

THE PERIODIC TABLE OF ELEMENT™

THE BASICS OF LIGHTING CONTROL, REDEFINED.



<p>Address An Address is a single output through which a dimmer or device parameter may be controlled. On Express, this is called a Dimmer.</p> <p>Ad</p>													<p>Channel The electronic "handle" or set of handles that controls associated Addresses. A single channel may be patched to a single Address or many Addresses corresponding to individual dimmers or may be assigned a device Profile and patched to Addresses that map to the various parameters of the device.</p>		
<p>Proportion The maximum level an Address may send when its corresponding channel is set to full intensity.</p> <p>Pr</p>	<p>Devices Objects other than dimmers that can be controlled by the console.</p> <p>De</p>													<p>Channel Faders Channel faders map 1-to-1 and provide hands-on control of the associated channel's intensity. Channel faders operate using LTP logic, meaning a fader can be matched to the current level of that channel to gain control and moved up or down to raise or lower that channel's level.</p>	
<p>Curve A Curve adjusts the level sent by an Address as it fades from one level to a different level. On Express, this is called a Dimmer Profile.</p> <p>Cv</p>	<p>Scroller Scrollers contain individual pieces of color media ("gel") taped together in a long "scroll" or "string" using motors in the Scroller. The gel string is moved from frame to frame, allowing a single conventional fixture to use many different gels during a show.</p> <p>Sc</p>													<p>Selected Channels Selected channels are available for manual control through the intensity-level wheel and keypad commands or through the On Demand ML Controls. If deselected and not recorded, the next cue or LTP submaster with a move instruction will take control of that channel. Selected channels with manual adjustments behave like captured channels on Express.</p>	
<p>Preheat The level to which an Address will fade when a Preheat cue is running. Used to warm large filaments.</p> <p>Ph</p>	<p>Gobo Rotator A mechanical device that fits in the iris slot of a conventional fixture and can rotate a standard gobo or template as a special effect.</p> <p>Gr</p>	<p>Color Mixing Additive mixing happens in fixtures with multiple lamps (like LED fixtures) and uses - at a minimum - red, green and blue circuits. Subtractive color mixing happens when multiple color filters are used in front of a single lamp. Subtractive systems typically use CMY (cyan, magenta, yellow) filters, but in reality many fixtures with a gel using subtractive mixing to create the colored light.</p> <p>Co</p>	<p>Patch Patch is used to define what devices will be controlled by specified channels and what addresses those devices should use.</p> <p>Pt</p>	<p>Blind A console state where manual changes to channel levels are not sent to the lighting rig. Used for editing recorded targets or creating new items without altering the current live lighting levels. On Express, changes made in Blind must be recorded. On Element, changes made in Blind are immediately stored.</p> <p>Bl</p>	<p>Live A console state where manual changes affect the levels of the actual lighting rig. On Express, this view/state is called Stage.</p> <p>Li</p>	<p>Focus Effect A Focus Effect is a relative effect designed to adjust pan and tilt parameters of moving lights or mirror head accessories. Relative effects apply mathematical offsets to the current base parameter level to achieve smooth repeatable movement around that base point.</p> <p>Fe</p>	<p>GO The GO button advances cues in the Cue List. Pressing GO will cause the next cue to start fading its levels on stage. Pressing GO on top of a currently-fading cue will not override the fade timing of channels from the previous cue unless those channels have a new level (a move instruction) in the incoming cue.</p> <p>Go</p>	<p>Cue Timing Up and Down fade timing is used to create fades from one cue to the next. Up time is used by channels moving to a higher level and for non-intensity parameter moves. Down time is used by channels moving from a higher intensity level to a lower level. Follow time is used to make a cue automatically exagulate based on the Go on the previous cue.</p> <p>Ct</p>	<p>Categories Parameters are typically assigned to one of four Categories - Intensity, Focus, Color or Beam. Focus contains Pan/Tilt or positioning parameters. Beam can be a catch-all category for Parameters that do not fall into any other category. Beam is divided into three sub-categories of Shutter, Image and Form.</p> <p>Cm</p>	<p>Paging A total of 300 Submasters may be recorded. To gain access to those subs you can page the faders in groupings of 40 or 60, depending on your console type.</p> <p>Pg</p>	<p>Next/Last When a Group (or a grouping of individual channels) is selected, you can use NEXT and LAST to focus manual control on individual channels within that selection. If only one channel is selected, NEXT will select the next available channel and LAST will select the previous available channel.</p> <p>Nx</p>	<p>Intensity Level Intensity levels control the brightness of a lamp or the amount of light a mechanical dimmer allows out of a fixture. In its default state, Beam controls intensity levels using LTP logic for cueing and HTP logic on submasters. Channels with intensity of 1% or greater are referred to as "active" channels.</p> <p>Il</p>			
<p>Dimmer/Address Check The act of stepping from one Address to the next with the output can be verified.</p> <p>Da</p>	<p>Mirror Head A conventional fixture accessory which contains a mirror and two motors that pan and tilt the mirror. This allows a single fixture to shine on many different positions during a show.</p> <p>Mh</p>	<p>Gel Picker Console displays where you can pick a color for a color-mixing device, based on a manufacturer's gel number.</p> <p>Gp</p>	<p>Patch by Address Patching by Address allows you to select Addresses (dimmers) first and then assign them to a channel number.</p> <p>Pa</p>	<p>Blind Cue Console displays where the recorded contents of cues can be viewed and/or edited without having to play the cue back live. Levels shown in blue or green are moving to a new level in this cue. Levels shown in magenta are tracking (not moving) since the last cue. Levels in white are blocked.</p> <p>Bc</p>	<p>Channel Summary This display format shows many channels and intensity levels and limited (category summary) information about non-intensity parameter.</p> <p>Cs</p>	<p>Linear Effect A Linear Effect is a relative effect designed to adjust parameters such as intensity, or iris, or zoom of moving lights. Relative effects apply mathematical offsets to the current base parameter level to achieve smooth repeatable movement around that base point.</p> <p>Le</p>	<p>STOP/BACK If you press GO too quickly, you can use the STOP/BACK key to stop that fade. Press GO again to restart the transition into the new cue. Press BACK to move backwards through the Cue List. This key takes the place of the Hold and Back keys on Express.</p> <p>St</p>	<p>Editing with Tracking or Cue Only Editing with tracking will cause the change(s) to propagate forward through the cue list until a cue containing a move instruction or a block is encountered. Editing with cue only will change the level(s) only in the specific cue and may add move instructions into the next cue to protect the levels in following cues.</p> <p>Et</p>	<p>On Demand ML Controls The ELEMENT's On Demand ML Controls are an on-screen tool for adjusting non-intensity parameters.</p> <p>Om</p>	<p>HTP or LTP Subs By default, intensity on subs is HTP allowing you to pile on many subs to create a look, or to pile on subs with cues to affect the stage lighting. You can change subs to use LTP logic instead, which means you can have subs take intensity down based on the last submaster you move.</p> <p>Ht</p>	<p>Group Sub Recorded submasters can be used like groups for channel selection using the GROUP SUB # syntax. RECALL FROM is the command to use in Element to duplicate Group Sub # in Express.</p> <p>Gs</p>	<p>Sneak The Sneak command may be used to adjust levels for selected channels in time, either using the default time or a manually entered time. Sneak can also be used to remove a manual instruction from a channel, allowing the level from playback to return to the stage. Sneak will perform a function similar to Release function on Express.</p> <p>Sn</p>			
<p>Device Library The Device Library contains definitions of multi-parameter or non-intensity devices that can be controlled by the console. On Express, Device Profiles are called Personalities.</p> <p>Di</p>	<p>RGB Fixture Typically an LED-based fixture with Red, Green and Blue LEDs, but can also be applied to cyc or border lights with red, green and blue gels.</p> <p>Rf</p>	<p>Color Picker Console displays where you can pick a color for a color-mixing device, based on a color spectrum diagram.</p> <p>Co</p>	<p>Patch by Channel Patching by Channel allows you to select the channel number first, then assign Addresses (dimmers) to it.</p> <p>Pc</p>	<p>Blind Submaster Console displays where the recorded contents of submasters can be viewed and/or edited without having to play back the submaster live.</p> <p>Bm</p>	<p>Table View This display format shows fewer channels, all intensity levels for those channels, and all parameter settings for those channels.</p> <p>Tv</p>	<p>Color Effect A Color Effect is a relative effect designed to adjust color using Hue and Saturation. Relative effects apply mathematical offsets to the current base parameter level to achieve smooth repeatable movement around that base point.</p> <p>Ce</p>	<p>Proportional or I-Master Faders The Master Playback faders default to Proportional. So manual fades and fades that are caught can execute both intensity and non-intensity parameters manually. When set to I-Master the faders will only affect intensity manually and can be used to fade the intensity up and down even after the fade has completed.</p> <p>Pf</p>	<p>Block Cues Block cues are used to protect parts of your cue list from track editing. Use Block Cues at the beginning of acts or scenes or anywhere you would like to stop a tracked edit. Blocks can be applied to cues, cue parts, channels and individual parameters.</p> <p>Bc</p>	<p>Home When controlling devices, Home is a helpful way to get a fixture back to basic settings that will create a white beam of light and take pan/tilt back to a 50/50 position. Individual parameters may be homed or the whole fixture may be homed.</p> <p>Ho</p>	<p>Inhibitive Submaster An Inhibitive sub will proportionally limit the levels of channels based on its fader position. If a channel is on an inhibitive sub, and that sub's fader is at 50%, then that channel will only output 50% of its recorded levels on playback and will be limited to 50% maximum intensity in manual control.</p> <p>Is</p>	<p>Group Cue Recorded cues can be used like groups for channel selection using the GROUP CUE # syntax. RECALL FROM is the command to use in Element to duplicate Group Cue # in Express.</p> <p>Gc</p>	<p>Remainder Dim REM DIM will keep currently selected channels at their levels and take all unselected active channels to 0% (or a user-defined REM DIM level). Pressing REM DIM again will restore unselected channels to their previous levels.</p> <p>Rd</p>			
<p>Custom Profile You can create a Custom Profile directly on the console for a fixture not contained in the Device Library.</p> <p>Cp</p>	<p>Selador Series by ETC Selador Series fixtures use the x7 Color System of seven discrete colors to produce a more natural light from LED sources. The x7 system mixes colors with greater depth and better color-rendering than other LED fixtures.</p> <p>Sc</p>	<p>HS Hue and Saturation is a way of describing color within a color spectrum. Hue represents the desired color, while saturation represents the amount of that color.</p> <p>HS</p>	<p>Patching Devices Patching devices involves selecting a channel, then selecting a device Profile from the Library, then assigning a starting Address number for that device. The console will patch a number of consecutive Addresses to that same channel number based on the Profile definition.</p> <p>Pd</p>	<p>Blind Spreadsheet Console displays where the contents of many cues and many channels can be viewed and edited. Clearly shows the impact of editing using track and cue only. Levels shown in blue or green are moving to a new level in this cue. Levels shown in magenta are tracking (not moving) since the last cue. Levels in white are blocked.</p> <p>Bs</p>	<p>Flexi-Channel This display setting limits the number of channels shown, using certain criteria such as "used in show" to determine which channels are displayed on screen.</p> <p>Fc</p>	<p>Absolute Effects An Absolute Effect contains steps that reference Palettes or direct parameter information and define progressive movement from state to state. In an Absolute Effect, you determine the behavior of the effect by defining those states. On Express, the closest concept to this is the Subroutine.</p> <p>Ae</p>	<p>GO TO CUE The GO TO CUE command is used to jump out of order in the Cue List. It can also be used to fade into a cue using a different fade time. GO TO CUE OUT is used to reset the cue list to a blackout state just before the first cue in the list. This function takes the place of the CUE # GO syntax on Express.</p> <p>Gt</p>	<p>Automark This setting causes non-intensity parameters to move into position while a channel is dark (intensity < 0%), before you press GO for that cue. This pre-sets the parameters so that when you press GO, the light is already in the position you recorded. To have a live move, turn off Automark for that cue or cue part.</p> <p>Aut</p>	<p>Palettes Element provides intensity, focus, color and beam palettes. Palettes are used for levels you want to apply to channels frequently. They are mapped to specific types of parameters so that you can set each part independently for intensity, focus, color and beam. Palettes are referenced data. On Express, these are called Focus Points.</p> <p>Pa</p>	<p>Effect Submaster An Effect sub contains only effect information, not any base look information. For example, a regular submaster may contain a look of moving lights, making a circle effect-downstage center. An Effect mode sub would only contain the circle effect portion of that look, meaning it could be layered on top of those channels anywhere on stage.</p> <p>Es</p>	<p>Group List The Group List display is a blind display that can be used for viewing and editing Groups.</p> <p>Gl</p>	<p>Channel Check The act of stepping from one Channel to the next with a specified intensity level so that channel operation can be verified.</p> <p>Cc</p>			

<p>Last-Takes-Precedence (LTP) Logical convention where the last instruction to a channel/parameter wins. Comes from the historical Resistance Dimmer lighting control style where every dimmer had one physical handle.</p> <p>LTP</p>	<p>Tracking Tracking consoles record levels that move in a cue. Static levels "track through" cues until you give them a new level. In modern tracking consoles, displays will show recorded moves and tracked levels, and jumping in the cue list will play back the tracked levels, guaranteeing the correct stage look. Tracking must be considered while editing cues and staging new cues out of sequence.</p> <p>Tr</p>	<p>Move-Fade In a Move-Fade console, only move instructions are executed. In other words, if you start a sunset look fading on the cyc in cue 1, then execute many other cues, the sunset channels will stop fading in cue 1's timing as long as no other cues contain moves for those levels.</p> <p>Mf</p>	<p>Command Line Syntax This syntax style lets you build up instructions on a "Command Line" and then execute them all with the press of ENTER. A benefit of the command line is instant feedback. If the commands don't make sense, the console will ask you to make corrections if it doesn't understand what you're trying to do.</p> <p>CL</p>	<p>Displays The Display key opens up the Channel Information Area (CIA) where you can find the Browser and access to show file management functions (Save, Save As, Open) and commands for shutting down the console or getting into the ELEMENT Shell.</p> <p>Di</p>	<p>HELP Press HELP then any other key to see a short description of that key's function in the CIA.</p> <p>He</p>	<p>PARK Parked channels and addresses are held at a specific level regardless of manual control and playback commands. You can continue to edit cues and other show data while channels/addresses are parked, however the parked level will not change until you unpark the channel or record. Parked data is not stored to address targets.</p> <p>Park</p>	<p>Net3 Remote Video Interface (RV) A device manufactured by ETC that connects to a Net3 console using Ethernet and provides up to two monitor connections at that location for viewing the current console state.</p> <p>RV</p>	<p>Show Control Terms relating to external control protocols that can be used to trigger events on a lighting console. Typically refers to four protocols: MIDI, MIDI Show Control (MUSIC), MIDI Timecode (MTC) or SMPTE Timecode.</p> <p>SC</p>	<p>Ethernet Ethernet is a trademarked name for a local-area network (LAN) protocol. Ethernet is used to connect computers together, and in the case of a lighting system, to connect consoles with clients, RVs, Rapid Focus Remote (RFR) base stations and Net3 DMX/RDM Gateways for data distribution.</p> <p>Eth</p>	<p>DMX512-A DMX512-A is the current standard for XLR-based communication in a lighting system. Each XLR cable can transmit 512 addresses worth of levels - called a "universe". Devices and dimmers that are controlled via DMX512 require an address between 1-512. In systems with more than 512 dimmers or device parameters, additional universes can be used, however addressing is still in the 1-512 range.</p> <p>DMX</p>
<p>Highest-Takes-Precedence (HTP) Logical convention where the highest level for a channel/parameter wins. Comes from the historical Multiscene Preset lighting control style where a single dimmer has two or more control handles. The level from the handle with the highest output level wins.</p> <p>HTP</p>	<p>Preset Preset consoles record all levels at the time. Each cue contains a stand alone look and if levels are not changing they are still recorded into each cue, meaning that multiple cues must be updated in order to change a level throughout a scene.</p> <p>Pr</p>	<p>State A State console always plays back the whole look, regardless of whether a level is moving to a new level or not. In other words, if you start a sunset look fading on the cyc in cue 1, then execute many other cues, the sunset channels will be overridden by the fade time of the new cues, requiring you to run the sunset channels in separate playback fader.</p> <p>St</p>	<p>Referenced Data There are combinations of parameter settings that get used over and over again, like focus positions or mixed colors. These positions/mixes can be stored in Palettes, which are referenced by channels in cues. If you make a change to the Palette, then all cues that reference that Palette will play back the new data.</p> <p>RD</p>	<p>UNDO Use UNDO to clear all commands on an unrecorded command line, or you can use UNDO to remove the impact of previous instructions.</p> <p>Un</p>	<p>About The ABOUT function lets you find out information about channels, dimmers (using CEM+ or CEM3) and all record targets.</p> <p>Ab</p>	<p>MACRO A MACRO is a recorded series of commands or console actions that can be stored and executed later.</p> <p>Ma</p>	<p>Element Client A software product from ETC that runs on a PC or Mac and connects to an Element console using Ethernet and provides a means to view the current console state on that PC or Mac.</p> <p>EC</p>	<p>MIDI MIDI stands for Musical Instrument Digital Interface and was originally developed for controlling many electronic instruments through a single controller or other instrument. Has been expanded and adapted for controlling lighting consoles from another controller.</p> <p>Mi</p>	<p>ETCNet2 A set of protocols developed by ETC for use with their lighting systems for the distribution of data. Venues with existing network installations (including ETCNet2 DMX-Net) can use these network protocols.</p> <p>EN</p>	<p>Net3/ACN/SACN ACN is the new network-based lighting communication standard and is being adopted by manufacturers over time. ETC currently supports ACN in Net3 products like Element and Net3 DMX/RDM Gateways. SACN stands for "Streaming ACN" and is a lightweight protocol for products with less power/fan capacity.</p> <p>Net3</p>

