

R3-40W RGB OUTDOOR LASER

PROFESSIONAL EDITION

R3-40W RGB Outdoor Laser is a professional stage-effect platform combining 40 W RGB / DT40K galvanometer with DMX512 / auto / sound active operation.

40 W RGB

LASER OUTPUT

21CH

DMX CONTROL

**DT40K
GALVO**

SCAN SYSTEM



Product Positioning

Professional positioning and core value for R3-40W RGB Outdoor Laser

01 Professional laser effects
R3-40W RGB Outdoor Laser is designed for stages, venues, events and rental systems.

02 Flexible output platform
40 W RGB.

03 Core effect engine
40 W RGB / DT40K galvanometer / RGB optical architecture.

04 Professional control
DMX512 / auto / sound active / master/slave / ILDA / SD playback / Pangolin FB3/FB4 PC control.

CORE VALUE
40 W RGB, 21CH DMX512 and flexible operation.



THREE-QUARTER VIEW

Key Performance

Core performance and system configuration



R3-40W RGB OUTDOOR LASER

40 W RGB

LASER OUTPUT

21CH

DMX CONTROL

DT40K GALVO

SCAN SYSTEM

AC 110-250 V

INPUT VOLTAGE

40 W RGB

CORE EFFECT

FULL-COLOR

CORE FEATURE

BUILT FOR PROFESSIONAL LASER PROGRAMMING

40 W RGB / DT40K galvanometer / RGB optical architecture, supported by DMX512 / auto / sound active / master/slave / ILDA / SD playback / Pangolin FB3/FB4 PC control for flexible show programming.

AC 110-250 V, 50/60 Hz / +/-30 degrees (60-degree total)

Optical & Function Architecture

Product exterior, optical and control hardware



01 FRONT OPTICAL STRUCTURE

Aperture, guarded faceplate and mounting structure.



02 ENCLOSURE & COOLING

Enclosure, ventilation and bracket architecture.



03 CONTROL & CONNECTIONS

Display, control and connection panel.

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CORE EFFECT

40 W RGB

FEATURE

FULL-COLOR

OPTICAL OUTPUT & HARDWARE ARCHITECTURE

Optical output, enclosure and control-system architecture



01

OPTICAL OUTPUT

Aperture and optical-output architecture.

PRODUCT HARDWARE



02

ENCLOSURE & COOLING

Enclosure, ventilation and mounting architecture.

PRODUCT HARDWARE



03

CONTROL SYSTEM

Display, DMX and professional control architecture.

PRODUCT HARDWARE

PRODUCT HARDWARE & OPTICAL ARCHITECTURE

Control & Integration

21CH DMX512 and multiple operating modes



REAR ENCLOSURE / POWER INPUT REGION

DT40K GALVO

SCAN SYSTEM

+/-30 degrees

SCAN ANGLE

21CH

DMX MODE

01 **21CH DMX mode**

Integrate the fixture through its 21CH DMX512 mode.

02 **Standalone operation**

DMX512 / auto / sound active / master/slave / ILDA / SD playback / Pangolin FB3/FB4 PC control supports flexible deployment.

03 **Effect management**

40 W RGB / DT40K galvanometer / RGB optical architecture supports professional show programming.

CONTROL MODES

DMX512 / AUTO / SOUND ACTIVE / MASTER/SLAVE / ILDA / SD PLAYBACK /
PANGOLIN FB3/FB4 PC CONTROL

Product Views

Product views at a consistent visual scale



THREE-QUARTER / APERTURE SIDE



REAR / POWER INPUT REGION



STRAIGHT-ON / COOLING



MOUNTING / BRACKET STRUCTURE

Technical Specifications

Laser, movement, power and control data



MODEL	R3-40W
LASER OUTPUT	40 W RGB
RGB ALLOCATION	R 638 nm / 10 W; G 520 nm / 15 W; B 445 nm / 15 W
MAX INPUT POWER	<= 550 W
INPUT VOLTAGE	AC 110-250 V, 50/60 Hz
SCAN SYSTEM	DT40K galvanometer
SCAN ANGLE	+/-30 degrees (60-degree total)
BEAM DIVERGENCE	< 1.6 mrad full angle

PRO CONTROL	Professional stage-lighting system
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APERTURE SPOT	<= 6.5 mm at the aperture
MODULATION	<= 100 kHz
DMX MODE	21CH delivered library mode
MOUNTING	Adjustable dual-side bracket with safety-eye points
OUTDOOR ARCHITECTURE	Outdoor-oriented sealed enclosure architecture
CONTROL MODES	DMX512 / auto / sound active / master/slave / ILDA / SD playback / Pangolin FB3/FB4 PC control
PRO CONTROL	Professional stage-lighting system
PRO CONTROL	Professional stage-lighting system

Installation & System Integration

Power, scanning and control data for project planning

SYSTEM DATA



AC 110-250 V, 50/60 Hz

INPUT VOLTAGE

<= 550 W

MAX INPUT POWER

21CH DMX512

DMX MODE

+/-30 degrees (60-degree total)

SCAN ANGLE

PROJECT INTEGRATION

Review mounting, power and control requirements before installation.

Laser Safety & Installation

Professional installation and controlled laser projection



PRODUCT BODY / SAFE INSTALLATION

01

Trained personnel

Installation, commissioning and internal service require trained personnel.

02

Controlled laser zone

Keep the aperture and scanned effects away from eyes, skin and uncontrolled audience zones.

03

Secure mounting

Use a structure rated for the product load and verify every fastener.

04

Clear work zone

Keep the area below clear during installation, testing and service.

05

Environment management

Maintain ventilation and avoid unsuitable moisture, heat and dust exposure.

Power & Installation Safety

Protective earth, mounting structure and supply safety



POWER INPUT / INSTALLATION CONTEXT

AC 110-250 V

INPUT VOLTAGE

50/60 Hz

FREQUENCY / SIGNAL

≤ 550 W

MAX INPUT POWER

21CH

DMX MODE

01 **Rated mounting hardware**

Use rated clamps, brackets and independent safety retention.

02 **Protective earth**

Verify protective earth and the final unit nameplate before energizing.

03 **Circuit and clearance**

Keep ventilation and cable paths clear; size the supply correctly.

04 **Pre-operation inspection**

Confirm fasteners, safety points and movement clearance before operation.

POWER SAFETY: use protective earth and size the supply circuit to the final product nameplate and local electrical rules.

Operating Workflow

A controlled sequence for DMX or standalone operation



21CH DMX CONTROL

01

Rig and inspect

Secure the fixture and confirm safety hardware, aperture zone and clearance.

02

Connect power and DMX

Verify voltage, grounding, circuit capacity and signal cabling.

03

Select control mode

Choose DMX512 / auto / sound active / master/slave / ILDA / SD playback / Pangolin FB3/FB4 PC control.

04

Assign address

Set the DMX start address for 21CH mode.

05

Test at low output

Check 40 W RGB / DT40K galvanometer / RGB optical architecture.

06

Run and monitor

Maintain a controlled projection zone and monitor operating status.

Maintenance & Care

Preventive inspection protects optics and ventilation



- 01

Disconnect and cool
Remove power and allow the fixture to cool before cleaning or inspection.
- 02

Clean optical surfaces
Keep the aperture window clean using suitable non-abrasive methods.
- 03

Maintain ventilation
Remove dust around vents and fans without opening energized equipment.
- 04

Inspect mounting
Check brackets, clamps, fasteners and safety hardware.
- 05

Inspect cables
Check mains and DMX cables, connectors and strain relief.
- 06

Qualified internal service
Internal laser, power and control systems require trained service personnel.

Troubleshooting Guide

First-line checks before qualified technical service



01	No power or display	Check supply voltage, protective earth, switch position and circuit capacity.
02	No DMX response	Check 21CH mode, start address, cable and signal endpoint.
03	No laser output	Check the selected mode, program, dimmer, strobe and blackout state.
04	Abnormal output	Stop operation, inspect ventilation and supply stability, then cool before retest.
05	Intermittent control	Separate mains and signal wiring and inspect shielding and connections.
06	Problem remains	Disconnect power and refer the unit to qualified technical personnel.

SAFETY FIRST: disconnect power before inspection or maintenance.

Recommended Applications

Recommended professional stage, show, event and venue applications



CONCERT STAGES

Large performance stages and controlled projection zones

PROFESSIONAL SHOW PROGRAMMING



FESTIVALS & EVENTS

Festivals, brand events and public performances

DMX / PROFESSIONAL CONTROL



CLUBS & VENUES

Entertainment and hospitality installations

IMMERSIVE SHOW PROGRAMMING

RECOMMENDED FOR CONTROLLED PROFESSIONAL STAGE
APPLICATIONS

CONCERTS / FESTIVALS / CLUBS / PROFESSIONAL EVENTS

Product Summary

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40 W RGB

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21CH

DMX CONTROL

DT40K GALVO

SCANS SYSTEM

AC 110-250 V

INPUT VOLTAGE

40 W RGB

CORE EFFECT

FULL-COLOR

CORE FEATURE

PROFESSIONAL LASER OUTPUT. FLEXIBLE CONTROL.

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YL AUDIO & LIGHTING

Product details, fixture profiles and technical support are available on request.