

#### TX - 30 PROTOCOL TRANSLATOR OWNERS MANUAL

#### DESCRIPTION

The TX-30 is a very compact in-line translator which receives USITT DMX-512 signals and transmits the Lightronics (LMX-128) multiplex protocol. This is the industry standard multiplex protocol. The unit is powered by the dimmer chain to which it is connected or may optionally be powered by an external plug-in power supply.



#### CONNECTIONS

DMX input is received via a 5 pin male XLR connector. LMX output is via a 3 pin female XLR connector. A 5 pin female XLR is also provided for the DMX signal "pass thru". LED indicators display power and input signal status.



#### OPERATION

The TX-30 translates and sends LMX-128 automatically when power is applied and a DMX signal is present. LED indicators show the power and DMX incoming signal status.

#### CHANNEL ASSIGNMENT

The TX-30 translates 192 channels at a time. Eight of the DIP switches on the front of the unit are used to select the starting channel of the 192 channel block. When all switches are down, channels 1 - 192 are selected. Channel selection is incremented two channels at a time. A table of address switch settings is included at the back of this manual.

#### HOLD FUNCTION

DIP switch number 2 activates a "hold" function. If this switch is in the up position, channel outputs will remain at their current levels indefinitely upon loss of DMX signal.

#### DMX TERMINATOR

DIP switch number 1 will terminate the DMX input bus when it is in the DOWN position.

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## TX192 OPTION

The TX-30 may be optionally supplied to transmit the AMX-192 protocol. This model transmits both LMX and AMX simultaneously. An external power supply is included and is needed with this option. The AMX-192 output signal is transmitted from a 4 pin, male, XLR connector located at the rear of the unit.

CAUTION: Some AMX dimmer equipment uses a 4 pin MINI-DIN connector for the control signal. That connector is NOT wired the same as the 4 pin XLR connector. The following table provides the information needed to make an adapter cable.

#### **AMX-192 CONNECTOR WIRING**

Signal	XLR	MINI-DIN		
Name	Connector	Connector		
	Pin #	Pin #		
Common	1	2		
Clock +	2	3		
AMX Signal	3	4		
Clock -	4	1		

#### EXTERNAL POWER SUPPLY INFORMATION

Input Voltage:	120VAC
Output Voltage:	13.5 VAC
Output Current:	800 Milliamps
Connector:	2.1mm female connector

The TX-30 will operate using an alternative external power supply which can provide anywhere from 13 to 24 Volts AC or DC. The supply must be rated at 600 ma. If a DC supply is used, the center pin of the connector MUST BE THE NEGATIVE output terminal of the supply.

#### MAINTENANCE AND REPAIR

#### TROUBLESHOOTING

Verify the cables (a very common source of problems!). Ensure that all system units are powered - particularly the dimmer to which the translator is connected. Check address settings at dimmers, console, and translator. Check console patch configuration.

#### REPAIR

There are no user servicable parts in the unit. Internal service by other than Lightronics authorized agents will void the warranty. If service is required, contact the dealer from whom you purchased the unit or contact the Lightronics Service Dept..

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#### ADDRESS SETTINGS TABLE

The DIP Switch Setting column shows the positions of the DIP switches on the TX-30. The Start Channel column shows the resulting DMX channel assignment for the first TX-30 LMX output channel (channel 1). The left end two DIP switches are not included in the table since they do not affect the address settings.

NOTE: Some control consoles and dimmers can be programmed or "patched" to alter their channel order. You may get unexpected results if you are not aware of the patch condition when you set the TX-30 address switches.

EXAMPLE: If the dimmer's DIP switches are set to  $\mathcal{D} \mathcal{D} \mathcal{D} \mathcal{D} \mathcal{D} \mathcal{D} \mathcal{D} \mathcal{D}$ : the first channel of the dimmer will respond to console channel 87. The remaining dimmer channels will respond to console channels 88, 89, 90, ... etc.

DIP Switch # and Setting	Start	DIP Switch # and Setting	Start	DIP Switch # and Setting	Start	DIP Switch # and Setting	Start
3 4 5 6 7 8 9 10	Chan	3 4 5 6 7 8 9 10	Chan	3 4 5 6 7 8 9 10	Chan	3 4 5 6 7 8 9 10	Chan
$\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}$	1	$\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}$	65	$\mathbf{\hat{0}}\mathbf{\hat{0}}\mathbf{\hat{0}}\mathbf{\hat{0}}\mathbf{\hat{0}}\mathbf{\hat{0}}\mathbf{\hat{0}}\mathbf{\hat{0}}$	129	00000000	193
ŶŶŶŶŶŶŶ <b>Ŷ</b>	3	ŶŶ <b>IJ</b> ŶŶŶŶŶ <b>IJ</b>	67	Ŷ <b>IJ</b> ŶŶŶŶŶŶ <b>IJ</b>	131	Ŷ <b>IJIJ</b> ŶŶŶŶŶ <b>IJ</b>	195
ÛÛÛÛÛÛÛ	5	ŶŶ <b>IJ</b> ŶŶŶŶŶŶ	69	00000000	133	00000000	197
<b>ÛÛÛÛÛÛ</b>	7	00000000	71	00000000	135	00000000	199
<u> </u>	9	<b>ÛÛÛÛÛÛÛ</b>	73	00000000	137	00000000	201
<b>ÛÛÛÛÛÛÛ</b>	11	<b>ŶŶŎŶŶŎŶŎ</b>	75	Ŷ <b>IJ</b> ŶŶŶŶŶŶŶ	139	Ŷ <b>IJŨ</b> ŶŶŨŶŨ	203
<b>ûûûûûûû</b>	13	<b>ŶŶŎŶŶŎŎŶ</b>	77	00000000	141	00000000	205
<b>ÛÛÛÛÛÛ</b>	15	<b>ŶŶŎŶŶŎŎŎ</b>	79	Ŷ <b>IJ</b> ŶŶŶŶ <b>IJIJ</b>	143	00000000	207
<u> </u>	17	<b>ŶŶŬŶŮŶŶŶ</b>	81	Ŷ <b>IJ</b> ŶŶŶŶŶŶ	145	Ŷ <b>ŮŮ</b> ŶŮŶŮŶ	209
<b>ŶŶŶŶŶŶŶŶ</b>	19	<b>ŶŶŎŶŎŶŶŎ</b>	83	Ŷ <b>IJ</b> ŶŶŶŶŶŶŶ	147	Ŷ <b>ŨŨ</b> ŶŨŶŨ	211
<b>ûûûûûûû</b>	21	<b>ŶŶIJŶIJŶIJŶ</b>	85	00000000	149	00000000	213
ŶŶŶŶ <b>Ů</b> Ŷ <b>Ů</b> Ŷ	23	ŶŶ <b>IJ</b> ŶIJŶIJIJ	87	00000000	151	<b>Û 0 0 Û 0 Û 0 Û</b>	215
ŶŶŶŶ <b>ŮŮ</b> ŶŶ	25	ŶŶ <b>IJ</b> Ŷ <b>IJIJ</b> ŶŶ	89	00000000	153	00000000	217
ŶŶŶŶ <b>ŮŮ</b> Ŷ <b>Ů</b>	27	0000000	91	0000000	155	Ŷ <b>IJIJ</b> Ŷ <b>IJ</b> ŶŨ	219
ŶŶŶŶ <b>ŮŮŮ</b> Ŷ	29	$\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}$	93	0000000	157	0000000	221
ŶŶŶŶ <b>ŮŮŮŮ</b>	31	000000000000000000000000000000000000	95	00000000	159	<b>Û00Û0000</b>	223
<b>ûûûûûû</b> û	33	ŶŶ <b>IJIJ</b> ŶŶŶŶ	97	Ŷ <b>IJ</b> ŶŮŶŶŶŶ	161	Ŷ <b>IJIJIJ</b> ŶŶŶŶ	225
ŶŶŶ <b>IJ</b> ŶŶŶ <b>IJ</b>	35	ŶŶ <b>IJIJ</b> ŶŶŶ <b>IJ</b>	99	00000000	163	00000000	227
ŶŶŶ <b>IJ</b> ŶŶŶŶŶ	37	ŶŶ <b>IJIJ</b> ŶŶ <b>IJ</b> Ŷ	101	Ŷ <b>IJ</b> ŶŮŶŮŶŮŶ	165	00000000	229
ŶŶŶ <b>Ů</b> ŶŶ <b>ŮŬ</b>	39	00000000	103	000000000	167	<b>Û 0 0 0</b> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	231
<b>ûûûûûû</b> û	41	ŶŶ <b>IJIJ</b> ŶŨŶŶ	105	00000000	169	00000000	233
<b>ŶŶŶŮŶŮŶŮ</b>	43	0000000	107	00000000	171	<b>Û 0 0 0 Û 0 Û 0</b>	235
ŶŶŶ <b>Ů</b> Ŷ <b>Ů</b> ŮŶ	45	$\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}$	109	00000000	173	0000000	237
<b>ŶŶŶŶŶŶŶŶŶ</b>	47	0000000	111	000000000	175	<b>00000000</b>	239
ŶŶŶ <b>ŮŮ</b> ŶŶŶ	49	ŶŶ <b>IJIJIJ</b> ŶŶŶ	113	Ŷ <b>IJ</b> Ŷ <b>IJIJ</b> ŶŶŶ	177	00000000	241
ŶŶŶ <b>ŮŨ</b> ŶŶ <b>Ũ</b>	51	ŶŶ <b>ŎŎŎ</b> ŶŶŎ	115	000000000	179	<b>Û 0 0 0 0 0 0 0 0</b>	243
ŶŶŶ <b>ŮŮ</b> ŶÛŶ	53	ŶŶ <b>IJIJ</b> ŶŶŊ	117	0000000	181	<b>Û 0 0 0 0</b> 0 Û 0 Û	245
ŶŶŶ <b>ŮŮ</b> Ŷ <b>ŮŮ</b>	55	<b>ŶŶŮŮŮ</b> ŮŮ	119	<b>Û Û Û Û Û Û Û</b> Û Û Û Û Û Û Û Û Û Û Û Û	183	<b>00000000</b>	247
<b>ûûû000</b> ûû	57	<b>ŶŶŮŮŮŮ</b> ŶŶ	121	00000000	185	Ŷ <b>99999</b> ŶŶ	249
$\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}$	59	$\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}$	123	0000000	187	0.000000	251
$\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}\hat{U}$	61	$\hat{U}\hat{U}$	125	0000000	189	0000000	253
<b>ŶŶŶ<b>ŬŬŬŬŬ</b></b>	63	0000000	127	<b>0000000</b>	191	<b>0000000</b>	255

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### ADDRESS SETTINGS TABLE (CONTINUED)

DIP Switch # and Setting	Start Chan	DIP Switch # and Setting	Start Chan	DIP Switch # and Setting	Start Chan	DIP Switch # and Setting	Start Chan
3 4 5 6 7 8 9 10		3 4 5 6 7 8 9 10		3 4 5 6 7 8 9 10		3 4 5 6 7 8 9 10	
00000000	257	<b>U</b> ÛUÛÛÛÛÛ	321	000000000	385	000000000	449
•••••••••	259	00000000	323	000000000	387	000000000	451
<b>U</b> ÛÛÛÛÛÛÛÛ	261	<b>U</b> ÛUÛÛÛÛÛÛ	325	000000000	389	000000000	453
00000000	263	00000000	327	00000000	391	000000000	455
<b>U</b> ÛÛÛÛÛÛÛÛ	265	<b>U</b> ÛUÛÛÛÛÛ	329	000000000	393	000000000	457
00000000	267	00000000	331	00000000	395	00000000	459
00000000	269	00000000	333	00000000	397	00000000	461
00000000	271	00000000	335	00000000	399	00000000	463
<b>U</b> ÛÛÛÛÛÛÛ	273	<b>U</b> Û U Û Û Û Û Û Û Û Û Û Û Û Û Û Û Û Û Û	337	000000000	401	000000000	465
<b>U</b> ÛÛÛÛÛÛÛ	275	000000000	339	000000000	403	000000000	467
00000000	277	<b>0</b> 00000000	341	000000000	405	00000000	469
00000000	279	000000000	343	000000000	407	0000000000	471
00000000	281	<b>9</b> 0000000	345	000000000	409	00000000	473
00000000	283	00000000	347	000000000	411	000000000	475
0000000	285	0000000	349	<b>00</b> ûû <b>000</b> û	413	00000000	477
00000000	287	00000000	351	00000000	415	00000000	479
<b>U</b> ÛÛÛÛÛÛÛ	289	<b>U</b> Û <b>U</b> Û Û Û Û Û Û Û Û Û Û Û Û Û Û Û Û Û Û Û	353	000000000	417	000000000	481
000000000	291	00000000	355	000000000	419	0000000000	483
00000000	293	<b>0</b> 0000000	357	00000000	421	00000000	485
00000000	295	00000000	359	000000000	423	000000000	487
00000000	297	00000000	361	000000000	425	00000000	489
00000000	299	00000000	363	000000000	427	000000000	491
0000000	301	0000000	365	00000000	429	00000000	493
00000000	303	00000000	367	000000000	431	000000000	495
00000000	305	<b>0</b> 00000000	369	000000000	433	000000000	497
00000000	307	00000000	371	000000000	435	0000000000	499
0000000	309	00000000	373	00000000	437	00000000	501
00000000	311	00000000	375	00000000	439	000000000	503
0000000	313	00000000	377	00000000	441	00000000	505
0000000	315	00000000	379	00000000	443	000000000	507
0000000	317	0000000	381	0000000	445	0000000	509
000000	319	0000000	383	0000000	447	0000000	511

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	WARRANTY
All pur	Lightronics products are warranted for a period of TWO/FIVE YEARS from the date of chase against defects in materials and workmanship.
	This warranty is subject to the following restrictions and conditions:
A)	If service is required, you may be asked to provide proof of purchase from an authorized Lightronics dealer.
B)	The FIVE YEAR WARRANTY is only valid if the warranty card is returned to Lightronics accompanied with a copy of the original receipt of purchase within 30 DAYS of the purchase date, if not then the TWO YEAR WARRANTY applies. Warranty is valid only for the original purchaser of the unit.
C)	This warranty does not apply to damage resulting from abuse, misuse, accidents, shipping, and repairs or modifications by anyone other than an authorized Lightronics service representative.
D)	This warranty is void if the serial number is removed, altered or defaced.
E)	This warranty does not cover loss or damage, direct or indirect arising from the use or inability to use this product.
F)	Lightronics reserves the right to make any changes, modifications, or updates as deemed appropriate by Lightronics to products returned for service. Such changes may be made without prior notification to the user and without incurring any responsibility or liability for modifications or changes to equipment previously supplied. Lightronics is not responsible for supplying new equipment in accordance with any earlier specifications.
G)	This warranty is the only warranty either expressed, implied, or statutory, upon which the equipment is purchased. No representatives, dealers or any of their agents are authorized to make any warranties, guarantees, or representations other than expressly stated herein.
H)	This warranty does not cover the cost of shipping products to or from Lightronics for service.
I)	Lightronics Inc. reserves the right to make changes as deemed necessary to this warranty without prior notification.