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## **ENTTEC RDM Kit**

**Complete RDM Toolkit** 

includes USB PRO Mk2 RDM License Key Controller & Sniffer Zip case DMX Terminator

#### **Box Contents**

- DMX USB PRO Mk2 (70314)
- USB Cable (50282)
- 5pin DMX Breakout cable (79146)
- 5pin DMX Terminator (79122)
- RDM License Dongle (70511)
- ENTTEC Zip Case (70317)
- This user manual (50798)

#### Features

- Two universes (512 channel each) of input or output (one per DMX port) DMX.
- RDM enabled (ANSI E1.20 compliant)
- Fully compatible with ENTTEC RDM Controller and RDM Sniffer applications. (Windows only)
- Standalone mode: playback a single recorded DMX show on power-up
- Midi input & output ports (DMX + MIDI cable sold separately) – MIDI needs software support
- Fully compliant with USITT DMX512-A
- Adjustable Frame Rates and empty frames to accommodate non-standard equipment
- USB 2.0 Support on Windows PC and Mac OSX

- 1500 V full isolation (data & power lines to protect your computer from surges)
- Drivers for Windows, OSX and Linux (drivers released and maintained by FTDI)
- Output refresh rate configurable from 1 to 40 Fps
- Compatible with various open-source and professional lighting control programs (DMX)

#### Safety

- Do not expose the ENTTEC RDM Kit to rain or moisture, doing this will void the warranty
- Do not remove the cover, there are no serviceable parts inside
- This unit is intended for indoor use only
- Office lighting

#### **Basic Setup**

- Install and configure the Driver software on your Windows<sup>™</sup>, Linux<sup>™</sup> or Mac<sup>™</sup> computer.
- Methods can vary between Operating systems, but the end result is the same: once installed correctly, the drivers will allow software to communicate with the PRO Mk2.
- Connect the PRO Mk2 to your computer (usb) and the DMX512 control network (DMX cable).

- Connect the RDM License Dongle to your computer (usb).
- Load the RDM software of your choice onto the computer. RDM Controller and/or Sniffer.
- For updating firmware on the PRO Mk2, install and run PRO-Manager.
- Latest versions of RDM Controller and Sniffer are always available on www.enttec.com/rdm.

#### **RDM** Controller

ENTTEC RDM Controller makes it easy and fast to communicate with compatible (ANSI E1.20) devices which act as responders over the line. The responders are connected via DMX to the PRO Mk2. RDM Controller connects to this PRO Mk2 and performs RDM functions.

Once started, please select your PRO Mk2 from the Devices menu to activate the Controller. If the RDM License key is not plugged in, only Device Summary window will be available. The RDM functions are currently limited to DMX1 only on the PRO Mk2.

The Controller interface is divided into four tabs:

- Device Summary. Useful information reported by the device
- *DMX Patch Grid*. DMX Patching via drag & drop
- **Device Monitor:** Sensor information & Status Messages
- Advanced RDM Settings. RDM Get & Set for all supported Parameters (incl. Manufacturer PIDs)

### **RDM Controller: Device Summary**

Once connected, you can click **RDM Discovery** to find all connected RDM Responders on-line. On activating "Discovery", the status changes to "Discovery in Progress". Since RDM discovery could take up to a few seconds depending upon the number of RDM responders on the network, it can be cancelled by the "Cancel" button if needed.

The Summary screen, shows all found RDM devices, and available options that can be changed. For example, changing the DMX Start address or DMX Personality can be made from this screen. Select the device on the left, and make the changes as needed.

Devices(PRO)				
	[Full Discovery]	[ Additive Discovery ]	Status: Idle	
Device List				•
		Device Summary	Patch Grid 🕘 Monitor Devices 📊	Advanced RDM Settings
788-LD+ Quad		evice Info		1
		788-LD+ Quad Dim	mer Pack v2	Refresh
		RDM Protocol Version:	0100	
		Device Model ID:	788-LD + Quad Dimmer Pack v2	
E SubDevice		Product Category:	DIMMER_AC_INCANDESCENT	
E SubDevice		Goftware Version ID:	788-LD+ v5	
Hell RDM LED		DMX512 FootPrint:	8	
— 🙀 Desc: Test	Equipment C	Current DMX512 Personality:	2 - 16-bit 💌	Change
DMX Start:	print: 3	DMX512 Start Address:	120  Change	
Hell RDM LED		Sub Device Count:	4	
🐪 UID: 454E0	2051859	Gensor Count:	0	
ii) Desc: Test ii) DMX Start:		Device Label:		
🔄 🙀 DMX Foot	pinia 2	Aanufacturer Label:	CDS advanced technology bv, NL	
D Hell RDM LED	Effect	Supported Parameter Count:	10	
	s	Supported Parameters:	DEVICE_INFO, IDENTIFY_DEVICE, DMX_STA SOFTWARE_VERSION_LABEL, SUPPORTED_F STATUS_MESSAGES, DEVICE_MODEL_DESCR DMX_PERSONALITY_DEV	ARAMETERS , IPTION , MANUFACTURER_LABEL ,

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## RDM Controller: DMX Patch

The DMX Patch Grid panel contains a grid displaying all possible output addresses (also referred to commonly as "DMX Channels"). This allows user to patch devices and see the results graphically. There are also several buttons assist in the patching operation and to allow on-the-fly control of the dimmers or attributes of a multi-channel fixture.

Devices(PRO)																					
[Full Discovery ]			[ Ad	ditive	Disco	very	]	St	atus:	Idle									) PF	00	ON
Device List		_																-	·		
	1000	De	vice S	Summa	ary	<u>.</u>	DM	IX Pat	ch Gr	id	$\odot$	Mon	itor D	evice	s   -(	)—	Adva	nced	RDM	Settir	ngs
788-LD+ Quad Dimmer Pack v2						×						1			1			. 1			
UID: 636442634113			Exp	ort list		IW	port,,		Devic	e Con	ntrol		[Iden	tity j		Auto	Patc	n	Statu	is: IDI	LE
Desc: DIMMER_AC_INCANDES(     DMX Start: 120	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
DMX Start: 120	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
+ SubDevice_1	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
E SubDevice_2	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	10
E 😳 SubDevice_3	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	12
± 🚺 SubDevice_4	136	137	138	139	140	141		143	144			147		149	150	151	152	153	154		_
Hell RDM LED Effect	163	164	165	166	167	168	169	170		172			175		177	178	179	180	181	182	
Desc: Test Equipment																					_
DMX Start: 56	190	191		193	194	195	196	197	198	199	200	201			204	205	206	207	208	209	21
DMX Footprint: 3	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	23
Hell RDM LED Effect	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	26
Enttec Responder 2.12	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	29
UID: 454E02051859	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	31
🔤 👰 Desc: Test Equipment	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	34
DMX Start: 256	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	37
DMX Footprint: 1	379	380	381		383		385	386	387	388		390	391	392		394		396	397	398	39
Heir KDM LED Ellect																					-
	406	407	408	409	410		412			415			418	419	420	421	422	423	424		426
	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	45
	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	48
۰ III • •	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	50

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The Drag & Drop technique is available in this window, and is considered the easiest way to configure the selected device to output on the chosen DMX Channel (or to "address" it.) If you're already familiar with "drag and drop" just drop the selected device onto the Channel you want its DMX Start Address to be. Click on Save All once done, and all the patching changes will be saved (one by one).

The channels patched are shown in the following colors:

Patched to a device on the list. (DARK GREEN)

Vacant Cell / Not Patched yet (WHITE)

- Overlapped with 2 or more devices (**RED**)
- Patched to the Selected Device (**LIGHT GREEN**)

Overlapped And Patched to the currently Selected Device (**PINK**)

*Auto Patch* will patch all the devices shown on the list, to a series of channels starting with DMX 1. The devices will be patched consecutively based on the Sort order of their Manufacturer Label.

## **RDM Controller: Monitor Devices**

This window displays all sensors reported by the device selected in Device List to the left. The Sensor display area is scrollable if there are multiple values to scan. The following information for each sensor displayed (if available):

- Sensor No.
- Sensor Name
- Min. Defined Value (with units)
- Max. Define Value (with units)
- Lowest reported Value (with units)
- Current reported Value (with units)
- Highest reported Value (with units)

Any Warning, Error or Advisory Status Messages reported by the device are listed under "Status Messages". Critical messages are displayed in red. These messages are updated by manual refreshing only.

Devices(PRO)		
[ Full Discovery ]	[ Additive Discovery ] Status: Idle	
Device List		
	-	1
	Device Summary DMX Patch Grid 🕘 Monitor Devices r	<ul> <li>Advanced RDM Settings</li> </ul>
🚺 788-LD+ Quad Dimmer Pack v2	Device Sensors	
Desc: DIMMER_AC_INCANDES	Sub_1 - 788-LD+ Quad Dimmer Pack v2	[Identify] OEVIC
- MX Start: 120	SENSORS:	
- DMX Footprint: 8		Refresh
E SubDevice_1	Sensor 1: TEMPERATURE Filter/Triac temp	
SubDevice_2	Min: 0 °C	Max: 100 °C
⊞ O SubDevice_3 ⊞ O SubDevice 4		
Hell RDM LED Effect	Lowest: 25 °C Current: 25 °C	Highest: 26 °C
UID: 484500000018		
Desc: Test Equipment		
DMX Start: 56	Messages/Info STATUS MESSAGES:	
DMX Footprint: 3	No Error/Warning Messages	
D Hell RDM LED Effect		
D Enttec Responder 2.12		
——💱 Desc: Test Equipment		
DMX Footprint: 1		
D Hell RDM LED Effect		
· · · · · · · · · · · · · · · · · · ·		

The following information might be displayed, if supported by the device:

- DEVICE\_HOURS
- LAMP\_HOURS
- LAMP\_STRIKES
- LAMP\_STATE
- DEVICE\_POWER\_CYCLE

### RDM Controller: Advanced RDM

This panel allows GET/SET functions for all supported Parameters as reported by the device. Since not all PIDs allow both GET and SET, and since they may or may not have data to send, the relevant controls for each device are pre-selected based on the ANSI E1.20 specification.

Once a different device is selected, the list of PIDs that can be GET or SET will change accordingly. This window can be used to test and set any manufacturer specific PIDs. HEX values can be sent too (hover on the text field to see what format to use for HEX values).

There is also a log window which logs all relevant RDM messages that are sent or received by the RDM Controller. The log can be used to check for appropriately formed response by the responder.



### **RDM Sniffer**

ENTTEC RDM Sniffer captures packets and displays them with an extensive layout to easily decode RDM Layout of the captured packet. A detailed view lists each byte captured along-with individual time-stamp. With Timing checks enabled it can allow the user to determine whether a certain device complies with ANSI E1.20.

ENTTEC Sniffer is designed to be used primarily for the capture and analysis of RDM/DMX packets. The entire process is divided into two stages:-

- a) Capture of Data, and
- b) Analysis of capture data into meaningful form.



Press **Start Capture** button while **Enable Real Time Update** is selected, to perform both the tasks at the same time. The packet list screen will be updated as and when new packets are captured. If Real Time Update consumes too much resources, it is recommended to not use it. Alternatively a progress bar shows the packets being captured, and Stop Capture button allows analysis.

Any packet that does not conform to the Timing as per ANSI E1.20 (RDM) and DMX 512/1990 is highlighted in Yellow. Double Clicking the packet displays the error message with reference to ANSI E1.20 (Pg & table) to lookup for RDM Timing.

### PRO Mk2 Specifications

Due to continuous improvements and innovations of all ENTTEC products, specifications and features are subject to change without notice.

Item	Value
Power Requirements	500mA supplied by USB
Weight	0.42 lbs. / 0.19 Kg
Shipped weight	0.77 lbs. / 0.35 Kg
Length	4.1" / 105mm
Width	2.6" / 66mm
Height	0.9″ / 22mm
Op Environment	0°-50°C
Connectors	1x 15-Pin breakout connector 1x micro USB B Male connector

#### Ordering Information

The ENTTEC RDM Kit and compatible products can be ordered from our website or through your ENTTEC dealer.

PN	Description
70531	ENTTEC RDM KIT
70511	RDM License Dongle
70029	5-pin to 3-pin DMX Adapter
79122	5-pin DMX Terminator
79126	0.5m 5-pin DMX Cable
79133	2m 5-pin DMX Cable

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