

Solar Audio Post

Manual

V2.3

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Safety Guide

Please observe the following when installing this device.

Warning



- For disposal of old electrical equipment please follow the guidelines associated with your country/territory or ship the unit back to blackbox-av and we will dispose/recycle the unit. The symbol on the left indicates that this product shall not be treated as household waste. Instead it shall be handed to applicable collection points for the recycling of electronic equipment. If you dispose of this unit correctly you will be helping prevent future harm to the environment which is caused by poor waste management of this type of equipment. Follow the battery removal guide before disposing of the items and dispose of them separately.

- wildlife, or if in a residential area, the local people from excessive noise pollution.
- The wooden post will discolour over time and small fissures may form depending on the atmospheric conditions. This is a natural product and may need a light exterior woodcare product to keep the wooden post looking it's best.
- The performance of your solar post is dependent on environmental factors (weather, season, time) & the type of content you have.

Precautions of Use

- If storing the unit for long periods of time, it is recommended that you remove the batteries.
- Do not operate the unit below -20 or above 60 degrees Celsius. Battery performance will be affected by colder temperatures.
- When deciding on a suitable installation point, please follow the installation guides for your particular product to protect it from environmental damage. The post electronics are waterproof but cannot be submerged in water so do not install in an area which is prone to flooding. We have designed our products to be tough and durable, but we cannot guarantee them against vandalism and this should be considered when selecting a suitable installation point.
- In order to maintain good charging, it's advisable to wash the solar panels periodically to remove any debris that may have built up on the panels. You may use some mild soapy water to do this.
- When selecting a suitable installation location, please consider both the local

Your New Solar Audio Post

For technical specifications and installation instructions see your specific version of the Audio Post:

Wooden Solar Audio Post – Page 11

Metal Solar Audio Post – Page 13

Electronics Only – Page 15

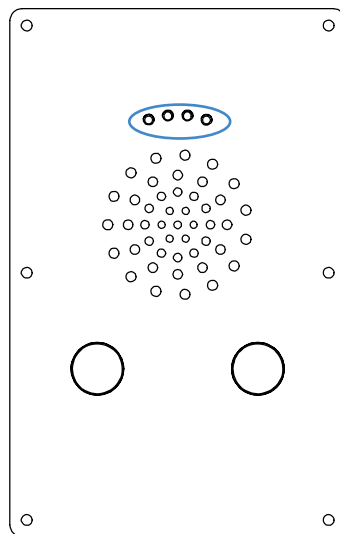
First Time Setup

The Solar Audio Post will be in 'Transit Mode' when it arrives. Pressing a button will activate a blinking red light within the grill.

Transit Mode

To exit Transit Mode, simply place your included Programming USB Dongle with USB attached into the 4 slots above the grill. Press a button to activate a greeting message. The Solar Post is now ready to use.

Note: You must always have a USB attached to the Programming USB dongle – even just to access settings when not updating content.



Configuration

There are various configuration options for your Solar Audio Post. To access these settings, ensure no messages are playing then insert the Programming Dongle with USB attached into the 4 slots above the grill.

Now press a button and wait approximately 2 seconds for the Solar Audio Post to take you through the settings.

Follow the audio instructions and press a button when you hear the function you require. Once you have completed editing a setting the Solar Audio Post will restart with the setting saved, repeat this

process to access consecutive functions or to exit without changing a setting simply remove the dongle. The settings are accessed in the following order;

1. Volume Adjustment
2. Update Media Content (Programming)
3. Playback Statistics
4. Erase Statistics
5. Battery / Solar Test / Delay / Serial Information
6. Activate Transit Mode
7. Exit the Menu

1. Volume Adjustment

The Solar Audio Post will go through volume levels 1-10, when you get to the desired level press a button to select it and the unit will restart with this option saved.

2. Update Media Content (Programming)

Update your audio content. Select this setting with the USB attached and uploaded with your content. Please see the programming instructions section for more details on programming your USB.

3. Playback Statistics

This setting allows you to access the playback statistics of your Solar Audio Post, select the Playback Statistics option and it will list a number of stats in the following order;

1. Total messages played for this period (can be reset in the Erase Statistics Option)
2. Total messages played for each track (1-6) (can be reset in the Erase Statistics Option)
3. Total messages played (this statistic cannot be erased)

Note: Removing the dongle while these statistics are being listed will not affect them in any way

4. Erase Statistics

This setting allows you to reset the playback statistics for period & track plays.

You will receive 5 warning beeps before the statistics erase. To stop this, simply take the dongle out.

5. Battery, Solar Test, Delay and Serial Information

This setting allows you to perform a battery and solar test for your Solar Audio Post.

Select the Battery and Solar Test option and you will be informed of the battery voltage, solar power availability and the voltage used on each panel. It will also tell you if there is no power from a panel. It will then tell you any delay settings and the serial number of the unit.

Note: The Solar Audio Post will inform you when the charge falls below 4V and no longer play messages.

6. Exit the Menu

Select this option if you wish to exit the menu. If no selection is made within 2 loops of the setting options, it will automatically exit.

6. Transit Mode

This setting is used to put the Solar Audio Post into Transit Mode and effectively shut down for transportation

When in Transit Mode messages will not be activated, if a button is pushed you will just see a blinking red light inside the speaker grill.

To exit transit mode, simply insert the Programming Dongle and press a button, you will then be greeted by a message that only plays when exiting Transit Mode.

Programming

Programming the Solar Audio Post couldn't be easier. You will need 4 things;

1. A Config.txt File
2. Audio Files (1-6)
3. A Programming Dongle (Included)
4. The USB Stick provided with the Programming Dongle

Note: If provided USB stick is not available use a USB stick less than 4GB in size if possible, if you have issues uploading your files please first retry with a different USB stick. Files must be .MP3 format.

Windows OS

Windows OS is required to program your Solar Audio Post using a PC or Laptop (Xp-10).

MacOS is not supported due to hidden files generated by the OS.

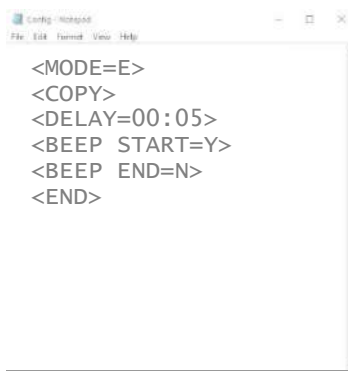
Step 1 – Config.txt

You must first create your config.txt file;

Note: We will send out your Solar Audio Post already programmed and with a config.txt file on your USB stick. We suggest you keep the USB and config.txt file for future reference and use.

The config.txt file determines a number of settings on your Solar Audio Post, including how your audio files are positioned on each button.

A standard config.txt file will look something like this;



```
<MODE=E>
<COPY>
<DELAY=00:05>
<BEEP START=Y>
<BEEP END=N>
<END>
```

All commands above must be written as shown, except for the mode. A full list of config modes are in step 2;

The above config.txt file will place the Audio Post into Mode E;

Button 1 – Track 1 and 2

Button 2 – Track 3 and 4

Users will be able to interrupt play (push a button and start a new message mid play).

Every config.txt file must finish with the text <END>.

Step 2 – Choosing your Mode

Mode	Button 1 Plays Tracks	Button 2 Plays Tracks	Playback
A	1	2	Int
B	1	2	Non-Int
C	1-6 (sequentially plays the next track each time a button is pressed)		Int
D	1-6 (sequentially plays the next track each time a button is pressed)		Non-Int
E	1,2	3,4	Int
F	1,2	3,4	Non-Int
G	1,2,3	4,5,6	Int
H	1,2,3	4,5,6	Non-Int

Int = Another button trigger will interrupt playback.

Non-Int = Another button trigger will not interrupt playback.

<MODE=A> = The mode determines how your audio will be played.

<DELAY=00:00> = The delay is set in order of Minutes:Seconds up to a max time delay of 05:00. The delay will stop the next button trigger until the timer has elapsed.

<COPY> = Allows you to upload your audio tracks onto the post.

<BEEP START=Y> = This turns the beep on.

<BEEP END=N> = This turns the beep off.

<END> = Is always put on the last line at the end of all configuration files.

Note: The Solar Post does not support an unequal amount of tracks.

For example, if you had 3 tracks for button 1 and 2 tracks for button 2, you must either add an additional blank track or a duplicated track in order for them to be equal.

Step 3 – Audio Tracks

Your audio tracks must be in .MP3 format – the order you transfer them to your USB stick will determine what track number they are. For example, the first to be transferred will be Track 1, the second will be Track 2 and so on.

The name does not matter, just the order they are transferred to your USB stick.

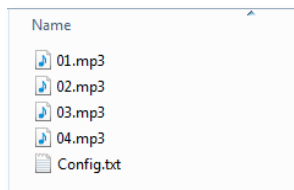
Place your audio onto your USB in the appropriate order. Lastly, drag and drop in your config.txt file.

Note: Make sure the transfer is complete between the moving of each file

Step 4 – Attach the USB

Attach your USB stick to the USB Programming Dongle and put into the Solar Post. Then select the 'Update Media Content' option from the settings menu.

This is an example of how content should be displayed:



Step 5 – Uploading

The Solar Audio Post will now tell you it's transferring your files or will inform you if there is an issue.

You will be asked to wait until it's finished. This could take a few minutes depending on the size and length of files you are transferring.

When finished, the Solar Audio Post will inform you and ask you to remove the USB Dongle Programmer.

Your Solar Audio Post is now ready to use with the updated messages. Test each message just to be sure and enjoy!

Wooden Solar Audio Post

Included

1. Wooden Solar Audio Post
2. User Manual
3. USB Programming Dongle

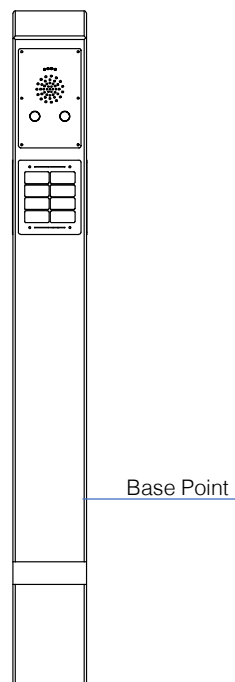
Installation Guide

It is very important to install the Solar Audio Post In-Ground where there is a good level of sunlight to charge its batteries. Solar Panels are installed on all four sides, allowing the post to charge from all angles. However, Trees and buildings can have a significant effect on the charge level.

In-Ground Mount

When installing the Wooden Solar Audio Post, consult a structural engineer on the amount of concrete or post-crete required for the installation location. You may need special permission to install the post on archaeological or scientifically important sites.

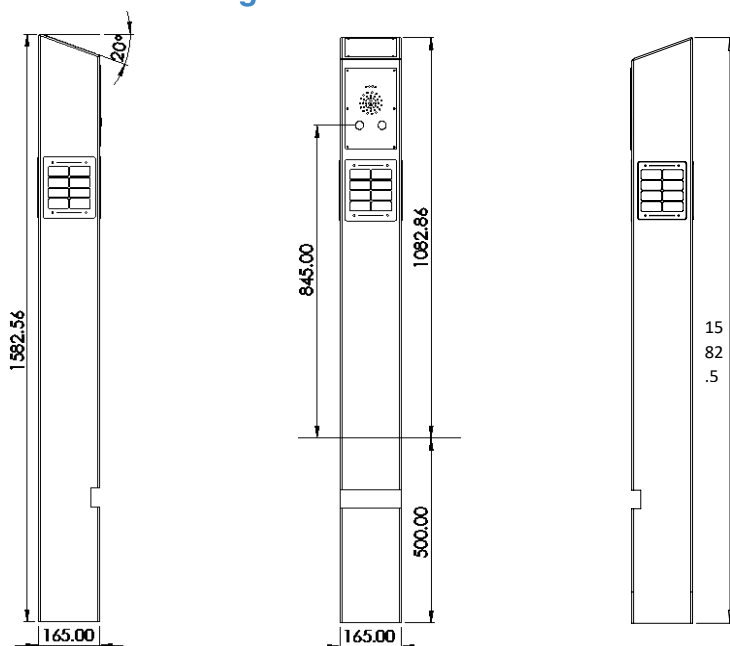
When installing do not bury the post below 500mm. Protect the area above the concrete with tape during installation as the concrete will discolour the wood. Do not install the solar post in an area which is prone to flooding.



Technical Information

Weight	Approx. 35Kg
Dimensions	165 (W) x 165 (D) x 1583 (H) mm
Power	4 built-in Solar Panels charging 4 x 1.2V long life batteries at up to 200mA per hour (+/- 10%)
Message Storage	16MB Flash Memory (on board)
Maximum No. of Messages	6
Message Encoding Format	.MP3
Maximum Total Message Length	16 minutes @ 128kbs
Post Performance	4 hours charge = 12 hours playback This test uses spoken word audio at default volume. The weather condition are on an overcast afternoon.
Programming Transfer Rate	Approx. 20 Seconds per MB of message
Audio Output	1W into 8Ω Speaker
Frequency Range	75Hz – 20KHz

Technical Drawings



Metal Solar Audio Post

Included

1. Metal Solar Audio Post
2. User Manual
3. USB Programming Dongle
4. Mount Type

Installation Guide

We supply the Solar Audio Post Metal with either a plinth or in-ground mount.

It is very important to install the Solar Audio Post where there is a good level of sunlight to charge its batteries. Solar Panels are installed on all four sides, allowing the post to charge from all angles. However, Trees and buildings can have a significant effect on the charge level.

Plinth Mount (a)

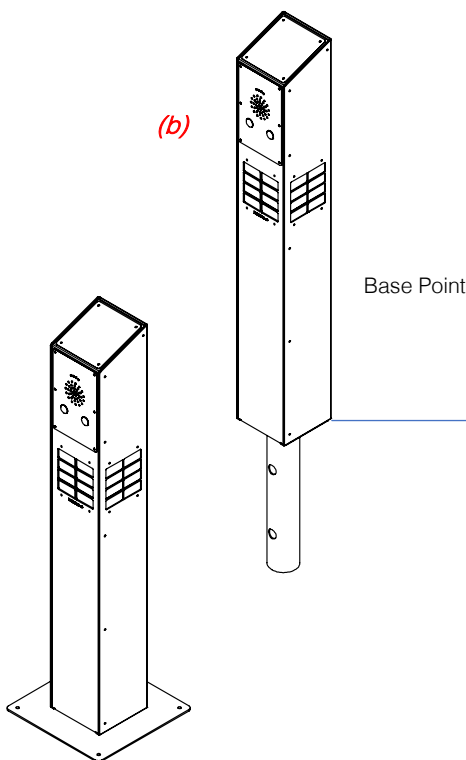
You will need four suitable fixings with an M8 thread to bolt down the Solar Audio Post Metal onto your concrete (concrete anchors not supplied). The only other surface we recommend bolting on is Asphalt but if the ground is firm enough to accept your fixings you should be fine.

We would recommend using expandable anchor fixings or chemical insert fixings. If the installation area is unmanaged, consider using security fixings.

Note: Ensure the installation area is flat and has available drainage. Do not install the Solar Audio Post in an area which is prone to flooding.

In-Ground Mount (b)

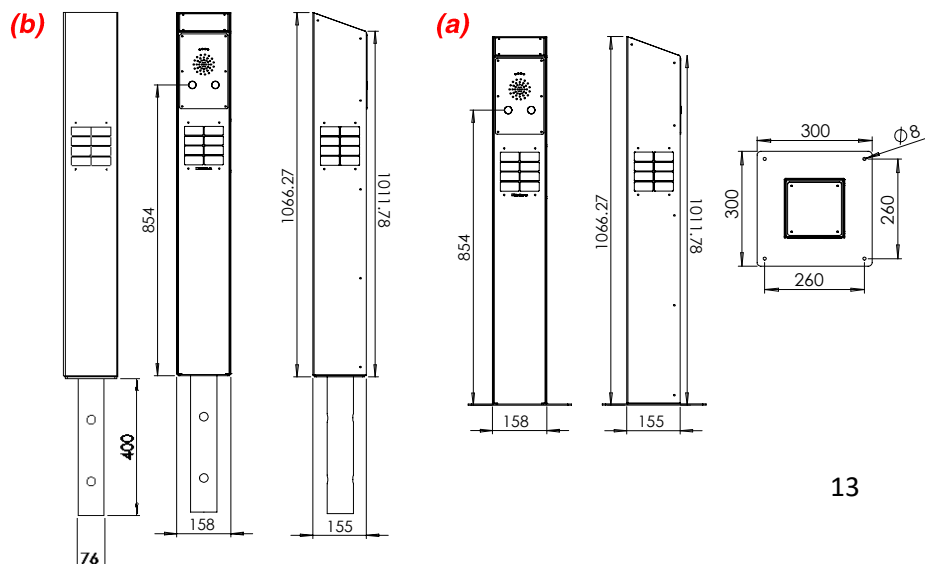
When installing the In-Ground version of the Solar Audio Post Metal, consult a structural engineer on the amount of concrete or post-crete required for the installation location. You may need permission to install on specific locations like archaeological or scientific sites. Do not bury above the base point. This helps the post naturally drain of water of which it could otherwise fill with over time.



Technical Information

Weight with Plinth Mount	13.1Kg
Dimensions with Plinth Mount	300 (W) x 300 (D) x 1066 (H)
Weight with In-Ground Mount	15.8Kg
Dimensions with In-Ground Mount	158 (W) x 155 (D) x 1466 (H)
Power	4 built-in Solar Panels charging 4 x 1.2V long life batteries at up to 200mA per hour (+/- 10%)
Message Storage	16MB Flash Memory (on board)
Maximum No. of Messages	6
Message Encoding Format	.MP3
Maximum Total Message Length	16 minutes @ 128kbs
Post Performance	4 hours charge = 12 hours playback This test uses spoken word audio at default volume. The weather condition are on an overcast afternoon.
Programming Transfer Rate	Approx. 20 Seconds per MB of message
Audio Output	1W into 8Ω Speaker
Frequency Range	75Hz – 20KHz

Technical Drawings



Electronics Only

In the Box

1. Electronics Only Unit
2. User Manual
3. USB Programming Dongle
4. 2 or 4 x Panels

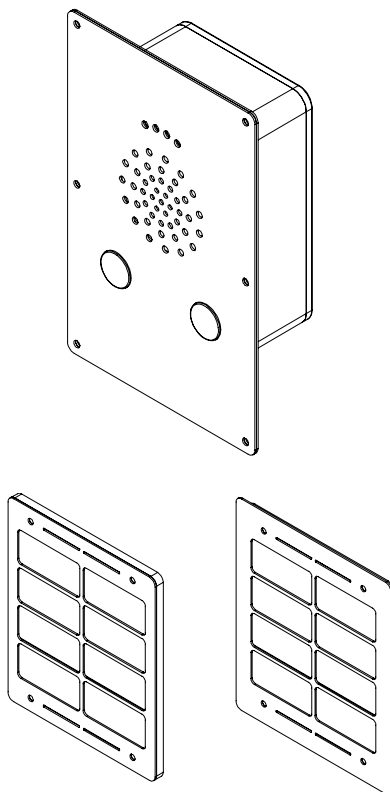
Installation

The Solar Audio Post Electronics can be provided to allow installation into your own structure.

This is supplied with two or four solar panels of either recessed or a surface mount type. As standard additional panels can be purchased if need be. When constructing your enclosure please ensure there is adequate drainage as the electronics are not designed to be submerged in water. We recommend a minimum 10mm drainage hole.

When designing your own structure ensure you install the solar panels, so they will be in direct sunlight for the maximum amount of time during the day.

To connect the Panel cables to the Electronic Unit simply attach each colour coded cable securely.

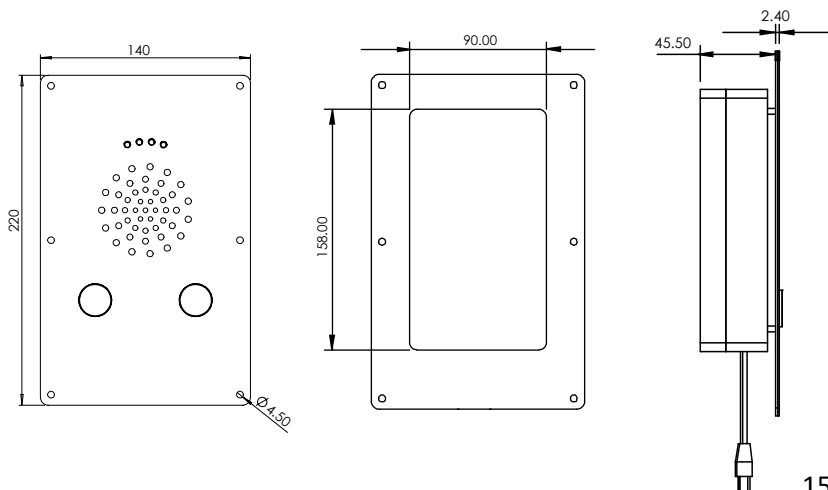


Technical Information

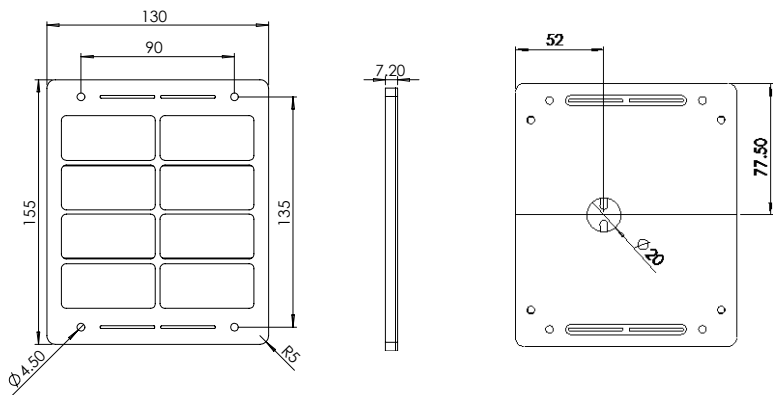
Weight	1.7Kg
Weight (Solar Panel)	0.25Kg
Dimensions of Unit	140 (W) x 47.90 (D) x 220 (H)
Dimensions of Solar Panels	Surfaced: 130 (W) x 7.20 (D) x 155 (H) Recessed: 140 (W) x 7.20 (D) x 165 (H)
Power	2 built-in Solar Panels charging 4 x 1.2V long life batteries at up to 200mA per hour (+/- 10%)
Message Storage	16MB Flash Memory (on board)
Maximum No. of Messages	6
Message Encoding Format	.MP3
Maximum Total Message Length	16 minutes @ 128kbs
Programming Transfer Rate	Approx. 20 Seconds per MB of message
Audio Output	1W into 8Ω Speaker
Frequency Range	75Hz – 20KHz

Technical Drawings

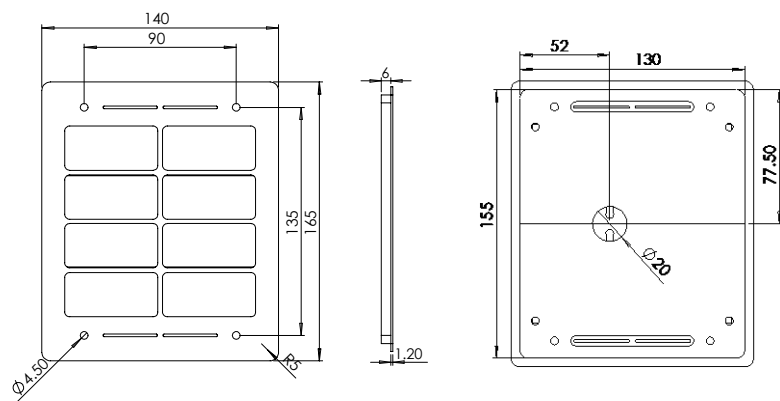
Drawings not to scale



Surfaced Solar Panels



Recessed Solar Panels



Maintenance

Changing Batteries

Your Solar Audio Post uses 4 rechargeable AA 1.2V 2500mAh (Ni-MH) batteries which depending on numerous factors will need to be replaced every 2-5 years.

Note: Do not use non-rechargeable alkaline or zinc batteries.

Tools

1. T20H Torque Bit (security bit)
2. Cross head Screwdriver

Procedure

1. Unscrew the 6 security screws from the front panel using the T20H pin torque screwdriver bit.
2. Pull the front panel forwards slowly; do not pull on the solar cable.
3. Unplug the solar panel connections and remove the solar electronics from the post. Each cable is marked with a number.
4. You will need to open the electronics box by removing the 4 cross head screws.

5. Replace the old batteries with the new. If three beeps are heard the player is ready to be used again. Hearing a continuous amount of beeps could mean that the SD Card was accidentally ejected during the this process. Please be sure to put it back in.
6. Replace 4 cross head screws to seal the electronics.
7. Re-connect the solar panel connections.
8. Replace the 6 screws to secure the front panel in place.

Troubleshooting

If you have any issues with the Solar Audio Post, please contact support@blackboxav.co.uk

