ELM Video Technology DMSC DMX Multi Station Switch Controller User Guide

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ELM Video Technology

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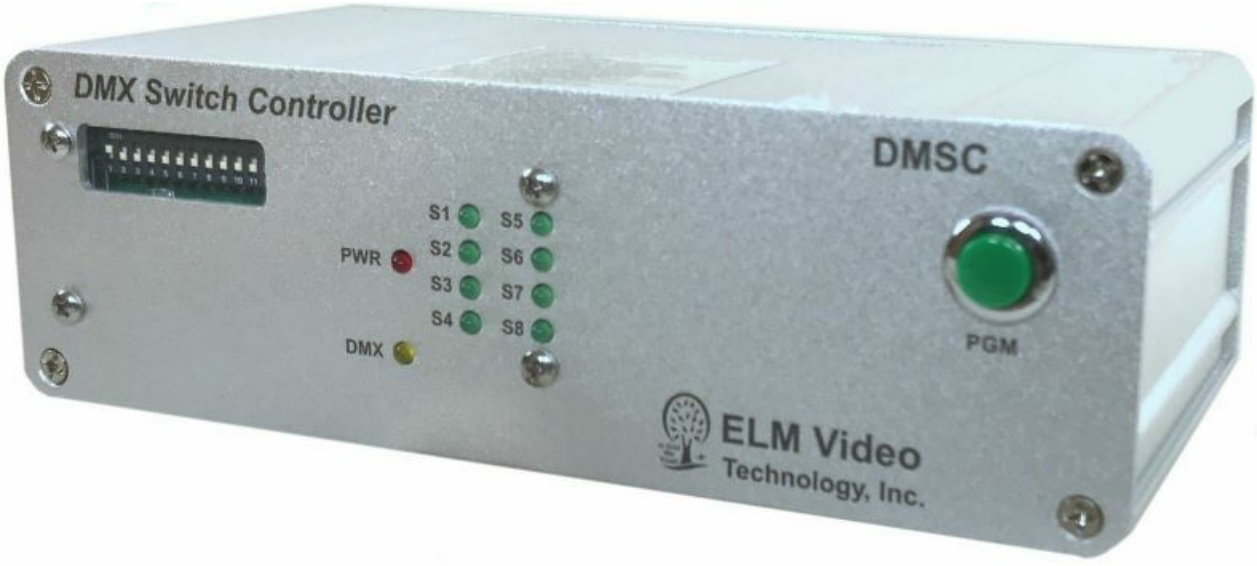


Product Usage Instructions

DMSC Overview

The DMSC allows users to store static scenes and recall them with the flip of a switch from multiple locations. Key features include:

- Recall scenes using different switch styles like 2-way, 3-way, 4-way, or toggle.
- Option to override or merge the input DMX with the switches.
- Pre-stored scenes can merge/combine via HTP (Highest Takes Precedence).
- Optional 5-second transition (fade) times.
- Option to configure Switch 4 as a DMX Input disable switch or Fire Alarm Input switch.

PCB DIP Switch Settings

To configure the operation settings, follow these steps:

1. Set the dip switches for the desired operation.
2. Reset power to activate the new settings.

FAQ

- **Q:** How do I reset the device to factory settings?
- **A:** To reset the device to factory settings, locate the reset button on the device and hold it down for 10 seconds until the device restarts.

Other enclosures may be available, such as 1U, and 2U modular.

DMSC – DMX Multi Station Controller User Guide

DMSC OVERVIEW

The DMSC is a DMX multi switch (station or panel) controller that stores DMX scenes and allows them to be

recalled with mechanical switches of any type: 2-way, 3-way, 4-way, or toggle switches. The DMSC has 1 DMX input and 1 DMX output, 4 or 8 switch inputs. Each switch represents a pre-stored static scene and will turn on or off the output levels of the respective scene. The DMSC scenes can easily be recorded from the front accessible PGM button. Each switch/scene turned on is HTP (Highest Takes Precedence) merged with other scenes and optionally merged with the incoming DMX input (if applicable). Parameter settings and options are set up by PCB dip switches, see the [PCB Dip Switch Settings] page. A DMX status LED is used to indicate a valid DMX or a DMX receive error.

- Store static scenes and recall with the flip of a switch from anywhere and multiple locations
- Recall scenes by any style switch such as 2-way, 3-way, 4-way, or toggle
- OVERRIDE or MERGE the input DMX with the switches (If DMX is present on the input the switches/scenes are optionally overridden and ignored)
- Pre stored scenes merge/combine via HTP (Highest Takes Precedence)
- Optional 5 second transition (fade) times
- Optional – Input switch 4 as a DMX Input disable switch OR
- Optional – Fire Alarm Input switch 4 – if ON and regardless of settings will turn on stored scene 4, merges with DMX, and all switches

CONNECTION

Connect a DMX source into the input connector (5 or 3 pin). If there is a DMX loop through the connector ensure that it is properly terminated locally or at the end of the daisy chain. (If there is not a loop through the connector the unit is internally terminated). The DMX output connector will source up to 32 DMX devices (depending on the devices and configuration). Connect the switch wiring as indicated by the legend on the back of the unit and the configuration examples. For the switch selection, any type 12VDC or higher-rated switch may be used. DO NOT CONNECT 120VAC TO THE INPUT OF THIS UNIT. The 12VDC source is provided on the “+V OUT” pin. Connect the switch return wire(s) per the legend on the back of the unit that’s applicable for the installation. Check for shorts and wiring errors before powering the unit. Mate the switch connector and test operation. For more connection information on the DMSC, see the DMSC Connection Examples.

4	**SWITCH PINOUT**
Pin	**CONNECTION**
1	Switch 1 IN
2	Switch 2 IN
3	Switch 3 IN
4	Switch 4 IN
5	+ Volt OUT
6	UNUSED
7	UNUSED
8	UNUSED
9	UNUSED

8	SWITCH PINOUT
Pin	**CONNECTION**
1	Switch 1 IN
2	Switch 2 IN
3	Switch 3 IN
4	Switch 4 IN
5	Switch 5 IN
6	Switch 6 IN
7	Switch 7 IN
8	Switch 8 IN
9	+ Volt OUT

PCB DIP SWITCH SETTINGS

Set the dip switches for the desired operation and reset the power to activate the new settings.
For DIN RAIL enclosures dip switch access – remove the front cover (4 silver outer screws)

Dip Switch 1: TRANSITION / **FADE RATE** – Sets the transition rate for switch/scene setting changes. If a respective scene/switch is turned on or off the scene recall will either be immediate or have a 5 second transition rate.

- OFF – Transition/fade rate = 5 SECONDS
- ON – Transition/fade rate = IMMEDIATE

Dip Switch 2: OVERRIDE SCENE(s) or MERGE/COMBINE with DMX INPUT – OFF = DMX OVERRIDE – all enabled scene(s) will only be active IF there is not a DMX input signal present, either turning off the DMX lighting board or disconnecting or unplugging the DMX input. ON = DMX MERGE – Will merge/combine all enabled scene(s) with incoming DMX.

- OFF – DMX Input will OVERRIDE all switches
- ON – DMX will MERGE with enabled switches

Dip Switch 3: SWITCH 4 – DMX INPUT DISABLE – Changes the operation of SCENE SWITCH 4 to a DMX input disable switch.

- OFF: Input scene switch 4 is a standard scene recall switch.
- ON: Scene input switch 4 is re-purposed and acts as a DMX input disable switch. If switch input 4 is off then input switches 1-3 (and 5-8 for 8 input units) operate normally. If Input Switch 4 is turned on the DMX input is ignored allowing input scene switches to operate regardless if DMX is present. e.g. If activated/desired, input Switch 4 could be located near the lighting control area to control wall switch activation.

Dip Switch 4: SWITCH 4 – FIRE ALARM – Changes the operation of SCENE SWITCH 4 to a Fire Alarm Mode

- OFF: Input Switch 4 is a standard scene recall switch.
- ON: Input Switch 4 is a FIRE ALARM scene, disables dip switches 3. Use scene switches 1-3 (and 5-8 for 8 input units) as normal. If Scene Switch 4 is on then the unit will recall its respective stored scene 4, enables the HTP merge mode with any DMX input, and with any scene switch turned on. Designed to allow all switches to recall its respective scenes and DMX to turn on lights. As with any scene switch input this input can be mechanical relay controlled.

Dip Switch 5: DMX LOSS DIRECTIVE – If DMX is lost or no DMX is present on the input this setting determines the output of the DMX output of the DMSC unit. NOTE If ON then Dip Switch 2 must be ON for Scene/Switches to be operable, otherwise the switches and scenes are disabled.

- OFF – DMX output will always active regardless of a DMX input signal
- ON – DMX loss will turn off DMX output (no output)

Plan all DMX changes carefully, understand how each mode will respond, and thoroughly test each device after any configuration changes.
To abort any settings while in the programming mode, toggle the power to reset the unit, or wait 30 seconds for auto abort.

LED BLINK RATES

DMX LED	
Rate	**Description**
OFF	No DMX is being received
ON	Valid DMX is being received
1x	DMX Input data overrun error has o ccurred since last powered or DMX connect ion
2x Blink	Record scene mode attempting to be entered without a DMX input present

SCENE LED'S	
Rate	**Description**
OFF	Respective Switch/Scene is Off
ON	Respective Switch/Scene is On / Activ e
1x	Respective scene is selected
2x	Respective scene is ready to record
2 Flashes	Respective scene has been recorded
3 Second ON Flic ker	Respective scene/switch is on but over ridden

SCENE RECORDING

NOTE: If Dip Switch 2 (Merge) is on, upon entering the PGM Scene Recording mode, all switch settings will be turned off while programming and will resume upon exiting. To prevent a blackout, preset a DMX scene before

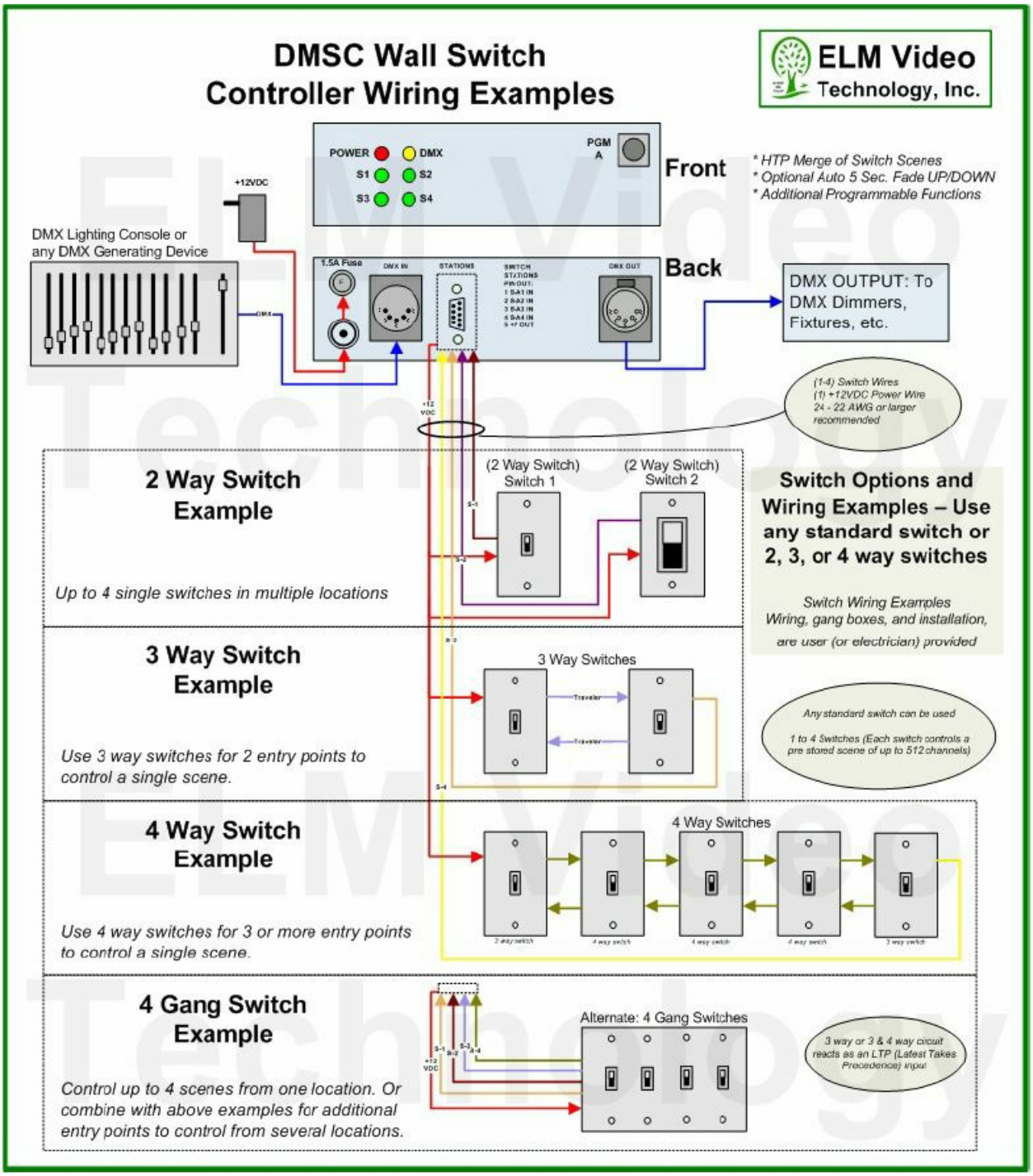
entering the PGM Scene Record mode.

1. Insure a valid DMX signal is present indicated by the DMX input LED on.
2. Preset a desired look from the DMX lighting board or DMX generating device.
3. Enter the PGM Scene Record Mode: Press and hold the PGM button for 3 seconds, the 1st scene will be selected and will blink at a 1x rate. (NOTE: If Dip Switch 2 [DMX/Switch Merge] is ON – Switches will be temporarily disabled and turned off while in the PGM Scene Record Mode.)
4. Select the desired scene to record by tapping the PGM button until the desired scene LED is blinking, (to exit the record scene mode tap past the last accessible scene, or wait 30 seconds).
5. Press and hold the PGM button 3 seconds to confirm selection, the scene LED will blink at the 2x rate. (To exit the scene record mode tap the PGM button.)
6. Insure the scene (seen in real time) is the desired ‘look’ to be recorded, make any changes from the DMX lighting board or DMX generating device.
7. Press and hold the PGM button for 3 seconds to record the scene. Two flashes on the respective LED will indicate confirmation of the record. Tap the button or wait 30 seconds to abort storing.

Repeat steps to record each scene.
While in the scene record mode, inactivity for 30 seconds will automatically cancel and exit.

CONNECTION EXAMPLES

- Store and recall up to 4 static scenes with any type switch or standard 2, 3, or 4-way switches



SPECIFICATIONS

- **DMX CONTROL WARNING:** NEVER use DMX data devices where human safety must be maintained.
  - NEVER use DMX data devices for pyrotechnics or similar controls.
- **Manufacturer:** ELM Video Technology, Inc.
- **Name:** DMX Multi Station Controller
- **Functional Description:** DMX input and output with optional external slider panel(s) or switch(es) with optional merge panel scene data with incoming DMX and manipulable outbound DMX.
- **Chassis:** Anodized Aluminum .093″ thick RoHS compliant.
- **External Power Supply:** 100-240 VAC 50-60 Hz, Output: Regulated 12VDC/2A
- **Power Connector:** 5.5 x 2.1 x 9.5
- **External Scene/Switch Fuse:** 1.0 Amp 5×20 mm
- **PCB Fuse:** .5 ~ .75 Amp for each

- **DC Current:** Apx 240mA (output full DMX load of 60mA) per DMPIO PCB installed
- **Model Number:** DMSC-12V3/5P

UPC

- **Operating Temperature:** 32°F to 100°F
- **Storage Temperature:** 0°F to 120°F
- **Humidity:** Noncondensing
- **Non-Volatile Memory Writes:** Minimum 100K, Typical 1M
- **Non-Volatile Memory Retention:** Minimum 40 Yrs, Typical 100 Yrs
- **Station I-O Connector:** Phoenix style female connector
- **Switch Input Voltage Max/Min:** +12VDC / +6VDC (at input)
- **Switch Input Current Max/Min:** 10mA / 6mA
- **Data Type:** DMX (250Khz)
- **Data Input:** DMX – 5 (or 3) pin male XLR, Pin 1 – (Shield) Not connected, Pin 2 Data -, Pin 3 Data +
- **Data Output:** DMX512 output 250 kHz, 5 and/or 3 pin female XLR Pin 1 – Power supply common, Pin 2 Data -, Pin 3 Data +
- **RDM:** No
- **Dimensions:** 3.7 x 6.7 x 2.1 inches
- **Weight:** 1.5 pounds

Documents / Resources

	ELM Video Technology DMSC DMX Multi Station Switch Controller [pdf] User Guide DMSC DMX Multi Station Switch Controller, DMX Multi Station Switch Controller, Station Switch Controller, Switch Controller, Controller
	ELM Video Technology DMSC DMX Multi Station Switch Controller [pdf] User Guide DMSC DMX Multi Station Switch Controller, DMSC, DMX Multi Station Switch Controller, Station Switch Controller, Switch Controller, Controller

References

- DMX and Midi Products | Home | ELM Video Technology

- **User Manual**