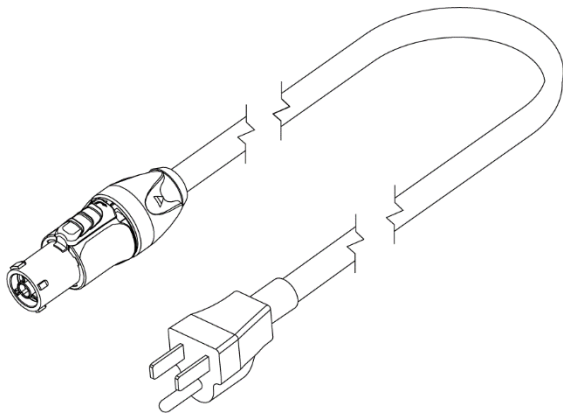
Pin 2 – Positive polarity signal (+)

Pin 3 – Negative polarity signal (-)

powerCON Jumper – Used to daisy-chain Ts15 boxes via the parallel powerCON TRUE1 AC inputs.



powerCON Edison Cable – To power a single Ts15 module, a powerCON TRUE1 to standard IEC/Edison is available.



8.2 Cabling Recommendations

It is recommended to add ferrites to all input signal and power cables used with modules to limit the effects of EMI (electromagnetic interference).

Maximum Cable Lengths

Cable Type	Max Supported Distance (m)	Max Supported Distance (ft)
XLR	91	300
AES3	91	300
Ethernet	91	300

Recommended Connection Cable Lengths

Connection Type	Recommended Cable Length (m)	Recommended Cable Length (ft)
Ts15-Ts15	0.6	2
Ts15-Ts15 Cardioid	1.5	5
Ts15-Pole Mounted Tx	1.5*	5*

* Note: Cable length depends on the pole mount used.

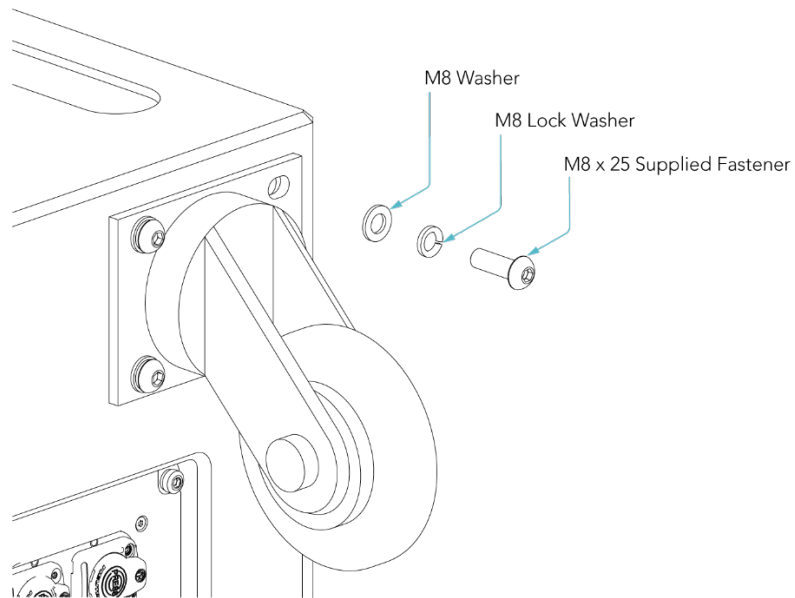
Recommended Cable Connectors

Cable Type	Male Connector	Female Connector
XLR	Neutrik NC3MX1-TOP	Neutrik NC3FX1-TOP
AES3	Neutrik NC3MX1-TOP	Neutrik NC3FX1-TOP
Ethernet	Neutrik NE8MX-B-TOP/14	-

9. Transportation

9.1 Caster Kit

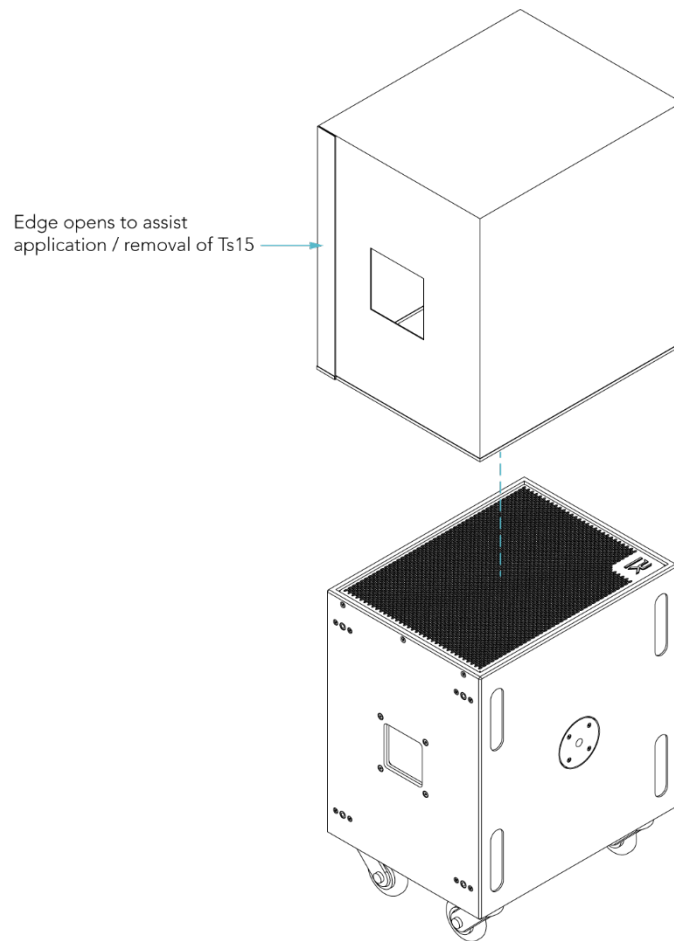
The TS15 features an optional caster mounting location on its rear panel, making transport even more convenient. PK Sound offers a dedicated caster kit, which includes two locking casters, two non-locking casters, and all necessary mounting hardware. The protective Cover is designed to be fully compatible with the caster kit, ensuring seamless use while keeping your speaker protected on the move.



Ensure M8 Washer & M8 Lock Washers are installed with M8 Machine Screws on 4 Places per Caster. All M8 Caster fasteners must be torqued to 30N/m.

9.2 Covers

The Cover is intended to protect the Ts15 from dust, abrasion, and light impacts during transportation. The Cover is designed to maximize protection for the grill when the Caster Kit is installed. Removal and application of the Cover is quick, and the design allows continued access to the handles.



10. Care & Cleaning

Ts15 loudspeakers are coated with a resilient, tour-proven modified polyurea coating. It may be cleaned with a mild soapy damp microfiber cloth and wiped with a dry cloth. To reduce the risk of electrical shock, ensure the system is unplugged from AC power before cleaning. To clean dust off the speaker cone, use a can of compressed air such as a commercial air duster. Do not blow dust into the horn; it may damage the high-frequency compression driver.

11. Specifications

Output Capacity		
Frequency Response	33 Hz – 130 Hz (±10 Hz)	
Peak SPL	136.5 dB (M-noise)	
Transducer		
Low-Frequency Driver	15"	
Amplification		
Amplifier	Class-D	
Amplifier Output Power	2400 Wrms	
Operating Voltage	Auto-switching 100-240 V, 50 - 60 Hz	
Power Consumption (Rated Load)	440 W	
Input Impedance	10 kΩ Balanced	
Nominal Input Sensitivity	0 dBu	
Network Control	AES70	
Input/Output Connections		
Audio/Network	Balanced XLR / 14 pin Amphenol IP65	Balanced XLR / Ethernet IP65
Input Selection	Analog/AES3/Milan	Analog/AES3/Milan
Module Auto-Array	Network only	
AC Power Input	powerCON TRUE1	
Local Control		
Touch Screen	2.4" TFT	
DSP Control	Gain, Delay, Mute, Preset Selection	
Environmental Conditions		
Temperature	0°C - 35°C	
Altitude	For optimal performance use lower than 2000m	
Physical Properties		
Module Construction	Void-Free, High-Grade Baltic Birch	
Rigging Construction	8 x M10 Steel	
Finish	Tour-Grade High-Impact EXL Polyurea	
Grill	Powder Coated Steel	
Dimensions (W x H x D)	560 mm x 448 mm x 574 mm 19.8" x 7.6" x 11.9"	
Weight	31 kg (68.34 lbs)	

12. Dimensions

