



nanoscope

Quick Start Guide

The full User Guide can be downloaded via the following QR code:



Overview

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 colours 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 coloured blips representing different attributes of the DMX512/RDM signal (see code on product label). Cold colours indicate good/informational signals while hot colours are used for bad/unusual signals.



Analysis mode detail and hints chart

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

- Error**
 - Orange: Break Length out of range, less than 88 μ S (an error)
 - Magenta: Mark After Break (MaB) time less than 8 μ S (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 (informational)
 - Ice blue: DMX test packets detected (informational)

		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

