LIGHTRONICS

AS40D
4 x 600W COMPACT DMX DIMMER
OWNER'S MANUAL

Version 2.3
10/12/2023

DESCRIPTION

The AS40D is a compact four channel light dimmer. It has a maximum capacity of 600 Watts per channel and a maximum TOTAL load capacity of 2400 watts. It is supplied with an input power cord which may be connected to a 120 VAC, 20 amp power circuit. The AS40D is intended for INDOOR USE ONLY. The unit operates using the USITT DMX-512 protocol. The AS40D may be operated in a relay (non-dim) mode. The unit will also function as a stand-alone chaser and has eight primary preset chase patterns which may be used.

INSTALLATION

LOCATION:

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

POWER CONNECTIONS:

Extending from the chassis is a 20 amp line cord for connection to a 120 VAC, 20 amp, grounded service. Total capacity of the AS40D is 2400 watts.

LOAD CONNECTIONS:

There is one Edison Plug connector provided for each AS40D output channel. They are located along the left and right edges of the unit. The markings on the cover indicate the channel numbers for each connection. The maximum capacity of each channel is 600 watts.

CONTROL SIGNAL CONNECTIONS:

The male five pin XLR connector on the unit end panel connects to the control console. The female connector is for connection to additional dimmers. The AS40D dimmer is compatible with the USITT DMX-512 protocol.

Note: The DMX standard does not provide for console power via the dimmer chain. Therefore, the DMX console used with AS40D dimmers must be powered by other means.

Wiring information for the DMX control signal connectors is shown on the unit top cover.

CHASSIS END VIEW
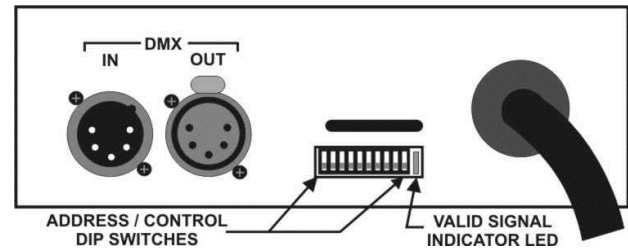
OPERATION

NORMAL MODE (non-chaser)

A green LED in the end panel will indicate that a valid DMX control signal 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 console channels 1-4. Moving the switch position on the far right to up will set the dimmer to respond to channels 5-8. A complete table of channel assignments is provided at the end of this manual. You can address up to 512 channels using DMX control.

RELAY MODE: Pairs of channels (1/2 and/or 3/4) may be switched into relay mode. Relay mode is provided by solid state Triacs, and not mechanical relays. In this mode, the output of these channels will be either OFF or ON depending on the control console channel setting. The trip point for turn on is approximately 50%. The two left hand switches on the DIP switch block control relay mode channel selection.

NORMAL MODE SWITCH FUNCTIONS
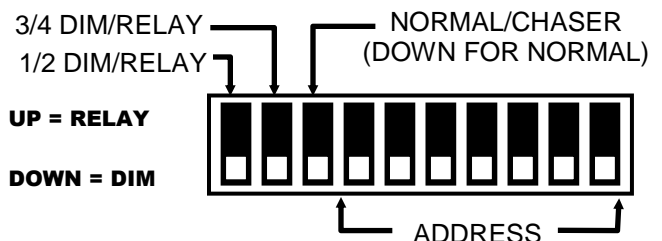
CHASER MODE

When operating in the chaser mode, the AS40D 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 shows the switch settings for controlling chaser operation.

Eight different chaser patterns are available. A "bounce" condition may be imposed 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 on the next page show the details of chaser settings.

CHASER MODE SWITCH FUNCTIONS

SWITCHES	PATTERN
⇓⇓⇓	4 channel sequence
⇓⇓⇑	4 channel build
⇓⇑⇓	4 channel build/unbuild
⇓⇑⇑	4 channel random
⇑⇓⇓	3 channel sequence +
⇑⇓⇑	3 channel build
⇑⇑⇓	3 channel build/unbuild
⇑⇑⇑	2 channel alternating
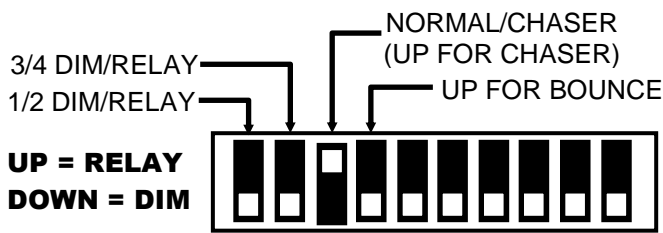
SWITCHES	STEP TIME (Duration)
⇓⇓⇓	0.5 seconds
⇓⇓⇑	1.0 seconds
⇓⇑⇓	2 seconds
⇓⇑⇑	4 seconds
⇑⇓⇓	8 seconds
⇑⇓⇑	16 seconds
⇑⇑⇓	32 seconds
⇑⇑⇑	64 seconds

MAINTENANCE AND REPAIR

TROUBLESHOOTING

- Check you have power applied to the dimmer.
- Check all light fixtures are functional.
- Check the fuses.
- Check the DMX control cable.
- Check the settings of the dimmer DIP switches.
- Check the console setup for correct patching.

REPAIR

The only AS40D user serviceable parts are externally accessible fuses. Replace fuses ONLY with 5 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

LIGHTRONICS INC

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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.

All Lightronics products using DIP switches for DMX-512 address assignments conform to this table.

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