







INSTALLATION MANUAL



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1. Description and components of the i500 Series

The i500 is a multi-room audio system for listeners to enjoy music throughout the entire home by integrating the sound into the home's fixtures. Thanks to its built-in ceiling speakers, the i500 does away with the need for portable MP3 devices or individual sound systems in each room. The Series is also equipped with intercom features for room-to-room communication, electronic baby monitors, etc.

Some of the i500 Series features:

- Enjoy music throughout the entire house
- Access different music channels, including a disc player and an iPod docking station with full control allowing the user to navigate throughout a full collection of music
- Wireless Remote Control Unit

The i500 Series does not require hook-up from a dedicated computer. No technical computer skills are required to fully enjoy all the features equipped to the system.

With the i500 Series it is possible to distribute different music channels to as many as 32 separate rooms from a Master Unit.

The Master Unit (ref. 51121) is equipped with the basic features:

- ✓ FM tuner with built-in RDS and RF 75 ohm coaxial connectors for antenna
- ✓ CD/DVD disc players able to "reproduce" audio CD, CD-MP3 and DVD-MP3
- ✓ connection to Universal Dock for iPod (ref. 52222)
- Two RCA inputs for external sound devices with independent regulator and level indicator
- ✓ Data and sound (4 channels) output line via RJ45 connector
- Direct connection to the electrical power source (110 to 240Vac/35W)



A Main Speaker (ref. 55101) and a Passive Speaker (ref. 55301) are installed in each zone or room. Flush-mounted in the ceiling, they become integrated into the home without the need for entertainment centers, counters or any other type of external fixture

A bus-type cable connection is required to communicate the Master Unit with all the Main Speakers within the system. The wired connection provides optimal sound quality reception, free of interference and interruptions, thus guaranteeing total privacy from possible intrusions (involuntary or intentional) from outside the home.

The Main Active Speaker (ref. 55101) integrates the control and sound electronics of each zone or room and is equipped with the following basic features:



- ✓ FM tuner with built-in RDS and 75 ohm RF coaxial antenna connector
- ✓ Wireless data and sound communication with 52121 Remote Control Unit
- ✓ Data and sound (4 channels) input line from the Master Unit: 8 wires
 ✓ 5+5W sound amplifier
- ✓ Built-in two-way loudspeaker
- ✓8 ohm output for Passive Speaker (ref. 55301)
- ✓ Line output (4 wires) for Auxiliary Active Speaker (ref. 55201)
- Connection to the electrical power source (110 to 240Vac/20W)



ref. 55101

The Auxiliary Active Speaker (ref. 55201) is ideal for zones or rooms where greater sound power is required. Its features include:

- √5+5W sound amplifier
- ✓Built-in two-way loudspeaker
- ✓8 ohm output for Passive Speaker (ref. 55301)
- ✓Line input (4 wires)
- Connection to electrical power source (110 to 240Vac/18W)



ref. 55201

The entire system is handled from Remote Control Units (ref. 52121). They do not require any installation. The Remote Control Unit Base (ref. 52221) needs be connected to the mains, acting as the remote's platform as well as providing battery charge for the Remote Control Unit:

- ✓ Graphic interface with 2.2" color TFT
- ✓ Built-in microphone
- ✓3.5 mm input jack for external sound source
- ✓ Wireless data and sound communication with Main Active Speaker (ref. 55101)
- Battery charger connected to the electrical supply (110 to 240Vac/5W)



ref. 52121 (Remote Control Unit) ref. 52221 (Remote Control Base)

Only use Base 52221 to charge Remote Control Unit model 52121 batteries

2. Pre-installation: previous recommendations

The i500 Series requires basic pre-installation. To avoid future issues and ensure optimal system operation, follow these prior recommendations.

2.1. Power Source

Power source wires should be compliant to regulations in force.

It is recommended that the power source to Master Unit (ref. 51121), Main Speakers (ref. 55101) and Auxiliary Active Speakers (ref. 55201) be from the same automatic switch in order to facilitate isolation and disconnection of the sound system independent from the rest of the home's electrical consumption. This will also avoid signal reception and sound interference with other appliances such as extractor fans, air conditioning, refrigerators, fans and the like (see wiring diagram in Chapters 3.1, 4.1 and 4.2).



IMPORTANT do not supply power to the system until it is correctly installed and connected.

2.2. Communication Line

The communication line (ref. 57101) is an 8 wire connecting hose that connects Master Units (ref. 51121) to all Main Speakers (55101)

To make connection 4 (yellow) use 1mm² cross-section wires. For the remaining connections use 0.25mm² cross-Section wires. It may be necessary to increase the wire cross-Section in systems with a large number of units and/or great distances. In this case consult with EIS Technical Services.

Bus-type communication line distribution is necessary to keep the length of the shunts to each Main Speaker ("stub") to the minimum. This is especially important in systems greater than 100 meters and/or ten Main Speakers. In smaller systems star or mixed connections are possible.

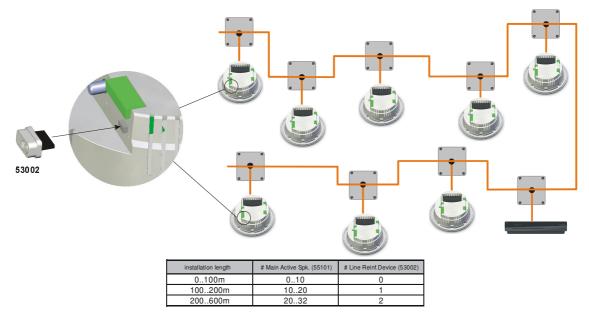
2.3. Line Reinforcement module

It may be necessary to use a Line Reinforcement module (ref. 53002) in some cases. This module would be pluged in the Main Active Speaker (ref. 55101)

The location of the device is very important:

- In a bus-type system it should be installed in one or both ends of the system (see the figure)
- In star or mixed type systems look for the longest straight path between two points and install the device on one or both ends of the system.





2.4. FM Tuners

Installation of the 75 ohm FM antenna must be according to adequate techniques of installation and signal distribution for antennas:

- 1 Ensure that the FM band amplifier is in the header of the antenna installation
- The installation should include as many distributors as necessary to reach all antenna feeds in the Master Unit and Main Speakers.

Because RDS information reception is more demanding in terms of signal/noise proportion than a simple FM signal, in some areas where signal reception is not optimal it may not be possible to receive RDS information. Also not all stations broadcast RDS information so the RDS function may not always be available.

In areas of very strong FM signal reception the antenna may be replaced by a simple 76cm long wire inserted into the nucleus of the ANT connector. In this event the wire should be placed as far away as possible from sources of electromagnetic interference such as motors, contact units, relays, fluorescents, halogens, and the like.

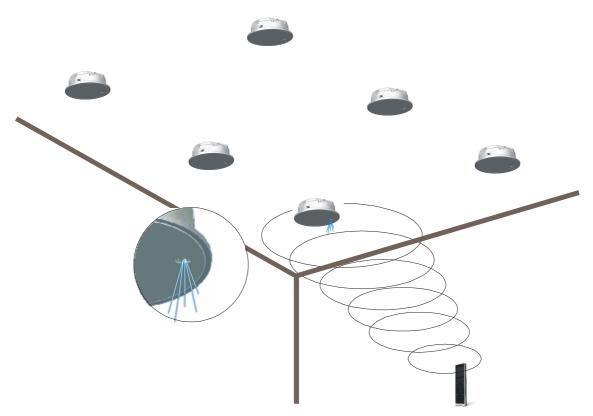
2.5. Coverage of Remote Control Unit

The entire system is solely and uniquely operated by using the 51121 Remote Control Units installed in each of the zones or rooms included in the system.

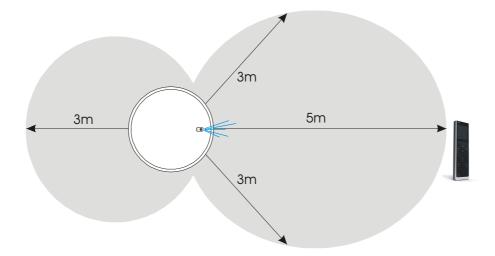
It is VERY IMPORTANT to carefully choose the location AND ORIENTATION of the Main Speaker when planning the pre-installation.

The Main Active Speaker (ref. 55101) is visually distinguistable from the rest of the Speakers by the blue LED embedded in the front grill.

0 W Place the Main Speaker in a preferential location in the room, as clear from any obstacles as possible, especially metallic objects.



O W Position the Main Speaker in way that the LED is facing the Remote Control Unit.



The location of the remaining Speakers (Auxiliary Active Speakers 55201 and Passive Speakers 55301) does not affect the coverage of the Remote Control Unit.

To facilitate communication between the Control Unit and the Main Speaker follow all the recommendations in chapter 8.



3. Installing the Master Unit

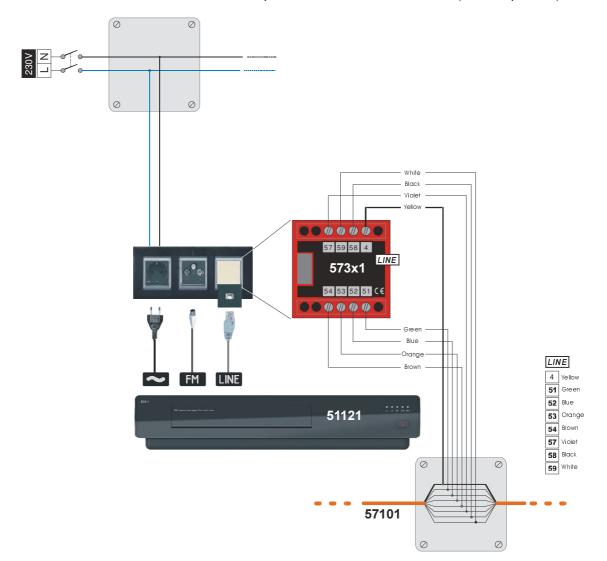
3.1. Connection to Communication LINE

The Master Unit (ref. 51121) is connected to the communication line by means of a Line Connector module (ref. 573x1). The cable supplied with the Master Unit must be specifically used for this connection.

The Line Connector module is available in several colours and can be connected to leading market switch brands by using the adapters listed in the EIS catalog (BJC, Jung, Legrand, Niessen, Schneider, Simón, bTicino, ...).

Connection to the power supply is made with the cable supplied with Master Unit (see installation recommendations in Chapter 2.1).

The Master Unit has a 75 ohm antenna input for FM tuner which is built-in (see Chapter 2.3).



3.2. Connection to Universal Dock for iPod

To access music stored in an iPod, the Master Unit (ref. 51121) is equipped with a back panel connection to the Universal Dock for iPod (ref. 52222). The connection is only available with this unit and should not used for any other purpose.

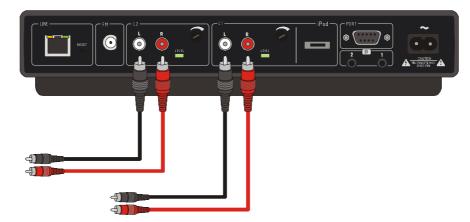


3.3. Connection to External Sound Sources

On its back panel, Master Unit (ref. 51121) is equipped with 2 RCA inputs to connect 2 external sound sources as L1 and L2.

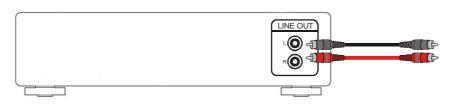
External L1 sound input share signal with iPod with this one as priority. That means the music in by L1 is only available when iPod is not connect with the dock.

The maximum allowable length for this connection depends on the external devices that supply the signal (consult the manufacturer's technical specifications). The length tends to vary between 1 and 10m. The input signal level can be adjusted using a potentiometer together with a LED.



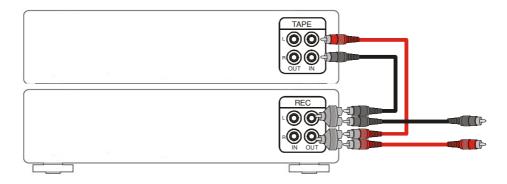
There are three alternatives for connecting an external sound source to the Master Unit:

(1) Preferably use the music system line out as an external sound source. This output ensures a constant signal which is independent of the system's volume control.





(2) In systems equipped with a REC OUT (such as HI FI systems), connection to the 51121 Master Unit can be installed between the REC OUT and the music system's amplifier.



(3) The headphone output can be used in systems with no LINE OUT or REC OUT (such as walkman, compact stereos, MP3 players ...). This output is regulated by the system's volume output and must therefore be adjusted with the level potentiometer on the 51121 Master Unit to achieve the ideal signal level.

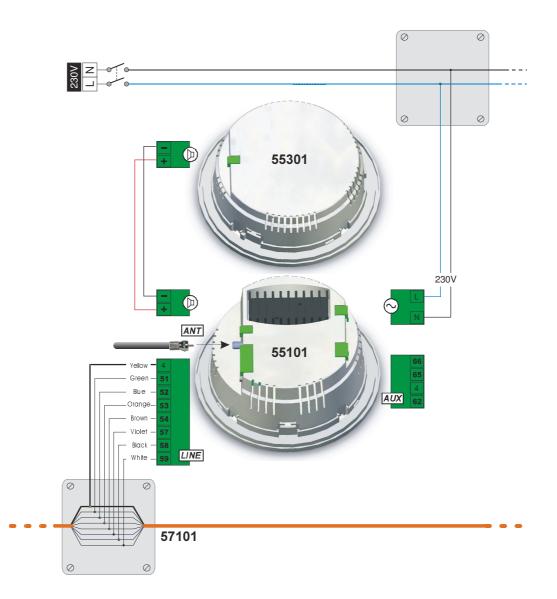


4. Installing Speakers in each zone

In choosing the location of the Main Speaker it is VERY IMPORTANT to follow all recommendations indicated in Chapter 2.5.

4.1. Basic installation

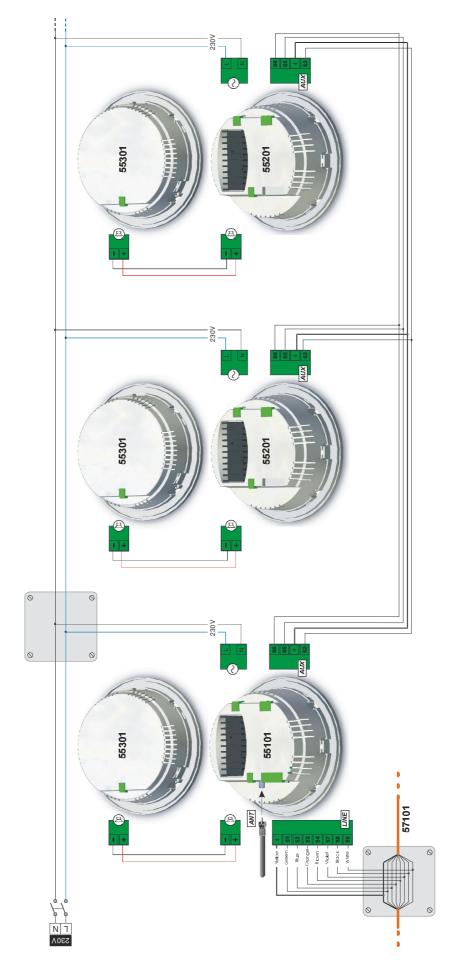
Each Main Active Speaker (ref. 55101) requires simple installation as per the following diagram.



4.2. Extended installation

In zones or rooms where more than two speakers are required it is possible to add as many pairs of Auxiliary Active Speaker (ref. 55101) + Passive Speaker (ref. 55301) as desired to cover the entire sound system area.





5. Installation configuration

In the following process it is assumed that all the units are not installed and still under factory settings. To reset the system to factory default settings see Chapter 6.

5.1. Install each Main Speaker with its own Remote Control Unit

Supplying power to the system

Engage the automatic switch that feeds the power to all system components.



Review that Master Unit and ALL Main Speakers emit a SLOW FLASHING signal to indicate that they are NOT INSTALLED.



Wait 10 seconds minimum with the installation un-powered before supplying power to the system

2 Supplying power to the Remote Control Units

Use a tool to open the battery compartments in the Remote Control Units and insert the batteries being careful to align the polarity correctly. Only use the rechargeable batteries supplied with the product (AAA NiMH 1,2V). Do not discard used batteries mixed with household waste



Place the Remote Control Units in their respective Remote Control Bases and connect them to any electrical outlet in the home (it is not necessary for these outlets to be controlled by the automatic switch of the rest of the system elements of 51121 Master Unit, 55101 Main Speakers and 55301 Auxiliary Active Speakers.)

The Remote Control Unit displays the initial screen, pending start up of the installation process.





The Remote Control Unit can be operated while stationed in the base. It is recommended that the remote NOT BE SEPARATED FROM THE BASE until the batteries are completely charged.

As a general rule IT IS RECOMMENDED that when not in use the Remote Control Unit be inserted in its Base.

③ Link each Remote Control Unit with its own Main Speaker

The Remote Control Unit together with the Main Speakers use a single "home address" which ensure that the system operates independently and free of any other i500 systems installed in neighboring homes. This address is automatically assigned with no direct user intervention during the system configuration procedure

Push the key "install" ⊂ ♠⊃

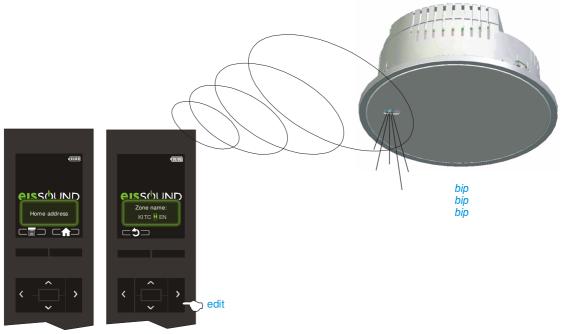
If the Remote Control Unit does not find any Main Speaker, will appear on the display "No home adress":

repeat the process following the indicationses of chapter 8 (Recommendations to achieve communication between the Remote Control Unit and the Main Speaker)



IMPORTANT: the Remote Control Unit will communicate only with the Main Speakers , so the Remote Control Unit must be inside of the Main Speaker coverage (see chapter 8)

When the Remote Control Unit connect with the Main Speaker, it will take the "home address" and will link with the speaker to program his name: the Main Speaker emit a beep audio signal and at the moment the speaker emit a FAST FLASHING with light signal.



At this point a name is given to the Main Speaker which is emitting the BEEP signal. Use the navigation keys.

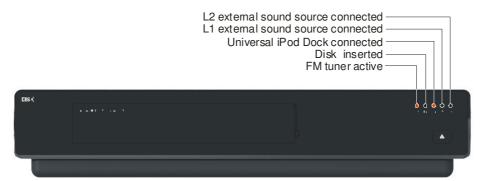
The zone name is linked with the Main Speaker and NOT with the Remote Control Unit.

Because the Speaker is built-in to the ceiling and permanently fastened it is recommended that the name be indicative of the zone or room, for example "KITCHEN", "BEDROOM", "OFFICE", "ATTIC", "PANTRY", and the like.

Once the process of linking and programming the name of the Main Speaker has been completed, the indicative LED will stop flashing and turn off. At that time the Speaker and Remote Control Unit are completely operational. The LED will become lit when the background music is activated and will turn off when the background music is turned off. The zone name with which it is linked will appear on the Remote Control Unit.



When had been installed the first Remote Control Unit with the first Main Speaker, leds of the Master Unit stop flashing and the sound sources that are available at the time stay illuminated.



This step must be repeated with all the Remote Control Unit and Main Speaker sets installed in the different zones or rooms in the home.

IMPORTANT: ALL the 52121 Remote Control Units and ALL the 55101 Main Speakers must be linked in the same way before the installation process can be completed.

At this point the Master Unit, all the Main Speakers and all The Remote Control UNits share the same "home address", avoiding interference from any other nearby systems.



5.2. Install several Main Speakers with the same Remote Control Unit

The i500 multi-room system allows for a single Remote Control Unit to operate different Main Speakers. However, in order to make the best use of its features, it is HIGHLY RECOMMENDABLE that each zone or room have a Main Speaker and a Remote Control Unit.

A Remote Control Unit is only linked WITH A SINGLE Main Speaker at a time.



The start-up screen appears indicating that the Remote Control Unit is not linked. When the "link" key $\Box \cong \Box$ is pressed again the Remote Control Unit searches an uninstalled Main Speaker, which then signals the event with a RAPID FLASHING and a BEEP sound signal. The remaining process is as described in the previous point.



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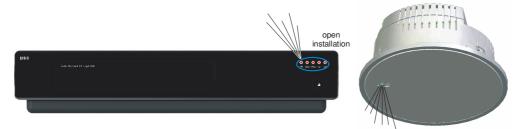
5.3. Incorporate a new Remote Control Unit to the current system

When all the Main Speakers are installed and a new Remote Control Unit wil be added, the following procedure:

Open the installation



The Master Unit leds emit FAST FLASHING to indicate that the installation is opened to receive new Remote Control Units. Every *not linked* Main Speakers emit FAST FLASHING also.



Install the new Remote Control Unit

Come close to any not linked **Main Speakers** *(flashing)* and press the "install" key $\square \clubsuit \square$. When the Remote Control Unit finds the home address, it will change the key "install" $\square \clubsuit \square$ by "link" $\square \And \square$.





③ Close the installation

Briefly push (under 2 seconds) the "reset" button

All the leds (Master Unit and Main Speakers) stop flashing to indicate that the installation is CLOSED, meaning that it will not admit new Remote Control Units



4 Link Remote Control with its Main Speaker

Follow the steps indicated in chapter 2 of User Manual

5.4. Other configuration options

Other configuration options are available on the settings menu of the Remote Control Unit. To Access the unit, once the Speaker control unit has been linked, press the "Menu" key, select the "Settings" option and enter "Installation".



Zone Name: change the actual name of the zone

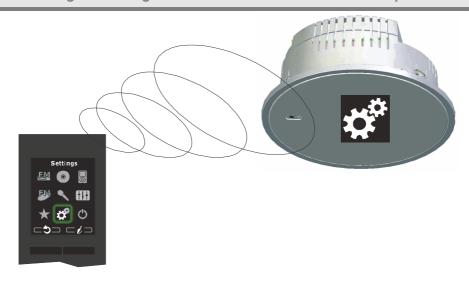
<u>My groups:</u> define 8 groups of zones for intercom calls to several areas simultaneously, for example, "GROUP 1" can include the zones "KITCHEN", "LIVING ROOM" and "GARAGE".

<u>Permissions</u>: block the access to certain operations such as limiting the use of intercom calls.

Neighbor Zones: Designed for 55101 Main Speakers that are installed in the same zone or room and, thus, with the ability chain by issuing group calls between them.

Mono Output: Option for when a room has a single 55101 Main Speaker, without a 55301 Passive Speaker.

IMPORTANT: the programming of the adjustment corresponds WITH THE ZONE or ROOM where the Main Speaker is installed, NOT WITH THE REMOTE CONTROL UNIT. Therefore if the Control Unit is later linked with another Main Speaker, the settings will change and become those of the new Main Speaker.



6. Reset the system with factory default settings

In order to operate, the Master Unit, Main Speakers and Remote Control Units need to have a "home address" assigned. The "home address" is a 16 bit number that all elements of a single installation share. This identifier ensures that no interferences from neighboring i500 systems will be experienced. The identifier is empty from the factory and is automatically calculated in the installation process (see Chapter 5).

To reboot the system, delete all the identifiers and reset the units to the factory settings, following this procedure:

• Keep the "reset" button pressed on the Master Unit for 10 seconds until all the frontal LEDS are illuminated.



Next, all the LEDS on the Master Unit and all the Main Speakers signal SLOW FLASHING to indicate they are NOT INSTALLED

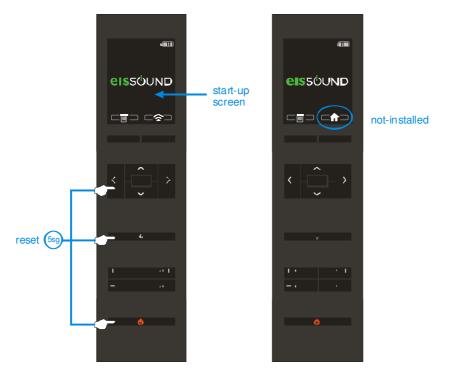




2 For each of the Remote Control Units, press the "link" key to delete the association.



3 At the start-up screen, press the "on/off" key \square , "intercom calls" \square , and left navigation for 5 seconds.



To install all the units in the house with the same identifier, follow the procedure described in Chapter 5.

7. Technical Characteristics

51121 - Master Unit

51121	MIN	NORMAL	MAX		COMMENTS
Measurements		274x54x250		mm	width x height x depth
Voltage	85	230	264	Vac	50/60Hz
Consumption demand			35	W	
Input signal	150		3800	mVeff	RCA inputs L1 , L2
Input impedance	2		10	Kohms	RCA inputs L1 , L2
Output signal		2,8		Veff	terminals 51,52,53,54
Passband	20		15000	Hz	
Frequency range	87,5		108	MHz	
Antenna impedance		75		ohms	
Antenna sensitivity		1,7	3,5	uV	
Tuner distortion		0,1	0,5	%	
Number of station pre-sets			30		
Lenght to line conector 573x1			2	m	
Number of zones in system		10	32 (**)		(**) consult
System length		100	600 (**)	m	(**) consult

52121+52221 - Remote Control Unit + Base

52121 + 52221	MIN	NORMAL	MAX		COMMENTS
Measurements		50,5x183x20		mm	ref.52121 (width x height x depth)
		78,5x116x133,5		mm	ref.52221 (width x height x depth)
		78,5x213x133,5		mm	set (width x height x depth)
Voltage ref.52221	85	230	264	Vac	50/60Hz
Consumption demand ref.52221			5	W	
Input signal		1		Veff	discman input
Input impedance		10		Kohms	discman input
Passband	20		20000	Hz	discman input
Wireless transceiver		2,4		GHz	
Range		5		m	

55101 - Main Active Speaker

55101	MIN	NORMAL	MAX		COMMENTS
Measurements		220x93		mm	exterior (diameter x depth)
		190x85		mm	cavity (diameter x depth)
		220x8,5		mm	front grill (diameter x height)
Voltage	85	230	264	Vac	50/60Hz
Consumption demand			20	W	
Input signal		2,8		Veff	terminals 51,52,53,54,57
Input impedance		36		Kohms	terminals 51,52,53,54,57
Output signal		2,8		Veff	terminals 65,66
Output impedance		47		ohms	terminals 65,66
Aux.amplifier switch on signal	5		12	V	terminal 62
Output external speaker (8 ohm)			5	W	
Inside speaker (8 ohms)			5	W	
tweeter		1"			
woofer		5"			
Left/right channel separation		75		dB	
Passband	20		20000	Hz	
Distortion		0,05	0,1	%	
Frequency range	87,5		108	MHz	
Antenna impedance		75		ohms	
Antenna sensitivity		1,7	3,5	uV	
Tuner distortion		0,1	0,5	%	
Number of station pre-sets	-		30		
Wireless transceiver		2,4		GHz	
Number of zones in system		10	32 (**)		(**) consult
System length		100	600 (**)	m	(**) consult

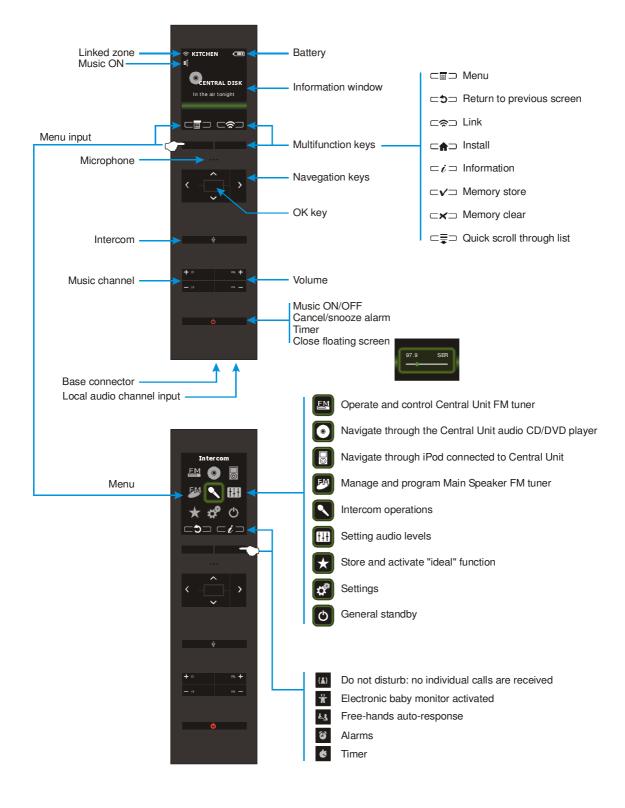


55201 - Auxiliary Active Speaker

55201		MIN	NORMAL	MAX		COMMENTS
Measurements			220x93		mm	exterior (diameter x depth)
			190x85		mm	cavity (diameter x depth)
			220x8,5		mm	front grill (diameter x height)
Voltage		85	230	264	Vac	50/60Hz
Consumption demand				18	W	
Input signal			2,8		Veff	terminals 65,66
Input impedance			50		Kohms	terminals 65,66
Aux.amplifier switch on signal		5		12	V	terminal 62
Output speaker signal (8 ohm)				5	W	
Inside speaker signal (8 ohms)				5	W	
	tweeter		1"			
	woofer		5"			
Left/right channel separation			75		dB	
Passband		20		20000	Hz	
Distortion			0,05	0,1	%	

55301 - Passive Speaker

55301	MIN	NORMAL	MAX		COMMENTS
Measurements		220x72		mm	exterior (diameter x depth)
		190x64		mm	cavity (diameter x depth)
		220x8,5		mm	front grill (diameter x height)
Tweeter		1"			
Woofer		5"			
Impedance		8		ohms	
Power			5	W	

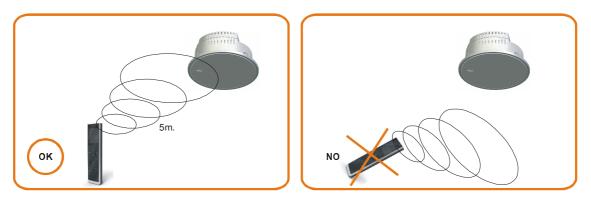


8. Quick Reference Guide for Remote Control Unit Operation



Recommendations to achieve enhanced communication between the Remote Control Unit and the Main Speaker

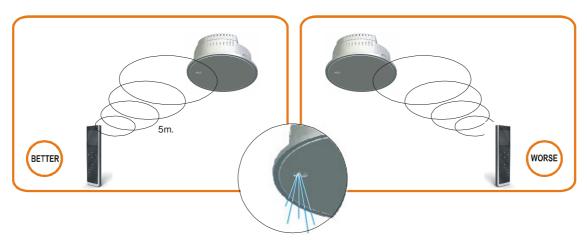
Operate the Remote Control Unit in a vertical position



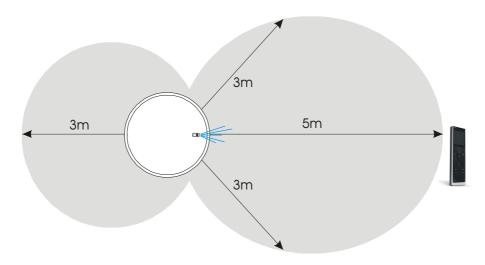
O not move while operating the Remote Control Unit.



3 Main Speaker coverage is better on the LED side: preferably aim the Remote Control Unit towards that zone and avoid operating from the sides.



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Avoid nearby devices that emit Bluetooth, Wi-Fi or any other radiofrequency that transmits at 2.4 GHz.



IMPORTANT: When the Remote Control Unit loses communication with its linked Speaker, the resonance symbol disappears along with the name of the zone. In this case the Remote Control Unit will attempt to re-establish the link until it is established. To facilitate this operation, follow the above recommendations until the resonance symbol stops flashing.

If the link cannot be established, press the "link" key $\square \square$ to break the link and proceed to retry with this (or another) Speaker by following the procedure in Chapter 2 of User Manual

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ESTE CAJETÍN NO FORMA PARTE DEL MANUAL

SISTEMA	RANCIADE MEDID A DE TOLERANCIAS XAS GENERALES NCIAS CRITICASIS	S ISO 8015 ISO 2768-mK	LAS COTAS ENCUADRADAS SON CRITICAS	Denominación Denomination			a)
I SO 8015 FUNE IS 2768	FREEMEASBREMENTTOLERANCE ISO 8015 FUNDAMENTAL TOLERANCING PRINCIPLE IS 2768-INK GENERAL TOLERANCES ISO 2768-IN CARITOLERANCES			MANUAL INSTALAC inglés	Código Pieza		
Modificación <i>Modification</i>				,	Part Code		
				Material Material tinta: blanco y negro	64460042		
		Fecha Date	Nombre Name	portada y contraportada papel estucado brillo 135gr			
	Proyectado Projected	01/12/2008	L.ABOS	resto de hojas 80gr		Código Plano	Edición
Página age	Dibujado Drawn	19/02/2009	L.ABOS	Escala ^{Scale}	Drawing Code	Edition	
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