VARYTEC

User’s manual

Easy Scan XT3 LED

Table of content

1. Safety instructions

FOR SAFE AND EFFICIENT OPERATION

Be careful with heat and extreme temperatureAvoid exposing it
to direct rays of the sun or near a heating appliance.
Not put it in a temperature bellow 41°F /5°C, or exceeding 95°F /35°C.

Keep away from humidity, water and dust
Do not place the set in a location with high humidity or lots of dust.
Containers with water should not be placed on the set.

Keep away from sources of hum and noise
Such as transformer motor, tuner, TV set and amplifier.

To avoid placing on un-stable location
Select a level and stable location to avoid vibration.

Do not use chemicals or volatile liquids for cleaning
Use a clean dry cloth to wipe off the dust, or a wet soft cloth for stubborn dirt.

If out of work, contact sales agency immediately
Any troubles arose, remove the power plug soon, and contact with an engineer for repairing,
do not open the cabinet by yourself, it might result a
danger of electric shock.

Take care with the power cable
Never pull the power cable to remove the plug from the receptacle, be sure
to hold the plug. When not using the player for an extended period of time
be sure to disconnect the plug from the receptacle.

2. Before you begin

2.1. What is included

1 x Easy Scan XT3 LED

1 x Power Cord

1 x Warranty Card

1 x User manual

2.2. AC Power

This fixture has an auto-switching power supply that can accommodate a wide range of input voltages (100 V - 240 VAC, 50/60 Hz). Before powering on the unit, make sure the line voltage to which you are connecting it is within the range of accepted voltages.

Always connect the fixture to a switched circuit. Never connect the fixture to a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel is used only as a 0% to 100% switch.

3. Introduction

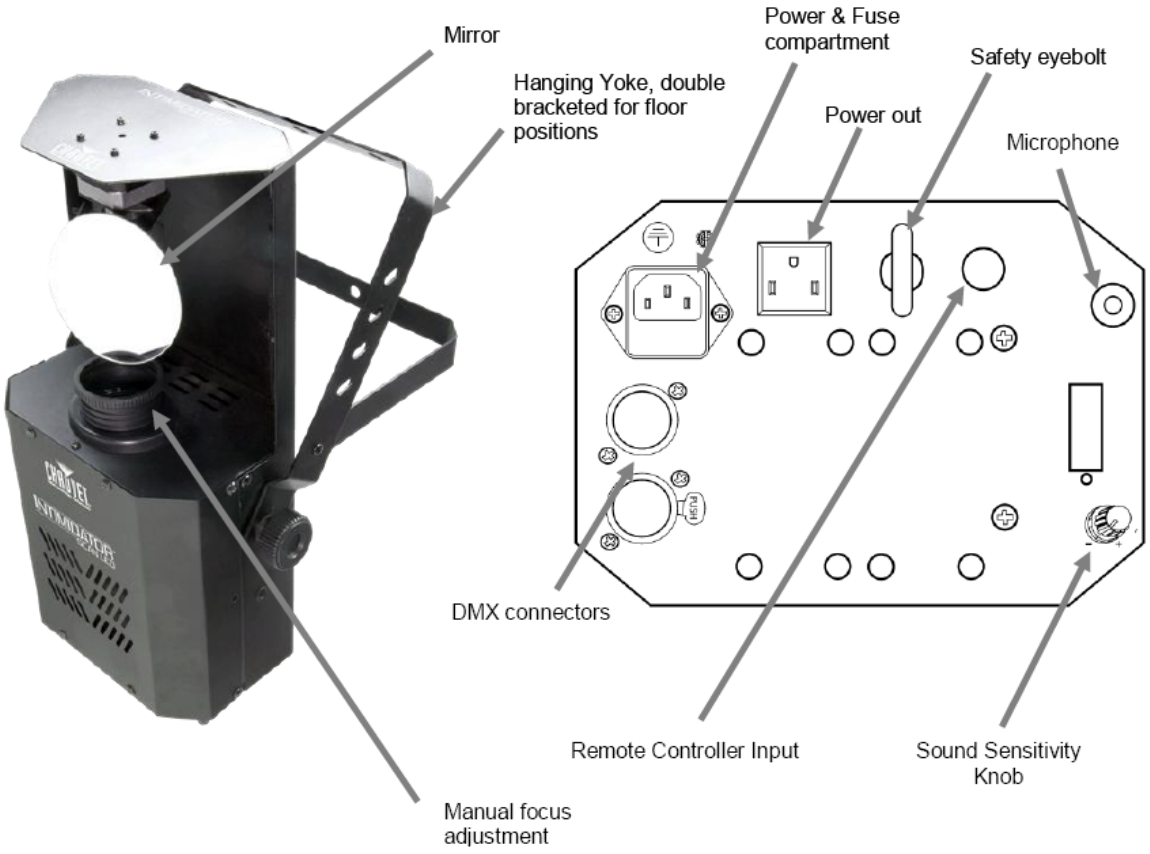
3.1. Features

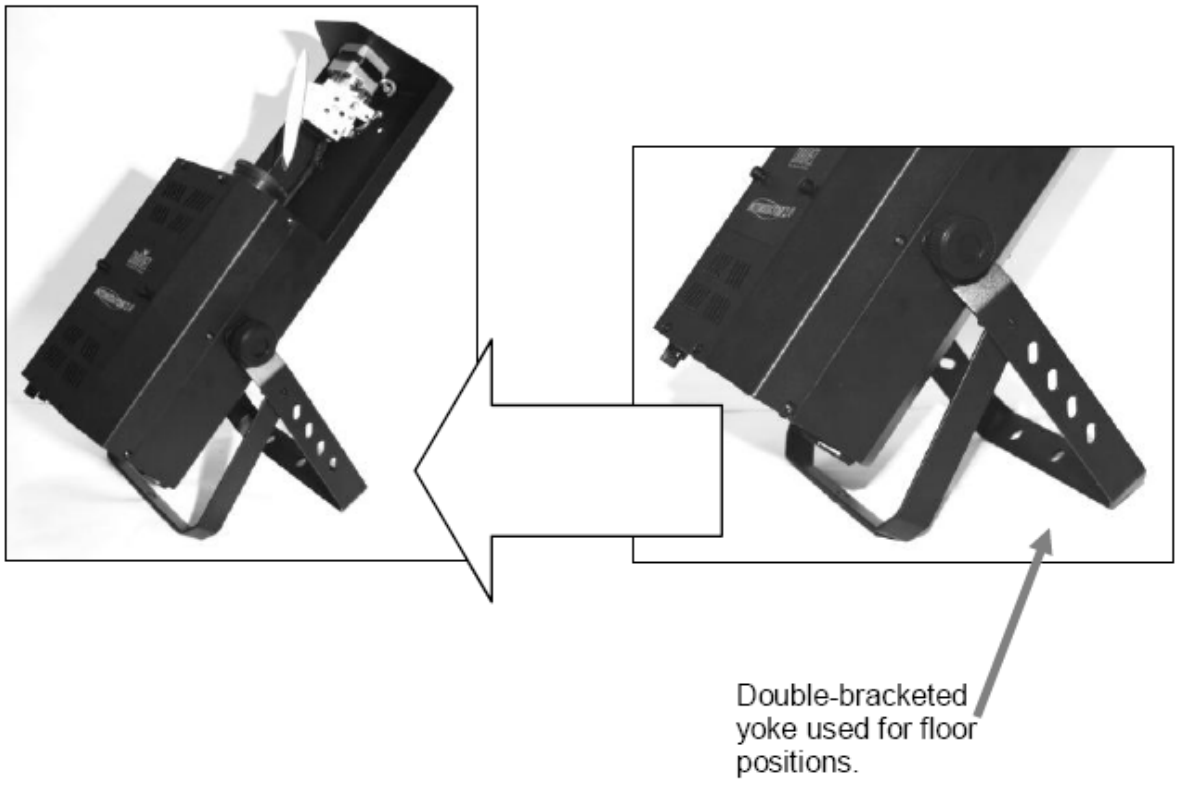
- 5-channel DMX-512 LED scanner
- Pan: 180o / tilt: 90
- Color wheel 11 colors + white
  1 quad color, 1 tri color
  Rainbow color spin effect
- Gobo wheel with Gobo shake
  14 gobos + open
  12 metal, 2 glass installed
  Gobo wheel spin effect

Additional Features

- High-power, 22W (1,360mA) LED
- Additional power output: max 20 units @ 120V (see manual for details)
- Built-in automated programs via master/slave
- Built-in sound activated programs via master/slave
- Double bracket yoke doubles as floor stand
- Automatically enters stand alone when no DMX signal is present

4. Product overview





5. DMX Channel

CHANNEL	FUNCTION
1	Strobe
2	Gobo
3	Color
4	Pan
5	Tilt

6. Setup

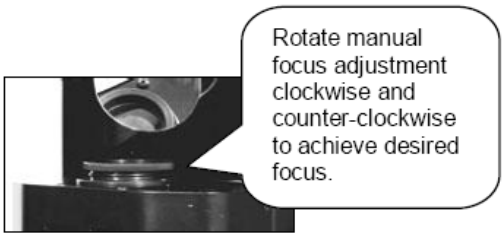
6.1. Light Source

The fixture does not use a halogen lamp as its light source. Instead, it uses a high luminosity LED, which comes preinstalled, and does not need to be setup or replaced.

6.2. Manual focus

To adjust the focus, please follow the instructions below:

1) If operating in stand-alone mode, turn the music down so that the unit temporarily stops any activity.



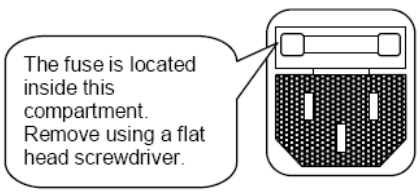
2) In DMX control mode, create a static scene with any gobo of your choice pointed to a flat surface, ideally at a halfway point of the fixture's total coverage area.

3) Rotate the manual focus either clockwise or counter-clockwise until the spot is defined by a hard edge.

6.3. Fuse replacement

Disconnect the power cord before replacing a fuse and always replace it with the same type of fuse.

With a flat head screwdriver, wedge the fuse holder out of its housing. Remove the blown fuse from its holder and replace with the exact same type of fuse. Insert the fuse holder back in its place and reconnect power.



7. Fixture Linking

7.1. Fixture Linking

You will need a serial data link to run light shows of one or more fixtures using a DMX-512 controller or to run synchronized shows on two or more fixtures set to a master/slave operating mode. The combined number of channels required by all the fixtures on a serial data link determines the number of fixtures the data link can support.

Fixtures on a serial data link must be daisy chained in one single line. To comply with the EIA-485 standard no more than 32 devices should be connected on one data link. Connecting more than 32 fixtures on one serial data link without the use of an optically isolated DMX splitter may result in deterioration of the digital DMX signal.

7.2. DMX Data Cable

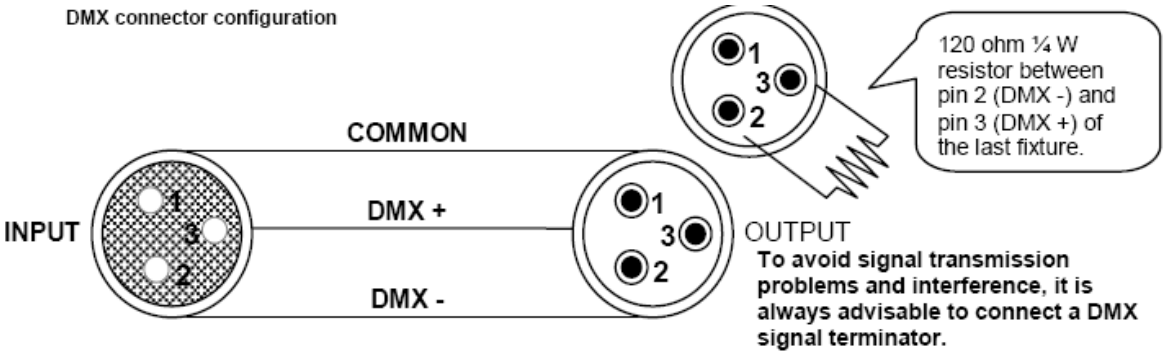
To link two or more fixtures together you must use DMX compliant data cables.
If you choose to create your own cable, please use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference. Use a Belden© 9841 or equivalent cable, which meets the specifications for EIA RS-485 applications.

Standard microphone cables cannot transmit DMX data reliably over long distances.

The cable must have the following characteristics:

- Type: shielded, 2-conductor twisted pair
- Maximum capacitance between conductors: 30 pF/ft.
- Maximum capacitance between conductor and shield: 55 pF/ft.
- Maximum resistance: 20 ohms / 1000 ft.
- Nominal impedance: 100 – 140 ohms

DMX connector configuration



Do not allow contact between the common and the fixture's chassis ground. Grounding the common can cause a ground loop, and your fixture may perform erratically. Test the cables with an ohmmeter to verify correct polarity and to make sure the pins are not grounded or shorted to each other.

7.3. 3 pin to 5pin connector

A lot of fixtures are still using a 5pole DMX connector.

In this case you can buy a adaptor or built up a connector on your own.

Wiring then is as following:

3-PIN TO 5-PIN CONVERSION CHART

Conductor	3-Pin Female (output)	5-Pin Male (Input)
Ground/Shield	Pin 1	Pin 1
Data (-) signal	Pin 2	Pin 2
Data (+) signal	Pin 3	Pin 3
Not used		Pin 4
Not used		Pin 5

8. Mounting

It is important never to obstruct the fan or vents pathway. Mount the fixture using, a suitable “C” or “O” type clamp. Adjust the angle of the fixture by loosening both knobs and tilting the fixture. After finding the desired position, retighten both knobs.

- When selecting an installation location, consider ease of access for routine maintenance.
- Always use safety cables.
- Never mount the unit in places where it will be exposed to rain, high humidity, extreme temperature changes or restricted ventilation.

9. Operating Instructions

9.1. Operating modes

Stand alone

The Stand-alone mode is activated automatically when the fixture does not receive a DMX signal, regardless of DIP switch settings. The fixture will run through its built in program (sound activated).

Master Slave

The Master/Slave mode will allow you to link up to as many units as you want, without a controller, in a daisy chain fashion. In this mode, the first unit in the daisy chain will automatically command all other units following regardless of their DIP switch settings. See the **Setup** section for instructions on how to connect the various units.

DMX Mode

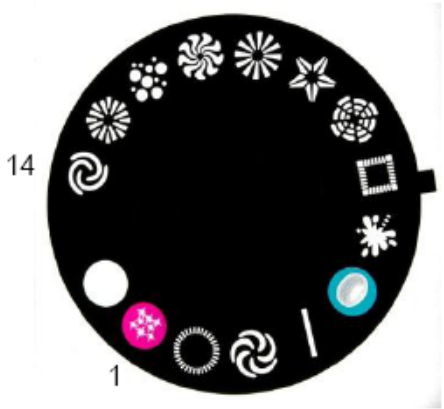
This mode allows the unit to be controlled by any universal DMX controller

9.2. Using DMX Mode

- Daisy chain the fixture(s), using DMX cables, from the output of the DMX controller as indicated in the **Setup** section.
- Assign the individual DMX address, using DIP switches 1 to 9 on each unit.
- When the fixtures detect DMX signal, they will automatically switch to DMX operation mode.

9.3. DMX Channel Value

Channel	Value	Function
1		**Strobe**
	000 ⇳ 015	Gobo Stopped
	016 ⇳ 091	Adjacent gobo strobe: Slow > Fast
	092 ⇳ 135	Adjacent color strobe: Slow > Fast
	136 ⇳ 195	Adjacent color and gobo strobe: Slow > Fast
	196 ⇳ 255	Gobo shake: Slow > Fast
2		**Gobo**
	000 ⇳ 007	Blackout
	008 ⇳ 015	Open
	016 ⇳ 023	Gobo 1
	024 ⇳ 031	Gobo 2
	032 ⇳ 039	Gobo 3
	040 ⇳ 047	Gobo 4
	048 ⇳ 055	Gobo 5
	056 ⇳ 063	Gobo 6
	064 ⇳ 071	Gobo 7
	072 ⇳ 079	Gobo 8
	080 ⇳ 087	Gobo 9
	088 ⇳ 095	Gobo 10
	096 ⇳ 103	Gobo 11
	104 ⇳ 111	Gobo 12
	112 ⇳ 119	Gobo 13
	120 ⇳ 127	Gobo 14
	128 ⇳ 255	Gobo Spin: Slow > Fast
3		**Color**
	000 ⇳ 010	Open/White
	011 ⇳ 012	Red
	022 ⇳ 023	Cyan
	033 ⇳ 034	Yellow
	044 ⇳ 045	Green
	055 ⇳ 065	Magenta
	066 ⇳ 076	Light Blue
	077 ⇳ 087	Dark Yellow
	088 ⇳ 098	Light Green
	099 ⇳ 109	Orange
	110 ⇳ 120	Tri-Color (Red-White-Blue)
	121 ⇳ 127	Quad-Color
	128 ⇳ 255	Color Spin: Slow > Fast
4		**Pan**
	000 ⇳ 255	0° - 180°
5		**Tilt**
	000 ⇳ 255	0° - 90°



9.4. Setting the starting Address

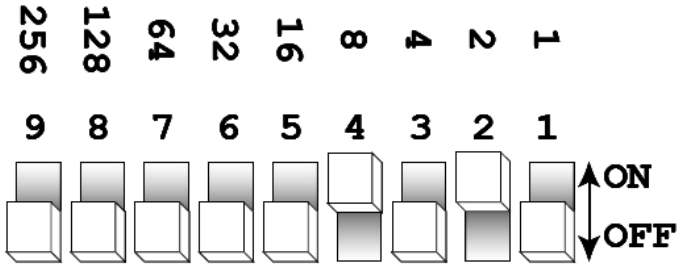
Set the starting address using the group of DIP switches located usually on bottom of the fixture. Each DIP switch has an associated value. Adding the value of each switch in the ON position will provide the starting address. The following instructions will help you to figure out which switches to toggle ON given a specific starting address:

- Determine the largest value switch that is less than the starting address. Turn this switch on.
- Subtract the value of the switch you just turned on from the starting address number.
- Determine the largest value switch that is less than the remainder from the previous subtraction. Turn this switch on.
- Subtract the value of the switch you just turned on from the remainder of the previous subtraction.
- Repeat steps three and four until you have a remainder of zero.

9.4.1. examples

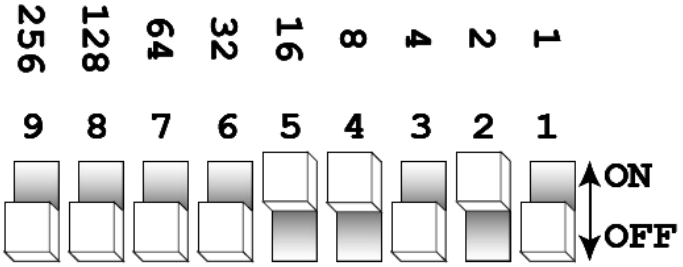
Address 10

Switch # 4 = 8
Switch # 2 = 2
Total = 10



Address 26

Switch # 5 = 16
Switch # 4 = 8
Switch # 2 = 2
Total = 26



Resolving the starting address using simple math.

Address 233

233 – (128) = 105 - Turn ON Dip # 8

105 – (64) = 41 - Turn ON Dip # 7

41 – (32) = 9 - Turn ON Dip # 6

9 – (8) = 1 - Turn ON Dip # 4

1 – (1) = 0 - Turn ON Dip # 1

DIPSWITCH	(DMX VALUE)
1	1
2	2
3	4
4	8
5	16
6	32
7	64
8	128
9	256

9.4.2. DMX Quick reference chart

DMX Quick Reference Chart

DMX Address Quick Reference Chart

Dip Switch Position

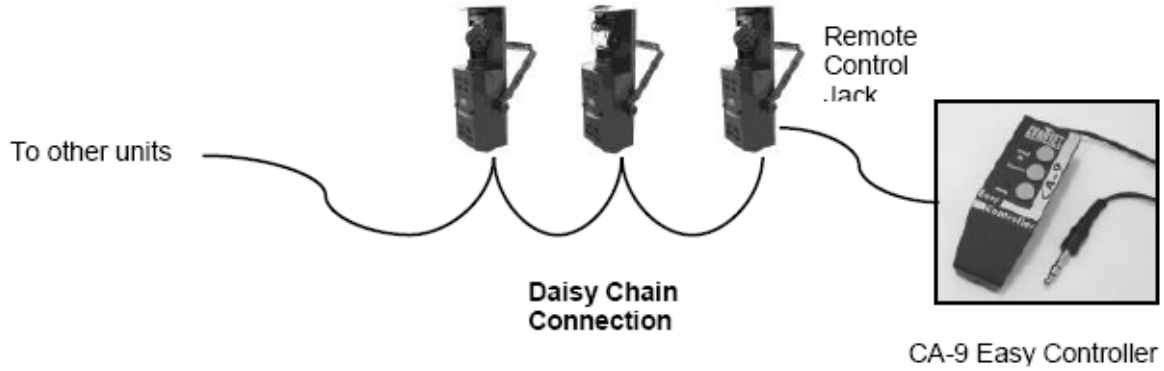
DMX DIP SWITCH SET 0=OFF 1=ON X=OFF or ON																					
	#9	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1				
	#8	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1				
	#7	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1				
	#6	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1				
Dip Switch Position					DMX Address																
#1	#2	#3	#4	#5																	
0	0	0	0	0		32	64	96	128	160	192	224	256	288	320	352	384	416	448	480	
1	0	0	0	0	1	33	65	97	129	161	193	225	257	289	321	353	385	417	449	481	
0	1	0	0	0	2	34	66	98	130	162	194	226	258	290	322	354	386	418	450	482	
1	1	0	0	0	3	35	67	99	131	163	195	227	259	291	323	355	387	419	451	483	
0	0	1	0	0	4	36	68	100	132	164	196	228	260	292	324	356	388	420	452	484	
1	0	1	0	0	5	37	69	101	133	165	197	229	261	293	325	357	389	421	453	485	
0	1	1	0	0	6	38	70	102	134	166	198	230	262	294	326	358	390	422	454	486	
1	1	1	0	0	7	39	71	103	135	167	199	231	263	295	327	359	391	423	455	487	
0	0	0	1	0	8	40	72	104	136	168	200	232	264	296	328	360	392	424	456	488	
1	0	0	1	0	9	41	73	105	137	169	201	233	265	297	329	361	393	425	457	489	
0	1	0	1	0	10	42	74	106	138	170	202	234	266	298	330	362	394	426	458	490	
1	1	0	1	0	11	43	75	107	139	171	203	235	267	299	331	363	395	427	459	491	
0	0	1	1	0	12	44	76	108	140	172	204	236	268	300	332	364	396	428	460	492	
1	0	1	1	0	13	45	77	109	141	173	205	237	269	301	333	365	397	429	461	493	
0	1	1	1	0	14	46	78	110	142	174	206	238	270	302	334	366	398	430	462	494	
1	1	1	1	0	15	47	79	111	143	175	207	239	271	303	335	367	399	431	463	495	
0	0	0	0	1	16	48	80	112	144	176	208	240	272	304	336	368	400	432	464	496	
1	0	0	0	1	17	49	81	113	145	177	209	241	273	305	337	369	401	433	465	497	
0	1	0	0	1	18	50	82	114	146	178	210	242	274	306	338	370	402	434	466	498	
1	1	0	0	1	19	51	83	115	147	179	211	243	275	307	339	371	403	435	467	499	
0	0	1	0	1	20	52	84	116	148	180	212	244	276	308	340	372	404	436	468	500	
1	0	1	0	1	21	53	85	117	149	181	213	245	277	309	341	373	405	437	469	501	
0	1	1	0	1	22	54	86	118	150	182	214	246	278	310	342	374	406	438	470	502	
1	1	1	0	1	23	55	87	119	151	183	215	247	279	311	343	375	407	439	471	503	
0	0	0	1	1	24	56	88	120	152	184	216	248	280	312	344	376	408	440	472	504	
1	0	0	1	1	25	57	89	121	153	185	217	249	281	313	345	377	409	441	473	505	
0	1	0	1	1	26	58	90	122	154	186	218	250	282	314	346	378	410	442	474	506	
1	1	0	1	1	27	59	91	123	155	187	219	251	283	315	347	379	411	443	475	507	
0	0	1	1	1	28	60	92	124	156	188	220	252	284	316	348	380	412	444	476	508	
1	0	1	1	1	29	61	93	125	157	189	221	253	285	317	349	381	413	445	477	509	
0	1	1	1	1	30	62	94	126	158	190	222	254	286	318	350	382	414	446	478	510	
1	1	1	1	1	31	63	95	127	159	191	223	255	287	319	351	383	415	447	479	511	

10. Optional controller

Optional it is possible to buy the Easy Scan XT3 remote control. It will be connected by using the jack input, on the first unit. The other units you want to control together should be connected like a dmx line.

The functions of the remote control are:

STAND BY	MODE	FUNCTION
	LED ON: Slow Mode	Pan & Tilt is sound activated but Gobo and Color wheel are static and controlled by the **Function** button. Tap the **Function** button to step through the 11 colors then once more to step to the next gobo.
BLACKOUT	LED OFF: Fast Mode	The unit's movement Pan & Tilt and Gobo/Color is sound activated. Press and hold the **Function** button to achieve the following results. a. Strobe in different colors and gobos b. Synchronous strobe in white c. Two-light strobe in white color



11. Technical data

WEIGHT & DIMENSIONS

Length	17.4 in (441 mm)
Width	10.1 in (256 mm)
Height	5.6 in (142 mm)
Weight	10.2 lbs (4.6 kg)

POWER

Autoswitching	100-240 VAC 50/60 Hz
Fuse	F3 A 250 V (5x20 mm fast-blow)
Power Consumption	50 W (0.6 A) max @ 120 V
Inrush Current	(0.2 A) @ 120 V
Power Consumption	53 W (0.4 A) max @ 230 V
Inrush Current	(0.3 A) @ 230 V
Power Output	20 units max @ 120 VAC, 40 units max @ 230 V

LIGHT SOURCE

LED	22 W 1,360 mA (1 White) 50,000 hrs

PHOTO OPTIC

Luminance @ 1m	1,530 lux
Beam angle	15°

THERMAL

Maximum ambient temperature	104° F (40° C)

CONTROL & PROGRAMMING

Data input	locking 3-pin XLR male socket
Data output	locking 3-pin XLR female socket
Data pin configuration	pin 1 shield, pin 2 (-), pin 3 (+)
Protocols	DMX-512 USITT
DMX Channels	5

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