

# TDC CROSS

# **DMX LED light effect with 5 lenses**



**User manual** 

## Safety precautions

**WARNING:** This unit may cause serious injury to the eyes when used incorrectly. It is therefore strongly advised to read this user manual carefully, to get familiance yourself with the functions of this device.

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

**WARNING:** Do not look directly into the beam from a short distance. This may cause serious injury to the eyes. Ayra is not responsible for any injuries caused by incorrect use of this device.

## Installation requirements:

- Always check the power supply to which you want to connect the device. If the voltage requirements do not meet, do not connect the device as this may cause serious damage.
- This device must be installed by a professional technician, in a standing or hanging position. Only use the included mounting bracket if you want to position the unit against a ceiling or truss system.
- When installed in a hanging position above your audience, this unit **MUST** be secured by using a safety cable, capable of holding 10x the weight of this device.
- The unit is designed to be installed with a halfcoupler or G-clamp, by using the included mounting bracket. Direct installation with proper bolts is also possible.
- Make sure there are no flammable objects in the direct environment of the device.
- Do not block the beam-exit.
- Keep a minimum distance of 0.25 meter from any walls to provide sufficient cooling.
- Make sure the beam-exit is not blocked by any objects in the near environment.
- Always use the included power supply. Contact your local dealer for a replacement unit if necessary.

#### **Maintenance and protection**

- Keep the unit away from dusty environments, as this may have negative effects on the ventilation and optics. Clean the optics with a small, soft brush and vacuum cleaner when needed. Clean the housing of the unit with a damp cloth. **WARNING:** Always disconnect the unit from the power supply when cleaning the unit. Reconnect the unit only when any moist on the fixture has evaporated completely.
- Do not switch the power on and off frequently, as this may cause serious damage to the unit.
- Avoid heavy shocks and collision during transport and use, as this may cause damage to the LED light source, electronic circuit, optics and housing.
- Keep the device away from moisture, rain, water or any liquids as this may cause a short circuit and/or electric shocks. If any liquid enters the unit, power supply or housing of the unit, disconnect the unit immediately and do not reconnect the power supply. Contact your local dealer or technician to inspect the unit for any damage.

## **Box contents**

## **Box contents**

1x TDC Cross 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.
- When your device does not generate any light, do not look directly into the lens. When the fixture suddenly produces a beam, it may cause injury to your eyes.



## **Device overview**



- 1. Beam output
- 2. Adjustable bracket
- 3. IEC Power inlet with integrated fuse holder
- 4. Control panel display with MENU, UP and DOWN buttons
- 5. Built-in microphone for sound active mode
- 6. DMX input (3P XLR)
- 7. DMX output (3P XLR)

## Setting up the unit

To activate the unit, connect the included power supply with the unit and a suitable 230V, 50 Hz power outlet. The unit will activate directly after it is plugged in to a wall outlet or other power source.

The status of the fixture is shown on the display. Certain values determine the current status and will change when you push buttons on the control panel. The buttons each have their own function, for easy navigation in the control panel. When connecting the unit for the first time,

Press the 'MENU' button to switch modes, so you can easily select the built-in master/slave, music controlled or DMX mode. Press 'Enter' to confirm a setting.

#### Display codes:

#### DMX-Mode: Addr / 1:

This value represents the DMX channel where the scanner is currently set to. 1 stands for channel 1, but can be changed with the UP and DOWN buttons to a value from 1 to 255.

When receiving DMX data, a small red dot on the display will blink continuously, regardless of what function is being used.

#### Music controlled mode: Soun:

When no DMX-signal is detected in DMX-mode, or when you select the master-mode, the unit will turn itself into music controlled mode, displaying 'Soun'. Use the microphone sensitivity potentiometer to adjust the sensitivity of the internal microphone for optimal light to sound functionality. When no music is detected, the scanner will play a slow automatic program until a beat or loud sound is detected. The Sound mode can be activated or de-activated.

#### Master/Slave mode: Nast / SL 1 / SL 2:

The 'Nast' value stands for the master-unit, which will use the internal microphone to perform music-controlled. This fixture will send out a signal for slave fixtures, which you may connect using standard XLR male to XLR female cables (not included).

The slave units show 'SL 1' or 'SL 2' on the display. This way you can select a synchronous or horizontal mirrored slave-function, for more dynamic effects.

#### Stand-alone mode: Shnd:

This mode uses the internal programs of the unit to perform a stand-alone light show. The TDC Cross has 13 built-in programs, varying from 0 to 12. When the internal microphone is active, the unit will change the beam output on every detected beat. When there is no music detected, the unit will provide a steady and slow change of patterns.

When the internal microphone is not active, the unit will play the programs on a predefined speed.

#### Microphone sensitivity: Sens

The microphone sensitivity is digitally adjustable between 0 and 100. 0 is a very low sensitivity, 100 is a very high sensitivity. Feel free to adjust this sensitivity until you have reached the optimal setting.

## **LED display mode:** Led:

The LED display of the unit can be turned off during use, which makes your light-show more attractive, especially if the display is visible for your audience. When using the menu-buttons the display will be lit, but after several seconds inactivity the display will be turned off. When pressing one of the menu buttons the display will activate itself again. The off value means display OFF, the on value means

display ON. The DMX indicating dot will not turn off for convenience reasons.

## Flip display: Disp

When activating this function, the LED display will flip upside-down. This might be convenient when the fixture is installed in a certain way and you need to read the values on the display.

#### Channel mode: Chnd

This mode changes the DMX channel mode between 1 and 4. Each mode has its own characteristics, which makes basic, medium or advanced control possible.

## Working time: hour:

It is possible to see the total working time of this fixture, by activating this feature.

#### Test mode: test:

The unit will test all its internal programs.

#### Version: Vers

This feature is only intended for technical purposes and shows the current firmware version of the unit. This can not be changed.

#### DMX control mode:

This fixture can be controlled using a DMX-controller and standard XLR male to XLR female cable. When doing so, make sure your DMX-controller is capable of controlling your fixture. When in doubt, contact your local dealer for advice.

Set the correct address on the digital display, you are able to choose a value between 001 and 255. When a DMX-signal is received, a blinking red dot on the display is active.

**NOTE:** At some point, mirror-motors and lenses will be identified by using the numbers 1, 2, 3 and 4. The numbers apply from left to right. The most left mirror is mirror 1, the most right mirror is mirror 4.

This unit has the following DMX-channels and DMX-values:

## 1 channel DMX mode

Channel 1: Pattern

Start value	End value	Function
0	7	Blackout
8	17	Chase 1
18	27	Chase 2
28	37	Chase 3
38	46	Chase 4
47	56	Chase 5
57	66	Chase 6
67	75	Chase 7
76	85	Chase 8
86	95	Chase 9
96	104	Chase 10
105	114	Chase 11
115	124	Chase 12
125	133	Chase 13

134	143	Chase 14
144	153	Chase 15
154	162	Chase 16
163	172	Chase 17
173	182	Chase 18
183	191	Chase 19
192	201	Chase 20
202	211	Chase 21
212	220	Chase 22
221	230	Chase 23
231	240	Chase 24
241	249	Chase 25
250	255	Random

## 4 channel DMX mode

Channel 1: Mode selection

Start value	End value	Function
0	9	Off
10	129	Synchronous show
130	249	Asynchronous show
250	255	Sound active

Channel 2: Chase selection

Start value	End value	Function
0	21	Chase 1
22	42	Chase 2
43	63	Chase 3
64	85	Chase 4
86	106	Chase 5
107	127	Chase 6
128	149	Chase 7
107	127	Chase 8
128	149	Chase 9
150	170	Chase 10
171	191	Chase 11
192	213	Chase 12
214	234	Chase 13
235	255	Chase 14

Channel 3: Variable speed (slow-fast)

Channel 4: Strobe (slow-fast)

## Installation and maintenance

## Mounting the bracket

A pre-mounted hanging bracket is provided, with screwknobs at both sides of the fixture. This bracket can be used to install the unit to a fixed structure, such as a T-bar or truss.

## Installing the scanner in a hanging position

When you wish to hang the scanner against a wall, ceiling or beam, make sure to use proper installation tools and let a skilled technician install the scanner for you.

When you wish to install the scanner to a lighting stand or truss system, use a G-clamp or halfcoupler for optimal, safe and stable fixation. Check the technical specifications of your light stand or truss system to gather more information on maximal loads and other safety precautions.

## **Transport**

When using this fixture in mobile setups, provide sufficient protection during transport. Use the original packaging of this unit, or use a professional flightcase with proper foam inlay. This way the electronics, optics and housing are protected against severe shocks, exterior damage and failing electronics.

## Replacing the internal fuse

First check whether a failing power supply may be the cause of malfunction. When you suspect that the internal fuse is broken, the fuse can be replaced by removing the fuse cover, located directly below the power inlet.

**WARNING:** Before changing the fuse, always disconnect the fixture from your wall outlet or any other power supply to prevent electric shocks.

Always replace a broken fuse with a fuse that has the same type and rating. After the fuse has been replaced, always close the fuse-cover. Reconnect the fixture to your power supply and check whether the problem is solved. When this does not solve your problem, contact your local dealer for help.

#### **Spare parts**

This unit has no user serviceable parts inside. When any damage to internal components occur, contact your local dealer or a specialized technician in order to repair the fixture.

#### Cleaning:

Clean the housing of the fixture frequently with a damp cloth, to remove dust and/or dirt. **WARNING:** Always disconnect the fixture from your wall outlet or other power supply and let the fixture dry before reconnecting it. This prevents possible electrical shocks.

The lenses can be cleaned with a non-aggressive glass cleaning solution, but is not recommended. Ayra recommends to clean the mirror and lens with a fine brush, while removing dust and/or dirt with a vacuum cleaner. Avoid touching the lenses with your bare fingers, to prevent fingerprints on the optics.

#### Checkup

To prevent dangerous situations, make sure your fixture is in optimal condition before using it. Check your fixture frequently by using the following checklist:

- All screws must be mounted tightly.
- Check all screws and metal parts for corrosion. No visible corrosion may be present.
- The exterior of your fixture must be in optimal condition. Check your fixture for dents, cracks or missing parts.
- Your installation spot must be in optimal condition. Check your installation spot for corrosion, cracks, dents and strength.

- Electrical components (connectors and cables) must be in optimal condition. Any form of damage (cuts, exposed wire cores or any other visual deformities should not be present.

If any visual or mechanical damage is detected, contact your local dealer or a specialized technician. Do not use a damaged or failing fixture.

## **Connectors and wiring schematics:**

# DMX-connections: DMX-output

XLR mounting-socket:



## DMX-input XLR mounting-plug:



## **Electrical wiring:**

Cable	Pin	International
Brown	Live	L
Blue	Neutral	N
Yellow/Green	Earth	<b>(</b>



## **Technical specifications**

- LED light effect with 5 lenses
- Light source: 320 LEDs (80 red, 80 green, 80 blue, 40 white, 40 amber
- 1 or 4 DMX-channels
- 3-pin XLR in- and output
- Music controlled mode with internal microphone
- Microphone sensitivity adjustable through menu
- Working modes: music controlled, DMX, automatic, test, master/slave
- Power consumption: 40 Watt
- Fuse: T6.3A 250V 20mm glass fast blow
- Power supply: 230V AC, 50 Hz
- Measurements: 457 x 433 x 286 mm (with bracket)
- Weight: 4 kg

#### **Connectors:**

- DMX: 3p XLR male and female- Power: IEC power connector

## Included accessories:

- Power cable with Shucko & IEC connectors

