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Mystery Vibe

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1 Introduction

This document provides information relating to the prototype design for the Mystery Vibe Crescendo product. The device is an adult toy which utilises enhanced technology features to provide users with an enhanced experience.

This document describe basic user operation.

All operation and functions described in this document relate to Firmware 3.2 Beta.

2 *Crescendo Control*

2.1 *Modes of operation*

The device can be controlled in two modes.

- Stand Alone Mode – whereby control is solely by the buttons on the device and the device only runs vibes pre-installed – or vibes last configured via the IOS APP.
- IOS APP Control – whereby control is achieved via BlueTooth Interface and using an IOS device with the APP installed.

2.2 *Standalone Operation*

During standard mode operation the user can switch on / off the device, selected 1 of 6 preset vibes which are stored on the internal SD Card and increase / decrease intensity.

2.3 *IOS App Control*

3 User Interface

This sections describes the user interface and controls currently implemented.

3.1 Switch Operation

The initial prototype software has implemented the following control operation using the four side switches.

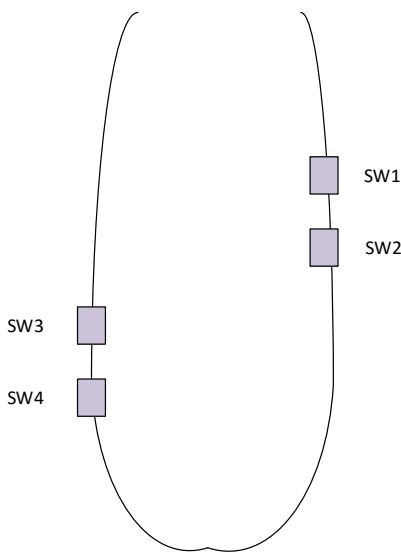


Figure 1 Switch Location

Function	State	Switch Operation	Notes
Power On	Device OFF	Any Switch	Side LEDs illuminate for 5 seconds. Device auto starts playing last used vibe. Multi colour LED indicates vibe being played and remains on for 3 seconds
Vibe Start	Device ON / Idle Mode	Hold any Switch for 0.5 second	Vibe start playing. Multi colour LED indicates vibe being played and remains on for 3 seconds. Side LEDs illuminate for 5 seconds.
Vibe Stop	Vibe Active	Hold any key for 0.5 second	Vibe stops, side leds illuminate, device will power down after 20 seconds.
Next Vibe	Vibe Active	SW3	Move to next available Vibe, . Multi colour LED indicates vibe being played and remains on for 3 seconds.
Previous Vibe	Vibe Active	SW4	Move to previous Vibe . Multi colour LED indicates vibe being played and remains on for 3 seconds.
Increase Intensity	Vibe Active	SW1	Increases the vibe strength (1-4 levels)
Decrease Intensity	Vibe Active	SW2	Decrease the vibe strength (1-4 levels).
Force Power Off	Vibe Active	Hold any Key for 3 seconds	Vibe halts, LEDs turns off.

Figure 2 Key Functions

When using the keys to navigate through vibes, the vibe will wrap around. Thus is Vibe Id 3 is running and the next vibe is requested Vibe Id 0 will be loaded:-

Vibe 0 -> Vibe 1 -> Vibe 2 -> Vibe 3 -> Vibe 0

Changing the Intensity does not wrap.

3.2 Full Colour Led Indication

The device incorporates one RGB multicolour LED. The multicolor LED is the main visual indication for the user when the device is operating. Current implementation for visual feedback is provide in.

The device allows the selection of 1 out of 8 loaded vibes.

Note:- Only vibes 0-5 currently implemented as presets.

RGB LED Color	State	Description
Red	Flash	Default Vibe 0 Running. Flash rate depends on intensity setting.
Lime	Flash	Default Vibe 1 Running. Flash rate depends on intensity setting.
Blue	Flash	Default Vibe 2 Running. Flash rate depends on intensity setting.
Orange	Flash	Default Vibe 3 Running. Flash rate depends on intensity setting.
Teal	Flash	Default Vibe 4 Running. Flash rate depends on intensity setting.
Yellow	Flash	Default Vibe 5 Running. Flash rate depends on intensity setting.
Green	Flash	Default Vibe 6 Running. Flash rate depends on intensity setting.
Magenta	Flash	Default Vibe 7 Running. Flash rate depends on intensity setting.

Figure 3 Multicolour LED Functions

Note generally the vibes will operate from files stored on the SDCard, these are created at first power on via a factory reset through the IOS APP.

The device incorporates a back up 'always available' set of vibes to ensure the device remains usable should the SDCard fail. When the hard coded vibes are executing the flash sequence with alternate with a white LED flash.

3.3 Charging Indication

When the device is placed on the charging dock unit and charging is initiated and actively running vibe shall immediately be terminated and the device shall enter charging state.

During this mode the side LED's will flash to indicate charging.

If the device is placed on the charger unit while active the Bluetooth can continue to operate with the exception off switch on / off vibes. However removing the device from the charger will immediately shut down the device and disconnect the Bluetooth.

3.4 Charging DOCK Module

When the DOCK module is first powered up (USB power supplied), the LEDs shall flash in the following sequence:-

- RED
- GREEN
- RED + GREEN

When charging the GREEN LED on the charging dock will flash.

A RED LED on the charger module indicates error and foreign object detection. The RED led flashes FAST and then SLOW. All object around the charger must be completely removed including Crescendo until the Dock module resets from the error state – approximately 5 seconds.

When the DOCK is not charging all LED's shall be off.

When the battery is fully charged the GREEN LED on the charger DOCK will remain active.

4 *BlueTooth Control*

Crescendo can be controlled via Bluetooth.

When the device is connected the side switch LED's shall blip OFF every 3 seconds for a short period.

The device will not shut down while a Bluetooth connection is active, unless the battery depletes.

4.1 *User APP for IOS*

For controlling the device an APP is available for the IOS platform. This can be downloaded from the APP Store and is supplied free of charge.

4.2 *Engineering APP for IOS*

The engineering team can also operate the device using an IOS APP Utility, this exposes more detailed control operation and provides a simplified UI for testing basic control.

5 Device Safety Instructions

1. DO NOT SUBMERGE the Crescendo device in water
2. Clean Crescendo after use, wiping with mild detergent.
3. DO NOT apply any cleaning chemicals to Crescendo.
4. DO NOT use near any heat sources such as radiators, stoves or other device that produce heat.
5. DO NOT expose the Charge base to moisture in any form.

6 Device Compliance Declaration

6.1 EMC

This product has been tested and evaluated by an independent accredited test lab and found in compliant with all the applicable EMC, RF and safety requirements per standards:

EN 55014-1:2006 + A1/2009 + A2/2011

EN 301489-3 V1.6.1

EN 301 389-17 V2.2.1

EN 55014-2:1997 + A2/2009

EN 55014-2:2015

6.1.1 FCC

6.1.1.1 Main Unit



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.

FCC ID: 2AHVA-6900

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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

6.1.1.2 *Charger Base*



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.

FCC ID: 2AHVA-6900DK

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The charger should not be used within 20cm of the human body with RF enabled.

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