TRANSCENSION
Show Control

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DMX 512 MERGER

(Order code: BOTE61)

User manual

WARNING

FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOUR INITIAL START-UP!

CAUTION!

Keep this equipment away from rain, moisture and liquids.

SAFETY INSTRUCTIONS

Every person involved with the installation, operation & maintenance of this equipment should:

- Be competent
- Follow the instructions of this manual

CAUTION! TAKE CARE USING THIS EQUIPMENT!
HIGH VOLTAGE-RISK OF ELECTRIC SHOCK!!

Before your initial start-up, please make sure that there is no damage caused during transportation. Should there be any, consult your dealer and do not use the equipment.

To maintain the equipment in good working condition and to ensure safe operation, it is necessary for the user to follow the safety instructions and warning notes written in this manual.

Please note that damages caused by user modifications to this equipment are not subject to warranty.

Warnings

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorised modification to the equipment.

- Never let the power-cable come into contact with other cables. Handle the power-cable and all mains voltage connections with particular caution!
- Never remove warning or informative labels from the equipment.
- Do not open the equipment and do not modify the equipment.
- Do not switch the equipment on and off in short intervals, as this will reduce the system's life.
- Only use the equipment indoors.
- Do not expose to flammable sources, liquids or gases.
- Always disconnect the power from the mains when equipment is not in use or before cleaning! Only handle the power-cable by the plug. Never pull out the plug by pulling the power-cable.
- Make sure that the available voltage is between 220v/240v.
- Make sure that the power-cable is never crimped or damaged. Check the equipment and the power-cable periodically.
- If the equipment is dropped or damaged, disconnect the mains power supply immediately.
  Have a qualified engineer inspect the equipment before operating again.
- If the equipment has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation might damage the equipment. Leave the equipment switched off until it has reached room temperature.
- If your product fails to function correctly, discontinue use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Prolight dealer for service.
- Only use fuses of same type and rating.
- Repairs, servicing and power connection must only be carried out by a qualified technician. THIS UNIT CONTAINS NO USER SERVICEABLE PARTS.
- WARRANTY; One year from date of purchase.

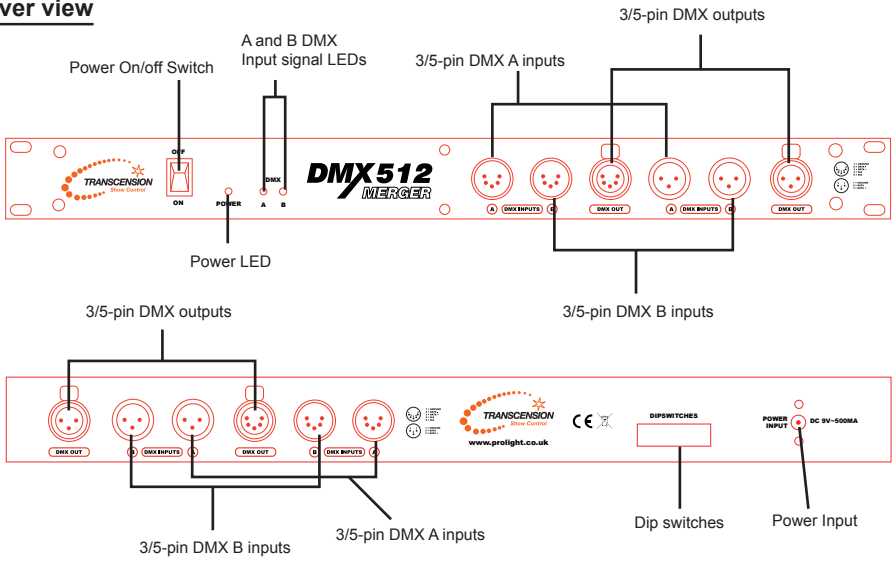
OPERATING DETERMINATIONS

If this equipment is operated in any other way, than those described in this manual, the product may suffer damage and the warranty becomes void.

Incorrect operation may lead to danger e.g.: short-circuit, burns, electric shocks, lamp failure etc.

Do not endanger your own safety and the safety of others!
Incorrect installation or use can cause serious damage to people and property.

Over view



When unit is switched on the Power LED will illuminate.
When DMX inputs “A” and “B” have a present signal, both of the DMX input LEDs will illuminate.
To turn the unit On or Off, use the Power switch on front panel of the unit.
Connect your lighting controllers into the 3-pin or 5-pin male XLR sockets.
Use the 3-pin or 5-pin female XLR socket to connect in to the first DMX unit in line.

The DMX Merger merges two DMX signal inputs, to one output. Three operation modes can be selected by using the 2 dip switch setting. The three operation modes include HTP (Highest Takes Priority), Back up/LTP and Merge mode. When set to HTP mode the controller with the highest channel output setting will take priority on output. HTP is the most commonly used to controller dimmer channels. When set to the Back up/LTP mode, a controller that is connected to the “B” DMX input will be on stand by and will only take over if the controller connected to the “A” DMX input fails. When set to Merge mode, the controller signals coming into the “A” and “B” DMX inputs will merge to one output. There are 10 dip switches available so the starting DMX address channel can be set for the controller that is connected into DMX input “B”.
For example, a stage desk 16 is connected to the DMX input “A”, we would patch the controller that is connected to DMX input “B” at channel 17 and also set the binary on the DMX merger to 17.

Note: Only 1 input can be used on input “A” and input “B” simultaneously. You can not use both 3-pin and 5-pin sockets on the same input at the same time.

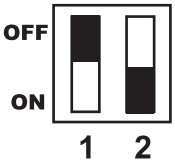
HTP Mode

To set the unit into the HTP (Highest Take Priority) mode, set dip switch 1 and 2 to the “ON” position.

When two DMX signals are present, the higher DMX values for each channels (1-512) will take place. This may allow for some channels of DMX input “A” controller to be active and other channels from DMX input “B” controller to be active.

Back Up and Latest Takes Priority (LTP) Mode

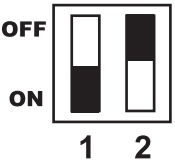
To set the unit into the Back up/LTP mode, set dip switch 1 and 2 to the “OFF” position. The unit will now be in the Back up/LTP mode.



When DMX signal “A” is present, it will take the DMX output priority. When DMX signal “A” is lost, the DMX signal “B” will take over the Priority.

Merge Mode

To set the unit into Merge mode, set dip switches 1 to “ON” and 2 to the “OFF” position.
The unit will now be in the merge mode.



You can merge both “A” and “B” signal into a one DMX output. You must set the starting DMX address for the controller that is connected to input “B” with dip switches 1-9.

Note: If you set dip switch 1 to “ON” and all others to the “OFF” position, all DMX channel output will start with the first channel of DMX signal “B”.

DMX Operation

DMX-512:

• DMX (Digital Multiplex) is a universal protocol used as a form of communication between intelligent fixtures and controllers. A DMX controller sends DMX data instructions form the controller to the fixture. DMX data is sent as serial data that travels from fixture to fixture via the DATA “IN” and DATA “OUT” XLR terminals located on all DMX fixtures (most controllers only have a data “out” terminal).

DMX Linking:

• DMX is a language allowing all makes and models of different manufactures to be linked together and operate from a single controller, as long as all fixtures and the controller are DMX compliant. To ensure proper DMX data transmission, when using several DMX fixtures try to use the shortest cable path possible. The order in which fixtures are connected in a DMX line does not influence the DMX addressing. For example; a fixture assigned to a DMX address of 1 may be placed anywhere in a DMX line, at the beginning, at the end, or anywhere in the middle. When a fixture is assigned a DMX address of 1, the DMX controller knows to send DATA assigned to address 1 to that unit, no matter where it is located in the DMX chain.

Figure 1

Further DMX cables can be purchased from all good sound and lighting suppliers or Prolight dealers.
Please quote:

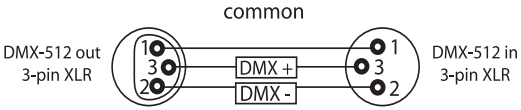
CABL10 – 2M
CABL11 – 5M
CABL12 – 10M

Also remember that DMX cable must be daisy chained and cannot be split.

DMX Operation

Notice:

• Be sure to follow figures 2 & 3 when making your own cables. Do not connect the cable's shield conductor to the ground lug or allow the shield conductor to come in contact with the XLR's outer casing. Grounding the shield could cause a short circuit and erratic behaviour.



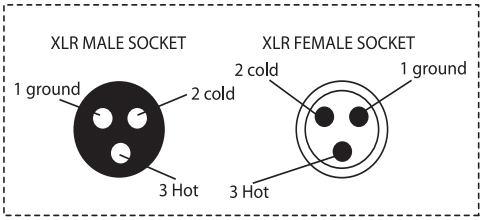


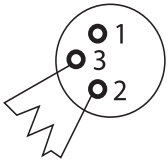
FIGURE 3

XLR Pin Configuration
Pin 1 = Ground
Pin 2 = Negative
Pin 3 = Postive

FIGURE 2

Special Note: Line termination:

• When longer runs of cable are used, you may need to use a terminator on the last unit to avoid erratic behaviour.

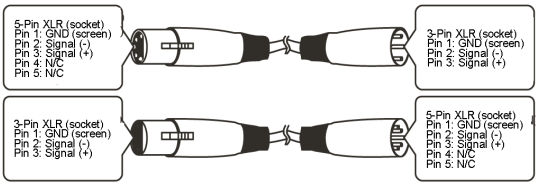


Termination reduces signal transmission problems and interferance. it is always advisable to connect a DMX terminal, (resistance 120 Ohm 1/4 W) between pin 2 (DMX-) and pin 3 (DMX+) of the last fixture.

Using a cable terminator (part number CABL90) will decrease the possibilities of erratic behaviour.

5-Pin XLR DMX Connectors:

• Some manufactures use 5-pin XLR connectors for data transmission in place of 3-pin. 5-Pin XLR fixtures may be implemented in a 3-pin XLR DMX line. When in serting standard 5-pin XLR connectors in to a 3-pin line a cable adaptor must be used. The chart below details the correct cable conversion.



Dip Switch DMX Address Chart

DMX DIP SWITCH SET 0=OFF 1=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
#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	

Dip Switch Position **DMX ADDRESS**