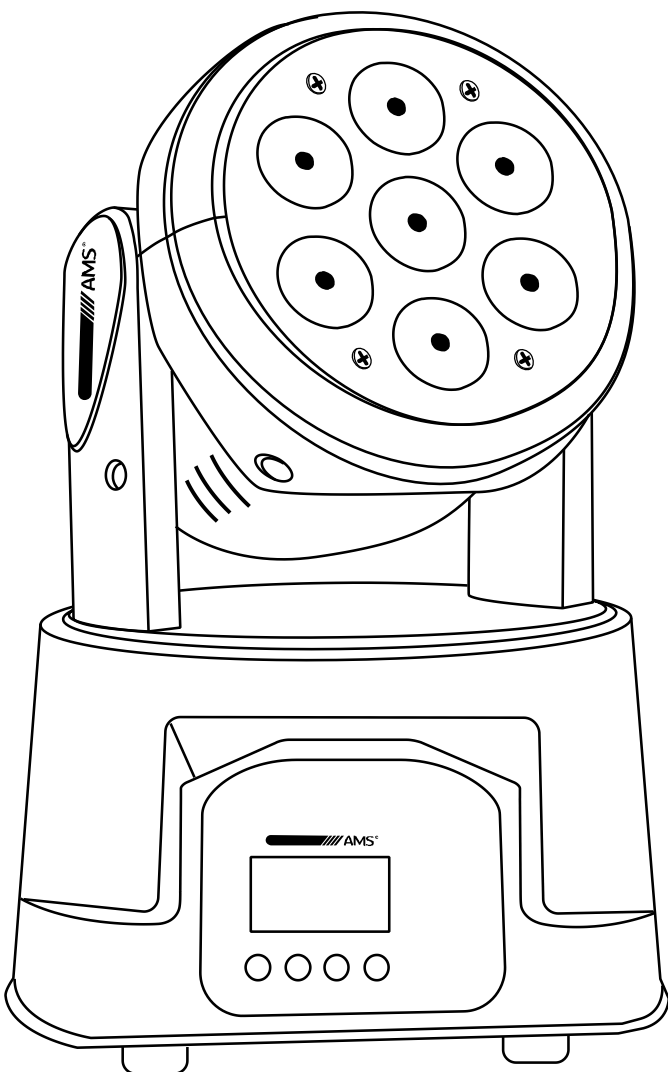


# MOVING 70

ENGLISH



# SAFETY INSTRUCTIONS

1. Read the instructions of this manual.
2. Keep these instructions in a safe place.
3. Heed all warnings.
4. Follow all instructions.
5. Please, respect your country safety regulations.
6. Don't use this device close to the water or high humidity places. Clean only with dry cloth.
7. Don't install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. Make certain that the equipment is always installed so that is cooled and can't overheat.
8. Don't block any ventilation openings. Install in accordance with the manufacturer's instructions.
9. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
10. Only use attachments/accessories specified by MARK.
11. Unplug this device during lightning storms or when unused for long periods of time.
12. The technical service is required when the device has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the device, doesn't operate normally or has been dropped.
13. To completely disconnect this apparatus from the AC mains, disconnect the power supply cord plug from the AC receptacle.
14. The mains plug of the power supply cord shall remain readily operable.
15. WARNING – to reduce the risk of fire or electric shock, don't expose this device to rain or humidity.
16. Don't expose this equipment to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the equipment.

# GENERAL DESCRIPTION

This small-sized, but high-power, high-performance moving head incorporates 7 LEDs of 10 W RGBW each, integrating the three RGB primary colors in the same LED and also White as a pure color, in this way the mixture obtained is more homogeneous. Its great luminosity allows it to be placed in installations to replace traditional lighting bulbs, with the advantages of saving power, absence of generated heat and duration. Furthermore, in this case, it is a mobile device, therefore, the number of applications to which it can be dedicated is even greater.

Its highly efficient motors allow fluid movements with the absence of noise. It has various control modes: DMX (with configuration for 8/13 channels), Auto (thanks to its internal programs and built-in microphone), and Master / Slave. Among the incorporated functions, the possibility of controlling the speed of execution of the programs, inversion of PAN / TILT movements and Strobe stands out.

All functions and configurations can be carried out through its interface, which has buttons for accessing menus and a large display.

## Technical Data:

Main supply	220-240V 50/60Hz
Consumption	68W (0.30A), MAX at 230V
Light source	7x 10W LEDs RGBW
Pan	180°, 360°, 540°
Tilt	90°, 180°
Control modes	Audio / Master-Slave / Auto / Strobe / DMX
Channels	8-13 DMX
Input connection	XLR 3 Pin Male
Output connection	XLR 3 Pin Female
Dimensions	225 x 225 x 270 mm
Weight	2.7 Kg

## Features:

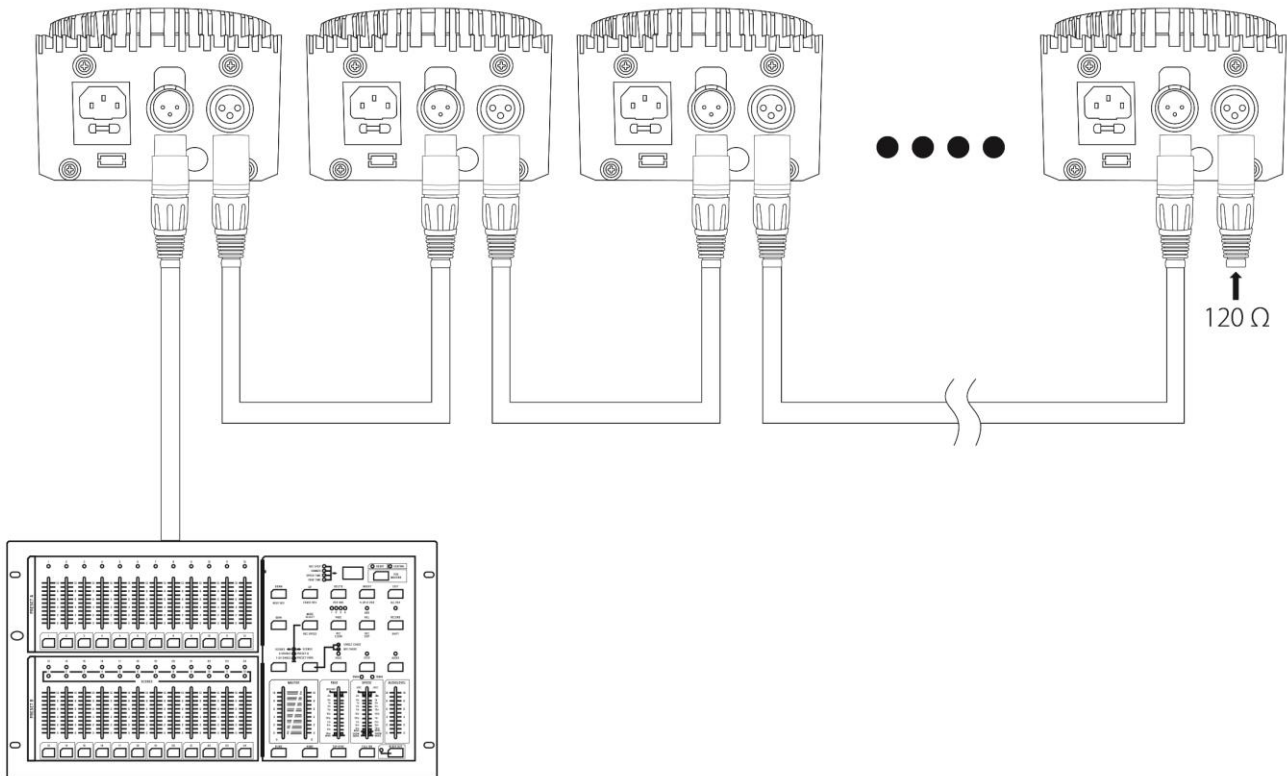
It incorporates 7 high-power 10 W RGBW LEDs. The device can be controlled individually or through the DMX protocol. Smooth dimmer for variable strobe effect.

Various operating modes such as Audio / Master-Slave / Auto / Strobe / DMX.

Thanks to its small size, it is an ideal device for discos, clubs, nightclubs, mobile DJs, etc.

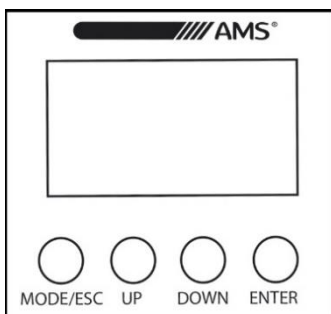
# USING & INSTALLATION

**MOVING 70** has on its front panel a screen and navigation buttons to access both the MENU and all the functions and effects that the device offers. To start working with the device, first connect the unit to the mains.



To connect several units to each other, you must connect them using a 3-pin DMX cable, you must bear in mind that to avoid possible problems you must terminate the line with a 120 Ohm load.

The unit can work under different operating modes. Through the menu you can select each one of them and configure the device as necessary.



BUTTON	FUNCTION
Model/ESC	To Access to the menu and return to previous
Up/Down	Allow to navigate through the different menus/submenus
Enter	Select and accept the parameter

When a menu function is selected, the display will immediately show the first available option for the selected menu. In order to navigate through the menu and submenus, you must use the UP-DOWN and ENTER controls to select the desired option.

# ADVANCE USE

## Setup through DMX:

- 1- Connect the 3-pin male DMX connector to the unit. This cable at its end must be connected to an external DMX controller. **Configuración Master/Esclavo:**

When connecting more than the same unit in series, you must connect the output of the first unit with the input of the second, and so on. The rest of the units except the first must be in slave mode.

## Navigation through the menu:

The unit has up to six different modes of operation, some of them even with sub-menus. To start operating the unit, please press the MODE / ESC button as many times as necessary. Navigate through the menu and sub-menu using the UP and DOWN buttons, press the ENTER button to select the required option. To be able to go back steps or to the main menu without altering the selection made previously, press the MODE / ESC button. After a few seconds, the LCD screen will return to showing the status of the menu you are currently in.

## Setup through the user:

### Setting the angles of the PAN effect

To select this setting, press the MODE / ESC button and use the UP and DOWN buttons to select the following options "PA18", "PA36" or "PA54".

LED display	Max. PAN
PA 18	180°
PA 36	360°
PA 54	540°

### Setting the angles of the TILT effect

LED display	Max TILT
T.9	90°
T.18	180°

**MOVING 70** can be installed in truss structures thanks to its mounting system, so the unit may be inverted, when it is, the option to invert the screen can be selected through the menu for better visualization and ease of use, as well as the TILT and PAN effect.

To do this, press the MODE / ESC button and choose PAN (normal) or R PAN (inverted). The UP and DOWN buttons will toggle between the two options. To choose the desired one, press ENTER.

If you want to invert the TILT effect as well, press MODE / ESC and choose T.L as normal mode or RT.L (inverted) and press ENTER for the desired option.

If you want the LCD screen to also appear inverted, press the MODE / ESC button and choose D.S (normal) or RD.S (inverted). Use the UP and DOWN navigation buttons to choose the necessary option and press ENTER.

## Automatic mode:

Various modes can be selected as different presets. This mode enables the unit to work under two sub-modes: Fast and slow. In order to enter the menu and configure the unit in this way, press the MODE / ESC button and

the display will show NAFA (fast mode) or NASL (slow mode). UP and DOWN allow the choice of the necessary sub-mode for said configuration and ENTER will load the configuration into the unit:

Initial display	Secondary display	Preset
NAFA	Fast	Fast automatic mode
NASL	Slow	Slow automatic mode

#### Audio Mode:

The unit responds to sound thanks to its built-in microphone. The sound causes the unit to change color and modify its movements. To configure the unit as one of these two modes press the MODE / ESC button and choose NStS. When the ENTER button is pressed the display will show SrUN and the unit will go into sound active mode.

Initial display	Secondary display	Preset
NStS	SrUn	Sound activated

#### Master/Slave mode:

Up to a total of 32 units can be connected to each other, one functioning as Master and the rest as slaves. Units given as slaves will act synchronously with the master without the need for an additional controller. The connection between the units must be done in the same way as the DMX protocol. The unit that is activated as Master can work in automatic mode or audio mode.

To configure the unit as a slave, press the MODE / ESC button and choose the SLA option or when pressing the ENTER button, the screen will show Son, in this way it is confirmed that the unit will work under slave mode on the signal of a master unit.

#### Resetting the unit:

After many configurations on the unit, it is convenient to reset the unit. To do this, press the MODE / ESC button and choose REST. Press ENTER to confirm. The unit will turn off automatically and after a few seconds it will be reset. During this time, the display will show REST from left to right.

Si se desea dejar la unidad con configuración de fábrica, deberá presionar el botón **MODE/ESC** y elegir **LOAD**, presione a continuación **ENTER** para confirmarla. En la pantalla de la unidad aparecerá el cambio **d001** para confirmar que ha sido puesta de fábrica.

Cuando la unidad arranque, durante unos segundos ella misma se auto comprobará que no hay errores entre sus parámetros. Durante estos segundos, en la pantalla aparecerá **REST** de izquierda a derecha. Después, la unidad operará de manera natural.

#### DMX channels:

**MOVING 70** works with 8/13 DMX channels through a standard controller. When the unit is connected by DMX to another unit, the display will show d.001 flashing.

To set the DMX address, press MODE / ESC to display the current address of the unit. If you want to change this, you must use the UP and DOWN buttons to increase or decrease the address value up to a maximum of 512. If you want to know in which mode the unit is working, press and hold the MODE button. The mode will appear on the screen. If you want to change it, press the UP and DOWN keys to set it.

Display	DMX mode
8 CH	8 Channels
13CH	13 Channels

### Colors:

The unit offers a range of 16 color presets. They can be individually chosen via DMX or set the unit in Automatic mode.

### DMX channels value:

#### 8 Channels:

Channel	Value	Function
1	0-255	PAN
2	0-255	TILT
3	0-7	Dimmer & strobe Closed
	8-134	Dimmer
	135-239	Strobe from 0Hz to 40Hz
	240-255	Opened
4	0-255	Red
5	0-255	Green
6	0-255	Blue
7	0-255	White
8	0-255	PAN/TILT speed

#### 13 Channels:

Channel	Value	Function
1	0-255	PAN
2	0-255	PAN fine
3	0-255	TILT
4	0-255	TILT fine
5	0-255	PAN & TILT speed
6	0-7	Dimmer & strobe Closed
	8-134	Dimmer
	135-239	Strobe from 0Hz to 40Hz
	240-255	Opened
7	0-255	Red
8	0-255	Green
9	0-255	Blue
10	0-255	White

11	0-255	COLOR
	0-7	Closed
	8-21	White
	22-34	Red
	35-49	Dark green
	50-63	Dark blue
	64-77	Light blue
	78-91	Magenta
	92-105	Yellow
	106-119	Purple
	120-134	Orange
	135-147	Light green
	148-161	Pink
	162-175	Brown
	176-189	Gold
	190-203	Crimson
204-217	Violet	
218-231	Dark purple	
232-255	Color change	
12	0-255	Color speed
13		Movement (Auto & audio effect)
	0-7	Closed
	8-22	Auto 1
	23-37	Auto 2
	38-53	Auto 3
	54-67	Auto 4
	68-82	Auto 5
	83-97	Auto 6
	98-112	Auto 7
	113-127	Auto 8
	128-142	Sound 1
	143-157	Sound 2
	158-172	Sound3
	173-187	Sound 4
	188-202	Sound 5
	203-217	Sound 6
218-232	Sound 7	
233-255	Sound 8	



# TROUBLESHOOTING

This short guide is meant to help and try to solve simple problems. If they continue and the device cannot operate, please, don't try to repair it by yourself, return the device to your MARK dealer.

If a problem occurs, carry out the following steps in sequence until find solve the problem. If finally, the unit operates properly, don't continue with the next steps. If the light effect does not operate properly, refer servicing to a technician.

## No Light

Response: Suspect two potential problem areas: the power supply or the LEDs.

- 1- Power supply. Check that the unit is plugged into an appropriate power supply.
- 2- The LEDs. Return the device to your MARK dealer.
- 3- Check if the fuse is not blown, if it is, change it with one that keeps the same technical features. If once the fuse is ok the device again blown it, please, don't change it again, contact the MARK technical service.
- 4- If all the above appears to be OK, plug the unit in again.
- 5- If you are unable to determine the cause of the problem, do not open the device, as this may damage the unit and the warranty will become void.
- 6- Return the device to your MARK dealer.

## No DMX

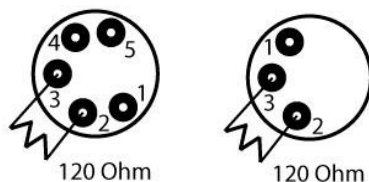
Response: Suspect the DMX cable or connector, a controller wrong function, a light effect DMX card error.

- 1- Check the DMX setting. Make sure that DMX addresses are correct.
- 2- Check the DMX cable: Unplug the unit; change the DMX cable; then reconnect to electrical power. Try your DMX control again.
- 3- Determine whether the controller or light effect is at fault. Does the controller operate properly with other DMX products? If not, take the controller in for repair. If so, take the DMX cable and the light effect to a qualified technician.

## DMX Connection

When fabricating your own cables, always observe the illustrations on this page. Never connect the shielding of the cable to the ground contact of the plug, and always make certain that the shielding does not come into contact with the housing of the XLR plug. If the shielding is connected to the ground, this can lead to short-circuiting and system malfunctions.

To prevent system errors, the last device in a DMX chain needs to be equipped with a terminating resistor (120 ohm, 1/4 Watt).





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