



DEVINE

**WMD 168 (614 – 638 MHz)
Dual wireless microphone system**



User manual

Any information and illustrations shown in this user manual are subject to change without further notice.

User manual version: 2.0 Creation date + author initials: 05-12-2013 RV Revision date + author initials: 18-02-2014 RV

Safety instructions



WARNING!



Always keep this device away from moisture and rain! Hazardous electrical shocks may occur!



WARNING!



Only connect this device to a matching power outlet. This device is intended to work on a specified AC currency. Connecting this device to power outlets with other voltages may result in permanent damage and possible hazardous situations, such as fire or electrical shocks!



WARNING!



Be careful with every operation of this device. Touching live wires inside and outside the unit may cause hazardous electrical shocks!

This unit must be operated by, or under the supervision of an adult. This device is not suitable for children.

Every person involved with the installation, operation and maintenance of this device has to:

- Be qualified
- Follow the instructions of this manual
- Make sure there is no damage caused by transport. If the device seems damaged from the outside, do not use it and contact your dealer for more information and consultation.
- To make sure the device maintains in perfect condition and for safe operation, it is necessary for the user to follow the instructions and warning notes of this user manual.
- Damage caused by improper use or modifications to the device are not covered by warranty.
- This device does not have any user-serviceable parts inside. Servicing of this device needs to be done by qualified technicians.

Important notes regarding safety and health:

- Always keep the power cord away from other cables.
- Never remove any warning or informative labels from the unit
- Never leave cables lying around
- Do not open the device and do not modify any hard- or software of this unit.
- Do not insert this object into air vents.
- Do not connect this device to a dimmerpack.
- Do not switch the system on and off frequently as this will reduce the lifespan of the device.
- Do not drive the inputs of the fixture with a signal larger than required to work at full performance.
- This device is designed for indoor use, avoid contact with water, moist or other liquids. Do not place items filled with liquids on top of the unit.
- Avoid nearby flames or heat sources, do not place this device near flammable liquids, gas or flammable items.

Any information and illustrations shown in this user manual are subject to change without further notice.

User manual version: 2.0 Creation date + author initials: 05-12-2013 RV Revision date + author initials: 18-02-2014 RV

- Always disconnect the device when it is not in use for a longer period of time, when servicing is needed or when the device needs cleaning.
- Only handle the power cord by its connectors. Never pull the cable to remove a connector from its socket, as this could lead to damage and electrical shocks.
- Always operate this device with a stable AC current.
- Never use other types of cables than specified in the manual, do not use defective or bad functioning cables. Contact your dealer when the included or required cables do not work properly with this device.
- When the device has been exposed to large temperature differences (for example, transport from outdoor to indoor), do not connect the device immediately. Do not activate the unit until it has reached room temperature, as moist might build up inside the unit, which may cause shortcircuits and/or electrical shocks.

Guidelines and types of use:

- This device is intended to be used by professionals on stage, in theatres, clubs and other equal venues.
- This device is not suitable for children and always needs to be operated by an adult.
- Only use the device when the environment is suitable and will not cause any damage. Do not use the product in moist or dusty environments, or where long-term damage may occur such as:
 - indoor swimming pools where chlorine is used.
 - Beaches, where sand and salt are present.
 - Temporarily outdoor setups, without roof protection
 - Indoor areas where intense heat sources are present or where the temperature exceeds levels which are comfortable for humans.
- Only use the included power adapter and only connect the device to a suitable power outlet with the correct output voltage. Connecting the device to a power outlet with the wrong type of voltage or using the product with a wrong type of power supply may cause permanent damage to the device.
- Avoid shocks and collision during use and transport. Do not transport the device while in use. Avoid brute force during the installation and operation of this device.
- Familiarise yourself with the functions of the device before use. Do not allow operation of the device by unskilled or unqualified people.
- Use of the device in other ways than described in this user manual may cause damage and injury. Devine does not take responsibility for any damage or injury caused by improper use.

Storage and transport:

- This device is intended for mobile use. When transported, use the original packaging of the product, or a fitting flightcase, preferably filled with foam.
- This device is not intended for permanent use. Operation breaks will ensure that the lifespan of the device remains unchanged.
- If the device is not used for a longer period of time, disconnect it from its power source and store it in its original packaging, or in a fitting flightcase.
- Store the device indoor, dry and do not expose the device to extreme temperature differences.

Housing:

- Inspect the housing of the device frequently. Severe dents, cracks and missing screws should be avoided at all cost. Do not use the device when the housing is not in optimal condition. Contact your dealer or a skilled technician when in doubt about the state of the device
- Check the fixture and screws for corrosion. Corrosion should not be present on the fixture. Contact your dealer or a skilled technician when corrosion is found on the fixture
- Every power or signal chassis/connector should be mounted tightly. Do not use the device when connectors are loose.
- Do not use the power cord when the cores are visible. Contact your dealer for a replacement if needed.
- Avoid the buildup of dust and dirt. Clean the exterior of the fixture every month with a dry or damp cloth. When using the device intensively, the cleaning frequency needs to be increased.

Fuses:

- The main fuse of this device is to be found on the rear of the device. In most cases, directly next to the power inlet.
- Only replace a fuse for a new one with the same type and rating! Do not use a fuse with a higher or lower rating.
- Do not bridge the fuse with electrical wires, aluminum foil, as the fuse is used for protection against electrical shocks and short circuit.

Any information and illustrations shown in this user manual are subject to change without further notice.

User manual version: 2.0 Creation date + author initials: 05-12-2013 RV Revision date + author initials: 18-02-2014 RV

- Always mount the fuse cover back to the fuse compartment.



DEVINE

Any information and illustrations shown in this user manual are subject to change without further notice.

User manual version: 2.0 Creation date + author initials: 05-12-2013 RV Revision date + author initials: 18-02-2014 RV

Box contents

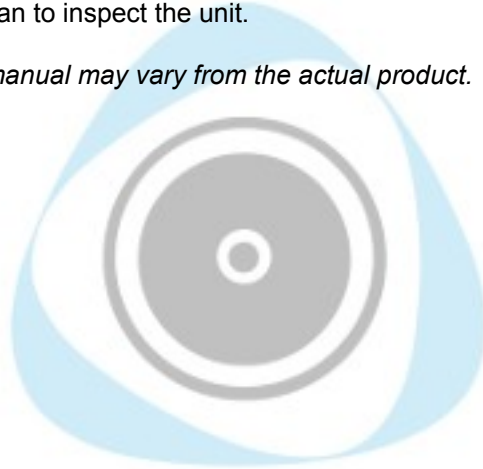
Box contents:

2x wireless microphone
1x 19 inch rack mountable receiver
2x screw-on type antenna for receiver
1x power supply
1x user manual
1x mono 6.35mm jack audiocable

Unit and accessory inspection

- Always use the supplied power cable to connect the unit to a power supply. If the cable appears broken or has visible damage, do not use it.
- If the unit is not going to be used for a longer period of time, disconnect it from the power supply and store it in a dust-free environment.
- Always check the unit for possible damage before use. If you suspect that something is wrong with the unit, do not connect it to a power source! When you suspect that your unit is broken or damaged, contact your local dealer or a certified technician to inspect the unit.

Note: Illustrations shown in this manual may vary from the actual product.



DEVINE

Any information and illustrations shown in this user manual are subject to change without further notice.

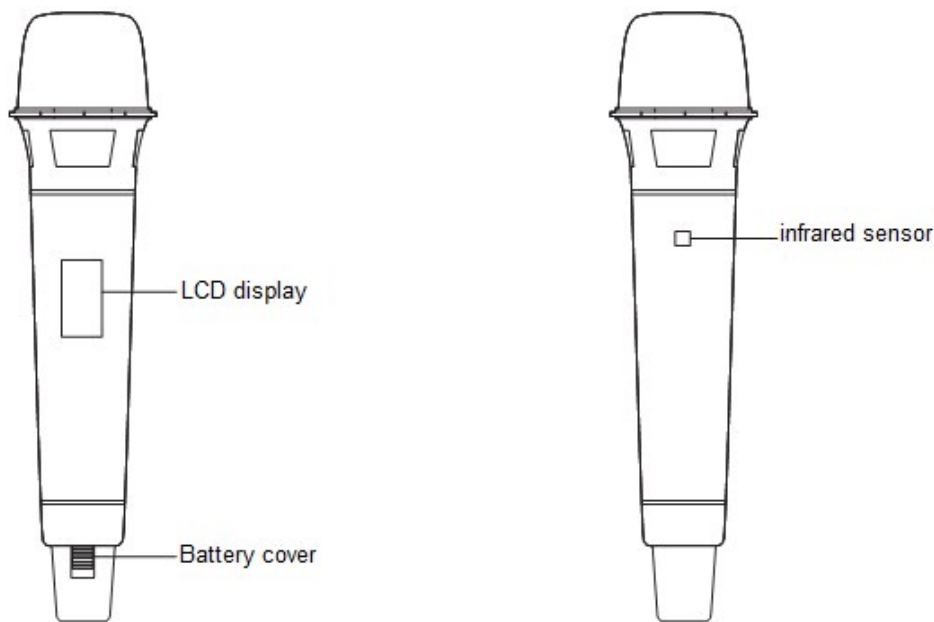
User manual version: 2.0 Creation date + author initials: 05-12-2013 RV Revision date + author initials: 18-02-2014 RV

Preparing the system

Inserting batteries

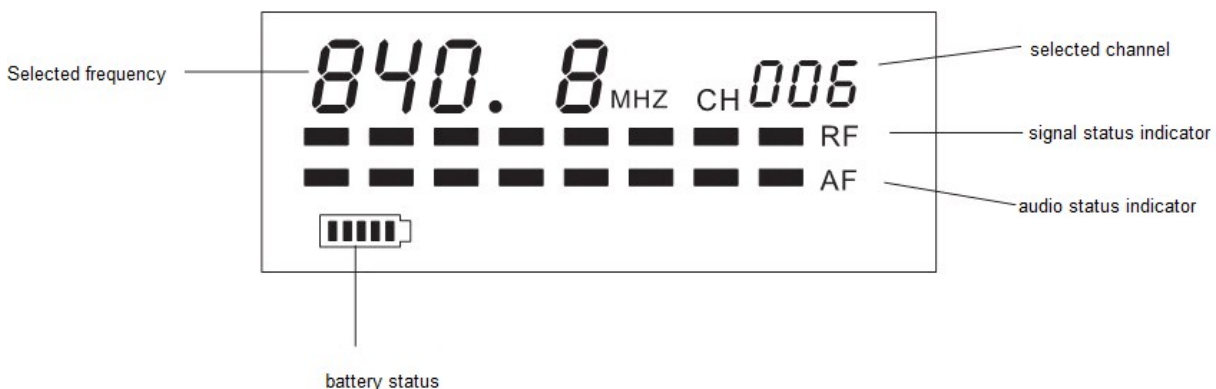
This system uses AA 1.5V batteries for the handheld microphones. Each handheld microphone uses 2 AA batteries. Always use good quality batteries, as the battery life may vary. This may result in an operation lifespan, varying from 8 to 20 hours.

To access the battery compartment, twist the bottom half of the microphone (the part below the blue ring). You will notice that the body cover will turn until it comes loose. After you have removed the body cover, you have access to the LCD display menu buttons and the battery compartment.



Insert the batteries with the right sides up. The indicators inside the battery compartment show how the batteries should be inserted (+ and – should match). Pay attention to the placement of the batteries, as the microphone might fail to operate when the batteries are inserted incorrectly.

There is an on/off switch at the bottom of the microphone. When you turn the switch to the 'ON' position, the LCD screen of the microphone will turn on, as illustrated below.



Synchronizing the microphones, selecting the right frequencies

When you have connected the receiver and turned it on, synchronize the wireless microphones with the receiver using the infrared synchronizing system.

Any information and illustrations shown in this user manual are subject to change without further notice.

User manual version: 2.0 Creation date + author initials: 05-12-2013 RV Revision date + author initials: 18-02-2014 RV

The receiver determines which microphone is used on which frequency band and on which specific frequency. To sync a wireless microphone with the receiver, perform the following actions:

- Press SET on the receiver, "M" will start blinking in the display, next to frequency 1.
- Set the preferred frequency for microphone 1 (Blue) with the up and down buttons, on the right of the display
- Press SET again, "M" next to frequency 2 will start blinking, set the preferred frequency for microphone 2 (Red).
- Press ESC to leave the settings-menu.

Syncing mic 1:

- Press IR on the receiver, until the microphone of frequency 1 syncs automatically.
- When finished, the RF LED will turn on.

Syncing mic 2:

- Press IR until lines appear on the left part of the display
- Before the receiver start searching, press and hold the SET button on the receiver for at least 3 seconds.
- After releasing the SET button, the display on the receiver for mic 2 will show lines and will start searching automatically.
- Wait until the automatic searching is finished. When the frequency is shown on the display, the microphone is synced. The frequency shown on the display of the receiver, will match with the frequency shown on the microphone.
- After the sync is complete, the RF LED on the receiver will turn on.

Both microphones are now ready for use. Turn up the volume of microphone 1 and 2, until the right output-signal is achieved.

Distance adjustment

Sometimes, other electrical devices might interrupt your performance as you are performing on stage. When these disturbing devices are relatively far away, you can decrease the distance setting to avoid interference at the receiver.

Use the H and L buttons to adjust the distance (by decreasing the signal power). H stands for far distance, L stands for short distance. You will see on the main display that the RF signal indicator changes.

Volume adjustment

When you want to change the volume sensitivity on your microphone, press SET on the microphone (after you removed the cover at the bottom). The display will show 'VOL' which means you are able to change the volume, using the UP and DOWN buttons. After 3 seconds of inactivity, the unit will return to the frequency display, so you can test the new settings.

Backlight adjustment

When you want to change the backlight of the display (as this might draw too much attention on dark stages), hold the SET button for about two seconds. The display will show 'LED' on the display. Use the UP/DOWN buttons to increase or decrease the brightness of the display, it is also possible to turn the backlight completely off. When no activity is detected, the display will turn back to the main display, with the settings saved.

Setting up the receiver

Install the receiver on a solid surface, or in a 19 inch flightcase or rack. Use the two included antennas and screw them onto the device at the provided mounting points.

Place the antennas in a V-shape, to create the best signal receiving environment for the antennas. The best set-up of the antennas would be in a 90 degree angle, compared to each other.



Plug the power supply cable into the provided connector-chassis at the rear of the unit. Check the power supply you wish to plug the unit into, to make sure the outlet has a proper voltage. Do not turn the power on or connect any cable if you suspect that the voltage is incorrect, or if the cable shows defects.

Connecting signal cables

The unit has several professional audio connectors at the rear side of the unit. For both channels there is a separate balanced XLR output. There also is a MIX output with unbalanced 6.35mm jack (for simple setups). You can not use both outputs (XLR and 6.35mm jack) at the same time. We advise to use the XLR outputs as much as possible, as this provides a better signal transportation with a minimum chance of errors and signal distortion. An unbalanced 6.35mm jack cable is included for simple setups and testing purposes after receiving the unit.

As shown in the illustration below, the information of both microphones is bundled on 1 display. Each microphone shows information on the display, regarding the Frequency and the Channel.

To change the selected frequency, press SET, then use the UP and DOWN buttons to adjust the frequency. Press ESC to exit the menu and save the settings, press IR to match the frequency with your microphone (by synchronizing, as shown before in this manual).

It is also possible to copy the frequency that you already selected on your microphone to the receiver. Press and hold the DOWN-button and let the receiver match the frequency automatically.



Lock and unlock the receiver

Hold ESC, after a while the display shows 'LOCK'. Hold ESC again for a while and the 'LOCK' item on the display will disappear.

Volume settings

Use the VOLUME knobs to adjust the volume settings of the microphones. Use the LED VU-meters next to the display to choose the right volume setting.

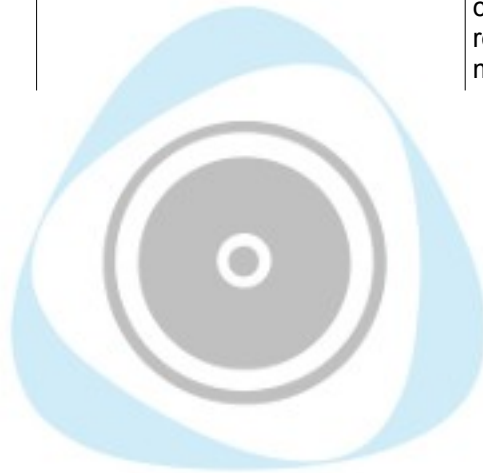
Troubleshooting

Problem	Possible Cause	Solution
Microphones do not turn on	Battery low or not inserted (correctly)	Replace the batteries with new ones. Check the polarity so the battery can be inserted in the correct way.
No sound from microphone receiver	Microphone not turned on Microphones do not send any signal	Turn the microphone on Check microphone/receiver display for microphone activity and synchronization. Check cables for correct working and replace if needed Check audio receiver (mixer, audio interface, etc.) for correct incoming signal, mute buttons, etc.
Receiver does not turn on	Microphones not synced properly Receiver not activated Power adapter broken	Sync the microphones to their respective channels and check if the microphones and displays are on the correct frequency/channel. Plug the power adapter to a wall outlet and turn the device on. Contact your local dealer for a replacement power supply.
Distorted sound or signal	Microphones too far away from antennas	Move closer to the antennas. Adjust antennas and position them in a 90 degree angle opposed to each other. Make sure the receiver and antennas are free from obstacles (flight cases, walls, powered equipment).
Rattling and cracking sounds	Microphone level set too high Receiver level set too high Signal receiving device set too high	Decrease microphone level Decrease receiver level Decrease gain and/or volume on your mixer / audio interface / etc.
Loud high frequencies coming from the speakers	Moist inside the microphone	Let the microphone dry on room temperature and avoid use of the microphone in humid or moist environments. Do not let the microphone come in contact with water or liquids.
Interruption of the microphone signal	Microphone positioned too close to the speakers, which causes feedback Loose cable or broken cable	Move the microphone further away from the speakers, or change the position to prevent the microphone to be aimed directly at the speakers. Check if the cable is plugged into the microphone correctly. If that does not solve the problem, try to change the cable.

Any information and illustrations shown in this user manual are subject to change without further notice.

User manual version: 2.0 Creation date + author initials: 05-12-2013 RV Revision date + author initials: 18-02-2014 RV

	Signal loss	Move closer to the receiver and avoid interruption of the signal by walking behind walls, large structures or large groups of persons (for example, a filled dance floor).
Display unable to change by using the several buttons next to the display	Locked display (shows 'LOCK' on display of the receiver)	Hold "ESC" for a longer period of time, until 'LOCK' disappears from the display screen. The device is now ready for adjustment to the settings again.
Wrong microphone activated	Microphones/receiver set to wrong frequencies	Check the microphone and receiver display for frequencies/channels and change the frequencies/channels if needed.
	Separate outputs mixed	Check all connected cables for correct connections to any receiving devices (audio interface, mixer) and correct if needed.



DEVINE

Technical specifications

Technical specifications microphone:

- Frequency: 614 ~ 638 MHz
- channels: 276 (2 channels, choose from 138 frequencies per microphone)
- oscillation-mode: PLL
- frequency stability: +/- 10 ppm
- modulation mode: FM
- radio frequency power: 10 ~ 30 mW (variable)
- audio frequency response: 40 ~ 18.000 Hz
- distortion: < 0.5%
- batteries: 2x AA, 1.5V
- using time: 8 ~ 20 hours (depends on battery quality)

Technical specifications receiver:

- frequency: 614 ~ 638 MHz
- channels: 276 (2 channels, choose from 138 frequencies per microphone)
- oscillation-mode: PLL
- frequency stability: +/- 10 ppm
- superheterodyne double-supersystem receiving
- sensitivity: -95 ~ -71 dBm
- audio frequency response: 40 ~ 18.000 Hz
- distortion: < 0.5%
- signal to noise ratio (S/N ratio): >110dB
- audio output: 800mV (1x 6.35 mm mixed output jack, 2x separate balanced XLR)
- working power: DC 12-15V (power supply included), 300mV
- power supply: AC 230V, 50 Hz
- 19 inch rack mountable, 1U

Dimensions:

Receiver: 483 (with rack ears) x 210 (without antennas connected) x 50 mm (with rubber feet)
Microphone: 263 x 51 x 51 mm



DEVINE

Any information and illustrations shown in this user manual are subject to change without further notice.

User manual version: 2.0 Creation date + author initials: 05-12-2013 RV Revision date + author initials: 18-02-2014 RV