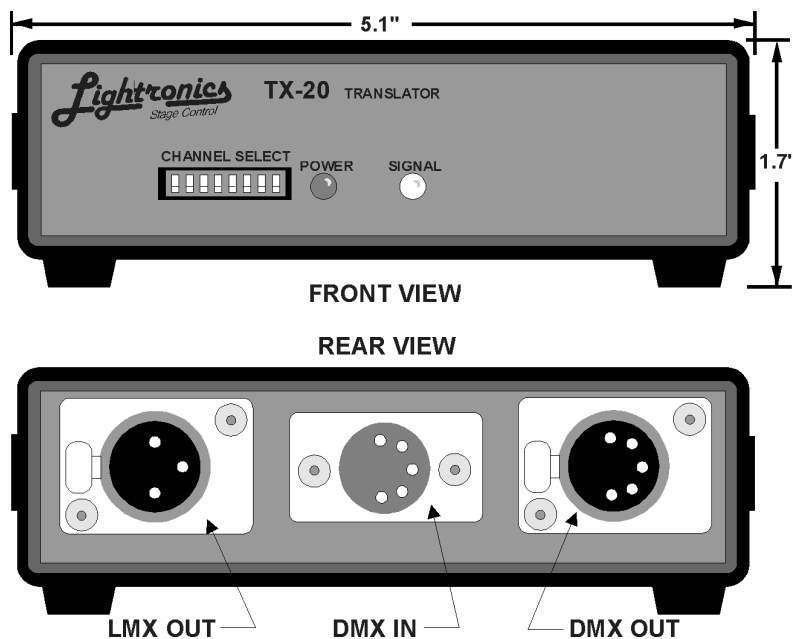


## DESCRIPTION

The TX - 20 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-20 translates 192 channels at a time. The DIP switch block on the front of the unit is 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 four channels at a time. A table of address switch settings is on the bottom of the unit. The leftmost switch selects the "time out" function. If this switch is down, active channels will remain as they are for 2 seconds upon loss of DMX signal, then drop to full off. If this switch is in the up position, channels will remain at their current levels indefinitely upon loss of DMX signal.

## TX192 OPTION

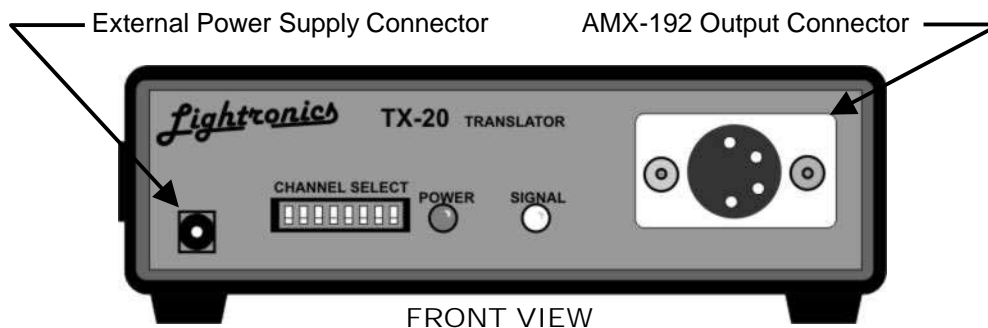
The TX-20 may be optionally supplied to transmit the AMX-192 protocol. This model transmits both LMX and AMX simultaneously. An external power supply is included. The AMX-192 output signal is transmitted from a 4 pin, male, XLR connector located at the front of the unit.

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

## TX-20 WITH AMX-192 OPTION



## EXTERNAL POWER SUPPLY INFORMATION

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

## 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..

## TX – 20 PROTOCOL TRANSLATOR

## ADDRESS SETTINGS TABLE

The DIP Switch Setting column shows the positions of the DIP switches on the TX-20. The Start Channel column shows the resulting DMX channel assignment for the first TX-20 LMX output channel (channel 1). The left end DIP switch is not included in the table since it does 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-20 address switches.

EXAMPLE: If the TX-20 DIP switches are set to  $\downarrow \uparrow \downarrow \uparrow \downarrow \uparrow \uparrow$  then the first TX-20 LMX output channel will respond to DMX channel 173. The remaining TX-20 output channels will respond to console channels 174, 175, 176 ...etc.

DIP Switch Setting	Start Channel	DIP Switch Setting	Start Channel	DIP Switch Setting	Start Channel	DIP Switch Setting	Start Channel
$\downarrow \downarrow \downarrow \downarrow \downarrow \downarrow \downarrow$	1	$\downarrow \uparrow \downarrow \downarrow \downarrow \downarrow \downarrow$	129	$\uparrow \downarrow \downarrow \downarrow \downarrow \downarrow \downarrow$	257	$\uparrow \uparrow \downarrow \downarrow \downarrow \downarrow \downarrow$	385
$\downarrow \downarrow \downarrow \downarrow \downarrow \downarrow \uparrow$	5	$\downarrow \uparrow \downarrow \downarrow \downarrow \downarrow \uparrow$	133	$\uparrow \downarrow \downarrow \downarrow \downarrow \downarrow \uparrow$	261	$\uparrow \uparrow \downarrow \downarrow \downarrow \downarrow \uparrow$	389
$\downarrow \downarrow \downarrow \downarrow \downarrow \uparrow \downarrow$	9	$\downarrow \uparrow \downarrow \downarrow \downarrow \uparrow \downarrow$	137	$\uparrow \downarrow \downarrow \downarrow \downarrow \uparrow \downarrow$	265	$\uparrow \uparrow \downarrow \downarrow \downarrow \uparrow \downarrow$	393
$\downarrow \downarrow \downarrow \downarrow \downarrow \uparrow \uparrow$	13	$\downarrow \uparrow \downarrow \downarrow \downarrow \uparrow \uparrow$	141	$\uparrow \downarrow \downarrow \downarrow \downarrow \uparrow \uparrow$	269	$\uparrow \uparrow \downarrow \downarrow \downarrow \uparrow \uparrow$	397
$\downarrow \downarrow \downarrow \downarrow \uparrow \downarrow \downarrow$	17	$\downarrow \uparrow \downarrow \downarrow \uparrow \downarrow \downarrow$	145	$\uparrow \downarrow \downarrow \downarrow \uparrow \downarrow \downarrow$	273	$\uparrow \uparrow \downarrow \downarrow \uparrow \downarrow \downarrow$	401
$\downarrow \downarrow \downarrow \downarrow \uparrow \downarrow \uparrow$	21	$\downarrow \uparrow \downarrow \downarrow \uparrow \downarrow \uparrow$	149	$\uparrow \downarrow \downarrow \downarrow \uparrow \downarrow \uparrow$	277	$\uparrow \uparrow \downarrow \downarrow \uparrow \downarrow \uparrow$	405
$\downarrow \downarrow \downarrow \downarrow \uparrow \uparrow \downarrow$	25	$\downarrow \uparrow \downarrow \downarrow \uparrow \uparrow \downarrow$	153	$\uparrow \downarrow \downarrow \downarrow \uparrow \uparrow \downarrow$	281	$\uparrow \uparrow \downarrow \downarrow \uparrow \uparrow \downarrow$	409
$\downarrow \downarrow \downarrow \downarrow \uparrow \uparrow \uparrow$	29	$\downarrow \uparrow \downarrow \downarrow \uparrow \uparrow \uparrow$	157	$\uparrow \downarrow \downarrow \downarrow \uparrow \uparrow \uparrow$	285	$\uparrow \uparrow \downarrow \downarrow \uparrow \uparrow \uparrow$	413
$\downarrow \downarrow \downarrow \uparrow \downarrow \downarrow \downarrow$	33	$\downarrow \uparrow \downarrow \uparrow \downarrow \downarrow \downarrow$	161	$\uparrow \downarrow \downarrow \uparrow \downarrow \downarrow \downarrow$	289	$\uparrow \uparrow \downarrow \uparrow \downarrow \downarrow \downarrow$	417
$\downarrow \downarrow \downarrow \uparrow \downarrow \downarrow \uparrow$	37	$\downarrow \uparrow \downarrow \uparrow \downarrow \downarrow \uparrow$	165	$\uparrow \downarrow \downarrow \uparrow \downarrow \downarrow \uparrow$	293	$\uparrow \uparrow \downarrow \uparrow \downarrow \downarrow \uparrow$	421
$\downarrow \downarrow \downarrow \uparrow \downarrow \uparrow \downarrow$	41	$\downarrow \uparrow \downarrow \uparrow \downarrow \uparrow \downarrow$	169	$\uparrow \downarrow \downarrow \uparrow \downarrow \uparrow \downarrow$	297	$\uparrow \uparrow \downarrow \uparrow \downarrow \uparrow \downarrow$	425
$\downarrow \downarrow \downarrow \uparrow \downarrow \uparrow \uparrow$	45	$\downarrow \uparrow \downarrow \uparrow \downarrow \uparrow \uparrow$	173	$\uparrow \downarrow \downarrow \uparrow \downarrow \uparrow \uparrow$	301	$\uparrow \uparrow \downarrow \uparrow \downarrow \uparrow \uparrow$	429
$\downarrow \downarrow \downarrow \uparrow \uparrow \downarrow \downarrow$	49	$\downarrow \uparrow \downarrow \uparrow \uparrow \downarrow \downarrow$	177	$\uparrow \downarrow \downarrow \uparrow \uparrow \downarrow \downarrow$	305	$\uparrow \uparrow \downarrow \uparrow \uparrow \downarrow \downarrow$	433
$\downarrow \downarrow \downarrow \uparrow \uparrow \downarrow \uparrow$	53	$\downarrow \uparrow \downarrow \uparrow \uparrow \downarrow \uparrow$	181	$\uparrow \downarrow \downarrow \uparrow \uparrow \downarrow \uparrow$	309	$\uparrow \uparrow \downarrow \uparrow \uparrow \downarrow \uparrow$	437
$\downarrow \downarrow \downarrow \uparrow \uparrow \uparrow \downarrow$	57	$\downarrow \uparrow \downarrow \uparrow \uparrow \uparrow \downarrow$	185	$\uparrow \downarrow \downarrow \uparrow \uparrow \uparrow \downarrow$	313	$\uparrow \uparrow \downarrow \uparrow \uparrow \uparrow \downarrow$	441
$\downarrow \downarrow \downarrow \uparrow \uparrow \uparrow \uparrow$	61	$\downarrow \uparrow \downarrow \uparrow \uparrow \uparrow \uparrow$	189	$\uparrow \downarrow \downarrow \uparrow \uparrow \uparrow \uparrow$	317	$\uparrow \uparrow \downarrow \uparrow \uparrow \uparrow \uparrow$	445
$\downarrow \downarrow \uparrow \downarrow \downarrow \downarrow \downarrow$	65	$\downarrow \uparrow \uparrow \downarrow \downarrow \downarrow \downarrow$	193	$\uparrow \downarrow \uparrow \downarrow \downarrow \downarrow \downarrow$	321	$\uparrow \uparrow \uparrow \downarrow \downarrow \downarrow \downarrow$	449
$\downarrow \downarrow \uparrow \downarrow \downarrow \downarrow \uparrow$	69	$\downarrow \uparrow \uparrow \downarrow \downarrow \downarrow \uparrow$	197	$\uparrow \downarrow \uparrow \downarrow \downarrow \downarrow \uparrow$	325	$\uparrow \uparrow \uparrow \downarrow \downarrow \downarrow \uparrow$	453
$\downarrow \downarrow \uparrow \downarrow \downarrow \uparrow \downarrow$	73	$\downarrow \uparrow \uparrow \downarrow \downarrow \uparrow \downarrow$	201	$\uparrow \downarrow \uparrow \downarrow \downarrow \uparrow \downarrow$	329	$\uparrow \uparrow \uparrow \downarrow \downarrow \uparrow \downarrow$	457
$\downarrow \downarrow \uparrow \downarrow \downarrow \uparrow \uparrow$	77	$\downarrow \uparrow \uparrow \downarrow \downarrow \uparrow \uparrow$	205	$\uparrow \downarrow \uparrow \downarrow \downarrow \uparrow \uparrow$	333	$\uparrow \uparrow \uparrow \downarrow \downarrow \uparrow \uparrow$	461
$\downarrow \downarrow \uparrow \downarrow \uparrow \downarrow \downarrow$	81	$\downarrow \uparrow \uparrow \downarrow \uparrow \downarrow \downarrow$	209	$\uparrow \downarrow \uparrow \downarrow \uparrow \downarrow \downarrow$	337	$\uparrow \uparrow \uparrow \downarrow \uparrow \downarrow \downarrow$	465
$\downarrow \downarrow \uparrow \downarrow \uparrow \downarrow \uparrow$	85	$\downarrow \uparrow \uparrow \downarrow \uparrow \downarrow \uparrow$	213	$\uparrow \downarrow \uparrow \downarrow \uparrow \downarrow \uparrow$	341	$\uparrow \uparrow \uparrow \downarrow \uparrow \downarrow \uparrow$	469
$\downarrow \downarrow \uparrow \downarrow \uparrow \uparrow \downarrow$	89	$\downarrow \uparrow \uparrow \downarrow \uparrow \uparrow \downarrow$	217	$\uparrow \downarrow \uparrow \downarrow \uparrow \uparrow \downarrow$	345	$\uparrow \uparrow \uparrow \downarrow \uparrow \uparrow \downarrow$	473
$\downarrow \downarrow \uparrow \downarrow \uparrow \uparrow \uparrow$	93	$\downarrow \uparrow \uparrow \downarrow \uparrow \uparrow \uparrow$	221	$\uparrow \downarrow \uparrow \downarrow \uparrow \uparrow \uparrow$	349	$\uparrow \uparrow \uparrow \downarrow \uparrow \uparrow \uparrow$	477
$\downarrow \downarrow \uparrow \uparrow \downarrow \downarrow \downarrow$	97	$\downarrow \uparrow \uparrow \uparrow \downarrow \downarrow \downarrow$	225	$\uparrow \downarrow \uparrow \uparrow \downarrow \downarrow \downarrow$	353	$\uparrow \uparrow \uparrow \uparrow \downarrow \downarrow \downarrow$	481
$\downarrow \downarrow \uparrow \uparrow \downarrow \downarrow \uparrow$	101	$\downarrow \uparrow \uparrow \uparrow \downarrow \downarrow \uparrow$	229	$\uparrow \downarrow \uparrow \uparrow \downarrow \downarrow \uparrow$	357	$\uparrow \uparrow \uparrow \uparrow \downarrow \downarrow \uparrow$	485
$\downarrow \downarrow \uparrow \uparrow \downarrow \uparrow \downarrow$	105	$\downarrow \uparrow \uparrow \uparrow \downarrow \uparrow \downarrow$	233	$\uparrow \downarrow \uparrow \uparrow \downarrow \uparrow \downarrow$	361	$\uparrow \uparrow \uparrow \uparrow \downarrow \uparrow \downarrow$	489
$\downarrow \downarrow \uparrow \uparrow \downarrow \uparrow \uparrow$	109	$\downarrow \uparrow \uparrow \uparrow \downarrow \uparrow \uparrow$	237	$\uparrow \downarrow \uparrow \uparrow \downarrow \uparrow \uparrow$	365	$\uparrow \uparrow \uparrow \uparrow \downarrow \uparrow \uparrow$	493
$\downarrow \downarrow \uparrow \uparrow \uparrow \downarrow \downarrow$	113	$\downarrow \uparrow \uparrow \uparrow \uparrow \downarrow \downarrow$	241	$\uparrow \downarrow \uparrow \uparrow \uparrow \downarrow \downarrow$	369	$\uparrow \uparrow \uparrow \uparrow \uparrow \downarrow \downarrow$	497
$\downarrow \downarrow \uparrow \uparrow \uparrow \downarrow \uparrow$	117	$\downarrow \uparrow \uparrow \uparrow \uparrow \downarrow \uparrow$	245	$\uparrow \downarrow \uparrow \uparrow \uparrow \downarrow \uparrow$	373	$\uparrow \uparrow \uparrow \uparrow \uparrow \downarrow \uparrow$	501
$\downarrow \downarrow \uparrow \uparrow \uparrow \uparrow \downarrow$	121	$\downarrow \uparrow \uparrow \uparrow \uparrow \uparrow \downarrow$	249	$\uparrow \downarrow \uparrow \uparrow \uparrow \uparrow \downarrow$	377	$\uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \downarrow$	505
$\downarrow \downarrow \uparrow \uparrow \uparrow \uparrow \uparrow$	125	$\downarrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow$	253	$\uparrow \downarrow \uparrow \uparrow \uparrow \uparrow \uparrow$	381	$\uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow$	509



All Lightronics products are warranted for a period of TWO YEARS from the date of purchase against defects in materials and workmanship.

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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) This 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.