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#### FCC ID: 2AB6X52791

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.

#### FCC Caution:

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

#### FCC Statement:

"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."

#### RSS-Gen & RSS-210 statement:

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

#### RSS-102 Statement:

This equipment complies with Industry Canada radiation exposure limits set forth for an uncontrolled environment. Cet équipement est conforme à l'exposition aux rayonnements Industry Canada limites établies pour un environnement non contrôlé.

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### **1. Basic Components**









The Bluetooth Audio Receiver - Master (M) is an electronic module installed in the ceiling. After installation, it may not be easily accesible to the user during normal operation. It allows you to enjoy two music channels: Bluetooth audio streaming and an FM tuner.

The Device (D) is any smartphone or tablet based on iOS or ANDROID with the following Bluetooth profiles: A2DP, AVRCP (for sending audio) and SPP (for data).

The KBSOUND BT App (A) is the App for managing the Master (M). It can be downloaded from Apple App Store (for iOS Devices) or Google Play Store (for ANDROID Devices). The KBSOUND BT App is compatible with iOS 7 and higher and ANDROID 4.2 and higher. *Warning:* The KBSOUND BT App runs on different releases from different operating systems, using different devices from different brands. As a result, its functioning may present some differences between devices.

The KBSOUND BT App is the "Remote Control" for the Master. It is the only tool for the user to manage the system.



D

FM Antenna

Bluetooth Audio Receiver + FM Radio (MASTER)

Speakers

Device

Device

KBSOUND BT App





## 2. KBSOUND BT App Installation

### 2.1 iOS DEVICES





Tap the Apple App Store on the iOS Device to

download the KBSOUND BT App.

Tap the Google Play Store on the ANDROID Device to download the KBSOUND BT App.

Google play

# **3. Bluetooth Pairing and Connection**

Once the KBSOUND BT App has been installed, the Device has to be correctly paired and connected with the Master.

The first time the Device is going to be paired with the Master, the KBSOUND BT Bluetooth identifier and password will be the factory defaults. This data can be found on the label of the Master.

Each Master (M) has a UNIQUE KBSOUND BT Bluetooth identifier and password, please check that you have a copy of the label with the KBSOUND BT Bluetooth identifier and password provided on the "Quick reference guide".

**Note:** KBSOUND BT Bluetooth identifier and password can be changed by the user (see chapter 9). For recovering factory defaults (see chapter 11.6).



**Warning:** the first time you connect the KBSOUND BT App with the Master, it is necessary to be connected to Internet in order to validate the Master. (see chapter 11.1)

### 3.1 iOS DEVICES

1. Open iOS Bluetooth Settings Menu.

2. Select the Master KBSOUND BT Bluetooth identifier (e.g. 0001 KBSOUND BT).

3. Introduce the password (e.g. 4582). Needed only when pairing, not in future connections.

4. Check that the Master (e.g. 0001 KBSOUND BT) is correctly connected.





### **3.2 ANDROID DEVICES**

- 1. Important: be sure that the KBSOUND BT App is closed, not running in the background (see chapter 14.15 FAQ's).
- 2. Open ANDROID Bluetooth Settings Menu.
- 3. Select the Master. (e.g. 0001 KBSOUND BT).
- 4. Introduce the password (e.g. 4582). Needed only when pairing, not in future connections.
- 5. Check that the Master (e.g. 0001 KBSOUND BT) is correctly connected.

#### if KBSOUND BT App is running in background, close it



**Note:** the following process is just an example (GOOGLE NEXUS 5 / ANDROID 5.0.1) since different Devices have different configurations for different brands, models and versions.

# 4. Open KBSOUND BT App

- **1.** Be sure that the Device is connected with the Master (see chapter 3).
- 2. Tap the KBSOUND BT App on the Device.
- **3.** The first time you open the App, the FM screen will be shown as App's default.

**Note:** to know if the KBSOUND BT App is open in the backgound (see chapter 14.15 FAQ's). Take note that while any App is in the background it is consuming data and battery.





# 5. Listen FM



# 6. Listen Bluetooth Audio Streaming





Bluetooth Audio Streaming Screen allows you to enjoy Bluetooth audio streaming from the Device.

Any App sending Bluetooth audio streaming can be used as source of audio: Music Player, Spotify, Tune In Radio..

Take note that some Apps pause the audio when they are in the background and only play audio when they are in the foreground (for example Youtube in iOS) (see chapter 14.13 FAQ's).

# 7. Ideal mode



Each Device has its own Ideal mode, which are the "most-favorite" audio settings.

To save the Ideal mode:

- 1. Select Bluetooth audio streaming or FM as an audio source.
- **2.** For Bluetooth audio streaming: select volume and equalization mode as desired. For FM: select volume and FM frequency as desired.
- 3. Press the "SAVE IDEAL MODE" button in Settings Screen.

To activate the Ideal mode, just press the "IDEAL" button.

## 8. Settings

### Settings Screen



go to Settings Screen \_\_\_\_\_ Ma Site AU





### 8.1 POWER MASTER AND SLAVES

KBSOUND BT drives a Master and Slave stereo audio outputs:

- The Master audio output drives both speakers directly connected to the terminals L+L-R+R- (see chapter 12).
- Optionally the KBSOUND BT can drive Slave audio outputs, which are audio amplifiers connected to the terminals 65,66,4,62. (see chapter 12).

Go to the Settings Screen to choose the on/off button to activate the Master module and/or the Slave modules.

#### Settings Screen



### 8.2 AUTO-POWER ON (START-UP MODE)

The start-up mode (audio settings when the Master is powered from the mains 230/120V) factory default is OFF.

To customize the start-up mode the Auto-power ON function can be used:

**1.** The factory default is Master and Slaves Auto-power ON disabled.

2. Choose the desired FM tuner station and volume for start-up.

#### Settings Screen



when this switch is disabled, the Master will remain OFF when fed from the mains (230/120Vac)

- when this switch is enabled, the Slave modules will remain OFF when fed from the mains (230/120Vac)
- no audio settings for auto-power-on start-up mode



FM Screen

select FM station and volume

(e.g. 100.5MHz. volume 40%)



### 3. activate the settings option in the Settings Screen

### Settings Screen



	when this switch is enabled, the Master will remain ON when fed from the mains (230/120Vac)
_	when this switch is enabled, the Slave modules will remain ON when fed from the mains (230/120Vac)
h	

audio settings for auto-power-on star-up mode (e.g. 100.5Mhz, volume 40%)

### 8.3 KEEP THE FM ON WHEN OUT OF RANGE

When the Bluetooth connection between the Master and the Device is lost, the default option is to turn OFF the music (Bluetooth audio streaming or FM).

To keep the FM ON when the Device is out of Bluetooth range (e.g., the user has left the room), activate the option "KEEP THE FM ON" in the Settings Screen.

### Settings Screen



when the connection between Master and the external devices is lost, the Master/Slaves can be kept ON

**Note:** only the FM can be activated as a music source for Auto-power-on function. Bluetooth streaming audio is not available for this feature. The FM will remain ON until another Device is connected and switches it OFF.



## 9. Multiroom: Bluetooth Naming

Many Masters can be installed in the same home. Each one will have a unique KBSOUND BT Bluetooth identifier and password.

The default factory Bluetooth identifier for each Master is XXXX KBSOUND BT where XXXX is a number between 0000 and 9999. The default password for each Master is a 4-digit number between 0000 and 9999 (different from the KBSOUND BT Bluetooth identifier). This data can be found on the label of the Master and the label provided with the "Quick reference guide".

When more than one Master is installed in the same home, it is convenient to rename the KBSOUND BT Bluetooth identifiers making daily operation more friendly.



The identifier must be a name containing just letters and numbers. Other symbols are not allowed. It is important to use a name which has a meaning in order to facilitate the identification of each Master. (advice: use names like KITCHEN, LIVING ROOM, BEDROOM, etc.)

*Warning:* if the Bluetooth identifer and/or password have been forgotten, reset to factory defaults (see chapter 11.6).

To customize the KBSOUND BT Bluetooth identifier and password open the Bluetooth Zone Naming Screen and edit the identifier and/or the password.





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Note for ANDROID: in some ANDROID models/ versions it is possible to customize the Bluetooth identifer in the ANDROID Bluetooth settings menu. However the KBSOUND BT App cannot update the KBSOUND BT Bluetooth identifier when it has been customized in that way. For this reason, if the KBSOUND BT Bluetooth identifier is changed from the ANDROID Bluetooth Settings Menu, take care to use the same name used in the App to avoid confusions.

**Note:** When the KBSOUND BT Bluetooth identifier has been changed, updating the iOS/ ANDROID Bluetooth Settings Menu of some models/versions may require you to disconnect and connect, while other models/versions need to be un-paired and paired again.

*Warning for ANDROID:* take care that some ANDROID models/versions require a factory reset when un-paired and paired again. (see chapter 3.2).

*Warning:* remember that for un-pairing and pairing again, it is necessary to know the password.

### 10. Multi-User

Many users can be paired. However, only one can be connected. While one user is connected a second user cannot connect with the same Master until the first user disconnects his device.





#### 10.1. iOS Bluetooth disconnection

- 1. Open the iOS Bluetooth Settings Menu.
- Disconnect Bluetooth (In some iOS versions only total Bluetooth disconnection is available).
- **3.** After disconnection, take note that the music will turn off except if FM is the audio source and "KEEP THE FM ON" is activated (see chapter 8.3).



### **10.2. ANDROID Bluetooth disconnection**

- 1. Open the ANDROID Bluetooth Settings Menu.
- Disconnect Bluetooth. Total Bluetooth disconnection is advisable, although some ANDROID models/versions permit individual disconnections. Take care that individual disconections sometimes do not disconnect correctly all the Bluetooth profiles. (see chapter 14.12 FAQ's).
- After disconnection, take note that the music will turn off except if FM is the audio source and "KEEP THE FM ON" is activated. (see chapter 8.3).



**Note:** the following process is just an example (GOOGLE NEXUS 5 / ANDROID 5.0.1) since different Devices have different configurations for different brands, models and versions.

# **11. Operating Mode**

### **11.1. MASTER VALIDATION**

When the Device has been paired with the Master and it is the first time that the KBSOUND BT App connects with the Master, the App must validate the hardware so it is necessary to be connected to Internet. If Internet is not available, the following screen is shown.



### **11.2. BLUETOOTH CONNECTION**

When user opens the KBSOUND BT App, if the Device is not connected with any Master the Unconnected Device Screen is shown.



**Note for iOS:** if Lighting-30 pin connector adaptor is being used, take care to disconnect the adaptor from the iOS Device before opening the KBSOUND BT App.



### **11.3 CLEAR THE PAIRING**

To clear the pairing between the Device and the Master, open the iOS/ANDROID Bluetooth Settings Menu.

Take care that to pair again, you will need the password, so before clearing the pairing, take note of the password.

**Warning:** some ANDROID's, after clear the pairing, do not clear all of their internal data and to pair again will requiere resetting the Master to factory defaults (see chapter 11.6), which means that all the Devices paired will be deleted and they will have to be paired again. Tested with:

GOOGLE NEXUS 5 / ANDROID 5.0.1

AMSUNG GALAXY ALPHA / ANDROID 4.4.4

### 11.4 Volume

The KBSOUND BT App manages two independent volumes: the FM volume and the Bluetooth volume

When FM is selected as source of music, the App volume bar will manage the FM volume.



When Bluetooth streaming audio is selected as source of music, the Device volume bar will manage the Bluetooth volume.

The Bluetooth volume is the volume for all the sources of music that can be chosen for streaming audio (Music Player, Tune In Radio, Spotify, ...).

As the Bluetooth volume is the Device operating system volume, the Device volume buttons will control this volume.





#### **11.5. NOTIFICATIONS AND PHONE CALLS WHILE OPERATING**

When the Device receives a phone call while connected with the Master, the ring tone will be heard in the smartphone. The phone call will be managed only from the smartphone and never through the speakers.

When the Device receives a notification (email, sms, whatsapp, ...) while connected with the Master, the smartphone sends this sound to the Bluetooth audio streaming. If Bluetooth audio streaming is selected in the Master as audio source, the notifications will be heard through the speakers. However if the Master is OFF or FM is selected as audio source, the notification will not be heard through the speakers.

**Warning:** take note that notifications depend on iOS/ANDROID Notification Settings Menu and also may depend on each particular App Settings (for example Whatsapp Settings).

### **11.6. RESET TO FACTORY DEFAULTS**

- 1. Close the KBSOUND BT App. (important: not send it to backgound, close it, see chapter 14.15 FAQ's).
- 2. Turn OFF the Bluetooth within the iOS/ANDROID Bluetooth Settings Menu.
- **3.** Reset the Master.



*Warning:* reset the Master with factory defaults will clear all the settings and all the pairings with the different Devices. The KBSOUND BT Bluetooth identifier and pasword can be found on the label on the Master.



4. Turn ON the Bluetooth within the iOS/ANDROID Bluetooth Settings Menu.

5. Pair and connect (see chapter 3).



### 12. Slaves Option

The Master module has an audio output where amplifiers acting as a Slaves can be connected.

However, for the moment it is neccessary to use ONLY with EISSOUND 55201 (Amplified Auxiliary Speakers) and expand the system to a maximum of 4 slaves.

Slaves and Master can be turned on and off joined or separately using the settings option (see chapter 8.1). The volume of Master and Slaves will always be the same.



### **13. Technical Specifications**

52791	MIN	NORMAL	MAX		COMMENTS
Measurements		200x53x56		mm	
Voltage	85		264	Vac	50/60Hz, terminal F,N
Frequency	47		63	Hz	50/60Hz, terminal F,N
Consumption demand		10	60	W	terminals F,N
			2,5	W	terminals L,R over 16ohm
Output signal			5	W	terminals L,R over 8ohm
			10	W	terminals L,R over 40hm
Passband	20		20.000	Hz	
Any emplifier quitch on signal		12	14	Vdc	terminals 62, 4
Aux.amplifier switch on signal			220	mA	
Distortion		0,3		%	
Crosstalk	68	85		dB	
FM Frequency range	87,6		108.0	MHz	
FM antenna impedance		75		ohms	RF connector
FM antenna sensitivity		1,7	3,5	uV	
FM tuner distortion		0,1	0,5	%	
Bluetooth spec.		Class2 BT3.0 + EDR A2DP 1.0 AVRCP 1.0 SPP 1.0			
Wireless transceiver		2,4		GHz	
RF transmision power		-10		dBm	
RF antenna		internal			
Bluetooth range			10	m	

### 14. FAQ's

### 14.1 EQUALIZATION

The equalization mode is stored in the Master. As a result, the equalization mode is the last one set by the most recent user.

#### 14.2 BLUETOOTH NAME AND PASSWORD

We have included in the "Quick Reference Guide" a copy of the label used on the Master with the KBSOUND BT Bluetooth identifier and password.

#### **14.3 FM RECEPTION**

This product has been designed and tested to provide reasonable protection against harmful interference in residential installation.

Improving the FM reception: extend the aerial antenna wire and adjust the angle for best reception. Be sure to locate it as far as possible from any sources of electrical noise such us halogen lamps, HVAC, fluorescent bulbs, etc.

### 14.4 RDS INFORMATION RECEPTION

The App is prepared to receive RDS information and show it beside the frequency. However some FM stations do not send any RDS information. Also, if FM reception is not good, although sound can be heard, RDS information may not be well received. In these cases, no RDS information is shown. To improve it, be sure that the FM station is sending an FM signal and use an FM antenna.

### 14.5 RECEIVE A CALL WHEN LISTENING FM

Take note that the FM is not paused when the Device receive a call.

### 14.6 POOR BT SIGNAL

Frequent cuts in BT signal can be originated by a obstacles between the device and the Master.

To avoid these issues, distance the Master from another RF source such as other Bluetooth or Wi-fi equipment. Take care that the Bluetooth connection management is done by the Device Operating System as the Master has no control over this process.

### 14.7 BLUETOOTH PAIRING FAILURES

When an incorrect password is introduced and the correct password is immediately reintroduced, sometimes the device will not connect. To fix it, reset the Master and introduce the correct password again.

### 14.8 ISSUES WHEN CONNECTING BLUETOOTH

Sometimes a Device previously paired can request the password again to reconnect with the Master. This is originated by the Operating System inside the Device and the Master has no control over this. Re-entering the password will allow you to continue managing the Device correctly.

### **14.9 BLUETOOTH CONNECTION FAILURES**

When the App initiates you may find that it freezes in a "loading" status . In addition, the App may lose its connection with the Master and cease to function. Please note that the Bluetooth connection is managed by the Operating System (iOS or ANDROID) in the Device and the Master has no control over this process. Furthermore, the device is managing many processes at the same time (phone, wi-fi, bluetooth, internal processes) and they can interfere with each other.

Should this occur, close the App and reopen it again. This will allow the management process to initiate once more.

### 14.10. BLUETOOTH DISCONNECTION

When Bluetooth is manually disconnected by the user or Bluetooth range is lost, the music will turn OFF except if FM is the audio source and "KEEP THE FM ON" is activated (see chapter 8.3)

Some ANDROID models/versions disconnect Bluetooth partially. As the disconnection is incomplete, some malfunctioning can occur because the Device is connected with different profiles from different devices. For fixing this issue, turn OFF the Bluetooth in the Device, turn ON and connect again with the Master. If the issue is not fixed, reset to factory defaults (see chapter 11.6).

Sometimes a similar issue can be present in iOS devices, when the Bluetooth audio streaming (A2DP profile) is forced to be re-directed to a different device from KBSOUND using the AIRPLAY option. To fix this issue, turn OFF the Bluetooth, turn ON and connect again with the Master. If the issue is not fixed, reset to factory defaults (see chapter 11.6).

### 14.11. BLUETOOTH RE-CONNECTION

When the Device has lost the Bluetooth range the re-connection is automatic if it is recovered before 60". If it is out of range for more than 60", then the re-connection has to be done manually (see chapter 3).

When an iOS Device has been disconnected manually by the user (see chapter 10.1), re-connecting again must be done manually.

Some ANDROID models/versions have an automatic re-connection as part of their internal operating mode. Sometimes it can be enabled and disabled in the ANDROID Bluetooth Settings Menu. Also there are many "gadgets" for ANDROID which control these features and different versions/models can work in different ways.

### 14.12. MULTI-MASTER CONNECTION RELATED TO BLUETOOTH PROFILES

KBSOUND BT App manages the AVRCP, A2DP and SPP Bluetooth profiles. AVRCP and A2DP profiles are related with the Bluetooth streaming audio, while SPP profile is related to remote control operation.

ANDROID Devices only permit to be connected with one Master. When a second Master is going to be connected, automatically disconnect the first one.

iOS Devices can be connected simultaneously with more than one Master. However the KBSOUND BT App will manage just one (the first one with wich it was connected). It is advisable to be connected with just one Master at any time, since it is the only one that can be operated.

iOS Devices can manage the A2DP Bluetooth profile between several devices using AIRPLAY re-direction. However AIRPLAY does not manage the SPP Bluetooth profile, so when AIRPLAY is used with KBSOUND BT, some unexpected issues can happen.

In these cases close and reopen the App.





# 14.13. BLUETOOTH AUDIO STREAMING FROM APPS PLAYING IN BACKGROUND

When Bluetooth streaming audio is selected as source of audio, any App sending Bluetooth audio streaming can be used as source of audio: Music Player, Spotify, Tune In Radio, Youtube, ...

This approach is more flexible than integrating the services into the App. As a result, any service will be compatible, not only the services defined in the App. In this way each user can play the music using his favorite player and is not limited to the KBSOUND BT App.

Take note that some Apps pause the audio when they are in the background and only play audio when they are in the foreground (for example Youtube in iOS).

### 14.14. WHAT TO DO WHEN PASSWORD IS FORGOTTEN

To pair a new Device it is necessary to know the KBSOUND BT Bluetooth identifier and the password (see chapter 3).

Both data can be customized (see chapter 9). If they have been changed from the factory defaults and you lose them, the way to recover this information is to connect another Device that has been previously paired. Then open the Bluetooth Naming Screen (see chapter 9), and take note of the identifier and password.

If there is no possibility to know the KBSOUND BT Bluetooth identifier and password, reset the Master to factory defaults (see chapter 11.6) and check the information on the label on the Master.

### 14.15. iOS AND ANDROID MULTITASKING

It is very important to distinguish between App's operating in the background and the App's in the foreground.

Multitasking allows Apps to perform certain tasks in the background while you are using other Apps. The App in the foreground is the App that user can see active in the screen. Simultaneously, other Apps can be operating in background.

When you press the Device HOME button, the App is sent to backgound. Take note that an App operating in background consumes data and battery.



To close the App means that the App is permanently closed and it is not operating in background. The way to close the App can be different for each Device, although the process can be similar. See their user manuals to see how to do it.







### 14.16. WHAT TO DO IF THE KBSOUND BT App IS NOT WORKING

- Close the KBSOUND BT App. (important: not send it to backgound, close it, see chapter 14.15)
- 2. Turn OFF Bluetooth in the iOS/ANDROID Bluetooth Settings Menu.
- **3.** Turn ON Bluetooth in the iOS/ANDROID Bluetooth Settings Menu.
- **4.** Open the KBSOUND BT App.
- If still not working properly, reset to factory defaults (see chapter 11.6).

### CENTRAL

Polígono Malpica Calle F Oeste Grupo de Naves Gregorio Quejido, 87-88 50016 Zaragoza (SPAIN) Tel.: 34 976 46 55 50 Fax: 34 976 46 55 59 comercial@eissound.com

www.eissound.com



