

ART SERIES



PROFESSIONAL ACTIVE SPEAKER SYSTEM

ART 310-A, 312-A, 315-A

*For natural sound and clarity, nothing comes close
- when you come to audition an ART you will know
why we moved heaven and earth to get the perfect sound -
so that you can.*

IMPORTANT NOTES

Before connecting and using the amplifier, please read this instruction manual carefully and keep it on hand for future reference. The manual is to be considered an integral part of the product and must accompany the amplifier when it changes ownership as a reference for correct installation and use as well as for the safety precautions. RCF Spa. will not assume any responsibility for the incorrect installation and/or use of the product.



WARNING: To prevent the risk of fire or electric shock, never expose this equipment to rain or humidity.

SAFETY PRECAUTIONS

1. All the precautions, in particular the safety ones, must be read with special attention, as they provide important information.
2. The power supply voltage of this equipment is sufficiently high to involve a risk of electrocution; therefore, never install or connect the product with the power supply switched on.
3. Before powering up the amplifier, make sure that all the connections have been made correctly and that the voltage of your power mains corresponds to the voltage shown on the rating plate on the unit; if it does not, please contact your RCF dealer.
4. The metallic parts of the unit are earthed by means of the power cable. In the event that the current outlet used for power does not provide the earth connection, contact a qualified electrician to earth the equipment using the dedicated terminal.
5. To protect the power cable from damage, make sure that it is positioned so that it cannot be stepped on or crushed by objects.
6. To prevent the risk of electric shock, never open the amplifier. There are no parts on the inside that the user needs to access.
7. Make sure that no objects or liquids can get into the amplifier, as this may cause a short circuit.
8. Never attempt to carry out any operations, modifications, or repairs that are not expressly described in this manual.
Contact your authorized service centre or qualified personnel should any of the following occur:
 - the amplifier does not function (or functions in an anomalous way);
 - the power supply cable has been damaged;
 - objects or liquids have got into the unit;
 - the amplifier has been subject to heavy impact.
9. When the amplifier is not to be used for long periods of time, switch it off and disconnect the power cable.
10. If the amplifier begins to emit any strange odours or smoke, switch it off immediately and disconnect the power supply cable.
11. Do not connect this product to any equipment or accessories not specified.
For suspended installation, only use the dedicated anchoring points and do not try to hang this product using HANDLES or elements that are unsuitable or not specific for this purpose.
Also check the suitability of the support surface to which the product is anchored (wall, ceiling, structure, etc.), and the components used for attachment (screw anchors, screws, brackets not supplied by RCF etc.), which must guarantee the security of the system/installation over time, also considering, for example, the mechanical vibrations normally generated by the transducer.
To prevent the risk of falling equipment, do not stack multiple units of this product unless this possibility is specified in the instruction manual.
12. RCF SpA strongly recommends this product is installed by professional qualified installers (or specialised companies) who can ensure correct installation and certify it according to the regulations in force.
The entire audio system must comply with the current standards and regulations regarding electrical systems.
13. SUPPORTS AND TROLLEYS
The equipment should only be used on trolleys or supports, where necessary, that are recommended by the manufacturer. The equipment/support/trolley assembly must be moved with extreme caution. Sudden stops, excessive pushing force and uneven floors may cause the assembly to overturn.
14. There are numerous mechanical and electrical factors to be considered when installing a professional audio system (in addition to those which are strictly acoustic, such as sound pressure, angles of coverage, frequency response, etc.).
15. HEARING LOSS
Exposure to high sound levels can cause permanent hearing loss. The acoustic pressure level that leads to hearing loss is different from person to person and depends on the duration of exposure. To prevent potentially dangerous exposure to high levels of acoustic pressure, anyone who is exposed to these levels should use adequate protection devices. When a transducer capable of producing high sound levels is being used, it is therefore necessary to wear ear plugs or protective earphones.
See the technical specifications in the instruction manual for the maximum sound pressure the loudspeaker is capable of producing.

IMPORTANT NOTES

To prevent the occurrence of noise on the cables that carries microphone signals or line signals (for example, 0 dB), only use screened cables and avoid running them in the vicinity of:

- equipment that produces high-intensity electromagnetic fields (for example, high power transformers);
- mains cables;
- lines that supply loudspeakers.

OPERATING PRECAUTIONS

- Do not obstruct the ventilation grilles of the unit. Situate this product far from any heat sources and always ensure adequate air circulation around the ventilation grilles.
- Do not overload this product for extended periods of time.
- Never force the control elements (keys, knobs, etc.).
- Do not use solvents, alcohol, benzene or other volatile substances for cleaning the external parts of this product.

THE PHILOSOPHY OF ART

ART was originally conceived way back in 1996. The brief was a tough one. To create perfect sound. Moreover, the speaker enclosures were to be portable, lightweight and strong enough to withstand every day use. Using the latest "Advanced Resource Technology".

The brief remains the same but with even more exacting challenges. Portable and even lighter in weight systems were a must, plus the demands from musicians for improved vocal clarity and definition.

To achieve this RCF has taken the numerous new technological advances in our own transducer developments along with designing new high efficiency "True Active Extended Dynamics" TAED™ amplifier technology. Our new RCF Precision Series of light in weight Neodymium woofers and compression drivers with advanced phase plug technology provide this goal.

THE ART SERIES

The new ART SERIES is a range of professional active speaker systems that combines high power and wide bandwidth in a light weight enclosure.

COMPONENTS

The woofer used in the new Art Series can withstand peak power of up to 6 times the nominal power. These mid bass woofer have been designed for superior reproduction of acoustic signals up to the crossover frequency.

Specific attention has been applied to the speaker cone, optimized for shape and pulp composition.

Our edgewound copper clad aluminium voice coils provide maximum efficiency and high speed for accurate transient response.

Our massive magnets offer superior bass control and mid-bass voice presence.

Our state of the art compression drivers are made from neodymium magnetic circuit technology, reaching levels that exceed 2 Kilogauss in the gap.

AMPLIFIERS

All the new ART models are designed using newly created RCF "True Active Extended Dynamics TAED™ Active Amplifier Technology. Based around 300 watt low and 50 watt high Bi-Amplified monolithic modules, each amplifier has a specific input board and is set-up to optimize the performance in conjunction to the specific transducers in each model.

Each amplifier will give you: XLR balanced inputs, XLR Output link, Mic/Line selectable Input.

CABINETS

Art's polynomial constant directivity horn has virtually the same physical area as the woofer. This means that the driver is perceived to achieve the same output power as the low section with minimum diaphragm excursion, resulting in a well defined, natural and open sound.

The shape of the horn is a unique design able to provide exceptional constant directivity.

Art's bass reflex cabinet is moulded in a special polypropylene composite material resulting from years of experience in plastic cabinet designs, which provide superior stiffness for the weight and excellent low frequency damping.

The cabinet is equipped with ergonomically designed handle easy manoeuvrability in every situation.

Two M10 threaded inserts are provided for optional mounting hardware in Installed Sound Applications.

PRODUCT	WOOFER	C. DRIVER	POWER	DIRECTIVITY	MAX SPL
ART 310-A	10"	1"	350 W	90 X 70	127 dB
ART 312-A	12"	1"	350 W	90 X 60	127 dB
ART 315-A	15"	1"	350 W	90 X 60	128 dB

REAR PANEL FEATURES AND CONTROLS

ENGLISH



- 1 MIC AND LINE LEVEL CONTROL**
Adjust the input stage gain.
- 2 MIC/LINE SWITCH**
Switch between 0 dB line or - 40 dB input sensitivity.
- 3 POWER ON AND LIMITER LEDS**
The green led is ON when power is ON and the red led is ON when the system limiter is acting to prevent clipping condition.
- 4 FEMALE XLR INPUTS (BAL/UNBAL) and MALE XLR SIGNAL OUTPUT**
The system accepts XLR input connectors. The output XLR connector provides a loop trough for speakers daisy chaining.
- 5 IEC AC SOCKET AND POWER MAIN SWITCH**
The IEC AC socket connects the power cord to the socket. The protection fuse is contained in the AC socket. The power switch turns the AC power ON and OFF.
- 6 AC LINE VOLTAGE SELECTOR**
This switch changes the supply voltage to 230 Volt or 115 Volt. This operation requires the substitution of the fuse value and should be carried out by an authorized RCF SERVICE CENTRE.

ARTSERIES

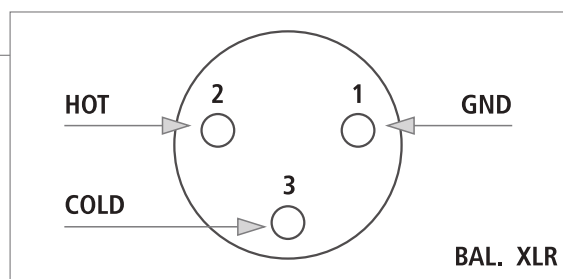
CONNECTIONS

The XLR connectors use the following AES standard:

PIN 1 = GROUND (SHIELD)

PIN 2 = HOT (+)

PIN 3 = COLD (-)



BEFORE CONNECTING THE SPEAKER

On the back panel you will find all the controls, the signal and current inputs.

At first verify that the voltage selector on the speaker is in proper position for your country (115 Volt or 230 Volt).

The switch shall be in proper position (unless moved by unauthorized people), but a fast check will avoid problems. In case it is necessary to change the voltage please call your vendor or authorized RCF SERVICE CENTRE. This operation requires the substitution of the fuse value and is should be carried out by an RCF SERVICE CENTRE.

BEFORE TURNING ON THE SPEAKER

At this point you can connect the power supply cable and the signal cable, but before turning on the speaker make sure that the volume control is at the minimum level (even on the mixer output). It is important that the mixer is already ON before turning on the speaker. This will avoid damage to the speakers and noisy "thumps" due to turning on parts in the audio chain. It is a good practice to always turn on speakers last and turn them off immediately after the show.

Check now that the signal selector is in proper position (- 40 dB MIC if directly connected to a microphone or 0 dB LINE for every other application). Now you can turn ON the speaker and adjust the volume control to a proper level.

INSTALLATION

A 35 mm socket for mounting the loudspeaker on a speaker stand is provided in the bottom of the cabinet. ART speakers MUST be suspended only with approved rigging hardware. In any case always use at least 2 M10 threaded inserts on opposite sides of the cabinet.



WARNING: Never suspend ART speakers by there handles. Handles are intended for transportation, not for rigging.

PROTECTIONS

ART Series active speakers are equipped with a complete system of protection circuits. Two led's on the amplifier back panel indicate the working status of the amplifier: the green led indicates that the speaker is ON and the red led is on when the protection circuit is active. The circuit is acting very gently on audio signal, controlling level and maintaining distortion at acceptable levels. If this led is ON for a long period is better to reduce immediately the signal level from the mixer or from the speaker volume control.

VOLTAGE SETUP (RESERVED TO THE RCF SERVICE CENTRE)

230 Volt, 50 Hz SETUP: FUSE VALUE 2.5 A -T

115 Volt, 60 Hz SETUP: FUSE VALUE 5 A -T

PRODUCT	ART 310-A	ART 312-A	ART 315-A
ACOUSTICAL SPECIFICATIONS			
Frequency response	50 - 20 KHz	50 - 20 KHz	50 - 20 KHz
Max SPL	127 dB	127 dB	128 dB
Coverage angle	90 x 70	90 x 60	90 x 60
Compression driver	neo 1" - 1,5" voice coil	neo 1" - 1,5" voice coil	neo 1" - 1,5" voice coil
Woofer	neo 10" - 2,5" voice coil	12" - 2,5" voice coil	15" - 2,5" voice coil
INPUT SECTION			
Input signal	bal/unbal	bal/unbal	bal/unbal
Input connector	xlr	xlr	xlr
Output signal connector	xlr	xlr	xlr
Input sensitivity	0 dBu	0 dBu	0 dBu
Mic. input sensitivity	- 40 dBu	- 40 dBu	- 40 dBu
PROCESSOR SECTION			
Crossover frequencies	1800 Hz	1800 Hz	1800 Hz
Protections	DC / short cir.	DC / short cir.	DC / short cir.
Limiter	fast limiter	fast limiter	fast limiter
Master volume	yes	yes	yes
AMPLIFIER			
Nominal power	350 Watt	350 Watt	350 Watt
High frequencies	ab / 50 Watt	ab / 50 Watt	ab / 50 Watt
Low frequencies	H / 300 Watt	H / 300 Watt	H / 300 Watt
Cooling	Convection	Convection	Convection
PHISICAL SPECIFICATIONS			
Height	537 mm	680 mm	680 mm
Width	337 mm	405 mm	405 mm
Depth	315 mm	345 mm	345 mm
Weight	12.4 Kg	19 Kg	20 Kg
Cabinet	Composite PP	Composite PP	Composite PP
Hardware	2 M10 flying points	4 M10 flying points	4 M10 flying points
Handles	1 top	2 side - 1 top	2 side - 1 top
Pole Mount / Cap	yes	yes	yes
Colour	Anthracyte gray	Anthracyte gray	Anthracyte gray



Except possible errors and omissions.
RCF S.p.A. reserves the right to make modifications without prior notice.

Salvo eventuali errori ed omissioni.
RCF S.p.A. si riserva il diritto di apportare modifiche senza preavviso.