



ONLINE COURSES FOR HIGH SCHOOL TECH THEATRE STUDENTS

LIGHTING BASIC CHASE SEQUENCE PROGRAMMING FOR ELEMENT AND ION TUTORIAL

HOW TO PROGRAM A CHASE SEQUENCE (EFFECT) FOR ELEMENT AND ION LIGHT BOARDS

THIS TUTORIAL WILL INTRODUCE YOU TO HOW TO PROGRAM A BASIC CHASE SEQUENCE ON THE ELEMENT AND ION LIGHT BOARDS.

PLEASE NOTE:

This tutorial does not address how to set up a new board, and is assuming that your board is up and running.

PLEASE NOTE:

There are different editions of Element and Ion boards, so your protocols may be slightly different. These instructions have been 'tried and tested', but if for some reason a step doesn't work on your board, please contact the Helpline at ETC at 608-831-4116 or toll-free in the U.S. at 800-688-4116. Also check out the Before You Call information at <https://www.etcconnect.com/ContactETC/>.

SECTION 1 EFFECTS TAB SET UP

If don't have an **Effects** tab (next to the **Live** and **Patch** tabs) first perform this procedure:

- ✓ Click on **+** tab.
- ✓ Click on the **Effects** box.
- ✓ **Effects** should be added to your tab list.

SECTION 2

OPEN EFFECTS AND SET UP

To open the Effects list do one of two things:

- ✓ Click on the Effects tab.
- or
- ✓ Press **Effect** button on the console.

To set up your effect, follow this procedure:

Number your first effect by pressing **Effect** **1** **Enter**.
(Number subsequent effects by pressing **Effect** **x** **Enter**.)
The command line should read: "Effect 1 Create Type".

There should be a selected box on the right of your screen labeled **Type**. If it's not selected, click on it.

- ✓ On the left of your screen select and click on **StepBased**.

Choose the number of steps (for instance 4 steps) by:

- ✓ Pressing **SK Step** **1** **Thru** **4** **Enter** **Enter**.

You will see the steps listed in the **Step** column on the left side of the screen.

Let's say you want to chase Channels 5, 6, 7 and 8.

To program Channel 5 in Step 1:

- ✓ Click in the box next to Step 1 under the **Channels** column.

The command line will now read: "Effect 1 Step 1 Chan".

- ✓ Press **5** **Enter** and "5" will appear under the Channels column in the Step 1 row.

(NOTE: You can add two or more channels to a step if you like. See Train sample below.)

Repeat this process for channels 6, 7 and 8 in steps 2, 3 and 4 respectively.

Next you will set the features of your chase sequence.

Under the **Parameter** box it should read **Intens**, which is the default that you want.

If it does not, follow this procedure:

- ✓ Click on the **Parameter** box.
- ✓ Select **Intensity**.

If that option does not appear in the box:

- ✓ Click on the **Parameter** box.
- ✓ Select **Intensity** on the bottom left of your screen.
- ✓ Press **Enter**.

The command line should read: "Effect 1 Step 1 Parameter Intens".

Repeat this process for Steps 2, 3 and 4.

SECTION 3

TIMING

Now you will define the timing of the chase sequence.

The columns that you need to use in order to create a basic chase sequence are: Step Time Dwell Time and On State.

If there are numbers in the In Time, Decay Time or Off Time columns:

- ✓ Click in a box.
- ✓ Press 0 Enter.
- ✓ Repeat for each box in those columns.

Setting the timing of your chase.

Step Time is the time between the start of one step and the start of the next step, or the 'rate' that the instruments will flash on.

Dwell Time is the length of time that each instrument will remain on.

For each On State box enter 100, which indicates that the instrument will go to 100%/Full.

Sometimes it's a matter of trial and error to find the correct numbers, especially if you are trying to match the flashes to the beat of music.

If you have a Beats-Per-Minute app, you can find out the Step Time. For instance, a color flash sequence to a piece of music had a Step Time (the timing of the beats) of 0.45 (it was actually .455, but the Step Time only goes to two decimal points) and Dwell Time (how long each instrument stayed on for) of 0.5.

To program a simple chase that flashes one instrument every 2 seconds, and each instruments stays on for 1 second, follow this procedure:

First, let's assume you want each instrument to go to full each time it flashes on. Under the On State column:

- ✓ Click on the first box.
- ✓ Press 1 0 0 Enter.
- ✓ Repeat for all 4 (assuming 4 steps in your sequence) boxes in that column.

Next, to set the instruments to flash on every 2 seconds, under the Step Time column:

- ✓ Click on the first box.
- ✓ Press **2** **Enter**.
- ✓ Repeat for all 4 (assuming 4 steps in your sequence) boxes in that column.

Then, to set each instrument to stay on for 1 second, under the Dwell Time column:

- ✓ Click on the first box.
- ✓ Press **1** **Enter**.
- ✓ Repeat for all 4 (assuming 4 steps in your sequence) boxes in that column.

Congratulations! You have now recorded a chase sequence! The board automatically saves all of your programming, but regardless save manually:

- ✓ Press and hold **Shift**.
- ✓ Press **Update**.
- ✓ Release both buttons.

The screen will excitedly flash “Success!”

SECTION 4

PLAY BACK

Now it's time to play your chase sequence.

To run your chase sequence:

- ✓ Go to your **Live** tab.
- ✓ Press **5** **Thru** **8** **Effect** **1** **Enter**.

or

- ✓ Select channels 5 through 8 by clicking on them on your screen, then press **Effect** **1** **Enter**.

Your chase sequence should start running.

To stop the chase sequence from running:

- ✓ Press **Effect** **1** **At** **Enter**.

Or, as long as all of the channels are still selected on your screen:

- ✓ Press **Sneak** **Enter**.

SECTION 5

LEDs

Now let's program a chase sequence with LEDs.

Follow all of the steps above, except use 4 LED channel numbers, and record them into Chase 2.

Now, when you go to run your chase:

- ✓ Select the first instrument on the screen.
- ✓ Using the color wheel or percentage columns, select the color of that instrument.
- ✓ Select the second instrument on the screen.
- ✓ Using the color wheel or percentage columns, select the color of that instrument.
- ✓ Repeat for subsequent instruments.
- ✓ Now go back and re-select all of the instruments.
- ✓ Then press Effect 1 Enter.

But, wait, we're not quite finished...

SECTION 6

SUBS

RECORDING AN EFFECT ON A SUB

So that you don't have to keep selecting all of the channels each time you want to run a chase sequence, it's best to record the chase sequence onto a submaster fader. That way you simply have to raise and lower the fader to start and stop the chase. Here's how:

- ✓ Click on the **Live** tab.

Select the channels that you have programmed into the effect. For instance, Effect 1 with channels 5, 6, 7 and 8, recorded into Sub 7.

Select the effect:

- ✓ **5 Thru 8 Effect 1 Enter**

Record the effect into a cue:

- ✓ **Record Sub 7 Enter**

The effect will run when you raise the fader and stop when you lower the fader.

SECTION 7 CUES

RECORDING AN EFFECT IN A CUE

If you want to use your chase sequence as a cue for your production, here's how:

- ✓ Click on the Live tab.

Select the channels that you have programmed into the effect. For instance, Effect 1 with channels 5, 6, 7 and 8, recorded into Cue 9.

Select the effect:

- ✓ 5 Thru 8 Effect 1 Enter

Record the effect into a cue:

- ✓ Record Cue 9 Time 0 Enter

The effect will continue to run until you go into the next cue.

Tip: Record the effect cue and the following cue with Time 0, so that the effect starts immediately and stops immediately.

SECTION 8 EXAMPLES

SAMPLE CHASE SEQUENCE EXAMPLES

Below are some sample chase sequences that you can duplicate, or use as a base for creating other chases.

CAMERA FLASH or LIGHTNING EFFECT

4 LED instruments, white, channels 70, 75, 80, 85, flashing in order as seen below.

Step	In	Dwell	Decay	On	Off
Param	Time	Time	Time	State	State
Intens	0.8	0	0.1	0	100
	0.8	0	0.1	0	100
	0.8	0	0.1	0	100
	0.8	0	0.1	0	100

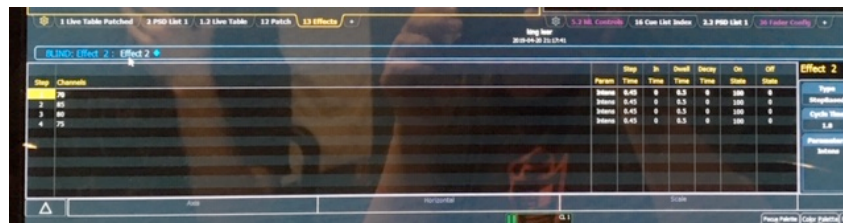
Step	Channels
1	75
2	80
3	85
4	70

Param	Step Time	In Time	Dwell Time	Decay Time	On State	Off State
Intens	0.8	0	0.1	0	100	0
	0.8	0	0.1	0	100	0
	0.8	0	0.1	0	100	0
	0.8	0	0.1	0	100	0

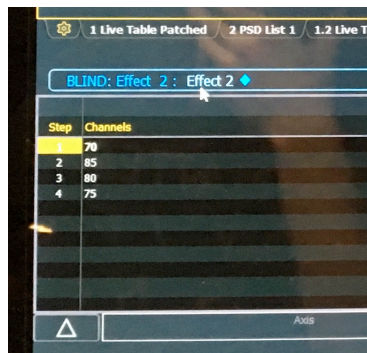
COLOR FLASHES IN TIME TO MUSIC

4 LED instruments, one red, one blue, one green, one amber, channels 70, 75, 80, 85 flashing in order below.

(Step time was 0.455, but Ion only allows for 2 decimal points.)



Step	Channels	Param	Step Time	In Time	Dwell Time	Decay Time	On State	Off State	Effect 2
1	70	Intens	0.45	0	0.5	0	100	0	Effect 2
2	85	Intens	0.45	0	0.5	0	100	0	
3	80	Intens	0.45	0	0.5	0	100	0	
4	75	Intens	0.45	0	0.5	0	100	0	



Step	Channels
1	70
2	85
3	80
4	75



	Param	Step Time	In Time	Dwell Time	Decay Time	On State	Off State
	Intens	0.45	0	0.5	0	100	0
	Intens	0.45	0	0.5	0	100	0
	Intens	0.45	0	0.5	0	100	0
	Intens	0.45	0	0.5	0	100	0

FIREWORKS

4 LED instruments, one red, one blue, one green, one amber, channels 41, 42, 43 and 44, flashing in quick succession.

To access screen buttons, press 'Properties'. Use arrows to navigate, press 'Select' to edit. Press 'Escape' to access the left-side functions.

BLIND: Effect 1 :

Step	Channels	Param	Step Time	In Time	Dwell Time	Decay Time	On State	Off State
1	41		0.1	0	0.1	0	100	0
2	42		0.1	0	0.1	0	100	0
3	43		0.1	0	0.1	0	100	0
4	44		0.1	0	0.1	0	100	0

To access screen buttons, press 'Pro

BLIND: Effect 1 :

Step	Channels
1	41
2	42
3	43
4	44

	Param	Step Time	In Time	Dwell Time	Decay Time	On State	Off State
		0.1	0	0.1	0	100	0
		0.1	0	0.1	0	100	0
		0.1	0	0.1	0	100	0
		0.1	0	0.1	0	100	0

MOVING TRAIN EFFECT

Slow green pulses, simulating train traveling through trees, channels 41 and 42 flash on together for 3 seconds, then flash off together for 1 second, and repeat.

To access screen buttons, press 'Properties'. Use arrows to navigate, press 'Select' to edit. Press 'Escape' to access the left-side functions.

BLIND: Effect 3 : Effect 3 ◆

Step	Channels	Param	Step Time	In Time	Dwell Time	Decay Time	On State	Off State
1	41>42		2	1	3	0	100	0
2	41>42		1	0.5	1	0	0	0

To access screen buttons, press 'Properties'. Use arrows to navigate, press 'Select' to edit. Press 'Escape' to access the left-side functions.

BLIND: Effect 3 : Effect 3 ◆

Step	Channels
1	41>42
2	41>42

To access screen buttons, press 'Properties'. Use arrows to navigate, press 'Select' to edit. Press 'Escape' to access the left-side functions.

	Step	In	Dwell	Decay	On	Off
Param	Time	Time	Time	Time	State	State
	2	1	3	0	100	0
	1	0.5	1	0	0	0