GENERAL INFORMATION

Lighting control system harnessing and extending the power of WYSIWYG™ visualization and the acclaimed ETC Expression style operation, software and functionality in a fully integrated, networked system.

APPLICATIONS	University, College, School Theatre
	Regional Theatre
	TV Studio
	Touring Shows
	Special Events, Trade Show, Church
FEATURES	500, 1000, 2500 or 5000 channels
	32,767 dimmers
	Expression-style ease of operation
	9,999 cues, 255 focus points, 500 groups, 2000 macros
	16-bit fades
	Hard drive and CD-RW for file storage and transfer
	WYSIWYG-style paperwork, drafting and visualization
	Comprehensive libraries (over 6000 items)
	Wireframe and shaded visualization of stage and blind views
	Preview and Storyboard in wireframe and shaded view
	Emphasis backup server configuration for synchronized backup
	Photo-realistic Rendering
	Custom Report and Plot content and layout
	Import / Export of WYSIWYG files
	Patch and data changes propagate throughout system
	Graphic fixture selection
	Optional functionality: Emphasis 2D and Emphasis 3D
	Supports WYSILink message logging
	Full WYSILink option available
ACCESSORIES	Flat screen monitors
	Remote Focus Unit (RFU)
	Radio Remote Focus Unit (RRFU)
	Wireless Remote Focus Unit (WRFU)
	ETCNet2 Video Node
	ETCNet2 DMX Nodes
	Alpha Numeric Keyboard (included)
	Scroll Mouse (included)
	Tower Stand
	5-port Ethernet hub/switch (included)
	19" equipment rack tray
	Remote Virtual Face panel
	Emphasis Offline Editor

ORDERING INFORMATION

Emphasis Servers

Model #	Description
EMPH-3D-500	3D Server 500 channels
EMPH-3D-1000	3D Server 1000 channels
EMPH-3D-2500	3D Server 2500 channels
EMPH-3D-5000	3D Server 5000 channels
EMPH-3D-500-L	3D Server 500 channels with WYSILink
EMPH-3D-1000-L	3D Server 1000 channels with WYSILink
EMPH-3D-2500-L	3D Server 2500 channels with WYSILink
EMPH-3D-5000-L	3D Server 5000 channels with WYSILink
EMPH-2D-500	2D Server 500 channels
EMPH-2D-1000	2D Server 1000 channels
EMPH-2D-2500	2D Server 2500 channels
EMPH-2D-5000	2D Server 5000 channels
EMPH-2D-500-L	2D Server 500 channels with WYSILink
EMPH-2D-1000-L	2D Server 1000 channels with WYSILink
EMPH-2D-2500-L	2D Server 2500 channels with WYSILink
EMPH-2D-5000-L	2D Server 5000 channels with WYSILink

Emphasis Facepanels

Model #	Description
EMPH-EXPN	Expression ECS Facepanel
EMPH-EXPN-S	Expression ECS Facepanel with SMPTE
EMPH-INST	Insight ECS Facepanel
EMPH-INST-S	Insight ECS Facepanel with SMPTE
EMPH-EXPS	Express ECS Facepanel
EMPH-EXPS24	Express 24/48 ECS Facepanel
EMPH-EXPS48	Express 48/96 ECS Facepanel
EMPH-EXPS72	Express 72/144 ECS Facepanel

Emphasis Accessories

Model #	Description
D-NODE	See DMX Node datasheets for details
V-NODE	ETCNet2 Video Node
M219	LCD Flat Screen Display
M732	Emphasis Server Tower Stand
M733	Emphasis Server 19" rack-mount tray
N1029	5-port Ethernet Switch
4200A1108	Emphasis Dual Video Upgrade Kit (ETC Hardware)
WYSILink	WYSILink
RFU	Remote Focus Unit
RRFU	Radio Remote Focus Unit
WRFU-FL	Wireless Remote Focus Unit, Full System
LPC250	Express Lighting Playback Controller
LPC400, LPC800, LPC1200	Expression Lighting Playback Controller
LPC512	Insight Lighting Playback Controller

SPECIFICATIONS

SYSTEM CAPACITY
32,767 DMX512 dimmers/attributes
500/1000/2500/5000 control channels
9,999 cues
500 groups
255 focus points
Effects with up to 100 steps each
2,000 macros
24 submasters/10 pages (108/10 on Insight)
Two timed/manual fader pairs
Hard drive
CD/RW drive
Diskette drive
Single/Dual VGA outputs

EMPHASIS CONSOLE:
Playback Monitor

FACEPANEL INTERFACE
Fader status
Cue List
MIDI/SMPTE Event List
Command Monitor
Stage
Blind
Spreadsheet and List
Cue, Sub, Group and Focus Point
Fader
A/B fader and/or C/D fader
Spreadsheet
Tracksheet
Patch
Proportional levels
32 User-definable profiles
Full integration with data and visualization
Park
Channel or dimmer
Setup
Expand
Flexichannel (displays only used channels)

PLAYBACK CONTROLS
Faders
Two timed/manual fader pairs with Go, Hold,
Rate, Clear, and Back keys.
Individual last action fade capability for
each channel
Submasters
24 submasters with bump buttons and
integral LEDs (108 on Insight)
Encoders
Five Moving Light attribute encoders[1]
Rate wheel[1]
Level wheel[1]
Trackpad[2]
Master slider
Blackout button
Channel faders and bump buttons
(Two-Scene Express only)

INTERFACES
DMX512 Configurable Outputs (four[1]/two[2])
Ethernet
MIDI
MIDI Show Control
MIDI Time Code
SMPTE[1]
Remote Focus Unit (RFU)
Remote Macro/Go
Remote Trigger[2]
File Server

CONTROL KEYPAD FEATURES
Cue attributes
Cues from .1 to 999.9
Split up/down fade times
Wait times
Follow time
Link to cue, macro or submaster
Modified rate
Label[1]

Eight-part multipart cues
Selective cue recording
Channel Functions
Lists constructed with And, Thru, Except
Sneak sets channel to discrete or fader level
in default/specified time
Only and Except features for group and
channel manipulation
Channel Attribute display
Independent channel capability
Flip provides inversion of pan/tilt or
lamp/scroll programming
Last Action Channels
Dual fader wheels and five control
attributes for moving lights[1]
Frame Tables
Moving Light Functions
Six pages of attribute encoders[1]
Focus Points
16–bit fade resolution
Pop–up displays
Dynamic Effects
Group Functions
500 groups with labels
Any cue or submaster may be accessed as a group
Submaster Functions
Ten pages of 24 submasters with labels, timing and rate attributes
(108 on Insight)
Bump buttons may be enabled, disabled or solo
Range editing of submaster attributes in submaster list
Submasters 13-24 (73-108 on Insight) may be individually
changed between pile-on and inhibitive.
Any Submaster can become a Supermaster
of other Submasters
Effect Functions
Live effects editing
Step-based intensity effects
Template-based Dynamic Effects
Comprehensive timing effects
Customize dynamic templates
Effects may be recorded as cues and/or loaded to submasters
Subroutines
Subroutines on submasters
Up to 26 cue stacks (up to 110 on Insight)
100 steps with level and timing attributes.
Multiple step types
Multiple playback styles
Filter for selective playback
Macro firing
Macros
Macro list
2,000 macros, 1000 steps each
Macros may activate any key or command sequence on
the console.
Live Learn mode
Blind editing
Remote Macros (via facepanel and video nodes)
Startup Macro
Astronomical Time Clock
Program up to 500 events
Play back according to date, day of week, time of day
Program longitude/latitude of show location
Play back in reference to time before/after sunrise or sunset

[1] Expression and Insight facepanels only
[2] Express facepanels only

Note: Some functions that are available may be modified over the life of the product. In addition, functions not described here may also be added. In order to maintain the highest possible standards, ETC reserves the right to change specifications without notice.

SPECIFICATIONS

EMPHASIS SERVER
Pentium based processor
Hard drive
CD/RW drive
Floppy drive
Sound card
USB ports
Serial Ports
VGA/DVI³ monitor output
Parallel printer port
19" rack mountable / desktop
Network Printing
Network file sharing
Partial Show Read
Show Mode

USER INTERFACE
User log-in
Password protected System Manager log-in
Extended Windows™ desktop³
Scroll Mouse (any pointing device)
Keyboard
Hotkeys, drop-down menus,
toolbar icons, shortcuts
Pop-up windows

DISPLAYS/ USER MODES
Emphasis mode
  Console Screen — facepanel screens with
  wireframe and shaded view³
  Console — facepanel screens and virtual console
  Subroutine
  Quad — wireframe and shaded³ views
  Wireframe — plan, section and isometric³
  Shaded³
  Monitor — one facepanel screen
CAD mode
  Wireframe, Quad, Flight case, Shaded³
Data mode
  Spreadsheet, H Select, V Select, Patch, Errors
Presentation mode
  Reports, Plots, Images, Worksheet
Link mode
  Message log

CONTROL FEATURES
Graphic selection of fixtures
  Mouse click
Multiple selection
  Mouse click + Ctrl
  Left click dragged box
  Right click dragged box, specify by type
  By layer
  By Concept
Menu tools for
  Fixture home state
  Intensity Full/Out/Specify
  Focus
  Iris Wide/Tight/Specify
  Colour Palette & Library
Console toolbars
  Screen/mode selection, record tools,
  configurable buttons
  Virtual console
Virtual console
  Clickable softkeys and menu items
  Faders mirror levels from facepanel
Blind editing with visualization for
  Cues
  Groups
  Submasters
  Focus Points
Preview Mode — visualize any cue, and
current cue +1, +2, +3
Storyboard — visualize multiple cues and
activate live from window
Rendering³
  File image, and bitmap output
  Variable resolution
  Full color mixing, amber shift, haze, smoke,
  radiosity, shadow, ambient light

CAD FEATURES
Comprehensive libraries for
  Fixtures — over 1400 from 72 manufacturers
  Truss — over 1400 items from 19 manufacturers
  Theatrical scenic elements, including over 170 people
  Colour — gel catalogs from 18 manufacturers
  Gobos — catalogs from 22 manufacturers
  Accessories, Lens, Lamps, Symbols
CAD conventions
  Missing Coordinate
  XYZ command line
  Relative & Absolute values
  Ortho, Snap, Cursor, Origin
  Undo, Redo,Repeat last command, Group, Ungroup,
  Move, Rotate, Focus, Mirror
  Import from .dwg, .dxf
  Interactive & specified object drawing
  Dimension & Distance tools
  Layers & Scenes
  Extrude, Break, Convert, Divide, Fillet, Array
Drawing tools
  Riser, Sphere, Column, Pipe, Line, Circle, Arc, Text
  Label, Surface, Extruded Surface, Focus Position,
  Camera, Venue: Black Box, Proscenium Arch, Arena
  Specified and interactive object creation
Fixture property tools
  Point of View³, Shutter³, Barn Door³, Barrel Rotate³,
  Patch, Accessories
Fixture photometrics
Quick Tools
  Spot, Unit, Purpose, Focus, Channel, Patch,
  Dimmer, Circuit, Colour, Gobo
Shortcut tools
  Col/Gobo, Fixture, Truss, Accessories, Library,
  Navigation, Views, Concepts, Palettes
Object property tools
  Translusency, Light Emitting Surface, Textures,
  Materials, Legs & Borders
Focus Position with Link to Focus Point
Position Manager

DATA FEATURES
Patch
  Fixture layer indication
  Fixture control status
  EDMX
Graphic selection
Drag-and-drop patching
Spreadsheet data entry & edit
Error checking & reporting
Data filter
Configurable spreadsheets
Fully interactive with all data entry in system
Dynamically updated from any screen, including
changes made at facepanel

PRESENTATION FEATURES
Configurable reports from data
Configurable plot printing
Images from render & screen bitmaps
Worksheet for plot notes
Multi-format output

DIMMER MONITORING FEATURES
WYSIlink message log
Pop-up messages
About Dimmer⁴ and About Rack⁴
Node / Device manager⁴
CEM backup look recording & playback⁴
Graphic dimmer error indication in
wireframe views⁴
Highlighted dimmer error indication in data views⁴
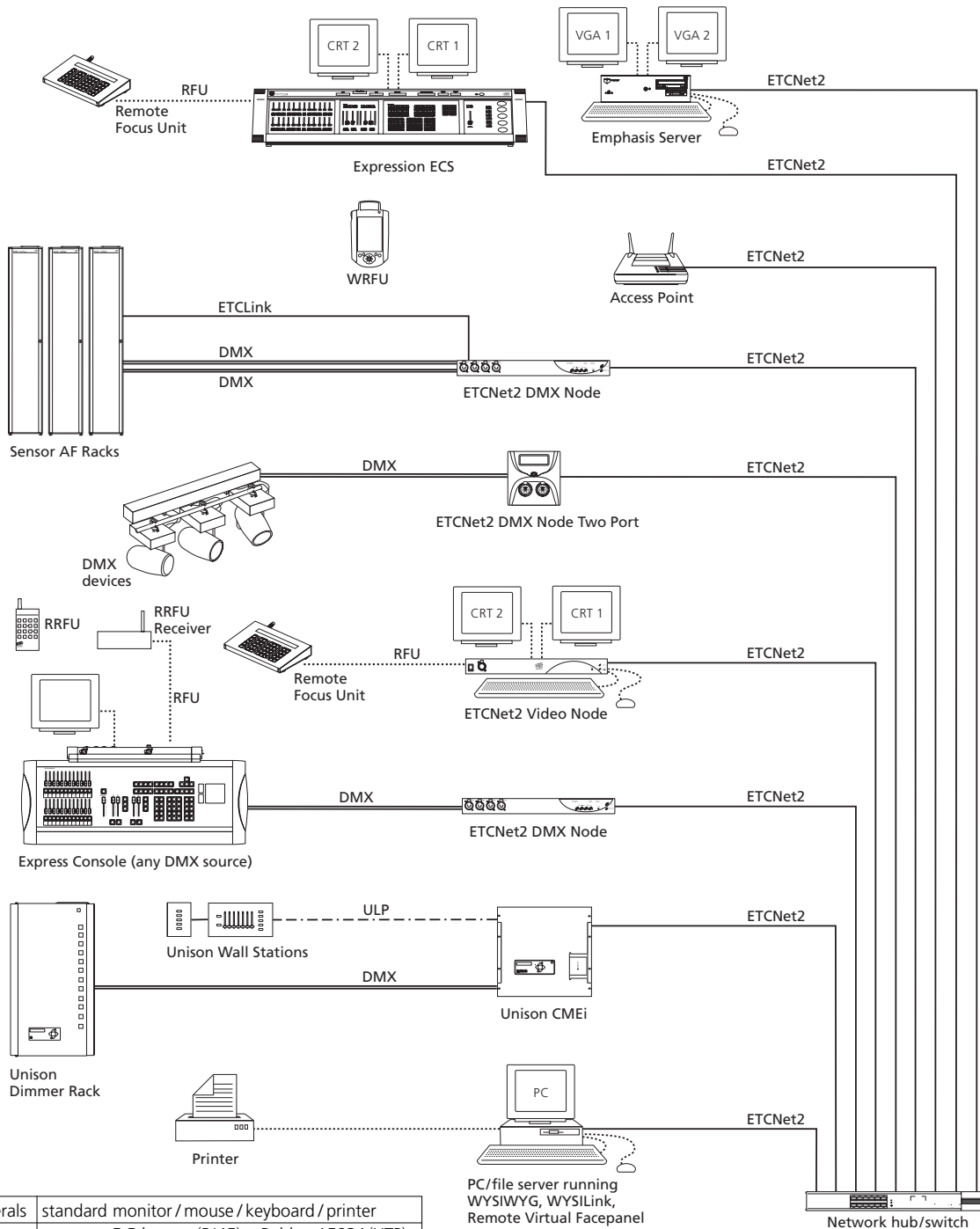EDMX monitoring⁴
CEM+: Sensor+ connect browser interface

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³ Emphasis 3D system only

⁴ WYSILink add-on option features. Messaging dependant
 on AF/Standard option for Sensor Dimming system

TYPICAL SYSTEM RISER

CRT 2
CRT 1
VGA 1
VGA 2

RFU

Remote
Focus Unit

Expression ECS

Emphasis Server

ETCNet2

ETCNet2

WRFU

Access Point

ETCNet2

ETCLink

DMX

DMX

ETCNet2 DMX Node

ETCNet2

Sensor AF Racks

DMX

ETCNet2 DMX Node Two Port

ETCNet2

DMX
devices

RRFU

RRFU
Receiver

CRT 2
CRT 1

RFU

Remote
Focus Unit

ETCNet2 Video Node

ETCNet2

RFU

DMX

ETCNet2 DMX Node

ETCNet2

Express Console (any DMX source)

ULP

Unison Wall Stations

Unison CMEi

ETCNet2

DMX

Unison
Dimmer Rack

PC

Printer

PC/file server running
WYSIWYG, WYSILink,
Remote Virtual Facepanel

ETCNet2

Network hub/switch

Wire types

- - - - - - local peripherals	standard monitor / mouse / keyboard / printer	
——— ETCNet2	category 5 Ethernet (RJ45) – Belden 1583A(UTP)	
═══ DMX	DMX (XLR5) – Belden 9729	
·········· RFU	RFU (XLR6) – Belden 9728	
≡≡≡ ETCLink	ETCLink (XLR6) – Belden 9279	
–·–·– ULP	Unison Link Power – Belden 8471 2x#16AWG	