

AQUATIC AV®

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SWA6+ COMBINED BLUETOOTH STEREO SUBWOOFER

with Full Range Speaker Outputs

USER / INSTALLATION MANUAL



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PLEASE READ THIS INSTRUCTION MANUAL BEFORE
INSTALLATION AND OPERATION



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Getting Started

Congratulations on the purchase of the SWA6+ Combined Stereo Subwoofer with Bluetooth and USB connectivity and two full range speaker outputs. With the right care and attention it will give you many years of trouble free operation.

Before operating the system, please read this manual fully to obtain the best results from your new product, and retain it for future reference.

1.1 Contents

- SWA6+ Combined Stereo Subwoofer
- 2-Way RF Waterproof Remote Control (RF6)
- USB Charging Cable (RF6 Charging Cable)
- Wiring Harness (AQ-UNH-2)*
- User/Installation Manual
- Bluetooth *Halo Aerial Technology* Antenna (AQ-BTANT-1)

*Retail packaged models only.

1.2 Features

The SWA6+ Combined Bluetooth Stereo Subwoofer System is a high quality, robust and durable combined subwoofer and stereo, with built-in amplifier and outputs for connection of standard full range speakers.

Built-in electronic cross-over automatically balances the full range speaker outputs with the tuned subwoofer for optimum performance

Halo Aerial Technology provides unrivalled Bluetooth range and signal strength.

Automatic Standby mode will engage when the SWA6+ does not see any input from either the RCA's or Bluetooth.

USB connection allows connection of USB thumb drives with supported audio media and will charge USB devices such as smartphones.

Rated at 288W max power output: 144W for the sub and 72W x 2 to the full range speakers (at 2 Ohms) with a frequency response of 26Hz-125Hz for the sub frequencies and 125-20Hz for the full range frequencies.

The amplifier is both 2 Ohm and 4 Ohm stable, so a maximum of four 4 Ohm speakers can be connected.

The SWA6+ active subwoofer features a Tuned Port for enhanced bass response and 8" DVC (Dual Voice Coil) speaker to deliver powerful, warm bass to your existing speaker setup, adding musicality and depth to your favourite audio content.

Designed and built to withstand the harsh IPX4 conditions associated with use in marine, boat, pool or spa applications the cabinet has been treated to an IPX4 rating and the PCB is conformal coated.

1.3 Connections

1. 12-pin Watertight Harness*

The 12-pin harness supplies power and ground connections to the SWA6+ and four (4) speaker channel output connections from the SWA6+ (see Connections Diagram 1.3.1).

 *Do not cut or modify the 12-pin harness* on the SWA6+ side or warranty will be void.*

2. FM Radio Antenna Jack

Allows connection of FM radio antenna. For best FM performance make sure the antenna is extended to the highest achievable position.

3. Auxiliary Outputs

Allows external amplifiers to be connected to power additional speakers.

4. Auxiliary Inputs

Allows an additional RCA input from a standalone unit or another stereo source.

5. 12V DC External Triggers (x2)

Allows for external lighting or relays to be triggered (3A max load).

6. USB Input

For connection of USB thumb drives with MP3 and/or WMA files. Charges compatible USB devices when connected via USB cable.

7. Wired Remote 8-pin DIN Cable

Allows connection of a Wired Remote Control (WR6 sold separately).

8. Bluetooth *Halo Aerial* Connector

Connect the Bluetooth *Halo Aerial Technology* Antenna (AQ-BTANT-1) to the male SMA connector. Do not apply excessive torque on the SMA connector (no more than 0.5N-m). Use hands to tighten the connection (do not use a wrench). See section 1.5.

9. Power Attenuation Wires

Allows the output level to be adjusted from a factory preset of -3dB to either -6dB, 0dB or +6dB. See section 1.6 for further details.

 *Aquatic AV does not recommend the wired remote control WR6 for use in spa applications.*

*Retail packaged models only.

FCC ID:
MADE IN CHINA

FCC Statement to the User

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 of the following measures:

1. Reorient or relocate the receiving antenna.
2. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
3. Increase the separation between the equipment and receiver.
4. Consult the dealer or an experienced radio/TV technician for help.

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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

Product design and specification subject to change without notice. E&OE.

Doc V1.1

Aquatic AV offers a limited warranty of our products on the following terms:

Length of warranty
2 years on audio systems, electronics, speakers, and accessories (receipt required).

Coverage
This warranty covers only the original purchaser of an Aquatic AV product purchased from an authorized Aquatic AV dealer. In order to receive service, the purchaser must provide Aquatic AV with a copy of the receipt stating the customer name, dealer name, product purchased and date of purchase.

Defective products
Products found to be defective during the warranty period will be repaired or replaced (with a product deemed to be equivalent) at Aquatic AV’s discretion.

What is not covered
Damage caused by accident, abuse, improper operations or theft. Any cost or expense related to the removal or reinstallation of product. Service performed by anyone other than an authorized Aquatic AV service center. Any product with the serial number or tamper labels defaced, altered, or removed. Subsequent damage to other components. Any product not purchased from an authorized Aquatic AV dealer.

Limit on implied warranties
Any implied warranties including warranties of fitness for use and merchantability are limited in duration to the period of the express warranty set forth above. Some states do not allow limitations on the length of an implied warranty, so this limitation may not apply. No person is authorized to assume for Aquatic AV any other liability in connection with the sale of the product.

How to obtain service
You must obtain a return material authorization number (RMA) to return any product to Aquatic AV. You are responsible for shipping charges of returned products to Aquatic AV.

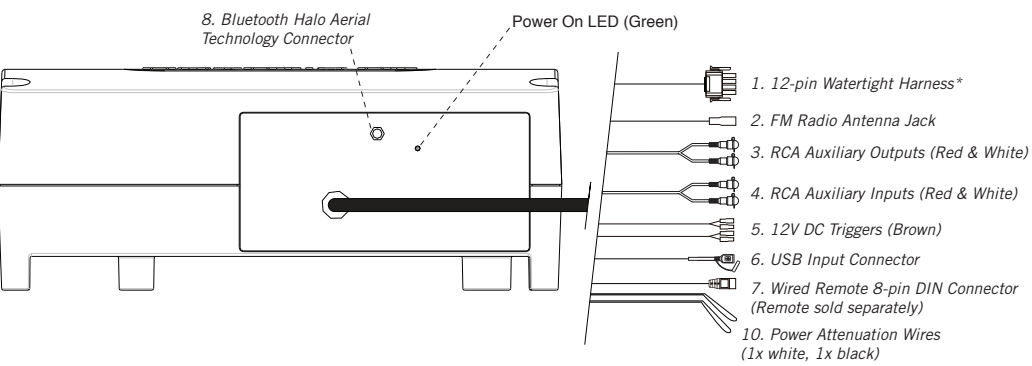
Priority Customer Support & Free Extended Warranty
In order to receive the best customer support from Aquatic AV we recommend you register your product for a free extended warranty.

Register your product for extended warranty and priority support at www.aquaticav.com/register

Please record the model and serial number[s] of your equipment in the space provided below as your permanent record and will assist us with your factory warranty coverage. These numbers can be found on the front panel of the SWA6+ Combined Stereo Subwoofer.

Model number[s]:	Serial number[s]:

1.3.1 Connections Diagram

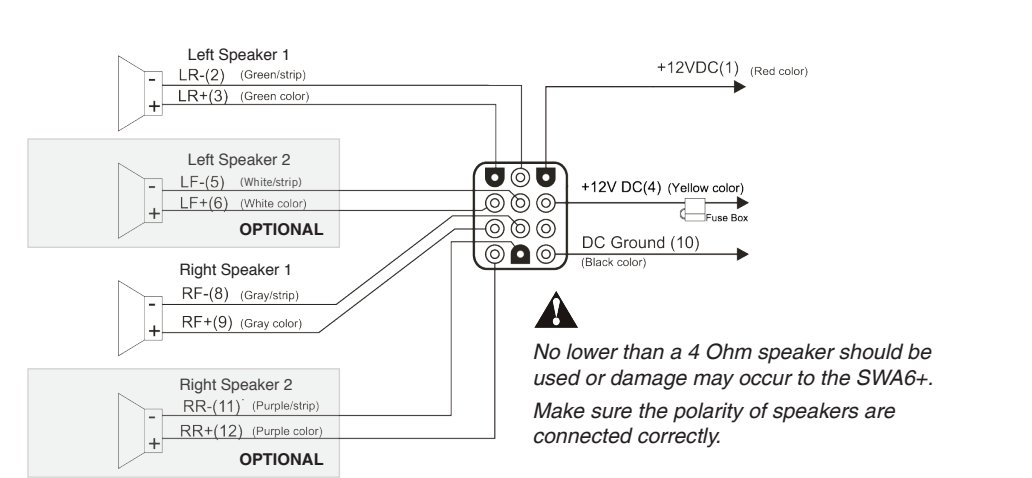


1.4 12-pin Harness Connection (retail packaged models only)

If your SWA6+ was purchased from an Aquatic AV dealer and/or supplied with retail packaging it is supplied with the Aquatic AV universal harness AQ-UNH-2 in order to connect the power and speakers. Please proceed to section 1.4.1.

If your SWA6+ was supplied as a pre-installed waterproof entertainment system it will utilise 3rd party wiring connections and is not supplied with the Aquatic AV 12-pin Harness. Please proceed to section 1.5

1.4.1 12-pin Harness Wiring Diagram



! All open wire connections should be soldered and protected against water and dust for best long-term performance.

*Retail packaged models only.

1.5 Bluetooth *Halo Aerial Technology* Antenna

The Bluetooth *Halo Aerial Technology* antenna AQ-BTANT-1 (included) improves the standard Bluetooth wireless signal and range, for a stronger signal and increased range.

Please read the precautions and installation instructions below before installing the AQ-BTANT-1 Bluetooth Antenna.

1.5.1 Bluetooth *Halo Aerial Technology* Precautions

Connect the Bluetooth *Halo Aerial Technology* Antenna (AQ-BTANT-1) to the male SMA connector. Do not apply excessive torque on the SMA connector (no more than 0.5N-m). Use hands to tighten the connection (do not use a wrench).

To ensure that the range is maximized, make sure the arrow is pointing directly upwards towards the sky when the antenna is mounted.

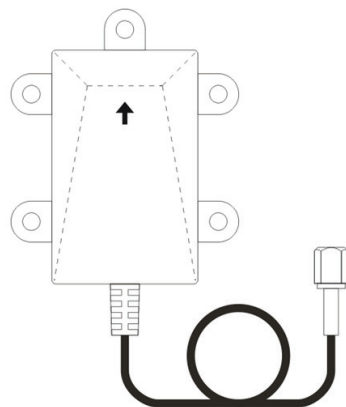
If there is excess antenna cable length make sure this is coiled and not bent as bending may cause damage to the cable.

For spa or hot tub installation the antenna should be located above the waterline otherwise Bluetooth range will be drastically reduced.

1.5.2 Bluetooth *Halo Aerial Technology* Installation

1. Connect the Bluetooth Antenna's cable to the Halo Aerial Technology connector on the control panel, ensuring it is fully secure by turning clockwise until it is finger tight.
2. Make sure the arrow is pointing directly upwards towards the sky when the antenna is mounted to ensure the Bluetooth range is maximized.
3. Screw on the provided Bluetooth Antenna, avoiding bending the cable at more than a 60° angle.

If there is no suitable surface to screw in to, we recommend using a good quality double sided tape.



6.1 Specifications

Media

Supported Media.....	Bluetooth Audio / USB / MP3 / FM / AUX
Device Charging.....	via USB
Device Control.....	Handheld RF Remote Control (included)
	Wired Remote Control (WR6 sold separately)
Remote Charging.....	via cable

Inputs

Auxiliary.....	1x stereo pair RCA
USB.....	1x USB

Outputs

Pre-Out.....	1x stereo pair RCA (4V)
12V Trigger.....	2x 12V DC Triggers (3A)

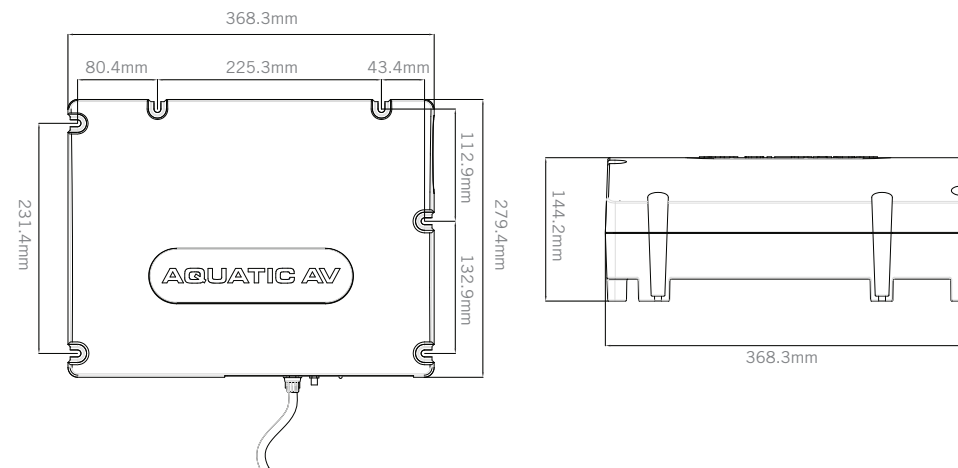
Power

Output Voltage @ 2 Ohm.....	4x 72W
Output Voltage @ 4 Ohm.....	4x 45W
Operation Voltage.....	9.6V - 14.4V DC
Max Current Draw.....	7A
Standby Current Draw.....	6mA

Multi-Environment Certifications

Waterproof.....	IPx4
Conformal PCB Coating.....	Yes
UV Protection.....	500 hours stable, ASTM D4329 compliant
Salt/Fog Protection.....	500 hours stable, ASTM B117 compliant
Stainless Steel Mountings.....	Yes

6.2 Dimensions



5.5 Connecting Multiple Amplifiers or High Current Draw Lighting Systems

Wiring a Single Pull Single Throw (SPST) Relay

The SPST is necessary to protect the stereo in systems with multiple amplifiers. The SWA6+ remote and trigger wire provide 2A max current. While this enough to power a single amplifier, complex systems with multiple amplifiers will require a SPST relay.

Position 30: requires 12VDC from the main power source (12V battery, power supply etc). This should be the same power source that is powering your stereo.

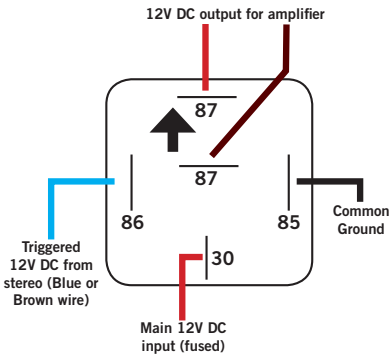
Position 85: this is where you connect your ground from your power source (12V battery, power supply, etc.) This should be the same ground reference as your stereo.

Position 86: position 86 is triggered 12V, and is sent when your stereo is powered on.

For Aquatic AV stereos position 86 can be connected to either the blue remote wire in the harness or the brown 12V trigger on the rear of the unit. The differences are below:

- Blue (recommended): The blue (remote wire) provides a 12VDC output when the stereo is powered on. Meaning as soon as the stereo is powered on the blue wire sends 12VDC through the relay powering on the amplifier.
- Brown: the brown (12V Trigger) provides 12VDC output when it is triggered via the lightning bolt icon on the faceplate or handheld remote. This setup is more advantageous in a more complex system with several zones, as it gives you control of when an amp is on or off.

Position 87: this is the 12VDC output that you will provide 12VDC to the remote turn on to the amplifiers in your system.



1.6 Power Attenuation Wires

The SWA6+ Combined Stereo Subwoofer's power can be reduced or increased to suit different applications. An output level of -3dB or -6dB should be used to avoid blowing very small speakers, often used in spa applications.

Black Wire	White Wire	Output Level
Intact (not cut)	Intact (not cut)	-3dB
Intact (not cut)	Cut	-6dB
Cut	Intact (not cut)	0dB (reference)
Cut	Cut	+6dB

By cutting only the white wire the output level will decrease to -6dB below the nominal 0dB.

By cutting both the white and black wires the power/volume will increase to +6dB above the nominal 0dB.

By cutting only the black wire the power/volume will increase from -3dB to the nominal 0dB.

These modifications should only be carried out by an experienced audio installer.

i Should you cut the wrong wires or wish to reconnect them to further alter the attenuation, the Power Attenuation Wires can be crimped back together.

1.7 Power On

The SWA6+ requires +12V DC to both the red and yellow wires. When both of these wires have power the SWA6+ is always powered on, and the green Power On LED will remain illuminated. Ground is connected to the black wire.

In a spa application this requires the red and yellow wires to be jumped together and then connected to the +12VDC output of the power source. In this set up the SWA6+ will always be on, with a very low current draw when idle.

In a boat, ATV or other application requiring power from a battery, the yellow wire (constant power) should be connected to the battery, and the red wire should be connected to the ignition or a switch.

For detailed instructions you can check out our online video:

‘How to wire your Aquatic AV stereo system’
<http://www.aquaticav.com/support/videos>

1.8 Handheld Remote Control Charging

The remote has a built-in Polymer Lithium rechargeable battery and comes with a charging cable. Connect one end of the charging cable to the charging connection on the remote control and connect the USB end of the charging cable to any USB charger (5V DC) for charging.

Make sure the remote has been charged before used.

1.9 Handheld Remote Control Synchronizing

The remote should already be paired from the factory, but if you need to synchronize the remote, follow the steps below.

1. Make sure SWA6+ is powered ON (green LED)
2. Put the remote within 0.5 meter of the SWA6+.
3. Press and hold MODE on remote control until the LCD shows “Pairing in Progress”. Release the button.
4. Within 2 seconds, the LCD will show “Paired”. If it fails to pair, the LCD will show “Pairing Failed”. If this happens, wait 5 seconds and repeat steps above.

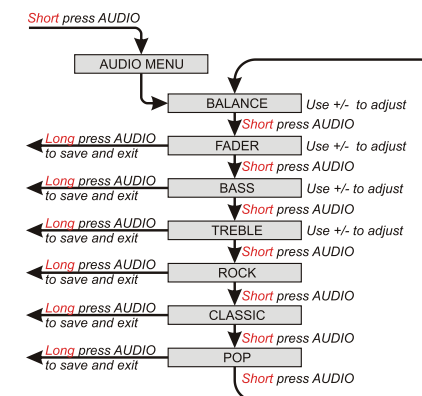
For any additional remote controls, you will also need to synchronize those remote controls to the SWA6+.

- i** If the pairing process is not successful, try again to put your remote close to the remote receiver or charge the remote control if the battery is low.
- i** Depending on the frequency of usage, the remote may drain its battery. Please charge the remote before use. If the LCD shows nothing, the battery has been drained and will need charging.
- i** If you have lost or damaged your remote control and buy a new remote control, follow the above steps to pair the new remote control.

5.1 Audio Menu

The SWA6+ is equipped with an audio DSP (Digital Signal Processor) to provide preset listening experiences for different music types.

1. To enter audio menu, press once AUDIO button on the remote control.
2. Each press of AUDIO button will advance to the next audio setting as described on the right.
3. In the audio menu, press and hold AUDIO to save and exit the audio menu back to the original mode.



If you have chosen preset equalizer (Rock, Classic, or Pop), the previous Bass & Treble settings will be overridden.

5.2 Virtual Bass (VBass)

Virtual Bass (VBass) boosts the bass of the audio signal using the latest DSP technology and is particularly useful when used with very small speakers to create perceived bass frequencies of a much larger speaker.

Press VBASS once on the remote control to toggle it ON or OFF.

5.3 External 12V Triggers

The SWA6+ includes two independent 12V ‘accessory’ triggers, activated from the remote control. These could activate any 12V based device like 12V lights or 12V motors.

In any operational mode, press the 12V TRIGGER button on the remote control to activate. Press again to deactivate.

If using two external trigger wires you can also activate the second external trigger by pressing and holding the 12V TRIGGER button to activate. Press and hold again to deactivate.

- i** Aquatic AV strongly recommend you speak to our technical service staff or your local Aquatic AV dealer if you are considering using this feature.

⚠ Load on External Trigger should not exceed 3A.

5.4 Bluetooth Halo Aerial Technology

The Bluetooth Halo Aerial Technology antenna AQ-BTANT-1 (included) improves the standard Bluetooth wireless signal and range, for a stronger signal and increased range.

4.1 Enter FM Radio Mode

1. Press MODE on the remote control to switch to FM radio mode.
2. Press PLAY/PAUSE to mute or unmute the audio.

- i

If this is the first time you listen to FM radio, the default frequency will be 87.5MHz, as shown on the remote LCD.
- i

FM radio is only available when you are in FM Radio mode.

4.2 Scan or Seek FM Radio Channels

1. Press FAST REWIND/FAST FORWARD to seek another station.
2. Press once FAST REWIND/FAST FORWARD to -0.05kHz or +0.05kHz to the frequency.

4.3 Saving Radio Channel to Memory

To save the current frequency to memory, press and hold 1, 2 or 3 for more than 2 seconds. The station will be stored into relevant button.

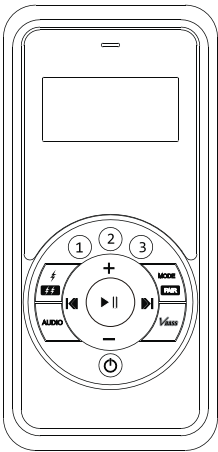
4.4 Listening to Saved Radio Memory

Press the 1, 2, or 3 preset button once to listen to the station stored in that button.

4.5 Adjust Volume Level

1. Press VOLUME UP once to increase the volume.
2. Press VOLUME DOWN once to reduce the volume.
3. Press and hold either VOLUME UP or VOLUME DOWN to increase or decrease audio volume continuously.

2.1 RF6 Wireless Handheld Remote Control



Buttons		Button Action	Bluetooth	AUX	USB	FM Radio
Power		Press once:	Toggle Operational mode to Standby mode or vice versa			
		Press and hold:	No function			
Mode/Pair		Press once:	Change mode			
		Press and hold:	Synchronize remote control			
Volume Up		Press once:	Volume up			
		Press and hold:	Fast volume up			
Volume Down		Press once:	Volume down			
		Press and hold:	Fast volume down			
Fast Forward		Press once:	Next track	No function	Next track	+0.05kHz
		Press and hold:	Fast forward	No function	Fast forward	Scan up
Fast Rewind		Press once:	Previous track	No function	Previous track	-0.05kHz
		Press and hold:	Fast Rewind	No function	Fast Rewind	Scan down
Play/ Pause		Press once:	Play / Pause	Mute / unmute	Play / Pause	Mute / unmute
		Press and hold:	No function	No function	No function	No function
1		Press once:	No function	No function	Next Folder	Preset 1
		Press and hold:	No function	No function	No function	Save to Preset 1
2		Press once:	No function	No function	Random Playback	Preset 2
		Press and hold:	No function	No function	No function	Save to Preset 2
3		Press once:	No function	No function	Previous Folder	Preset 2
		Press and hold:	No function	No function	No function	Save to Preset 2
EXT Trigger		Press once:	Toggle EXT 1 on/off	Toggle EXT 1 on/off	Toggle EXT 1 on/off	Toggle EXT 1 on/off
		Press and hold:	Toggle EXT 2 on/off *	Toggle EXT 2 on/off *	Toggle EXT 2 on/off *	Toggle EXT 2 on/off *
Audio		Press once:	Enter Audio Menu			
		Press and hold:	Save & Exit Audio Menu			
VBass		Press once:	Toggle VBass on/off			
		Press and hold:	No function			

3.1 Listening via USB

3.1.1 Listening via USB

1. Attach your USB thumb drive to the female USB socket of the SWA6+.
2. Press MODE on the remote to select USB mode.
3. Press PLAY to play or pause the music.
4. Press FAST REWIND / FAST FORWARD once play previous / next song file.
5. Press and hold FAST REWIND / FAST FORWARD to fast forward / fast rewind the song file.

i Playback and navigation of music files via USB includes MP3 and WMA files.

3.1.2 Navi Search

You can navigate folders in the USB thumb drive.

1. Press 1 once to go to the next folder.
2. Press 3 once to go to the previous folder.

3.1.3 Random Playing

Press and hold 2 will toggle Random Play in USB mode.

3.1.4 Device Charging

When specified USB devices, such as Smartphones or MP3 players, are connected with a standard male-to-female USB cable, the device's battery will charge automatically. The USB socket can deliver 1A of current to charge a device battery.

3.2 Listening via Bluetooth Audio

3.2.1 Pair with Bluetooth Audio Device

1. Switch on your Bluetooth Audio device.
2. Select 'AQUATIC AV SW620' from the list of available devices to pair (no password is needed).

3.2.2 Listening via Bluetooth Audio Device

1. Bluetooth Audio mode will be activated once a Bluetooth Audio device is paired in any mode. Use MODE to change to the Bluetooth Audio mode to listen to music.
2. Play the song from device and the sound will play through the SWA6+.
3. Press PLAY/PAUSE to play/pause the song.
4. Press FAST REWIND/FORWARD buttons to play previous/next song file.
4. Press and hold FAST REWIND/FORWARD buttons to fast forward / fast rewind the song file.
5. Previous/next track and volume up/down can be controlled directly from your Bluetooth Audio device or directly from the SWA6+ remote control.

3.2.3 Bluetooth Multi-link

A second Bluetooth Audio device can pair to the SWA6+ even when music is playing from the first Bluetooth Audio device.

Once paired, playing music from device 2 will override device 1 and the SWA6+ will begin playing music from device 2.

Should you wish to play music from device 1 again, wait 10 seconds and press play on device 1. This process can be repeated between device 1 and device 2 indefinitely while both devices are paired.

3.3 Listening via Auxiliary Input

1. Connect your MP3 device to the stereo RCA inputs.
2. Press MODE on the remote control to select 'AUX' mode.

i If using a single RCA 'sub' output then an RCA Y adaptor must be used to provide input to both red and white RCA inputs on the subwoofer.

i Connecting and playing device via Bluetooth will override Auxiliary mode.

3.4 Adjust Volume Level

1. Press VOLUME UP once to increase the volume.
2. Press VOLUME DOWN once to reduce the volume.
3. Press and hold either VOLUME UP or VOLUME DOWN to increase or decrease audio volume continuously.

3.5 Automatic Standby Mode

Automatic Standby mode will engage when the SWA6+ does not see any input from either the RCA's or Bluetooth.

Once a signal is detected the unit will switch on again.