

# YOU'VE MADE THE RIGHT CHOICE!

We have designed this product to operate reliably over many years. LD Systems stands for this with its name and many years of experience as a manufacturer of high-quality audio products. Please read this User's Manual carefully, so that you can begin making optimum use of your LD Systems product quickly.

You can find more information about **LD-SYSTEMS** at our Internet site [WWW.LD-SYSTEMS.COM](http://WWW.LD-SYSTEMS.COM)

## SAFETY INFORMATION

1. Please read these instructions carefully.
2. Keep all information and instructions in a safe place.
3. Follow the instructions.
4. Observe all safety warnings. Never remove safety warnings or other information from the equipment.
5. Use the equipment only in the intended manner and for the intended purpose.
6. Use only sufficiently stable and compatible stands and/or mounts (for fixed installations). Make certain that wall mounts are properly installed and secured. Make certain that the equipment is installed securely and cannot fall down.
7. During installation, observe the applicable safety regulations for your country.
8. Never install and operate the equipment near radiators, heat registers, ovens or other sources of heat. Make certain that the equipment is always installed so that is cooled sufficiently and cannot overheat.
9. Never place sources of ignition, e.g., burning candles, on the equipment.
10. Ventilation slits must not be blocked.
11. Keep a minimum distance of 20 cm around and above the device.
12. Do not use this equipment in the immediate vicinity of water (does not apply to special outdoor equipment - in this case, observe the special instructions noted below. Do not expose this equipment to flammable materials, fluids or gases. Avoid direct sunlight!
13. Make certain that dripping or splashed water cannot enter the equipment. Do not place containers filled with liquids, such as vases or drinking vessels, on the equipment.
14. Make certain that objects cannot fall into the device.
15. Use this equipment only with the accessories recommended and intended by the manufacturer.
16. Do not open or modify this equipment.
17. After connecting the equipment, check all cables in order to prevent damage or accidents, e.g., due to tripping hazards.
18. During transport, make certain that the equipment cannot fall down and possibly cause property damage and personal injuries.
19. If your equipment is no longer functioning properly, if fluids or objects have gotten inside the equipment or if it has been damaged in any other way, switch it off immediately and unplug it from the mains outlet (if it is a powered device). This equipment may only be repaired by authorized, qualified personnel.
20. Clean the equipment using a dry cloth.
21. Comply with all applicable disposal laws in your country. During disposal of packaging, please separate plastic and paper/cardboard.
22. Plastic bags must be kept out of reach of children.
23. Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## FOR EQUIPMENT THAT CONNECTS TO THE POWER MAINS

24. CAUTION: If the power cord of the device is equipped with an earthing contact, then it must be connected to an outlet with a protective ground. Never deactivate the protective ground of a power cord.
25. If the equipment has been exposed to strong fluctuations in temperature (for example, after transport), do not switch it on immediately. Moisture and condensation could damage the equipment. Do not switch on the equipment until it has reached room temperature.
26. Before connecting the equipment to the power outlet, first verify that the mains voltage and frequency match the values specified on the equipment. If the equipment has a voltage selection switch, connect the equipment to the power outlet only if the equipment values and the mains power values match. If the included power cord or power adapter does not fit in your wall outlet, contact your electrician.
27. Do not step on the power cord. Make certain that the power cable does not become kinked, especially at the mains outlet and/or power adapter and the equipment connector.
28. When connecting the equipment, make certain that the power cord or power adapter is always freely accessible. Always disconnect the equipment from the power supply if the equipment is not in use or if you want to clean the equipment. Always unplug the power cord and power adapter from the power outlet at the plug or adapter and not by pulling on the cord. Never touch the power cord and power adapter with wet hands.
29. Whenever possible, avoid switching the equipment on and off in quick succession because otherwise this can shorten the useful life of the equipment.
30. IMPORTANT INFORMATION: Replace fuses only with fuses of the same type and rating. If a fuse blows repeatedly, please contact an authorised service centre.
31. To disconnect the equipment from the power mains completely, unplug the power cord or power adapter from the power outlet.
32. If your device is equipped with a Volex power connector, the mating Volex equipment connector must be unlocked before it can be removed. However, this also means that the equipment can slide and fall down if the power cable is pulled, which can lead to personal injuries and/or other damage. For this reason, always be careful when laying cables.
33. Unplug the power cord and power adapter from the power outlet if there is a risk of a lightning strike or before extended periods of disuse.

34. The appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.

35. Children must be instructed not to play with the device.

36. If the power cord of the device is damaged, do not use the device. The power cord must be replaced by an adequate cable or assembly from an authorized service center.



**CAUTION:**

To reduce the risk of electric shock, do not remove cover (or back). There are no user serviceable parts inside. Maintenance and repairs should be exclusively carried out by qualified service personnel.



The warning triangle with lightning symbol indicates dangerous uninsulated voltage inside the unit, which may cause an electrical shock.



The warning triangle with exclamation mark indicates important operating and maintenance instructions.



Warning! This device is designed for use below 2000 metres in altitude.



Warning! This product is not intended for use in tropical climates.

**CAUTION! HIGH VOLUMES IN AUDIO PRODUCTS!**

This device is meant for professional use. Therefore, commercial use of this equipment is subject to the respectively applicable national accident prevention rules and regulations. As a manufacturer, Adam Hall is obligated to notify you formally about the existence of potential health risks.

Hearing damage due to high volume and prolonged exposure: When in use, this product is capable of producing high sound-pressure levels (SPL) that can lead to irreversible hearing damage in performers, employees, and audience members. For this reason, avoid prolonged exposure to volumes in excess of 90 dB.

## PROPERTIES

### LDICOA12A(BT)

- Genuine all-rounder for full-range, satellite, and monitor applications
- Two-way speaker with 12" woofer
- BT model equipped with Bluetooth® audio streaming
- 126 dB max. SPL and 300 W RMS power handling
- Coaxial design with rotatable, BEM-optimized CD horn for vertical and horizontal use
- Horn-loaded woofer
- DynX DSP with four presets featuring three band equalizer (EQ) and delay function
- Two line/mic input channels with individual gain controllers, 3.5 mm jack input plus mono mix output
- 36 mm dual-tilt stand connection with a tilt angle of 0° and 5°, 55° monitor angle with sturdy stand
- Shockproof front grille for the best speaker protection
- Four aluminium handles with ergonomic, rubberized surface
- Comprehensive range of optionally available accessories for installation and transport

## LDICOA15A(BT)

- Genuine all-rounder for full-range, satellite, and monitor applications
- Two-way speaker with 15" woofer
- BT model equipped with Bluetooth® audio streaming
- 128 dB max. SPL and 300 W RMS power handling
- Coaxial design with rotatable, BEM-optimized CD horn for vertical and horizontal use
- Horn-loaded woofer
- DynX DSP with four presets featuring three band equalizer and delay function
- Two line/mic input channels with individual gain controllers, 3.5 mm jack input plus mono mix output
- 36 mm dual-tilt stand connection with a tilt angle of 0° and 5°, 55° monitor angle with sturdy stand
- Shockproof front grille for the best speaker protection
- Four aluminium handles with ergonomic, rubberized surface
- Comprehensive range of optionally available accessories for installation and transport

## CONNECTIONS, CONTROL, AND DISPLAY ELEMENTS



### 1 POWER

On/off switch. The speaker should always be the last device to be switched on in the signal chain, and the first to be switched off.

### 2 POWER SOCKET AND FUSE HOLDER

IEC power socket with integrated fuse holder. A suitable power cable is included in delivery.

**IMPORTANT NOTE:** Only replace the fuse with a fuse of the same type and values. Please note the inscription on the housing. If a fuse trips repeatedly, please contact an authorized service center.

### 3 LC DISPLAY

Multifunctional graphic LC display for displaying the master volume, the DSP preset and the input level for channels 1 and 2 in the main menu. The menu items, submenu items, and corresponding editing options are displayed in the Editing menu.

### 4 VOLUME / PUSH FOR MENU

From the main menu, the master volume can be adjusted by turning the rotary-push encoder. Press the rotary-push encoder to access the Editing menu. Use the rotary-push encoder to navigate the Editing menu, adjust system settings, and change values in the respective menu items.

**5 INPUT 1-2**

XLR/jack combo sockets for balancing audio output of channels 1 and 2. The inputs are suited for both line-level signals as well as for directly connecting the microphone. The inputs are not equipped with phantom power.

**6 GAIN**

Controller for adjusting the input gain of channels 1 and 2. For an optimum signal-to-noise ratio, set the signal as high as possible, but make sure that the Peak display does not light up or briefly appear, to prevent signal distortion and system damage. If necessary, also adjust the player's output level.

**7 AUX IN**

Unbalanced audio input with 3.5 mm stereo jack socket. A connected stereo signal is summed to mono internally. Control the volume for the AUX IN channel using the gain controller for channel 2. If necessary, also adjust the player and master volume with the rotary-push-encoder.

**8 SYSTEM OUT**

Balanced audio output with male 3-pin XLR socket. The connected signal is a mix out of channel 1 and 2 and AUX IN.

**OPERATION****NOTE:**

The LD Systems logo briefly appears on the display as soon as the speaker is correctly connected to the power supply and switched on. All settings (e.g. Preset, EQ, and Delay) resume the way they were as before the speaker was switched off. If Bluetooth was previously enabled (on models with Bluetooth), it will be automatically disabled after a restart. The speaker will be ready for use after completion of this process, which usually takes one second.

**MAIN MENU**

The main display is activated during normal operation. It shows the master volume setting, the activated speaker preset, the input levels of channels 1 and 2, and Bluetooth if it is activated on Bluetooth-enabled models (see figure).

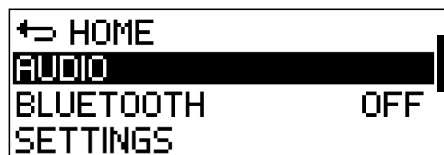
**VOLUME**

From the main menu, the master volume can be directly adjusted by turning the rotary-push encoder VOLUME / PUSH FOR MENU from -60 to +10 dB. When the encoder is rotated, the display automatically changes to the corresponding symbol (see figure below). The main menu will automatically reappear after approx. 8 seconds of inactivity. Pressing the encoder immediately changes the display to the main menu.



## AUDIO SETTINGS (AUDIO)

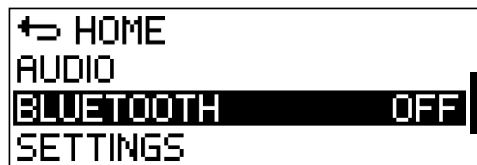
Press the rotary-push encoder to access the main menu and then turn the encoder to select the menu item AUDIO (dark background). Press the encoder again to access the submenu and then turn the encoder to select the desired submenu item. Confirm the selection by pressing the encoder. Turn the encoder to change a value and then confirm the change in value by pressing the encoder. Refer to the table below for the submenu items and the relevant information. In the submenu, select  $\rightarrow$  MAIN MENU and press the encoder to return to the main menu. In the main menu, select  $\rightarrow$  HOME and then press the encoder to confirm this selection and return to the main menu. The main menu will automatically be displayed after approx. 8 seconds of inactivity.



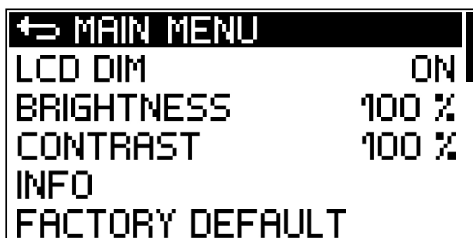
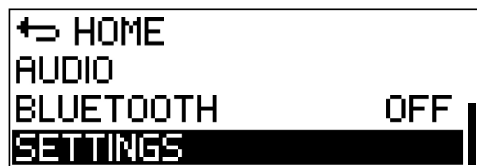
AUDIO (Change value = turn encoder, confirm change in value = press encoder)			
$\rightarrow$ MAIN MENU	Return to main menu		
PRESET	Selection of the speaker preset	FULL RANGE	
		MONITOR	
		FLAT	
		SAT	
HIGH EQ	Setting treble frequencies from -10dB to +10dB		
MID EQ	Setting mid frequencies from -10dB to +10dB		
LOW EQ	Setting bass frequencies from -10dB to +10dB		
DELAY	Time delay of the audio signal in 0.32 ft steps up to 32 ft (0 ft = OFF, display in meters and feet)		

**BLUETOOTH® (only LDICOA12ABT and LDICOA15ABT models)**

The LDICOA12ABT and LDICOA15ABT models are Bluetooth-enabled to allow for audio files on another Bluetooth device (e.g. smartphone, tablet) to be played back on speakers (maximum distance between both devices is approx. 10 meters; stereo signals are summed to mono internally.). To enable Bluetooth, press the rotary-push encoder to access the main menu and then turn the encoder to select the menu item **BLUETOOTH** (dark background). Press the encoder again to access the submenu and then turn the encoder to select **ON** (return to main menu with [↵]). Confirm the selection by pressing the encoder. Select the submenu item ↵ **HOME** and then press the encoder to confirm the selection. A flashing Bluetooth icon will now appear in the main display. Switch on Bluetooth on your smartphone or tablet and look for available devices on the user interface. Select "LD ICOA 12" or "LD ICOA 15" to pair and connect your Bluetooth device with the speaker's Bluetooth unit. The audio playback can start as soon as the process is completed. The Bluetooth symbol now permanently appears on the display. If the Bluetooth connection is lost (e.g. out of range), the Bluetooth icon will start to flash again. The volume setting is carried out on the player, and the master volume is adjusted using the encoder. If a Bluetooth connection to the speaker is not required to emit sound, disable Bluetooth in the Bluetooth submenu (**BLUETOOTH OFF**).

**SYSTEM SETTINGS (SETTINGS)**

Press the rotary-push encoder to access the main menu and then turn the encoder to select the menu item **SETTINGS** (dark background). Press the encoder again to access the submenu and then turn the encoder to select the desired submenu item. Confirm the selection by pressing the encoder. Turn the encoder to change a value and then confirm the change in value by pressing the encoder. Refer to the table below for the submenu items and the relevant information. In the submenu, select ↵ **MAIN MENU** and press the encoder to return to the main menu. In the main menu, select ↵ **HOME** and then press the encoder to confirm this selection and return to the main menu. The main menu will automatically be displayed after approx. 8 seconds of inactivity.



<b>SETTINGS</b> (Change value or status = turn encoder, confirm or request information = press encoder)			
↵ <b>MAIN MENU</b>	Return to main menu		
<b>LCD DIM</b>	Automatic display dimming	ON	Display is dimmed after approx. 8 seconds of inactivity
		OFF	Automatic display dimming switched off
<b>BRIGHTNESS</b>	Setting the display brightness (0-100%)		
<b>CONTRAST</b>	Setting the display contrast (0-100%)		
<b>INFO</b>	Display of model number and software version		
<b>FACTORY DEFAULT</b>	Reset to factory default (AUDIO, BLUETOOTH + SETTINGS)	CANCEL	Cancel reset
		RESET →	SURE? YES      Execute reset
		CANCEL	Cancel reset



#### WHAT DOES LD SYSTEMS DynX® DSP MEAN?

DSP is an acronym that stands for digital signal processing. DynX® includes the Limiter, EQ, Compressor, and Crossover functions. Digital signal processing ensures optimal audio playback with maximum clarity while protecting the PA system from overloading.

#### WHAT EXACTLY DOES DynX® DSP DO?

The Limiter function protects the speaker and prevents overload-induced distortion. Separate limiters for the bass, mid, and treble regions limit the signal if the level exceeds a value that could have negative effects. Each limiter is optimized for one of the three seamlessly connected frequency ranges (multi-band limiter). This allows the system to be operated at an overall higher sound pressure since extreme signal peaks are automatically limited so that the master volume does not have to be reduced.

The multi-band EQ handles the entire frequency range and optimizes the system's overall sound.

Depending on the frequency range, the crossovers divide the audio signal into the respective speakers, i.e. the subwoofer, midrange tweeter, and tweeter of the array column. The amplitude and run-time optimization of the crossovers also ensure that all frequencies are evenly emitted and reach listeners at the same time.

## STAND ADAPTER



The speakers are equipped with a stand adapter with a stand connection with an angle of 0° (rear position) and a stand connection with a tilt angle of 5° (front position). Examples of use: Use the stand adapter with an angle of 0° for emitting sound to a public audience and the stand adapter with a tilt angle of 5° for emitting sound to a seated audience.

## USE AS A FLOOR MONITOR



The speakers can also be used entirely as floor monitors thanks to the monitor DSP preset, the rotatable tweeter, and its all-purpose housing. Non-slip rubber washers ensure secure positioning. The monitor angle is positioned at 55°.

## ROTATE TWEETER BY 90°



The tweeter can be rotated 90° when the speaker needs to be used in situations where it is installed horizontally or used as a floor monitor. Put the speaker on the slanted monitor panel, remove the front grille from the housing (five screws each for a 2.5 mm Allen key on both the left and right of the housing), and loosen the four screws holding the tweeter to the housing (see Figure A). Now lift the tweeter slightly and turn it 90°. Make sure not to damage the tweeter cable. Guide the tweeter cable into the designated holding groove next to the fixing hole and put the tweeter back on the brackets. Make sure that the cables are not cinched/clamped. Carefully screw the tweeter tight and reattach the front grille to the housing.



OPTIONAL ACCESSORIES

- LDICOAMB – multiposition holder for LD ICOA 12 & 15
- LDICOA12PC – protective cover for LD ICOA 12
- LDICOA15PC – protective cover for LD ICOA 15

TECHNICAL SPECIFICATIONS

Article number:	LDICOA12A	LDICOA12ABT	LDICOA15A	LDICOA15ABT
Product type:	Coaxial PA speaker			
Type:	Active			
Bluetooth audio receiver:	-	Bluetooth 4.0	-	Bluetooth 4.0
Large woofer:	12"		15"	
Large woofer:	12"		15"	
Woofer magnet:	Ferrite			
Woofer brand:	Custom-made			
Tweeter:	BEM-optimized CD horn			
Large HF driver:	1"			
Large HF driver:	1 inch			
HF driver magnet:	Ferrite			
HF driver brand:	Custom-made			
HF driver voice coil:	1"			
HF driver voice coil:	1 inch			
Amplifier:	Class D			
Dispersion (H x V):	90° x 50°			
Power (RMS):	300 W			
Power (Peak):	1200 W			
Frequency response:	50 Hz-20 kHz		48 Hz-20 kHz	
Crossover frequency:	2 kHz			
Max. SPL (Peak):	126 dB		128 dB	
Protection circuits:	Multi-band limiter, overheating, overvoltage, excess current			
Control elements:	On/Off switch, rotary-push encoder, 2 x gain controller			
Display elements:	LC display			
Mic/line inputs:	2			
Mic/line input connections:	XLR/6.3 mm jack combi sockets (balanced)			
Line inputs:	1			
Line input connections:	3.5 mm stereo socket			
Line outputs:	1			
Line output connections:	XLR			
AD/DA converter sampling frequency:	48 kHz			
AD/DA converter resolution:	24 bit			
Power supply:	SMPS			

Operating voltage:	100-240 V AC 50-60 Hz	
Fuse:	T4AL 250 V	
Power consumption:	150 W	
Ambient temperature (running):	0 - 40°C	
Relative humidity:	< 80% (non-condensing)	
Housing material:	Polypropylene	
Housing design:	Bassreflex	
Stand bracket:	36 mm, 0° and 5°	
Monitor angle:	55°	
Dimensions (W x H x D):	375 x 635 x 396 mm	416 x 695 x 415 mm
Weight:	20,4 kg	24,8 kg
Accessories included:	Power cable	
Additional features:	Four handles, mounting holes, rubber washers for using the monitor, robust front grille, DSP with user EQ and Delay function	

## FCC Statement

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.