



MONITOR 33T

MONITOR 33/WT

MONITOR COMPATTO A DIRETTIVITÀ COSTANTE
COMPACT CONSTANT DIRECTIVITY MONITOR SPEAKER
MONITOR COMPACT A DIRECTIVITE COSTANTE
KOMPAKT MONITOR MIT KONSTANTER RICHTWIRKUNG
MONITOR COMPACTO DE DIRECTIVIDAD CONSTANTE

Safety first!!

Before installing and using this product, please read this instruction manual carefully and keep it on hand for future reference. Follow all the instructions to the letter.

WARNING: This product has been designed for installation only by qualified personnel having the technical know-how and experience or specific instructions to ensure correct execution of all the operations involved and to prevent any risk to personal safety. There are numerous factors that must be taken into consideration when installing a professional sound system, including mechanical and electrical evaluations as well as studies related to coverage and acoustic performance. Therefore strongly recommend that you have this product installed only by professional installers or specialized firms.

1. Attention to the precautions – Always follow the precautions provided on this product and in the instruction manual.
2. Water and humidity – Do not use this product near water; for example, in the vicinity of a bath tub or sink, in a damp cellar, near a swimming pool, etc..
3. Foreign bodies and liquids – Be careful not to allow any foreign bodies or liquids to get into this product.
4. Technical service – The user should never attempt to make any repairs on this product unless otherwise indicated in the instruction manual. All repairs should be made by qualified service technicians.
5. Installation – Do not install this product in any way that is not provided for in the instruction manual.

6. Stacking multiple units – To prevent the danger of falling equipment, never stack multiple units of this product unless this possibility is expressly indicated in the instructions.
7. Respect the safety standards – The entire sound system must be created in compliance with the current standards and laws regarding electrical systems.
8. Specifications – When installing and using this product, keep in mind the technical specifications indicated in the dedicated section of this instruction manual.
9. Accessories – Install and use this product only with the accessories specified by the manufacturer or supplied with the product.



Hearing loss - Exposure to high sound levels can cause permanent hearing loss.

The sound pressure level which leads to hearing loss varies considerably from one person to another, and depends on the duration of exposure. The U.S. Government's Occupational Safety and Health Administration (OSHA) has established the maximum sound pressure levels that can be with stood without causing damage, which are shown in the table below. According to the OSHA regulations, any exposure over the maximum limits indicated in the table can reduce the hearing capacity of a person. To prevent potentially dangerous exposure to high sound pressure levels, anyone subjected to such levels must use suitable protection. When an product capable of producing high sound levels is being used, it is therefore necessary to wear ear plugs or protective earphones when the limits shown in the table are exceeded.

Duration per day (hours)	Sound level (dBA)	Typical example
8	90	Duet in a small club
6	92	
4	95	Underground train
3	97	
2	100	Classical music played at high volume
1.5	102	
1	105	
0.5	110	
0.25 or less	115	Particularly "hard" music at a rock concert

Consult the specifications provided in the instruction manual to know the maximum sound pressure (SPL) the speaker is capable of producing.

The MONITOR 33T and MONITOR 33/WT speakers are supplied with a black (white) ball joint support for wall mounting.

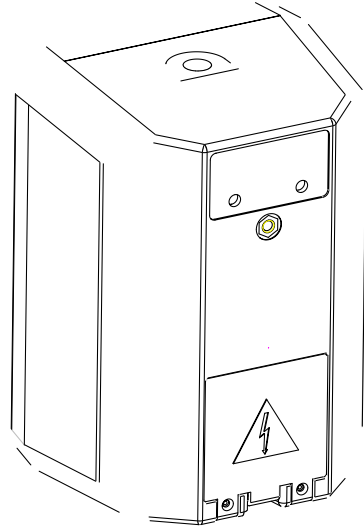
Unpacking the speaker

Remove the speaker carefully from its packaging to avoid damaging it. Should the speaker appear to be damaged, put it back in the original packaging and take it immediately to your dealer or to the nearest RCF S.p.A.

Description

The MONITOR 33T (Black) and MONITOR 33/WT (White) are a compact two-way speaker system designed for constant-voltage system. The 4.75" (120 mm) carbon fiber woofer, in combination with a 0.5" (13 mm) mylar dome tweeter mounted on a 110° x 100° constant directivity horn, provide natural, smooth sound reproduction, ideal for use in business music systems and indoor/outdoor background music applications.

The passive crossover is designed to reduce heat dissipation and optimise the power response of the loudspeaker. Connections are made to recessed, color-coded spring-loaded terminals. The enclosure is constructed of high-density plastic, with M6 threaded inserts for use with the optional mounting hardware, and includes a protective perforated steel grille.

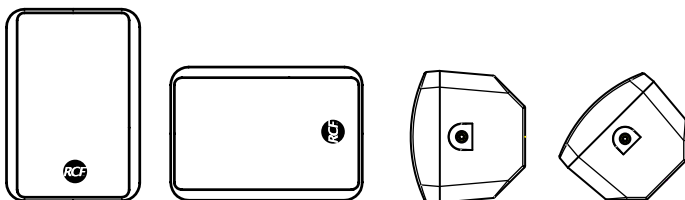


Installation

The special hexagonal shape of the cabinet makes it possible to position the speaker in various ways, as shown in the figure. The RCF plate on the front protective grille can be rotated to adapt it to the position of the speaker.

The speaker body has four M6 threaded inserts, one each on the top and bottom and two on the back, used for attaching accessories for installing the speaker in different ways.

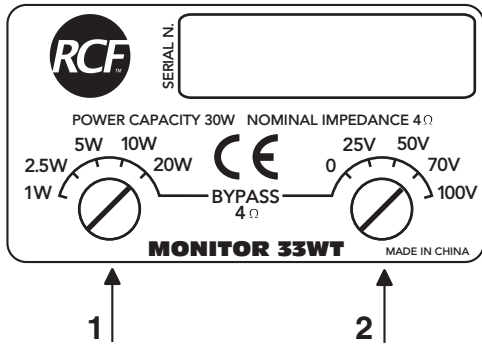
WARNING - Consult a professional rigger or structural engineer prior to suspending loudspeakers from a structure not intended for that use. Always know the working load limit of the structure supporting the loudspeaker array. Always make sure that the rigging hardware minimum rating is at least five times the actual load.



Rear Panel Features and Controls

1. This rotary control selects the power tap for the internal constant voltage transformer. Choices are 1W, 2.5W, 5W, 10W, 20W, and BYPASS (used for 4 ohm operation).
2. This rotary control selects the constant voltage distributed system in which the speaker is used. Choices are BYPASS (used for 4 ohm operation), 0 (Off), 25V, 50V, 70V and 100V.

Note: Use a slot-head screwdriver to adjust the rotary controls.

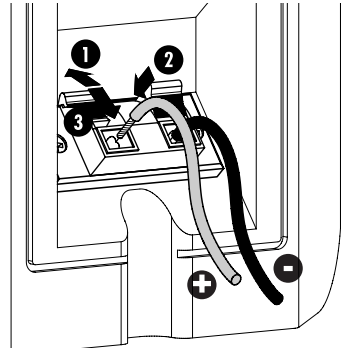


Connections

The spring-loaded speaker terminals are designed to accept bare wire, up to a maximum of 18 gauge. Strip 1/4" (6 mm) of insulation off the end of the speaker wire, press in the tab, and insert the bare wire into the hole. When you release the tab, the wire is locked in place. Make sure there are no stray strands of wire outside the terminal connection.



WARNING: To prevent the risk of electrical shock, always fit the protective cover of the terminals after completing connections.



Connecting the MONITOR 33T and MONITOR 33/WT speakers

These speakers can be used in either constant systems (e.g. 25V, 50V, 70V, 100V) or constant impedance systems.

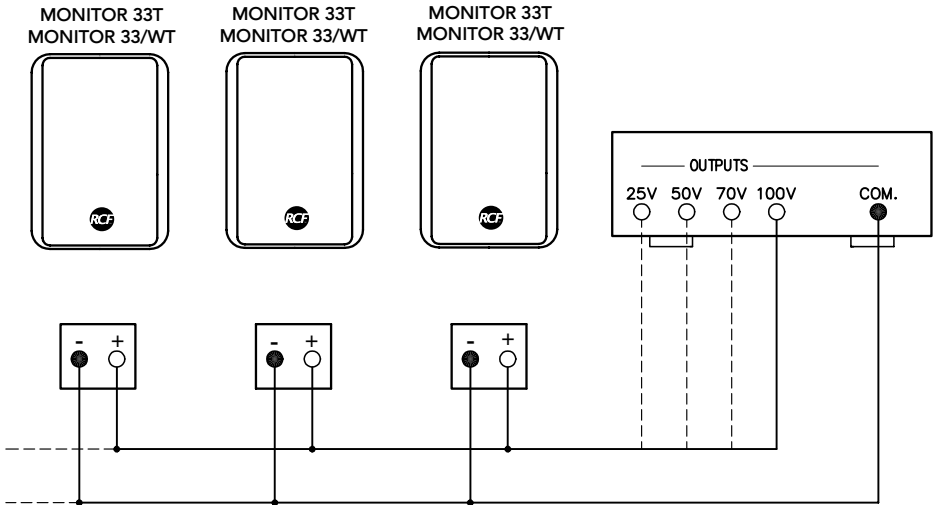
To connect the speakers to constant voltage lines:

1. Use a screwdriver to turn the switch 1 and select the power to be delivered as explained in the specific section. Should this switch be mistakenly placed in the Bypass position, the sound message will not be distributed.
2. Use a screwdriver to turn the input voltage selector 2 so that the slot is set on the voltage of the sound system (e.g. 70V).
3. Connect the input terminals: the RED terminal must always be connected to the positive terminal (e.g. 70V) of the audio line.

To connect the speakers to constant impedance lines:

1. Use a screwdriver to turn the switch 1 so that the slot is set on the Bypass position.
2. Use a screwdriver to turn the switch 2 so that the slot is set on the Bypass position.
3. Connect the input terminals: the RED terminal must always be connected to the positive terminal (+) of the audio line.

When the switch 2 is turned to the 0 position, the speaker is disconnected from the line, and the sound message is not distributed. The 25V input voltage can also be used in constant impedance systems for connecting multiple speakers in parallel: the minimum impedance of the 25V input, corresponding to the 20W position of the switch 1, is 31 ohms.



Specifications

Enclosure:

Bass reflex

Components:

Low frequency : 4.75" (120 mm) carbon fiber woofer.

High frequency :

0.5" (13 mm) driver loaded by 110° x 100° constant directivity horn.

Sensitivity (1W / 1m):

88dB SPL in anechoic chamber

Maximum sound pressure:

105 dB/1m in anechoic chamber
Bypass (60 RMS – 0.5 sec. ON – 0.5 sec. OFF)

Nominal power with Transformer:

1 – 2.5 – 5 – 10 – 20 W

Applicable power*:

30 W (RMS) - Bypass

Musical power*:

60 W (RMS - 0.5 sec. ON - 0.5 sc. OFF)-
Bypass

Peak power*:

90 W (30 W RMS + Crest factor 4.5 dB)-
Bypass

Nominal impedance:

[Bypass]: 4 ohm
[100V]: 500 Ω - 20W, 1kΩ - 10W,
2kΩ - 5W, 4kΩ - 2.5W, 10kΩ - 1W
[70V]: 245Ω - 20W, 490Ω - 10W,
980Ω - 5W, 2kΩ - 2.5W, 4.9kΩ - 1W
[50V]: 125Ω - 20W, 250Ω - 10W,
500Ω - 5W, 1kΩ - 2.5W, 2.5kΩ - 1W
[25V]: 31Ω - 20W, 62Ω - 10W,
125Ω - 5W, 250Ω - 2.5W, 625Ω - 1W

Input voltage:

25 – 50 – 70 – 100 V

Frequency response:

150 – 20.000 Hz ±3 dB
100 – 20.000 Hz –10 dB

Tuning frequency:

150 Hz

Crossover frequency:

3000 Hz

Type of filter:

12/6 dB/oct

Angle of coverage:

110° vertical x 100° horizontal

Enclosure material:

High density plastic

Input connectors:

Spring-loaded terminal

Application:

Indoor – Outdoor

Dimension (L x H x P):

154 x 216 x 136 mm
(6.06'' x 8.50'' x 5.35'')

Colour: Matt black (MONITOR 33T)

White (MONITOR 33/WT)

Weight: 2.2 kg (4.85 lb)

* The specifications provide three power values which are determined by submitting the speaker to a series of laboratory test lasting two hours each. In the test for applicable power, pink noise is applied in the operating range of the speaker, and the signal is filtered at the ends of the band with a 12dB/oct. slope. The applicable power value indicated is an RMS value. The signal peaks present in the pink noise, adjusted according to the type of speaker being tested (e.g. +4.5dB with respect to the average level), are used for determining the peak power value. To identify the musical power, the RMS power value obtained in the first test is doubled, applying it with impulses lasting 0.5 seconds (0.5 sec. ON), and at an interval of 0.5 seconds between one application and the next (0.5 sec. OFF). For all the tests, the maximum power that the speaker can withstand without permanent damage is assumed as the power value.

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