LIGHTRONICS


# AS42D

## 4 x 1200W COMPACT DMX DIMMER

## OWNERS MANUAL

Version 2.2
06/01/2022

## DESCRIPTION

The AS42D is a compact four channel dimmer. It has a maximum capacity of 1200 Watts per channel and maximum total load capacity of 4800 Watts. It is supplied with two input power cords which may be connected to two different 120 VAC power phases. The AS42D is intended for INDOOR USE ONLY. The unit operates using the USITT DMX-512 protocol or an industry standard three wire multiplex protocol. The AS42D may be operated in a relay (non-dim) mode. The unit will also function as a chaser and has several preset chase patterns which may be used.

## INSTALLATION

LOCATION: Locate the unit vertically with control signal connectors on bottom in a well ventilated area away from moisture and heat. Two ½" holes are provided on the dimmer top cover to install a lighting bar pipe clamp and suitable safety cables.

POWER CONNECTIONS: Extending from the chassis are two 20 amp line cords for connection to two separate 120 VAC grounded services in any phase combination. Total capacity of the AS42D is 4800 watts.

LOAD CONNECTIONS: There are four numbered duplex outlets on the top of the unit. Each provides two connections for one output channel. You can connect up to 1200 Watts of lighting to each channel.

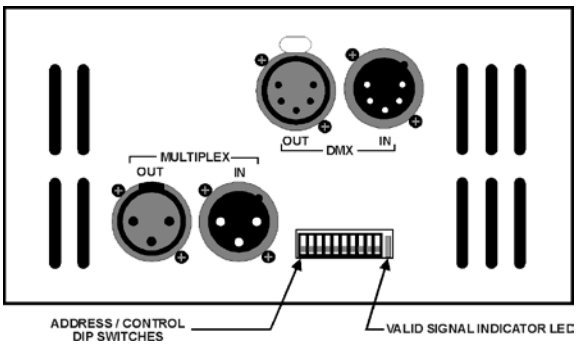
STAGE PIN OUTPUT CONNECTOR OPTION: There are four numbered female stage pin connectors on the top of the unit. One connection is provided for each output channel. Wiring information for the stagepin connectors is shown on the top of the unit.

CONTROL SIGNAL CONNECTIONS:

MULTIPLEX OPERATION: The male three pin XLR connector on the unit end panel connects to the control console. The female connector is for connection to additional dimmers. The AS42D dimmer is compatible with the Lightronics and NSI/Sunn three wire multiplexed protocol. If you have older Lightronics dimmers which run in the obsolete Lightronics mode only, contact Lightronics for information on changing the mode. When using multiple dimmers, ALL dimmers MUST be in the SAME mode.

DMX-512 OPERATION: The male five pin XLR connector on the unit end panel connects to the control console. The female connector is for connection to additional devices. If both multiplex and DMX signals are available to the unit - it will automatically lock on to the DMX signal. Note that DMX does not provide for console power via the dimmer chain. Therefore the DMX console used with AS42D dimmers must be powered by other means.

**AS42D END VIEW**




CONTROL SIGNAL WIRING:

| Connector Pin # | Multiplex | DMX |
|---|---|---|
| 1 | LMX Common | DMX Common |
| 2 | Console Power | DMX Data - |
| 3 | Multiplex Signal | DMX Data + |
| 4 | Not Used | Not Used |
| 5 | Not Used | Not Used |

## OPERATION

NORMAL MODE (non-chaser)

A solid green LED in the end panel will indicate that a valid control signal (DMX or multiplex) is applied to the unit.

A DIP switch block on the end panel selects the starting channel number of the dimmer. The seven right hand switches control this function. For example, if all switch positions are down - the dimmer will respond to channels 1-4. Moving the switch position on the far right up will set the dimmer to respond to channels 5-8. A complete table of channel assignments is provided in this manual. You can address up to 512 channels using DMX control and up to 128 channels with multiplex control.

RELAY MODE: Pairs of channels (1/2 and/or 3/4) may be switched into the relay mode. In this mode the output of these channels will be either off or full

on depending on the control console channel setting. The trip point for turn on is approx. 50%. The two left hand switches on the DIP switch block control relay mode channel selection.

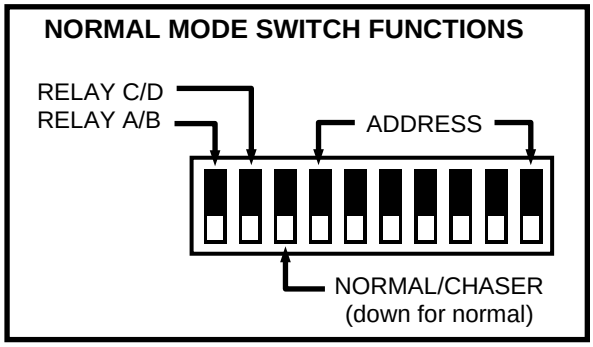
CHASER MODE:

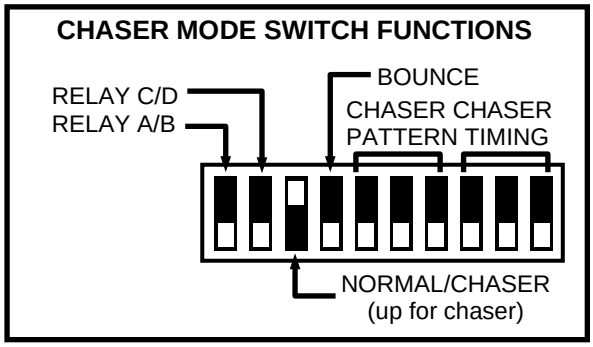
When operating in the chaser mode the AS42D becomes independent of the control console and other dimmers. The green LED indicator is OUT when in the chaser mode. Chaser mode is turned on and off by one of the DIP switches on the end of the unit. A diagram on the unit cover unit shows the switch settings for chaser operation.

Eight different chaser patterns are available. A "bounce" condition may be used on several of the chase patterns by setting one of the DIP switches. The bounce condition causes the chase pattern to run in alternating directions.

The chase step time may be controlled for up to 64 seconds per step. Step fade time is proportional to the step time. If a channel is in the relay mode during chaser operation - it will "snap" on and off (zero fade time). The tables below show the details of chaser settings.

ADDRESS AND CONTROL SWITCH SETTINGS




CHASER PATTERN SELECTION

| SWITCHES | PATTERN |
|---|---|
| ⇩⇩⇩ | 4 chan. sequence |
| ⇩⇩⇧ | 4 chan. build |
| ⇩⇧⇕ | 4 chan. build/unbuild |
| ⇩⇧⇧ | 4 chan. random |
| ⇧⇩⇩ | 3 chan. sequence + |
| ⇧⇩⇧ | 3 chan. build |
| ⇧⇧⇩ | 3 chan. build/unbuild |
| ⇧⇧⇧ | 2 chan. alternating |

CHASER TIMING SELECTION

| SWITCHES | PATTERN |
|---|---|
| ⇩⇩⇩ | .5 seconds |
| ⇩⇩⇧ | 1.0 seconds |
| ⇩⇧⇕ | 2 seconds |
| ⇩⇧⇧ | 4 seconds |
| ⇧⇩⇩ | 8 seconds |
| ⇧⇩⇧ | 16 seconds |
| ⇧⇧⇩ | 32 seconds |
| ⇧⇧⇧ | 64 seconds |

## MAINTENANCE AND REPAIR

### TROUBLESHOOTING

- Check that power is applied to the dimmer.
- Check that all light fixtures are functional.
- Check the fuses.
- Check the multiplex and/or DMX cable.
- Check the settings of the dimmer DIP switches.
- Check the console setup for correct patching.

### REPAIR

The only user serviceable parts are externally accessible fuses. Replace fuses ONLY with 10 Amp, 250VAC, fast blow fuses. Internal service on the unit by other than Lightronics authorized agents will void the warranty. If service is required, contact the dealer from whom you purchased the dimmer, or Lightronics Service Department, 509 Central Drive, Virginia Beach, VA 23454. Tel: 757 486 3588.

### WARRANTY INFORMATION AND REGISTRATION – CLICK LINK BELOW

www.lightronics.com/warranty.html

**CHANNEL ASSIGNMENT SETTINGS**

The DIP Switch Setting column shows the positions of the DIP switches on the dimmer. The Start Channel column shows the resulting channel assignment for the first channel of the dimmer

NOTE: Some control consoles can be programmed or "patched" to alter their channel order. You may get unexpected results if you are not aware of the console patch condition when you assign channels at a dimmer.

EXAMPLE: If a dimmer's DIP switches are set to ⇩⇧⇩⇧⇩⇧⇧ then the first channel of the dimmer will respond to console channel 173. The remaining dimmer 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 |
|---|---|---|---|---|---|---|---|
| ⇩⇩⇩⇩⇩⇩⇩ | 1 | ⇩⇧⇩⇩⇩⇩⇩ | 129 | ⇧⇩⇩⇩⇩⇩⇩ | 257 | ⇧⇧⇩⇩⇩⇩⇩ | 385 |
| ⇩⇩⇩⇩⇩⇩⇧ | 5 | ⇩⇧⇩⇩⇩⇩⇧ | 133 | ⇧⇩⇩⇩⇩⇩⇧ | 261 | ⇧⇧⇩⇩⇩⇩⇧ | 389 |
| ⇩⇩⇩⇩⇩⇧⇩ | 9 | ⇩⇧⇩⇩⇩⇧⇩ | 137 | ⇧⇩⇩⇩⇩⇧⇩ | 265 | ⇧⇧⇩⇩⇩⇧⇩ | 393 |
| ⇩⇩⇩⇩⇩⇧⇧ | 13 | ⇩⇧⇩⇩⇩⇧⇧ | 141 | ⇧⇩⇩⇩⇩⇧⇧ | 269 | ⇧⇧⇩⇩⇩⇧⇧ | 397 |
| ⇩⇩⇩⇩⇧⇩⇩ | 17 | ⇩⇧⇩⇩⇧⇩⇩ | 145 | ⇧⇩⇩⇩⇧⇩⇩ | 273 | ⇧⇧⇩⇩⇧⇩⇩ | 401 |
| ⇩⇩⇩⇩⇧⇩⇧ | 21 | ⇩⇧⇩⇩⇧⇩⇧ | 149 | ⇧⇩⇩⇩⇧⇩⇧ | 277 | ⇧⇧⇩⇩⇧⇩⇧ | 405 |
| ⇩⇩⇩⇩⇧⇧⇩ | 25 | ⇩⇧⇩⇩⇧⇧⇩ | 153 | ⇧⇩⇩⇩⇧⇧⇩ | 281 | ⇧⇧⇩⇩⇧⇧⇩ | 409 |
| ⇩⇩⇩⇩⇧⇧⇧ | 29 | ⇩⇧⇩⇩⇧⇧⇧ | 157 | ⇧⇩⇩⇩⇧⇧⇧ | 285 | ⇧⇧⇩⇩⇧⇧⇧ | 413 |
| ⇩⇩⇩⇧⇩⇩⇩ | 33 | ⇩⇧⇩⇧⇩⇩⇩ | 161 | ⇧⇩⇩⇧⇩⇩⇩ | 289 | ⇧⇧⇩⇧⇩⇩⇩ | 417 |
| ⇩⇩⇩⇧⇩⇩⇧ | 37 | ⇩⇧⇩⇧⇩⇩⇧ | 165 | ⇧⇩⇩⇧⇩⇩⇧ | 293 | ⇧⇧⇩⇧⇩⇩⇧ | 421 |
| ⇩⇩⇩⇧⇩⇧⇩ | 41 | ⇩⇧⇩⇧⇩⇧⇩ | 169 | ⇧⇩⇩⇧⇩⇧⇩ | 297 | ⇧⇧⇩⇧⇩⇧⇩ | 425 |
| ⇩⇩⇩⇧⇩⇧⇧ | 45 | ⇩⇧⇩⇧⇩⇧⇧ | 173 | ⇧⇩⇩⇧⇩⇧⇧ | 301 | ⇧⇧⇩⇧⇩⇧⇧ | 429 |
| ⇩⇩⇩⇧⇧⇩⇩ | 49 | ⇩⇧⇩⇧⇧⇩⇩ | 177 | ⇧⇩⇩⇧⇧⇩⇩ | 305 | ⇧⇧⇩⇧⇧⇩⇩ | 433 |
| ⇩⇩⇩⇧⇧⇩⇧ | 53 | ⇩⇧⇩⇧⇧⇩⇧ | 181 | ⇧⇩⇩⇧⇧⇩⇧ | 309 | ⇧⇧⇩⇧⇧⇩⇧ | 437 |
| ⇩⇩⇩⇧⇧⇧⇩ | 57 | ⇩⇧⇩⇧⇧⇧⇩ | 185 | ⇧⇩⇩⇧⇧⇧⇩ | 313 | ⇧⇧⇩⇧⇧⇧⇩ | 441 |
| ⇩⇩⇩⇧⇧⇧⇧ | 61 | ⇩⇧⇩⇧⇧⇧⇧ | 189 | ⇧⇩⇩⇧⇧⇧⇧ | 317 | ⇧⇧⇩⇧⇧⇧⇧ | 445 |
| ⇩⇩⇧⇩⇩⇩⇩ | 65 | ⇩⇧⇧⇩⇩⇩⇩ | 193 | ⇧⇩⇧⇩⇩⇩⇩ | 321 | ⇧⇧⇧⇩⇩⇩⇩ | 449 |
| ⇩⇩⇧⇩⇩⇩⇧ | 69 | ⇩⇧⇧⇩⇩⇩⇧ | 197 | ⇧⇩⇧⇩⇩⇩⇧ | 325 | ⇧⇧⇧⇩⇩⇩⇧ | 453 |
| ⇩⇩⇧⇩⇩⇧⇩ | 73 | ⇩⇧⇧⇩⇩⇧⇩ | 201 | ⇧⇩⇧⇩⇩⇧⇩ | 329 | ⇧⇧⇧⇩⇩⇧⇩ | 457 |
| ⇩⇩⇧⇩⇩⇧⇧ | 77 | ⇩⇧⇧⇩⇩⇧⇧ | 205 | ⇧⇩⇧⇩⇩⇧⇧ | 333 | ⇧⇧⇧⇩⇩⇧⇧ | 461 |
| ⇩⇩⇧⇩⇧⇩⇩ | 81 | ⇩⇧⇧⇩⇧⇩⇩ | 209 | ⇧⇩⇧⇩⇧⇩⇩ | 337 | ⇧⇧⇧⇩⇧⇩⇩ | 465 |
| ⇩⇩⇧⇩⇧⇩⇧ | 85 | ⇩⇧⇧⇩⇧⇩⇧ | 213 | ⇧⇩⇧⇩⇧⇩⇧ | 341 | ⇧⇧⇧⇩⇧⇩⇧ | 469 |
| ⇩⇩⇧⇩⇧⇧⇩ | 89 | ⇩⇧⇧⇩⇧⇧⇩ | 217 | ⇧⇩⇧⇩⇧⇧⇩ | 345 | ⇧⇧⇧⇩⇧⇧⇩ | 473 |
| ⇩⇩⇧⇩⇧⇧⇧ | 93 | ⇩⇧⇧⇩⇧⇧⇧ | 221 | ⇧⇩⇧⇩⇧⇧⇧ | 349 | ⇧⇧⇧⇩⇧⇧⇧ | 477 |
| ⇩⇩⇧⇧⇩⇩⇩ | 97 | ⇩⇧⇧⇧⇩⇩⇩ | 225 | ⇧⇩⇧⇧⇩⇩⇩ | 353 | ⇧⇧⇧⇧⇩⇩⇩ | 481 |
| ⇩⇩⇧⇧⇩⇩⇧ | 101 | ⇩⇧⇧⇧⇩⇩⇧ | 229 | ⇧⇩⇧⇧⇩⇩⇧ | 357 | ⇧⇧⇧⇧⇩⇩⇧ | 485 |
| ⇩⇩⇧⇧⇩⇧⇩ | 105 | ⇩⇧⇧⇧⇩⇧⇩ | 233 | ⇧⇩⇧⇧⇩⇧⇩ | 361 | ⇧⇧⇧⇧⇩⇧⇩ | 489 |
| ⇩⇩⇧⇧⇩⇧⇧ | 109 | ⇩⇧⇧⇧⇩⇧⇧ | 237 | ⇧⇩⇧⇧⇩⇧⇧ | 365 | ⇧⇧⇧⇧⇩⇧⇧ | 493 |
| ⇩⇩⇧⇧⇧⇩⇩ | 113 | ⇩⇧⇧⇧⇧⇩⇩ | 241 | ⇧⇩⇧⇧⇧⇩⇩ | 369 | ⇧⇧⇧⇧⇧⇩⇩ | 497 |
| ⇩⇩⇧⇧⇧⇩⇧ | 117 | ⇩⇧⇧⇧⇧⇩⇧ | 245 | ⇧⇩⇧⇧⇧⇩⇧ | 373 | ⇧⇧⇧⇧⇧⇩⇧ | 501 |
| ⇩⇩⇧⇧⇧⇧⇩ | 121 | ⇩⇧⇧⇧⇧⇧⇩ | 249 | ⇧⇩⇧⇧⇧⇧⇩ | 377 | ⇧⇧⇧⇧⇧⇧⇩ | 505 |
| ⇩⇩⇧⇧⇧⇧⇧ | 125 | ⇩⇧⇧⇧⇧⇧⇧ | 253 | ⇧⇩⇧⇧⇧⇧⇧ | 381 | ⇧⇧⇧⇧⇧⇧⇧ | 509 |