McIntosh®

MB25

BLUETOOTH TRANSCEIVER

OWNER'S MANUAL

McIntosh

FCC Information (US Customers)

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.

1. IMPORTANT NOTICE: DO NOT MODIFY THIS PRODUCT

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modification not expressly approved by McIntosh may void your authority, granted by the FCC, to use the product.

2. CAUTION:

- To comply with FCC RF exposure compliance requirement, separation distance of at least 20cm must be maintained between this product and all persons.
- This product and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

3. COMPLIANCE INFORMATION:

- Product Name: MB25 Bluetooth Transceiver
- Model Number: MB25
- This product contains FCC ID:BWY-MB25

McIntosh Laboratory, Inc.
2 Chambers Street
Binghamton, NY 13903
Tel. (607) 723-3512

IC Information (Canadian Customers)

1. PRODUCT:

This device contains license-exempt transmitter(s)/ receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

2. CAUTION:

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada.
To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.
This radio transmitter (IC: 2483A-MB25) has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated.
Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.
Antenna used by this product: MB25
Antenna Model/Peak Gain: 380B 3dBi or FS-441 5dBi
Manufacturer: ShenZhen Feihseng Electronics Co., Ltd

Informations sur IC (pour les clients Canadiens)

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement

RED (EN) Information

1. DECLARATION OF CONFORMITY

Our products follow the provisions of EC/EU directives:
LVD: 2014/35/EC
EMC: 2014/30/EU
RED: 2014/53/EU
ErP: EC regulation 1275/2008 and its frame work directive 2009/125/EC
RoHS: 2015/863/EU

2. IMPORTANT NOTICE: DO NOT MODIFY THIS PRODUCT

This product, when installed as indicated in the instructions contained in this manual, meets RED directive requirements. Modification of the product could result in hazardous Radio and EMC radiation.

3. CAUTION:

Separation distance of at least 20cm must be maintained between this product and all persons.
This product and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

Safety Information

WARNING:
Cancer and Reproductive Harm -
www.P65Warnings.ca.gov

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

ATTENTION:
RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR

5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not use or place near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
8. Only use attachments/accessories specified by the manufacturer including the supplied AC/DC adapter.
9. Unplug the supplied AC/DC Adapter during lightning storms or when unused for long periods of time.
10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, the AC/DC Adapter is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
11. Do not expose this apparatus to dripping or splashing and that no objects filled with liquids, should not be placed on the equipment.
12. This equipment is supplied with AC/DC Adapter with separate power supply cord or the AC/DC Adapter plugging directly into an a.c. receptacle, they shall remain readily operable. To completely disconnect this equipment from the a.c. mains remove the AC/DC Adapter mains power supply cord from the a.c. receptacle or remove the AC/DC Adapter when it is directly plugged into the a.c. receptacle.
    Working temperature: 0-35°C.

This product is intended for use only with the adapter provided:
Manufacturer: GOLDEN PROFIT ELECTRONICS LTD.

13. **WARNING: Do not expose apparatus to excessive heat such as sunshine, fire or the like. No naked flame sources such as lighted candles should be placed on the apparatus.**
    Les piles ne doivent pas être exposées à de forte chaleur, tel qu'à la lumière du soleil, au feu ou autres choses de semblable. Aucune source de flamme nue, tel qu'une bougie, ne doit être placée sur l'appareil.
14. Rating plate is located at bottom enclosure of the apparatus.
    Les marquages sont inscrits en bas de l'appareil.

Statement for Class B digital device acc. to FCC 15.105 as following:

Note: 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.

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Thank You from All of Us at McIntosh

You have invested in a precision instrument that will provide you with many years of enjoyment. Please take a few moments to familiarize yourself with the features and instructions to get the maximum performance from your equipment.

If you need further technical assistance, please contact your dealer who may be more familiar with your particular setup including other brands. You can also contact McIntosh with additional questions or in the unlikely event of needing service.

McIntosh Laboratory, Inc.
2 Chambers Street
Binghamton, New York 13903

Technical Assistance	(607) 723-3512
Fax	(607) 724-0549
Customer Service	(607) 723-3515
Fax	(607) 723-1917
Email	support@mcintoshlabs.com
Website	www.mcintoshlabs.com

Please Take A Moment

For future reference, you can write down your serial number and purchase information here. We can identify your purchase from this information if the occasion should arise:

Serial Number: _____

Purchase Date: _____

Dealer Name: _____

Introduction

The MB25 functions as a Bluetooth Receiver or as a Bluetooth Transmitter. The MB25 has been designed to provide a superior Bluetooth connection to equipment that lacks Bluetooth connectivity. The MB25 is a Class 1 Bluetooth device with a transmission range ten times that of a typical Class 2 Bluetooth device (such as most cell phones.) As a receiver, the MB25 employs an extremely sensitive receiver for better reception even from Class 2 devices.

Class 1 Bluetooth can transmit up to ten times the range of Class 2 devices. Class 1 operation can typically be 150 feet (45.7 meters) in ideal conditions with mobile devices. Actual range of Bluetooth Class 1 technology may be affected by physical obstacles as well as the performance of devices with which the MB25 is intended to connect, particularly Class 2 devices. Think of this measure as a point of comparison since the world is not always ideal. As a receiver, the maximum range is determined by the capabilities of both paired devices.

Internal sampling and bit shifting, which can be thought of as sophisticated up-sampling, will enable all digital processing to occur at the highest available speed and resolution. The MB25's internal DAC processing at 192 kHz is the gentlest way of filtering the audio signal. The digital output will be at 96 kHz for wider compatibility with other DACs.

Bluetooth Transmit and Receive support aptX HD for improved sound quality. Plus aptX™ Low Latency audio improves end-to-end speed of audio transmission to keep the sound in sync with the screen. Using two MB25, one as a receiver and the other as a transmitter, provides full wireless aptX HD code and decode bridge.

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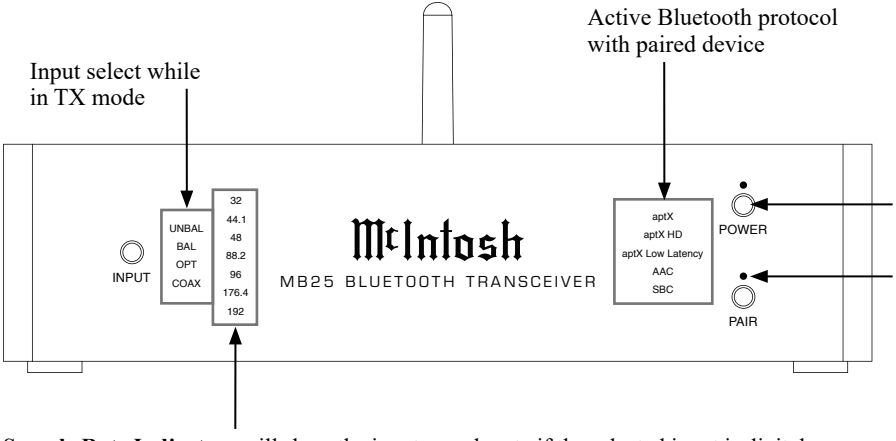
MB25 Front View



Power Button turns the MB25 On or Off.

Pair Button LED indicator displays the following:

White- Standby, ready to reconnect to the last connected device

Blue- Bluetooth Receiver Mode

Green- Bluetooth Transmitter Mode

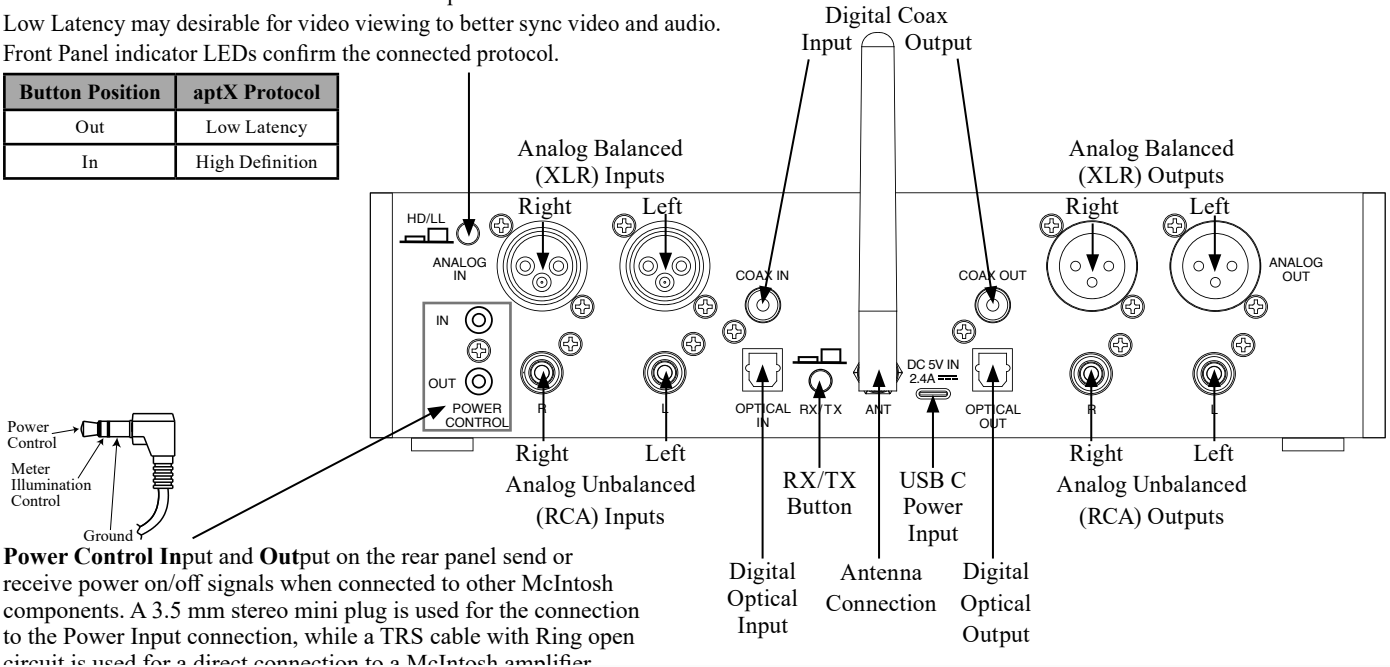
Flashing (Blue or Green)- Discovery Mode

Sample Rate Indicators will show the input sample rate if the selected input is digital.

MB25 Rear View

Low Latency/High Definition Preference Button sets a preference for either Low Latency or High Definition connections. If a receiver does not support both protocols, the MB25 will use the available protocol. If both protocols are available on the receiver this button will set the preference of which to use. Low Latency may desirable for video viewing to better sync video and audio. Front Panel indicator LEDs confirm the connected protocol.

Button Position	aptX Protocol
Out	Low Latency
In	High Definition



Power Control Input and **Out**put on the rear panel send or receive power on/off signals when connected to other McIntosh components. A 3.5 mm stereo mini plug is used for the connection to the Power Input connection, while a TRS cable with Ring open circuit is used for a direct connection to a McIntosh amplifier.

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How to Use the MB25

Power the MB25

Use only the supplied AC/DC adapter with the included USB cable to power the MB25.

The DC input labeled DC 5V IN can be found next to the antenna connection in “MB25 Rear View” on page 7.

To allow the MB25 to properly reset when powering off and on, please allow 5 to 10 seconds between removing and re-inserting the power cord.

Attach the Antenna

Attach the included Bluetooth Antenna to the ANT Connection in the center of the rear panel of the MB25. Tighten the brass nut at the base of the Antenna until finger tight.

Entering Discovery Mode

When powered on, the MB25 will automatically search for the last paired device. After one minute, the MB25 will enter Discovery Mode.

If the MB25 has not been previously paired (or the pairing list has been erased), the unit will more quickly (10 seconds) enter Discovery Mode.

Discovery Mode is indicated by the LED above the Front Panel Pairing Button flashing green or blue (single blink on and off). It will stay in Discovery Mode for 15 minutes.

Pairing to New Devices

The MB25 will pair a previously paired device while in Discovery Mode or press the Front Panel Pair button to pair with a new device that is also in Discovery Mode. The process of pairing will happen automatically. When the MB25 pairs with another device, the Front Panel Button will be solid green or blue (no longer blinking).

Since you may not be able to see a list of discoverable Bluetooth Devices to choose from on the device you are trying to connect, it is helpful to not have any other discoverable devices competing with the MB25 when trying to pair.

After 15 minutes in Discovery Mode, if no pairing occurs, the MB25 will exit Discovery Mode.

Reset / Clear Paired Devices

To reset the MB25 and clear the pairing list:

1. Press and hold the Front Panel Pair Button for 10 seconds.
2. The LED of the Front Panel Button will blink, pause and then double blink when reset. Once that happens, release the button.
3. Pull out DC USB Power Connector from the rear of MB25 for 10 seconds and then plug it back in.

How to Use the MB25 (continued)

Compatible Bluetooth Audio Codecs

- aptX: Supports 48kHz/16-bit LCPM audio data.
- aptX HD: Supports near-lossless 48kHz/24-bit LCPM audio data.
- aptX LL: Supports a Low-Latency audio connection that helps with audio-video synchronization.
- AAC (Advanced Audio Coding): Improved audio quality that is better than MP3.
- SBC (Sub-Band Codec): Good audio quality at medium bit rates.

Note: Currently only Android devices support aptX codecs. MB25's configured in Transmitter-Receiver pairs also support aptX. Visit www.aptx.com/products for a complete list of compatible products.

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Selecting Receiver or Transmitter Mode

The MB25 can be switch between Receiver (RX) or Transmitter (TX) Mode, but it can only be one of these at a time.

Set the MB25 to the desired mode, either RX or TX, by pushing the RX/TX Button located on the rear of the unit. When the RX/TX Button is depressed (pushed in), the MB25 is in Receiver Mode. When the button is in the released position, the MB25 is in Transmitter Mode. Pushing the RX/TX button will toggle between these two modes.

RX/TX Button	MB25 Mode
In	Bluetooth Receiver
Out	Bluetooth Transmitter

Transmitter Mode

In the Transmitter Mode (TX), the MB25 will transmit a signal from one of the following inputs:

- Analog Balanced (XLR)
- Analog Unbalanced (RCA)
- Digital Coax
- Digital Optical

Press the Input Select button to connect the desired input.

Most devices will auto-pair back with the MB25 upon powering up. To re-connect, quickly press the pairing button. The Front Panel Button above the Pair Button will glow Green in Transmitter Mode if already paired and connected. Only one device is stored in memory while in TX mode.

Receiver Mode

In the Receiver Mode (RX), the MB25 will send a received Bluetooth signal to ALL these outputs:

- Analog Balanced (XLR)
- Analog Unbalanced (RCA)
- Digital Coax
- Digital Optical

The Front Panel Button will glow Blue in Receiver Mode.

To pair the MB25 to receive from your device:

- RX/TX Button should be in the receive (RX) position (depressed)
- Power On the MB25. Front Panel Button will glow blue. It will begin to blink when in pairing mode
- On the device you wish to connect to the MB25, scan for Available Devices. The MB25 will be listed as “MB25”
- Choose MB25. If asked “Pair with MB25?”, choose OK
- MB25 should be connected for Audio. When successfully paired the Front Panel Button will display as solid blue. Unsuccessful pairing will display as solid white

You can use the Bluetooth menu of your connected device to disconnect or reconnect the MB25. The MB25 will remember up to six previously paired devices while in RX mode.

Shipping the MB25

When shipping the MB25, it is highly recommended that the unit be packed as it was originally shipped to avoid damage. For this reason, you may wish to save the original box and packing material for your MB25. If you need any of the packing material, you can contact McIntosh Customer Service. Use only packing material that is in good condition and replace any material that has seen better days.

Technical Specifications

The MB25 has been tested and certified for indoor use only.

Bluetooth Version
Bluetooth 5.0

Supported Protocols
A2DP, SBC, AAC, aptX, aptX Low Latency, aptX HD

Digital Input
up to 192kHz 24-bit

Digital Ouput
96 kHz 24-bit

Analog Input and Output
2.5 Vrms maximum

Dimensions
Width is 9.7 inches (24.64cm)
Depth is 3.94 inches (10.01cm)
Height is 2.5 inches (6.35cm)

Shipping Carton Dimensions
Width is 12 inches (30.48cm)
Depth is 8 inches (20.32cm)
Height is 4 inches (10.16cm)

Weight
2.5 pounds (1.2 kg) net, 3.5 pounds (1.6 kg) in shipping carton

McIntosh®

MADE OF SOUND™

McIntosh Laboratory, Inc.
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Binghamton, NY 13903

www.mcintoshlabs.com

The continuous improvement of its products is the policy of McIntosh Laboratory, Inc. who reserve the right to improve design without notice.

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