

KABOOM 648

QUICK USER MANUAL
RASHA PROFESSIONAL A/S



Edition Notes

The **Kaboom 648**, User Manual Rev. 1 covers the description, safety precautions, installation, programming, operation, and maintenance of the **Kaboom 648**. Rasha released this edition of the **Kaboom 648** User Manual in February 2016.

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Document Printing

For better results, print this document in color, on letter size paper (8.5 x 11 in), double-sided. If using A4 paper (210 x 297 mm), configure your printer to scale the content accordingly.

Intended Audience

Any person in charge of installing, operating, and/or maintaining this product should completely read through the guide that shipped with the product, as well as this manual, before installing, operating, or maintaining this product.

Document Revision

The **Kaboom 648** User Manual Rev. 1 supersedes all previous versions of this manual. Discard any older versions of this manual and replace with this version. Go to www.rashaprofessional.com for the latest version.

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Table of Contents



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1. Before You Begin	4	Parameter Value Settings	12
What Is Included	4	Sub-menu.....	12
Claims	4	Set Dmx Address	13
Manual Conventions	4	Set Fixture Mode.....	13
Symbols	4	Set Display Mode.....	14
Safety Notes.....	5	Set Test Mode	14
Personal Safety.....	5	Set Light Run Parameter.....	15
Mounting And Rigging	5	View Status	15
Power And Wiring.....	5	DMX Channels	16
Operation	5	Specifications	18
2. Introduction	7	5. Technical Specifications	19
Description	7	Returns.....	19
Features	7	Contact Us	20
Overview	7		
Dimensions	7		
3. Setup	8		
AC Power	8		
AC Plug	8		
Fuse Replacement	8		
Power Linking.....	8		
DMX Linking.....	8		
DMX Personalities.....	8		
Mounting	9		
Orientation.....	9		
Rigging	9		
Procedure.....	9		
4. Operation	10		
Control Panel Description	10		
Menu Map	11		
Menu Intro.....	11		
Operations.....	12		

What Is Included

- Rasha **Kaboom 648**
- PowerCon to Edison
- Omega Bracket with screw
- DMX Cable 3 Pin
- Quick reference guide

Claims

Carefully unpack the product immediately and check the box to make sure all the parts in the package are in good condition. If the box or the contents (the product and included accessories) appear damaged from shipping or show signs of mishandling, notify the carrier immediately, not Rasha. Failure to report damage to the carrier immediately may Void your claim. In addition, keep the box and contents for inspection.

For other issues, such as missing components or parts, damage not related to shipping, or concealed damage, file a claim with Rasha within 7 days of delivery.

Manual Conventions

Convention	Meaning
1-512	DMX value range in number
50/60	A set of mutually exclusive values in the text
<SET>	A button on the product's control panel
Settings	A product function or a menu option
0-512	A sequence of menu options
1-10	A range of menu values from which to choose in a menu
Yes/No	A set of two mutually exclusive menu options in a menu
ON	A unique value to be entered or selected in a menu

Symbols

Symbols	Meaning

The term "DMX" used throughout this manual refers to the DMX512 digital data transmission protocol

Safety Notes

Read all the following Safety Notes before working with this product. These notes include important information about the installation, usage, and maintenance of this product. This product contains no user-serviceable parts. Any reference to servicing in this User Manual will only apply to properly trained Rasha certified technicians. Do not open the housing or attempt any repairs. All applicable local codes and regulations apply to proper installation of this product.

Personal Safety

Avoid direct eye exposure to the light source while the product is on. Always disconnect this product from its power source before servicing. Always connect this product to a grounded circuit to avoid the risk of electrocution. Do not touch this product's housing during operation because it may be very hot.

Rigging

This product is for indoor use only! To prevent risk of fire or shock, do not expose this product to rain or moisture. (IP20) CAUTION: When transferring product from extreme temperature environments, (e.g. cold truck to warm humid ballroom) condensation may form on the internal electronics of the product. To avoid causing a failure, allow product to fully acclimate to the surrounding environment before connecting it to power. Mount this product in a location with adequate ventilation, at least 20 inches (50 cm) from adjacent surfaces. Make sure there are no flammable materials close to this product while it is operating. Always carry this product by the handles. Do not carry from the head. When hanging this product, always secure to a fastening device using a safety cable.

Power And Wiring

Always make sure you are connecting this product to the proper voltage in accordance with the specifications in this manual or on the product's specification label. Never connect this product to a dimmer pack or rheostat. Never disconnect this product by pulling or tugging on the power cable.

Operation

Do not operate this product if you see damage to the housing, lenses, or cables. Have the damaged parts replaced by an authorized technician at once. To eliminate unnecessary wear and improve its lifespan, during periods of non-use completely disconnect the product from power via breaker or by unplugging it. Do not cover the ventilation slots when operating to avoid internal overheating. Do not aim this product toward the Sun. The lenses could concentrate the solar energy and cause internal overheating. The maximum ambient temperature is 113 °F (45 °C). Do not operate this product at a higher temperature. In case of a serious operating problem, stop using this product immediately!

Use on Dimmer	Auto Programs
Outdoor Use	Auto-Ranging Power Supply
Sound-Activated	Replaceable Fuse
DMX	User-Serviceable
Master/Slave	

The term "DMX" used throughout this manual refers to the DMX512 digital data transmission protocol



Features

- Single lens wash with premixed RGBAW+UV colors
- Board color palette, RGBAW+UV color option
- 11-60 Degree zoom
- Rapid moment,
- TFT touch screen display
- Dimmer control from 0-255, flicker free leds
- Preprogramed random strobe & pulse effects
- High efficiency, low power consumption, long lifetime
- Multiple Field angle options for a perfect wash
- Create coordinated light shows by linking other fixtures in master/slave mode
- Daisy chain linkable power and signal
- Enhance light shows with adjustable electronic strobe and dimmer effects
- Compact design easily fits inside sticks of truss or stand free.

Description

The **Kaboom 648** features, beautiful wash fields, a market-leading color palette, and uniform mixing that combines to accommodate the most demanding applications, offering brightness and perfection. Combining an impressive 36 @18W of RGBWUV LEDs power with optical system ensures that the 1:6 zoom on the **Kaboom 648** Wash operates with maximum output and superior performance

OVERVIEW



Power Supply

Each **Kaboom 648** has an auto-ranging power supply that works with an input voltage range of 100 to 240 VAC, 50/60 Hz. To determine the power requirements for each **Kaboom 648** refer to the label affixed to the product. You can also refer to the Technical Specifications chart in this manual. The listed current rating indicates the maximum current draw during normal operation. For more information, you may download Sizing Circuit Breakers from the Rasha website: www.rashaprofessional.com



Always connect this product to a protected circuit with an appropriate electrical ground to avoid the risk of electrocution or fire. To eliminate unnecessary wear and improve its lifespan, during periods of non-use completely disconnect the product from power via breaker or by unplugging it.



Never connect this product to a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel serves only as a 0 to 100% switch.

AC Plug

The **Kaboom 648** comes with a power input cord terminated with a Neutrik® powerCON® A connector on one end and an Edison plug on the other end (U.S. market). If the power input cord that came with your product has no plug, or if you need to change the Edison plug, use the table below to wire the new plug.

Connection	Wire (U.S.)	Wire (Europe)	Screw Color
AC Live	Black	Brown	Yellow or Brass
AC Neutral	White	Blue	Silver
AC Ground	Green/Yellow	Green/Yellow	Green

Fuse Replacement



1. Disconnect this product from the power outlet.
2. Using a flat-head screwdriver, unscrew the fuse holder cap from the housing.
3. Remove the blown fuse and replace with another fuse of the same type and rating (F 10 A, 250 V).
4. Screw the fuse holder cap back in place and reconnect power.

Make sure to disconnect the product's power cord before replacing a blown fuse. Always replace the blown fuse with another of the same type and rating.

Power Linking

You can link 8 Fixtures @ 110V and 16 fixtures @ 220V.

DMX Personalities

- The **Kaboom 648** uses a 3-pin DMX data connection for the 17 channel DMX personalities.
- Refer to the Introduction chapter for a brief description of each DMX personality.
- Refer to the Operation chapter to learn how to configure the **Kaboom 648** to work in these personalities.
- The DMX Values section provides you with detailed information regarding the DMX personalities

If you are not familiar with or need more information about DMX standards, Master/Slave connectivity, or the DMX cables needed to link this product to a DMX controller, download the DMX Handbook from the Rasha website: www.rashaprofessional.com

Before mounting this product, read and follow the Safety Notes. For our Rasha® Professional line of mounting clamps, go to <http://rashaprofessional.com/products>

Orientation

Always mount this product in a safe position and make sure there is adequate room for ventilation, configuration, and maintenance

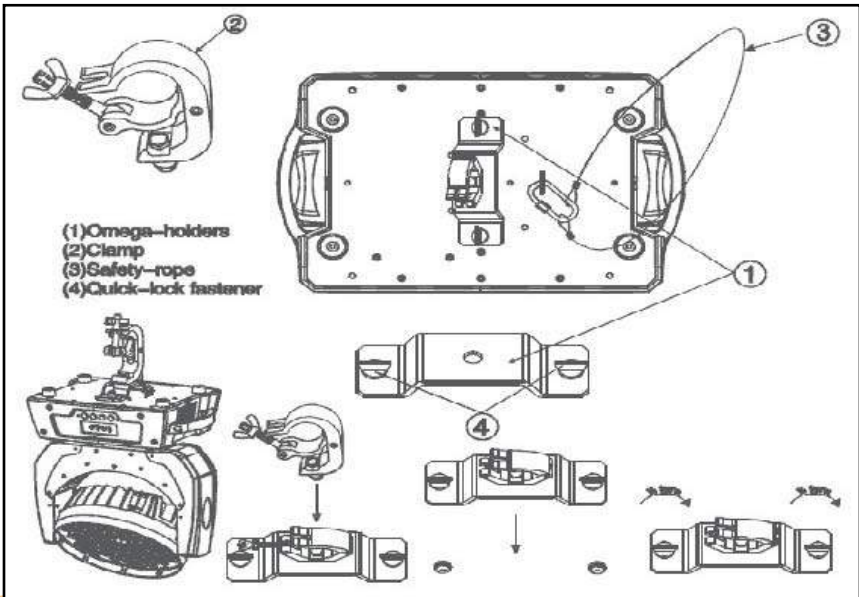
Rasha recommends using the following general guidelines when mounting this product.

- When selecting an installation location, consider easy access to this product for operation, programming adjustments, and routine maintenance.
- Make sure to mount this product away from any flammable material as indicated in the Safety Notes.
- Never mount in places where rain, high humidity, extreme temperature changes, or restricted ventilation may affect the product.
- If hanging this product, make sure that the mounting location can support the product's weight. See the Technical Specifications for the weight-bearing requirements of this product.
- When hanging this product, always secure to a fastening device using a safety cable.

Rigging

Procedures

The **Kaboom 648** comes with a preinstalled mounting surface to which you will be able to attach the included omega bracket. Make sure the clamps are capable of supporting the weight of this product. Use at least 1 mounting point per product. In addition, use a safety cable to link the product to the structure.





Set light DMX address.



Set light function mode



Used for testing The Light light, modify DMX channel data to test function, the corresponding function of reference channel function table.



Set display parameter, eg. select language



Set light running parameter



view light current status and system details

1. Intro

The light panel diagram show as below, The TFT Display support touch, Display & operation just like any touch screen in todays market, Touching the appropriate icons will set or modify setting.

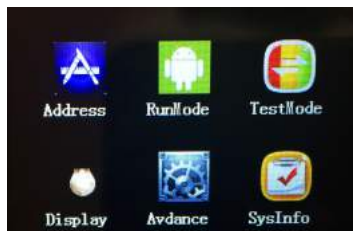
Note: Prevent damage the touch or TFT displayer, Can not use sharp objects check displayer.



2. Operation

1. Operate light with touch or encoder button

- Top Left Sets your Fixtures Address
- Top Center Displays your Fixures Modes of operation
- Top Right Displays Test Mode
- Bottom Left Displays options for Display, (i.e. Screen Rotation)
- Bottom Center displays Advanced option for Fixture.
- Bottom Left displays current mode, DMX address, Fixture Information.



2. Parameter value setting

Select icon on main screen or setting in any Sub-Menu to set Value


- Touch <UP> or <DOWN> to display correct value. Touch <Enter> to Set and save value. Touch <BACK> to Exit to Main Menu.

3. Sub-Menu

- Select any Icon from main menu to enter corresponding sub menu shown below. There is a of total 6 sub menu, includes class of parameter and status:
- ADDRESS - Set light DMX address.
- RUNMODE - Set light work mode, master or slave mode when in auto run mode.
- TESTMODE - Used for test light, modify DMX channel data to test function the corresponding function of reference channel function table.
- DISPLAY - Set display parameter, eg. select language.
- ADVANCE - Set light running parameter.
- SysInfo-view light current status




3. Set DMX Address

- Select  from main menu. Enter the page of DMX address setting, range from 1 to 512, the address code shouldn't is not greater than (512- channels quantity), otherwise the light will not been controlled. Following is the operation:
- Select Address from main menu, use <UP> or <DOWN> to modify value.
- Press <Enter> to save your setting.




4. Set Fixture Mode

- Select  from main menu. Fixture includes 3 work mode: DMX MODE, WORK RUN and SOUND MODE
- DMX Mode - Under this mode, the light receive data from the DMX controller and move.
- AUTO RUN - Under this mode, light will run with inside code(data), ignore data from DMX controller.
- SOUNDCONTROL - Under this mode, The light will ignore data from DMX controller., When there is a strong sound from the stage, the light will run a scene, otherwise it will keep the last scene.
- SYNC- This controls and sets Master or Slave Mode




5. Set display Mode

- Select  from main Menu
- Screen Saver- When the touch screen panel is idle (there is no operation after 10 second), the display will enter screen saver status. When set as 'Mode 1' Screen saver status shuts off display (to activate, just touch Screen), in 'Mode 2' Screen Saver will display DMX address code (DMX MODE) or display LOGO(AUTO RUN or SOUND CTRL), in "Mode 3", screen displays Rasha Logo
- Screen Rotation - Rotates the display upside down.
- Touch Adjust - Calibrates touch screen, (Do not enter, unless directed to do so by Authorized Tech.




6. Set Test Mode

- Select  from main Menu, Light will enter test mode, in this mode, the light does not receive the data for DMX controller.:
- PAN: range for 0 to 255
- TILT: range for 0 to 255
- FOCUS: range for 0 to 255
- RED: range for 0 to 255
- GREEN: range for 0 to 255
- BLUE: range for 0 to 255
- White: range for 0 to 255
- Amber: range for 0 to 255
- UV/Purple: range for 0 to 255




7. Set light run parameter

- Select  Advance Icon from main menu.
- Pan Invert: Reverse PAN move.
- Reset DMX.
- Reset System: Soft Rest.
- Cool Fan: Set to ALWAYS or AUTO.
- Pan Angle: Set PAN ANGLE to original position.
- Pan Offset: Set Pan to original position.
- Factory Setting: restore all parameter to factory setting.



8. View status

- Select  from Main Menu.
- View light current status, and Version.





550 Moving Head Wash DMX Protocol

Channel	DMX Value	Function
CH1: PAN	000-255	Pan Movement From 0 To Full Pan
CH2: TILT	000-255	Tilt movement from 0 to full tilt
CH3: ZOOM	000-255	to be from narrow beam to wide beam
CH4: STROBE & RESTORE	000-009	No function
	010-059	Slow to fast strobe
	060-064	No function
	065-114	Pulse strobe from slow to fast
	115-119	No function
	120-169	Strobe fading in from slow to fast
	170-174	No function
	175-224	Strobe fading out from slow to fast
	225-234	No function
	235-244	Blackout/restore □ reset after 3 seconds
CH5: COLOR MARCO/STATIC COLOR	245-255	No function
	000-002	Turn Off
	003-005	RGBAWUV
	006-008	RED
	009-011	GREEN
	012-014	BLUE
	015-017	WHITE
	018-020	AMBER
	021-023	UV
	024-026	RED+BLUE
	023-024	BLUE+WHITE
	027-029	RED +BLUE
	028-029	RED+AMBER
	030-032	GREEN+BLUE
	032-035	GREEN+AMBER
	050-083	from dark to bright Green+Red
	084-117	from bright to dark Green+Blue
	118-151	from dark to bright Blue+Green
	152-185	from bright to dark Blue+Red
	186-218	from dark to bright Red+Blue
	219-252	dark to bright Blue+Red from
	253-255	RED+GREEN+BLUE+AMBER+WHITE
	CH6: DIMMER	000-255

DMX CHANNELS



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CH7: RED	000-255	0%-100% Dimmer
CH8: GREEN	000-255	0%-100% Dimmer
CH9: BLUE	000-255	0%-100% Dimmer
CH10: WHITE	000-255	0%-100% Dimmer
CH11: AMBER	000-255	0%-100% Dimmer
CH12: UV	000-255	0%-100% Dimmer
CH13 AUTO COLOR	000-005	RGBAW, Depend on 5CH
	006-127	From slow to fast color dimmer with color change
	128-255	From slow to fast color jump with color change
CH14: PAN 16 BIT	000-255	Fine pan movement from 0 to full step
CH15: TILT 16 BIT	000-255	Fine tilt movement from 0 to full step
CH16: P/T SPEED	000-255	Pan Tilt speed from slow to fast
CH17: AUTO MODE	000-049	DMX model
	050-099	Pan auto run
	100-149	Tilt auto run
	150-199	Pan and Tilt auto run in the same time
	200-255	Sound active

SPECIFICATIONS



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PHYSICAL

Weight	20.4 lbs.
Dimensions	278x 202 x 380 mm (7.8 x 2.3 x 7.8 in.)

DYNAMIC EFFECTS

Color mixing	RGBAWUV
Color selection	38 color presets
Electronic dimming	0-100%
Strobe and pulse effects	Variable speed and action, random strobe
Electronic shutter effect	Instant open and blackout

OPTICS

Light source	36 x 18W RGBAW +UV LED Chips
Mini LED lifetime	50,000 hours (>70% luminous output)

LED Manufacturer's figure obtained under manufacturer's test conditions

CONTROL AND PROGRAMMING

Control options	DMX, stand-alone Sound active, Auto, Static Mode, Wireless
DMX channels	17
Stand-alone trigger options	Music trig, auto trig, Linkable
Standalone built-in shows	Random, preset colors, or variable fade
Settings, addressing and programming	TFT touch screen display
Sound activation	Adjustable microphone sensitivity
DMX compliance	USITT DMX512/1990/ DMX 512 Uni-versal
Wireless DMX Transmitter compliance	Universal DMX 2.4GHz

CONSTRUCTION

Color(s)	Black/White
Protection rating	IP 20

INSTALLATION

AC power in/thru	Powercon to Edison
DMX data in/thru	3 or 5-pin locking XLR
Wireless DMX Receiver	2.4GHZ DMX Signal receiver

APPROVALS

EU safety/EU EMC	EN 60598-2-17/EN 55015, EN55103-1, EN 61547
US safety/US EMC	UL 1573/ FCC Part 15 Class A

ELECTRICAL

AC power	100-240 V nominal, 50/60 Hz
Power supply unit	Auto-ranging electronic switch-mode
AC power input	PowerOutlet
AC power throughput	IEC Power Outlet
DMX data in/out	3/5-pin locking XLR

INCLUDED ITEMS

Two Ringing clamp	P/N 890106
Powercon to Edison	P/N 890507
DMX input cable with 3 pin	P/N 890507

THERMAL

Maximum ambient temperature (Ta max.)	50° C (122° F)
Minimum ambient temperature (Ta min)	0° C (32° F)
Cooling system	Aluminum heat control panel installed
Fan cooling	low noise fan installed

ACCESSORIES (SOLD SEPARATELY)

3M Powercon to Edison	P/N 890113
Safety Wire	P/N 890110
3-pin male XLR connector 5M	P/N 890103

ORDERING INFORMATION

Kaboom 648, Natural packing	P/N 817648
Kaboom 648, Flight/road case	P/N 817650

You must send the product prepaid, in the original box, and with the original packing and accessories. Rasha Professional will not issue call tags.

Call Rasha and request a Return Merchandise Authorization (RMA) number before shipping the product. Be prepared to provide the model number, serial number, and a brief description of the Claim(s) for the return.

Clearly label the package with an RMA number. Rasha will refuse any product returned without an RMA number.

DO NOT write the RMA number directly on the box. Instead, write it on a properly affixed label.

Once you have received the RMA number, include the following information on a piece of paper inside the box:

- Your name
- Your address
- Your phone number
- The RMA number
- A brief description of the problem(s).

Be sure to pack the product properly. Any shipping damage resulting from inadequate packaging will be the customer's responsibility.

Double-boxing is recommended. Rasha reserves the right to use its own discretion to repair or replace returned product(s).

CONTACT US



WORLD HEADQUARTERS - RASHA GENERAL INFORMATION
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Outside the U.S. contact the dealer of record. Follow their instructions to request support or to return a product. Visit our website for contact details.

