eMotion LV1 Control User Guide

Safety and Precautions

- Read these instructions.
- Heed all warnings.
- Follow all instructions.

PROTECT YOUR DEVICE AND YOURSELF

- Do not block any ventilation openings.
- Do not place the device on an unstable surface.
- Do not use the device near water. Do not spill liquids on the surface or into the openings.
- Plug the unit only into a grounded outlet that complies with local standards.
  Never defeat the ground pin.
- Avoid placing heavy objects on the control surface, scratching the surface with sharp objects, or rough handling and vibration.
- Use the supplied dust cover to cover the device when it is not being used for extended periods.
- Unplug the device during lightning storms or when it is not being used for extended periods.

Pay attention to the operating environment

- Do not place the device in direct sunlight.
- Do not install the device near any heat sources such as radiators, heat resistors, stoves, or other equipment (including amplifiers) that produce heat.
- If the equipment has been stored in sub-zero temperatures, allow time for it to reach normal operating temperature before use at the venue. The recommended operating temperature for eMotion LV1 Control is 5 to 35 degrees Celsius.

Keep your LV1 Control looking good

- Clean the surface only with a dry cloth.
- Do not use chemicals, abrasives, or solvents when cleaning the controller.

Service

This unit contains no user-serviceable parts. Refer all servicing to a qualified service engineer through an authorized Waves dealer. Servicing is necessary if the controller has been damaged in any way, such as when liquid has been spilled into the unit, objects have fallen into it, it has been exposed to rain or moisture, it fails to operate normally, or it has been dropped.

Waves assumes no liability for damage caused by maintenance, repair or modifications performed by unauthorized personnel.

Table of Contents

Introduction

The Waves eMotion LV1 Control is a digital mixing controller that extends eMotion Lv1 Live mixing console physical control facility. The Lv1 Control includes 17 100 mm Alps motorized faders, LCD mini displays for meters and indicators, and an array of toggles for channel select, mute, solo, faders layer control, custom user set functions and a set of 17 encoders for parameters control. Lv1 Control connects to the Lv1 system with a single USB connection, it provides a dedicated connection for a goose neck lamp and three ¼ Inch threadings for mounting accessories.

What's in the box?

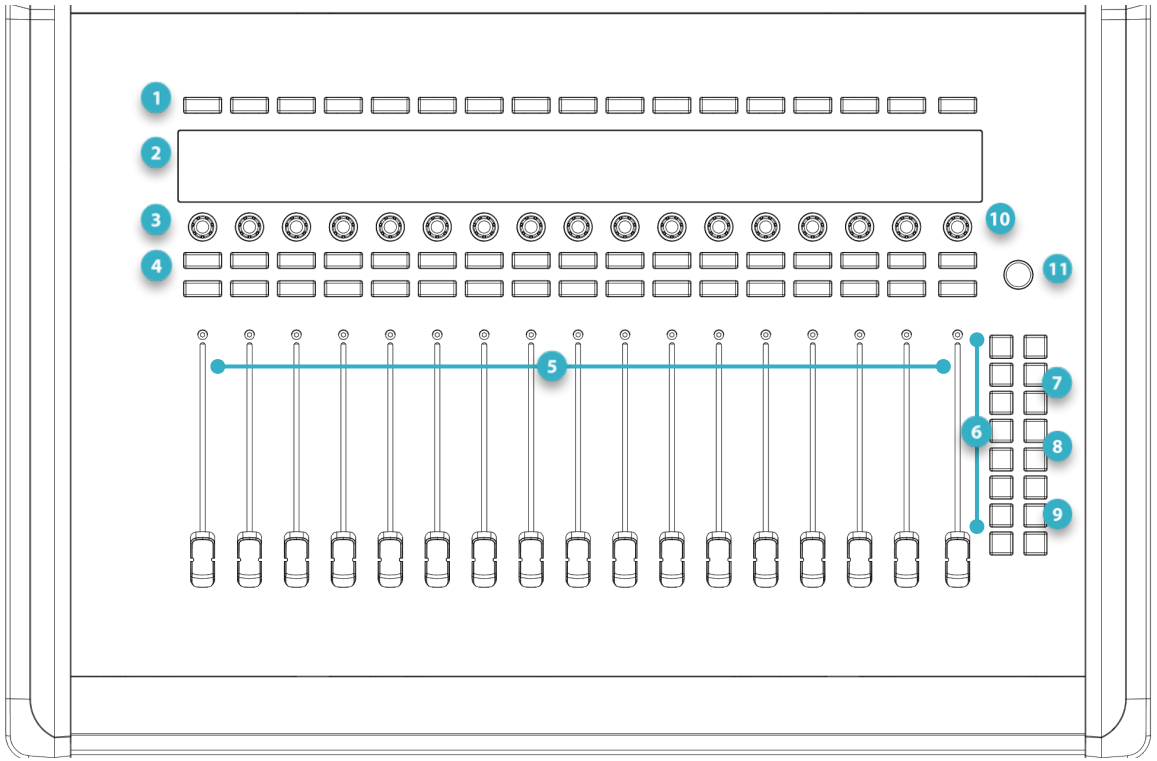
- eMotion LV1 Control
- Power Cable
- USB Cable
- Documentation
- Mounting Brackets
- Dust Cover

Main Features

- Seamless integration with eMotion LV1 Classic and eMotion LV1 modular systems
- 17 motorized 100 mm Alps faders
- 17 precision encoders, with mini-displays including per-channel LCD metering
- Touch and Turn function mapping for on screen parameters
- Select/Mute/Solo toggle control per channel
- 8 layers keys and 8 utility keys
- A dedicated tempo pad
- 16+2 customizable user defined keys
- 12v XLR4 lamp connection
- Internal 100-240V switching power supply
- USB port for system connection

Lv1 Control Layout and Controls

1. **Channel Select Button**
   Click the User button to toggle between Channel select (default) and User-Assigned Keys.
2. **Four-line Scribble Strip**
3. **Rotary Encoders**
   Control Pan, Gain, or Plugin edit mapping
4. **Solo/Mute**
5. **16+1 Motorized Faders**
6. **Mixer Layers 1–8 Selector**
7. **Encoders Mode**
   Select Pan, Gain, or Plugin edit mode
8. **Shortcuts** (user-assignable)
9. **Fader Alternative Modes**
   Custom/Spill/Sends on faders
10. **Touch and Turn**
    Maps a selected parameter on screen for immediate access.
11. **Tempo Tap Pad**



Channel select buttons (1)

Channel Select Mode (default) Click to select a channel. A selected channel is identified by a white line on the top row of the corresponding scribble strip.

User Mode (User button on) The 16 channel buttons are mapped to the 16 user-assignable keys.

Flip Mode (Flip button on) The Select buttons and the first row of scribble strips are used to select the aux destination.:
Buttons10–12: select destination layer (FX 1–8, MON 1–8, MON 9–16)
Buttons 1–8: select destination channel within an Aux layer
Once you select an aux destination, the faders flip to sends-on-faders mode, sending to the selected aux.
The blinking Flip light indicates the mode.

Four Line Scribble Strip (2)

The Scribble Strip is a four-line display that provides feedback about channel condition.
The information displayed will be correlated with operation mode of the Select, User Keys,
Aux Sends-On-Faders Flip and rotary encoder function.

The display is divided into three sections:
Top line for Select indication or Sends-On-Faders Flip select or User Key label,
Mid line for the channel strip associated name,
and the Bottom a two-line display for the encoder function and value.

The Scribble strip for Channel Select (Default) displays a white strip on the top section for indicating the selected channel.

The Middle section displays the channel strip Name.

The Bottom section displaying encoder function – Pan and its value.

When select toggles are in USER mode, the top section displays the User Key label.

The Middle section displays the channel strip Name.

The Bottom section displaying encoder function – Gain and its value.

When select toggles are in FLIP mode, the top section displays the Aux Mix Send destinations above channel strips 1-8, and the Aux Mix bank above channel strips 10-13

The Middle section displays the channel strip Name.

The Bottom section indicating Send-On-Fader mode and displaying encoder function (when applicable) – Send Pan and its value.

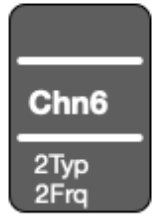
A non selected channel would have an empty top section if User or Flip modes are not activated.

The Middle section displays the channel strip Name.

The Bottom section displays the Plugin / Channel mapped parameters for encoder (continuous controls on main screen – e.g. Frequency) and encoder-toggle (toggle switches on main screen – e.g. Filter Type)

Rotary Encoder (3)

The Rotary Encoder controls the channel's Pan or input Gain and also maps to specific plugin or channel control parameters when in the Edit mode. The Encoder Mode is set in the Utilities buttons section on the right of the surface. When the encoder mode is set it will affects all the channels in the layer. The value and label of this control are displayed on the scribble strip above.



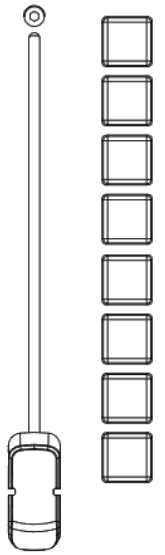
SOLO / MUTE (4)

The solo and mute toggles activates SOLO or CUE (as set for the channel) and MUTE for the mapped channel or mix.

Fader (5)

The 16+1 touch-sensitive motorized faders control the mapped channel output gain, the mix output gain or input gain. The fader will control the Aux send level in Sends-On-Fader Flip mode.

Master fader specific mapping and configuration is set in the Fader Bank control panel.

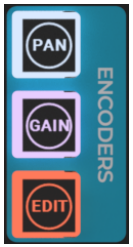


Mixer Layer 1-8 selector (6)

Select the active mixer layer from the active layer bank (Factory Input / Output, Custom, Spill).

Encoders Mode selector (7)

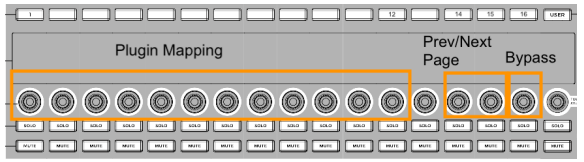
The Rotary Encoders can be set to map different parameters in the mixer. The bottom section of the scribble strip will display the encoders mapped function labels and values.



Pan (lavender)
By default, the rotary encoders are mapped to channel pan.

Input Channel Gain (blue)
When the knobs are set to control the gain, they auto-map the channel input's preamp-Gain or local-VGain.*
When there is no preamp set to the channel input (Line, Digital) or in a Mix buss channels, the encoder knobs will control the Trim.

Plugin Edit (orange)
When knobs are set to Edit mode, selecting a channel or a plugin on-screen will map all its parameters to the knobs. Rotary knobs are mapped to continuous controls (turn) and to a toggle control (push).



Shortcuts 1-2 (8)

User defined shortcut to mixer functions. Functions can be assigned in the LV1 Control or Fader Bank Control panel (when connected to LV1 Classic).

Fader Alternative Modes / Banks (9)

Select Custom (purple) mixer layers 1-8 bank, organize layers to suit your circumstances.

Spill (Yellow-green) layer bank displays all the channels in the selected Link group, comprised of any channel types.

Flip (green) activates the “sends on faders” mode, where the faders and pan control send levels to a selected Aux.
Flip Sends-On-Faders mode function:

1. Press the Flip mode button
2. The Flip button will blink, the Select buttons will turn green, the top row in the scribble strip will display Aux FX and Mon banks and mix buss destinations
3. Select an Aux destination
4. Fader and Pan function will flip to control the send levels
5. Press Flip mode button to turn off the mode, bringing the faders back to their original function.

Touch and Turn (10)

Any parameter on the screen can be mapped to a dedicated encoder, the mapped parameter label and value are displayed on the Master section scribble strip.
Assign: Touch any LV1 or plugin control
Control: Turn the knob to adjust the selected continuous control. Press the Touch and Turn knob to get x10 value resolution. When the Touch and Turn knob is assigned to a toggle parameter, Press the encoder to control switches.

Tempo Pad (11)

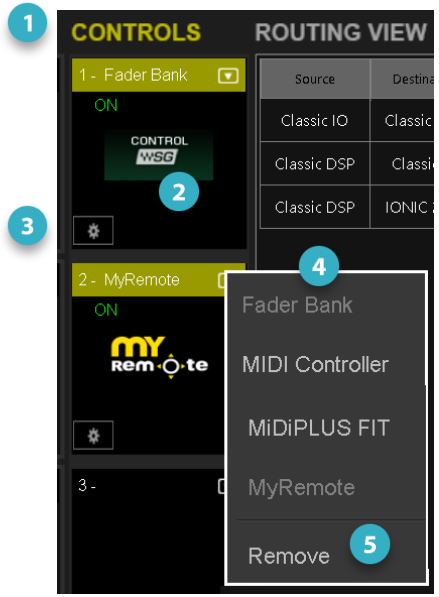
Tap repeatedly to set the tempo. This value is broadcast to all plugins in the session that can receive tempo data, and is displayed on the LV1 UI Top-Bar.

LV1 Control Fader Bank Control panel

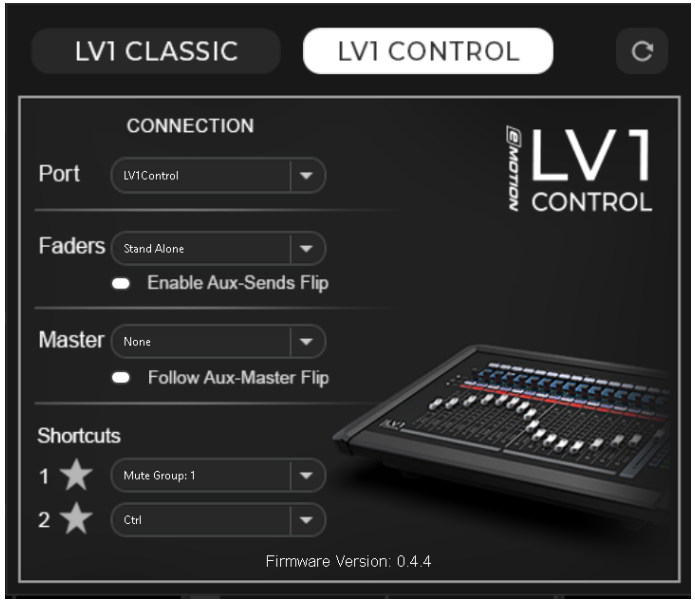
LV1 Setup window includes the Fader Bank Control,
pressing the gear icon will pop up the control panel window.

The control panel can be used to configure which LV1 Mixer window will the Fader Bank follow and sync to, the master fader mapping, short cut settings and more.

1. Control Device inventory slots in Setup tab
2. The Fader Bank Control device is assigned to Lv1, indicating the Device is ON and connected. The Lv1 Control uses the ‘Fader Bank’ control panel.
3. Pressing the Gear button will open the control panel.
4. Control Device menu
5. Use the menu to remove an assigned controller.



The LV1 Control uses dedicated control panel in LV1 SW modular system, while when connected to LV! Classic, The Fader Bank control panel is used to configure LV1 Classic Fader Bank as well as Lv1 Control, each with its dedicated tab.



1. Connection Port should be assigned to LV1 Control in the list. In a LV1 Modular system choose Lv1 Control 2 for the respective second controller.
2. Faders settings are used to set the corresponding Mixer window, or set to standalone. This is where Aux Sends-on-faders Flip mode is enabled for this fader bank.
3. Master setting for mapping the master fader to any fader in the mixer or to follow the main fader, and the Aux Master fader in case of Sends-on-faders Flip.
4. Shortcuts 1-2 button assignment can be set in this section, any function that can be mapped to a User Key will also be available for the Shortcuts.
5. The refresh connection button on the top right will reset the connection to the controller.

All the settings in this control panel will be saved to the device preferences and maintain settings across sessions.

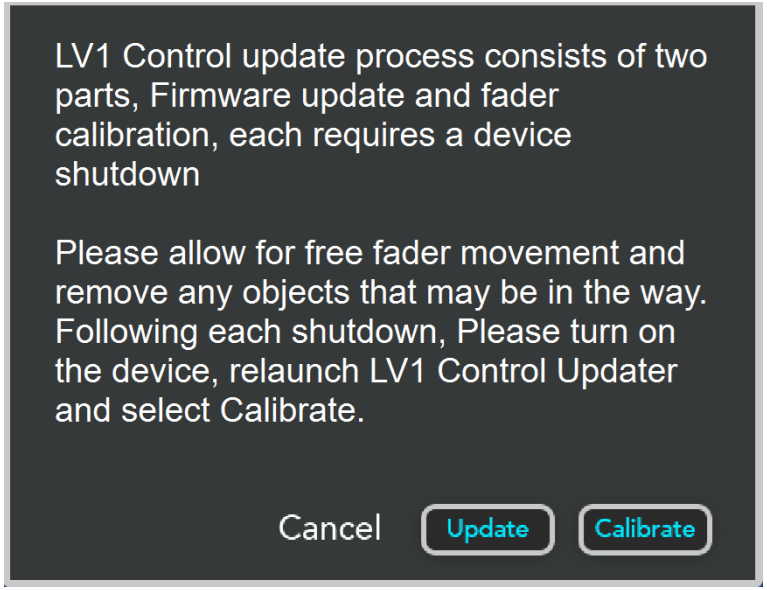
LV1 Control Update and Calibration tool

To Update and Calibrate the Lv1 Control use the provided tool in the LV1 Classic Admin Kiosk, or in Waves/SoundGrid/Utilities folder on a Windows system. This tool is not available for macOS.

Make sure only One Lv1 Control is connected to the system when performing the update.
Do not disconnect power or USB during the update.

Press Update to Update the device, follow the instructions,
After the update is complete a calibration pass is needed,
It should start automatically. Device power cycle may be needed following the process.

Press Calibrate to run the calibration process on an updated system,
Device power cycle may be needed following the process.

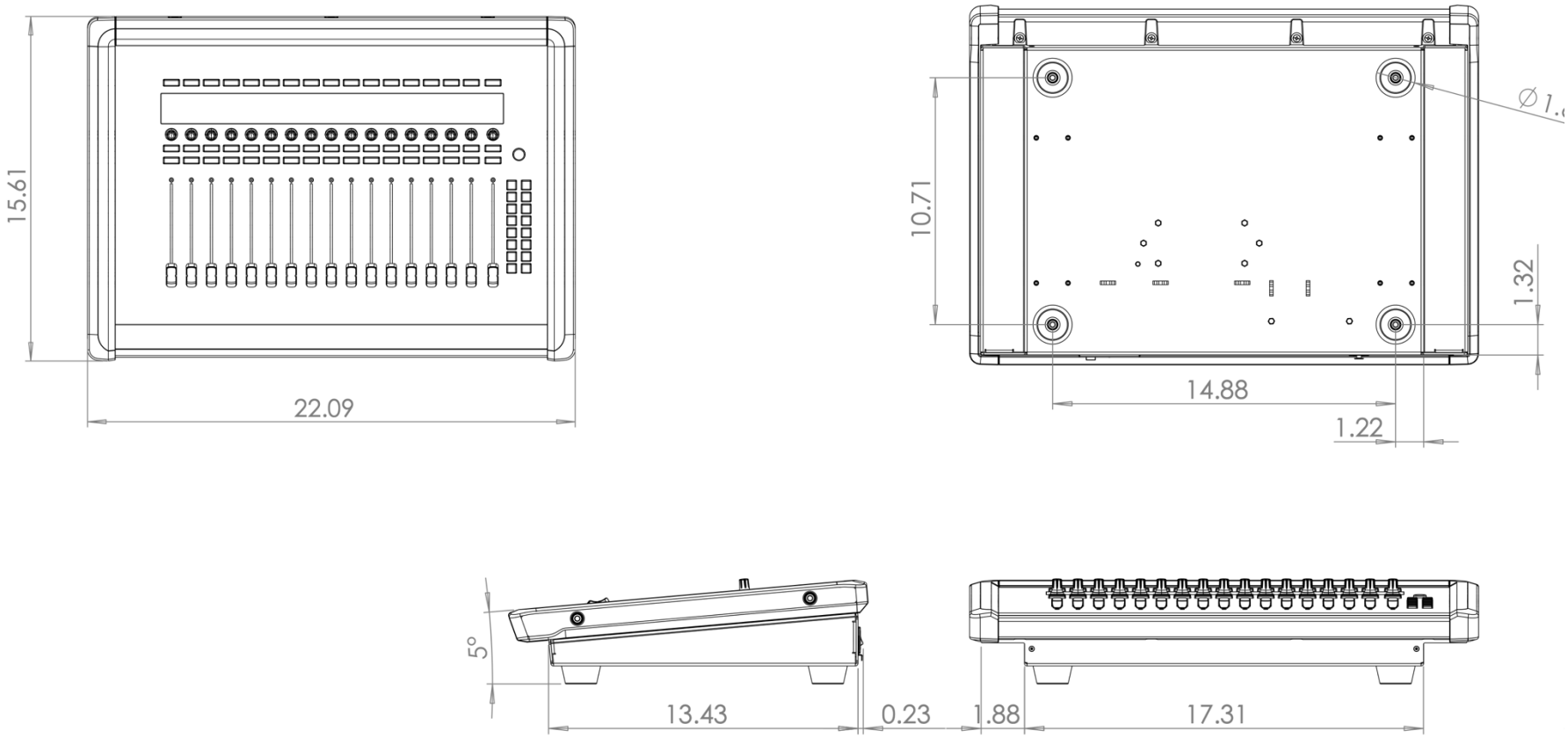


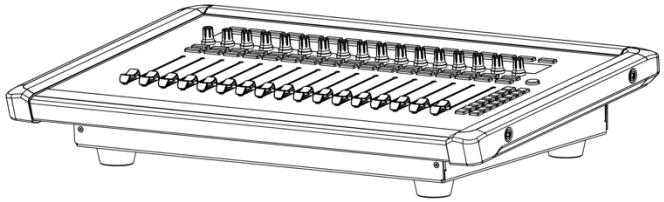
Specifications

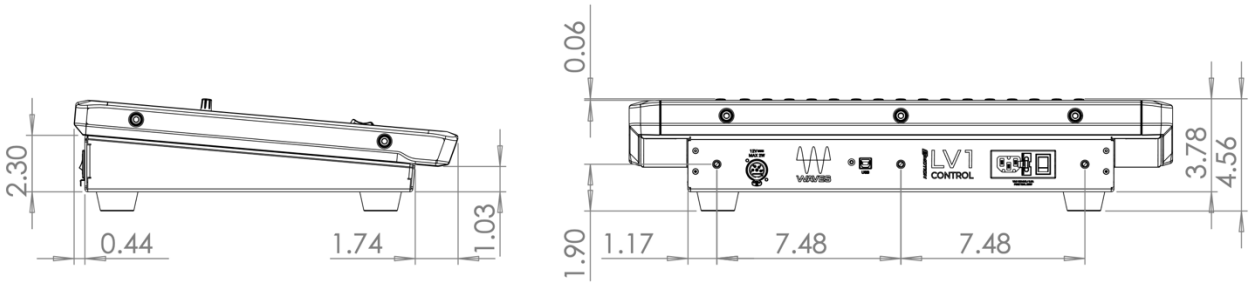
Faders	17 touch-sensitive 100mm motorized faders
Encoders	17 rotary encoders with clickable toggle
Select / User Keys	17 RGB backlit buttons
Solo / Mute	17 RGB backlit buttons
Layers / Utilities	16 RGB backlit buttons
Tempo	RGB backlit Tap Pad
Display	17 1.14” TFT LCD with Meters
USB	USB 2.1 (B) port
Lamp	12V 2W max (pin 1, 2= NC, pin 3= GND, pin 4= +12V)
Power	110V/220V 0.8A/0.4A auto-switching power supply units
Operating Temperature	0 to 35 degrees Celsius (32 to 95 degrees Fahrenheit)

Dimensions

W x D x H	561 mm (w) x 396 mm (d) x 116 mm (h) 22.1 inch (w) x 15.6 inch (d) x 4.6 inch (h)
Weight	6.4 kg (14 lbs)






0.06
2.30
0.44
1.74
1.03
3.78
4.56
1.90
1.17
7.48
7.48
LV1
CONTROL