

mainstation®

User Manual

Model: MS-21 In-wall Streaming A/V Receiver



mainstation®

In-wall Streaming A/V Receiver

READ ME FIRST!

The MS-21 has been designed to be used in residential, commercial, and the RV environments. The MS-21 is built on an automotive platform with its associated ruggedness and reliability. It uses the Android GO operating system for efficiency. Due to the automotive platform, many automotive features are present in the device. You will occasionally see references to automotive applications, especially in the setup menus. However, unlike other automotive systems, the MS-21 utilizes WiFi to connect to the internet and local area networks.

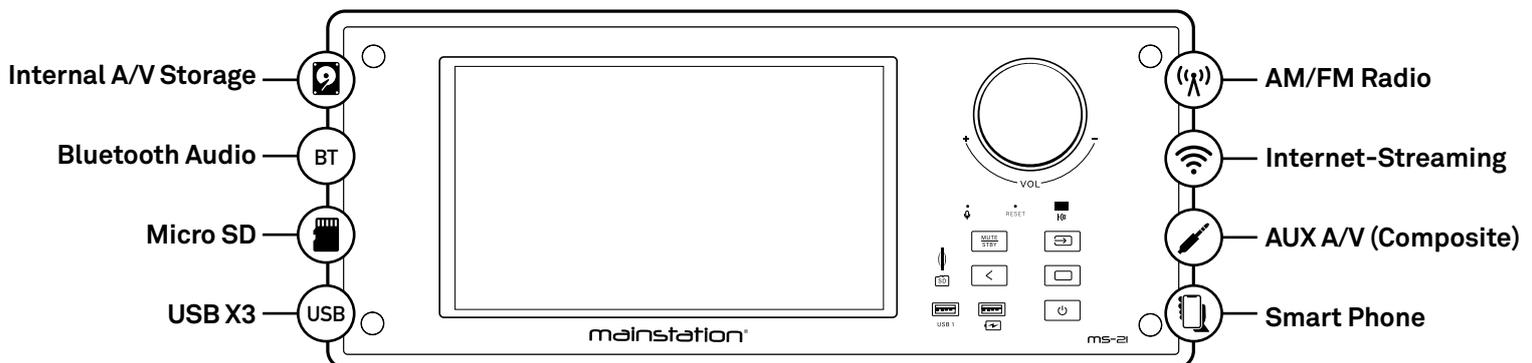
 Full operation of this device requires a reliable 2.4GHz WiFi network connection and internet service through an internet service provider (ISP). No Ethernet port connectivity is provided. You may connect to a mobile Hot Spot.

Due to the limited bandwidth of 2.4GHz WiFi, it is recommended that the user installs a reliable WiFi network, with multiple access points if necessary, and that a wireless access point (AP) be located within a relatively short distance of the unit. If no cabling is available for multiple APs then a Triband Mesh Network may be the best option. WiFi “range extenders” are not recommended. Most WiFi related problems are due to network congestion and an insufficient number of APs to handle the network traffic.

Note: If you are controlling devices on your network, such as thermostats, lights, etc., ensure that they are all on the same 2.4GHz network. Download and install the appropriate Apps for your devices.

Without an internet connection, this device will provide AM/FM radio and local playback of digital files, either internal or through the Micro SD and USB inputs, and Bluetooth playback of whatever content the user can stream from their personal devices.

THE DIAGRAM BELOW SHOWS THE VARIOUS AUDIO/VIDEO INPUTS.



 The USB inputs are for connection to mass storage devices, such as a USB Flash Drive, up to 32GB each. One USB input is available on the front panel and the other two are available on the rear, but can be extended to a jack-plate for anytime-access. A USB charge jack is also available on the front panel.

IMPORTANT SAFETY INSTRUCTIONS

- » **Read these instructions.** - All the safety and operating instructions should be read before the appliance is operated.
- » **Retain Instructions** - The safety and operating instructions should be retained for future reference.
- » **Heed all warnings** - All warnings on the appliance and in the operating instructions should be adhered to.
- » **Follow all instructions** - All operating and use instructions should be followed.
- » **This is a permanently connected Class 1 apparatus** - Installation of this apparatus should be carried out in accordance with all applicable installation rules by qualified service personnel.
- » **The rating plate** is located on the back of unit, and the **Caution Marking** is located at the bottom of the enclosure.
- » **Water and Moisture** - Do not use this apparatus near water. The appliance should not be used near water, for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement or near a swimming pool and the like. **WARNING:** To reduce the risk of fire or electric shock, this apparatus should not be exposed to rain or moisture, and objects filled with liquids, such as vases, should not be placed on this apparatus.
- » **Mounting** - The appliance should be mounted to a wall in accordance with the mounting dimensions.
- » **Ventilation** - Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should be not be situated on a bed, sofa, rug or similar surface that may block the ventilation openings; or placed in a built-in installation, such as bookcase or cabinet that may impede the flow of air through the ventilation
- » **Heat** - Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- » **Power Sources** - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
- » **Cleaning** - The appliance should be cleaned with a slightly dampened cloth. Do not use harsh chemicals, cleaning solvents, strong detergents, etc.
- » **For Speaker Connections** - 18 AWG (American Wire Gauge), Class 2 Cable, or larger, should be used. The wire of preference is 16 AWG Stranded.

CAUTION

RISK OF ELECTRIC SHOCK - DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



WARNING

The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



CAUTION

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



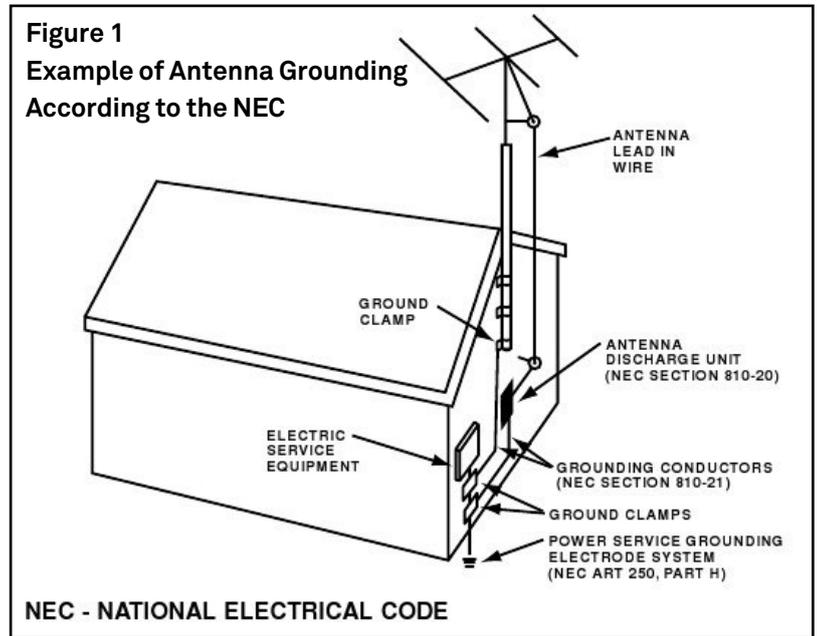
» **Outdoor Antenna Grounding** - If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code. ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode. **(See Figure 1)**

Notes

- a. Use No. 10 AWG copper or No. 8 AWG aluminum or No. 17 AWG copperplate steel or bronze wire, or larger as ground wires for both mast and lead-in.
- b. Secure lead-in wire from antenna to antenna discharge unit and mast ground wire to house with stand-off insulators, space from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart
- c. Mount antenna discharge unit as close as possible to where lead-in enters house.
An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

- » **Object and Liquid Entry** - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
- » **Damage Requiring Service** - The appliance should be serviced by qualified service personnel when:
 - a) The power supply cord or the plug has been damaged; or
 - b) Objects have fallen, or liquid has been spilled into the appliance; or
 - c) The appliance has been exposed to rain; or
 - d) The appliance has been dropped, or the enclosure damaged.

“CAUTION - Use of controls or adjustments or performance of procedures other than specified herein may result in hazardous radiation exposure”



Please record the Serial Number located on the rear of the unit in the space below:

S/N:

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Additional information for operating the MS-21 can be found by opening the **Description Application**. ▶

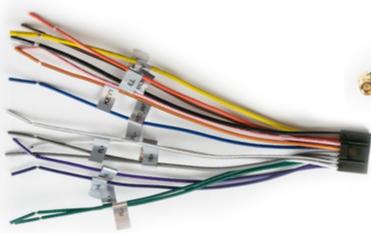


Description

INSTALLATION

Included with the MS-21

The MS-21 is supplied with the following accessories.



(1) Wire Harness



(1) GPS Antenna



(1) AM/FM Antenna



(1) Remote Control



(1) Torx® Driver & (4) Screws



(8) Wago Connectors



(8) Plugs



USB 1



USB 2



RCA Input Output



WiFi / BT/ Ant / Camera

Using the Installation Kit (MS-21-IK)

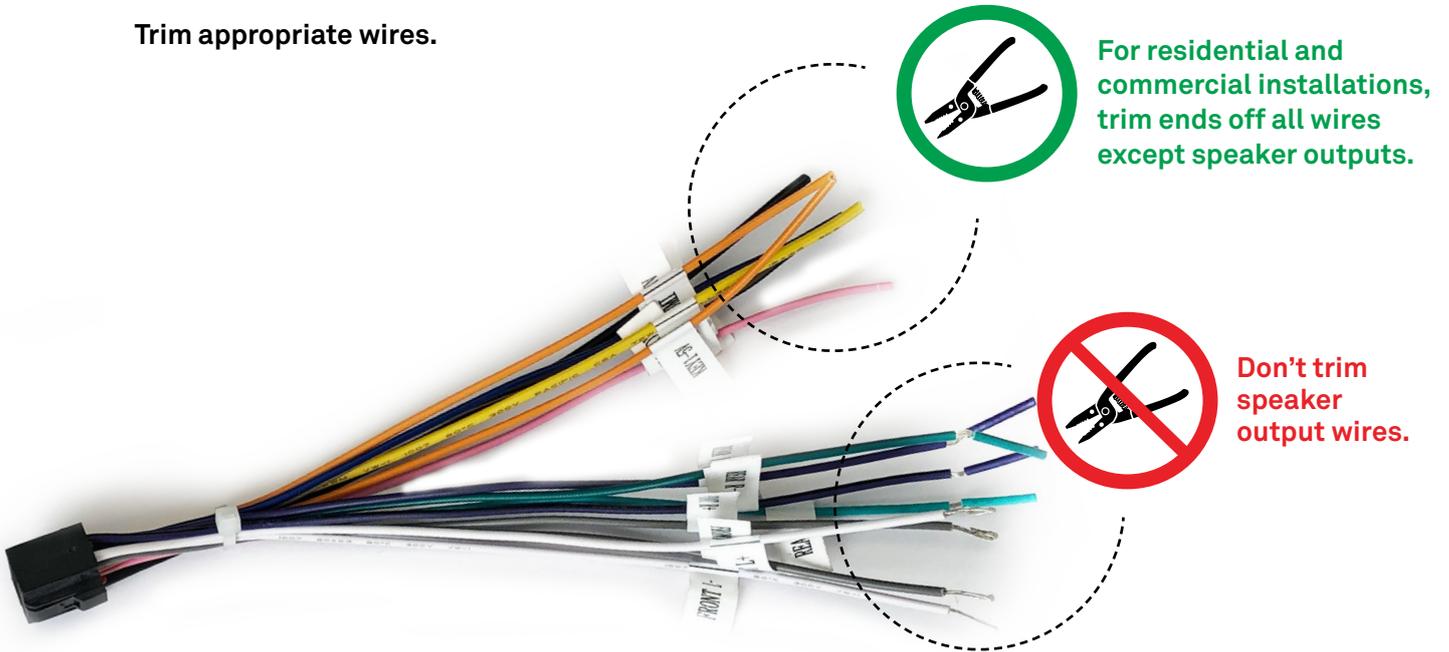
The MS-21 can be connected and operated from any 12-15V DC power source. For in-wall installations using 110-250V AC, where the power supply will be installed in the wall, the MS-21-IK must be used since it contains an installation frame and power supply with 4.2mm mini connector that is safety rated for in-wall installations. No other power supply is designed for this application.

Follow the instructions that come with the MS-21-IK or download them from www.oemsystems.com.

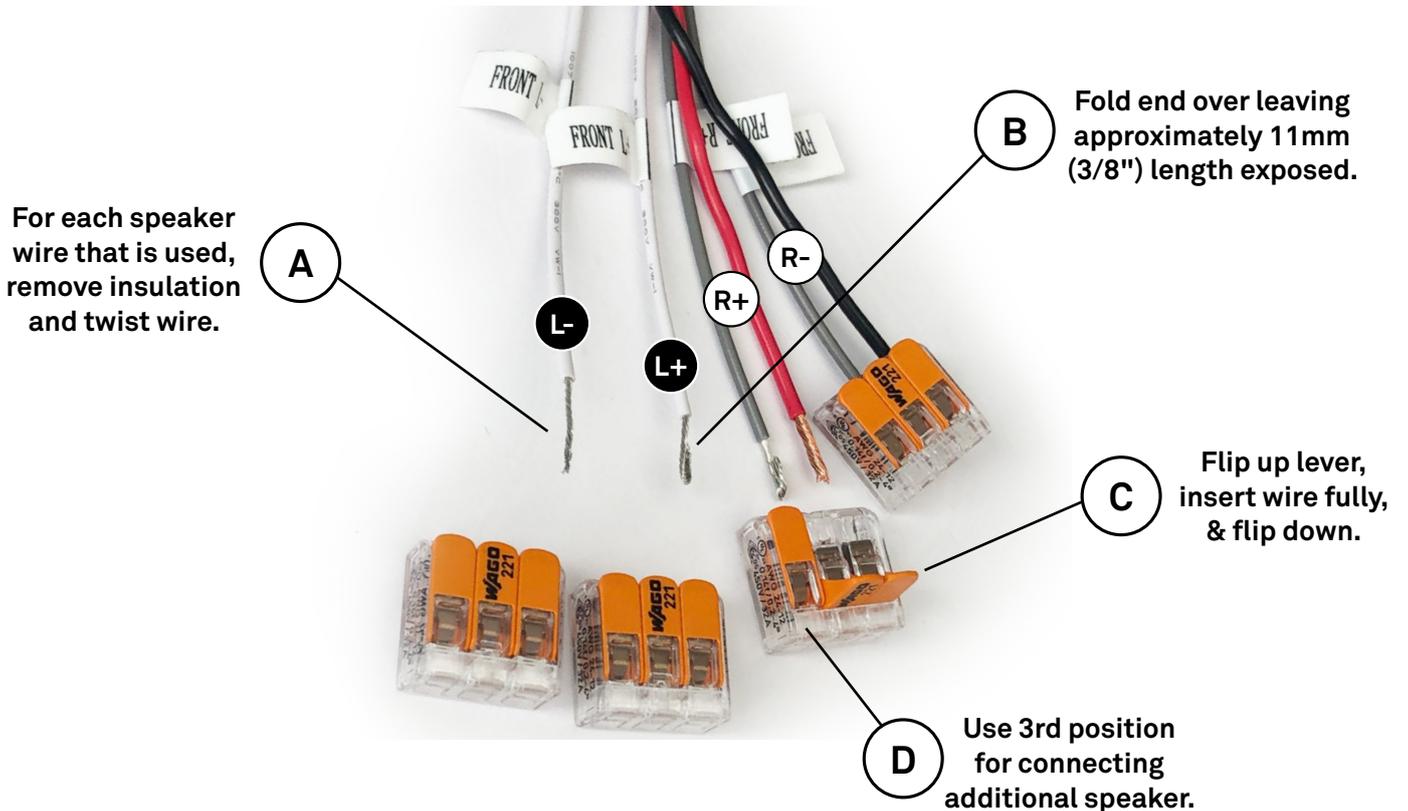
INSTALLATION

Speaker Connections

Trim appropriate wires.



Connect speaker wires using Wago connectors.

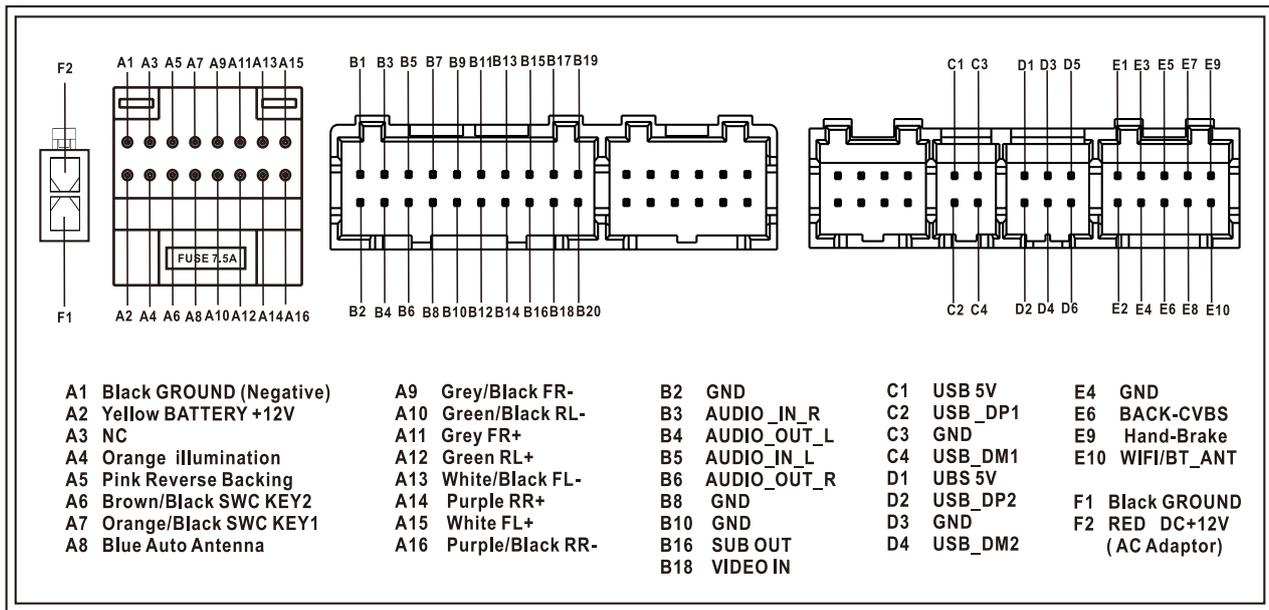


INSTALLATION

Connections

Almost all connections are made using multipin connectors. These speed up the final installation. All connectors are unique in size so that they cannot be interchanged. For reference, the chart below shows the connector assignments.

There is a zip tie provided with the MS-21 installation kit. This zip tie can be used to support all the wiring coming into or leaving the MS-21.



Antennas

The AM/FM and GPS antenna are connected at the rear panel. The AM/FM antenna can be dangled or attached within the interior of the wall. For improved performance, an attic-mounted or external antenna can be used. It may be necessary to purchase a Motorola to F-connector adapter when using a supplemental antenna.

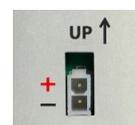
The GPS antenna has a magnetic attachment or an adhesive backing. If adhesive, peel the protective film and attach the antenna to the interior of the wall, either above or below the cut-out opening. Either attachment method may also be used to attach antenna next to the power input connector on the rear panel of the MS-21.

Miscellaneous Connections

Make any accessory connections such as Auxiliary A/V inputs and outputs, subwoofer, cameras, USB, etc. The short pigtailed can be disconnected from the rear panel to make connection easier. There is a tab on each of the connectors that must be pressed to release each of the pigtail adapters.

Power

Insert Mini power connector from MS-21-IK power supply into the Rear Panel. The connector is polarized so that it cannot be installed incorrectly. This will be the last connection you make as you install the MS-21 into the wall.



Rear Panel Power Connector Showing Polarity.

INSTALLATION

Attaching to the Wall

Follow the instructions supplied with the MS-21-IK (Installation Kit).

The hole is cut to the width of the studs, but not greater than 15.5" (394mm) or less than 14" (355mm), since this is the acceptable range in which the unit will fit.

The required height of the opening is 6.5" (165mm).

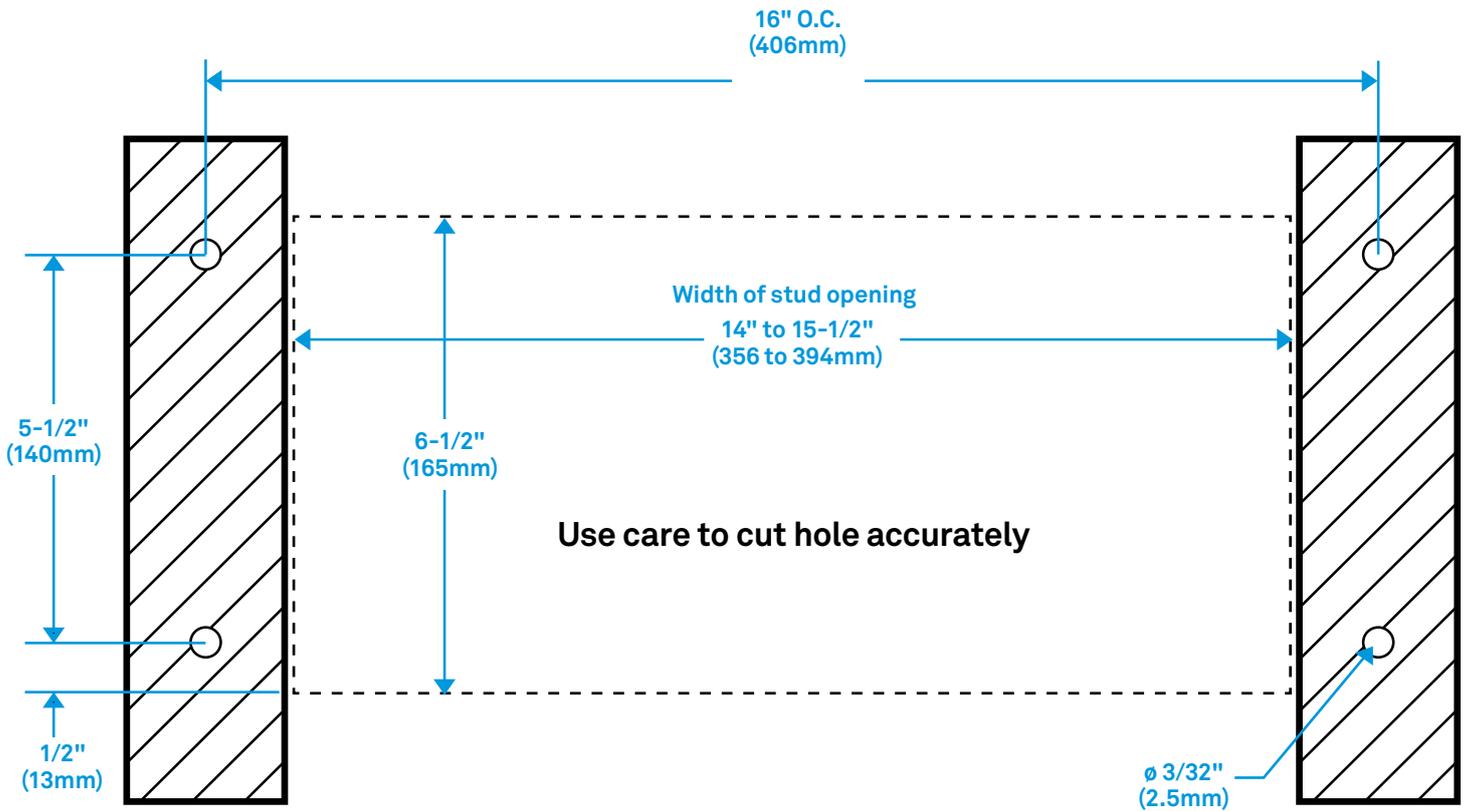


IMAGE NOT TO SCALE (FOR REFERENCE ONLY)

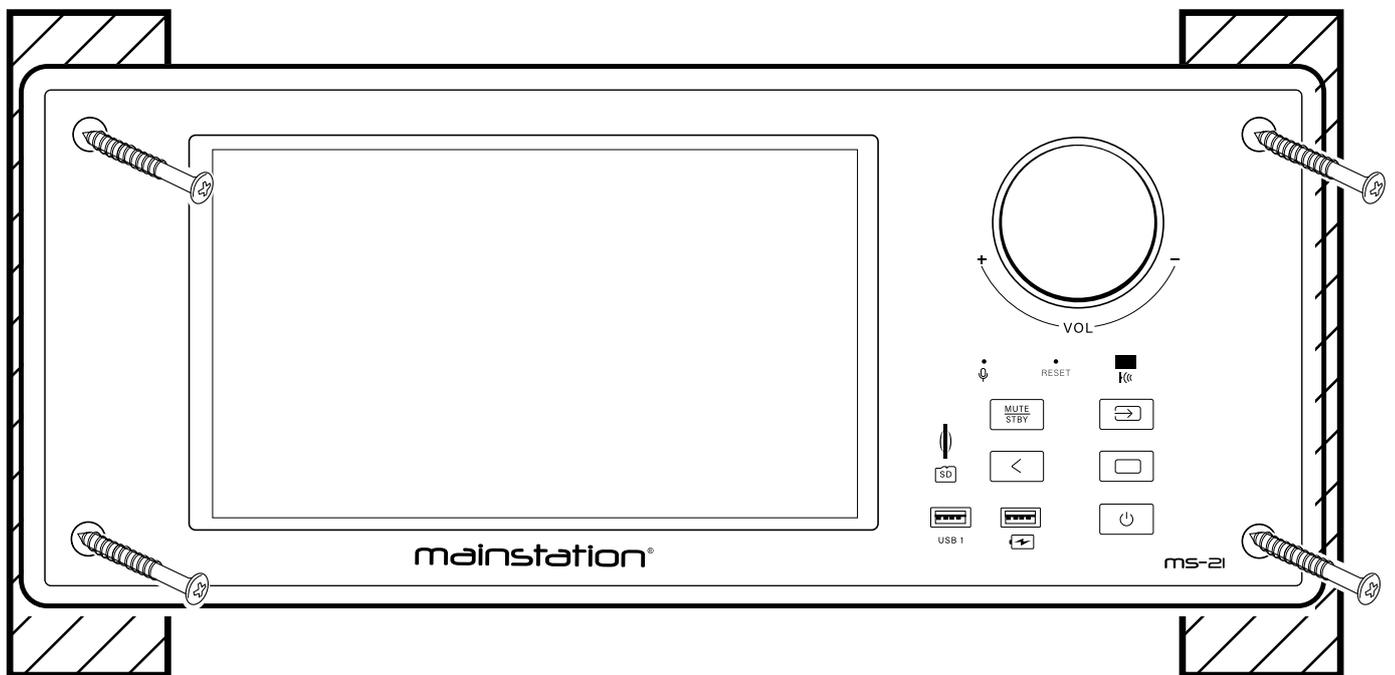
It is recommended that you predrill the mounting holes using a 3/32" (2.5mm) bit. Use the MS-21 as a template to mark the holes, ensuring the unit is level.

INSTALLATION

Attaching to the Wall (continued)



After making all the necessary connections, use the 4 supplied Torx® screws and supplied Torx driver to secure the unit to the wall. It is recommended that you predrill the holes using a 3/32" (2.5mm) bit. Use care to keep the tip of the driver from slipping out of the screw. Use of other screw types could lead to damage of the MS-21 if the driver slips out.



Installing Screw Caps



Press the supplied caps (x4) into the holes to cover the screws. Extra caps are provided.

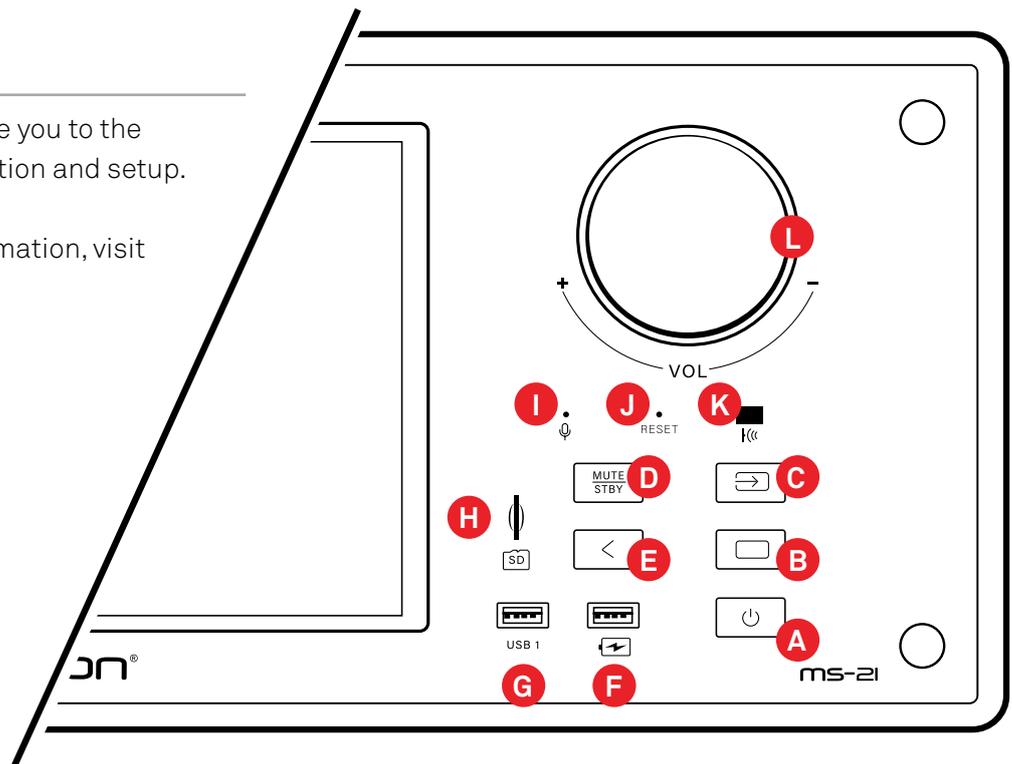
The caps can be removed by placing a sticky piece of tape or similar onto the cap and pulling slowly outward. Alternatively, driving a sharp screw into the cap and pulling outward is a method that works, but this damages the screw cap.

GETTING TO KNOW YOUR SYSTEM

Front Panel Layout

The following will introduce you to the basics of the MS-21 operation and setup.

For the most current information, visit www.oemsystems.com.

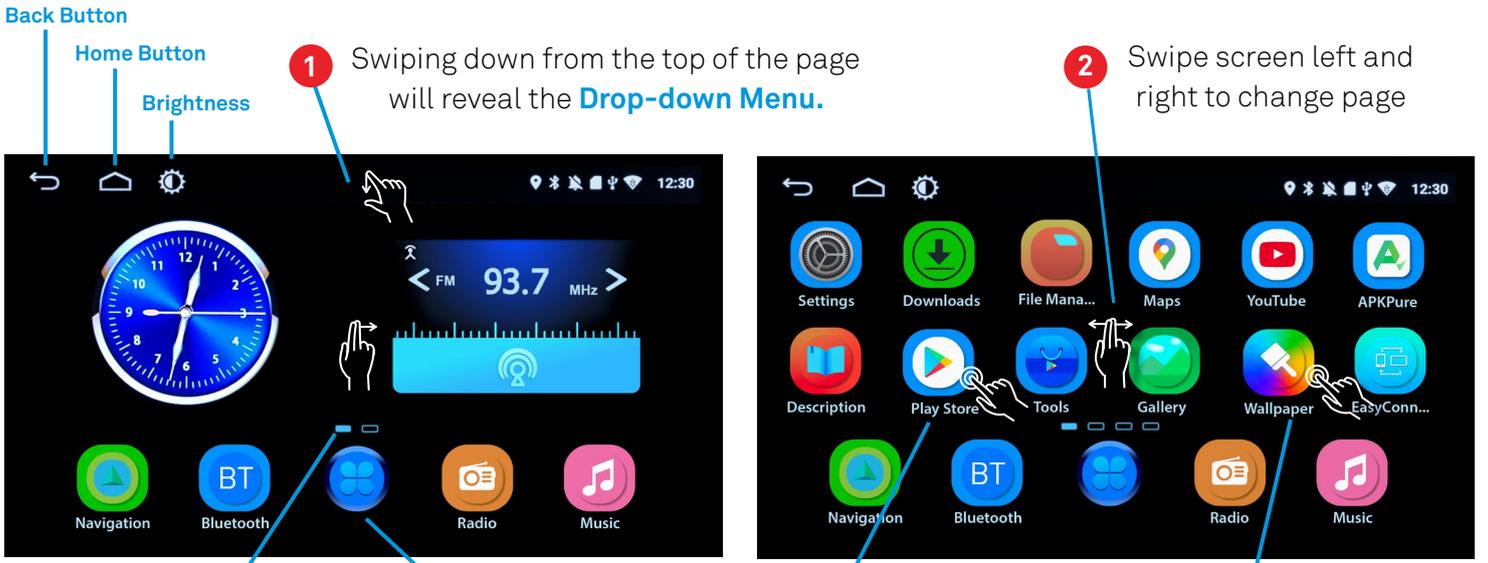


- A**  **Main Power Button:** Turns power on and off. Shuts down screen. Press, to change mode.
- B**  **Home Button:** Press to return to APP screen and/or then to Home screen.
- C**  **Input Selector:** Use to step between primary operations, Radio, Audio, Video, Bluetooth, etc.
- D**  **Mute / Standby:** Short press to Mute and Unmute. Long press (1 second) to place unit in standby. Touch to take out of Standby mode. A Clock is displayed on the screen in Standby mode.
- E**  **Back Button:** Returns to the previous screen.
- F**  **USB Charge Port:** Provides up to 700mA of charge current.
- G**  **USB Jack:** For USB dongles up to 32GB. Supports transfer and playback of music, videos, pictures, etc.
- H**  **Micro SD Slot:** For Micros SD cards up to 32GB. Supports transfer and playback of music, videos, pictures, etc.
- I**  **Microphone:** Used for voice-to-text dictation, audio recordings, telephone, and other functions that require a microphone.
- J**  **Reset Button:** Reboots system. Use paper clip or similar object to press recessed button.
- K**  **IR Receiver:** Infrared receiver for remote control.
- L**  **Master Volume:** Controls volume level for all 4 audio channels.

NAVIGATING THE SCREENS

Navigating the Home Page

NOTE: If no  Back Button is present on the screen, swipe down from the top to see default header, or press the  Back Button on the front panel.



Back Button
Home Button
Brightness

1 Swiping down from the top of the page will reveal the **Drop-down Menu**.

2 Swipe screen left and right to change page

3 Identifies **Selected Page**

4 **App Button**

5 Login and Download Apps from the **Google Play Store**

6 Change Screen Background with the **Wallpaper App**

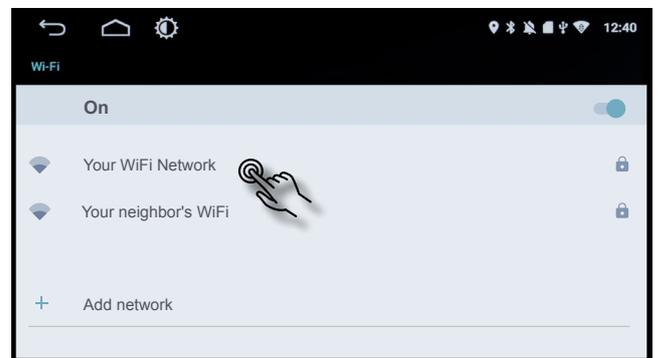
Setting Network/WiFi

STEP 1: Swipe from the top to reveal drop-down menu.

STEP 2: Select **Settings**  from the drop-down menu.

STEP 3: Select **Network** from the Settings Menu.

STEP 4: Touch desired network and Enter password.



NAVIGATING THE SCREENS

Setting Homepage Style

There are two available homepage screens as shown below. This section will show you how to change the homepage.



HOMEPAGE OPTION 1



HOMEPAGE OPTION 2

STEP 1: Swipe down from top and select **Settings** ⚙️

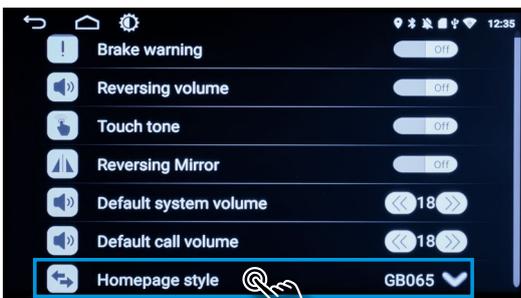
Select **Settings**.



STEP 2: Select **Common** from the Settings Menu.



STEP 3: Select **Homepage style** to select a new homepage (Graphical User Interface, “GUI”)



NAVIGATING THE SCREENS

Setting Default Features

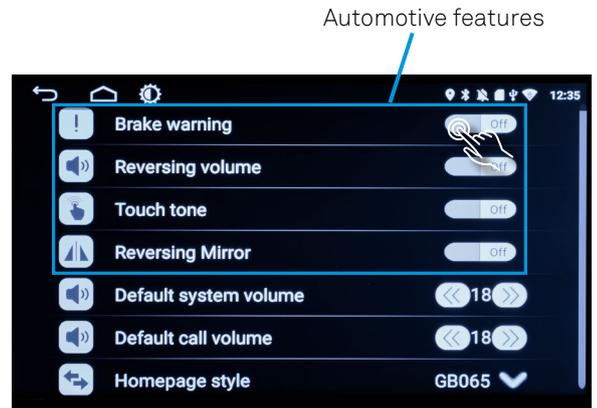
The MS-21 has been designed to be used in residential, commercial, and RV environments. The MS-21 is built on an automotive platform with its associated ruggedness and reliability. It uses the Android GO operating system for efficiency. Due to the automotive platform, many automotive features are present in the device. You will occasionally see references to automotive applications, especially in the setup menus.

Brake warning, **Reversing volume**, **Touch tone**, and **Reversing Mirror** are automotive features that are only used in the automotive environment and can be turned on or off here.

NOTE: Brake warning must be off for video playback to function.

Default system volume – Sets the initial volume of the system at startup.

Default call volume – Sets the initial volume of the system when a phone call is made.



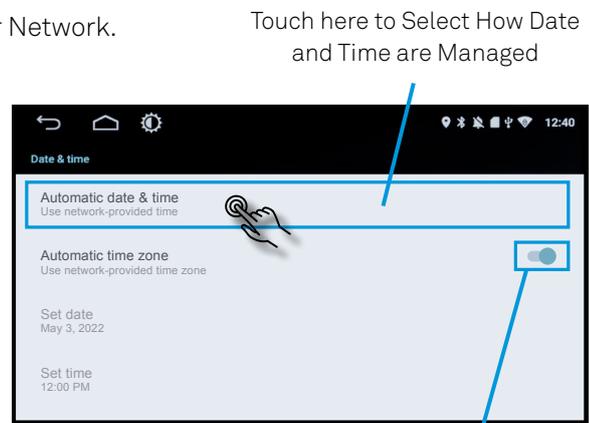
Setting Date and Time

The date and time can be set manually or automatically using GPS or Network.

STEP 1: Select **Settings** by swiping from the top.

STEP 2: Select **Time** from the Settings Menu.

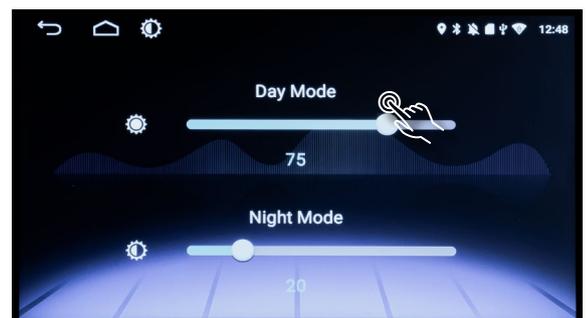
STEP 3: Select **Automatic date & time**, to use network-provided time, GPS, or manually set clock. Select **Automatic time zone** to use your current location.



Setting Brightness

Touching the **Sun Icon** at the top of the screen will toggle the brightness between Day Mode, Night Mode, and Dark. When dark, touching the screen anywhere will return the screen to Day Mode.

The adjustment for the brightness settings is found in the **Settings** menu.



USING THE RADIO

Tuner Functions



- 1**  **Tuner Dial:** Touching the tuner dial will move the station indicator and change the station frequency.
 - 2** **Fresh** **Metadata Indicator:** Displays Station ID, Song, etc.
 - 3** **NEWS** **Additional Metadata:** Displays Program Type.
 - 4** **ST** **Stereo Indicator:** Displays whether radio is in Stereo or Mono mode.
 - 5** **DX** **Local/Distance Indicator:** Displays whether radio is optimized for local or distant stations.
- The following functions (6-8) work with the RDS (Radio Data System), data that is transmitted with some stations to indicate format, content, song titles, artists, etc.*
- 6** **AF** **AF (Alternative Frequency):** Default is ON. When a radio signal is very weak, the AF function will begin a seek operation to find the same program on a different frequency. Touch the AF indicator to turn AF ON or OFF.
 - 7** **TA** **TA (Traffic Announcement):** Default is OFF. Select to search for local traffic information.
 - 8** **PTY** **PTY (Program Type):** Default is OFF. Select to seek specific types of programming, such as, Sports, News, Music, etc. Radio will scan and stop at selected type. To defeat function, select a pre-programmed station or manually tune radio.
 - 9**  **Stereo Indicator:** Displays whether radio is receiving Stereo or Mono signal or is processing signal as Stereo or Mono.
 - 10**  **Manual Station Control:** Decreases tuning frequency. Press and momentarily hold to auto-scan to next lowest station or press repeatedly to step frequency incrementally lower.
 - 11** **FM-1** **Radio Mode Indicator:** Displays which preset station group is active... FM-1,2,3, or AM-1,2.
 - 12** **105.7** **Station Frequency:** Displays tuning frequency in MHz or KHz.
 - 13** **MHz** **Frequency Band:** Displays tuning frequency; MHz = FM or KHz = AM (North America).

USING THE RADIO

14		Manual Station Control: Increases tuning frequency. Press and momentarily hold to auto-scan to next highest station or press repeatedly to step frequency incrementally higher.
15	MHz 92.1	Station Selection Buttons: Displays programmed stations. Press any button to select frequency. Press and hold for 2 seconds to program station to selected button.
16		Scan Button: Press to scan "Programmed" stations. Press again to stop.
17		Auto-program Button: Press to Automatically program stations. Tuner will program strongest stations.
18		Band Selector: Press to select which preset station group is displayed... FM-1,2,3, or AM-1,2.
19		Stereo/Mono Selector: Press to select Stereo or Mono radio mode. If signal is weak, select Mono mode to reduce background noise.
20		Local/Distance Selector: Toggles between Local and Distant Radio modes. For rural programming, select DX mode.
21		Sound Equalizer Selector: Press to access Equalizer to adjust Bass and Treble. Use back button to return to previous screen.

WORKING WITH APPS

Much like a smart phone or tablet, Apps (applications) can be downloaded onto the MS-21, making the MS-21 a versatile tool. If you can think of it, there is likely an App that will do what you want. However, not all Apps are compatible with the MS-21. Apps designed for portrait use only, and/or that do not contain scrolling capability, may not show the full screen. Contacting the App developer and letting them know of the App's scrolling or other limitation may prompt future releases to operate properly.

Downloading Apps



Play Store

Touch the Play Store App icon and log into Google to download Apps. You may need to create a Google account if you currently don't have one. If the unit will be shared by multiple users, creating a unique Google account will allow for greater individual privacy.

Moving Apps



Play Store

hold for 1 second

Apps can be moved around the screen or to different screens, allowing you to organize them. Touch and hold the App icon for approximately 1 second until a light-colored background appears around the icon. Then drag the icon to the desired location and/or screen.

Deleting Apps



Maps

hold for 2-3 seconds

Touch and hold the App icon for approximately 2-3 seconds until the option to delete the App appears. Note: Apps along the bottom row and on the home-screen cannot be moved or removed.

Additional information

Install only the Apps you will use. This will keep the memory uncluttered and allow the MS-21 to work more efficiently. Apps cannot be placed into folders or hidden. Apps on the home screen cannot be moved or changed.

NOTE: Exiting an app using the home button or closes the app. Using the back arrow or to exit the app leaves the app active in memory for faster access. Apps that are not closed remain in RAM memory until they are pushed out by the use of other Apps. Apps that are used recently will open more quickly because they are still in RAM.

MODES OF OPERATION

Radio

Pressing the Radio button will open the Radio App and begin playing the radio. Pressing the Back button [icons here] will turn off the radio and return you to the Homepage or App page. Pressing either Home button will exit the radio screen but the radio will continue to operate. This allows navigation to other screens and Apps while the radio continues to operate.



Pressing the Equalizer  icon will bring up the Sound Settings. The sound field can also be changed from this screen by pressing the Sound field icon. This allows adjustment of the left-right balance and volume levels of the front and rear stereo amplifiers.

Music

The Music App allows playback of digital audio files that are stored within the MS-21 or from an SD card or USB flash drive that is inserted into one of the 3 USB inputs. The available drives and folders will appear on the left side of the screen when the  icon is selected on the bottom of the Music player screen. The Music player is not for playback of internet content. Internet content is played through downloaded Apps of your choice.



Video

Video playback is similar in operation to the Music system. Files can be stored or uploaded in the same way. Supported modes of playback include MP4, MPG, MOV, AVI, FLV, RMVB, 3GP, and MKV in 1080 HD format. The Video player is not for playback of internet content. Internet content is played through downloaded Apps of your choice.



Swiping up and down on the right-hand side of the screen will raise and lower the volume. Swiping up and down on the left-hand side of the screen will raise and lower the screen brightness.

Aux

The Auxiliary input is located on the rear panel and allows for Audio/Video playback from the analog outputs of CD, DVD, and Blu-ray players, as well as, the analog outputs of digital music and video players, i.e., phones, tablets, etc. All connectors are RCA style. The Video input also accepts signals from analog video cameras. The video format is composite, allowing up to 480 lines of resolution. Input sensitivity is 1V for all analog A/V inputs.



To access the A/V inputs, it is recommended that a jack be installed at a location suitable to the user. These jacks are commonly available from your local A/V dealer or from OEM Systems Co, Inc.

HDMI to Composite video converters can be used to adapt equipment that do not contain composite outputs.

Navigation

Navigation requires a WiFi connection. More accuracy can be achieved with the use of the included GPS antenna. Google Maps is the default App for navigation. The default App can be changed by downloading and installing a suitable navigation App and then changing the default App in the Navi page of the Settings Menu.



MODES OF OPERATION

Bluetooth

Wireless connection from a smart phone or similar device can be made using the Bluetooth App. Within the App you will be able to establish the behavior of the connection, set the passcode, give a unique name to the Mainstation, make calls, record calls, download and view contacts, and play music.



1. **Press the Bluetooth or Bluetooth Music icon.** Either one will bring up the Bluetooth screen.

2. **Press “BT Set”** and enter the unique Bluetooth name and passcode (PIN) that you would like to use for your device. The default name is “mainstation” and the default passcode is “1234.”

3. Ensure the BT Switch is set to “ON.” Switching it to “OFF” will turn off the Bluetooth.

4. Switch AutoConnect and AutoAnswer to the desired settings. With AutoConnect enabled, the MS-21 will automatically connect to a user’s phone when it is within range of the MS-21. The recommended setting is “OFF.” With AutoAnswer enabled, the MS-21 will automatically answer incoming calls to a user that is connected to the MS-21. The recommended setting is “OFF.”

5. **Select “BT Connect”** from the left-side menu on the MS-21.

6. Turn on the phone or device that you wish to connect to the MS-21 and access the Bluetooth menu. For iPhones and iPads, this is located under “Settings.” For Android, swiping down, and turning the Bluetooth mode off and on will bring up the Bluetooth menu.

7. Enter the scan/search mode of your device. The Scan modes time-out after several seconds and may need to be reactivated.

8. **Press “Search”** on the MS-21 (Top right corner).

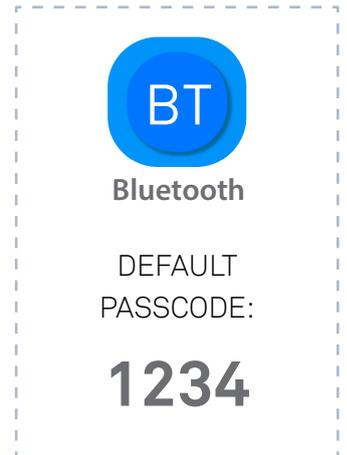
9. When you see the default or unique name of the MS-21 appear on your phone or device, select it and enter the passcode. Note: You may need to enter scan mode again if it has timed-out. Successful connection of the paired device will show on the screen of the MS-21.

10. Select “BT Music” on the MS-21 and begin playing music or other media from your device. You will be able to control the playback using your device or from the “BT Music” menu of the MS-21.

Phone calls can be made from your phone or from accessing the “BT Call” menu or the “Contacts” menu on the MS-21. However, contacts will not appear until authorized and downloaded. By default, microphone and speakers of the MS-21 will be active. To switch to the telephone speaker and microphone, press the telephone  icon after the call is made.

Deleting a Bluetooth Device

Press and hold the name of the device (approximately 1-2 seconds) until the option to delete it appears.



INPUTS AND OUTPUTS

USB/SD Input

There is 1 USB input and 1 Micro SD input located on the front panel of the MS-21. There are 2 additional USB inputs on the rear panel. Each input is USB type A and can accept up to 32GB of storage with either FAT32 or exFAT formatting.

Speakers

There are 4 speaker outputs that are driven from 4 independent amplifier channels. The amplifiers are rated for 4 to 8-ohm operation. Using the system sound field control to adjust the output to the front amplifier channels will not fully eliminate the output to the rear outputs and a very small output will still be heard from the rear channels. The reverse is also the case.

A/V (Line Level)

The A/V output is located on the rear panel. The audio can be connected to an amplifier to drive additional speakers. Another possibility is that the output can be connected to the input of a secondary MS-21 to allow sharing of A/V sources from the primary to secondary unit. The Audio output is variable and is controlled by the Rear audio channels.

Subwoofer

The subwoofer output provides up to 1V of monaural full-range signal. No low-pass filter is provided. This permits maximum flexibility so the output can also be used for a mono speaker using an independent amplifier. The subwoofer output is variable and linked to the Rear audio channels. Adjusting the volume or the system output to the Front speakers will reduce the subwoofer output.

File Transfer

Much like personal computers, files can be transferred to and from the unit using the USB or SD drives, as well as through the internet using conventional means, drag & drop, copy & paste, etc. Folders and files can be accessed by touching the Folder Icon. Note: Google and other Apps may create separate folders for music and video storage.

Remote Control

The MS-21 comes with a small handheld IR (infrared) remote control. It offers line-of-sight operation with a maximum range of approximately 10 feet (3 meters). Range decreases at increasing angles to the sensor. Only the basic functions that are available on the front panel of the MS-21 are available from the remote control. Remote uses CR2025 style battery.

CARING FOR YOUR UNIT

Cleaning: Use a soft moist cloth. A mild soap solution can be used.



DO NOT use harsh chemicals or alcohol for cleaning.

SPECIFICATIONS

DC Input Voltage (MS-21 Base Unit):	12-15 VDC 7A Peak
Fuse Size:	5A ATM Mini
AC Input Voltage Range (Power Supply Unit PS-9015):	100 - 277 VAC Auto Select
Output Power (Peak @ 4 ohms):	25 watts per channel x4 (dual stereo outputs)
Frequency Range:	AM 522 - 1710 KHz ; FM 87.5 - 108 MHz (Region Selectable)
Frequency Response:	20 Hz - 20 KHz
Screen Resolution:	1024 x 600
Internal Storage:	32GB (Expandable up to 128GB)
Analog Input Sensitivity:	1V for all analog A/V inputs
Required Wall Cut-out:	13-1/2" W x 6-1/2" H x 2-1/2" D
Overall Faceplate Dimensions:	17-7/8" W x 7-3/8" H x 2-3/8" D
Faceplate Thickness:	3/8" (1 cm)

SERVICE

Contact Customer Service at: customerservice@oemsystems.com
or call **775-355-0405** (8A-4P PST) Monday - Friday

mainstation®

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