

SCALE



QUICK START MANUAL

CD10

CD12

CD15

www.scale-tech.net



Important Safety Instructions

Read instructions before connecting

- Save these instructions for later use!
- Follow all warnings and instructions marked on the product!
- Do not use this product in the near of water, i.e. swimming pool, wet basement, etc.
- Read all of these instructions clearly!
- Do not place this product onto a instable stand or table. The product may fall down, causing damage to the product or to persons!
- Slots and holes in the cabinet and the electronic modules are provided for ventilation; to ensure reliable operation of the product, do not cover any slots or holes.
- This product should not be placed in the near an oven or any other hot units.
- Use only the attached (original) power mains cable. In case of questions about power supply or cable, please ask your local SCALE dealer.
- Do not cover or damage the power mains cable.
- In case of damaged cables, do not use them at all.
- The power mains cable should be unplugged if the unit is not used for longer time.
- Never push any objects into this product. Dangerous (high) voltage points could result in risk of fire or electrical shock. Do not spill any liquid on the product.
- Do not try to service this product by yourself. Opening or removing covers may expose you to dangerous (high) voltage or other risks. All service should be handled by qualified service personnel only.
- Clean only with dry clothes.
- In case of any problems, unplug the product from the mains supply immediately.
- Contact qualified service personnel in following cases:
 - If the mains power cable or plug is damaged.
 - If liquid has been spilled into the product.
 - If the product has been exposed to water.
 - If the product does not operate normally according this manual.
 - If the product has been dropped (damaged chassis).
 - Exposure to extremely high volume levels may cause a permanent hearing loss.

TO PREVENT THE RISK OF FIRE AND SHOCK HAZARD,
DO NOT EXPOSE THIS APPLIANCE TO MOISTURE OR RAIN.
DO NOT OPEN CASE; NO USER SERVICE-ABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY.

- The product has been manufactured according to IEC 60065.
- The user must follow the advice and warning comments found in the operating instructions. The unit conforms to Protection Class 1.
- Loudspeaker outputs can carry dangerous high voltage. Connect or disconnect any speaker cable ONLY if the unit is switched off and the unit is disconnected from the mains power supply (wall socket).
- Do not interrupt the protective conductor connection.

MAINS CONNECTION:

- The set operating voltage must match the local mains supply voltage.

PLACE OF INSTALLATION:

- The unit should be used only on a clean, horizontal working surface.
- Keep away the product from moisture and dust.
- Do not place this product onto a instable stand or table. The product may fall down, causing damage to the product or to persons!
- Slots and holes in the cabinet and the electronic modules are provided for ventilation; to ensure reliable operation of the product, do not cover any slots or holes.
- This product should not be placed in the near an oven or any other hot units.
- Keep away from direct sunlight.



WEEE Mark

If you want to dispose of this product, do not mix with general household waste. There are separate collection systems for used electronic products in accordance with legislation under the WEEE Directive (Directive 2002/96/EC) and is effective only within the European Union.

Limited Warranty

Information and Disclaimer

For a period of one year from the date of delivery to the original purchaser (as shown on the original invoice or sales receipt), ScaleNordic AS warrants to the ORIGINAL OWNER of each product (provided it was purchased at an authorized SCALE Dealer) that it is free of defects in materials and workmanship and that each product will meet or exceed all factory published specifications for each respective model. SCALE agrees to repair or replace (at its discretion) all defective parts at no charge for labor or materials; subject to following provisions:

SCALE shall take no responsibility for repair or replacement as specified under this warranty, if the damaged product has been subject to misuse, accident, neglect or failure to comply with normal maintenance procedures; or if the serial number has been defaced, altered or removed. Nor will SCALE accept responsibility for, or resulting from, improper alterations or unauthorized parts or repairs. This warranty does not cover any damage to speakers or any other consequential damage resulting from breach of any written or implied warranty. SCALE will remedy any defect, regardless of the reason for failure (except as excluded) by repair, or replacement. SCALE will remedy the defect and ship the product within a reasonable time after receipt of the defective product at an authorized SCALE Service Center. In the case that an SCALE product requires service, the owner must contact SCALE or an authorized SCALE Service Center to receive an R.A.N. (Return Authorization Number) and instructions on how to return the product to the authorized SCALE Service Center, or to the factory. SCALE (or its Authorized Service Center) will initiate corrective repairs upon receipt of the returned product. Please save original carton and all the packing materials in case shipping is required. All products being returned to the factory or service center for repairs must be shipped pre-paid.

If the repairs made by SCALE or the authorized SCALE Service Center are not satisfactory, the owner is instructed to give written notice to SCALE. If the defect or malfunction remains after a reasonable amount of attempts by SCALE to remedy the defect or malfunction, the owner shall then have the option to elect either a refund or replacement of said SCALE product free of charge. The refund shall be an amount equal to but not greater than the actual purchase price, not including any taxes, interest, insurance, closing costs and other finance charges (minus reasonable depreciation on the product). If a refund is necessary, the owner must make the defective or malfunctioning product available to SCALE free and clear of all liens or other restrictions. SCALE reserves the right to modify or change equipment (in whole or part) at any time prior to delivery thereof, in order to include therein electrical or mechanical improvements deemed appropriate by SCALE; but without incurring any liability to modify or change any equipment previously delivered, or to supply new equipment in accordance with any earlier specifications.

DISCLAIMER OF CONSEQUENTIAL AND INCIDENTAL DAMAGES YOU, THE OWNER, IS NOT ENTITLED TO RECOVER FROM SCALE ANY INCIDENTAL DAMAGES RESULTING FROM ANY DEFECT IN THE SCALE PRODUCT. THIS INCLUDES ANY DAMAGE TO ANOTHER PRODUCT OR PRODUCTS RESULTING FROM SUCH A DEFECT.

No person has the authority to enlarge, amend, or modify this warranty rules. This warranty is not extended by the length of time which the owner is deprived of the use of product. Repairs and replacement parts provided pursuant to the warranty shall carry only the non-expired portion of the warranty.

THIS STATEMENT OF WARRANTY SUPERSEDES ALL OTHERS CONTAINED IN THIS MANUAL.

EU Declaration of Conformity

Version for European Union



This declaration applies to loudspeakers manufactured by ScaleNordic AS and includes the types listed below.

EU conformity of loudspeakers

CD10 / CD12 / CD15

All production versions of these types are included, provided they correspond to the original technical version and have not been subject to any later design or electromechanical modifications.

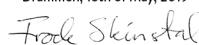
We herewith declare that said products are in conformity with the provisions of the following EC directives including all applicable amendments:
2006/95/EG, Low Voltage
2004/108/EG, Electromagnetic Compatibility

The following standards have been applied:

DIN EN 60065
DIN EN 55103-1:1996, classes E1 to E4
DIN EN 55103-2:1996, classes E1 to E4

ScaleNordic AS, Norway, accepts responsibility for this declaration.

Drammen, 15th of May, 2019


Frode Skinstad

Frode Skinstad
General manager

1. Connecting the loudspeaker

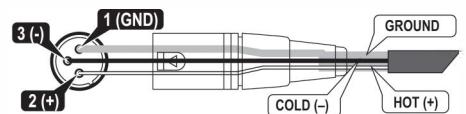
Make sure that the voltage of your power wall socket fits to the voltage requirements of the speaker (+/- 10%) before switching on the system.

Connect the speaker only with the original power mains cable to the wall socket before switching on the system. Disconnect the speaker from the wall socket / mains supply, if the system has been switched off. All other cables (XLR) should be connected or disconnected only if the speaker is switched off. Use shielded cables only.

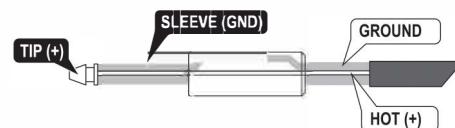
Do not use damaged cables. Damaged or wrong type of cables could destroy parts or the whole system. Check your cables before you use the system.

All cables should be connected internally as per following instructions to ensure a safe operation of the system:

Signal cable with XLR connectors
Cable for inputs and loop outputs.



Signal cable with TS connectors
Cable for inputs.



2. Technical specifications

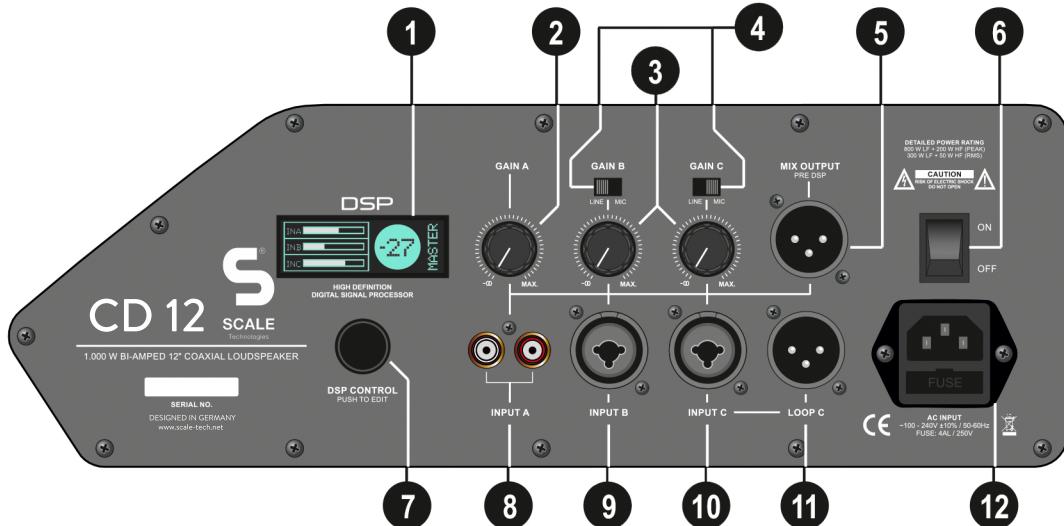
MODEL	CD10	CD12	CD15
TYPE	Self-powered 10" two-way, coaxial	Self-powered 12" two-way, coaxial	Self-powered 15" two-way, coaxial
AMPLIFIER POWER HF (RMS)	50 W	50 W	50 W
AMPLIFIER POWER LF/MF (RMS)	300W	300 W	300 W
AMPLIFIER POWER TOTAL (PEAK)	1.000 W	1.000 W	1.000 W
AMPLIFIER TYPE LF/MF	Class-D	Class-D	Class-D
AMPLIFIERS TYPE HF	Class-D	Class-D	Class-D
DSP CHANNELS	2	2	2
ANALOG INPUT CHANNELS	2	2 + 1 stereo	2 + 1 stereo
INPUT CONNECTORS	2 x combo XLR / TS	2 x combo XLR / TS + 2 x RCA (pair)	2 x combo XLR / TS + 2 x RCA (pair)
LINK CONNECTORS	NO	1 x XLR MIX OUT + 1 x XLR Loop from Input C	1 x XLR MIX OUT + 1 x XLR Loop from Input C
HIGH DRIVER	1 x 1.35" compression driver, mounted coaxially	1 x 1.35" compression driver, mounted coaxially	1 x 1.35" compression driver, mounted coaxially
LOW/MID TRANSDUCER	1 x 10" coaxial speaker	1 x 12" coaxial speaker	1 x 15" coaxial speaker
COVERAGE HXV NOMINAL	90° x 90°	90° x 90°	90° x 90°
SPL MAX	126 dB	127 dB	129 dB
FREQUENCY RESPONSE (-10dB)	65Hz-20kHz	55Hz-20kHz	50Hz-20kHz
FACTORY RESET FUNCTION	Yes	Yes	Yes
DIGITAL MASTER LEVEL	70 steps (-60/+10)	70 steps (-60/+10)	70 steps (-60/+10)
LOW CUT FUNCTIONALITY	80Hz, 100Hz, 120Hz, 150Hz, OFF	80Hz, 100Hz, 120Hz, 150Hz, OFF	80Hz, 100Hz, 120Hz, 150Hz, OFF
DSP MASTER SETTINGS / PRESETS	Normal, monitor, e-drums, keyboard, acoustic guitar, Electric guitar, voice	Normal, monitor, e-drums, keyboard, acoustic guitar, Electric guitar, voice	Normal, monitor, e-drums, keyboard, acoustic guitar, Electric guitar, voice
DSP EQ MODES	high EQ (+/-12dB), mid EQ (+/-12dB), low EQ (+/-12dB)	high EQ (+/-12dB), mid EQ (+/-12dB), low EQ (+/-12dB)	high EQ (+/-12dB), mid EQ (+/-12dB), low EQ (+/-12dB)
DIGITAL DELAY	up to 100m in steps of 0.25m	up to 100m in steps of 0.25m	up to 100m in steps of 0.25m
MIC / LINE SWITCH	2	2	2
WEIGHT (NET)	12.5 kg	14 kg	18 kg
DIMENSIONS WXHxD	355 x 295 x 425 mm	400 x 314 x 465 mm	465 x 335 x 530 mm

3. Connection panel and controls

NOTICE:

The connection panel for CD12 and CD15 is the same.

The CD10 has the following inputs: 2 XLR/TS jack combo inputs and outputs



1. LCD display

Showing all parameters of the internal DSP.

2. INPUT GAIN controller for input A

Reduce if the signal is distorted

3. INPUT GAIN controllers for input B and C

Reduce if the signal is distorted

4. MIC / LINE Switch

Switch, for input sensitivity.

Pushed right - microphone level.

Pushed left - line level.

5. MIX OUTPUT-connector

Balanced sum output of mixed signal (pre DSP).

6. Mains Switch

Switch to turn ON or OFF the speaker.

7. DSP CONTROL encoder

Encoder to adjust all DSP settings.
PUSH to enter menus.

8. INPUT A

Double RCA connectors for
phones and other stereo sources

9. INPUT B

XLR/TS combo connector
for microphone and line sources

10. INPUT C

XLR/TS combo connector
for microphone and line sources

11. LOOP C

Parallel output from input C

12. Mains Connector

Mains connector, for power mains cable.

4. Controlling the DSP functions

DSP ENCODER / CONTROLLER

The encoder is an endless data wheel with push function to enter menus and confirm settings. With this encoder the whole DSP can be controlled.

BEFORE SWITCH ON

Take care, that the correct input mode (MIC or LINE) is selected.
Turn all gain controllers to left position.

When you switch ON the FR speaker, you will see the SCALE logo for some seconds (initializing) The display shows the home screen after initializing.

MASTER VOLUME

The default setting is +00 position. Turn the DSP controller to change the master volume (from -60 up to +10).

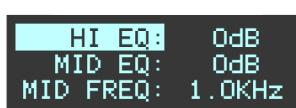
INPUT GAIN SETTING

Set the input gain of all input channels with the gain controls.
If the display shows CLIP, reduce the gain of the clipping input.



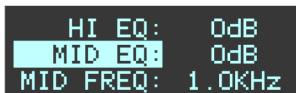
Setting HI EQ

Scroll to HI EQ (high frequency master equalizer) and press the controller to enter the menu. Use the encoder to increase / decrease the value from -12 dB up to +12 dB. Press the controller to confirm.



Setting of parametric MID EQ

Scroll to MID EQ (mid frequency master equalizer) and press the controller to enter the menu.



Setting LOW EQ

Scroll to LOW EQ (low frequency master equalizer) and press the controller to enter the menu.



Setting high pass filter

Scroll to LOW CUT and press the controller to enter the menu (for use with an powered subwoofer).



Setting delay time

Scroll to DELAY and press the encoder to enter the delay function.
Use the encoder to adjust the delay time.
OFF or set the delay time (up to 100 meters in steps of 0,25 meters). Press the controller to confirm.



Using the HD-tuned presets

Scroll to PRESETS and press the encoder to enter the presets.
Use the encoder to change the presets. Press the controller to confirm.



NORMAL: recommended mode for P.A. use, with a flat frequency response.

MONITOR: A small reduction in the low frequency.

E-DRUMS: More punch in bottom, more clarity in mids.

KEYBOARDS: A warmer sound, and a slightly lift in top.

ACOUSTIC GUITAR: Reducing the boominess from an acoustic guitar.

ELECTRIC GUITAR: Emulates frequency response of a 12" guitar cabinet.

VOICE: Lo cut, and makes a clear and accurate sound for dynamic microphones.



Locking the DSP panel

Press the encoder for more than 3 seconds to lock the DSP panel / encoder.
Press again for more than 3 seconds to unlock the panel.





SCALE by ScaleNordic AS

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