



DraftLogic Electrical Video Training V10

Welcome

DraftLogic Electrical is the only building electrical systems expert system in the world. By harnessing its abilities, you will complete projects faster, produce more deliverables, and do all of that with fewer errors. The best thing for designers is that DraftLogic Electrical vastly reduces the time you will spend on repetitive and boring tasks, giving you more time to focus on the tasks where your design skill and discretion matter!

Herein, we will detail the videos and tutorial drawings you will use to learn to take advantage of DraftLogic Electrical's abilities. In order to be successful in your training and thus in using DraftLogic Electrical, you will need sufficient time to:

- view the videos, pausing and rewinding often to try things on your own and review tricky concepts;
- work through a project from start to finish—it can be our tutorial project or it can be one of your choosing;
- contact us for assistance as needed to explain functions in further detail or answer questions you have that are not covered by the videos—it is of the utmost importance that you understand how to take complete advantage of DraftLogic Electrical, so don't leave any questions unasked!

In our experience, your training time will be 20-24 hours if you use our tutorial project or up to approximately 30 hours using your project of similar size (allow more time for larger projects). In order to ensure good retention of the large amount of information you are going to see, hear, and experience, the training should be completed in no less than four hour blocks of uninterrupted time & spread out over no more than two weeks.

After you complete the training, it is vital that you use DraftLogic Electrical on all your projects in order to keep your skills sharp. In our benchmark testing, even projects that are not well suited to some parts of DraftLogic Electrical, like automated placement, still benefit from other parts of DraftLogic Electrical, like circuiting and reporting. Design drafting performance gains in these benchmark tests have ranged from a minimum of 200% up to 1300%. By succeeding in the training you will soon be benefiting from the same design drafting performance gains.

Resources

Although it is up to you and your company to allocate sufficient time and energy to the learning process, DraftLogic provides a number of resources to help you be successful in learning to take full advantage of DraftLogic Electrical:

- The training video series, detailed herein. They are all located in a publicly available portion of our FTP site (i.e. no login or password): ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/. You can use Internet Explorer or an FTP client to browse to this address and list the files. In Internet Explorer, right click the files you want one-by-one and select 'Save target as' to download them. Note the wording of the option may differ depending on your Internet Explorer version, but the intent is the same...to save the selected file to a location you specify on your hard drive.
- Tutorial datasets, also detailed herein. The tutorial datasets are in the same directory as the training videos on our FTP site, they are named "20111005_NEC_Series_ForVideoTraining.zip" for the NEC version and "20111005_CEC_Series_ForVideoTraining.zip" for the CEC version.
- User forums website where you can see Q&A from other users in addition to posing your own questions. Details on new and improved DraftLogic Electrical features are also in the forums; this new information supersedes information in the training videos and manual. You can list all the forums entries and select any to view without logging in from this page: http://www.draftlogic.com/forum/search.php?st=7&sk=t&sd=d&sr=topics&sid=c36d61cb3e8c779e55c7dccbfcdd6f5e&search_id=active_topics. Use the login and password we have provided you if you desire to login to post a question or tips for other users.
- The DraftLogic Electrical user manual, a 558 page document with detailed information about DraftLogic Electrical functions. This document is installed in the 'Documentation' subfolder of your DraftLogic Electrical client installation, usually located at 'Program Files\DraftLogic Electrical\Client'. This document is about 95% up-to-date, so be aware that some new functions are not detailed therein and also that some functions described in the manual have been improved upon. Our technical support can quickly help to clarify with any user manual versus current version discrepancies. Note that most discrepancies will have forums entries detailing the changes/additions.
- The DraftLogic website at www.draftlogic.com, where you will find information about the capabilities of DraftLogic Electrical although not any specifics about using functions. Information about DraftLogic Electrical capabilities is found on the 'DraftLogic Electrical' dropdown menu choice from the top horizontal menu bar.

- DraftLogic Technical support, available by telephone at 780-906-2888, email at support@draftlogic.com, chat by Skype at “Dean Whitford”, or chat by Live Online Help from the DraftLogic Electrical website. When you have a question wherein it would be best for our support person to see and/or remotely control your AutoCAD or to show you their AutoCAD, we’ll immediately start up a WebEx session to fulfill your support request.

As you can see from the above, it is of the utmost importance to us that you be successful in your DraftLogic Electrical training, so don’t hesitate to call and talk about anything that is holding you back.

Prerequisites

To be successful in learning to use DraftLogic Electrical you must have some degree of both AutoCAD experience and electrical design experience. This video training program will teach you how to use DraftLogic Electrical. It is not designed to, nor is it anywhere near long enough, to teach you to use AutoCAD or to learn electrical design!

At a bare minimum, we recommend that if you are new to AutoCAD you take the week or so course that will be offered by an Autodesk training company or reseller in your area. There are also a lot of options for AutoCAD courseware if you want to learn at your own pace. Note that ‘AutoCAD’ experience refers equally to AutoCAD LT, AutoCAD MEP, and all other flavors of AutoCAD—the user interface among all of them is the same or at least extremely similar.

In regards to electrical design experience, if you are not an electrical designer but want to use DraftLogic Electrical software to prepare bids, we strongly recommend that you at least have easy access to someone that is an electrical designer to assist with design questions and to review your projects.

The Videos

The training videos are all in mp4 format. You can download a free player for these at <http://www.apple.com/quicktime/download/>. The longer videos have been produced in both lower quality (30 or 40 percent) and higher quality versions (80 percent) to give lower bandwidth folks an easier download alternative. The content in the videos is exactly the same, it is only the audio and video quality that differs. If you have sufficient bandwidth, stick to the higher quality 80 percent versions. If your player has the ability to view the videos in streaming or downloaded fashion, we strongly recommend you download the videos rather than stream them.

The videos have been produced in 1280x720 resolution, watch in 'actual' resolution for the best appearance. If your player skips audio or video or is otherwise choppy, try another player. Your system may also be short of resources. Consult the player's troubleshooting information to ensure you have a good viewing experience if you have any audio or video problems.

The Tutorial Data

The tutorial data is not meant to be 'perfect', it is simply provided to give you a sample of what the tutorial dataset looks like after each step of the automation. Worst case, it gives you a place to start each stage from in case your dataset prevents you from moving ahead (good time for a support call if this happens!)

None of the tutorial data has had any manual cleanup performed; the data is all the result of automated processes and only the absolutely required manual operations (like drawing a floor boundary). There are definitely some errors left in the data, as we wanted you to see some error arrows show up after QA processes to understand how they work.

There is a complete set of NEC data drawn in inches & a complete set of CEC data drawn in mm. Ensure you use the suitable Riverfront School project or another school project (with 2x4 277v lighting as the prime) when attempting to use the tutorial data in order to have all or at least most of your room types be recognized.

The Video Training Program

We have produced videos to cover each phase of work in DraftLogic Electrical: Drawing Discovery, Systems Placement, Circuiting, Branch Circuit Wiring, and Reporting. This is the typical order that you will need the knowledge in & also mirrors the order of the tool groups on the Command tool palette.

There are also two Quick Start videos, where we touch on the main functionality of all phases of DraftLogic Electrical. We recommend that you do the complete video training, but if you are looking for a 'quick start', you can get going with these two videos (combined duration 135min).

Starting with V10 of this document, we have noted below where there are forums items that supersede any of the information in any particular training video. Please review the noted forums items so you will be up to date on any parts of DraftLogic Electrical that are new and improved since the videos were created.

Quick Start

Touches on the minimum required knowledge for all phases of DraftLogic Electrical work to enable you to complete a typical project. Great to get going with, although to take full advantage of DraftLogic Electrical, we recommend you follow up with the complete video training within a few weeks.

The Quick Start is split into two videos to keep length to about an hour each. The first covers the user interface, the DraftLogic Electrical Libraries, Drawing Discovery, and Systems Placement. Each of the videos are available in both 30 percent and 80 percent quality. Here's the links for the first:

ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/QuickStart_FirstSegment_30pct_74min_20120523.mp4

ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/QuickStart_FirstSegment_80pct_74min_20120523.mp4

Key segment start times:

- Introduction and Key User Interface Elements 0:00
- DraftLogic Electrical Libraries 6:42
- Drawing Preparation (aka Drawing Discovery) 31:56
- Systems Placement 52:21

This video runtime is 74 minutes, although you need to allow much more than that for frequent pausing to try things on your own and rewinding as required to review concepts.

The second Quick Start video covers Circuiting, Branch Circuit Wiring, Reporting, and the support forums:

ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/QuickStart_SecondSegment_30pct_62min_20120523.mp4

ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/QuickStart_SecondSegment_80pct_62min_20120523.mp4

Key segment start times:

- Circuiting 00:00
- Branch Circuit Wiring 29:36
- Reporting 49:06
- Export to ConEst IntelliBid 55:28
- Forums (User Support) 59:52

This video runtime is 62 minutes, although you need to allow much more than that for frequent pausing to try things on your own and rewinding as required to review concepts.

The tutorial data for the Quick Start is the same as it is for each major functional area below; please refer to the tutorial data references in each of the following sections.

Drawing Discovery

In Drawing Discovery, you are preparing your source drawing for the design process. It is an investment of time that, if done well, pays off later. This phase of work has the most risk in terms of potential for misallocated time, so it is important to consider your options carefully and choose a course of action that has both a high probability of success and promises reasonable results to move ahead from for the rest of the design process.

The minimum required results from Drawing Discovery include only four elements: 'room' boundaries around the inner perimeter of each space that you want treated separately for design purposes (can be a room or a portion of a room); a single room identifier block in each space with suitable selections made for its attributes; a floor boundary around each part of the drawing to be treated as the same level; and lastly, a floor match block at the same vertical location for each floor within each floor boundary.

When the architect source data is high-quality in terms of compliance to a layering and block standard & includes well drawn elements for walls, windows, and doors, you can also come out of the Drawing Discovery process with quality wall, window, and door elements for DraftLogic Electrical to make better decisions during Automated Placement and more accurate branch circuit length calculations during Automated Branch Circuit Wiring.

There are two Drawing Discovery videos. The first deals with the broad categories of architect source data type and quality, showing you how to handle raster drawing source, PDF file source, low quality DWG source, and high quality DWG source. It is available in both 40 percent and 80 percent quality:

ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/DrawingDiscoverySourceHandling_40pct_20110729.mp4
ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/DrawingDiscoverySourceHandling_80pct_20110729.mp4

Key segment start times:

Raster source 13:46
PDF source 27:46
Unstandardized DWG 36:44
Standardized DWG 43:17

This video runtime is 57 minutes, although you need to allow much more than that for frequent pausing to try things on your own and rewinding as required to review concepts.

The second Drawing Discovery video covers the use of all the Drawing Discovery tools and focuses in on what you need to complete in order to finish up this phase of the project:

ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/DrawingDiscoveryOverview_20110209.mp4

Key segment start times:

Drawing Mapping 00:45
Automated Room Creation 26:00
Room Review 31:44
Ceiling Grid 38:43
Room Boundary Tool 1:01:08
Floor Outline & Floor Match Tools 1:10:24

This video runtime is 85 minutes, although you need to allow much more than that for frequent pausing to try things on your own and rewinding as required to review concepts.

Update: DraftLogic Electrical now will automatically identify common Drawing Discovery issues & even automatically fix some of them, see this forums item about the Automatic Drawing Validation for details:

<http://www.draftlogic.com/forum/viewtopic.php?f=8&t=116>.

Here is a list of the tutorial data tied into the Drawing Discovery videos and an explanation of what each file is used for:

- A. Training_SourceJPG_20111004.jpg – Raster source sample file
- B. Training_SourcePDF_20111004.pdf – Adobe PDF source sample file
- C. Training_Source_CEC_mm_20111004.dwg – CEC version of the standardized DWG source drawing (millimeters units)
- D. Training_Source_NEC_inches_20111004.dwg – NEC version of the standardized DWG source drawing (inches units)
- E. Training_SourceMapping_20111004.map –completed mapping file for use with either the CEC or NEC standardized DWG source drawing
- F. Training_RoomsFloorNoGrid_CEC_mm_20111004.dwg & Training_RoomsFloorNoGrid_NEC_inches_20111004.dwg –tutorial data after mapping and Automated Room Creation complete; includes room boundaries, room IDs, floor boundary, and floor match block.
- G. Training_RoomsFloorWithGrid_CEC_mm_20111004.dwg & Training_RoomsFloorWithGrid_NEC_inches_20111004.dwg –tutorial data after mapping and Automated Room Creation complete, also after Mass Ceiling Grid tool used; includes room boundaries, room IDs, floor boundary, floor match block, and ceiling grid.

Systems Placement

During Systems Placement, you place the blocks representing all devices from all building electrical systems in the drawing. Luminaires and receptacles can be placed with both automated and manual methods, other systems are placed with manual methods. Note that although we use the term ‘manual’ it is not completely manual as DraftLogic Electrical includes tools to accelerate even ‘manual’ placement of devices.

There is one Systems Placement video, created at 60% quality:

ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/DevicesPlacementTutorial_20110706.mp4

Key segment start times:

Automated Placement 02:15

High Volume Move and Copy Tools 16:15

Manual Placement 21:57

Annotation Organizer 33:45

This video runtime is 45 minutes, although you need to allow much more than that for frequent pausing to try things on your own and rewinding as required to review concepts.

Update: The Annotation Organizer now has a dialog to run it & can store your preferred settings as templates, see this forums item for detail:

<http://www.draftlogic.com/forum/viewtopic.php?f=12&t=119> .

Update: The already excellent automated luminaire tags have become even more excellent! See this forums item for all your new control and management options for luminaire tag automation: <http://www.draftlogic.com/forum/viewtopic.php?f=9&t=115>.

Here is a list of the tutorial data tied into the Systems Placement video and an explanation of what each file is used for:

H. Training_AfterAutoPlacement_CEC_mm_20111004.dwg &
Training_AfterAutoPlacement_NEC_inches_20111004.dwg –tutorial dataset after Automated Placement run, only includes luminaire and receptacle devices, no manual placement of other systems done.

Circuiting

The Circuiting phase of work covers both Automated Circuiting and manual circuiting operations. Again as per Systems Placement, 'manual' circuiting in DraftLogic Electrical is nowhere near the mess that manual circuiting in raw AutoCAD is! DraftLogic Electrical includes many tools to make 'manual' circuiting easy and correct.

There is one video for Circuiting, available in either 30 percent or 80 percent quality:

ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/CircuitingTraining_30pct_20110722.mp4

ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/CircuitingTraining_80pct_20110722.mp4

Key segment start times:

Create Service Areas 01:44

Library Settings that Affect Circuiting 29:03

Automated Circuiting 38:12

Motor Circuiting 1:00:30

Circuit Manager 1:04:16

Reports Related to Circuiting 1:29:25

The video runtime is 104 minutes, although you need to allow much more than that for frequent pausing to try things on your own and rewinding as required to review concepts.

More Detail: These forums items explain motors Automated Circuiting and how feeders are assigned to them: <http://www.draftlogic.com/forum/viewtopic.php?f=10&t=21>, <http://www.draftlogic.com/forum/viewtopic.php?f=11&t=120>, and <http://www.draftlogic.com/forum/viewtopic.php?f=10&t=29>.

Here is a list of the tutorial data tied into the Circuiting video and an explanation of what each file is used for:

I. Training_CCTSetup_CEC_mm_20111004.dwg & Training_CCTSetup_NEC_inches_20111004.dwg – tutorial data with Automated Circuiting services areas set up, use 'Display Service Areas' tool to see what panel rooms and services areas were used.

J. Training_AfterCCT_CEC_mm_20111004.dwg & Training_AfterCCT_NEC_inches_20111004.dwg – tutorial data with Automated Circuiting complete, some devices missed on purpose so you can see error arrows when you run QA processes or reporting automatically runs QA processes.

Branch Circuit Wiring

During the Branch Circuit Wiring phase of work, you use a combination of Automated Branch Circuit Wiring and manual work to add branch circuit wiring interconnects (lines representing the connections between the devices of a home run group), wire count blocks, and home run blocks to the project. Again as per the other phases, ‘manual’ branch circuit wiring in DraftLogic Electrical is nowhere near the work that manual branch circuit wiring in raw AutoCAD is. DraftLogic Electrical includes many tools to make ‘manual’ branch circuit wiring easy for you & that also build the underlying data for you to be able to create a bill of materials and/or comprehensive ‘Export to IntelliBid’.

Industry practice today has resulting in a variety of treatments for branch circuit wiring in projects. Some projects require detailed and complete branch circuit wiring, including the drawing of the interconnects between the devices in each home run group. Other projects only require the home run locations and conductor information to be shown—in this case, it would be most efficient to run Automated Branch Circuit wiring and delete the interconnects for client deliverables. Finally, some projects do not have any branch circuit wiring required at all. If you desire to generate an estimate using the bill of materials report included in DraftLogic Electrical or the ‘Export to IntelliBid’, of course, you will need to generate complete branch circuit wiring detail using Automated Branch Circuit wiring and/or the ‘manual’ branch circuit wiring tools in DraftLogic Electrical.

There is one video for Branch Circuit Wiring, available in either 30 percent or 80 percent quality:

ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/BCW_Training_20110922_30pct.mp4

ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/BCW_Training_20110922_80pct.mp4

Key segment start times:

Automated Branch Circuit Wiring 14:26

Library Settings that Affect Circuiting 24:36

Branch Circuit Wire Manager 51:21

Create / Modify / Delete BCW For Any System 1:06:16

Other BCW Tools 1:23:29

The video runtime is 94 minutes, although you need to allow much more than that for frequent pausing to try things on your own and rewinding as required to review concepts.

Here is a list of the tutorial data tied into the Branch Circuit Wiring video and an explanation of what each file is used for:

- K. Training_AfterBCW_CEC_mm_20111004.dwg & Training_AfterBCW_NEC_inches_20111004.dwg – tutorial dataset with Automated Branch Circuit Wiring run, no clean up or massaging done.

Reporting

DraftLogic Electrical completely automatically generates the core schedules and plots you will need for your client deliveries—including such complex items as the Single Line Diagram! Due to this, even on the few projects where you do not use any of DraftLogic Electrical’s other automation, the Automated Reports will still vastly increase your productivity.

Due to the amount of information to cover, we have split the Reporting videos into three:

ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/ReportingTraining_1of3_20110804_80pct.mp4

Key segment start times:

- General Reporting 04:54
- Layer Color Selector 11:32
- Details of Schedules and Floor Plans 17:55
- Kitchen, Motor, and Luminaire Schedules 18:04

The video runtime is 36 minutes, although you need to allow much more than that for frequent pausing to try things on your own and rewinding as required to review concepts.

ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/ReportingTraining_2of3_20110805_80pct.mp4

Key segment start times:

- Details of Schedules and Floor Plans 17:55
- Luminaire Catalogue 00:09
- Legend of Symbols 01:44
- Single Line Diagram 04:29
- Panel Schedules 15:50
- Library Settings that Affect Reporting 23:05
- Details of Schedules and Floor Plans
- Fault Levels Log 37:56
- Bill of Materials 13:37
- Floor Plans 43:04
- Lighting Wattage Per Square Foot 51:35

The video runtime is 54 minutes, although you need to allow much more than that for frequent pausing to try things on your own and rewinding as required to review concepts.

Update: Do you desire to have the text annotation on a separate layer versus the devices so you can control color and pen width separately? DraftLogic Electrical can do this with a mouse click, see this forums item for details:

<http://www.draftlogic.com/forum/viewtopic.php?f=12&t=113>.

Update: You have new options on what appears in the service description column on the panel schedules, see this forums item for your options:

<http://www.draftlogic.com/forum/viewtopic.php?f=12&t=112>.

More Detail: DraftLogic Electrical will handle the effect of noncoincident loads throughout the distribution devices completely automatically, see this forums item for more detail: <http://www.draftlogic.com/forum/viewtopic.php?f=10&t=33>.

ftp://ftp.kanotech.com/DraftLogic_Electrical_Training/ReportingTraining_3of3_20110805_80pct.mp4

Key segment start times:

One Time Modifications 03:46

Permanent Modifications 07:09

The video runtime is 19 minutes, although you need to allow much more than that for frequent pausing to try things on your own and rewinding as required to review concepts.

More Detail: See this forums item about customizing schedules:

<http://www.draftlogic.com/forum/viewtopic.php?f=12&t=26>.

Here is a list of the tutorial data tied into the Reporting video and an explanation of what each file is used for:

- L. Training_PowerTreeSetUp_CEC_mm_20111004.dwg & Training_PowerTreeSetUp_NEC_inches_20111004.dwg – tutorial data with relationships between power tree members (i.e. distribution + branch circuit panels) set up using the Circuit Manager.
- M. Training_Reports_CEC_mm_20111004.dwg & Training_Reports_NEC_inches_20111004.dwg – tutorial dataset with full swath of reports run, ensure to use ‘All On’ layer tool from Frequent tool palette to see all floor plan and schedules intact.
- N. Training_Reports_CEC_mm_20111004_BOM.xls & Training_Reports_NEC_inches_20111004_BOM.xls – the Excel version of the Bill of Materials report resulting from the tutorial datasets full swath of reports.

- O. Training_Reports_CEC_mm_20111004_BOMLog.txt & Training_Reports_NEC_inches_20111004_BOMLog.txt –the text file list showing what makes up the Bill of Materials numbers.
- P. Training_Reports_CEC_mm_20111004_FaultLevelsLog20111005_165929.txt & Training_Reports_NEC_inches_20111004_FaultLevelsLog20111005_165929.txt – a text files showing the details of the fault levels calculations.

Future Videos

As time goes on, we will learn where users will benefit most from more information & future videos will focus in on these areas. We will also be posting training videos to cover the Drawing Compare tool and Suite Derating. Please don't let the lack of a video deter you from using these extremely beneficial tools—Suite Derating is explained in detail in the user manual and Drawing Compare is both an intuitive dialog & has a fair amount of content in the user manual.

Conclusion

Thank you for selecting DraftLogic Electrical to be your building electrical systems design tool. It is absolutely the most productive building electrical design platform available today. By putting sufficient time and energy into the training process, your future success in using DraftLogic Electrical is near assured.

Pathway to success: meet the prerequisites of AutoCAD and electrical design knowledge; put sufficient dedicated time into the training process to ensure you have the opportunity to learn how to use DraftLogic Electrical to the fullest; ensure that your time blocks for training are sufficient sized (4 hours+), uninterrupted, and happen in a two week span or less; ensure the training is paid time during regular work hours; promptly contact DraftLogic support for assistance if there are any functions that need further explaining or any issues arise during training; and finally, after training, **use DraftLogic Electrical on every project!**

Pathway to failure: expect to learn AutoCAD and/or electrical design from the DraftLogic Electrical video training; try and squeeze DraftLogic Electrical training into your undoubtedly busy days without freeing up dedicated time blocks for training, doing a few minutes of training 'here and there' or 'evenings and weekends'; take longer than two weeks to complete the training, or don't even finish it; don't ask for assistance when something is not clear—just assume you will figure it out on your own 'someday'; and finally, look for the 'perfect' projects to use DraftLogic Electrical on—more likely than not, you will forget some or much of your training by the time the 'perfect' project arises.

We are looking forward to working with you!

Regards,

The DraftLogic Team