Programming Guide

Digital Astronomical Timer

Model – DAT-4

FUNCTION

SimpleWorx products are designed to provide simple remote control for lighting and other electrical loads without running any new wiring. They connect or "link" to one another by communicating over the existing electrical power wires.

One transmitter can be linked to as many receivers as necessary. Each receiver has the ability to link to eight transmitters.

The SimpleWorx Digital Astronomical Timer (DAT-4) will control 4 different channels/groups with sixteen timer events and each can be set for:

- a specific time of day
- specific days of the week (or every day)
- sunrise (with 15 minute offsets)
- sunset (with 15 minute offsets)

Sunrise/sunset calculations are made each day for your location.

- Enter your latitude and longitude (itouchmap.com/latlong.html) in the setup procedure.

IMPORTANT SAFETY INSTRUCTIONS

When using electrical products, basic safety precautions should always be followed, including the following:

1. Do not use this product for other than its intended purpose.
2. Keep away from water. If the product comes in contact with water or other liquid, turn off the circuit breaker and remove the product immediately.
3. Never use products that have been dropped or damaged.
4. Do not use this product outdoors.
5. Do not cover this product with any material.

INSTALLATION

The setup procedure is simple and very straight forward.

Setup Steps:

- Set the current time and date
- Enter your time zone (Eastern, Central, etc)
- Select (if applicable) daylight saving time
- Enter your location (Latitude and Longitude)
- Create timer event schedules
- Link the SimpleWorx Receivers you want controlled to any or all of the four channels

EXAMPLE:

- Event 1 would be set to turn on the landscape lights at 15 minutes before sunset on Channel 1
- Event 2 would be turning off the lights at midnight on Channel 3.

Most applications have a simple on and off time, but you can add additional sets of on/off events if necessary.

BASIC OPERATION

The DAT-4 display has, three buttons "OFF / -", "ON / +", "SET", with a beeper and a Link button (on the side).

The "SET" button is used:

- To select one of the 4 channels for manual control, tap and you will hear a beep.
- For manual operation, pressing the "OFF / -" or "ON / +" button will turn the Linked Modules of the Channel displayed OFF or ON.
- To enter programming mode- press and hold for 3 seconds.

The Link Button (located on the side of the unit) is used to Link the DAT to SimpleWorx Receivers.

- **Choose which channel you want to Link the devices to by using the Set button**
- To enter Link Mode, press and hold the "Link" button for 6 sec. The LED will Blink RED and you will hear a beep.

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SETUP/PROGRAMMING

NOTE: Programming will be easier if the Digital Astronomical Timer (DAT-4) is plugged into an extension cord so it can be held for easier viewing. The DAT-4 has a battery backup, so settings will not be lost when disconnected from the power.

To enter "**PROGRAM MENU**", press and hold the SET button for 3 seconds. You will hear a beep and the display will show "PROGRAM MENU: TIME/DATE". Use the "OFF/ON" button to scroll through the menu, and tap SET to enter.

TIME/DATE

PROGRAM MENU:
TIME/DATE...

SET HOUR: 00	Use – and + buttons to elect the HOUR (Hours are 24 hr. Military, not AM/PM) Press SET to confirm.
SET MINUTE: 44	Use – and + buttons to select the MINUTE. Press SET to confirm.
SET DAY-OF-WEEK: MONDAY	Use – and + buttons to select the current DAY. Press SET to confirm
SET MONTH: 05	Use - and + buttons to select the current MONTH. Press SET to confirm
SET DATE: 01	Use – and + buttons to select the current DATE. Press SET to confirm
SET YEAR: 14	Use – and + buttons to select the current YEAR. Press SET to confirm
APPLY CHANGES? YES	Use – and + to select Yes or No Press SET, to save changes

Setting LOCATION

PROGRAM MENU:
LOCATION...

SET TIME ZONE: PACIFIC	Use the – and + buttons to select the TIME ZONE. Press SET when finished.
SET DST RULE: YES	Use the – and + buttons to select the DST rule to indicate if your area observes daylight saving time.
SET LONGITUDE: 118	Use the – and + buttons to set the Longitude. Press SET when finished.***
SET LATITUDE: 34	Use the – and + buttons to set the Latitude. Press SET when finished.***
APPLY CHANGES? YES	Use – and + to select Yes or No

Setting SCHEDULE

PROGRAM MENU:
SCHEDULE...

SELECT A TIMER WITH +/- KEYS	Use the – and + buttons to scroll through each time event you want to set. T01 = Timer #1...Press SET to enter programming.
T01- UNUSED	Press SET to program a timed event.
T01- ACTION UNUSED	Use the – and + buttons to select the Action to be set: CH1-ON, CH1-OFF...through CH04-OFF. Press SET to confirm this step.
T01- HOUR 00	Use the – and + buttons to select hour 00-23, SUNRISE, or SUNSET. Press SET to confirm this step.
T01- OFFSET: +00 mins	If SUNRISE or SUNSET is chosen, offset minutes needs to be set from 00 mins to -/+ 90mins. Press SET to confirm. OR
T01- MINUTE 00	Use – and + button to set minute. Press SET to confirm.
T01- EVERY DAY? YES	Use – or + button to determine if you want the event to happen Every day. Press SET to confirm.
T01- SUNDAY YES	If NO is chosen, Use – or + button to determine which day(s) of the week for this event to operate. Use – or + to choose Yes/No. Press SET to confirm each day.
T01- APPLY CHANGE NO	NO will be displayed as default first choice. Make sure to use – or + to select YES and press SET to save changes.
PROGRAM MENU: SCHEDULE	You may repeat the above steps for all 16 events.
PROGRAM MENU: EXIT	Use – or + button to scroll to EXIT Press SET to exit PROGRAM MENU
MON 03/13/14 11:01:45 CH#1	The screen will then display the Day of the week, the Date, Time and Channel it is set for manual control.

There is a major city lookup sheet in the back of this manual. Find the location that is closest to you and enter the coordinates.

Example: If you are a contractor in Northridge, CA the coordinates of 118 and 34 will work quite well anywhere within a 150 mile radius of Los Angeles.

***You can find your exact coordinates on this website itouchmap.com/latlong/html

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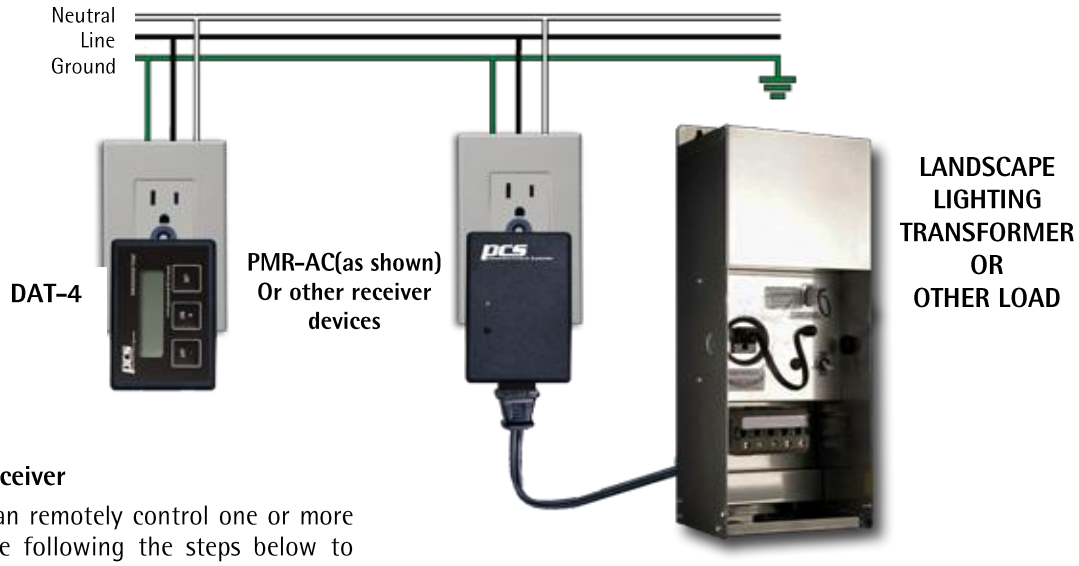
WIRING DIAGRAM



LINKING

Linking a Transmitter to a Receiver

All SimpleWorx transmitters can remotely control one or more SimpleWorx Receiver(s) by the following the steps below to "LINK" the two together:

1	Use the Set button on the display to choose which Channel you want to Link devices to. CH#1 – CH#4
2	Press and hold the Link button located on the side for 6 seconds. The LED will then blink GREEN
3	The Display will indicate Linking CH# X to Receivers… (X being 1-4)
4	At the SimpleWorx Receiver; Press and hold the rocker switch or link button for 6 seconds. The LED will blink GREEN and flash its load (if a load is connected).
5	The Receiver will indicate (within 30 seconds) the two devices have automatically "LINKED" to one another when the load flashes and the LED stops blinking.
	You may put another receiver in Link Mode to add to the Channel. To take the DAT out of the "LINK" mode, Tap the link button once. The LED will stop blinking. Note: The "LINK" mode will automatically timeout after 5 minutes

Clearing the LINKS

Step	Status
1	Press and hold LINK button for at least 6 seconds. The LED will blink green.
2	Tap the button 10 times to clear the LINK.
3	The LED will flash red 10 times before returning to solid RED to indicate the all receivers associated to that Channel have been removed.

Status LED Indicator

The DAT are each equipped with a bi-color status LED that is normally lit to red. This LED indicator will flash different colors to indicate configuration status as outlined below:

LED Color	Status
Solid RED	Power applied to Module
Blinks GREEN	Device is in LINK MODE
Solid GREEN	Transmitting a SPC™ message

LIMITED WARRANTY

Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in materials and workmanship for a period of five years from the date of purchase. Refer to the warranty information on the PCS website (www.pcslighting.com) for exact details.

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CITY	LON	LAT	CITY	LON	LAT
Albany, NY	73	42	Fort Worth, TX	97	32
Albuquerque, NM	106	35	Fresno, CA	119	36
Amarillo, TX	101	35	Grand Junction, CO	108	39
Anchorage, AK	149	61	Grand Rapids, MI	85	42
Atlanta, GA	84	33	Havre, MT	109	48
Austin, TX	97	30	Helena, MT	112	46
Baker, OR	117	44	Honolulu, HI	157	21
Baltimore, MD	76	39	Hot Springs, AK	93	34
Bangor, ME	68	44	Houston, TX	95	29
Birmingham, AL.	86	33	Idaho Falls, ID	112	43
Bismarck, ND	100	46	Indianapolis, IN.	86	39
Boise, ID	116	43	Jacksonville, FL	81	30
Boston, MA	71	42	Juneau, AK	134	58
Buffalo, NY	78	42	Kansas City, MO	94	39
Calgary, AB	114	51	Key West, FL	81	24
Carlsbad, NM	104	32	Kingston, ON	76	44
Charleston, SC	79	32	Klamath Falls, OR	121	42
Charleston, WV	81	38	Knoxville, TN	83	35
Charlotte, NC	80	35	Las Vegas, NV	115	36
Cheyenne, WY	104	41	Lewiston, ID	117	46
Chicago, IL	87	41	Long Beach, CA	118	33
Cincinnati, OH	84	39	Los Angeles, CA	118	34
Cleveland, OH	81	41	Louisville, KY	85	38
Columbia, SC	81	34	Manchester, NH	71	43
Columbus, OH	83	40	Memphis, TN	90	35
Dallas, TX	96	32	Miami, FL	80	25
Denver, CO	105	39	Milwaukee, WI	87	43
Des Moines, IA	93	41	Minneapolis, MN.	93	44
Detroit, MI	83	42	Mobile, AL	88	30
Dubuque, IA	90	42	Montgomery, AL.	86	32
Duluth, MN	92	46	Montpelier, VT	72	44
Eastport, ME	67	44	Montreal, QB	73	45
Edmonton, AB	113	53	Moose Jaw, SK	105	50
El Centro, CA	115	32	Nashville, TN	86	36
El Paso, TX	106	31	Nelson, BC	117	49
Eugene, OR	123	44	Newark, NJ	74	40
Fargo, ND	96	46	New Haven, CT	72	41
Flagstaff, AZ		35	New Orleans, LA	90	29

CITY	LON	LAT	CITY	LON	LAT
New York, NY	73	40	Portland, OR	122	45
Nome, AK	165	64	Providence, RI	71	41
Oakland, CA	122	37	Quebec, QB	71	46
Oklahoma City, OK	97	35	Raleigh, NC	78	35
Omaha, NB.	95	41	Reno, NV	119	39
Ottawa, ON.	75	45	Richfield, UT	112	38
Philadelphia, PA	75	39	Richmond, VA	77	37
Phoenix, AZ	112	33	Roanoke, VA	79	37
Pierre, SD	100	44	Sacramento, CA	121	38
Pittsburgh, PA	79	40	St. John, NB	66	45
Portland, ME	70	43	St. Louis, MO	90	38
Portland, OR	122	45	Salt Lake City, UT	111	40
Providence, RI	71	41	San Antonio, TX.	98	29
Quebec, QB	71	46	San Diego, CA	117	32
Raleigh, NC	78	35	San Francisco, CA	122	37
Reno, NV	119	39	San Jose, CA	121	37
Richfield, UT	112	38	San Juan, PR	66	18
Richmond, VA	77	37	Santa Fe, NM	105	35
Lincoln, NB	96	40	Savannah, GA	81	32
London, ON	81	43	Seattle, WA	122	47
Long Beach, CA	118	33	Shreveport, LA	93	32
Los Angeles, CA	118	34	Sioux Falls, SD	96	43
Louisville, KY	85	38	Sitka, AK	135	57
Manchester, NH	71	43	Spokane, WA	117	47
Memphis, TN	90	35	Springfield, IL	89	39
Miami, FL	80	25	Springfield, MA	72	42
Milwaukee, WI	87	43	Springfield, MO	93	37
Minneapolis, MN.	93	44	Syracuse, NY	76	43
Mobile, AL	88	30	Tampa, FL	82	27
Nashville, TN	86	36	Toledo, OH	83	41
Nelson, BC	117	49	Toronto, ON	79	43
Newark, NJ	74	40	Tulsa, OK	95	36
New Haven, CT	72	41	Vancouver, BC	123	49
New Orleans, LA	90	29	Victoria, BC	123	48
Phoenix, AZ	112	33	Virginia Beach, VA	75	36
Pierre, SD	100	44	Washington, DC	77	38
Pittsburgh, PA	79	40	Wichita, KS	97	37
Portland, ME	70	43	Wilmington, NC	77	34
			Winnipeg, MB	97	49

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