nanoScope

Artistic Licence

nanoScope by Artistic Licence

Brk | MaB | Fram | RDM | Long | <512 | NSC | RDM | Draft | Resp | Test

nanoScope is a battery-powered tester for DMX512 and RDM. The built-in 5-pin XLR connector enables it to be attached directly to the DMX512 cable (use nanoScope in place of an existing terminator during testing). The device lights up in different colors to indicate its findings.

Two modes of operation exist, selected by a recessed slide switch which also doubles as the power switch.

- **Pixel Mode: At power on, nanoScope indicates pixel mode is selected with a half-second red flash. This mode then displays the first three DMX512 channels as an RGB mix, to provide confidence that the expected data is on the cable.**

- **Analysis Mode: At power on, nanoScope indicates analysis mode is selected with a half-second blue flash. This mode then displays one long blip (green or red to indicate 'good' or 'bad' data respectively), then a train of short colored blips representing different attributes of the DMX512/ RDM signal (see code on product label). Cold colors indicate good/ informational signals while hot colors are used for bad/unusual signals.**

Analysis mode detail and hints chart

A brief explanation of each color code is given below. For more detail on how to interpret the signals and fix problems, please refer to the full user guide.

	Color	Description
Error	Orange	Break Length out of range, less than 88 µS (an error)
	Magenta	Mark After Break (MaB) time less than 8 µS (an error)
	Yellow	Framing error (but can occur legitimately during RDM discovery)
	Red	RDM data format wrong (an error)
	Pink	Packet too long, contains more than 512 channels (an error)
Advisory	Cyan	Less than 512 channels in data (informational)
	Warm White	Non-zero start codes (excluding RDM) detected (usually informational but can be an error)
	Green	RDM detected in data (informational)
	Mint	RDM draft detected in data (informational)
	UV Blue	RDM responses detected (infomational)
	Ice Blue	DMX test packets detected (informational)

Examples

Indicators	Description
🟩	Good DMX512 containing 512 data slots
🟩 🔵	Good DMX containing less than 512 data slots
🟩 ⚪	Good DMX containing 512 data slots with Non-zero Start Code packets
🟩 🔵 ⚪	Good DMX containing less than 512 data slots with Non-zero Start Code packets
🟩 🟢 🔵	Good DMX with active and good RDM communications
🟩 🟢 🟢 🔵	Good DMX with active and good RDM communications including Draft packets
🟩 🔵	Good DMX512 with good network test packets containing 512 data slots of 85
🟥 🔵	Bad network test packets. Either < 512 data slots or values not equal to 85
🟥 🔴 🟢	Controller is transmitting bad RDM data and getting no response
🟥 🔴 🟢 🔵	RDM communication between controller and responders contains errors
🟥 🟠 🔴 🟡 ⚪	Most likely pin 2 & 3 swapped in the DMX cable
🟥 🟠 🩷	Most likely pin 2 disconnected in the DMX cable

SPECIFICATIONS

Mechanical
Material: Plastic
Overall Dimensions: 38 mm (H) x 20 mm (W) x 135 mm (D)
Mass: 0.06 kg
Country of Manufacture: United Kingdom

Control / Data Connections
Input Protocols: DMX512, DMX512 (1990), DMX512-A, RDM V1.0 (E1.20 - 2006 ESTA Standard)
Connector: (1) XLR5 input

Power & Electrical
Input Power: 2 x AAA batteries
Battery Life: Continuous operation: 72 hours; Standby: 380 hours

Environmental
Operating Temperature: 0°C to 40°C
Storage Temperature: -10°C to +50°C
Operating Relative Humidity (max): 80% Non-Condensing
IP Rating: IP20 Indoor Use Only
Certification: CE FCC, WEEE, RoHS
Warranty: 2 Year (Return to Base)

Configuration / Indication
Switch for Pixel mode / Analysis mode
LED indication: Pixel mimic or DMX/RDM analysis

Package Contents
nanoScope (batteries included)
nanoScope Quick Start guide

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