

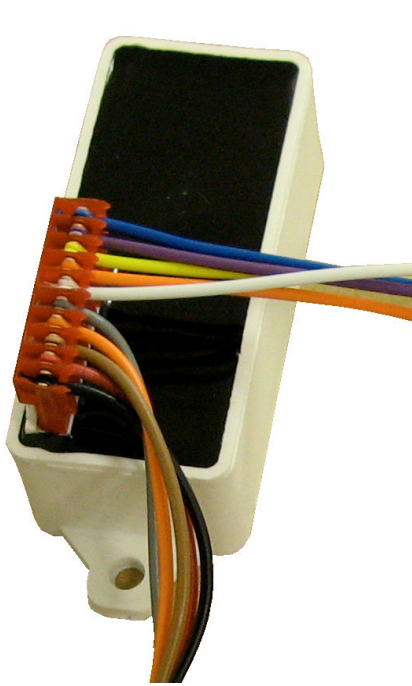
**INSTALLATION AND SETUP  
INSTRUCTIONS,  
DMX512 RECEIVER/ CONTROLLER**

**TECH 22**

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**GENERAL**

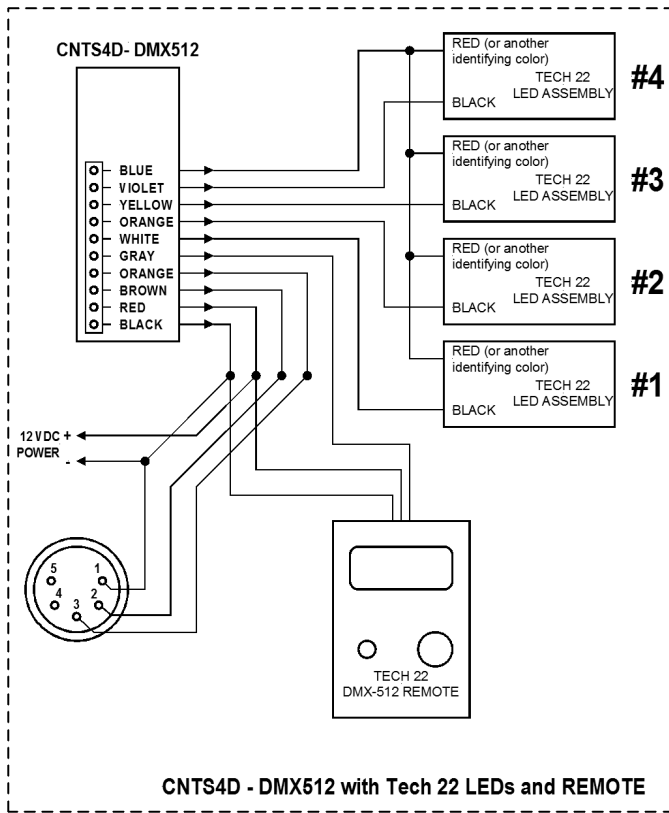
The Tech 22 DMX512 receiver/controller receives digital commands from a DMX512 data bus and generates corresponding electronic signals to control up to four independent channels of Tech 22 neon power supplies, low voltage incandescent lamps, Tech 22 LEDs, or other Tech 22 controllers. Controlling other controllers can be useful, for example, to trigger complex, dedicated animation sequences.

The receiver / controller operates from 12 Volts DC class 2 power source and it accommodates variety of output load types:

1. Neon (Tech 22 neon power supplies)
2. LEDs, 60 Hz power
3. LEDs, 50 Hz power
4. Incandescent bulbs, 60 Hz power
5. Incandescent bulbs, 50 Hz power
6. Linear, 8.333 ms frame
7. Linear, 10 ms frame
8. On / off (channel is 'on' with DMX512 data above THRESHOLD)
9. Off / on (channel is 'off' with DMX512 data above THRESHOLD)

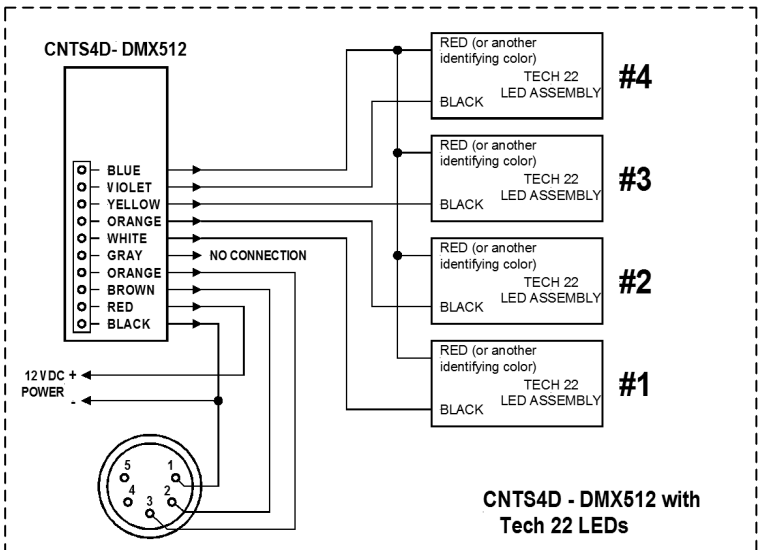
During setup of the receiver, each of the 4 channels is defined independently of all others, including its address. Because of this, these different load types can coexist simultaneously.

## WIRING:

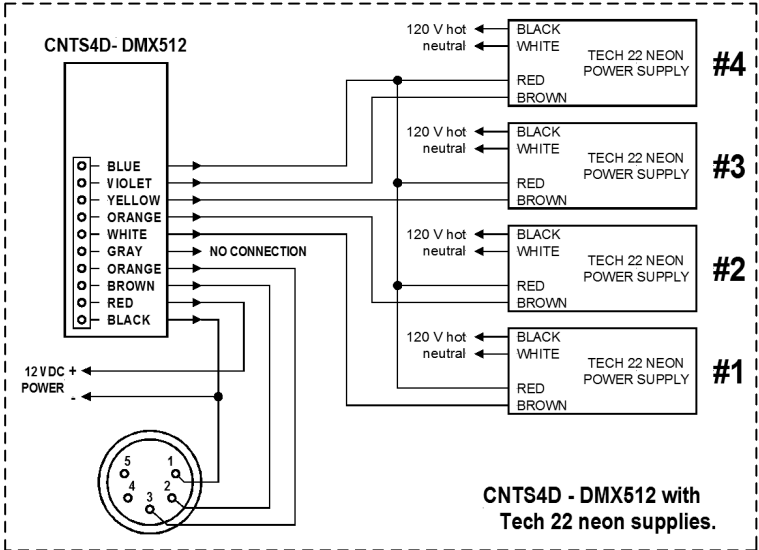


**CNTS4D - DMX512 with Tech 22 LEDs and REMOTE**

TO CONNECT THE REMOTE, FIRST REMOVE THE RECEIVER'S BOTTOM CONNECTOR (POWER AND DMX SIGNAL). NEXT, INSTALL CONNECTOR AT THE END OF REMOTE'S HARNESS TO THE RECEIVER'S BOTTOM 5 PINS. THEN INSTALL POWER AND DMX SIGNAL CONNECTOR (REMOVED EARLIER) TO THE MID CONNECTOR ON THE REMOTE'S HARNESS.



**CNTS4D - DMX512 with Tech 22 LEDs**



**CNTS4D - DMX512 with Tech 22 neon supplies.**

## SETUP / PROGRAMMING

Prior to setting up the receiver, connect the controller, loads and remote, then apply 12 volts DC power to the receiver. Setting up the receiver consists of selecting a function, specifying value for that function and storing that value in the receiver's memory.

Without pressing any switches, rotate the dial knob up / down to select the function, which needs to be adjusted:

(Channel 1)	(Channel 2)	(Channel 3)	(Channel 4)
1. DMX address	2. DMX address	3. DMX address	4. DMX address
5. Output curve	6. Output curve	7. Output curve	8. Output curve
9. Preset value	10. Preset value	11. Preset value	12. Preset value
13. Threshold	14. Threshold	15. Threshold	16. Threshold
17. Smoothing	18. Smoothing	19. Smoothing	20. Smoothing

While selecting a function, the dot at the top identifies the affected channel, the left-most character identifies presently selected function and the right three digits display presently stored value. This mechanism is handy for checking present configuration without making any changes.

## Detailed description of the parameters

**DMX ADDRESS** – function displays “A”, range is 0 to 512.

Addresses can be assigned to the channels sequentially, scattered, or all channels can be assigned the same address. If a channel is assigned address 0, it will not respond to the DMX512 data and will instead use its preset value as its input. This can be useful for testing.

**OUTPUT CURVE** – function displays “C”, range is 1 to 9, table ID number.

Assign separate curve to each of the four channels. Different response curves are necessary for the different types of loads to respond correctly to a given input. Choose the appropriate curve for each channel. ‘On/off’ curve will turn a channel on if its input is more than or equal to its threshold and off if its input is less than its Threshold. ‘Off/on’ is inverse.

1. Neon (Tech 22 neon power supplies)
2. LEDs, 60 Hz
3. LEDs, 50 Hz
4. Incandescent bulbs, 60 Hz
5. Incandescent bulbs, 50 Hz
6. Linear, 8.33 ms frame
7. Linear, 10.00 ms frame
8. On/off (channel is ‘on’ with DMX512 data above THRESHOLD)
9. Off/on (channel is ‘off’ with DMX512 data above THRESHOLD)

**PRESET VALUE** – function displays “P”, range is 0 to 255 (same as DMX512 data range)

The Preset value is the value that a channel will use as its input on power up. The channel will continue to use the Preset value if it is assigned to DMX Address 0 or if there is no DMX data. Once valid DMX data is received, channel will use that value instead. If the DMX data is interrupted, the channel will continue to use the last valid DMX value.

**THRESHOLD** – function displays “H” or “L”, range is 0 to 255 (same as DMX512 data range)

The Threshold is utilized for channels configured as on/off or off/on channels, or for channels with smoothing filter enabled.

**SMOOTHING** – function displays “S”, range is 0 to 1

When 0 is selected, the smoothing filter is disabled and raw DMX data is output. When 1 is selected, the smoothing filter is enabled. When smoothing is enabled and the difference between old and new values is smaller than the THRESHOLD setting, then the output is smoothly faded to the new value.

After a function is selected, press and hold the left button and then use the dial knob to adjust its value. Although the newly-dialed value is effective immediately, this value is not stored yet, and this is indicated by the blinking display. If the left button were released at this time, then the newly-dialed value would be lost and the receiver would revert to use the previously stored value. To store the newly-dialed value, continue holding the left button and press in the dial knob. This stores the new value and this is indicated by steady display, not blinking.

When setup is completed, reconnect as shown in the wiring diagram to remove the remote. If desired, the remote may be left connected as part of the installation.

## **CONTROLLER LOADS** (NEC class 2 power)

Maximum total current from all 4 outputs is not to exceed 5 amps.