



## AVTECHSMART SMARTBV2PLUS Battery Powered Wireless DMX Luminaire User Manual

[Home](#) » [AVTECHSMART](#) » AVTECHSMART SMARTBV2PLUS Battery Powered Wireless DMX Luminaire User Manual 

SMARTBV2PLUS Battery Powered Wireless DMX Luminaire User Manual



## Contents

### 1 Safety Instructions

### 2 PRODUCT INTRODUCTION

#### 2.1 Product Overview

#### 2.2 Fixture Dimensions

### 3 Specifications

### 4 BATTERY

### 5 PRODUCT SETUP

### 6 OPERATION

### 7 MAINTENANCE

### 8 Documents / Resources

## Safety Instructions

### WARNING

- This product guide contains important information about the safe installation and use of this product.  
Please read and follow these instructions carefully and keep this manual in a safe place for future reference
- When unpacking and before disposing of the carton, check there is no transportation damage before using the product.  
Should there be any damage caused by transportation, consult your dealer and do not use the apparatus.
- The product is for indoor use only.  
Use only in dry locations.

Keep this device away from rain and moisture, excessive heat, humidity and dust.

Do not allow contact with water or any other liquids.

The product is not designed or intended to be mounted directly on to inflammable surfaces.



- The product is only intended for installation, operation and maintenance by qualified personnel.
- The product must be installed in a location with adequate ventilation, at least 50cm from adjacent wall surfaces.

Be sure that no ventilation slots are blocked.

- Do not directly look into the led. It can cause harm to your eyes.

Do not look at the LEDs with a magnifying glass or any other optical instrument that may concentrate the light output.

- Do not attempt to dismantle and/or modify the product in any way.
- Electrical connection must only be carried out by qualified personnel.
- Before charging the fixture, ensure that the voltage and frequency of power supply match the power requirements of the product.
- Do not directly look into the light beam.

It can cause harm to your eyes.

Do not look at the led with a magnifying glass or any other optical instrument that may concentrate the light output.

- A rechargeable lithium ion battery is built inside this fixture.

Please avoid bumping or plunging, it may cause fire or explosion.

Never store the battery when fully drained. Always recharge immediately when empty.

Make sure to fully charge all fixtures before storing them.

Partially charged batteries will lose capacity.

Fully recharge every 6 months if not used.

- When charging fixtures in flight case, always charge with the case open.  
It is recommended to charge at a temperature between 0°C and 35°C.
- Please make sure the battery will be disposed of properly according to your local law when it runs out of its life, so that to protect the environment.
- This product is not designed for permanent operation.  
Consistent operation breaks will ensure that the device will serve you for a long time without defects.
- If this fixture is operated in any other way other than the one said in this manual, this device may suffer damages and thus the warranty becomes void.
- Always switch off the fixture when it is not in use or before cleaning it or before attempting any maintenance work.

## **IMPORTANT**

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the fixture.

## **Rigging**

- Concerning rigging, trussing for this fixture, please follow the European and national guidelines.

- Only the qualified technicians are allowed for the device installation,
- The fixture must never be mounted for a possible swinging position, and a safety cord attached must always be used.

## **PRODUCT INTRODUCTION**

### **Items Included in the Package**

After receiving the fixture, please carefully unpack the product and make sure the following parts are all included inside the package and are all in good condition.

- This fixture x 1 pc
- Infrared remote controller x 1 pc
- This manual x 1 pc

In case the package is damaged from shipping, inform the carrier right away while keeping the damaged box or flight case for inspection.

Failure to report damage to the carrier immediately may cause invalidity to your claim.

The dealer or manufacture will not take any responsibilities for the damage.

In case there are parts missing from the box with a good condition, please contact your dealer or the manufacturer immediately by email or in other written form.

### **Product Overview**

This lighting fixture is an outdoor version battery powered led luminaire with wireless DMX transceiver.

This luminaire features 4 super bright RGBW quad color led, and can create more vivid color changing effects besides RGBW color mixing, and wide range of color temperatures.

This lighting fixture has a rechargeable lithium-ion battery that can support 9 hours working at led full-color mode. It can work longer time at ECO mode.

The luminaire can continue working 18 hours to run its built-in programs and around 27 hours to run single color. Its battery is fully protected against overcharging to maximize battery life span.

This lighting fixture uses a very stable wireless DMX transceiver from Wireless DMX Solution Sweden.

The fixture can also be controlled with infrared remote controller.

Please refer to "5.5 IR Remote Control".

This fixture has a kettle charge socket, and can be charged on charge connector inside flight case.

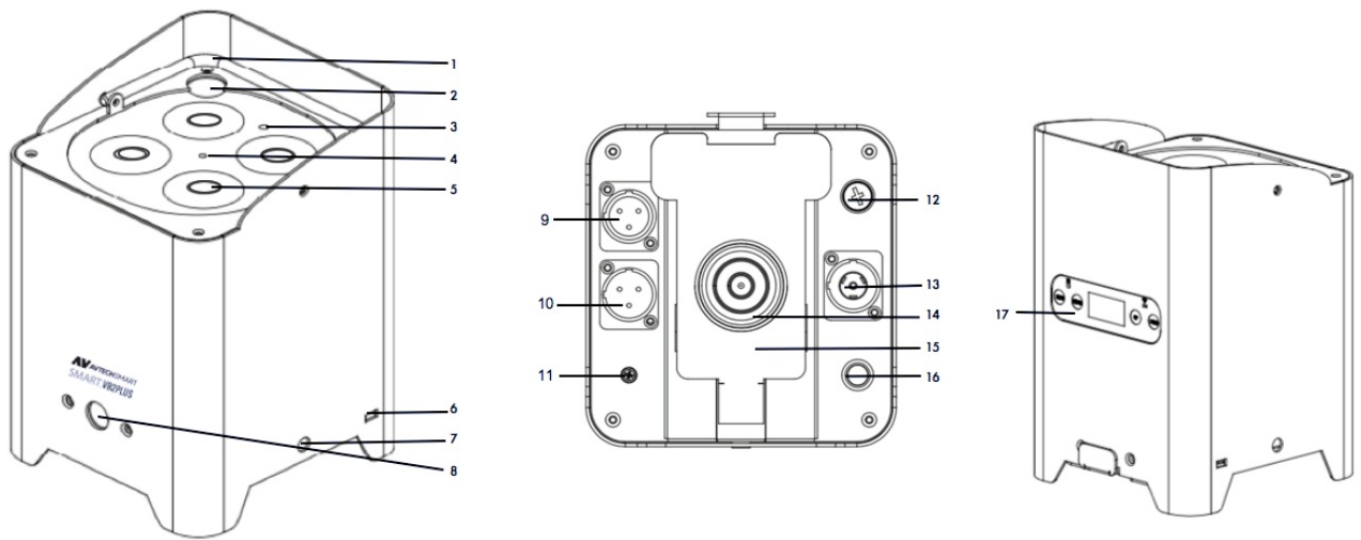
It can also be charged with 100-240V AC power.

This highly compact luminaire has very small dimensions that can be used not only as an uplighter but also as truss warmer.

Its tilt can manually move 25 degrees when needed.

It is absolutely an ideal tool for mobile DJ/Bands, wedding, exhibitions, ball room and hotel banquet halls etc.

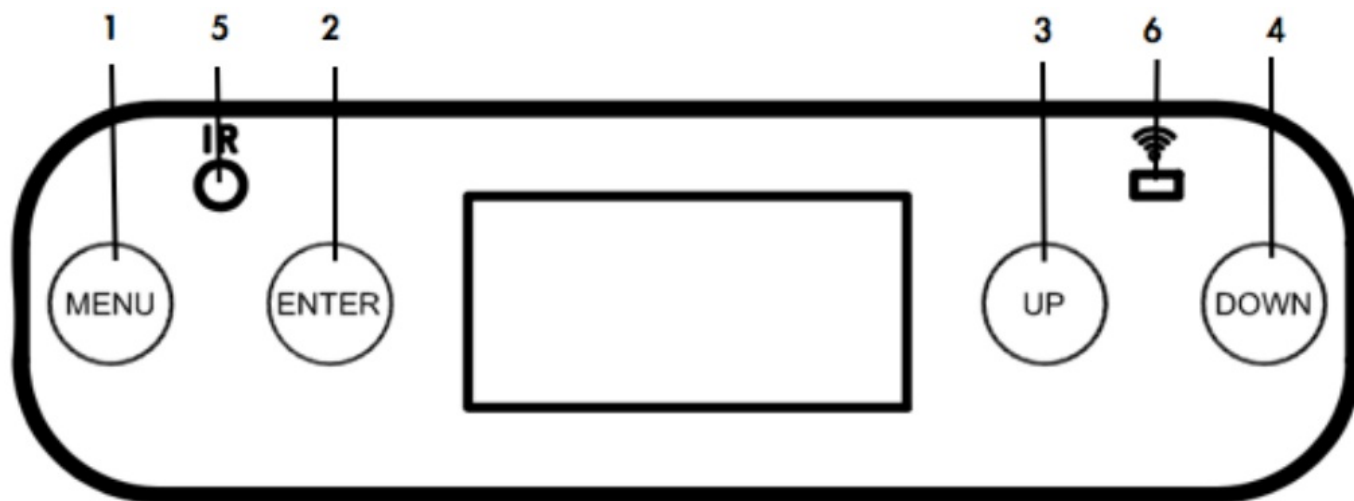
### **Fixture Elements and Connectors**




1. Handle
2. Wireless DMX antenna
3. IR sensor
4. Charge Indicator
5. Led
6. Kensington lock
7. Hole for safety cord
8. Threaded hole M10 for clamp
9. DMX Input (IP65)
10. DMX Output (IP65)
11. Ground
12. Fuse
13. Power Input (IP65)
14. Kettle charge base
15. Adjustable tilt stand
16. Power switch
17. OLED control panel

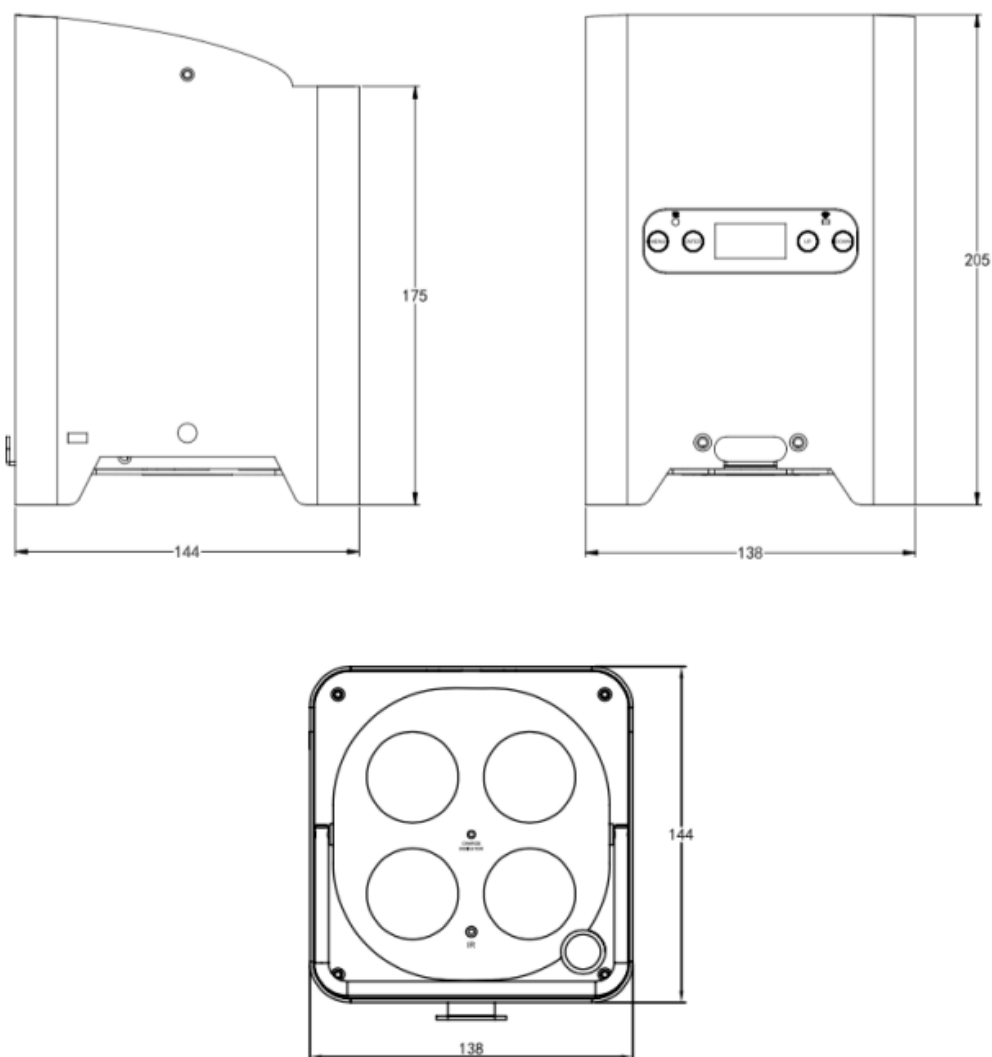
### Fixture Control Panel

There are 4 touch buttons on the OLED control panel: <MENU>, <ENTER>, <UP> and <DOWN>.



1. MENU Select the programming functions or exit from current setup
2. ENTER Enter the current menu or confirm the current function value
3. UP Scroll "UP" through menu list to increase value of current function
4. DOWN Scroll "DOWN" through menu list to decrease value of current function
5. IR Infrared control sensor
6.  Wireless DMX indicator

#### Fixture Dimensions



## Fixture Temperature

The fixture has temperature protection function.

You can easily check fixture temperature via the OLED display information menu.

When fixture temperature is higher than 65 degrees, light output will decrease to 80%.

When fixture temperature is higher than 65 degrees, light output will decrease to 60%.

When fixture temperature is higher than 75 degrees, leds will go off automatically until temperature comes down to 55 degrees.

## Storing the Fixture

Make sure to fully charge all fixtures before storing. Partially charged batteries will lose capacity.

Fully recharge every 6 months if not used.

Always remove battery fuse if fixture will be stored for long time (more than 1 month).

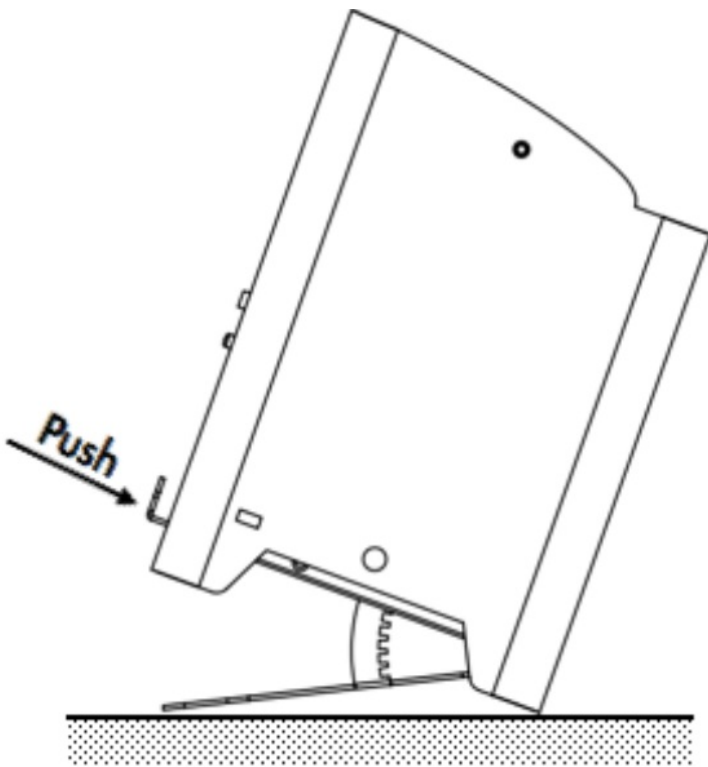
## Mounting

The fixture can be mounted in several orientations.

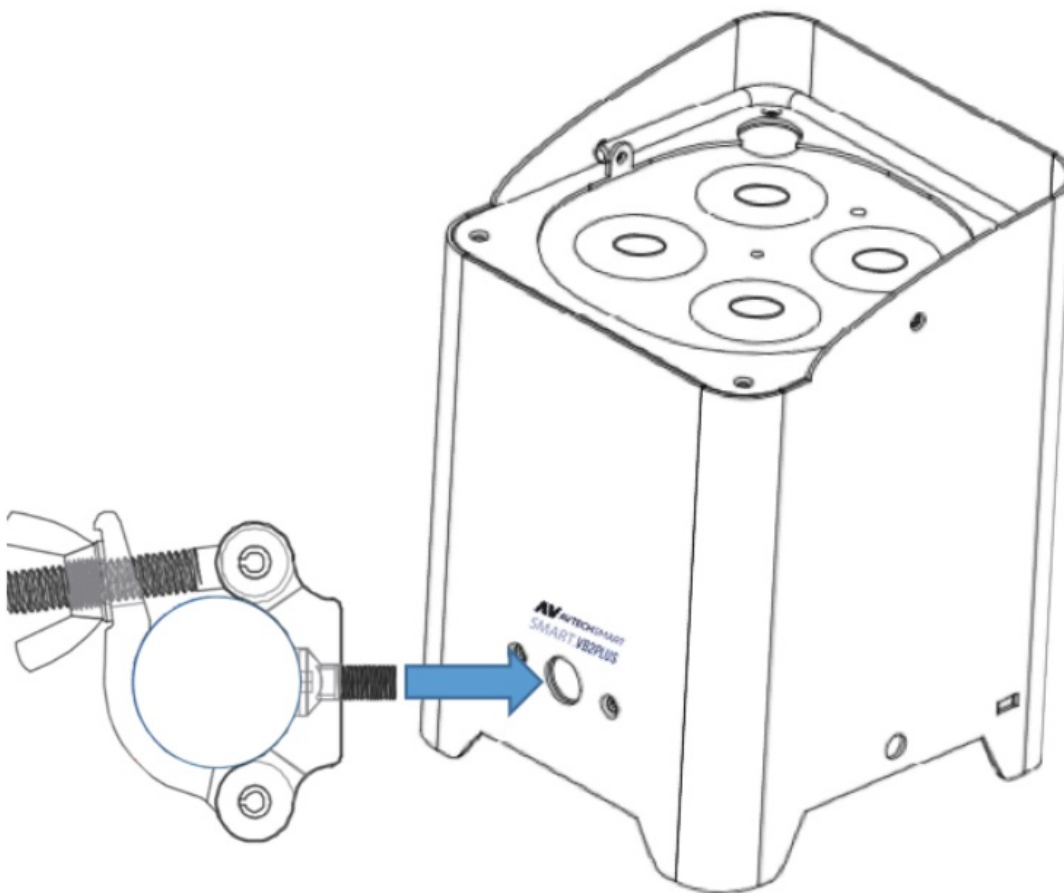
- The fixture has a highly compact housing, and can be fit inside 300x300mm truss as truss warmer.
- The fixture can sit on even and solid floor and work as an up light.

It also has a built-in adjustable tilt support.

By pushing the tilt support, the fixture can move up to 25 degrees to wash walls or facades.



- Make sure that the fixture is always placed on even and strong enough surface, and keep it 0.5m away from projection objects.
- The fixture has a M10 threaded hold for clamp, and can be mounted on truss as truss warmer.



When install the fixture to crossbar or truss, always use an extra safety cord (not supplied with the fixture). Users also need to make sure the crossbar is stable or not moving, and can support a weight of 38 kg (fixture net weight 3.8kg). For the rest of safety installation, please always respect your local regulations.



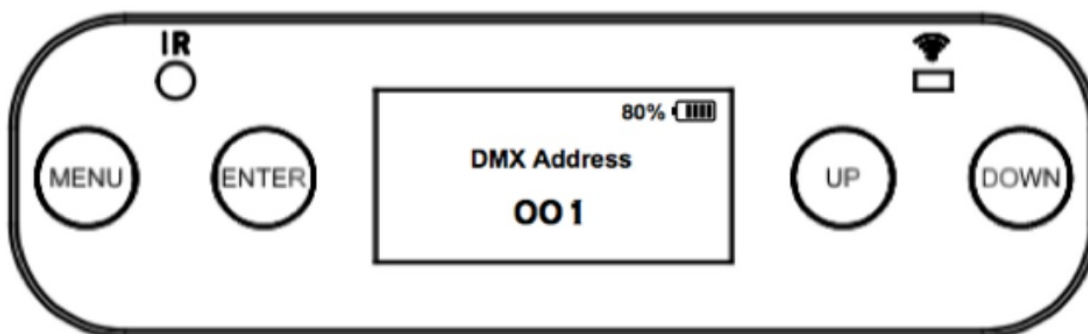
## Specifications

<b>Electrical</b>	
Power input	100-240VAC 50/60Hz
Power consumption	55W
<b>Connectors</b>	
Power connectors	See tonic power input connector IP65 Kettle charge socket for charging in charge case
Data connectors	Seetronic DMX input/output IP65
<b>Battery</b>	
Battery type	Rechargeable lithium-ion battery
Charge time	About 7.5 hours
Battery life	Around 9.0 hours at full color from one full charge Around 11 hours full color at ECO mode from one full charge 18 hours at running preset programs 27 hours at running single color
<b>Light sources</b>	
Led	4x12W, RGBW 4-in-1 quad led
Beam angle	15o
Field angle	29o
Led average life span	50,000 hours
<b>Control</b>	
Control mode	DMX512, Master/Slave, Stand Alone; Wireless DMX, I R Remote
DMX channel	4/6/10 channel selectable
Control panel	OLED display with touch buttons
<b>Physical &amp; Construction</b>	

Housing	Rigid metal
Housing color	Black
Fixture dimensions	138 x 144 x 205mm
Net weight	3.8 kg
Working temperature	-10o C – 45o C
Charge temperature	0o C – 35o C
IP rating	Top: IP65, base: IP54
Cooling	Natural cooling, silent operation

## BATTERY

- The fixture has a rechargeable lithium battery and auto-ranging charger built in.  
Always store the fixtures with full battery.  
Depleted batteries must be recharged immediately; otherwise fixture performance will suffer.
- Battery runtime will decreased time by time. Battery runtime may be slightly shorter than predicted due to different working environments.
- The fixture has a charging socket in the base, and can be charged in charge case.  
The charge case has built-in auto-ranging chargers.
- When battery capacity is less than 30%, OLED display will start flashing.  
When this happens, charge the battery immediately till it is 100% fully charged.
- To charge the fixture, just put it onto the charge connector in the charge case, and plug the case to the mains.  
The fixture will start to charge automatically.  
During charge time, all 4 led will turn on red light around 5% of full brightness.  
The 4 led will turn on green 5% of full brightness once battery is fully charged.



- Battery life can be easily seen on the OLED display.
- It is recommended to charge the fixture at an ambient temperature between 0°C and 35°C.
- When charging fixtures in flight case, make sure to always keep the case open.  
Battery always charges whenever fixture is seated on charge connector.
- During charge time, press “MENU” to go back to the last running mode.

**Note:** The battery must be replaced with an original one from the manufacturer only.

## PRODUCT SETUP

This fixture has a built-in rechargeable lithium battery. After it is fully charged, switch on the fixture with the power switch at the bottom of the unit, it will start to run and can be controlled with wireless DMX desk or IR controller.

After operation, please switch off the fixture with its power switch.

### OLED Display Protection

OLED display can be set to turn off in 10s, 20s or 30 seconds or “Always On”.

#### Follow below steps:

- Continue pressing “MENU” till “Screen save” appears.
- Press “ENTER” you will see **105**, you can scroll “UP”/” DOWN” to set up how many seconds the OLED display turns off after inactivity, or “Always On”
- Press “ENTER” to save your setting.

### Menu Navigation

Menu	Enter	Enter	Enter	Up/Down	Remarks
Address (101	1			001-512	DMX address 031-512
Channel	4CH			4CH	Channel mode
				6CH	
				10CH	
DMX Fail	Hold			Hold/Blackout/Auto	DMX Fail Mode
Frequency	600Hz			600Hz	Led strobe frequency per second. The higher the Frequency is, the worse dimming is and vice versa.
				1200Hz	
				20C0Hz	
				4030Hz	
				25K Hz	

				Red 0-255	Customized colors
				Green 0-255	
				B:Je 0-255	
				White 0-25S	
Program	Static Color	Colour 1	Strobe 0	Colour 01 – Colour 15 Strobe Sobe 00 – Speed 09	Static colors + strobe
	Fade	Fade 1	Speed 1	Fade 01 -fade 02 01 – Speed 09	Fade mode
	Auto	Auto 1	Speed 1	Auto 01 – Auto 02 Speed 01 – Speed 09	Auto mode
	Sound	Sensitivity		Sensitivity 01 – 09	Sound sensitivity from <i>low</i> to high
Wireless DMX	On/Off/Clear	•		Receive	Wireless DMX Signal Setting
	On/Off/Connect/Clear			Transmit	
Information	Version	Ver 1.0			Version
	Current Time	00HOOMC OS			Current Run Time
	Total Time	0000H			Total Run Time
	Temperature	taC			Temperature
Back Light	105			10S	Fixture turns off display backlight after or seconds of inactivity
				205	
				30S	
				Always Or	
Eco Mode	Off			On/Off	Eco mode setting

IR	Off			On/Off	IR Setting
Menu Lock	Off			Off/On	Menu lock setting
Factory Reset	No			Yes/No	Reset to factory default

## DMX Addressing

Each fixture must be given a DMX address so that the correct fixture responds to the correct control signals. This DMX address is the channel number from which the fixture starts to “listen” to the digital control information being sent out from the controller.

This fixture has 3 DMX channel modes, 4, 6 and 10 DMX channels.

To set up fixture DMX address, first select DMX channel mode. The highest DMX address for this fixture is 512. To set up fixture DMX starting address, follow the steps below:

- Switch on the fixture, press Menu till “Channel” appears;
- Press “UP” or “DOWN” button to select 4CH or 6CH or 10CH;
- Press “ENTER” to confirm your select.
- Press “MENU” repeatedly to come back to “Address 001”;
- – Set up DMX address by scrolling “UP”/” DOWN” button.
- Press “ENTER” to save your setting.

## DMX Fail

Users can set up the fixture how to operate once DMX signal fails.

Continue pressing “MENU” until “DMX Fail” appears.

Now press “UP” or “DOWN” to select “Hold” or “Auto” or “Blackout”. Press the “ENTER” to save the setting. Press “MENU” to exit out of any of the above options.

## Wireless DMX Setup

- To control the fixture by wireless DMX, users need to pair the fixture to wireless DMX transmitter first.
- To pair the fixture and transmitter make sure the wireless DMX indicator is off.
- To turn wireless DMX on, press the “MENU” button to show “Wireless DMX” on the OLED display.

Now use the “UP” or “DOWN” buttons to select “On”.

To set the fixture into Wireless DMX receive mode, press “ENTER” again and then press “UP” or “DOWN” to select “Receive”.

Press the “ENTER” to confirm the setting.

- Press the pair button on the transmitter.

The wireless DMX indicator will start flashing fast.

Once the pairing succeeds the indicator will turn to yellow.

- To turn wireless DMX off, keeping pressing the “MENU” until “Wireless DMX” appears.

Now press “UP” or “DOWN” to select “Off”.

Press the “ENTER” to confirm the setting. Press “MENU” to exit out of any of the above options

### **Clear Wireless DMX Memory**

To clear the wireless DMX memory, keep pressing “MENU” until “Wireless DMX” appears.

Now press “UP” or “DOWN” to select “Clear (All)” (Transmit mode) or “Clear” (Receive mode).

Press “ENTER” to clear the wireless DMX memory.

Then Wireless DMX indicator will go off. Press “MENU” to exit out of any of the above options.

When the fixture is in Wireless DMX transmit mode the wireless DMX memory of the Transmitter unit and all receiving units will be cleared (Clear (All)).

When in Wireless DMX receive mode the wireless DMX memory of that one receiving unit will be cleared (Clear).

### **Master and Slave Unit Setup**

Continue pressing “MENU” till “Master/Slave” appears, press “ENTER” and scroll “UP” or “DOWN” to select “Transmit”.

Press “ENTER” to save the setting. the master unit will start to pair all slave units automatically.

Wireless DMX indicator keeps flashing during pairing time.

Wireless DMX indicator keeps On if pairing succeeds.

You now can select and run preset programs.

To set other fixtures as slave units, continue pressing “MENU” till “Master/Slave” appears, press “ENTER” and scroll “UP” or “DOWN” to select “Receive”.

Press “ENTER” to save the setting.

Now all slave units will operate in sequence with the master unit.

Please note that slave units could have wireless DMX memory.

Please follow up the instructions in “4.5.1 Clear Wireless DMX Memory” to erase wireless DMX memory first.

Please ensure that all slave units have been set to the same DMX channel mode as the master unit.

To pair master unit with slave units, continue pressing “MENU” of the master unit till “Wireless DMX” appears, press “ENTER” and scroll “UP” or “DOWN” to select “Connect”.

Now press “ENTER” to confirm your setting.

Then the wireless DMX indicator will start flashing during pairing time.

The indicator will stay solid yellow once pairing succeeds.

### **Wireless DMX Indicator Information**

There is one wireless DMX indicator near the OLED display.

This indicator shows status of wireless DMX connection.

<b>Indicator Status</b>	<b>Description</b>
Blue light on	Fixture receiving wireless DMX signal from transmitter.
Blue light slow flashing	Fixture already connected to transmitter, but no signal coming from transmitter.
Blue light fast flashing	Fixture no connection to transmitter; fixture keeps. Wireless DMX memory from last pair.
Blue light off	Fixture no connection to transmitter, and no any wireless DMX memory.

## **OPERATION**

### **DMX Control Mode**

This function will allow users to control individual fixture with a standard DMX 512 console.

Below is fixture DMX Channel Chart.

Channel	Channel	Function	DMX Value	Setting/Percentage
4 CH	1	Red	0-255	0-100%
	2	Green	0-255	0-100%
	3	Blue	0-255	0-100%
	4	White	0-255	0-100%

6 CH	1	Master dimming	0-255	0-100%
	2	Red	0-255	0-100%
	3	Green	0-255	0-100%
	4	Blue	0-255	0-100%
	5	White	0-255	0-100%
	6	Strobe	0-10	No function
			11-255	Strobe from slow to fast
	1	Master dimming	0-255	0-100%
	2	Red	0-255	0-100%
	3	Green	0-255	0-100%
	4	Blue	0-255	0-100%
	5	White	0-255	0-100%
	6	Strobe	0-10	No function
			11-255	Strobe from slow to fast
			0-9	No function
			10-15	White1

10 CH	7	White balance & Color macro	16-21	White2
			22-27	White3
			28-33	White4
			34-39	White5
			40-45	White6
			46-51	White7
			52-57	White8
			58-63	White9
			64-69	White10
			70-75	White11
			76-81	White12
			82-87	White13
			88-93	White14
			94-99	White15
			100-105	White16
			106-110	Color macro 1
			111-115	Color macro 2
			116-120	Color macro 3
			121-125	Color macro 4
			126-130	Color macro 5
			131-135	Color macro 6



10 CH	7	White balance & Color macro	136-140	Color macro 7
			141-145	Color macro 8
			146-150	Color macro 9
			151-155	Color macro 10
			156-160	Color macro 11
			161-165	Color macro 12
			166-170	Color macro 13

10 CH	7	White balance & Color macro	171-175	Color macro 14
			176-180	Color macro 15
			181-185	Color macro 16
			186-190	Color macro 17
			191-195	Color macro 18
			196-200	Color macro 19
			201-205	Color macro 20
			206-210	Color macro 21
			211-215	Color macro 22
			216-220	Color macro 23
			221-225	Color macro 24
			226-230	Color macro 25
			231-235	Color macro 26
			236-240	Color macro 27
			241-245	Color macro 28

			246-250	Color macro 29
			251-255	Color macro 30
	8	Color wheel	000-010	No function
			011-255	Color wheel effects
	9	Auto run	0-10	No function
			11-60	RGB color fade
			61-110	RGBW color fade
			111-160	RGB color auto
			161-210	RGBW color auto
			211-255	Sound control
	10	Speed	0-255	From slow to fast

### Master/Slave Mode

The fixture has a built-in wireless DMX transceiver inside.

Fixtures can operate Master/Slave mode wirelessly.

In Master/Slave mode, one fixture will work as Master fixture, other fixtures in the daisy chain will work in synchronization with the Master fixture.

Please refer to “4.5.2 Master and Slave Unit Setup” on how to set up master and slave units.

### Auto Run Mode

The fixture has preset color mixing and fading programs that can be activated from the OLED control panel for auto running. To access this, follow below steps:

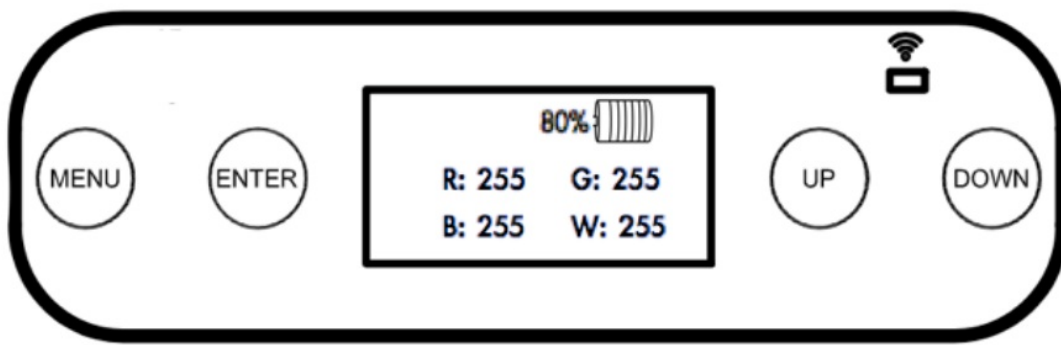
- Press button “MENU” until “Program” appears.
- Press “UP” or “DOWN” to scroll up/down to select “Auto”, “Fade”, “Static, and “Sound”;
- Press “ENTER” to confirm your run mode;
- Scroll “UP” or “DOWN” to select Auto programs (from 1 – 2), or Fade (from 1 – 2) or “Color” (from 1-15) or “Sound” (from 1 to 4

### Customized Colors

Users are allowed to program their own color effects and save to your fixture.

### Follow the steps below:

- Press button “Menu” until “Custom” appears.
- Press “ENTER”, you will see R (Red) flashing, this means you now can program red color, press again “Enter” and scroll “Up” or “Down” to adjust red intensity, press “Enter” again to save your setup.



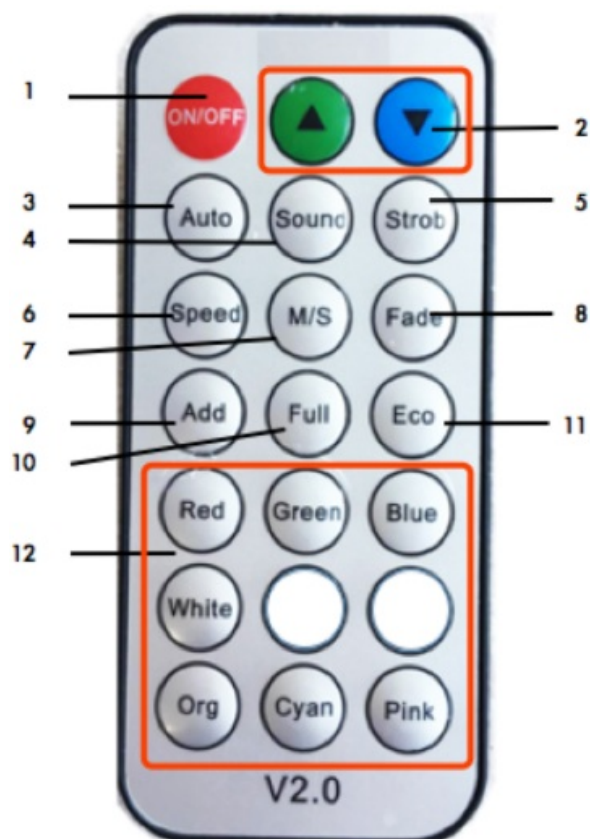
- To select other colors “UP” or “DOWN” and press “ENTER” to confirm the color you selected.
- Then scroll “UP” or “DOWN” to adjust the color intensity, and press “ENTER” to save it.





## IR Remote Control

This operation mode allows users to control the fixture with an infrared remote controller. The remote controller can help you to achieve almost all functions.



To activate IR remote control, press “Menu” until “IR” appears, press “Up” or “Down” button and select “On”. Press “Enter” to save the setting.

To control the fixture with this IR remote controller, make sure to point the controller directly to the IR receiving sensors on the product. Make sure there are no objects between the controller and the fixture.



1. Set the fixture into blackout (LED on/off).
2. Adjust auto, strobe & fade speed, sound sensitivity, DMX address, DMX channel, brightness etc.
3. Run auto mode, use “Speed” button followed by the   buttons to adjust auto speeds.
4. Run sound program, use   buttons to adjust sound sensitivity.

5. Run strobe program, use   buttons to adjust strobe speed.

6. Set auto/fade speed, Press this button followed by   buttons to adjust program speed.

7. Set the fixture into master or slave mode.

8. Run fade mode.

Use “Speed” button followed by   buttons to adjust fade speed.

9. Set DMX address.

Press this button followed by   to set up DMX address.

Press this button again followed by   to select DMX channel.

10. Set the fixture in full brightness.

Press this button followed by   buttons to adjust brightness.

11. Set the fixture in Economy mode.

Press this button followed by   buttons to turn Economy mode on/off.

12. Set static color.

This fixture has RGBW led, so “Amber” and “UV” buttons are invalid.

## MAINTENANCE

### General Maintenance

The operator has to make sure that the safety-related and machine-technical installations are to be inspected by an expert once a year in the course of an acceptance test.

The operator has to make sure that safety-related and machine-technical installations are to be inspected by a skilled person once a year.

#### The following points have to be considered during the inspection:

- Make sure connections are clean and totally dry before linking equipment's or supplying electric power.
- All screws used for installing the fixture or parts of the fixture have to be tightly connected and must not be corroded.

The fixture has optical lenses; users should clean the lenses periodically to optimize light output.

The cleaning frequency depends on the environment in which the curtain system is installed.

Damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the lenses.

Even in a clean type of surroundings, it is suggested to clean the lens and housing at least once a month.

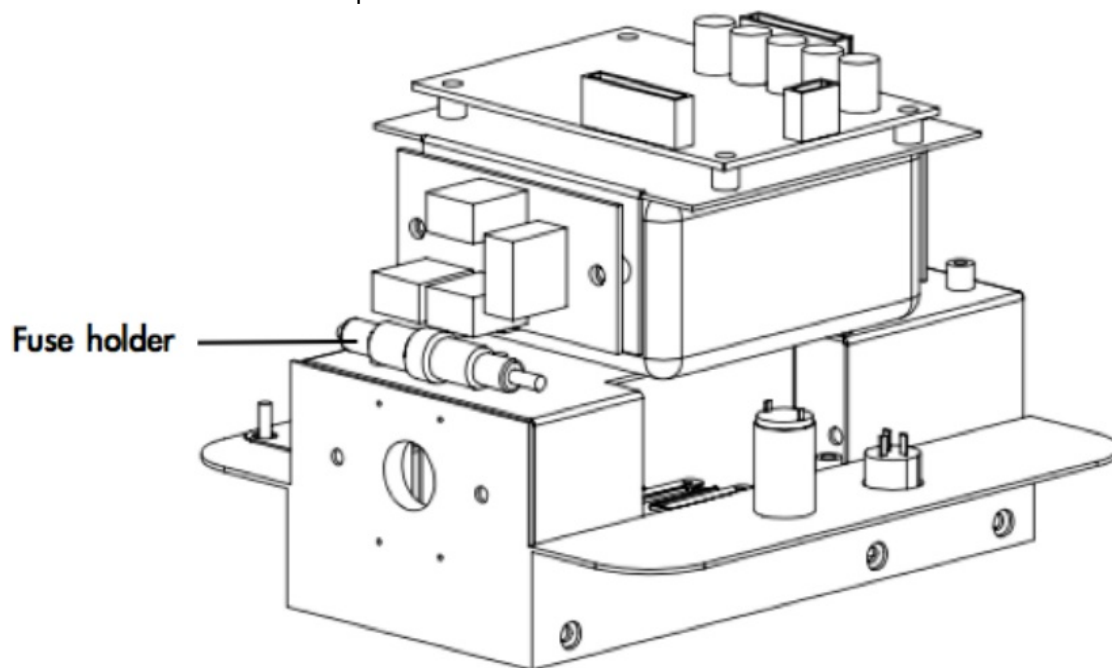
It is suggested to use a soft cloth using normal glass cleaning fluid.

#### The following points have to be considered during the maintenance:

- Switch off the fixture before cleaning.
- Clean the lens with a mild solution of glass cleaner or isopropyl alcohol, and a soft, lint free cotton cloth or a lens cleaning tissue.
- Gently polish the external glass surfaces until they are free of haze and lint.

## Fuse Replacement

The fixture has an internal replaceable fuse built in the base.



In case fuse is blown, you need to replace it. Unplug the fixture from power, remove the 4 screw from the housing to find the fuse holder.



Open the fuse holder by turning it anticlockwise; remove the blown fuse from the holder and replace it with the exact same type and rating one.

Close the fuse holder by turning it clockwise to tighten it. Screw back the base to the housing.

**Always replace a blown fuse with another of the same type and rating.**

# SMARTBVPLUS

## Documents / Resources

  USER MANUAL	<a href="#">AVTECHSMART SMARTBV2PLUS Battery Powered Wireless DMX Luminaire</a> [pdf] User Manual SMARTBV2PLUS Battery Powered Wireless DMX Luminaire, SMARTBV2PLUS, Battery Powered Wireless DMX Luminaire, Powered Wireless DMX Luminaire, Wireless DMX Luminaire, DMX Luminaire, Luminaire
---	--