

Laney

**CXSub-A CX-A Active Loudspeakers
CXSub Loudspeaker**

USER MANUAL



MODELS

CX15-A

CX12-A

CXSub-A

CXSub

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Intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient to constitute a risk of electrical shock to persons



Intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product

CAUTION: Risk of electrical shock - DO NOT OPEN

CAUTION: To reduce the risk of electrical shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

WARNING: To prevent electrical shock or fire hazard, do not expose this appliance to rain or moisture. Before using this appliance please read the operating instructions for further warnings



Este simbolo tiene el proposito de alertar al usuario de la presencia de "(voltaje) peligroso" que no tiene aislamiento dentro de la caja del producto que puede tener una magnitud suficiente como para constituir riesgo de corrientazo



Este simbolo tiene el proposito de alertar al usuario de la presencia de instrucciones importantes sobre la operacion y mantenimiento en la literatura que viene con el producto

PRECAUCION: Riesgo de corrientazo - no abra

PRECAUCION: Para disminuir el riesgo de corrientazo, no abra la cubierta. No hay piezas adentro que el pueda reparar. Deje todo mantenimiento a los tecnicos calificados

ADVERTENCIA: Para evitar corrientazos o peligro de incendio, no deja expuesto a la lluvia o humedad este aparato. Antes de usar este aparato, lea mas advertencias en la guia de operacion



Ce symbole est utilise pur indiquer a l'utilisateur de ce produit de tension non-isolee dangereuse pouvant etre d'intensite suffisante pour constituer un risque de choc electrique.



Ce symbole est utilise pour indiquer a l'utilisateur qu'il ou qu'elle trouvera d'importantes instructions sur l'utilisation et l'entretien (service) de l'appareil dans la litterature accompagnant le produit

ATTENTION: Risques de choc electrique - NE PAS OUVIRIR

ATTENTION: Afin de reduire le risque de choc electrique, ne pas enlever le couvercle. Il ne se trouve a l'interieur aucune piece pouvant etre reparee par l'utilisateur. Confier l'entretien a un personnel qualifie.

AVERTISSEMENT: Afin de prevenir les risques de decharge electrique ou de feu, n'exposez pas cet appareil a la pluie ou a l'humidite. Avant d'utiliser cet appareil, lisez les avertissements supplementaires situes dans le guide.



Dieses Symbol soll den Anwender vor unsolierten gefahrlichen Spannungen innerhalb des Gehauses warnen, die von Ausreichender Starke sind, um einen elektrischen Schlag verursachen zu konnen.



Dieses Symbol soll den Benutzer auf wichtige Instruktionen in der Bedienungsanleitung aufmerksam machen, die Handhabung und Wartung des Produkts betreffen.

VORSICHT: Risiko - Elektrischer Schlag! Nicht offen!

VORSICHT: Um das Risiko eines elektrischen Schlages zu vermeiden, nicht die Abdeckung entfernen. Es befinden sich keine Teile darin, die vom Anwender repariert werden Konnten. Reparaturen nur von qualifiziertem Fachpersonal durchfuhren lassen

ACHTUNG Um einen elektrischen Schlag oder Feuergefahr zu vermeiden, sollte dieses Gerat nicht dem Regen oder Feuchtigkeit ausgesetzt werden. Vor Inbetriebnahme unbedingt die Bedienungsanleitung lesen.

IMPORTANT SAFETY INSTRUCTIONS

WARNING: When using electric products, basic cautions should always be followed, including the following.

1. Read all safety and operating instructions before using this product
2. The product should be powered by a three pin `grounded (or earthed) plug connected to a power socket with a grounded earth outlet.
3. All safety and operating instructions should be retained for future reference
4. Obey all cautions in the Operating instructions and on the back of the unit
5. All operating instructions should be followed
6. This product should not be used near water, i.e. a bathtub, sink, swimming pool, wet basement, etc.
7. This product should be located so that its position does not interfere with its proper ventilation. It should not be placed flat against a wall or placed in a built up enclosure that will impede the flow of cooling air.
8. This product should not be placed near a source of heat such as stove, radiator, or another heat producing amplifier.
9. Connect only to a power supply of the type marker on the unit adjacent to the power supply cord.
10. Never break off the ground pin on a power supply cord.
11. Power supply cords should always be handled carefully. Never walk or place equipment on power supply cords. Periodically check cords for cuts or signs of stress, especially at the plug and the point where the chord exits the unit.
12. The power supply cord should be unplugged when the unit is to be unused for long periods of time.
13. If this product is to be mounted in an equipment rack, rear support should be provided.
14. The user should allow easy access to any mains plug, mains coupler and mains switch used in conjunction with this unit thus making it readily operable.
15. Metal parts can be cleaned with a damp cloth. The vinyl covering used on some units can be cleaned with a damp cloth or ammonia based household cleaner if necessary. Disconnect the unit from the power supply before cleaning.
16. Care should be taken so that objects do not fall and liquids are not spilled into the unit through any ventilation holes or openings. On no account place drinks on the unit.
17. A qualified service technician should check the unit if:
 - The power cord has been damaged
 - Anything has fallen or spilled into the unit
 - The unit does not appear to operate correctly
 - The unit has been dropped or the enclosure damaged.
18. The user should not attempt to service the equipment. All service work is done by a qualified service technician.
19. Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably in susceptibility to noise induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposure.

Duration Per Day In Hours	Sound Level dBA, slow response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

According to OSHA, any exposure in excess of the above permissible limits could result in some hearing loss. Ear plugs or protectors in the ear canals or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss if exposure exceeds the limits set forth above. To ensure against potentially dangerous exposure to high sound pressure levels it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.

SAVE THESE INSTRUCTIONS

INTRODUCTION

Congratulations on your decision to purchase a Laney PA system .This range of cabinets bring you the power and flexibility to create anything from a simple one box PA system to a flexible multibox set up.

The CX-A range consists of the following products

- CX15-A 300W active loudspeaker with built in CD/Line/ Mic inputs, optical limiter and switchable crossover filter.
- CX12-A 165W active loudspeaker with built in CD/Line/ Mic inputs, optical limiter and switchable crossover filter.
- CXSub-A 300W active bass cabinet with built in crossover filter and optical limiter.
- CXSub Dedicated passive bass cabinet ideal for use as an extension speaker with the above products.

Laney products are designed with ease of operation as a primary objective, however to ensure you derive the best from your new PA, it is important you take time to read this user manual and to familiarise yourself with the control functions and facilities available.

When you first receive your Laney CX / CX-A cabinet, follow these simple procedures:

- (i) Ensure that the amplifier is the correct voltage for the country it is to be used in.
- (ii) Make all connections with a high quality shielded cable. You have probably spent considerable money on your PA system - don't use cheap cable, it won't do your gear justice .

This manual has been written for easy access of information. The rear panels of each unit are graphically illustrated, with each control and feature numbered. For a description of the function of each control feature, simply check the number with the explanations adjacent to each panel.

Later in the manual are some connection diagrams for a number of different set ups to show how to get the best from your PA system.

Best Wishes

All at Laney

UNPACKING

On unpacking your CX/CX-A product please check carefully for any signs of damage that may have occurred whilst in transit from the Laney factory to your dealer. In the unlikely event that there has been damage please repack your unit in its original carton and consult your dealer.

We would strongly advise you to store away your original transit carton since in the unlikely event that some time in the future your unit should develop a fault, you will be able to return it to your dealer for rectification securely packed.

BEFORE SWITCHING

After unpacking your amplifier check that it is factory fitted with a three pin 'grounded' (or earthed) plug. Before plugging into the power supply ensure you are connecting to a grounded earth outlet.

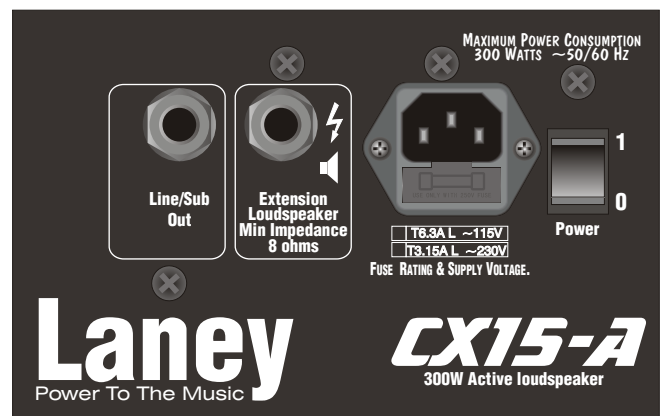
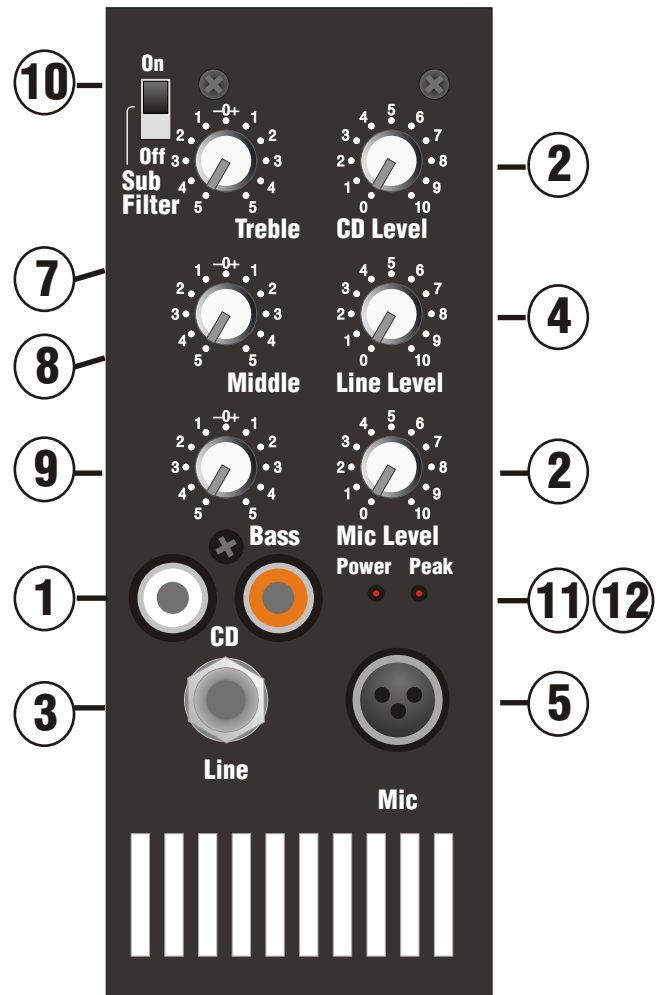
If you should wish to change the factory fitted plug yourself, ensure that the wiring convention applicable to the country where the amplifier is to be used is strictly conformed to. As an example in the United Kingdom the cable colour code for connections are as follows.

EARTH OR GROUND - GREEN/YELLOW
NEUTRAL - BLUE
LIVE - BROWN

CX12-A / CX15-A Facilities

- 1** CD
A pair of phono sockets for connecting sources such as a CD / mini disk players, Keyboards etc. The Volume of this input is controlled by the `CD Level` control
- 2** CD Level
Controls how loud the `CD` input sounds
- 3** Line
A 1/4 mono jack socket for the connection `line level` inputs. Line level signals typically come from mixers, radio mic receivers and CX-A line outs. The Volume of this input is controlled by the `Line Level` Control
- 4** Line Level
Controls how loud the `Line` input sounds
- 5** Mic
Connect your microphone here, the microphone volume is controlled by the `Mic Level` control. This is a balanced input suitable for low impedance microphones it does not have phantom power.
- 6** Mic Level
Controls how loud the `Mic` input sounds

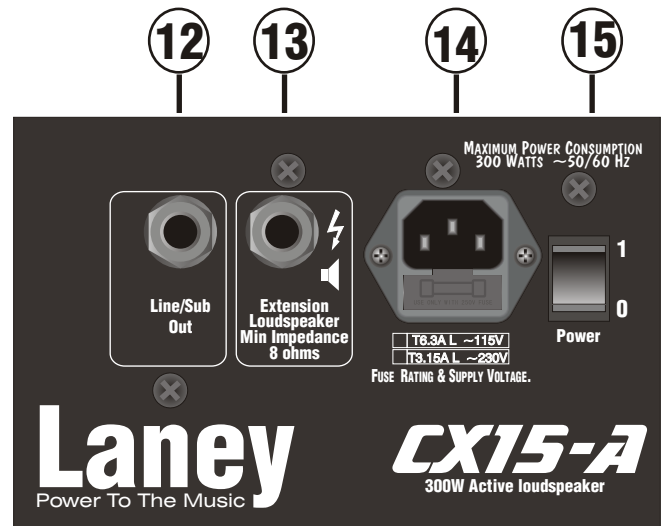
Bass, Middle, Treble
These make up a powerful set of tools to equalise your sound system.
- 7** Treble
Adjusting the Treble control cuts/boosts the high frequencies - eg sounds such as high hats / cymbal/ vocal presence.
- 8** Middle
Adjusting the mid control cuts/boosts midrange frequencies - eg sounds such as upper vocal area, edge to lead guitars.
- 9** Bass
Adjusting the bass control cut/boosts the low frequencies - eg sounds such as Kick drum ,bass guitar` etc
- 10** Sub Filter
This filter rolls off the bass frequencies, (<170Hz 12dB/ octave for the technical people) .This is useful in a biamped system where this cabinet does the mid / high frequencies and a dedicated bass enclosure such as a CXsub-A` does the bass. It could also be useful in a vocal only PA where you could use it to remove muddyness and rumble .
- 11** Power : Indicates the mains is connected and the CX-A is switched on.



- 12** Peak : Indicates that the onset of clipping - if this is on a lot - it won't sound very good and the level controls should be adjusted to reduce the volume of whats clipping. If you finde it needs to be louder additional speakers/amps are required.

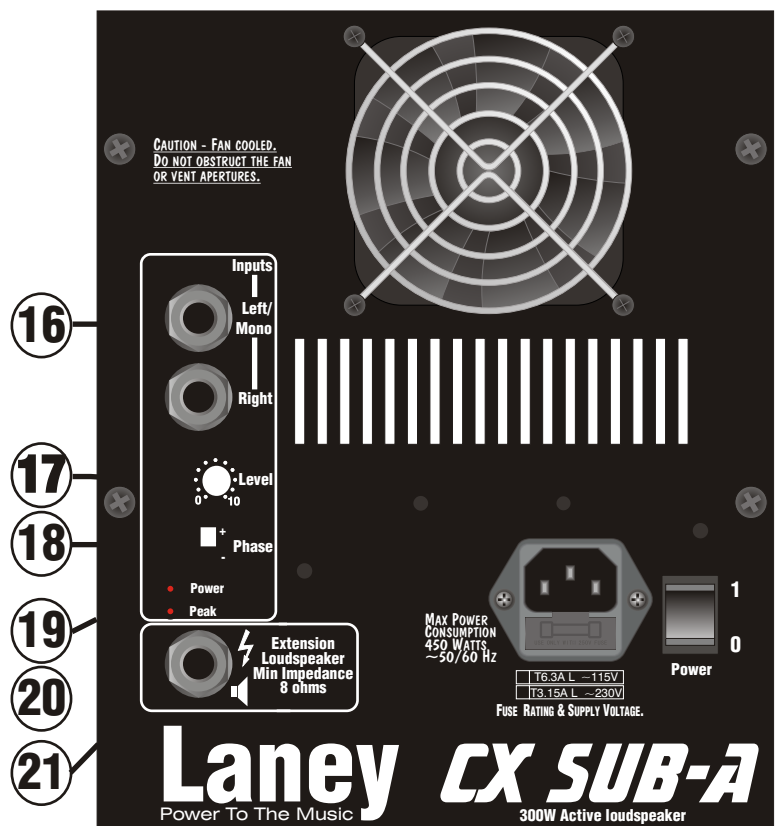
CX12-A / CX15-A Facilities

- 12** **Line/Sub Out**
This is a full range line level signal useful for driving other CX-A / CXSub cabinets or mixers. This sub filter does not operate on the line out. (i.e. Lineout is always full range.)
- 13** **Extension Loudspeaker**
Should you need to expand your sound system additional 8 ohm speaker cabinets can be connected here. If 4 ohms cabinets are connected there is a high risk of thermal overload and potential damage to your CX-A.
- 14** **Power Inlet and Power Fuse**
Connect the mains supply here. Ensure the local mains supply is compatible with this product.
- Power Fuse**
In the event the mains fuse blows only replace with same type and rating
Please refer to the product rear panel for details of the correct type and rating.
- 15** **Power Switch**
This switches the product on /off. When the unit is on the Power led illuminates.



CXSub-A Facilities

- 16** **Inputs**
The CXsub-A accepts line level signals on 1/4 inch mono jacks. This allows the CXSub to be driven by a single mono jack or a stereo signal on 2 mono jacks or a stereo jack.
- 17** **Level**
This control allow you to set the balance between you CXSub cabinets and the rest of your sound system allowing you to make you CXSub quieter or louder.
- 18** **Phase**
This allows you the flip the phase of the sub though 180 degrees. This is effectively the same as swapping the '+' and '-' connections on the loudspeaker. This allow you to ensure the CXsub and the bass driver in the mid/top cabinet are operating in phase with one another. If your bass drivers are out of phase with each other you will get bass cancellation.
- 19** **Power** : Indicates the mains is connected and the CXsub is switched on.
- 20** **Peak** : Indicates that the onset of amplifier clipping - if this is on a lot - it won't sound very good and the level control should be adjusted to reduce the volume . If it still needs to be louder additional speakers/amps are required.



- 21** **Extension Loudspeaker**
Should you need to expand your sound system additional 8 ohm speaker cabinets can be connected here. If 4 ohms cabinets are connected there is a high risk of thermal overload and potential damage to your CX-A.

CXSub Facilities

CXsub

Unlike the other products in this brochure the CXsub is a passive cabinet - this means it does not require any mains power but just needs to be driven by a power amplifier or the extension speaker socket on an active loudspeaker.

All the CX-A cabinets feature extension speaker sockets - these are ideal for driving the CXSub cabinet. If you have an application where you need more bass the CXSub is the perfect solution.

1

Input

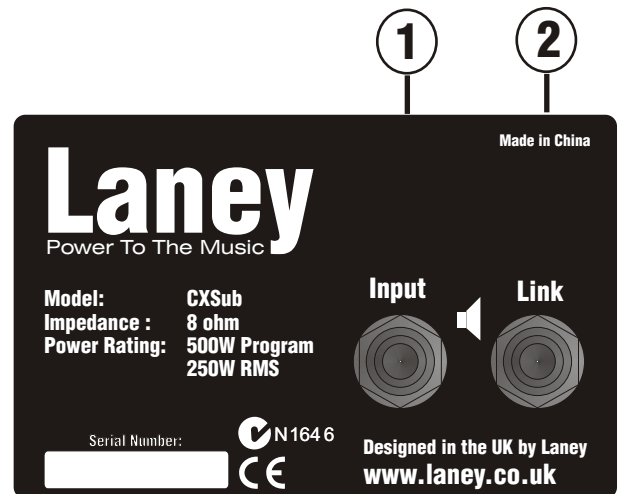
Connect either the power amplifier speaker output or your CX-A extension speaker socket. Connections to this socket should always be on good quality speaker cable.

2

Link

A Link connection is provided for daisy chaining another speaker cabinet. This saves you having to obtain a Y splitter for driving 2 cabinets from 1 amplifier speaker output.

Important : In a system which uses CX-A active loudspeakers an `extension speaker socket` can only drive 1 unpowered 8 ohm cabinet.



System Connections

To get you started on putting your new speakers to use now follows some typical connection information to help you on your way.

Simple PA System

Pictured here is a simple set-up using either a CX12-A or a CX15-A.

This would be typical of a PA system for aerobics class, vocal PA, Karaoke or a monitor for a DJ or singer.

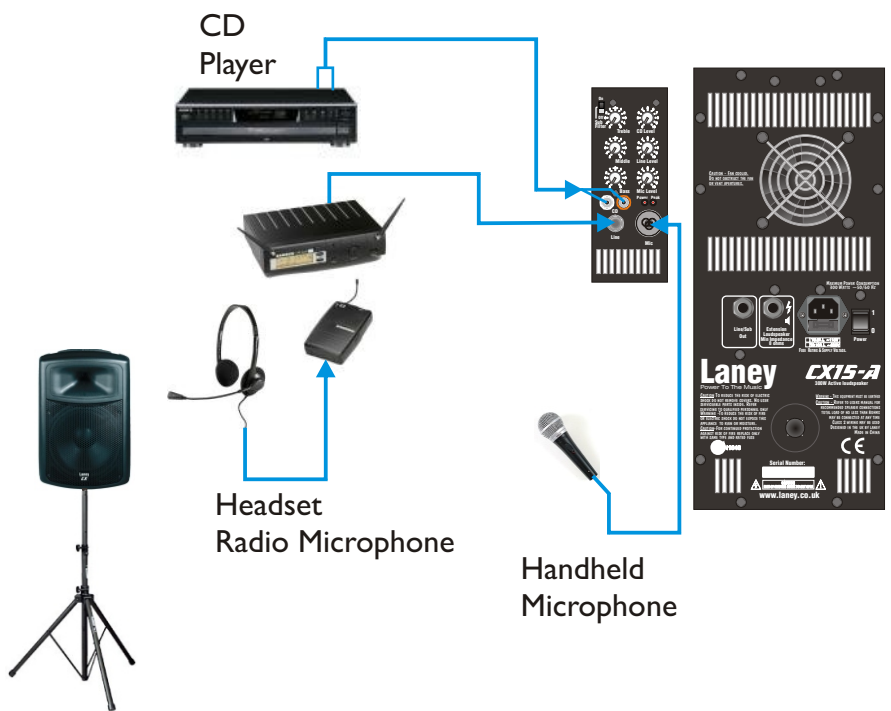
Plug your CD player into the 'CD' input, you control the volume using the CD level control.

If you need to use a radio mic / headset mic or mixer output, plug into the line input.

If you are using a handheld microphone you plug into the 'Mic' input.

If you need 2 speakers in your system, just plug any 8 ohm cabinet into the extension speaker socket. This will make full use of the built in amplifier and allow you to provide more even sound coverage for your audience.

The line out can be used for driving additional active CXA cabinets.



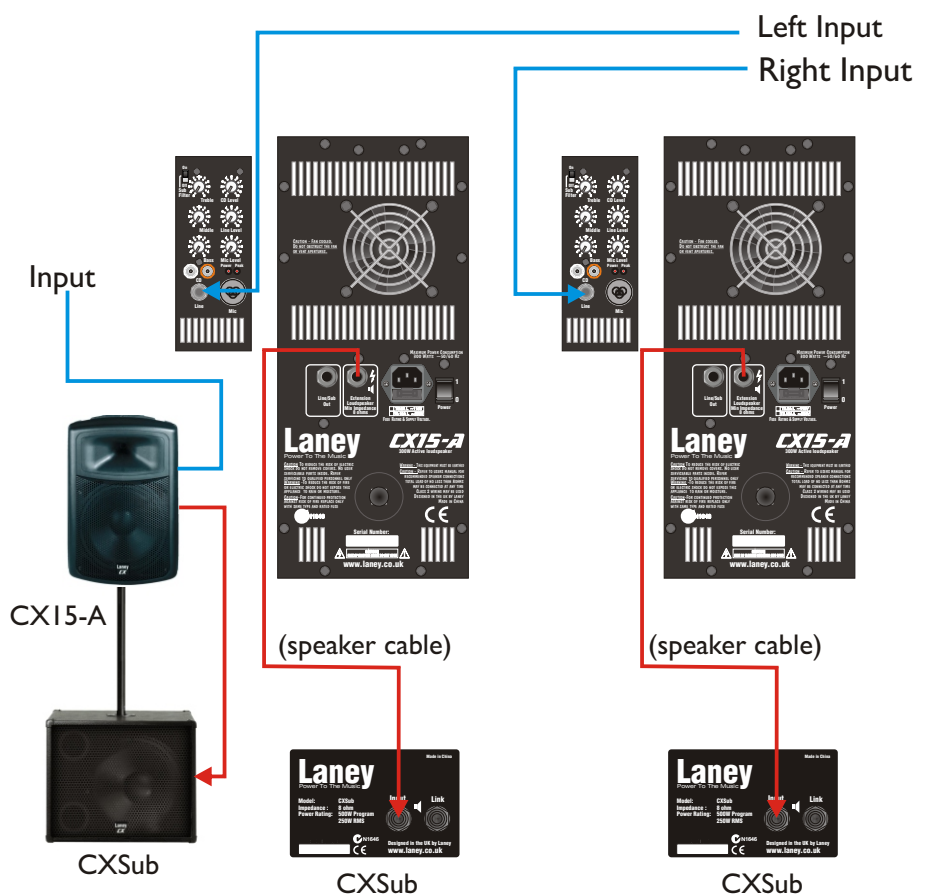
Band / DJ System

This system benefits from the addition of some passive CXsub's, this will give more weight and punch to the bass often needed in larger rooms/venues. This is particularly useful for making sure the kick drum / bass lines are heard.

The passive CXsubs are connected to the extension speaker outs on the CX12-A or CX15-A.

This system accept line level inputs on phono's and 1/4" jacks via the line or CD inputs. This provides good compatibility with most audio sources such as mixers / CD players etc.

Whilst microphones would normally be connected to the external mixer you can drive this system as in the previous setup - this gives you flexibility to take only the sound equipment to the gig that you need.



Band/DJ System using crossover facilities

If you need something louder & crisper you can use some active sub cabinets and the crossover filters which are built into the CX-A cabinets.

These crossover filters allow you to cut most of the vocals from the sub speakers (which never sounds good) and let the vocals / mid /treble frequencies have more headroom in the tops.

There is little stereo information at bass frequencies so it is quite normal to 'mono' the bass, if you have no stereo bass in your system you could lose the optional line out connection from one of the CX12-A / CX15-A speakers.

- The CX12-A / CX15-A line out sockets are connected to the Input sockets on the CXSub-A.
- The extension speaker socket of the active CXSub-A is connected to the input sockets of the passive CXSub.

After listening tests we have found the following setting sounds best :-

CX12-A / CX15-A Sub filter ON
CXSub-A Phase = +

- The active CXsub-A has a built in crossover which means it only reproduces bass frequencies.
- The active CX12-A / CX15-A sub filter cuts the bass frequencies from it's speaker out. The line out is still full range.

These 3 setups give you an idea how you can connect together CX-A cabinets to create anything from 1 speaker sound system to a multi speaker setup.

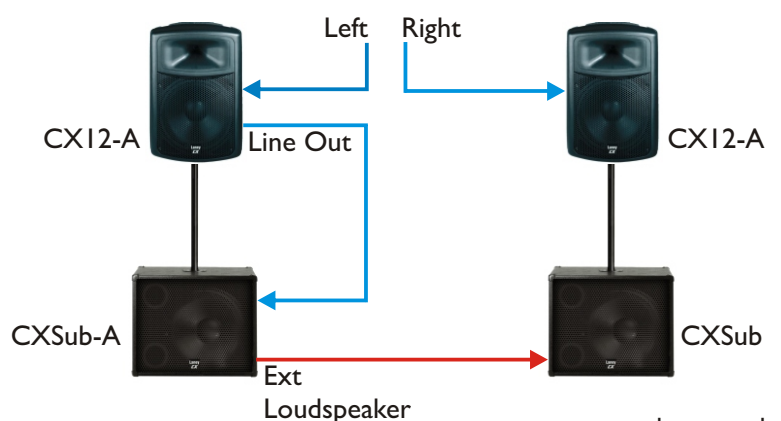
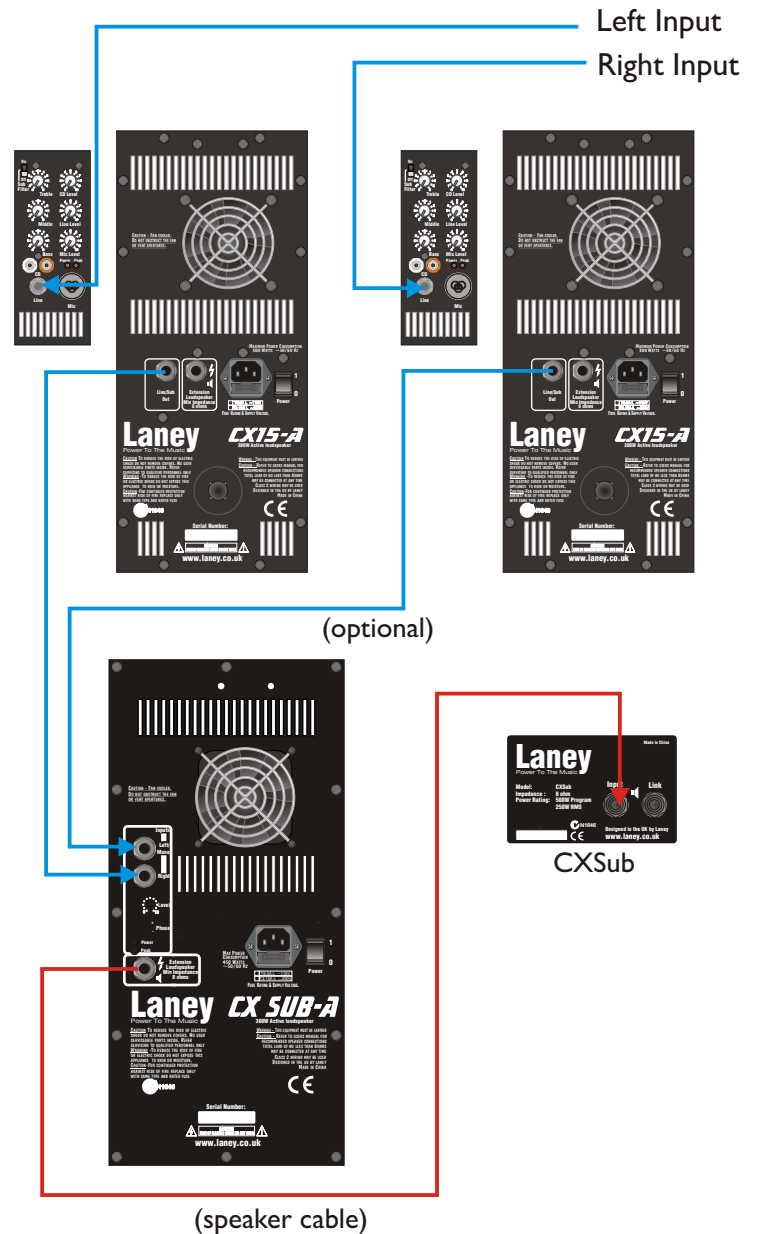
Definition of Terms and handy hints

Active : has a power amp built in
eg CX12-A , CX15-A, CXSub-A

Passive : No power amp - just the loudspeaker
eg CX12, CX15, CXSub.

Hint 1 : A CX-A active speaker can drive one 8 ohms passive loudspeaker from its extension speaker socket. Always use speaker cable for this type of connection.

Hint 2 : Line out are useful for driving the Line inputs of other active cabinets (CX-A). Always use good quality line level/screened cable for this connection.



	CX12-A	CX15-A	Cxsub-A	Cxsub
Supply Voltage	230V @ 50/60Hz	230V @ 50/60Hz	230V @ 50/60Hz	na
(factory selected)	or 120V @ 50/60Hz	or 120V @ 50/60Hz	or 120V @ 50/60Hz	na
Power Consumption	330W	600W	600W	na
Amplifier Power rating rms	165W / 4 ohms	300W / 4 ohms	300W / 4 ohms	na
	110W / 8ohms	170W / 8 ohms	170W / 8 ohms	na
Speaker power (r.m.s./Program)	200W/400W	250W/500W	250W/500W	250W/500W
Impedance	8	8	8	8
Frequency Range	60Hz - 18KHz	50Hz - 18KHz	35Hz - 170Hz	35Hz - 800Hz
Size W*D*H	410*330*620	500*360*700	580 * 505 * 510	580 * 505 * 510
Pole stand fitting	35mm diameter	35mm diameter	35mm diameter	35mm diameter
Shipping Weight	24Kg	19.5Kg	34Kg	29Kg
Net weight	20Kg	16Kg	30Kg	25Kg
Line gain (max)	+42dBu	+42dBu	-7dBu to +10dBu	na
Mic gain (max)	+72dbu	+72dbu	na	na
CD gain (max)	+32dBu	+32dBu	na	na
EQ	Bass ±12dB @ 35Hz	Bass ±12dB @ 35Hz	na	na
	Mid ±10dB @ 2.5KHz	Mid ±10dB @ 2.5KHz	na	na
	Treble ±10dB @10KHz	Treble ±10dB @10KHz	na	na
Crossover frequency	Switchable Hi Pass	Switchable Hi Pass	Fixed Lo Pass	na
	-6dB @ 170Hz	-6dB @ 170Hz	-6dB @ 170Hz	
	12dB octave	12dB octave	12dB octave	
Phase switch	no	no	yes	no
extension Loudspeaker socket	yes , for 8 ohm cabinet	yes , for 8 ohm cabinet	yes , for 8 ohm cabinet	link out
Line Out	Yes , full range,0dBu nom.	Yes , full range,0dBu nom.	no	na
peak led	Indicates onset of clipping	Indicates onset of clipping	Indicates onset of clipping	na
Cxsub recommended cross over frequency 150Hz - 250Hz				
Maximum Pole stand length should be 1 meter otherwise additional support is required				

General Notes

Amplifier connection. In order to avoid damage, it is advisable to establish and follow a pattern for turning on and off your sound system.

With all system parts connected, turn on source equipment, tape decks, cd players, mixers, effects processors etc. BEFORE turning on your power amplifier. Many products have large transient surges at turn on and off which can cause damage to your speakers.

By turning on your power amplifier LAST and making sure its level control are set to minimum any transients from other equipment will not reach your loudspeakers.

Wait until all system parts have stabilised usually a couple of seconds.

Similarly when turning off your system always turn down the level controls on your power amplifier and then turn off its power before turning off other equipment.

Cables- never use shielded or microphone cable for any speaker connections as this will not be substantial enough to handle the amplifier load and could cause damage to your complete system.

Rigging or suspended mounting. The rigging or suspended mounting of these speakers can expose members of the public to serious health risks or even death. **Under no circumstances attempt to rig, suspend or otherwise mount this system unless you are fully qualified and certified to do so by relevant local, state and national authorities. All relevant safety regulations must be followed. If you are not properly qualified or do not know of pertinent regulations, consult qualified personnel for advice and assistance.**

When mounted on a propriety tripod pole stand ensure the system is fully stable and can not fall over. We do not recommend poles stands to be used higher than 1 metres, without extra support.

Caution: These professional loudspeaker systems are capable of generating very high sound pressure levels. Use care with placement and operation to avoid exposure to excessive levels that can cause permanent hearing damage.

Servicing: The user should not attempt to service these products. Refer all servicing to qualified service personnel.

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Notes

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In the interest of continued product development Laney reserves the right to amend product specification without prior notification.