Wireless Wall Washer

(AL6-Series)

User Manual

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This instruction manual is part of the device and persons operating the device must have access to it at any time.
Safety precautions mentioned in the instruction manual have to be observed.
If the device is being sold, this instruction manual has to be included.

Translations

If the device is being sold, this instruction manual has to be translated into the national language of the destination country.
If discrepancies occur in the translated text, the original instruction manual has to be used to solve them tor the manufacturer has to be contacted.

1 Table of Contents

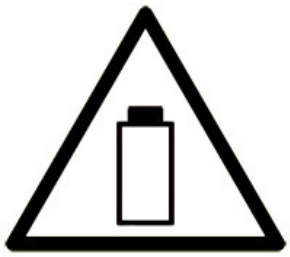
1 Table of Contents....3
2 Safety....5
3 Specifications:....7
4 Quick Start....9
4.1 Advantages....9
4.2 Overview....10
4.3 LCD Display....10
4.4 Buttons....11
4.5 Technical Data....12
5 Advanced Operation....13
5.1 Extended Addressing....13
5.1.1 Group Addressing....13
5.1.2 Chain Mode....13
5.1.3 Type Addressing....14
5.1.4 Serial Number Addressing....14
5.2 Overview of Programs....15
5.3 DMX Operation....16
5.3.1 Parameters for DMX Operation....17
5.3.2 DMX table for EFFECT MODE....19
5.4 Menu Reference....20
6 Troubleshooting....25
7 Disposal....27

2 Safety

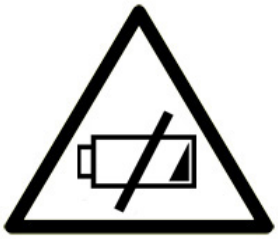
Before you operate the unit, read this manual carefully.
Make sure to keep the manual, in case you need to consult this manual again or you give the unit to another person.
Always make sure to include this manual if you hand out the unit to another person.
Keep in mind that this manual cannot address all possible dangers and environments. Please use your own caution when operating.

Only qualified personnel may repair this product.
Don't open the case.

Do not operate the unite in areas where the high temperature condition or outdoors . It will cause abnormal function or damage the product.



The Li-ion is inbuild, please avoid bumping or plunging, it will cause FIRE or EXPLOSION.
Never store the battery when fully drained. Always recharge immediately when empty.



MAKE SURE TO FULLY CHARGE ALL AL6 UNITS BEFORE STORING THEM.
PARTIALLY CHARGED BATTERIES WILL LOOSE CAPACITY.

3 Specifications:

a) **Slim linear wall washer, for Indoor decorative lighting**

b) **Displays more than 16 million colors.**

c) **Low power consumption**

d) **Controllable by wireless Remote control ARC2 , wireless DMX transmitter ART1 and can also get controlable via DMX512 cable connection**

e) **Build in Controller, the light effects also can get programmed directly via the integrated keyboard and LCD display**

f) **8-24 hours operation time without recharging the battery.**

g) **Up to 300 meter operation distance of the remote control**

h) **High brightness LEDs**

i) **RGB LEDs combined with white LEDs for a better color mixing and color appearance**

4 Quick Start

This linear Wallwasher is made for uncomplicated event illumination and for decorative lighting. Due to its integrated battery and wireless module it offers an uncomplicated setup. The AL6 can be used as standalone unit and be controlled with its integrated control pad or with the ARC2 Remote Control. For a larger setup, the AL6 can be grouped and paired with other Astera wireless lamps.

The AL6 wireless wall washer can operate at 4 modes, one is standalone second is remote control, wireless DMX,XLR DMX, (that can be set by "INPUT SELECT"), The basic concept behind the system offers a set of predefined programs (light effects), see "Overview of Programs", page ?.

All predefined programs, except RAINBOW take the displayed colors from a four color palette. This palette can be defined by selecting the color C1, C2, C3 and C4. Additionally, a lot of parameters, like SPEED, FADE and INTENSITY can be changed. It is also possible, to synchronize all units, and to spread programs over several units. So for example the RAINBOW effect will be stretched over two or more units.
The AL6 is suitable for shopping window, house, party, hotel, display room...Illuminating walls, curtains and objects in the room.

Most advanced functions are accessed by holding down the *Menu* key.

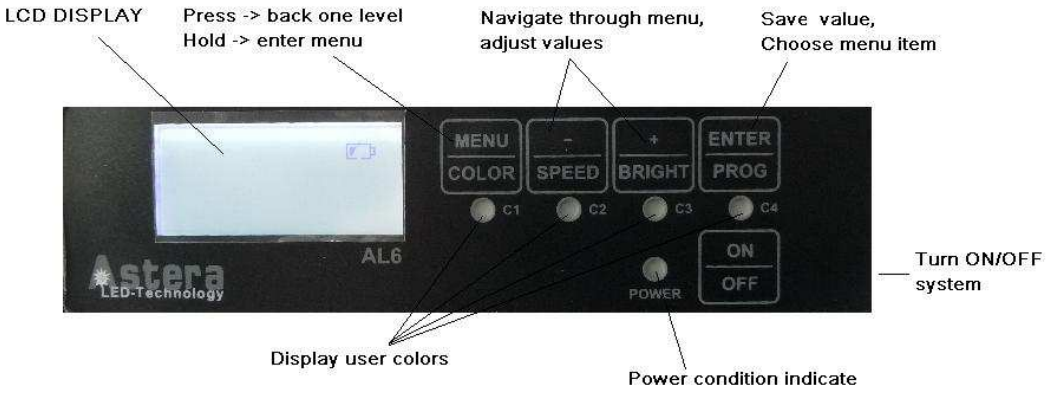
4.1 Advantages

Wireless design --- The AL6 is easy for installation due to its integrated battery and RF receiver.

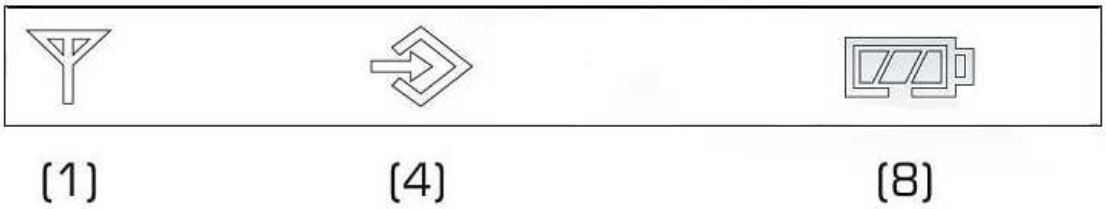
Smart programing --- The AL6 not only displays complex color-changing programs but also gives you the possibility to use your own customized colors for these programs. The AL6 can be used as a standalone unit or grouped and paired with other Astera lamps and be controlled with an ARC2 RF Remote Control.

Energy saving design --- Low working voltage, low power consumption and additional white LEDs helps to save up to 80% energy so it can reach a maximum operation time of up to 24 hours.

4.2 Overview



4.3 LCD Display



Definition of symbols:
(1) - Receiving (on controller units only)

(4) -Settings are stored in the internal memory. (this will be shown via a short blinking of this symbol)

(8) - Battery status.

4.4 Buttons

MENU/COLOR	Go back one level, or, if pressed for >1 second: enter the menu. For details on the menu, see page "Menu Reference".
+ -	Step through the menu and adjust parameters, like fade, speed, brightness.
-/SPEED	Change the speed of the light effect. A time between 0.09 seconds and 9 minutes 11 seconds can be set. It reflects the duration of the selected program.
+/BRIGHT	The brightness of the LEDs can be changed from 0%-100% in 10% intervals. By holding down the +/-.
ENTER/PROG	Choose menu item, save edited value or start sending a value.
ON/OFF	Press the ON/OFF menu, then to switch on or off this system
Prog	Change the program (light effect). Programs are predefined, but the user can choose for most of them which colors they consist of.
C1 C2 C3 C4 USER COLORS	All programs consist of one to four user colors (except in **RAINBOW** program, there colors are predefined and cannot be changed). For example, if **PROGRAM** is set to **SIMPLE RUNNING**, background color will be C1, and the color of the running pixel will be C2. The following standard colors are available: **RED**, **ORANGE**, **YELLOW**, **GREEN**, **CYAN**, **BLUE**, **MAGENTA**, **PINK**, **WHITE WARM**, **WHITE COLD**, **BLACK**. If a larger selection of colors is required, there are two possibilities: 1. choose from a predefined list of **INDEX COLORS** (hold down color key C1..C4 for one second). 2. enter the menu, and set colors by their RGB values (located under: "**AUTO SETTINGS**" -> "**USER COLORS**").

4.5 Technical Data

Light Sources	
Light Sources	5mm bullet LEDs with 15 degree narrow beam angle
Amount or LEDs	AL6-ES: 96 (24xR, 24xG, 24xB, 24xW) AL6-EM: 192 (48xR,48xG, 48xB, 48xW) AL6-EL: 384 (84xR,84xG, 84xB, 84xW)
LED Power	AL6-ES: 12W AL6-EM: 24W AL6-EL: 48W

Power Supply	
Input power	100-240V AC 50/60Hz Max:0.85A
Power supply unit	Built-in
Power Cable	2-pin, CE standard
Battery	AL6-ES: 22.2V, 1.6AH AL6-EM: 22.2V, 3.7AH AL6-EL: 22.2V, 7.4AH
Battery operational time	8 – 24h (depending on selected colors, brightness, programs)

Control	
Standalone control	With built-in control panel, backlit display with 5 multifunctional buttons
Chain connection	With DMX512 socket (XLR 3-pin)
Wireless control	With Astera RF Remote Control

Radio Frequency	
RF coverage	50m up to 300m
Frequency	Europe: 868.000 MHz – 869.750 MHz US: 902MHz – 928 Mhz

Housing	
Material	Aluminium
Size	AL6-ES: L250 x W61 x H61 mm AL6-EM: L500 x W61 x H61 mm AL6-EL: L1000 x W61 x H61 mm
Weight	AL6-ES: 1kg (2.2lb) AL6-EM: 2kg (4.4lb) AL6-EL: 4kg (8.8lb)

Environmental Requirements	
Operational Temperature	0 ~ 50 °*C* work temperature
Environment	Indoor and Dry Outdoor

5 Advanced Operation

The AL6 offers a wide range of advanced settings, to suit the professional user. Most of the advanced possibilities can only be accessed through the ARC2 Remote Control.

As there are numerous settings, it is recommended to reset each unit, as well as the remote controller to **FACTORY DEFAULT** before they are set-up (again).

This can be done by entering the menu (hold Menu key for one second) and go to **FACTORY RESET**, and confirm with **YES**.

5.1 Extended Addressing

There are several ways to control only a selection of units, rather than all units at once:

a) Group addressing

b) Chain mode

c) Type addressing

d) Serial number addressing

5.1.1 Group Addressing

Each unit can be a set up to be a member of one group. In total, there are four groups: 1,2, 3 and 4. Each group of units can be controlled individually, or groups can be "linked" together. That means, programs will run over more than one group.

For example, if two groups are linked together, the rainbow effect will stretch over both.

Note: *This setting can be accessed by the RF Remote Control (ARC2) only.*

5.1.2 Chain Mode

A similar way of grouping units together is the chain mode. Using it, several units can form one virtual big unit. For example, if three units are put together into a chain, programs will always stretch over all three.

Note: It is required, that they all belong to the same group!

Chains can be set up with the ARC2 or through the control panel of the AL6 (Menu > Input Select > Auto Settings)

Setup of chain mode is done like this:

1. Decide maybe how units ought to be put into a chain. Then set the **CHAIN SIZE** parameter on all relevant units to this number.

2. Define the order of the units inside the chain. Then set **POS IN CHAIN** to the corresponding number. For example, if we have three units in chain, for the first unit it is set to "1", for the second to "2" and the third to "3".

These settings can be entered into the unit directly, or remote configuration can be used. please refer"Configure Units remotely".

Example:

We have three units, that should form a chain. The units should setup like this:

Unit 1:

CHAIN SIZE = 3 POS IN CHAIN = 1

Unit 2:

CHAIN SIZE = 3 POS IN CHAIN = 2

Unit 3:

CHAIN SIZE = 3 POS IN CHAIN = 3

Note: the maximum chain size it 32.

5.1.3 Type Addressing

Additionally to the group addressing, it is possible to address all units of a certain type. This can be setup in **SEND TO TYPE**.

Note: *This setting can be accessed by the RF Remote Control (ARC2) only.*

5.1.4 Serial Number Addressing

If it is necessary to address only a single unit, this can be done by entering its serial number.
Note: This setting can be accessed by the RF Remote Control (ARC2) only.

5.2 Overview of Programs

Note: *If more units are grouped or chained together, the effects stretch over all those units.*

Name	*Light Effect*	*Used colors*
ONE COLOR STATIC	All pixels show the same color	C1
TWO COLOR STATIC	Same as **ONE COLOR STATIC**, but not all pixels show the same color, they are divided into 2, 3 or 4 parts.	C1 C2
THREE COLOR STATIC		C1 C2 C3
FOUR COLOR STATIC		C1 C2 C3 C4
ONE COLOR FADE	All pixels show the same color, but the color changes between all four **USER COLORS**.	C1 C2 C3 C4
TWO COLOR FADE	Same as **ONE COLOR FADE**, but not all pixels show the same color, they are divided into 2, 3 or 4 parts.	C1 C2 C3 C4
THREE COLOR FADE		C1 C2 C3 C4
FOUR COLOR FADE		C1 C2 C3 C4
SIMPLE RUNNING	All pixels have C1 color, except one, that is running over them with C2.	C1 C2
DOUBLE RUNNING	Same as **SIMPLE RUNNING**, but two pixels are running over the background, in opposite directions.	C1 C2
TWO COL RUNNING	Same as **DOUBLE RUNNING**, but the two pixels are of different color.	C1 C2 C3
FLAG RUNNING	A "flag" consisting of three color stripes is running over the background.	C1 C2 C3 C4
DOUBLE FLAG RUNNING	Same as **FLAG RUNNING**, but two flags are running in opposite directions.	C1 C2 C3 C4
SPIRAL 4 COLORS	The color of all pixels is changing pixel by pixel from one color to the next. If the geometry of the unit allows it, the direction is circular.	C1 C2 C3 C4
SPIRAL 2 COLORS	Same as **SPIRAL 4 COLORS**, but the movement starts at both and in opposite directions, and moves back after all pixels are changed.	C1 C2
RAINBOW	A moving rainbow is shown on the units.	none
FIRE	A flickering fire-like effect is displayed. C1 is the background color, randomly pixels flash and flicker with C2.	C1 C2
ROTOR	The rotor programs are much like the **FADE** programs, but if the units are of tower-like shape, then a clockwise running rotor can be seen.	C1 C2 C3 C4
ROTOR SPLIT 2	Same as **ROTOR**, but two rotors in opposite directions are running.	C1 C2 C3 C4

Name	*Light Effect*	*Used colors*
ROTOR SPLIT 4	Same as **ROTOR**, but four rotors in opposite directions are running.	C1 C2 C3 C4

5.3 DMX Operation

All Wireless Astera products can alternatively be controlled by wireless DMX or standard wired XLR DMX. This type also have this two functions.

Hold down **MENU** for 1 second, display **INPUT SELECT**, then use "-" to select the input signal :XLR DMX/WIRELESS DMX

When units are controlled by WIRELESS DMX, they can be setup to offer different number of channels features to suit almost any application:

1. Normal mode: every pixel can be controlled by three or four DMX channels, RGB and optionally S(stroboscope).

2. Effect mode: the build in effect engine that is usually controlled by the remote control can also be used with WIRELESS DMX. In this mode, the four user colors can either be controlled by three DMX channels each, RGB, or by only one channel by color. Then a set predefined set of colors can be accessed: "Index Colors", this might be useful as a scanner profile with 4 "gobo-wheels" can be defined in a light control desk.

5.3.1 Parameters for DMX Operation

DMX ADDRESS

Sets the DMX-address.

CHANNELS

ALL PIXELS

Every pixel can be controlled individually by DMX.

REDUCED PIXELS

Pixels are combined to archive a fewer pixel count for easier control. Please

see manual of the specific device to see how many pixels will be present on DMX when this setting is chosen.

ONE PIXEL

The device can be controlled with only three DMX channels; all pixels are

combined to one.

DMX TAB

Several different DMX tables can be chosen:

RGB RGB S S ..

All RGB channels are followed by all stroboscope channels.

RGB S RGB S ..

For each pixel, there are three channels RGB and one channel stroboscope.

EFFECT MODE FIX

EFFECT MODE RGB

The integrated effect generator can be controlled by DMX.

STROBE

SINGLE

One DMX channel is supplied for the control of the stroboscope function, all

pixels will strobe identical. When using this setting, **DMX TAB** should not be set to **RGB S RGB S ..**

MULTIPLE

For each pixel, the stroboscope can be controlled individually.

OFF

Stroboscope is turned off globally.

DMX FAILURE

The behavior of the light in case of an interrupted DMX signal can be set.

HOLD

The output keeps unchanged; the last received DMX frame is displayed.

EMERGENCY LIGHT

If the DMX reception times out, the light turns white.

BLACKOUT

If the DMX reception times out, the light turns black.

5.3.2 DMX table for EFFECT MODE

Channel	EFFECT MODE FIX	EFFECT MODE RGB
1	INTENSITY	
2	STROBE	
3	PROGRAM	
4	SPEED	
5	FADE	
6	DIRECTION: 0..63: FFW+LOOP 64..127: FFW 128..190: REW 191..255: REW+LOOP	
7	SIZE: defines the virtual size of the program in groups. For example if SIZE is set to 2 groups, only half of the program is shown on the unit. 0..63: 1 group 64..127: 2 groups 128..191: 3 groups 192..255: 4 groups	
8	OFFSET: if SIZE is set to >1 group, the units pixels can be shifted within the virtually larger program. Increasing the OFFSET parameter scrolls the position of the unit within the virtual large program.	
9	RESTART PROGRAM: if value is changed, the program starts again from the beginning (useful if DIRECTION is not set to loop)	
10	INDEX COLOR 1	COL 1 RED
11	INDEX COLOR 2	COL 1 GREEN
12	INDEX COLOR 3	COL 1 BLUE
13	INDEX COLOR 4	COL 2 RED
14		COL 2 GREEN
15		COL 2 BLUE
16		COL 3 RED
17		COL 3 GREEN
18		COL 3 BLUE
18		COL 4 RED
20		COL 4 GREEN
21		COL 4 BLUE

5.4 Menu Reference

Hold MENU key for 1 second to enter menu

– INPUT SELECT

– AUTO

System will operate at auto mode.

– STANDALONE

System will operate standalone, don't care the DMX or RF

REMOTE CONTROL

System will operate according to Remote Controller

WIRELESS DMX

System will operate according to Remote wireless DMX

XLR DMX

System will operate according to XLR DMX

– AUTO SETTING

PROGRAM

Chooses the program.

INTENSITY

Sets the brightness of the LEDs.

SPEED

Speed of the programs.

FADE

Fade between programs steps.

DIRECTION

Adjusts direction and looping of programs.

FFW+LOOP

Programs run in normal (forward) direction, when a program is finished, it starts again.

REV+LOOP

Programs run in reversed direction, when a program is finished, it starts again.

FFW

Programs run in normal (forward) direction, when a program is finished, execution is stopped.

REV

Programs run in normal (forward) direction, when a program is finished, execution is stopped.

Set the group.

OFFSET

If SIZE is set to >1 group, the units pixels can be shifted within the virtually larger program. Increasing the OFFSET parameter scrolls the position of the unit within the virtual large program.

CHAIN SIZE

*Please refer to **5.1.2 Chain Mode**.*

POS IN CHAIN

*Please refer to 5**.1.2 Chain Mode**.*

USER COLORS

Settle RGB colors and the brightness.

SOUND TRIG

Enable Sound trig or disable.

– DMX SETTINGS

DMX ADDRESS

Sets the DMX-address

CHANNELS

ALL PIXELS

Every pixel can be controlled individually by DMX.

REDUCED PIXELS

Pixels are combined to archive a fewer pixel count for easier control. Please see manual of the specific device to see how many pixels will be present on DMX when this setting is chosen.

DMX TAB

EFFECT MODEL RGB

RGB S, RGB S..

EFFECT MODEL FIX

STROBE

SINGLE

One DMX channel is supplied for the control of the stroboscope function, all pixels will strobe identical. When using this setting, ***DMX TAB*** *should not be set to* ***RGB S RGB S ..***

MULTIPLE

For each pixel, the stroboscope can be controlled individually.

– DMX FAILURE

The behavior of the light in case of an interrupted DMX signal can be set.

HOLD

The output keeps unchanged, the last received DMX frame is displayed.

EMERGENCY LIGHT

If the DMX reception times out, the light turns white.

BLACKOUT

If the DMX reception times out, the light turns black.

– USE WHITE LEDs

ENABLED

The level of the white LEDs is calculated automatically corresponding to the RGB data. This setting usually reduces power consumption and so increases battery run-time.

DISABLED

The white LEDs are turned off.

– LED POWER

Most of the available light fixtures support different LED-power levels. This is useful to influence the battery runtime.

MAXIMISE RUNTIME

Lowest available brightness. Should be used if extended battery life is needed. For details on runtime, see the unit's manual.

NORMAL

At this level, any unit should run about 8 hours on battery, displaying **COLD WHITE.**

HIGH BRIGHTNESS

For some applications this setting suits best: only short duration on battery is required, or only single colors like **RED**, **GREEN** *are displayed most of the time.*

– WHITE CORRECTION

It can be necessary to recalibrate a unit after some time, or to adapt it to other RGB sources. Then this should be set to **ENABLED**.

– WHITE CALIB RED / GREEN / BLUE

If **WHITE CORRECTION** *is enabled, then this three parameters adjust the calibration. If set to "***255***", factory calibration applies. Lowering the values*

reduces brightness for the specific colors.

– AC FAILURE

Some units are capable of detecting a loss of AC power (if plugged in). It might be desirable to make the unit react on those conditions:

EMERGENCY LIGHT

LEDs turn white until AC power is restored.

NO ACTION

No reaction on loss of AC power.

BLACKOUT

LEDs turn dark in case of AC power loss.

– INFO

– FIRMWARE VERSION

Displays information on the installed firmware.

– RF LINK

Displays the frequency which is used for transmitting.

– FACTORY RESET

Here the remote can be reset to factory defaults.
Confirm with **YES** *or* **NO***.*

Note: Only the remote itself is reset this way. This has no effect on the units! If needed, they should be reset separately.

6 Troubleshooting

Faulty condition	*Cause*	*Troubleshooting*
The display of a unit is showing BLACK-OUT, and there is no light output.	Either the unit is set to BLACKOUT mode, or DMX-FAILURE/AC FAILURE is set to BLACKOUT and one of these conditions persist.	Press SEND button or change PROGRAM.
No LED light when the unit is switched on	Due to the vast number of settings, one can not always predict behavior of the units, if setup was already done earlier.	Set the brightness to other value.
Units behave incorrectly	Due to the vast number of settings, one can not always predict behavior of the units, if setup was already done earlier.	Do FACTORY RESET on units and/or remote control.
Couldn't turn on the system	Maybe the battery is run out.	Plug the AC input, and put the system charge 1 hour more, then can turn ON
Units will go out of battery after only 6 hours of operation.	The AL6 may last only 8 hours with COLD WHITE, if the LED POWER is set to NORMAL. For HIGH BRIGHTNESS the run time may be shorter than 8 hours.	Adjust LED POWER and/or see manual of the unit.
DMX cable is plugged in but the LEDs don't react according to the DMXsignal, and the LCD does not display DMX LINK OK.	The DMX signal is not received	Change another XLR cable, and make sure there is no problem on the DMX signal output device.

7 Disposal

Follow local ordinances and/or regulations for disposal!

PACKAGING:

The unit is shipped in protective packaging.
This packaging can be recycled!

UNIT:

Don't throw the unit into the garbage at the end of its lifetime.
Make sure to dispose is according to your local ordinances and/or regulations, to avoid polluting the environment!

BATTERIES:

Don't throw empty batteries into the garbage!

Bring them to a collecting point for used batteries!