AYRA

ALO 060
DMX LED scanner

User manual

Safety instructions

This unit must be operated by, or under the supervision of an adult. This device is not suitable for children.

Every person involved with the installation, operation and maintenance of this device has to:
- Be qualified
- Follow the instructions of this manual

- Make sure there is no damage caused by transport. If the device seems damaged from the outside, do not use it and contact your dealer for more information and consultation.
- To make sure the device maintains in perfect condition and for safe operation, it is necessary for the user to follow the instructions and warning notes of this user manual.
- Damage caused by improper use or modifications to the device are not covered by warranty.
- This device does not have any user-serviceable parts inside. Servicing of this device needs to be done by qualified technicians.

Important notes regarding safety and health:
- Never let the power cord come in contact with other cables. Handle the power cord and all connectors with the mains with caution.
- Never remove any warning or informative labels from the unit
- The ground contact always needs to be connected. Do not cover or remove the ground contact.
- Never leave cables lying around
- Do not open the device and do not modify any hard- or software of this unit.
- Do not insert this object into air vents.
- Do not connect this device to a dimmerpack.
- Do not switch the system on and off frequently as this will reduce the lifespan of the device.
- Do not drive the inputs of the fixture with a signal larger than required to work at full performance.
- Only use this device indoor, avoid contact with water, moist or other liquids. Do not place items filled with liquids on top of the unit.
- Avoid nearby flames or heat sources, do not place this device near flammable liquids, gas or flammable items.
- Always disconnect the device when it is not in use for a longer period or time, when servicing is needed or when the device needs cleaning.

- Only handle the power cord by its connectors. Never pull the cable to remove a connector from its socket, as this could lead to damage and electrical shocks.
- Always operate this device with a stable AC current.
- Always operate this device with the AC ground wire connected to the electrical system's ground.
- Never use other types of cables than specified in the manual, do not use defective or bad functioning cables. Contact your dealer when the included or required cables do not work properly with this device.
- When the device has been exposed to large temperature differences (for example, transport from outdoor to indoor), do not connect the device immediately. Do not activate the unit until it has reached room temperature, as moist might build up inside the unit, which may cause shortcuts and/or electrical shocks.

Guidelines and types of use:
- This device is intented to be used by professionals on stage, in theatres, clubs and other equal venues.
- This device is not suitable for children and always needs to be operated by an adult.
- Only use the device when the environment is suitable and will not cause any damage. Do not use the product in moist or dusty environments, or where long-term damage may occur such as:
  - indoor swimming pools where chlorine is used.
  - Beaches, where sand and salt are present.
  - Outdoor, without roof protection
  - Indoor areas where intense heat sources are present or where the temperature exceeds levels which are comfortable for humans.
- Only use the included power adapter and only connect the device to a suitable power outlet with the correct output voltage. Connecting the device to a power outlet with the wrong type of voltage or using the prodcut with a wrong type of power supply may cause permanent damage to the device.
- Avoid shocks and collission during use and transport. Do not transport the device while in use. Avoid brute force during the installation and operation of this device.
- Familiarise yourself with the functions of the device before use. Do not allow operation of the device by unskilled or unqualified people.
- Use of the device in other ways than described in this user manual may cause damage and injury. Ayra does not take responsibility for any damage or injury caused by improper use.

Storage and transport:
- This device is intended for mobile use. When transported, use the original packaging of the product, or a fitting flightcase, preferably filled with foam.
- This device is not intended for permanent use. Operation breaks will ensure that the lifespan of the device remains unchanged.
- If the device is not used for a longer period of time, disconnect it from its power source and store it in its original packaging, or in a fitting flightcase.
- Store the device indoor, dry and do not expose the device to extreme temperature differences.

Housing:
- Inspect the housing of the device frequently. Severe dents, cracks and missing screws should be avoided at all costs. Do not use the device when the housing is not in optimal condition. Contact your dealer or a skilled technician when in doubt about the state of the device
- Check the fixture and screws for corrosion. Corrosion should not be present on the fixture. Contact your dealer or a skilled technician when corrosion is found on the fixture
- Every power or signal chassis/connector should be mounted tightly. Do not use the device when connectors are loose.
- Do not use the power cord when the cores are visible. Contact your dealer for a replacement if needed.
- Avoid the buildup of dust and dirt. Clean the exterior of the fixture every month with a dry or damp cloth. When using the device intensively, the cleaning frequency needs to be increased.

Fuses:
- The main fuse of this device is to be found on the rear of the device. In most cases, directly next to the power inlet.
- Only replace a fuse for a new one with the same type and rating! Do not use a fuse with a higher or lower rating.
- Do not bridge the fuse with electrical wires, aluminum foil, as the fuse is used for protection against electrical shocks and short circuit.
- Always mount the fuse cover back to the fuse compartment.

Box contents

Box contents
1x ALO 060 fixture
1x power cable

Unit and accessory inspection
- Always use the supplied power cable to connect the unit to a power supply. If the cable appears broken or has visible damage, do not use it.
- If the unit is not going to be used for a longer period of time, disconnect it from the power supply and store it in a dust-free environment.
- Always check the unit for possible damage before use. If you suspect that something is wrong with the unit, do not connect it to a power source! When you suspect that your unit is broken or damaged, contact your local dealer or a certified technician to inspect the unit.

Device overview

1. Beam output
2. Adjustable bracket
3. Built-in microphone
4. DMX input (3P XLR)
5. DMX output (3P XLR)
6. Menu display with buttons
7. Safety eye
8. IEC output (Power link)
9. IEC input with fuse

Setting up the unit

To activate the unit, connect the included power supply to the unit and a suitable 230V, 50 Hz power outlet.

The fixture will start up and show the last chosen setting on the display. Usually, with a new product, this is the DMX mode with the value set on 001.
The display shows several settings, each with the possibility to set several values.

Use the display and the menu buttons on the bottom to set preferences, change settings and scroll through the menu. "Enter" is used to save a certain setting or preset, press "Menu" for at least 2 seconds to discard the change and return to the main menu.

The table below shows an explanation for every feature and value.

display	Mode	Function
ADDR	DMX address setting	A001-A512
CHND	Channel mode	8CH mode/11CH mode
SLND	Master/slave mode	Master (default) Slave 1 - Slave 2
SPLC	Split color mode	YES-NO
SOUN	Sound controlled mode	Sound controlled mode on/off
SENS	Sound sensitivity	Sound sensitivity 0-100
BLND	Advanced Blackout Control	No: Normal operation Yes: No light during movement
LED	LED mode	ON-OFF
DISP	Display inversion	Display Inversion, ldsp-dspl
PAn	Pan inversion	YES-NO
TILT	Tilt inversion	YES-NO
TEST	Test mode	Self test
TEMP	Temperature	0 ~ 9999
Hour	Using time of light	Fixture hours,0 ~ 9999
RSEt	Reset	reset

ADDR: DMX address setting, used to determine the DMX starting channel. From this channel on, the fixture will respond to values, corresponding with the amount of channels that the fixture is occupying. (For example, when you set the starting address to value 003, the fixture will respond to channels 3, 4, 5 etc.)

CHND: The channel mode of the fixture makes it possible to use the correct channel mode setting for every application. For simple and basic setups, users may prefer to use the 8CH mode. For advanced setup, users may prefer to choose the 11CH mode.

SLND: When using the master/slave function, you need to connect 2 or more fixtures with XLR-XLR cable. The first fixture in line needs to be set as master, the others as Slave 1 or 2 (synchronized or mirrored performance). This way, the slaves will mimic the behavior of the master fixture for wonderful synchronized lighting shows.

SPLC: Split Color mode: The split color mode makes it possible to stop the color wheel between two colors,

SOUN: Activate or disable the built-in sound controlled mode. This way, the fixture will respond to the beat of the music.

SENS: The sensitivity of the built-in microphone is adjustable, to optimize the built-in sound controlled mode. For example, when your music source (speakers) are placed far away, you might want to increase the sensitivity to make sure that the fixture responds to the sound accurately.

which causes 2 colors to be projected at the same time. This way, you can create duo-color figures and spot effects, which can be a colorful addition to your lightshow and color scheme.

BLND: Advanced Blackout Control – When not selected, the scanner will work in a normal operating mode. When activated, the beam output will only be active when the mirror/gobos/colours are not moving or changing.

Led: The LED display will shut off automatically after a few seconds when this function is activated. When pressing any button, the display will activate again. When deactivating the feature, the display will be lit permanently.

DISP: Display invert version – When using the fixture in a hanging setup, it is possible to flip the display, so the characters will be shown upside down. This makes reading the several statuses much easier.

PAn/TILT: These modes are used to invert the pan/tilt signal for the fixture. When using multiple fixtures in your light show, this is an easy way to create wonderful synchronized mirrored movements. Especially in master/slave mode this is a very easy way to create dynamic light shows.

TEST: Self test mode, to control all segments and LEDs

TEMP: Current fixture temperature (in Celsius)

Hour: The fixture shows how much hours it has been active. This is very practical for rental companies which need to perform service intervals on all fixtures after several hours of performing, to maintain optimal shape.

RsEt: Reset function, which resets the fixture completely. This function is practical when you have a running lighting setup and, for example, one of the mirrors was touched by somebody in the audience, causing movements to lose their alignment.

The ALO 060 is equipped with several working modes, each with its own advantages. For simple events there are stand-alone modes, for advanced situations there are options to create synchronized lightshows, or controlled with a DMX-512 controller. A short description for each mode can be found below:

Auto:
Automatic lightshow with a pre-programmed internal show, on a pre-defined speed.

Sound:
Automatic lightshow with a pre-programmed internal show, on the beat of the music, thanks to an internal microphone which senses the beat of the music and will change a step every time a beat is detected.

Slave:
In master/slave mode, it is possible to link several ALO 060 fixtures together, to create synchronized lightshows in the Auto or Sound mode. The first fixture in the chain needs to be set in the Auto or Music mode. All the next fixtures need to be set to Slave and will mimic the behavior of the first fixture. The master/slave function requires XLR – XLR cables (not included).

DMX:
The ALO 060 can be connected to a DMX-controller with standard XLR – XLR cable. While doing so, a DMX-terminator must be connected to the last fixture, at the end of the DMX-chain. This prevents reflections in the DMX-signal, which could cause flickering and unwanted behavior from your intelligent fixtures.

A DMX terminator is a XLR connector with a resistor of 120 Ohm, placed between pin 2 and 3 as a bridge.

The ALO 060 can be controlled by DMX with the following channel setups:

8CH mode:

CH1	000-255	Pan 0°~ 180°
CH2	000 - 255	Tilt 0°~ 75°
CH3	000-007 Blackout 008-015 Open 016-131 Strobe slow to fast 132-139 Open 140-181 Slow open fast close 182-189 Open 190-231 Fast open slow close 232-239 Open 240-247 Random strobe 248-255 Open	Shutter
CH4	000-014 White 015-028 Color 1 029-042 Color 2 043-056 Color 3 057-070 Color 4 071-084 Color 5 085-098 Color 6 099-112 Color 7 113-127 Color 8 128-191 Rainbow effect clockwise rotation fast to slow 192-255 Rainbow effect counterclockwise rotation slow to fast	Color
CH5	000-007 Open 008-015 Gobo 1 016-023 Gobo 2 024-031 Gobo 3 032-039 Gobo 4 040-047 Gobo 5 048-055 Gobo 6 056-063 Gobo 7 064-073 Gobo 1 shaking 074-082 Gobo 2 shaking 083-091 Gobo 3 shaking 092-100 Gobo 4 shaking 101-109 Gobo 5 shaking 110-118 Gobo 6 shaking 119-127 Gobo 7 shaking 128-189 Gobo change clockwise rotation fast to slow 190-193 Stop 194-255 Gobo change counterclockwise rotation slow to fast	Gobo
CH6	000-127 Gobo index 0-360° 128-189 Clockwise rotation fast to slow 190-193 Stop 194-255 counterclockwise rotation slow to fast	Gobo Rotation
CH7	000 - 255 Dimmer 0 ~ 100%	Dimmer
CH8	000-069 No function 070-079 Enable Blackout when pan/tilt move 080-089 Disable Blackout when pan/tilt move 090-099 Blackout when color change 100-109 Disabled blackout when color change 110-119 Blackout when gobo change 120-129 Disabled blackout when gobo change 130-199 No function 200-209 Reset 210-239 No function 240-255 Stand-alone	Special function

11CH Mode:

CH1	000-255	Pan 0°~ 180°
CH2	000-255	Pan Fine
CH3	000-255	Tilt 0°~ 75°
CH4	000-255	Tilt Fine
CH5	000-255	Pan/Tilt move speed Fast to slow
CH6	000 - 255	Dimmer 0 ~ 100%
CH7	000-007 Blackout 008-015 Open 016-131 Strobe slow to fast 132-139 Open 140-181 Slow open fast close 182-189 Open 190-231 Fast open slow close 232-239 Open 240-247 Random strobe 248-255 Open	Shutter
CH8	000-014 White 015-028 Color 1 029-042 Color 2 043-056 Color 3 057-070 Color 4 071-084 Color 5 085-098 Color 6 099-112 Color 7 113-127 Color 8 128-191 Rainbow effect clockwise rotation fast to slow 192-255 Rainbow effect counterclockwise rotation slow to fast	Color
CH9	000-007 Open 008-015 Gobo 1 016-023 Gobo 2 024-031 Gobo 3 032-039 Gobo 4 040-047 Gobo 5 048-055 Gobo 6 056-063 Gobo 7 064-073 Gobo 1 shaking 074-082 Gobo 2 shaking 083-091 Gobo 3 shaking 092-100 Gobo 4 shaking 101-109 Gobo 5 shaking 110-118 Gobo 6 shaking 119-127 Gobo 7 shaking 128-189 Gobo change clockwise rotation fast to slow 190-193 Stop 194-255 Gobo change counterclockwise rotation slow to fas	Gobo
CH10	000-127 Gobo index 0-360° 128-189 Clockwise rotation fast to slow 190-193 Stop 194-255 counterclockwise rotation slow to fast	Gobo Rotation
CH11	000-069 No function 070-079 Enable Blackout when pan/tilt move 080-089 Disable Blackout when pan/tilt move 090-099 Blackout when color change 100-109 Disabled blackout when color change 110-119 Blackout when gobo change 120-129 Disabled blackout when gobo change 130-199 No function 200-209 Reset 210-239 No function 240-255 Stand-alone	Special functions

NOTE:

The last channel in 8/11 DMX mode is also known as the **A.B.C. channel,** which is **Advanced Blackout Control**. This feature is used for theatrical applications, where movement of scanner mirrors and the change of colors/gobos does not need to be visible for the audience. For example, when changing scenery from a blue bubble-gobo on position 1 to a red tunnel gobo on position 2, it is possible that the audience sees the movement and the switching of colors/gobos, causing distraction and a messy switch of scenery.
For disco applications this function can also be used in a creative way, especially when fast movement of mirrors is wanted, with shutter chases. This function can also be selected on the display for the fixture in every working mode (but with DMX you are able to activate or deactivate it remotely).

Also, this channel is equipped with a reset-value, which resets the fixture completely from distance. This is practical if there are any complications with a scanner and you want to perform a specific reset task on 1 fixture without disturbing the rest of the show.

Technical specifications

- Powerful scanner with LED light source
- Light source: 60 Watt LED chip
- Smooth mirror movement – accurate stepping motors
- Pan/tilt inverse option for every working mode
- Seperate colour- and gobowheel
- 8 colours + white
- 8 gobos + open
- Rotating and indexable gobo's
- Gobo shake effect
- Colour + gobo scroll effect
- Built-in shows
- A.B.C. (Advanced Blackout Control) ready - Block the light output when pan/tilt is active, or while changing gobo/colours
- High precision optics with manually adjustable focus
- Dimmer, (random) strobe and pulse effects
- Working modes: Automatic, music-controlled, master/slave, DMX
- DMX operation: 8 or 11 channels
- Adjustable microphone sensitivity for music-controlled mode
- IEC in- and output for easy power daisy-chaining
- Menu display and buttons for easy adjustment of settings
- Low power consumption – High output – Long lifespan

Connectors:
- DMX: 3p XLR male and female
- Power: IEC power input and Power Link output

Electronics:
- Voltage: AC100-240V 50/60Hz
- Power: 110W
– Fuse: F3AL 250V

Physical:
- Fixture dimensions: 480 x 250 x 145 mm
- Weight: 5 kg

Included accessories:
– Power cable (Schuko to IEC)

Connectors and wiring schematics:

DMX-connections:

DMX-output
XLR mounting-socket:

1: Ground
2: Signal (–)
3: Signal (+)

DMX-input
XLR mounting-plug:

1: Ground
2: Signal (–)
3: Signal (+)

Electrical wiring:

Cable	Pin	International
Brown	Live	L
Blue	Neutral	N
Yellow/Green	Earth	⏚