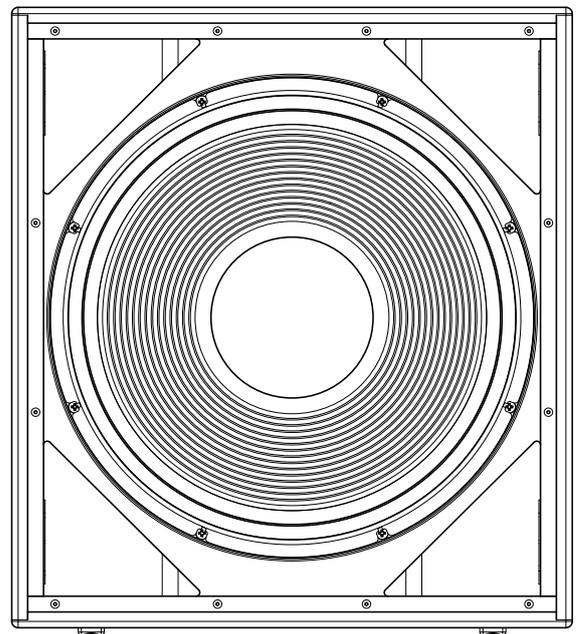
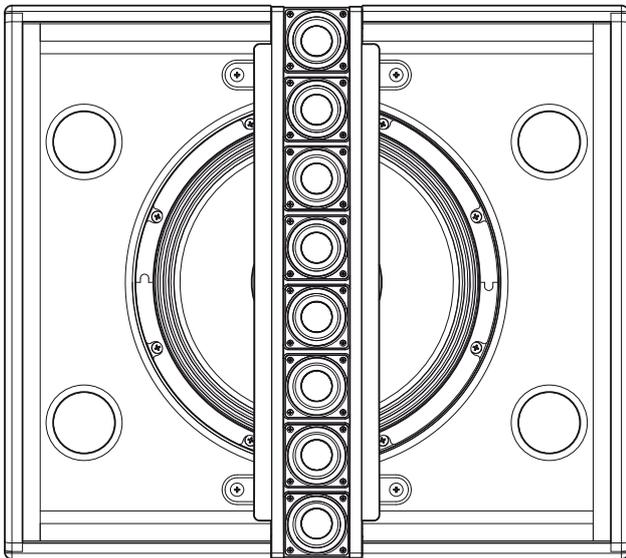


# CDL-series

## Constant Directivity Loudspeakers

### Owner's Manual





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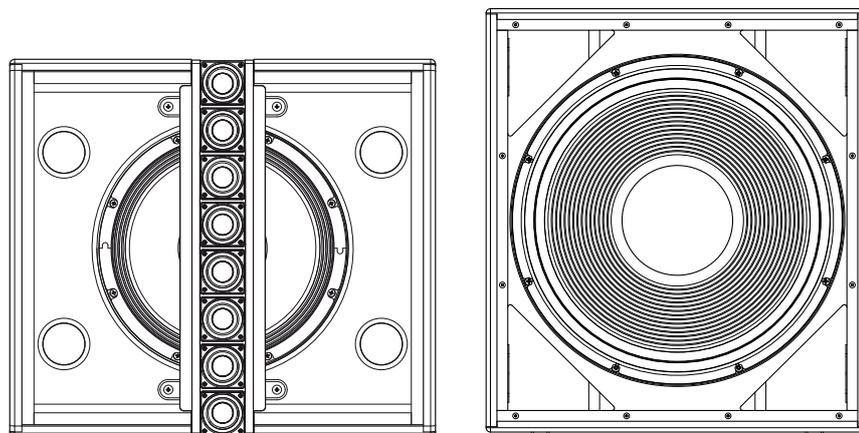
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## 1 Overview

### 1.1 Introduction



**Thank you** for purchasing a PreSonus® CDL-series loudspeaker. The CDL12 utilizes a unique design that takes advantage of Constant Directivity Loudspeaker (CDL) technology by placing eight 2-inch high-frequency drivers in a 20° constant curvature vertical array, centered in front of a 12-inch woofer. This allows the CDL12 to radiate sound in a focused directional pattern with up to 120° of vertical coverage when using six boxes rigged together. The CDL12 is a true hybrid of both point-source and line-array speaker designs that combine the beneficial elements of both technologies.

The companion CDL18s subwoofer is a 1000W 18" subwoofer with a 4" voice coil. Fully compatible for all supported suspended and pole-mounted applications, the CDL18s naturally extends the range of the CDL12, whether used individually or in an array.

We encourage you to contact us with questions or comments regarding this product. PreSonus Audio Electronics is committed to constant product improvement, and we value your suggestions highly. We believe the best way to achieve our goal of constant product improvement is by listening to the real experts: our valued customers. We appreciate the support you have shown us through the purchase of this product.

### 1.2 About This Manual

This manual covers hardware features and functions for both the CDL12 and the companion CDL18s subwoofer. We suggest that you use the manual to familiarize yourself with the features, applications, and connection procedures for your CDL-series loudspeakers before trying to set up and operate them.

In many respects, the functions of the CDL12 and CDL18s are the same. Whenever possible, these features and functions will be described for both.

Throughout this manual, you will find **Power User Tips** highlighting unique aspects of your CDL-series loudspeaker.

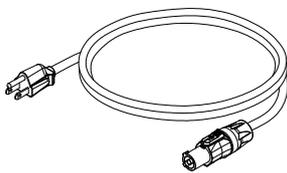
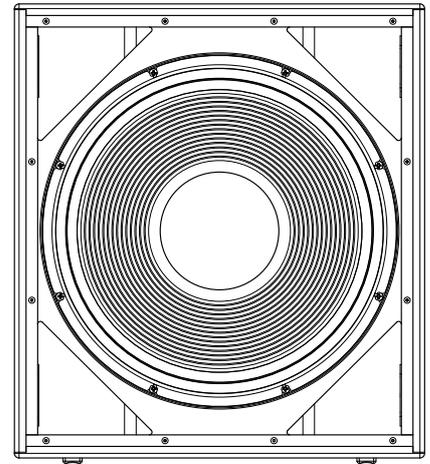
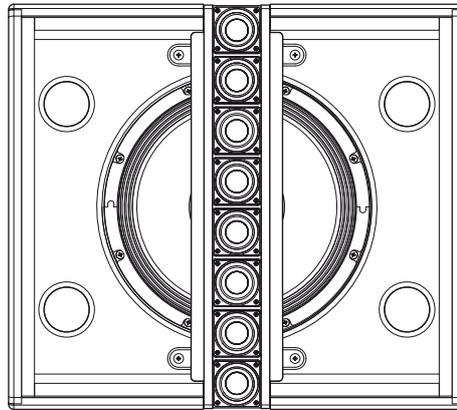
Separate companion guides for the Worx Control application and recommended Dante deployment guidelines are available at [PreSonus.com](http://PreSonus.com)

Thank you, once again, for buying our product. We are confident that you will enjoy your CDL-series loudspeakers!

### 1.3 What is in the Box

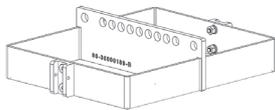
In addition to this manual, your CDL package contains the following:

- (1) CDL12 or CDL18s Loudspeaker

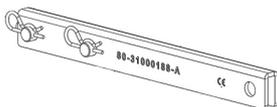


- (1) AC powerCON® 14AWG cord

### 1.4 Rigging Accessories (Sold Separately)



- CDL Rigging Grid



- CDL Rigging Extension Bar



- CDL Rigging Sling

### 1.5 Downloads

Once you register your CDL-series loudspeaker at [My.PreSonus.com](http://My.PreSonus.com), you will be able to download Worx Control software. This application allows you to connect your CDL-series loudspeaker to a standard LAN network to access presets for arrays containing more than two loudspeakers. Additional features include:

- 8-band Selectable EQ (High/Low Pass, High/Low Shelf, PEQ, Allpass)
- Limiter
- Delay
- Compression
- Performance Monitoring

## 2 Application and Deployment

The CDL12 can be configured as an individual point-source loudspeaker or in a vertical array with other CDL12 loudspeakers and the CDL18s Subwoofer. Integrated rigging makes easy and secure box-to-box deployment. When suspending two or more arrayed CDL-series loudspeakers, PreSonus requires the CDL Rigging Grid. This separately sold rigging grid allows the suspension up to (6) CDL12 loudspeakers or up to (5) CDL12 loudspeakers with up to (2) CDL18s subwoofers to be suspended in a vertical array. For all supported configurations, *see the chart in Section 2.6.*

Up to two CDL12 loudspeakers maybe be used on a tripod or on a sub pole over the CDL18s subwoofer (*See Section 2.7 for restrictions and guidelines*). The CDL12 is equipped with a two-position pole-mount to provide more flexible coverage when pole-mounted (0° or 10° downward).

*IMPORTANT: In all cases, when rigging loudspeakers together, attach the bottommost unit to the loudspeaker directly above it, moving up the grid to the topmost unit, ending with the CDL Rigging Grid.*

 **WARNING:** *The CDL12 weighs 65 lbs. (29.5 kg). The CDL18s weighs 105 lbs. (47.6 kg) Use proper lifting techniques to avoid serious injury. Please see Section 2.4 for Maximum Suspended Load.*

 **WARNING:** *When assembling or disassembling arrayed loudspeakers, make sure that all components are properly supported throughout the entire process to avoid damage or injury.*

 **WARNING:** *To ensure secure latching, verify that the loudspeakers are properly aligned for box-to-box vertical arraying. If loudspeakers are not properly aligned, physical damage, and personal injury may occur. The top of each loudspeaker should be parallel to the bottom of the unit above it. For suspension, the topmost unit must be securely attached to the CDL Rigging Grid.*

### 2.1 Getting Started

Before you begin, here are a few general rules of thumb:

- Always make sure your loudspeakers are powered off when making connections.
- Do not allow your inputs to clip. Watch the Clip LED on the back of your loudspeaker. When this LED illuminates, it indicates that the analog-to-digital converters are in danger of being overdriven. Overdriving the converters causes digital distortion, which sounds terrible.

Your PA and attached equipment should be powered on in the following order:

1. Sound sources (keyboards, D.I. boxes, etc.) connected to your mixer
2. Mixer
3. CDL-series Loudspeakers

When it's time to power down, your system should be turned off in the reverse order.

### 2.2 Cooling

CDL-series loudspeakers are internally-powered. As such, they utilize a power amplifier that produces heat. Allow a minimum of 6" (152.4 mm) clearance at the rear of the enclosure for cooling. Do not restrict airflow to the rear of the speaker enclosure.

 **CAUTION:** *To avoid overheating, do not install enclosures with the amplifier panels exposed to direct sunlight. This can heat the amplifier module and reduce performance. Install sunshades to avoid direct exposure. The maximum ambient temperature for full performance should not exceed 104° F (40° C).*

 **CAUTION:** *Do not install enclosures where they will be exposed to rain or other moisture. CDL-series loudspeakers are not weatherproof. Protection from the elements must be provided in outdoor installations.*

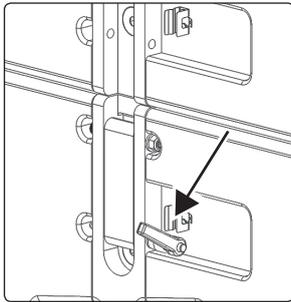
## 2.3 Important Safety Instructions

 **WARNING:** Failure to observe the following safety precautions may result in severe injury or death. Installations such as described in this guide should only be attempted by a trained professional.

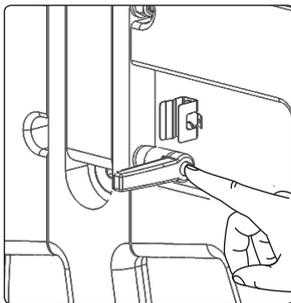
- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Before installing or suspending any CDL-series loudspeaker, inspect all hardware, the enclosure, and associated equipment for damage. Missing, corroded, or deformed components, or components without correct load ratings, could significantly reduce the strength of the installation or placement and should immediately be repaired or replaced.
- Always make sure that the structure the loudspeaker is to be suspended from has been approved by the building or structural engineer and will support the weight of all the components of the speaker system including speakers, speaker cable, wire rope, etc.
- Consult a licensed professional structural engineer regarding physical equipment installation.
- Do not suspend loudspeakers directly over people.
- Use only hardware that is rated for the load conditions of the installation and that allows for a possible short-term, unexpected overload. Never exceed the rating of the hardware or equipment.
- PreSonus strongly recommends that the system be inspected at least once a year and logged. If any sign of weakness or damage is detected, remedial action should be taken immediately.
- All installation crew members must be trained for loudspeaker rigging and mounting.
- Make sure that all relevant health and safety regulations are known, are followed by the installation crew, and are in compliance with applicable local laws. Local government offices can help with this information.
- Suspended installations must be completed or supervised by a certified rigger.
- The system should be designed so that it is a static suspension. There should be no dynamic or shock loading.
- Personal protective equipment (hard hats, steel-toed footwear, safety glasses, etc.) should be worn at all times by the installation crew.
- If called for in the design, make sure all installation personnel are trained to work at height and have certifications for scissor lifts, theatrical hoists, etc.
- Make sure all lifting equipment (slings, span-sets, deck chain, scaffolding, etc.) is in good working order. Thoroughly inspect all components prior to use.
- Inspect all the components associated with the project for damage before assembly. Any parts with damage or suspected damage should not be used. Contact the component manufacturer for replacement parts if necessary.
- Keep a tidy workplace. Do not leave tools, rigging items, etc., on top of loudspeakers during installation. Loose items can fall and cause injury.
- Never leave the system unattended during the installation process. Make sure that the workspace is isolated from public access. No one should be allowed to pass beneath the loudspeakers during installation.
- Do not suspend any other components or loudspeakers from PreSonus CDL-series loudspeakers other than the supported configurations described in this manual.
- If secondary steel safeties are required, they should be installed once the entire system is at operating height and before public access is allowed.

## 2.4 Rigging Instructions

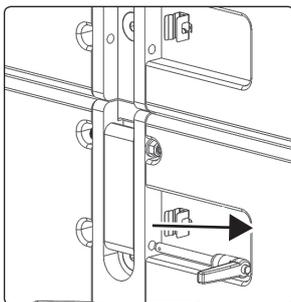
CDL-series loudspeakers feature integrated rigging pins. The integrated rigging pins function the same whether you are attaching CDL12, CDL18s, or the CDL Rigging Grid.



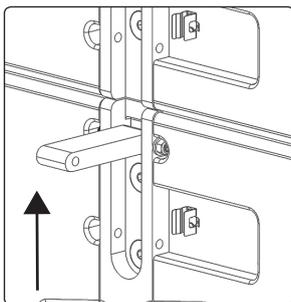
1. Rotate the pin to the forward 90°.



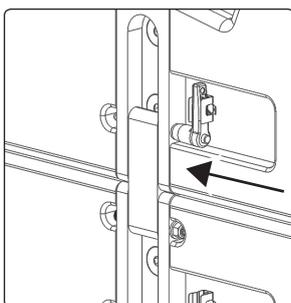
2. Press the release button to unlock the pin.



3. Pull out the pin.

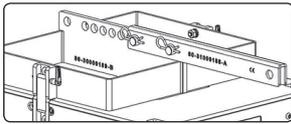


4. Flip the rigging clasp 180°.

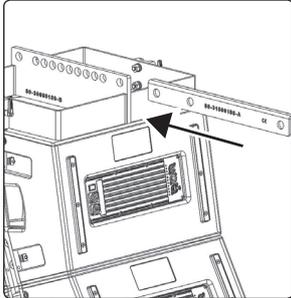


5. Insert the pin into the upper hole of the rigging clasp until it locks, and rotate it up to lock the handle in place.

## 2.5 CDL Rigging Extension Bar Installation Instructions

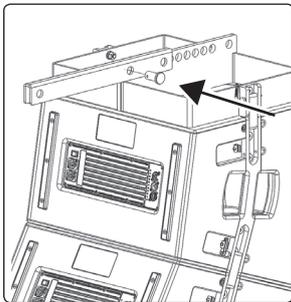


The CDL Rigging Extension Bar is an optional accessory for the CDL Rigging Grid that provides upward or downward tilt control for any suspended installation that requires it.

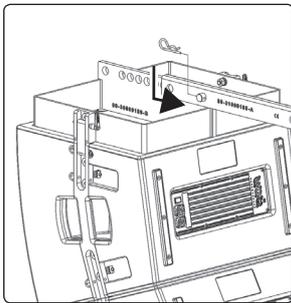


1. Align the CDL Rigging Extension Bar with the center support of the CDL Rigging Grid.

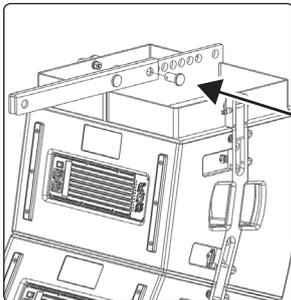
For downward tilt, the bar should be mounted at the rear of the loudspeaker array. For upward tilt, the bar should be mounted at the front of the array. The illustrations in this section show the downward tilt configuration only.



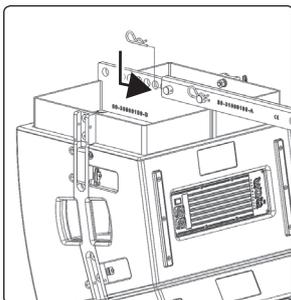
2. Insert the first clevis pin into the outermost through-hole.



3. Lock the clevis pin in place using a cotter pin.



4. Insert the second clevis pin into the inner through-hole.



5. Insert a cotter pin into second clevis pin to lock it into place.

## 2.6 Suspending the CDL Array

**⚠ WARNING:** Consult a professional mechanical or structural engineer, licensed in the jurisdiction of the sound system installation, to review, verify, and approve all attachments to the building or structure. Employ the services of a certified, professional rigger for hoisting, positioning, and rigging the equipment to the supporting structure. Improper suspension can lead to serious damage, injury, or death.

**⚠ WARNING:** Review all safety instructions in **Section 2.3**.

The table below shows the maximum suspended loudspeaker load configurations. Deploying loudspeakers that exceed the supported configurations below can lead to serious damage, injury, or death. PreSonus has tested the configurations below for safety. Please note that the structure from which you are suspending any CDL-series loudspeaker array must be able to support that total weight.

**DO NOT SUSPEND LOUDSPEAKERS DIRECTLY ABOVE THE AUDIENCE**

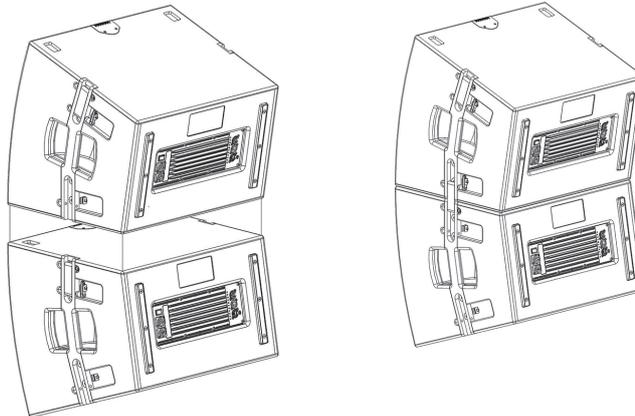
Supported Suspended Loudspeaker Configurations						
Maximum Number of CDL12 Loudspeakers	0	2	3	4	5	6
Maximum Number of CDL18s Loudspeakers	5	2	2	2	2	0

Individual Component Weight			
CDL12	CDL18s	CDL Rigging Grid	CDL Rigging Grid Extension Bar
65 lbs (29.5 kg)	105 lbs (47.6 kg)	24 lbs (10.9 kg)	5.8 lbs (2.6 kg)

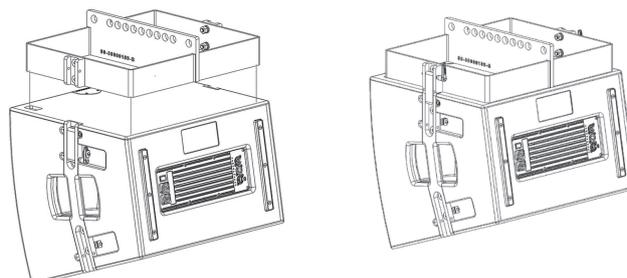
**⚠ WARNING:** All PreSonus CDL-series rigging and rigging accessories are rated for a 10:1 load. Structural suspension supports must also be rated for a 10:1 load.

## 2.7 Supported Configurations

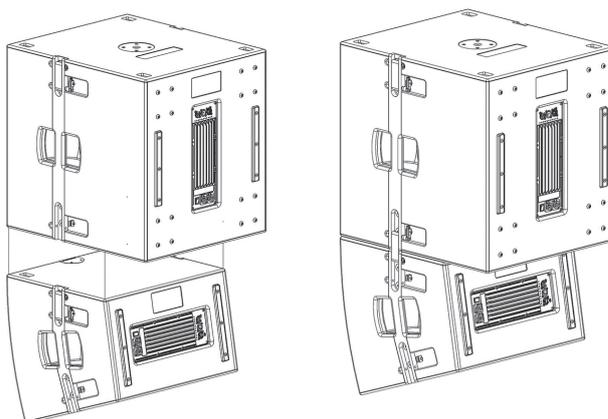
### 2.7.1 Rigging a CDL12 to Another CDL12



### 2.7.2 Rigging a CDL12 to a CDL Rigging Grid

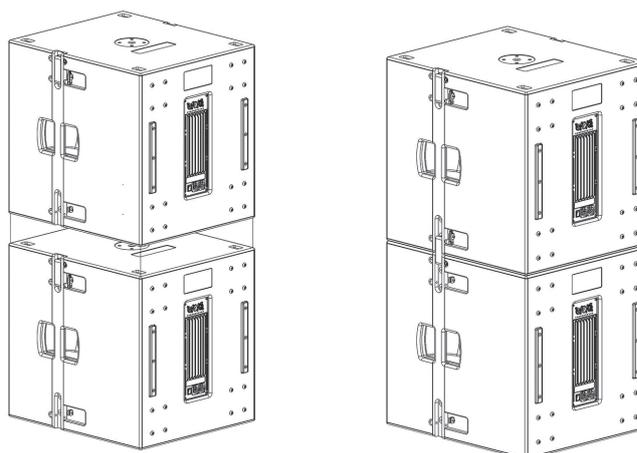


### 2.7.3 Rigging a CDL12 to a CDL18s

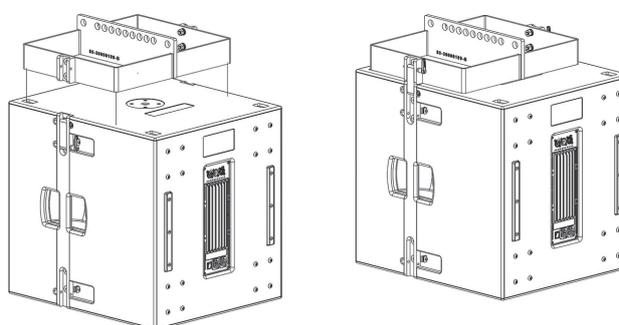


*Note: CDL12 loudspeakers must be mounted to the bottommost CDL18s in a suspended vertical array. A CDL12 can be mounted atop a CDL18s for ground-stacked applications only. See Section 2.8 for more information.*

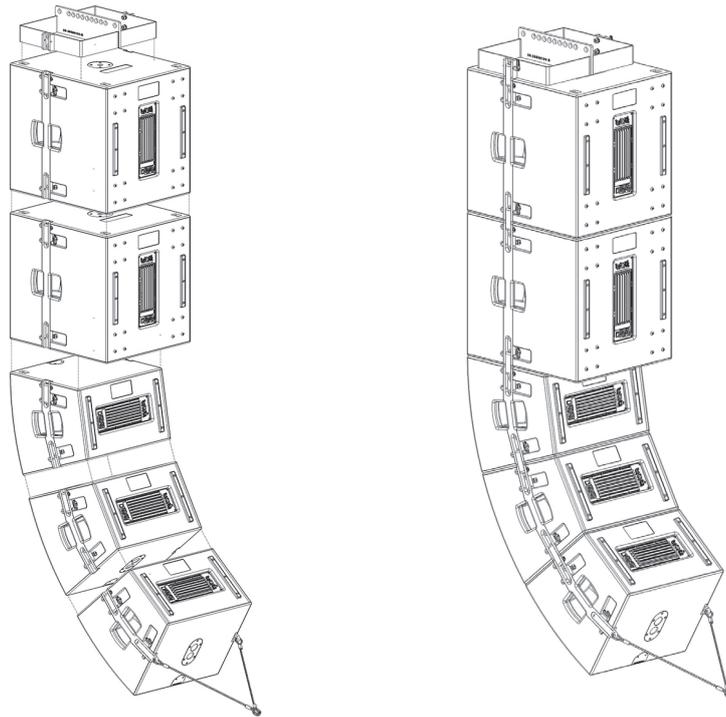
### 2.7.4 Rigging a CDL18s to Another CDL18s



### 2.7.5 Rigging a CDL18s to a CDL Rigging Grid



### 2.7.6 Using the CDL Rigging Sling with the CDL Rigging Grid



**⚠ WARNING:** The CDL Rigging Sling is required on all installations that include 4 or more CDL-series loudspeakers in a vertical array. Additionally, in installations using the CDL Rigging Extension Bar deployed with an upward or downward tilt of 12° or greater, the CDL Rigging Sling must be utilized.

## 2.7 Pole Mounting Options

You can mount up to two CDL12 loudspeakers on a loudspeaker pole either using a tripod stand that supports the total weight (130 lbs / 58.9 kg) or atop a CDL18s using a sub pole that supports the total weight of the CDL12 loudspeaker(s). If mounting atop a CDL18s, the elevation height cannot exceed the following guidelines:

Maximum Sub Pole Height		
(1) CDL12 + (1) CDL18s	(2) CDL12 + (1) CDL18s	(1) CDL12 + (2) CDL18s
40"	33.5"	17"

### 2.7.1 Important Pole Mounting Safety Instructions

- Always check the stand or pole specification to verify that it is designed to support the weight of the CDL-series loudspeaker(s).
- Always observe all safety precautions specified by any 3rd party manufacturer of devices used with the CDL-series loudspeakers.
- Always verify that the stand or subwoofer and subwoofer pole is resting on a level, flat, and stable surface.
- Tripod legs should be fully extended for maximum stability and positioned in a low-traffic area so that the legs do not create a tripping hazard.
- Route cables so that no one will trip over them as this could topple the speaker and cause serious injury, damage, or death.
- Stands, poles, and associated hardware should be inspected prior to each use. Do not use equipment with worn, damaged, or missing parts.
- For some applications, it may be necessary to place additional weights, such as sandbags, on the base of the stand to for maximum stability.
- Do not attach banners to the stand as these could function like a sail to topple the system, causing serious injury, damage or death.

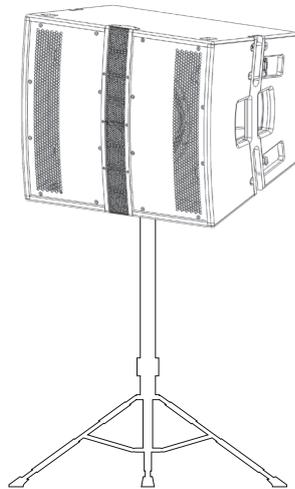
### 2.7.2 Pole Mounting Instructions

1. Select the pole socket angle for your application (0° or 10°).  
*Note: When mounting (2) CDL12 loudspeakers, the 10° tilt mount must be utilized.*
2. Carefully place one CDL12 on the loudspeaker pole by inserting the pole completely into the pole socket.
3. If mounting (2) CDL12 loudspeakers on one pole, place the lower loudspeaker on the pole first, then rig the top one to it following the instructions in **Section 2.7.1**.

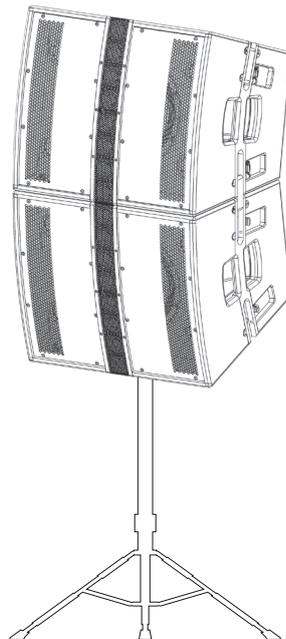
**!** ***Important:** Use proper lifting techniques to avoid injury. It is highly recommended that you team lift CDL12 loudspeakers onto their pole mount for maximum safety and to avoid injury.*

The following pole mounting options are supported:

#### (1) CDL12 on Tripod Stand

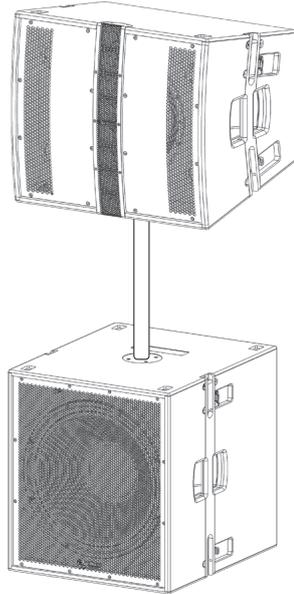


#### (2) CDL12 on Tripod Stand



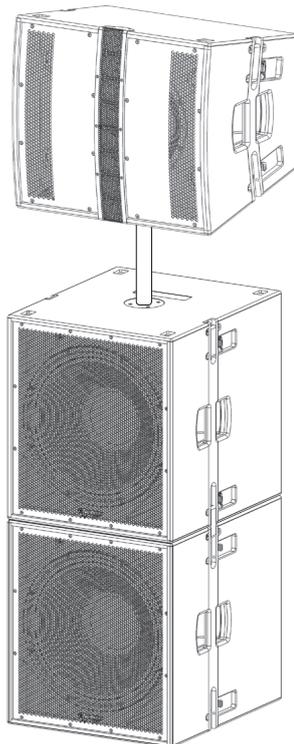
**!** **WARNING:** *The (2) CDL12 loudspeakers must be rigged to one another. See Section 2.7.1 for instructions.*

(1) CDL12 Atop (1) CDL18s



**⚠ WARNING:** Maximum pole height from the top of the CDL18s to the bottom of the CDL12 cannot exceed 40". PreSonus recommends the K&M 21339.000.55 Crank Stand.

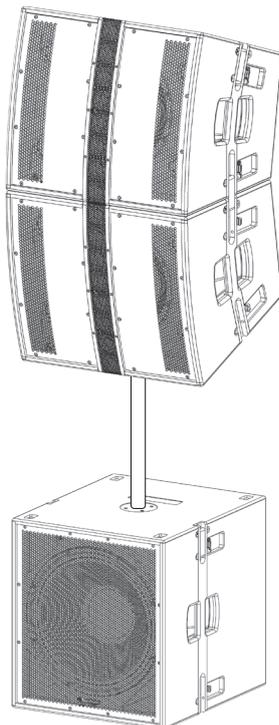
(1) CDL12 Atop (2) CDL18s



**⚠ WARNING:** Maximum pole height from the top of the upper CDL18s to the bottom of the CDL12 cannot exceed 17". PreSonus recommends the K&M 21334.050.55 Distance Rod.

The (2) CDL18s must be rigged to one another. See Section 2.7.4 for instructions.

(2) CDL12 Atop (1) CDL18s

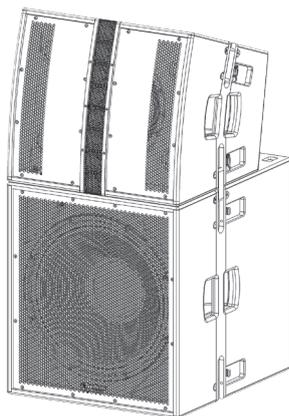


**⚠ WARNING:** Maximum pole height from the top of the CDL18s to the bottom of the CDL12 cannot exceed 33.5". PreSonus recommends the K&M 21339.000.55 Crank Stand.

The (2) CDL12 must be rigged to one another. See Section 2.3.1 for instructions.

2.8 Ground Stacking

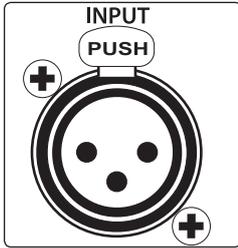
For ground stacking applications, up to (2) CDL12 loudspeakers can be mounted atop up to (2) CDL18s loudspeakers. Follow the rigging instructions in Section 2.7 for proper installation.



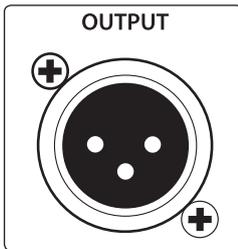
Vertical Coverage by Supported Combinations			
(1)CDL12 with (1)CDL18s	(1)CDL12 with (2)CDL18s	(2)CDL12 with (1)CDL18s	(2)CDL12 with (2)CDL18s
20°	40°	20°	40°

## 3 Hookup

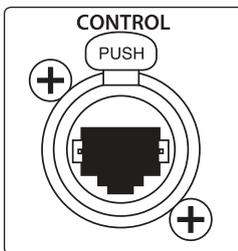
### 3.1 Rear-Panel Connections and Controls



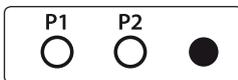
**Line Input.** This is a balanced XLR connection for line-level input. Use the Line input to connect the loudspeaker to a StudioLive digital mixer or another mixing console, either directly or through the Line out connector on a CDL-series loudspeaker.



**Direct Out.** This is the Direct Out for the line input. Use this to connect to other CDL-series loudspeakers. *See Section 3.4 for a connection example.*



**Dante / Control.** This locking Ethernet connection can be used for control via the Worx Control application as well as Dante audio networking. A standard RJ45 connector may be used, but we recommend the protection provided by using the mating male locking Ethernet connector. *For more information on creating a wired LAN network and using Dante, see the Worx Control Reference Manual.*

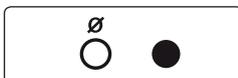


**Preset Toggle.** This button toggles between Preset 1 and Preset 2.

- **CDL12.** Use Preset 1 when using (1) CDL12 loudspeaker and Preset 2 on both loudspeakers in a (2) CDL12 array. When using 3 or more CDL12 loudspeakers in an array, you must use Worx Control Software to load the presets for larger configurations.
- **CDL18s.** Use Preset 1 when using (1) CDL18s subwoofer with (1) CDL12 loudspeaker. Use Preset 2 for applications requiring a higher subwoofer output.



**High Pass Filter (CDL12).** This button enables/disables the 90 Hz High Pass Filter. When the LED is illuminated, the 90 Hz High Pass Filter is active. When active, frequency content below 90 Hz is removed.



**Polarity (CDL18s).** The Polarity button inverts the polarity of the input signal. The LED will illuminate to indicate that the polarity is inverted.

### 3.2 Onboard Performance Monitoring



**Performance Monitoring.** These six LEDs display the performance status of the internal amplifier:

- **TEMP.** The LED will illuminate when the internal temperature of the amplifier module has exceeded the recommended operating limit (64° C).
- **SIG.** This LED illuminates when the input signal exceeds -50 dB.
- **-3 dB.** When this LED illuminates, the input signal has exceeded -3 dB, and you are in danger of clipping the ADC.
- **LIM.** The protection limiter has been engaged when this indicator illuminates.
- **CLIP.** The clip LED illuminates when the input signal has exceeded 0.5 dBFS, and the ADC is clipping, or when the amplifier exceeds the maximum upper limit (load dependent).
- **NET.** This LED has three states:
  - **Solid Red.** Network not available.
  - **Solid Blue.** Network available.
  - **Flashing Blue.** Network packets are being sent or received.

**Power User Tip:** Never run your input levels higher than the channel inputs can handle. If you overdrive the A/D converters, it will cause digital distortion (digital clipping), which sounds terrible.

### 3.3 Power



**AC Line Connection.** CDL-series loudspeakers have a universal power supply that accepts AC power input between 100 and 250 VAC at 50/60 Hz. Each loudspeaker is supplied with an AC powerCON® power cord appropriate for the country of sale.

**WARNING:** Do not remove the center grounding prong or use a ground-lift adapter, as this could result in electric shock.

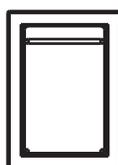
**WARNING:** Connect the powerCON connector on the AC powerCON power cord to the AC In connection on the amplifier **before** connecting the IEC connection to the AC mains power source.



**Power Thru.** CDL-series loudspeakers provide loop-thru power. Using powerCON® Loop-thru cables and an AC powerCON Power cord, you can power up to six CDL-series loudspeakers on a single 15 amp / 120V (8 am / 240V electrical circuit).

Loop-thru cable connectors are color coded as follows:

- **Blue.** AC In.
- **Grey.** AC Out.



**POWER**  
On/Off

**Power Switch.** This is the On/Off switch.

**Power User Tip:** If connecting multiple loudspeakers to the same electrical circuit, make sure that adequate line current is available. Maximum current draw for each CDL-series loudspeaker is 5.45 Amps.

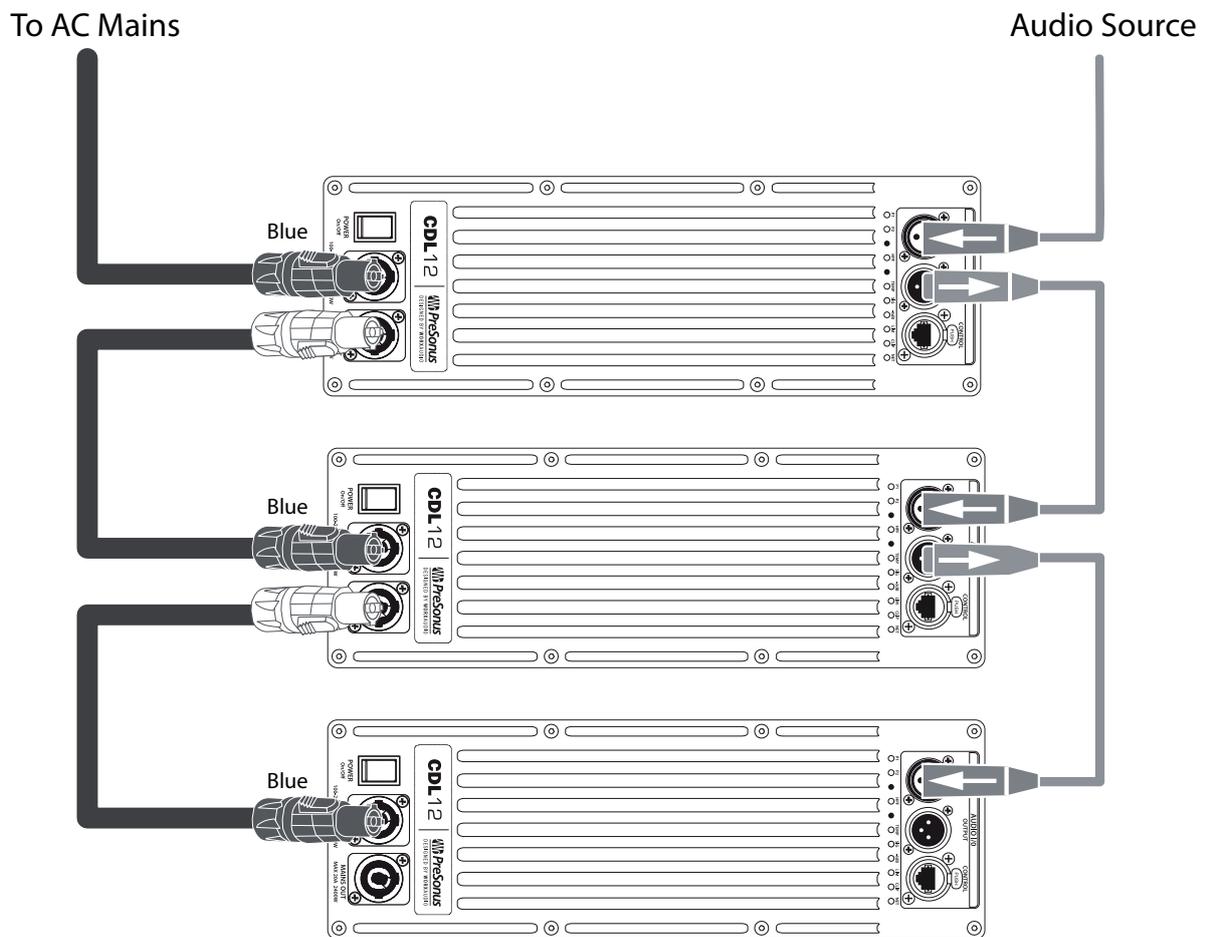
**WARNING:** The power switch does not cut AC mains power from the loop-thru cables. If AC mains power is connected to one CDL-series loudspeaker, electrical power will be present on all connected loop-thru cables.

### 3.3.1 Connecting Loop-Thru Power

1. Begin by inserting the grey powerCON connector on the loop-thru cable into the grey AC Out connection on the power amplifier.
2. Once the cable is fully seated, twist the powerCON connector clockwise to lock it into place.
3. Insert the blue powerCON connector into the blue AC In connection on the other CDL-series power amplifier.
4. Once the cable is fully seated, twist the powerCON connector clockwise to lock it into place.

Repeat Steps 1-4 for the other loudspeakers you'd like to power.

### 3.4 Connecting Multiple CDL Loudspeakers



*Note: AC powerCON jumper cables are sold separately.*

## 4 Networking Overview

### 4.1 Selecting the Right Network Hardware

While Dante is compatible with standard network hardware, there are a few basic requirements to keep in mind when choosing your network switch.

- Non-blocking layer-2 gigabit switch with a packet-forwarding rate of 1.488 Mpps per port. For example, if you purchase an 8-port switch, the packet-forwarding rate would have to be 11.904 Mpps (1.488 Mpps x 8).
- Energy Efficient Ethernet (EEE), also known as Green Ethernet or IEEE 802.3az, reduces power consumption when there isn't much traffic on the network. Unfortunately, this can lead to audio interruptions and can degrade clocking. If your switch provides this feature, make sure that you can and do disable it.
- Most managed switches support Quality of Service (QoS). This allows you to choose Dante clock synchronization as the highest priority and audio data as the next-highest priority. This is especially important if you are transferring large amounts of data over your Dante network or if you are transferring non-Dante data over the same network.
- If you are using multiple switches on your Dante network, we recommend using the same make and model to simplify setup and guarantee compatibility.

### 4.2 Adding a Wireless Router

Dante audio and routing cannot travel over a wireless network. You can still wirelessly remote control your CDL-series loudspeakers over a Dante network using Worx Control on your macOS or Windows computer, but you'll have to do a little more setup.

To connect a wireless router to your Dante network, you will need to purchase a managed switch and dive into its configuration settings. Select the port to which you've connected your wireless router and set Multicast Filtering to "On." This will stop the flow of Dante traffic to that port and allow it to be used for wireless remote control of your loudspeakers. Do not connect Dante devices to the ports on a wireless router. Please consult the documentation that came with your managed switch for instruction about enabling Multicast Filtering on a specific port.

Because your loudspeakers are hardwired to the switch, no additional setup is required to remote control them with Worx Control. Simply connect your device to the wireless router network and launch Worx Control. Complete instructions for Worx Control can be found in the Worx Control Reference Manual, available at [www.presonus.com](http://www.presonus.com).

### 4.3 Downloading Dante Controller

To connect your Dante network, you will need a macOS or Windows computer with an Ethernet port and Audinate's Dante Controller application.

Dante Controller is a free software application that allows you to route audio and configure devices on a Dante network. Thanks to automatic device discovery, one-click signal routing, and user-editable device and channel labels, setting up a Dante network is relatively simple.

Dante Controller also provides essential device status information and powerful real-time network monitoring, including device-level latency and clock stability stats, multicast bandwidth usage, and customized event logging, enabling you to identify and resolve network issues. You can also back up, restore, move, and reuse Dante network configurations using presets and can edit Dante routing configurations offline.

The Dante Controller application and associated documentation are available at [www.audinate.com/products/software/dante-controller](http://www.audinate.com/products/software/dante-controller).

## 5 Technical Information

### 5.1 Specifications

#### 5.1.1 CDL12

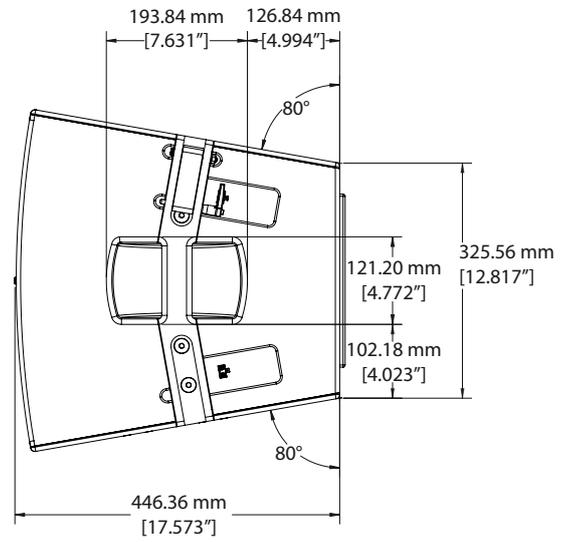
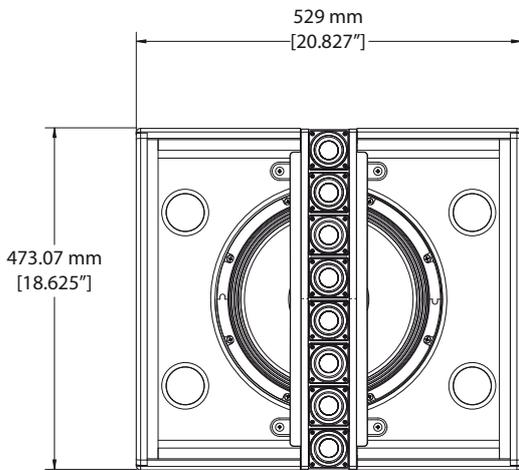
Type	Active 2-way
LF Driver	12" (2.5" Voice Coil)
HF Driver	8x 2" (1" Voice Coil)
Amplifier Type	Class D
Total System Power	2000W Peak, 1000W Program (500W RMS)
LF Driver Power	1000W Peak, 500W Program (250W RMS)
HF Driver Power	1000W Peak, 500W Program (250W RMS)
Frequency Range (+/- 3dB)	48 Hz – 18 kHz
Crossover Frequency	420 Hz
Maximum Peak SPL	131 dB
Horizontal Coverage	120°
Vertical Coverage	20° per enclosure
Input	Line (XLR)
Output	Direct Line Out (XLR)
Networking	Dante™ (Audio and Control), Control (only) (Locking Ethernet)
Mains Connection	powerCON® In and Out
User Controls	Preset Select, HPF On/Off
Indicators	Over Temperature, Signal, -3 dB, Limiter, Clip, Network Status
Enclosure	15 mm Eucalyptus plywood
Mounting	Dual-position pole mount (0° and 10°), Integrated Rigging (10:1 load)
Dimensions (H x W x D)	18.6" x 20.8" x 17.5" (473 mm x 529 mm x 444.5 mm)
Weight	65 (29.5 kg)
Optional Accessories	CDL12-Tote Tote Bag

#### 5.1.2 CDL18s

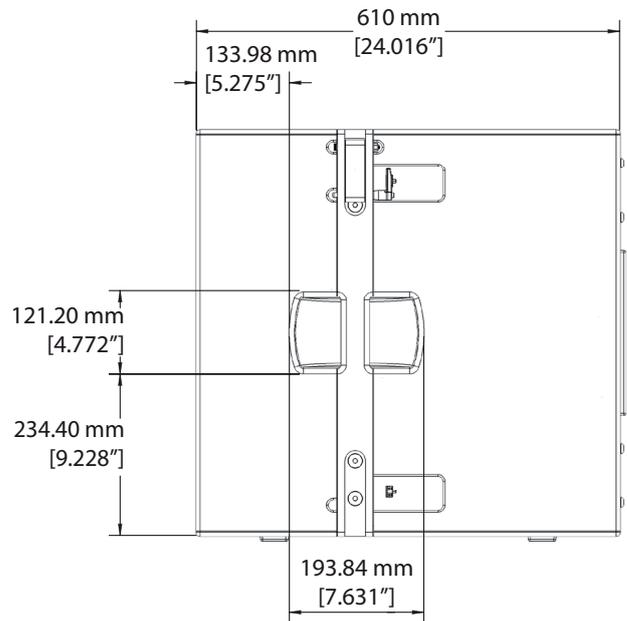
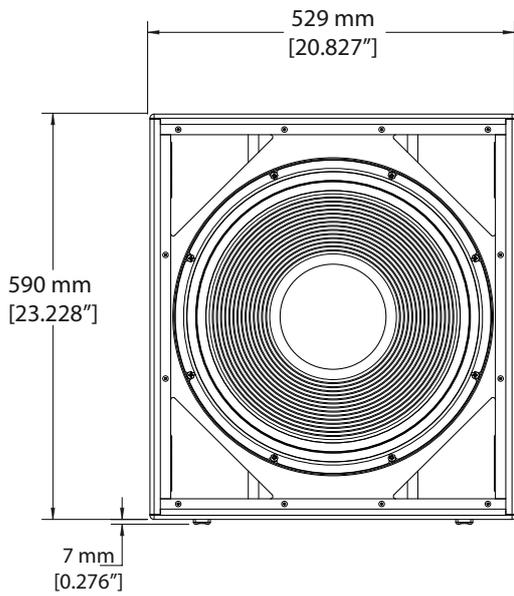
Type	Active Subwoofer
LF Driver	18" (4" Voice Coil)
Amplifier Type	Class D
Total System Power	2000W Peak, 1000W Program (500W RMS)
Frequency Range (-3 dB)	42 Hz – 150 Hz (Variable)
Maximum Peak SPL	135 dB
Input	1 Line (XLR)
Output	Direct Line Out (XLR)
Networking	Dante™ (Audio and Control), Control (only) (Locking Ethernet)
Mains Connection	powerCON® In and Out
User Controls	Preset Select, Polarity Invert
Indicators	Over Temperature, Signal, -3 dB, Limiter, Clip, Network Status
Enclosure	15 mm Eucalyptus plywood
Mounting	M20 Threaded pole receiver, Integrated rigging (10:1 load)
Dimensions (H x W x D)	22.2" x 20.8" x 24" (590 mm x 529 mm x 610 mm)
Weight	105 lbs. (47.6 kg)
Optional Accessories	ULT18-CSTR 4" Caster Kit, CDL18s-Cover Dust Cover

5.2 Mechanical Drawings

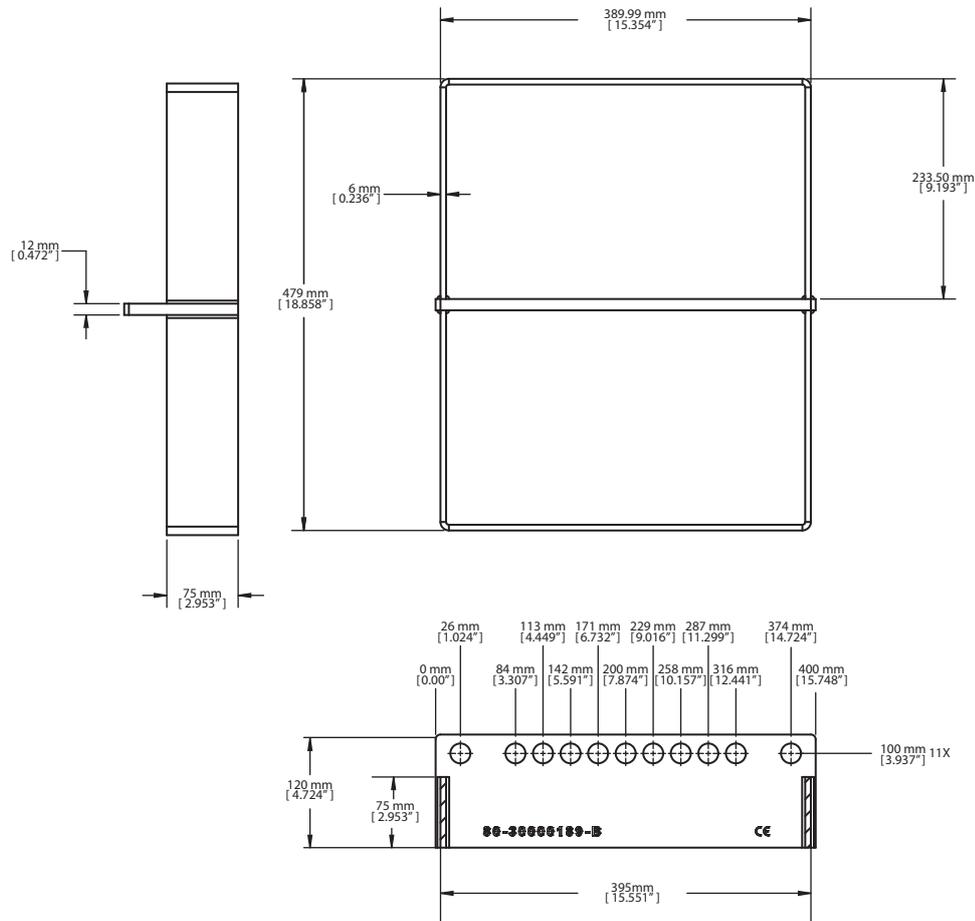
5.2.1 CDL12



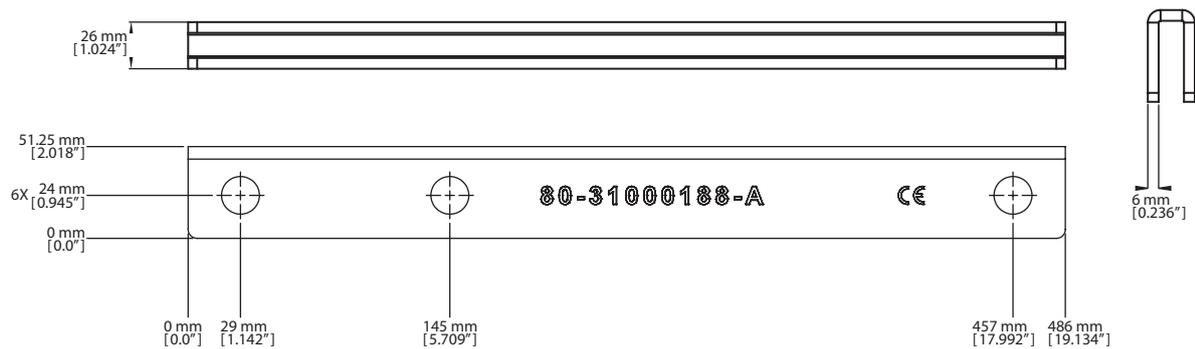
5.2.2 CDL18s



### 5.2.3 CDL Rigging Grid



### 5.2.4 CDL Extension Bar



## 6 Warranty Information

PreSonus' warranty obligations for this hardware product are limited to the terms set forth below:

### 6.1 How Consumer Law Relates To This Warranty

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE (OR BY COUNTRY OR PROVINCE). OTHER THAN AS PERMITTED BY LAW, PRESONUS DOES NOT EXCLUDE, LIMIT OR SUSPEND OTHER RIGHTS YOU MAY HAVE, INCLUDING THOSE THAT MAY ARISE FROM THE NONCONFORMITY OF A SALES CONTRACT. FOR A FULL UNDERSTANDING OF YOUR RIGHTS YOU SHOULD CONSULT THE LAWS OF YOUR COUNTRY PROVINCE OR STATE.

#### PreSonus Products And EU Statutory Warranty

When you purchase PreSonus products, European Union consumer law provides statutory warranty rights in addition to the coverage you receive from the PreSonus limited warranty. A summary of the EU Statutory Warranty and the PreSonus Limited Warranty is below:

	EU Consumer Law	PreSonus Limited Warranty
Repair or Replacement Coverage For	Defects present when customer takes delivery	Defects arising after customer takes delivery
Warranty Period	2 years (minimum) from original date of purchase (unless superseded by PreSonus)	1 year from original date of purchase (unless superseded by PreSonus)
Cost of Coverage	Provided at no additional cost	Included at no additional cost
Who to contact to make a claim	The seller	PreSonus technical support for your region

#### What This Warranty Covers

PreSonus Audio Electronics, Inc., ("PreSonus") warrants defects in material and workmanship in PreSonus-branded products under normal use. This Limited Warranty applies only to hardware products manufactured by or for PreSonus that can be identified by the PreSonus trademark, trade name, or logo affixed to them.

#### Exclusions and Limitations

This warranty does **not** cover the following:

1. Damage caused by accident, abuse, improper installation, failure to follow instructions in the applicable owner's manual or improper operation, rental, product modification, alteration, or neglect.
2. Damage from improper grounding, faulty wiring (AC and signal), faulty equipment, or connection to a voltage range outside published specifications (see applicable owner's manual).
3. Damage to drivers or diaphragm assemblies found to have burnt voice coils from over/under driving or signal surge from another device.
4. Damage occurring during shipment or improper handling.
5. Damage caused by repair or service performed by persons not authorized by PreSonus.
6. Products on which the serial number has been altered, defaced, or removed.
7. Products purchased from an unauthorized PreSonus dealer (products that have transferable warranties are excluded from this provision provided the customer and the product are registered with PreSonus).

**Who This Warranty Protects**

This Warranty protects only the original retail purchaser of the product (products that have transferable warranties are excluded from this provision provided the customer and the product are registered with PreSonus)

**How Long This Warranty Lasts**

The Warranty begins on the original date of purchase from the retail purchaser, and the duration is as follows:

1-Year Limited Warranty		
Product Category	Model	Transferable
Recording Interfaces	AudioBox-, Studio-, Studio 192-, FireStudio™-, and Quantum-series	No
Preamplifiers	ADL-series, BlueTube DP V2, DigiMax-series, RC500, Studio Channel, and TubePre V2	No
StudioLive® Mixers	AI-series, AR-series, Classic, and Series III	No
Monitoring & Controlling	Central Station Plus, Ceres-series, Eris®-series, FaderPort™-series, HP-series, Monitor Station V2, R-series, Sceptre®-series, Temblor®-series	No
Accessories	Covers, Dolly, PRM1 mic, Sub Pole, breakout cables, power supplies, M10 Kit	No
3-Years Limited Warranty		
Product Category	Model	Transferable
Live Sound	StudioLive AI 328, 312, 315, 185	Yes
6-Years Limited Warranty		
Product Category	Model	Transferable
Live Sound	AIR10, AIR12, AIR15, AIR15s, AIR18s, CDL12, CDL18s, ULT10, ULT12, ULT15, ULT18	Yes

**What PreSonus Will Do**

PreSonus will repair or replace, at our sole and absolute option, products covered by this warranty at no charge for labor or materials. If the product must be shipped to PreSonus for warranty service, the customer must pay the initial shipping charges. PreSonus will pay the return shipping charges.

**How to Get Warranty Service (USA)**

1. You must have an active user account with PreSonus and your hardware must be on file with your account. If you do not have an account, please go to <https://my.presonus.com> and complete the registration process.
2. Contact our Technical Support Department at (225) 216-7887 or log a support ticket at: <http://support.presonus.com>. TO AVOID THE POSSIBILITY OF SENDING IN A PRODUCT THAT DOES NOT HAVE A PROBLEM, ALL SERVICE REQUESTS SHALL BE CONFIRMED BY OUR TECH SUPPORT DEPARTMENT.
3. The return authorization number, as well as shipping instructions, shall be provided after your service request is reviewed and confirmed.
4. The product should be returned for service in the original product packaging. Products may be shipped in a manufactured “flight” or “road” style cases but PreSonus will NOT cover any shipping damage to these cases. Products that are not shipped in the original product package or a manufactured case may not receive a warranty repair, at PreSonus’ sole discretion. Depending on the product model and the condition of your original packaging, your product may not be returned to you in the original packaging. The return shipping box may be a generic box that has been fitted for that model tested if the original gift box is not available.

### **How to Get Warranty Service (outside of USA)**

1. You must have an active user account with PreSonus and your hardware must be on file with your account. If you do not have an account, please go to: <https://my.presonus.com> and complete the registration process.
2. Contact the Technical Support/Service Department for your region at [www.presonus.com/buy/international distributors](http://www.presonus.com/buy/international_distributors) and follow procedures provided by your PreSonus contact.

### **Limitation of Implied Warranties**

ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE LENGTH OF THIS WARRANTY.

Some states, countries, or provinces do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

### **Exclusion of Damages**

PRESONUS'S LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT, AT PRESONUS'S SOLE OPTION. IF PRESONUS ELECTS TO REPLACE THE PRODUCT, THE REPLACEMENT MAY BE A RECONDITIONED UNIT. IN NO EVENT WILL PRESONUS BE LIABLE FOR DAMAGES BASED ON INCONVENIENCE, LOSS OF USE, LOST PROFITS, LOST SAVINGS, DAMAGE TO ANY OTHER EQUIPMENT OR OTHER ITEMS AT THE SITE OF USE, AND, TO THE EXTENT PERMITTED BY LAW, DAMAGES FOR PERSONAL INJURY, OR ANY OTHER DAMAGES WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE, EVEN IF PRESONUS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states, countries, or provinces do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

If you have any questions about this warranty or service received, please contact PreSonus (USA) at +1-225-216-7887 or contact one of our authorized international distributors at [www.presonus.com/buy/international distributors](http://www.presonus.com/buy/international_distributors).

Product features, design, and specifications are subject to change without notice.

Added bonus: PreSonus' previously Top Secret recipe for...

## Redfish Couvillion

### Ingredients:

- ¼ C Vegetable oil
- ¼ C flour
- 1 onion diced
- 1 clove garlic minced
- 1 green pepper diced
- 3 celery stalks diced
- 1 14oz can diced tomatoes
- 1 bottle light beer
- 2 bay leaves
- 1 tsp thyme
- 2 lbs Redfish fillets

### Cooking Instructions:

1. In a heavy saucepan or large skillet, heat oil on medium high and slowly add flour a tablespoon at a time to create a roux. Continue cooking the roux until it begins to brown, creating a dark blond roux.
2. Add garlic, onions, green pepper, and celery to roux.
3. Sauté vegetables for 3-5 minutes until they start to soften.
4. Add tomatoes, bay leaves, thyme, and redfish. Cook for several minutes.
5. Slowly add beer and bring to a low boil.
6. Reduce heat and simmer uncovered for 30-45 minutes until redfish and vegetables are completely cooked, stirring occasionally. Break up redfish into bite size chunks and stir in. Add pepper or hot sauce to taste. Do not cover.
7. Serve over rice

### Serves 6-8

*While not one of Southeast Louisiana's more famous dishes, Redfish Couvillion is a favorite way to serve our favorite Gulf fish. Also known as Reds or Red Drum, Redfish is not only fun to catch, it's also delicious!*

# CDL-series

## Constant Directivity Loudspeakers

### Owner's Manual

