

WireCAD V7 With CMS Tools Edition

Holbrook Enterprises, Inc. 2000-2014 - dba WireCAD

Introducing WireCAD v7 CMS Tools

by WireCAD

WireCAD V7 With CMS Tools Edition

Holbrook Enterprises, Inc. 2000-2014 - dba WireCAD

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*Holbrook Enterprises, Inc.
dba WireCAD*

Special thanks to:

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Thanks to Andrea for handling the details.

Thanks to the Sales and Support teams.

To Tim and Barb for their excellent support.

And a very special thanks to all of you WireCAD users, and you know who you are, that help to make the program better!

*Christian Holbrook
President*

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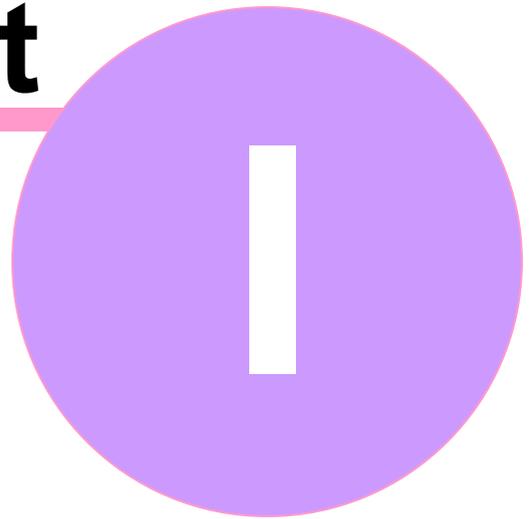
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Foreword

This manual is a work in progress be sure to visit the WireCAD wiki for dynamic content. www.wirecad.com/wiki

Part



1 WireCAD CMS Introduction & Concept

This section of the manual covers topics that will help you better understand the work flow, background and idea behind WireCAD with CMS Tools.



Topic Sub Sections

Introduction^[4]
WireCAD Concept
CMS Tools Concept^[6]

1.1 New In V7 With CMS Tools

WireCAD v7 is an update to our highly popular software WireCAD V6.

WireCAD v7 is a design and documentation tool that allows you to create Functional Block Diagrams, manage Cables, print reports and labels as well as installation reports and bills of materials.

WireCAD v7 introduces many new features including an all new Cable Management System, Backbone tools, Circuit tools, Find and Replace tools and much more.

Welcome to WireCAD v7 with CMS tools.

1.2 Conventions

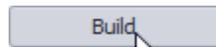
The following are conventions used throughout this manual:

A Link^[78] to another topic

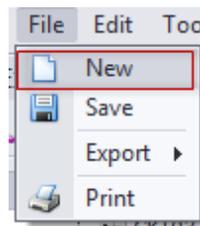
Topic Headings

Topic Subheadings

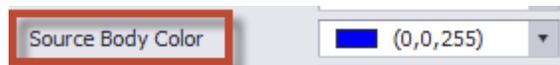
Text used to describe a button: [build]



Text used to describe a menu tree:
File>New



Text used to describe labels:
Source Body Color



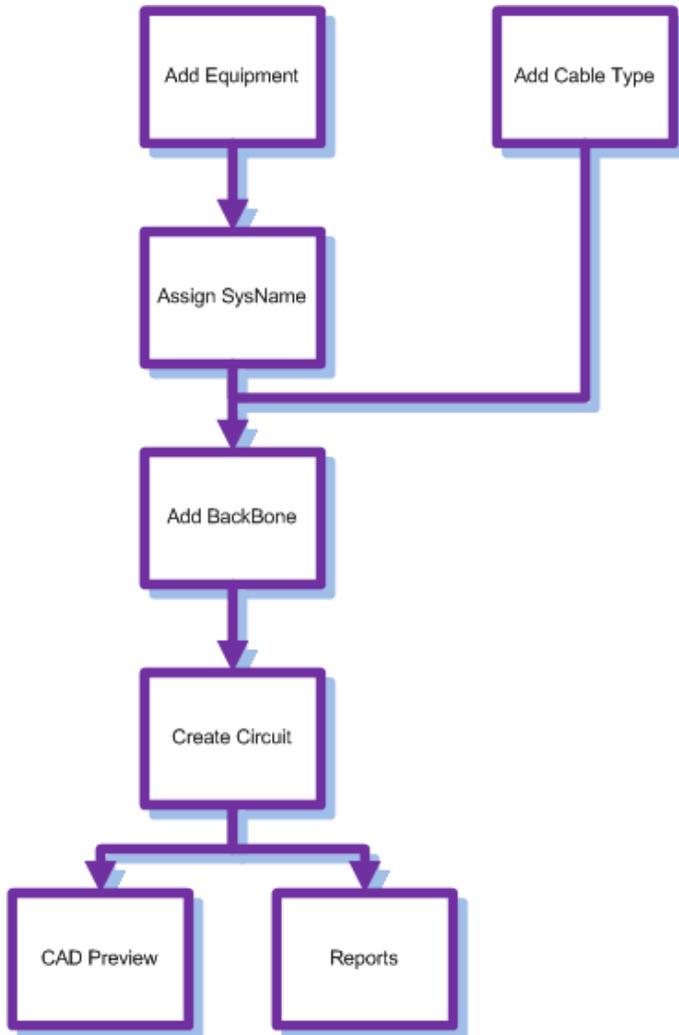
Text used to describe field names:
CktNo, CktSrc, CktDst

CktNo	CktSrc	CktDst
⊕ 0001	TB-2	[CFE~IT EQUIP
⊕ 0002	TB-2	[CFE~IT EQUIP
⊕ 0003	TB-2	[CFE~IT EQUIP
⊕ 0004	[CFE~IT EQUIPMENT ST]	[CFE~IT EQUIP

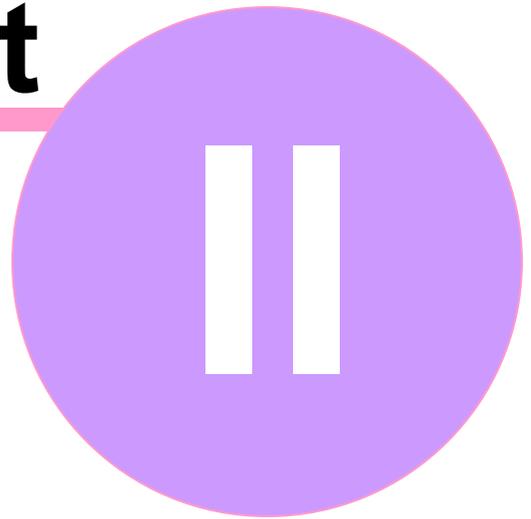
1.3 CMS Tools Concept

WireCAD v7 with CMS tools has introduced the ability to work in a different manner from previous versions of WireCAD.

WireCAD v7 CMS allows you to start by entering your SysNames and Cable Numbers into the Database first, create Backbones and Circuits and then generate a Functional Block Diagram based on the information set in the Database.



Part



2 CMS Basics

The following is a list of How To's for multiple functions in WireCAD v7 including creating Cable Types, New Equipment definitions, Projects and more.



Topic Sub Sections

Creating a New SQL Project^[59]
Creating a New Cable Type^[48]
How To Create a Backbones^[13]
Using The New Circuit Tool^[29]
How to Output a Circuit to CAD^[41]
How to Output Many Circuits to CAD^[43]
Using The Backbone Grid^[9]
WireCAD Glossary^[78]

2.1 Backbones

Backbones connect one panel to another via a series of cables or cores. Backbones are represented in the cables database by a collection of cables.

Each cable in the backbone has the same Cable Number Prefix. When you create a new Backbone you are creating a collection of cables based on the selected Cable Type. If you are documenting fibers think one fiber equals one core/conductor/cable. backbone cables are flagged with the boolean value `isBackbone = true`. Doing so distinguishes a cable as being part of a backbone structure.

Open the Backbones grid by double-clicking the icon in the Project Explorer [Project Databases] [Backbones]

Command Line Shortcut: `bbg`

Before You Start

Before creating a Backbone, you will need to make sure you have created your Equipment^[53] and Cable Types^[47] associated with this project.

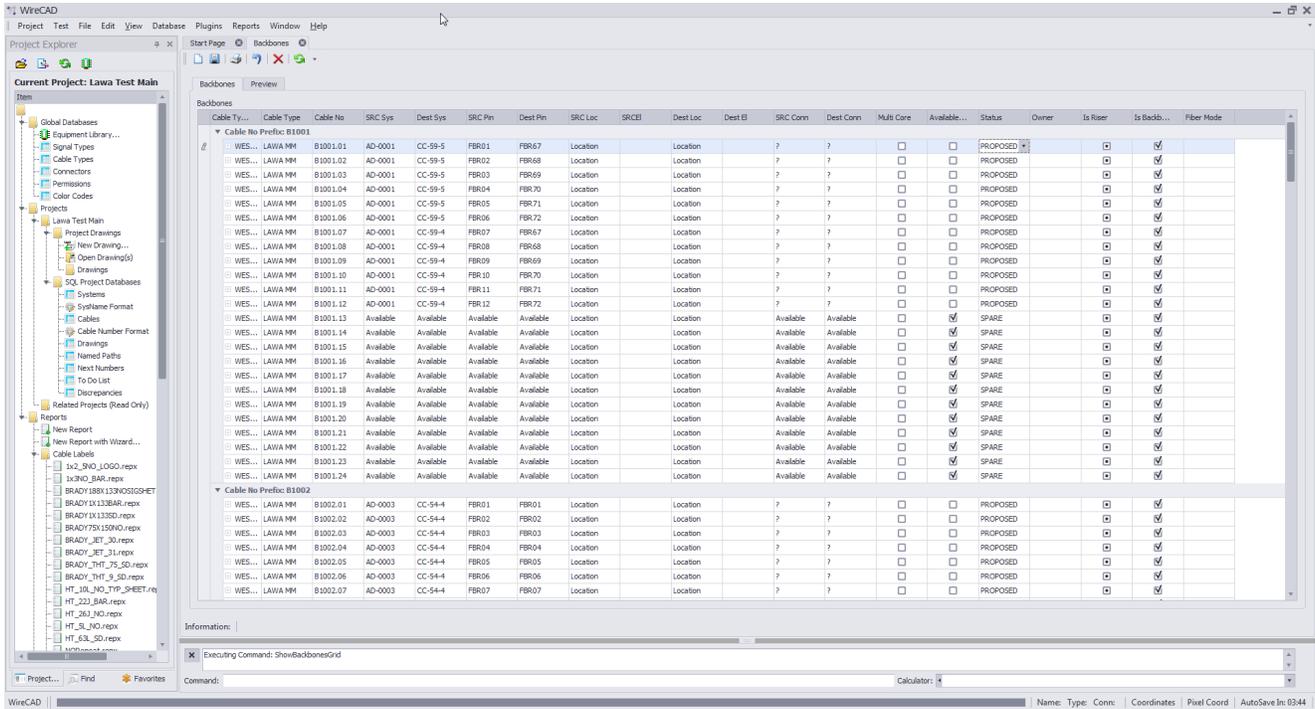
2.1.1 The Backbone Grid

The Backbone Grid will show you a list of all the backbone segments in your project and allow you to modify their status or delete the entire backbone cable group at once. The status will refer to whether the backbone is in use, proposed, dead ETC. New backbone status can be created in the project settings menu. There are 3 default status available; in use, proposed & dead.

The Backbone Grid is easier to use than the Cables Database if you are looking for basic information about a backbone such as number or origin and destination information or if you are simply wanting to change the status of the backbone.

To access The Backbone Grid, type `BBG` in the command line.

With The Backbones Grid open, a list of all created backbones and cores will show along numerous columns of information about each backbone core.



Menu Commands

Edit

Copy Selection Down

Create a selection vertically in the grid and click **Edit>Copy Selection Down** or **Ctrl+D** and the topmost cell's data will be copied to all selected cells below.

Delete Selected Backbone

This function will delete ALL cables associated with the selected Backbone. If you are just trying to delete a single cable you should do that from the Cables database.

Refresh

Query the database and reload the data into the grid.

Tools

Attach Document

Useful for storing field survey reports and other documents associated with this backbone. You can attach as many documents as you need. The documents are stored in the database. You can click on the link provided in the grid to launch the document into the system document reader for that file extension (MIME Type).

Rename Source Connecotor(s)

Renames the Source Connector (SrcConn) field and any jumpers or horizontal cables attached to this backbone.

Rename Destination Connector(s)

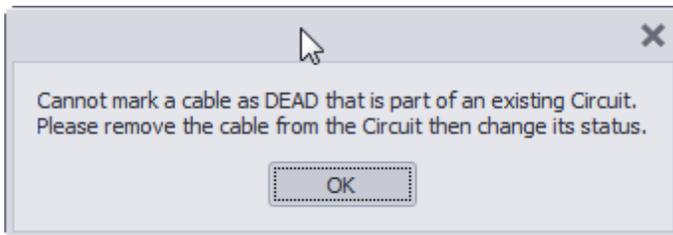
Renames the Destination Connector (DestConn) field and any jumpers or horizontal cables attached to this backbone.

Rename FiberMode

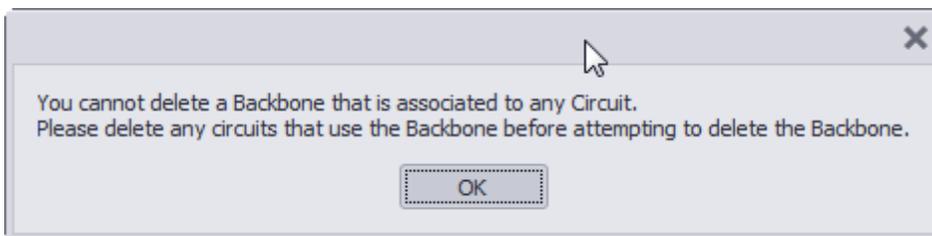
Renames the Fiber Mode (FiberMode) field and any jumpers or horizontal cables attached to this backbone.

While a number of fields are shown in **The Backbone grid**, only the **Status** field & **Owner** field are modifiable. All other fields are simply shown for reference.

Note: When marking a backbone as dead you must make sure that this cable is no longer used in an active circuit. If WireCAD detects that this backbone is still in use, you will be presented with a warning message stating "Cannot mark a cable as DEAD that is part of an existing Circuit. Please remove the Cable from the Circuit, then change its status. "



Note: You will also receive a warning message if you try to delete a cable that is part of an existing circuit. You must remove the cable/backbone from the circuit before deleting. If you wish to delete individual cores, you can do so from inside the cables database however this information will not persist back into the CAD drawings.



Note: When deleting a backbone in **The Backbone Grid**, the entire group of cables will be deleted even if you have only selected a single core. Make sure that you want to delete the entire backbone segment before selecting delete.

Note: Deleting backbones in **The Backbone grid**, does not adjust number sequence. If you wish to reuse deleted backbone numbers, you will need to manually access the **Next Numbers Grid** and change the next available number to the one you would like to use. Example, you have created backbones 1001,1002,1003 & 1004. The next number in the sequence would be 1005. If you then delete 1002,1003 & 1004, the Add Backbone Segment Tool will label the next backbone as 1005. To reuse 1002, 1003 & 1004, you need to manually select these as next in the sequence by doing so in the Next Numbers ⁶⁴Grid.

2.1.2 How To Create a New Backbone

Explanation

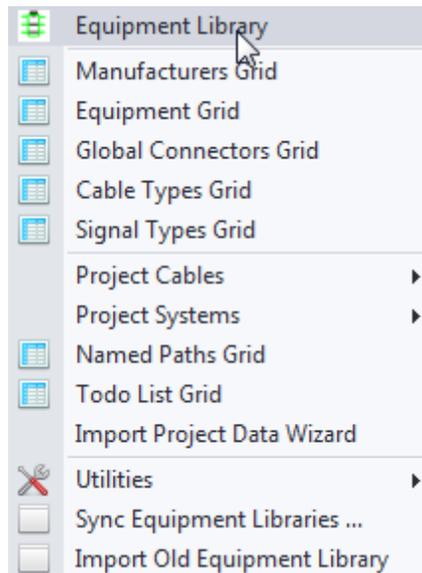
The following procedure outlines the creation of backbones in the CMS module. Backbones are multi-core cables in the cables database that interconnect two (or more) patch panels.

Note: While this tool is open in your window other WireCAD users will be locked out of the Cables table of the Project database.



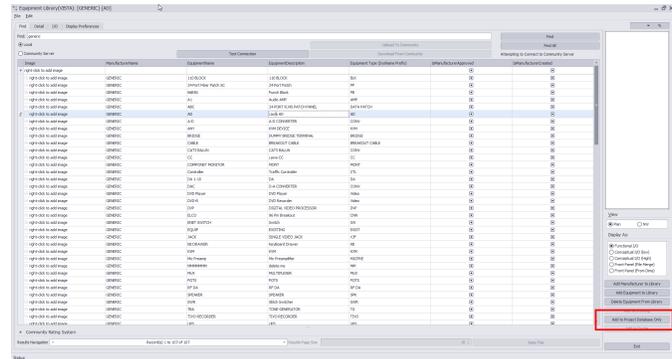
1. Make sure you have used the appropriate steps to create your Equipment^[54], Customize your I/O and create your Cable Types^[47].

2. Access your Equipment Library.

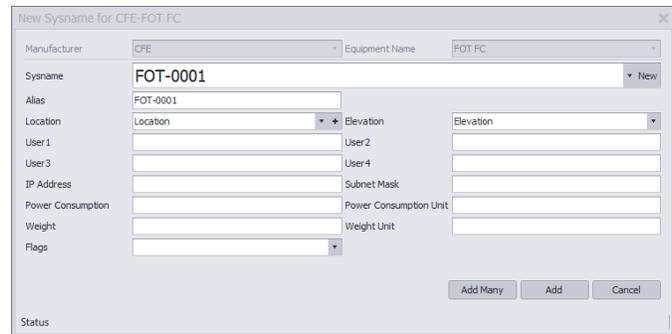


3. Find the equipment you would like to use and click [Add to Project Database Only].

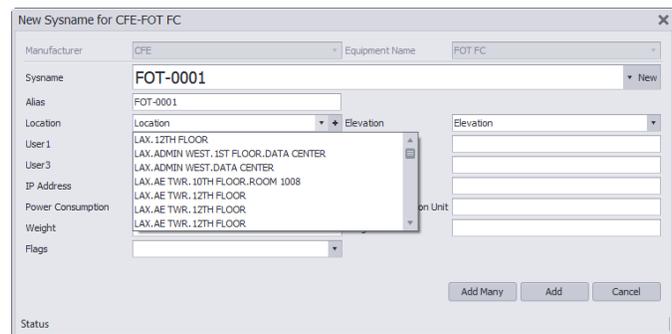
Note: You can add as many pieces of equipment you as you would like at this time however you will need to have at least the 2 definitions that the Backbone are linked to.



4. A new SysName window will pop up asking you to verify information about this equipment. The next available SysName will automatically populate.

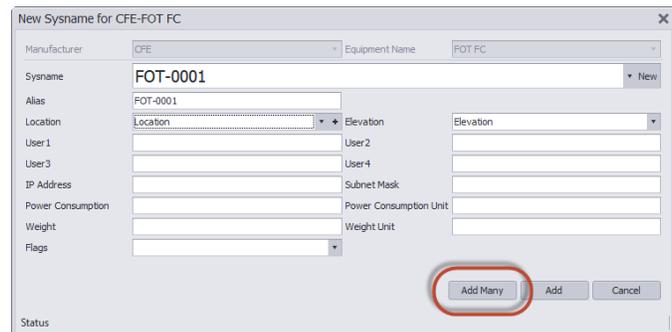


5. Enter in your location for this equipment. Example: Admin Basement Telephone Room.



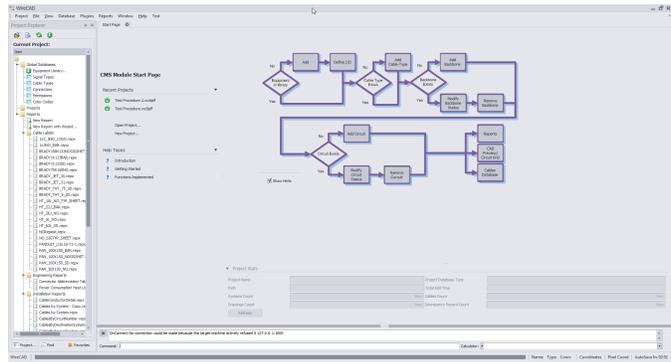
6. If there are multiple pieces of the same equipment in this location, you can select the [Add Many] to create multiple pieces of equipment at the same time.

Note: WireCAD will automatically SysName each piece of equipment using the next available number in the sequence.

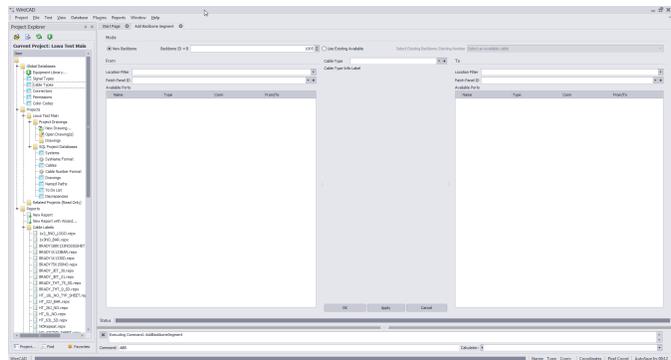


7. Once you have added your equipment into the Project Database, close your Equipment Library.

8. Enter ABS into the command line and press enter or click on the [Add Backbone] button on the homepage. Alternately open the Backbones Grid then click File>New



9. The **Add Backbone Segment** window should now be open.

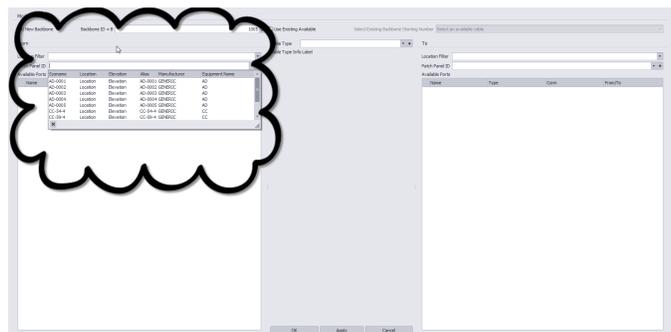


10. First select if you would like to create a **New Backbone** or **Use Existing Available**.

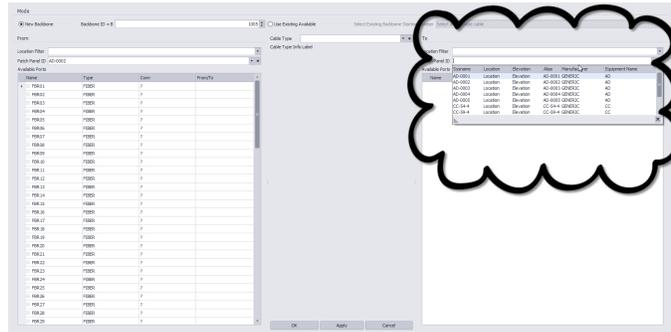


11. On the **From** side, select your equipment from the **Patch Panel ID** field.

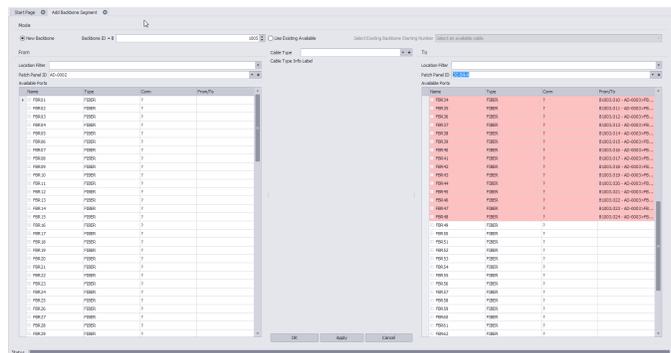
Note: You can filter your results using the Location Filter field. This allows you to select only equipment listed in a location that was specified during SysName Assignment.



12. On the **To** side, select your equipment from the **Patch Panel ID** field. Again, you can filter your results using the **Location Filter** Field.

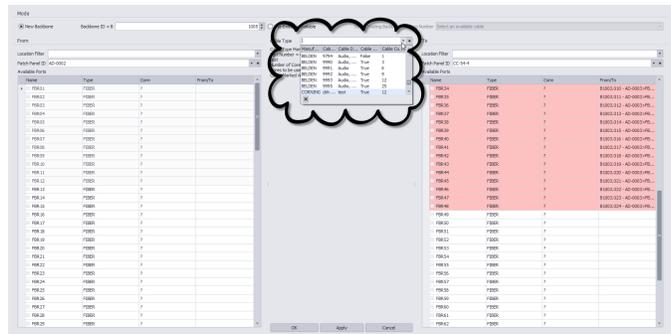


13. On both sides, ports that are available will be shown in white while ports that are currently being used will show as pink.



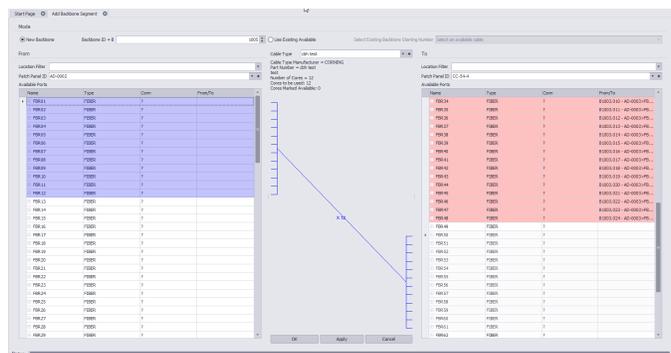
14. From the **Cable Type** field, select the Cable Type you would like to use as your backbone.

Note: If you have not already created a Cable Type for your backbone, you can do so by clicking the [+] sign and following the instructions here⁴⁸.

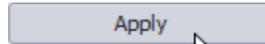


15. Select the ports you would like to use on the **From** side, then select a starting port on the **To** side.

Note: You will see that WireCAD will automatically draw a backbone based on your port selection and Cable Strand count. NOTE: See * Below!



16. Click [Apply]. WireCAD will create this backbone and then revert to an empty page ready for another backbone assignment.



2.1.3 Backbone Visualization Settings

Before You Start:

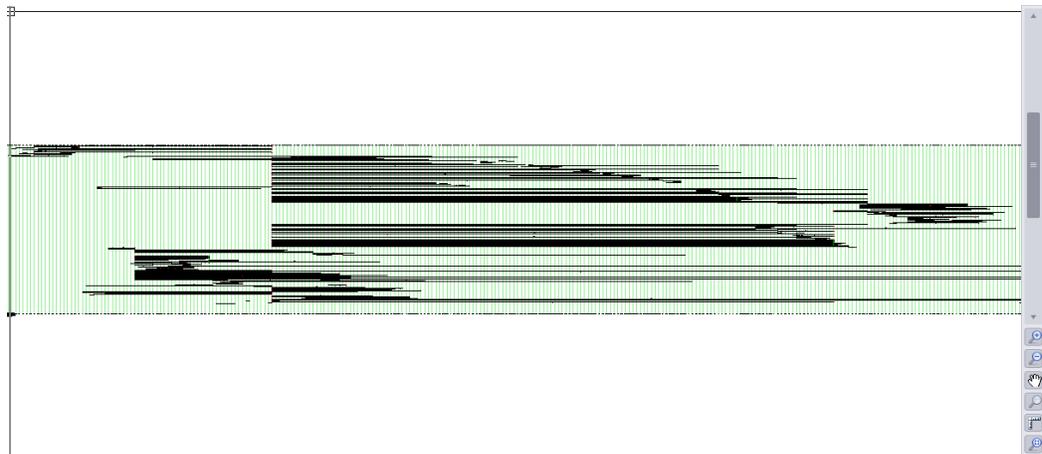
In order to preview Backbones you will first need to Add Backbones¹³

These settings determine the display of the Backbones Visualize²⁴ tool.

Layered Digraph Mode Data Source

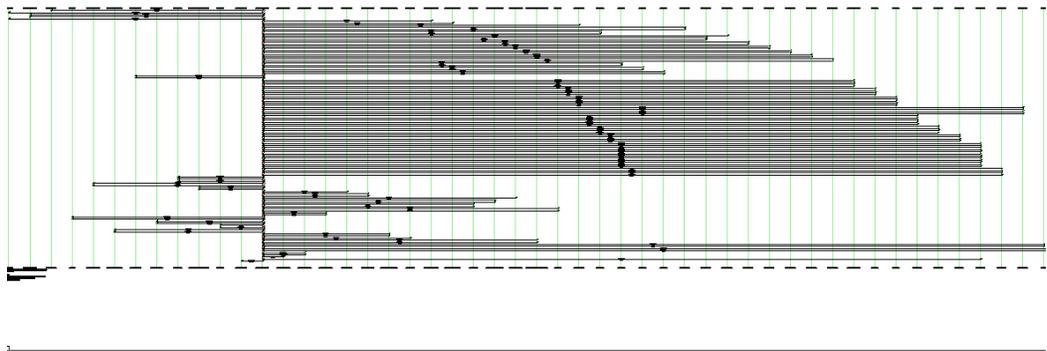
Show All

Shows all backbones in the database in the Visualize tool



Current Record

Allows selection of only those backbones that touch the selected record.



Search Depth

How many branches deep are we going to search.

Search Width How many backbones per branch.

Appearance

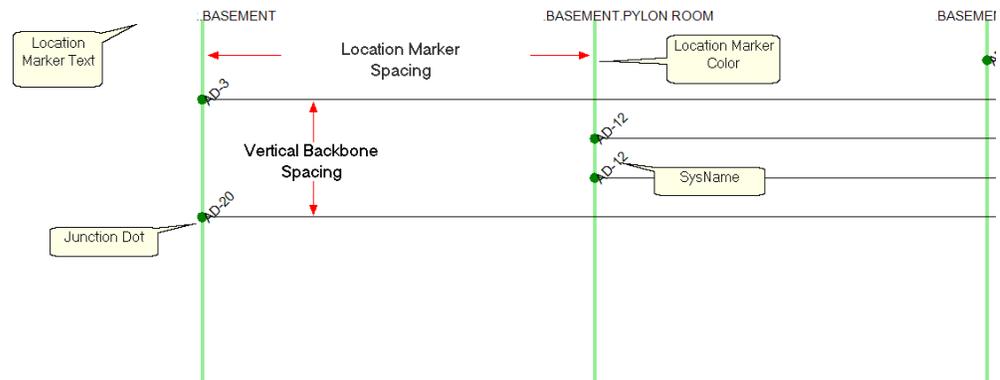
Location Marker
Spacing

Location Marker
Text Height

Location Marker
Color

Junction Dot
Radius

Vertical
Backbone
Spacing(DU)



Center Label Format String used to create the center label. Can make use of the following variables:

- {0} = Backbone Number
- {1} = Total Count
- {2} = Total Available Count
- {3} = Total Dead Count
- {4} = Single Mode Fiber Count
- {5} = Available Single Mode Fiber Count
- {6} = Dead Single Mode Fiber Count
- {7} = Multimode Fiber Count
- {8} = Available Multimode Fiber Count
- {9} = Dead Multimode Fiber Count

Example:

assume that our backbone number is 1001 with 12 single mode fibers of which 1 is dead and four are in use.

String:

B{0}-SM COUNT:{4} Avail:{5} Dead:{6}

Output:

B1001-SM COUNT:12 Avail:8 Dead:1

String:

B{0}

Output:

B1001

Center Label Offset	Offset from center in DU
Show SysNames	Shows the SysName labels
Ignore Same Locations	Hides backbones that originate and terminate in the same location
SysName Rotation Angle	Sets the rotation angle of the SysName label if shown
SysName Text Height (100th DU)	Sets the height of the SysName text if shown
SysName Text Offset	Offset from the endpoint of the backbone

Riser Diagram Mode

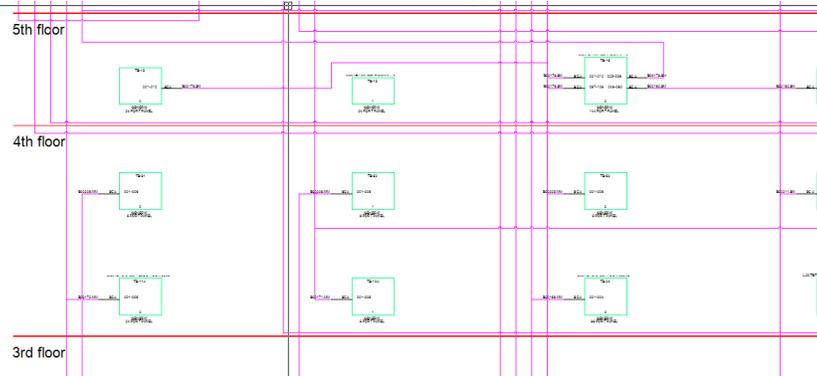
Campus and
Building

The Campus and Building for which to build the riser diagram



Layout
Max Columns,
Column Spacing,
Minimum Row
Height

Determine the layout of the panels in the diagram

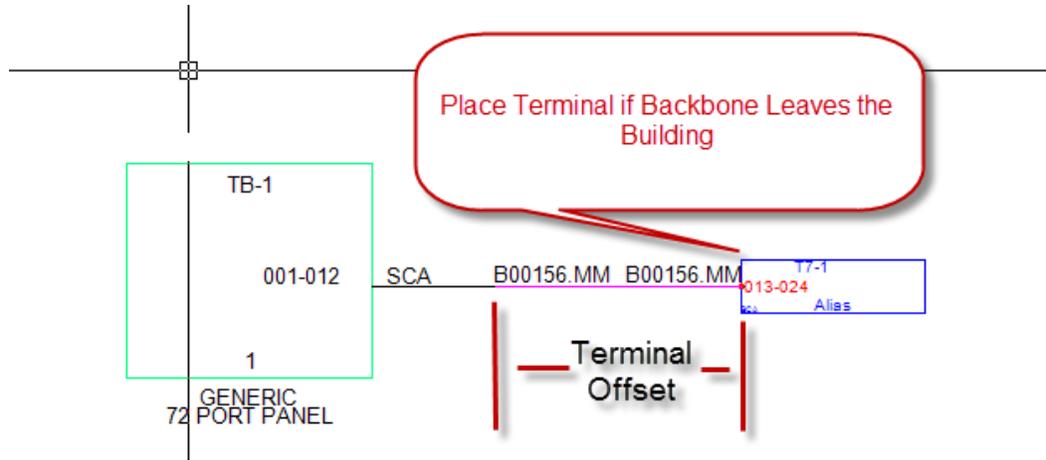


Body Color, Body
Width,
Descriptor
Locations

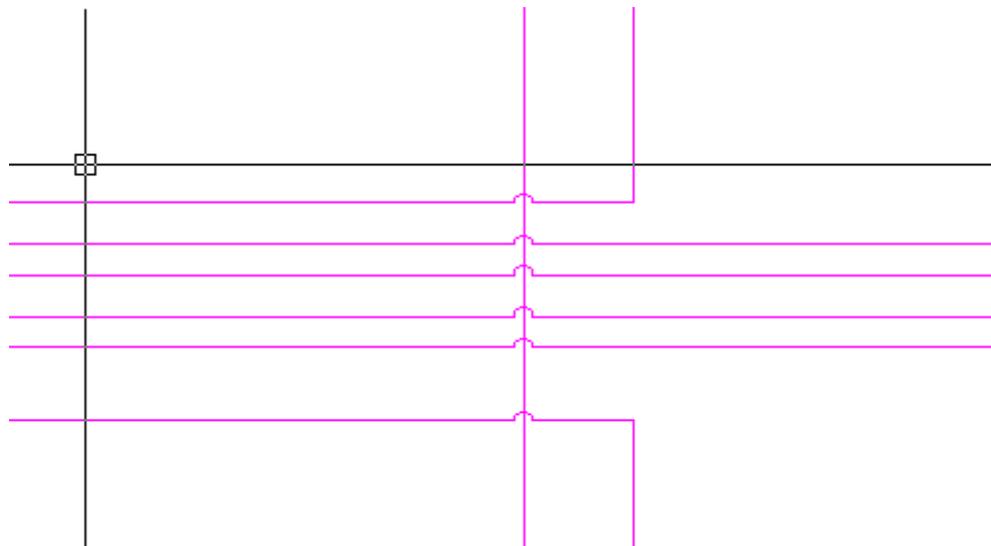
Determines the appearance of the body of the panels in the diagram

Show Terminals if Backbone Leaves the Building, Terminal Offset

If the other end of the Backbone is not in the selected building a terminal will be placed and a backbone drawn to it. The terminal's position from the port on the panel is determined by the **Terminal Offset** property.



Apply Jumps



Avoid Other Cables

Instructs the cable autorouter to attempt to avoid other cables.

Show Unresolved Backbones

If the Backbone cannot be placed in the drawing a list is generated. Enabling this setting shows the list as the function completes.

Title and Comment Block

Show Title

Sets the visibility of the title/comment block

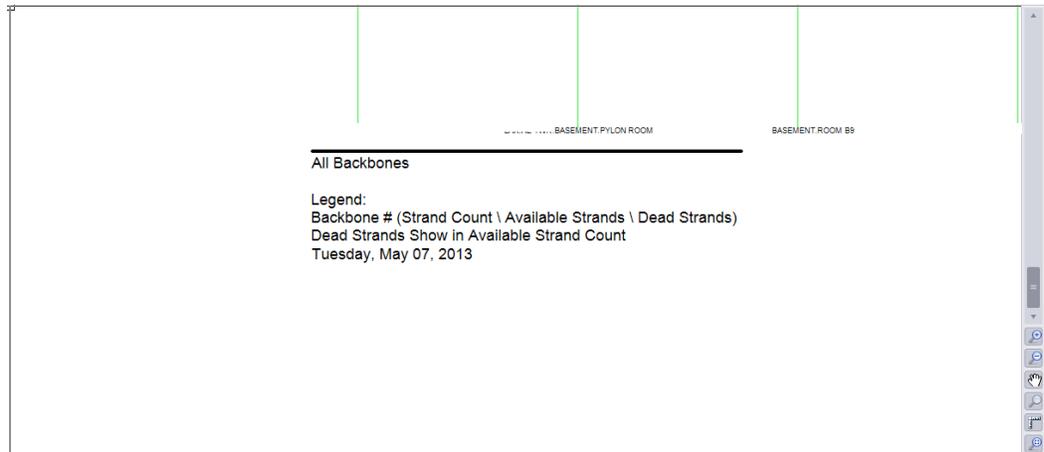
Title Position

Show Time
Stamp

Title Text Height
(100th DU)

Title Offset

Title



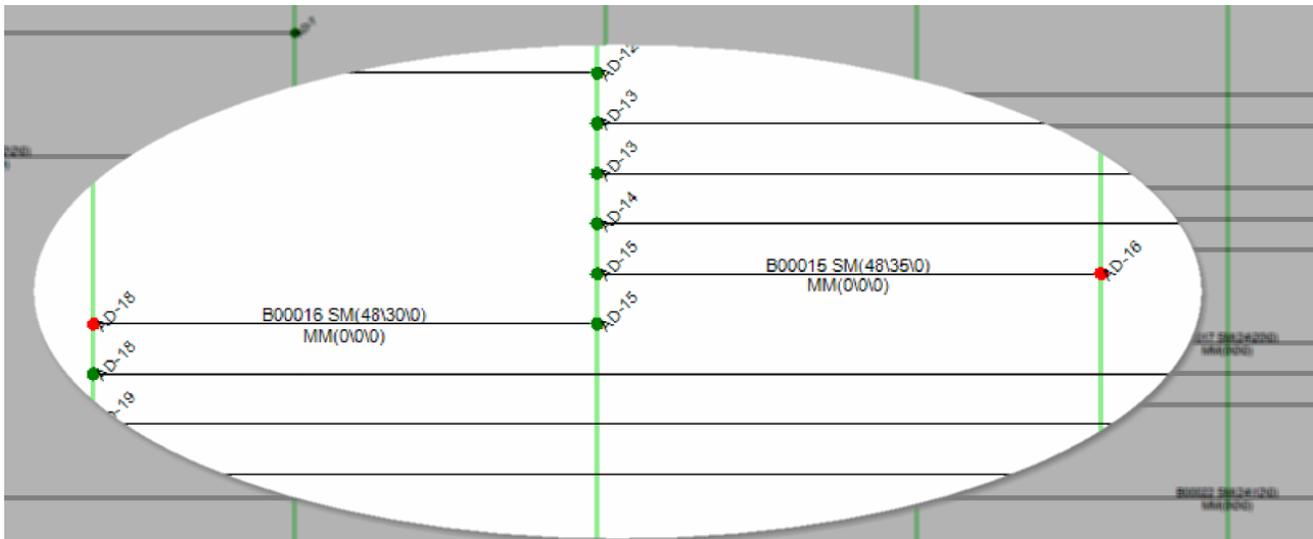
Misc.

- Backbone Color by Signal Type** Pulls the backbone color from the global Signal Types database.
- Show Directional Coloring** Shows green dots for the source end of the backbone and red dots for the destination end if shown.
- Backbone Color** Sets all backbones to the color defined.
- [Reset Default]** Button to reset the settings to the defaults.

2.1.4 Backbone Visualization Layered Digraph Output

The Backbone Visualization tool creates a layered digraph (ladder diagram) showing the backbones horizontally and the locations in which they originate and terminate vertically.

The backbones displayed, and many of the display parameters can be set using the **[Visualization Settings]**  tab.



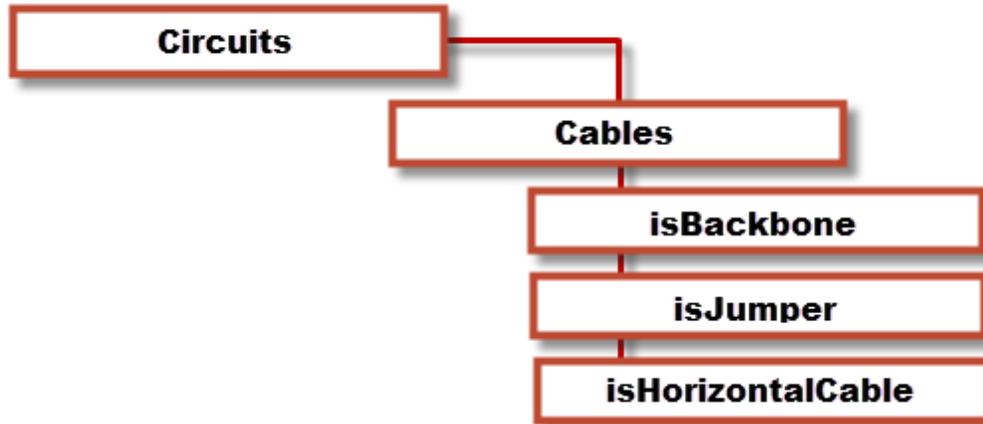
2.1.5 Backbone Preview Export

Exporting the CAD preview of the Backbones Visualization tool is as easy as clicking the **[Export]** button.

Note: The current preview will be exported based on the Export Settings found in the Project>Settings **[Project][Export Settings]**  tool.

2.2 Circuits

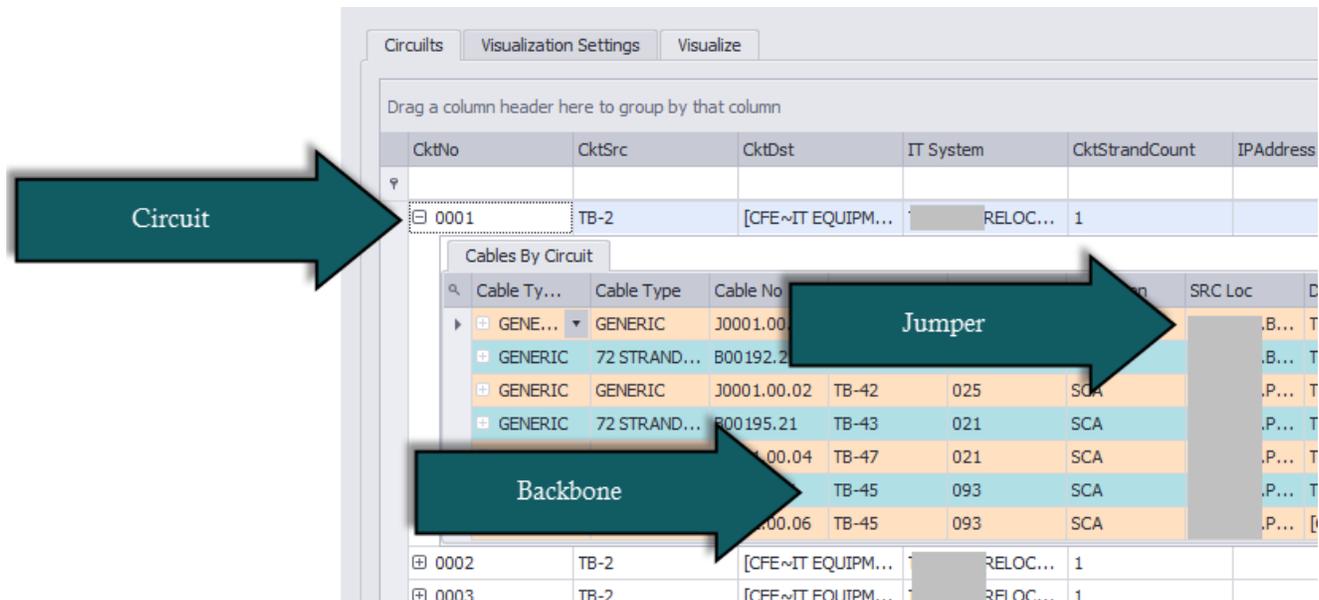
A circuit in WireCAD is defined as a collection of cables. Each circuit may have a Name, Description, and other meta data. A circuit also has a strand count to indicate the number of connections made from the originating device on through to the terminating device. Circuits have a one-to-many relationship with the cables in the Cables database. Each circuit may have many cables but a cable can belong to only one circuit.



2.2.1 Circuits Grid

The **Circuits Grid** presents the overall circuit data in list form with the child cable data attached for view.

Open the Circuits grid by double-clicking the icon in the Project Explorer [Project Databases][Circuits] Command Line Shortcut: *cmscg*



Tools

Attach Document

Useful for storing field survey reports and other documents associated with this circuit. You can attach as many documents as you need. The documents are stored in the database. You can click on the link provided in the grid to launch the document into the system document reader for that file extension (MIME Type).

Rename Circuit

Renames a circuit and all of its cables

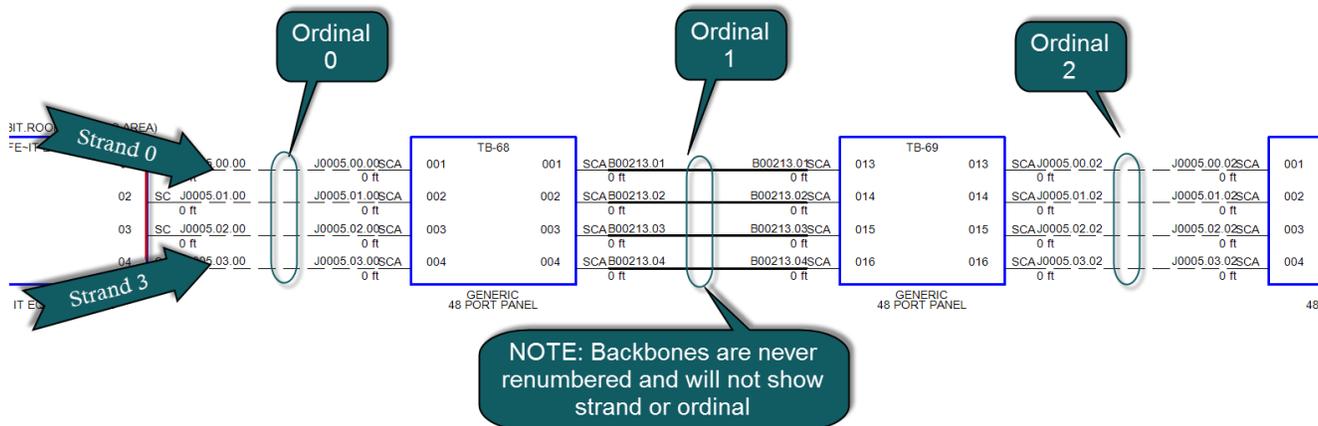
Edit Circuit

Opens the selected circuit in the editor.

Combine Circuit

See the topic Combining Circuits^[45].

Strand Count and Ordinal Explanation



WireCAD uses the strand and ordinal to know the exact position of a cable in a circuit. Strand 0 will always be the topmost cable in the circuit with Strand n being the bottommost cable in a circuit. Ordinal 0 will be the leftmost set of jumpers in the circuit with Ordinal n being the rightmost set of jumpers in the circuit.

2.2.2 New Circuit Tool

The New Circuit tool is used to connect *Field End & Head End* Equipment together by adding jumpers between existing Backbones. Each circuit is comprised of descriptive data, such as **Name**, **Customer**, **IT System** or **Description**, **source** and **destination equipment** (SysNames); as well as a collection of cables in the Cable database. You simply select the ports that you wish to jumper from/to and add the jumpers/back bone segments to the **Proposed Cables list**. A *Path Finder* tool helps you search out possible routes. A [Preview] window presents the functional block view of the **Proposed Cables**. Once you are happy with the circuit, simply click [Build] and all Proposed cables will be added and associated to the named circuit.

To open the New Circuit tool open the Circuits grid and click *File>New*
Command line shortcut: *nc*

Note: While this tool is open in your window other WireCAD users will be locked out of the Cables table of the Project database.

Circuit Number/Name* 1002 IT System* Customer

Strand Count* 2 In Service Date 5/8/2013

Origin* (named equipment) AD-15 Final Destination* (named equipment) AD-16

Origin* CFE Final Destination* CFE

Build Circuit Path Finder Preview

Jumper From Equipment AD-15 Jumper to Equipment AD-1

From Ports Show All Outputs

Coming From	Conn	Name
Originates here TO B00016.3...	SC	086
Originates here TO B00016.3...	SC	087
Originates here TO B00016.4...	SC	088
Originates here TO B00016.4...	SC	089
Originates here TO B00016.4...	SC	090
Originates here TO B00016.4...	SC	091
Originates here TO B00016.4...	SC	092
Originates here TO B00016.4...	SC	093

To Ports

Name	Conn	Coming From	Going To
001	SCA		B00001.01 - CC-R59-5...
002	SCA	J1000.00.00 - [CFE~A...	B00001.02 - CC-R59-5...
003	SCA	J1000.01.00 - [CFE~A...	B00001.03 - CC-R59-5...
004	SCA		B00001.04 - CC-R59-5...
005	SCA		B00001.05 - CC-R59-5...
006	SCA		B00001.06 - CC-R59-5...
007	SCA		B00002.01 - CC-R59-4...
008	SCA		B00002.02 - CC-R59-4...

DEAD

In Use

Selected

Add Jumper

Proposed Cables in Circuit

Cable No	Src Equip	Src Port	Dst Equip	Dst Port	SRC Loc	Dest Loc	SRC Conn	Dest Conn	Ckt Strand Num...	Ckt Ordinal	Is SD Reversed

Record 0 of 0

Start Over Clear All Build Cancel

2.2.2.1 Create New Circuit

Before you Start

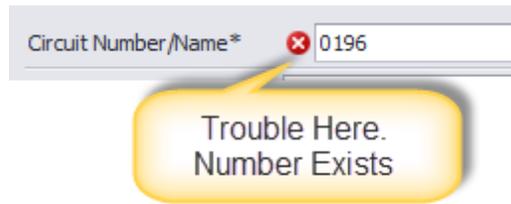
The use of this tool assumes the following:

- That you have added Backbones to the project.
- That you have added the necessary Cable Types to the global Cable Types Database.
- That you have an idea of what you want to connect together and that you know the first bit of infrastructure to which you will attach.
- That you have created your Customer Furnished Equipment(CFE) in the Equipment Library for the originating and final destination equipment devices and/or that SysNames have been created for each individual piece of equipment to which you will attach.

How to create a New Circuit

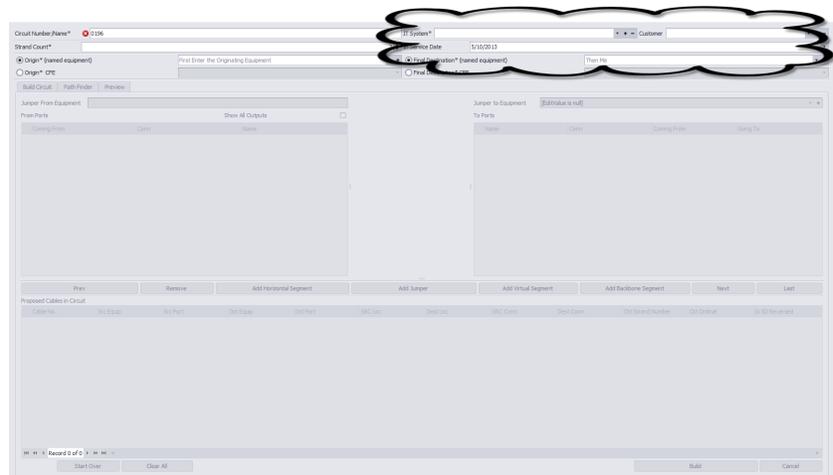
1. Verify that you have created all your Equipment and Cable Types needed for this circuit.
2. From the Circuits Grid click [File>New] to launch the New Circuit tool.

3. Verify that your Circuit **Number/Name** is correct and that it is not duplicating an existing entry.

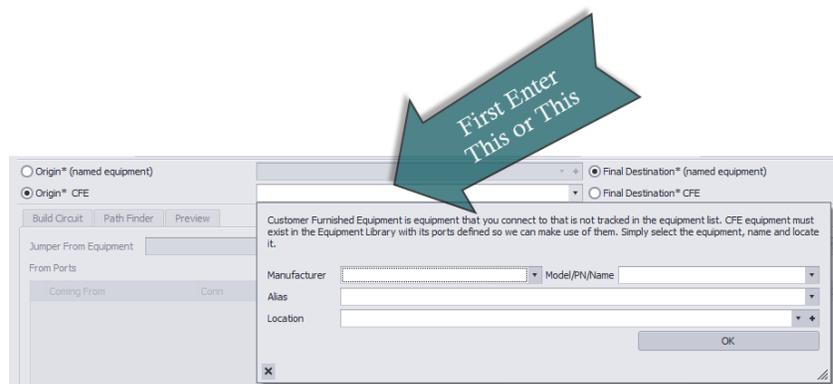


4. Enter your **IT System** and **Customer** info.

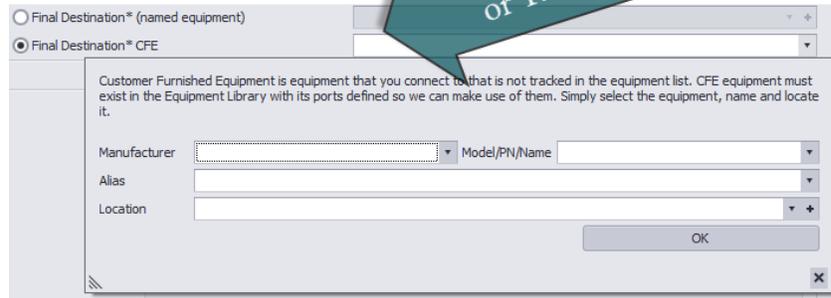
Note: IT System is required. You will not be able to [Build] without an entry.



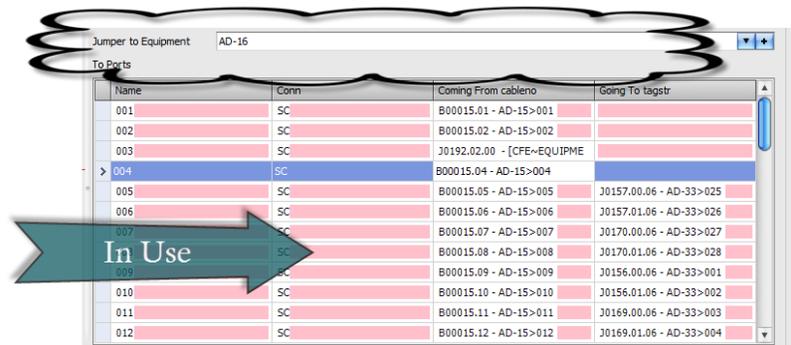
5. Select your **Origin**(named equipment) from the drop down menu on the left. Alternately, select the **Origin CFE** (Customer Furnished Equipment) and fill in the detail data in the dropdown.



6. Select your **Final Destination System** (named equipment) from the drop down menu on the right. Alternately, select the **Final Destination CFE** (Customer Furnished Equipment) and fill in the detail data in the dropdown.

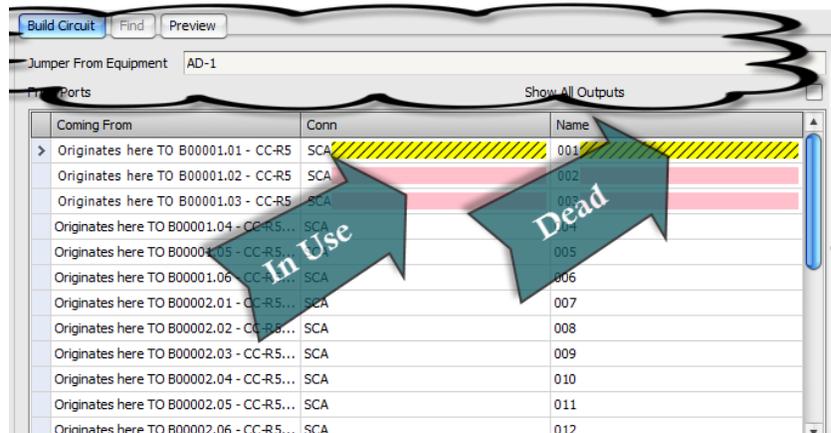


7. Select your **Jumper To Equipment**. This will be the first Patch Panel to which your **Origin** system will connect.



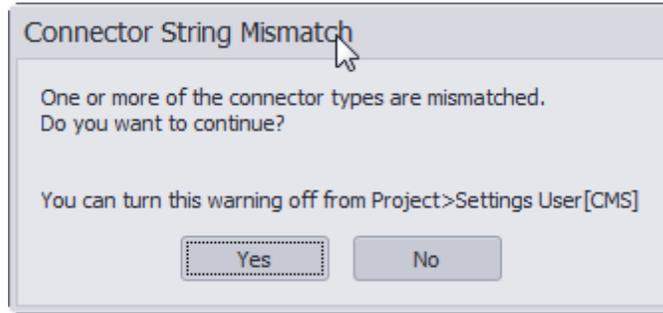
8. Select the ports from your **Origin** equipment and the **Ports** on your **Jumper To** equipment. You will see that WireCAD creates a preview jumper between the 2 for you to verify correct connections.

Note: You can only create a jumper set that matches the **Cable Strand Count** set in step 3.

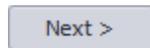


9. Click [Add Jumper].

Note: If you have connector types that WireCAD believes do not match, you will be presented with a window stating "Connector String Mismatch". If you want to turn this message off, you can do so in the **Project>Settings>User** CMS.

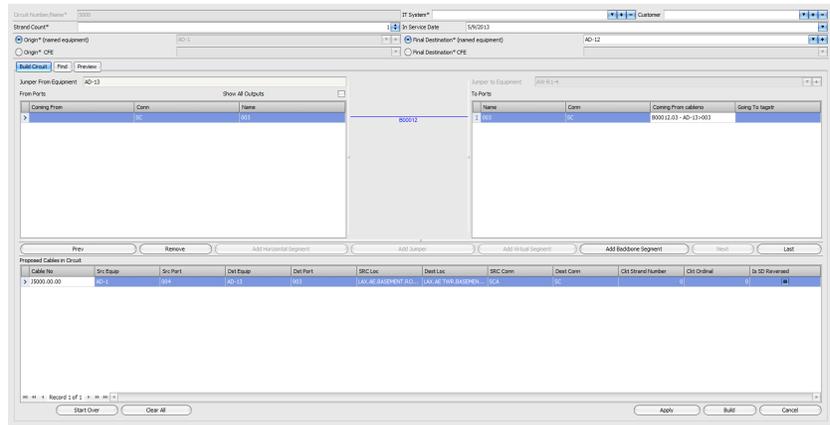


10. Click the [Next>] button.

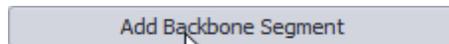


11. Verify that a Backbone exists between the correct Patch Panels.

Note: WireCAD will automatically populate an available route between Patch Panels using existing Backbone structures.



12. Click [Add Backbone Segment].



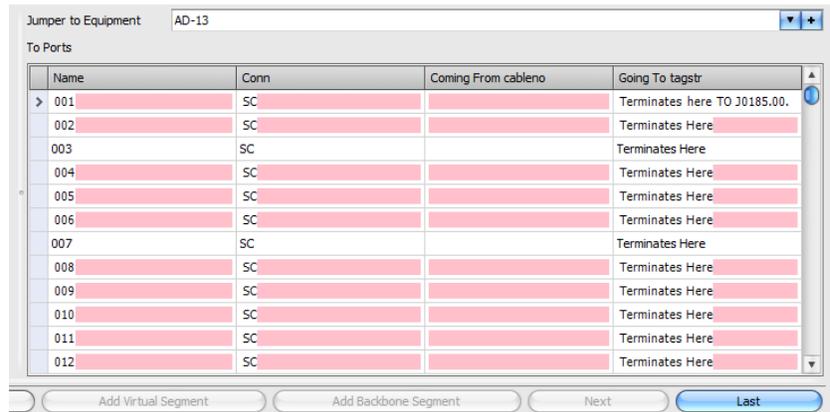
13. Verify the correct cables have been added to the **Proposed Cables In Circuit** list. Then click [Next].

Cable No	Src Equip	Src Port	Dst Equip	Dst Port
> 15000.00.00	AD-16	003	AD-16	004

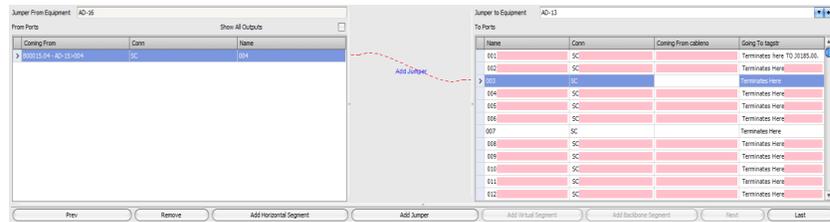
14. From this point, you can create additional **Jumper To** equipment, and place jumpers and backbone segments using steps 5-11.



15. When you are ready to complete this circuit, select the [Last] button. The **Final Destination** equipment will populate the **Jumper To** the list for selection of the final set of jumpers.

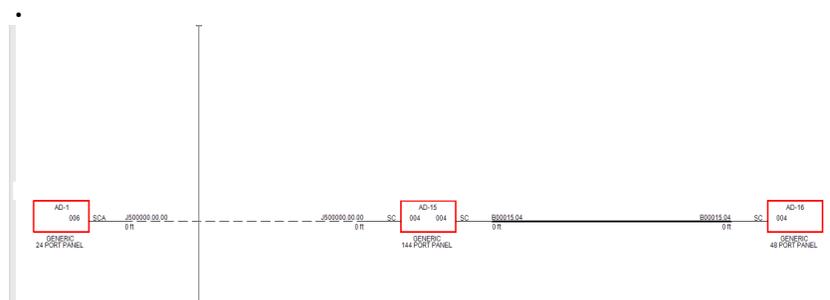


16. Select your last set of ports on both sides and click [Add Jumper].



17. If you would like to see a Functional Block Diagram preview of this circuit, click the [Preview] tab.

Note: Preview will be generated with **Project Settings**.



18. Click the [Build] button to finalize this circuit.



Note: If you have not filled in the required fields or if the **circuit Number/Name** is not unique the [Build] process will not continue. Look for the  icon to indicate fields that require attention

2.2.2.2 Path Finder Tab

Explanation:

The Path Finder tool can be used to find available ports and backbone segments from a source to a destination. The Path Finder tool will search the backbone structure for backbones that can be used to get from the source panel to the destination panel, then once a route is established the route candidate is checked for available port count. If all criteria are met the route is returned. If no routes can be established you will be notified.

Found 2 candidate routes of which 0 failed due to overpopulation. The shortest route has 6 backbones while the longest has 6

Cable No Prefix	Cable No	SRC Sys	Dest Sys	SRC Pin	Dest Pin	SRC Loc	Dest Loc	Ckt Strand Number	Ckt Ordinal	Route Number	Made It
B00028	800028.07	AD-33	AD-36	031	007	IZTH FLO...	WTH FLO...	0	1	0	<input type="checkbox"/>
B00028	800028.08	AD-33	AD-36	032	008			1	1	0	<input type="checkbox"/>
J1002	J1002.00.02	AD-33	AD-8-P1	031	001			0	2	0	<input type="checkbox"/>
J1002	J1002.01.02	AD-33	AD-8-P1	032	002			1	2	0	<input type="checkbox"/>
B00008	800008.01	AD-8-P1	AD-9	001	001			0	3	0	<input type="checkbox"/>
B00008	800008.02	AD-8-P1	AD-9	002	002			1	3	0	<input type="checkbox"/>
J1002	J1002.00.04	AD-9	AD-7	001	001			0	4	0	<input type="checkbox"/>
J1002	J1002.01.04	AD-9	AD-7	002	002			1	4	0	<input type="checkbox"/>
B00007	800007.01	AD-7	AD-8	001	001			0	5	0	<input type="checkbox"/>
B00007	800007.02	AD-7	AD-8	002	002			1	5	0	<input type="checkbox"/>
J1002	J1002.00.06	AD-8	AD-3	001	001			0	6	0	<input type="checkbox"/>
J1002	J1002.01.06	AD-8	AD-3	002	002			1	6	0	<input type="checkbox"/>
B00003	800003.01	AD-3	CC-R54-4	001	001			0	7	0	<input type="checkbox"/>
B00003	800003.02	AD-3	CC-R54-4	002	002			1	7	0	<input type="checkbox"/>
J1002	J1002.00.08	CC-R54-4	AD-12	001	003			0	8	0	<input type="checkbox"/>
J1002	J1002.01.08	CC-R54-4	AD-12	002	007			1	8	0	<input type="checkbox"/>
B00009	800009.03	AD-12	CC-R74-5	003	003			0	9	0	<input type="checkbox"/>
B00009	800009.07	AD-12	CC-R74-5	007	007			1	9	0	<input type="checkbox"/>
J1002	J1002.00.10	CC-R74-5	AD-12	003	099			0	10	0	<input type="checkbox"/>
J1002	J1002.01.10	CC-R74-5	AD-12	007	100			1	10	0	<input type="checkbox"/>
B00011	800011.03	AD-12	AD-25	099	003			0	11	0	<input checked="" type="checkbox"/>
B00011	800011.04	AD-12	AD-25	100	004			1	11	0	<input checked="" type="checkbox"/>
J1002	J1002.00.01	AD-36	AD-8-P1	007	001			0	1	1	<input type="checkbox"/>
J1002	J1002.01.01	AD-36	AD-8-P1	008	002			1	1	1	<input type="checkbox"/>
B00008	800008.01	AD-8-P1	AD-9	001	001			0	2	1	<input type="checkbox"/>
B00008	800008.02	AD-8-P1	AD-9	002	002			1	2	1	<input type="checkbox"/>
J1002	J1002.00.03	AD-9	AD-7	001	001			0	3	1	<input type="checkbox"/>
J1002	J1002.01.03	AD-9	AD-7	002	002			1	3	1	<input type="checkbox"/>
B00007	800007.01	AD-7	AD-8	001	001			0	4	1	<input type="checkbox"/>

2 possible routes returned each with 6 segments. We will use Route 0.

Proposed Cables in Circuit

Cable No	Src Equip	Src Port	Det Equip	Det Port	SRC Loc	Dest Loc	SRC Conn	Dest Conn	Ckt Strand Number	Ckt Ordinal	Is SD Reversed
J1002.00.06	AD-8	001	AD-3	001			SCA	FC	0	6	<input type="checkbox"/>
J1002.01.06	AD-8	002	AD-3	002			SCA	FC	1	6	<input type="checkbox"/>
B00003.01	AD-3	001	CC-R54-4	001			FC	SCA	0	7	<input type="checkbox"/>
B00003.02	AD-3	002	CC-R54-4	002			FC	SCA	1	7	<input type="checkbox"/>
J1002.00.08	CC-R54-4	001	AD-12	003			SCA	SC	0	8	<input type="checkbox"/>
J1002.01.08	CC-R54-4	002	AD-12	007			SCA	SC	1	8	<input type="checkbox"/>
B00009.03	AD-12	003	CC-R74-5	003			SC	SC	0	9	<input type="checkbox"/>
B00009.07	AD-12	007	CC-R74-5	007			SC	SC	1	9	<input type="checkbox"/>
J1002.00.10	CC-R74-5	003	AD-12	099			SC	SC	0	10	<input type="checkbox"/>
J1002.01.10	CC-R74-5	007	AD-12	100			SC	SC	1	10	<input type="checkbox"/>
B00011.03	AD-12	099	AD-25	003			SC	SC	0	11	<input type="checkbox"/>
B00011.04	AD-12	100	AD-25	004			SC	SC	1	11	<input type="checkbox"/>

After adding Route 0

Path Finder

From	Pre populated by your selection with the last jumper added in the Build tab.
Last Existing	Select the last existing piece of infrastructure that we will search for.
[Find]	Start the search.
[Cancel]	Cancel the search.
Use Route Number	Once routes are returned for selection this dropdown will be populated with the available routes.
[Add Selected Route to Circuit]	Once you have selected a route this button will enable for you to add the route to the Proposed Cables to Add to Circuit list on the[Build] tab.
Search Depth	How deep to search more will take longer but find more routes
Search Width	Maximum candidate routes to search
Show All	Show all routes found and populated with jumpers
Show Backbones Only (for research)	Show only the backbones without jumpers. Useful for research.
Show Only First Path Found	Stop searching when the first route is resolved.
Show Only Least Link Path	Search all then prune the list to the route with the shortest number of segments.

Found Paths Grid

Cable No Prefix, Cable No, SRC Sys, Dest Sys, Src Pin, Dest Pin, Src Loc, Dest Loc	Fields pulled from the Cables database or populated by jumpers that would need to be created to complete this circuit along this route.
Ckt Strand Number	For more information about circuit strand and ordinal see here ^[26] .
Ckt Ordinal	

Route Number

The router may find multiple paths or none. If paths are found they will be returned with a route number. You may then select the which, if any, route to add to the circuit.

Made It

Indicates that the route made it to the destination. All routes shown will show **Made It** on the last segment.

2.2.3 Circuits Preview Settings

The screenshot shows the 'Circuits Preview Settings' dialog box with the following settings:

- Appearance:**
 - Source Shape: A standard functional block appearance
 - Middle Equipment Shape: A standard functional block appearance
 - Destination Shape: A standard functional block appearance
 - Source Width (100th DU): 500
 - Middle Width: 200
 - Destination Width (100th DU): 500
 - Source Body Color: 0
 - Middle Color: (0,0,255)
 - Destination Color: 0
 - Descriptor Locations: SysName:13|Manufacturer:17|EquipmentName:18|Alias:...
 - Merge and Center Text In Body
 - Text Height: 25
 - Backbone Color: 4
 - Jumper Color: 39
 - Horizontal Cable Color: ByLayer
- Layout:**
 - Max Columns: 5
 - Column Spacing: 6
 - Row Vertical Spacing: 19
- Title and Comment Block:**
 - Show Title
 - Title Position: BottomLeft
 - Show Time Stamp
 - Title Text Height (100th DU): 50
 - Title Offset: 0,-1,0
- Misc.:**
 - Show Attenuation Labels
 - Show Jumper Length Labels
 - Show Backbone Length Labels
 - Show Jumper Numbers
 - Show Backbone Numbers
 - Show Length
 - Auto Router Avoid Other Cables

Appearance

Source, Middle and Destination Shape

Choose one of the 16 stock shapes

Source, Middle and Destination shape Width in (100th DU)

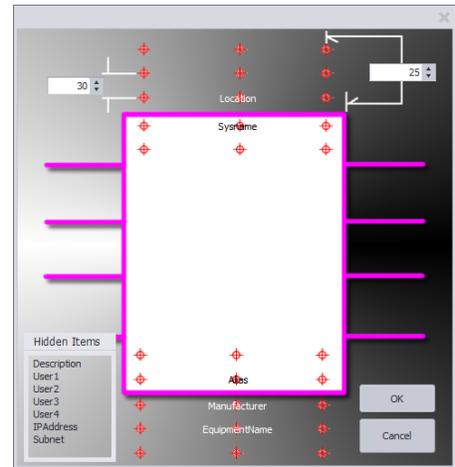
How wide is it

Source, Middle and Destination shape Color

Set the color of the shape

Source, Middle and Destination shape Descriptor Locations

Drag the descriptor to the location map or to the Hidden Items list to hide.



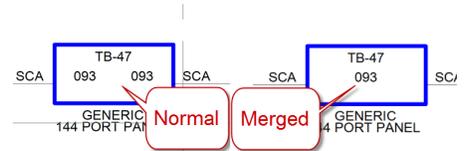
Backbone Color

Jumper Color

Horizontal Cable Color

Merge and Center Text in Body

Sets the color



Text Height

controls the height of all text in the visualization.

Layout

Max Columns

The maximum number of blocks placed before a new row is started below.

Column Spacing

The distance between blocks

Row Spacing

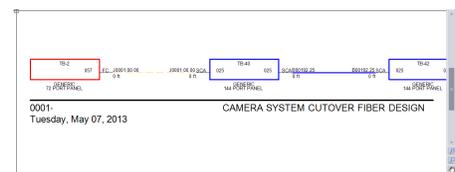
The Distance between rows

Title and Comment Block

Show Title

Title Position

Show Time Stamp



Title Text Height (100th DU)

Title Offset

Title

You can type whatever you want in this field. In addition the following variables are available:
 {0} = Circuit Number
 {1} = It System

Misc.

Show Attenuation Labels

Show Jumper Length Labels

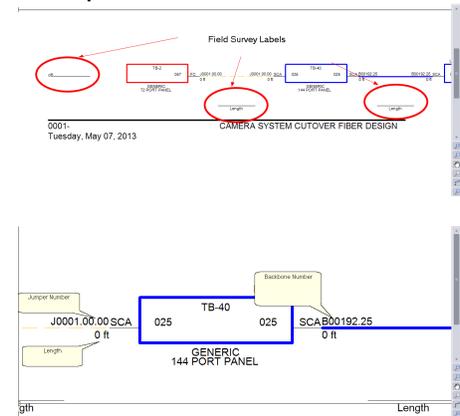
Show Backbone Length Labels

Show Jumper Numbers

Show Backbone Numbers

Show Length

Show field survey labels in the CAD preview



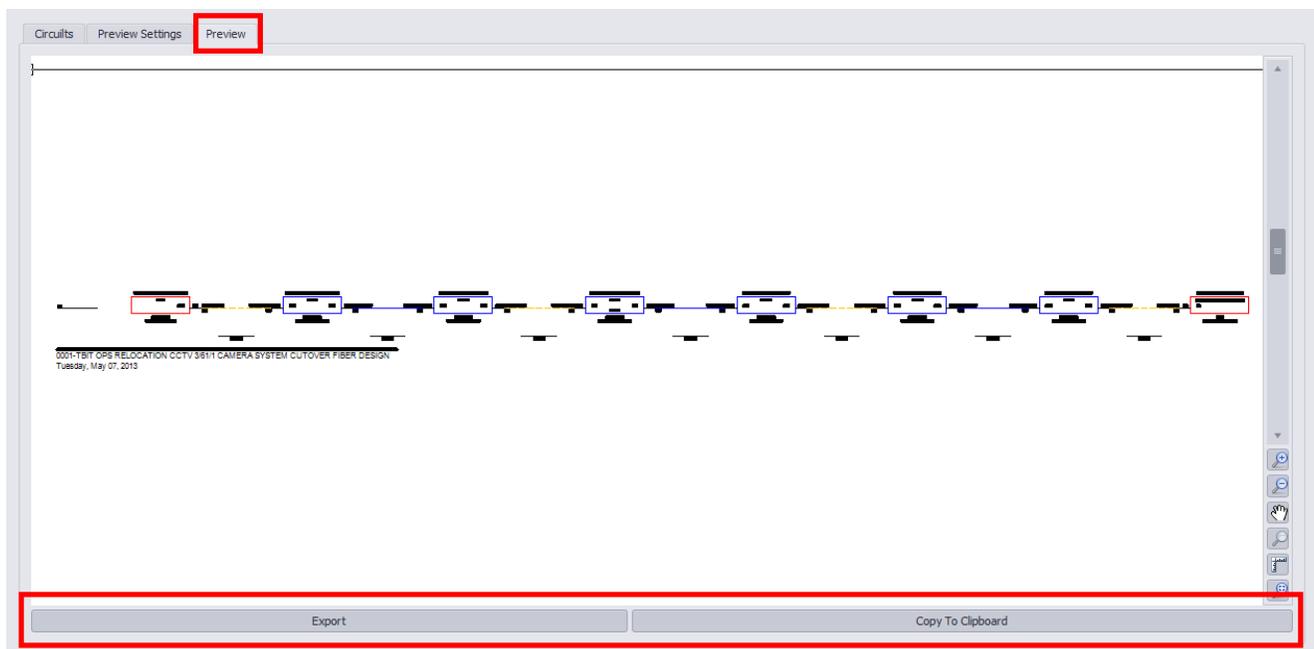
2.2.4 Outputting Circuits to CAD

Once a circuit has been defined you can create CAD views of single and multiple circuits. The tools to do this are contained in the **Circuits Grid** which you can access from the command line shortcut **CMSCG** or by selecting the [CAD Preview/Circuits Grid] on the home page.

Before accessing the **Circuits Grid**, please make sure to setup your export preferences in the settings menu. Please refer here^[66] for more information on the settings menu.

You can also batch output the selected records by clicking Tools>Output Selected.

Note: All export is governed by settings in the Project>Settings[Project][Export Settings] tool.



Export

Output to file based on the Export Settings found in Project>Settings [Project][Export Settings]

Copy to Clipboard

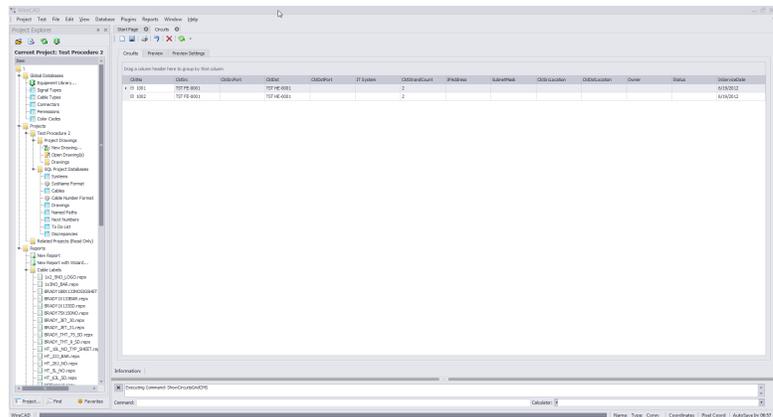
Copies the preview to the clipboard so it can be pasted into another drawing.

2.2.5 How to Output a Circuit to CAD

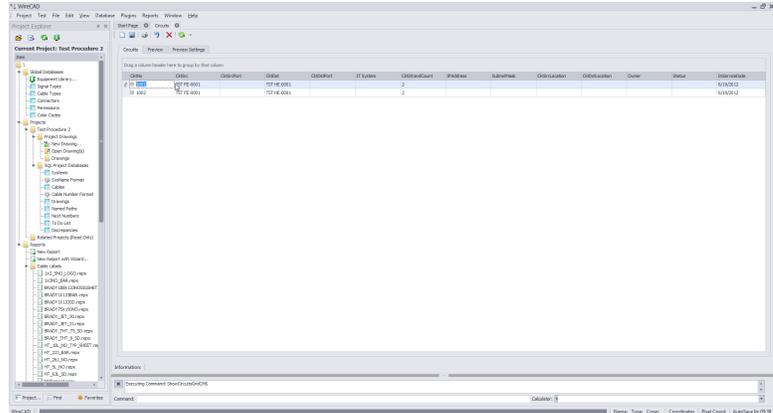
This step by step will guide you on exporting a circuit.



1. Open the Circuit Grid by entering CMSCG in the command line prompt. The **Circuit Grid** Window will open.



2. Select the Circuit Number you would like to Export.



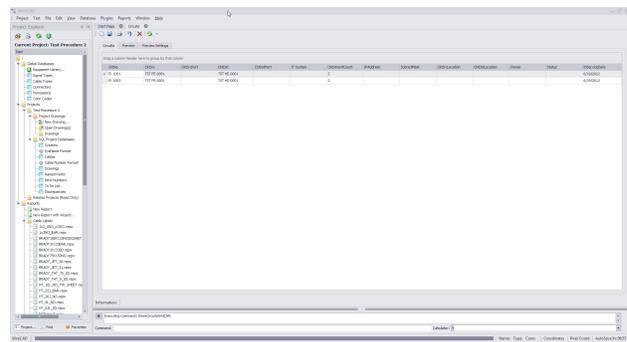
2.2.6 How to Output Many Circuits to CAD

This Step by step will guide you on exporting multiple circuits.

Note: this is different from the command *Tools>Output All Selected Circuits*

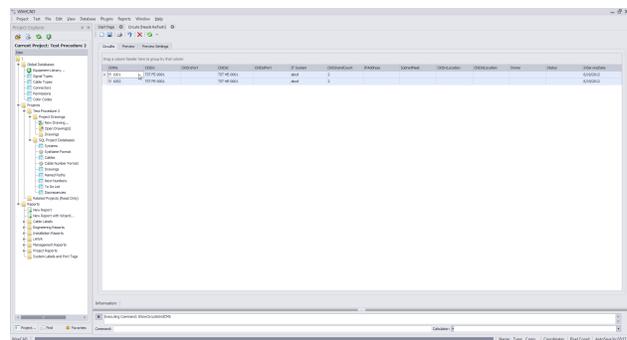


1. Open the Circuit Grid by entering **CMSCG** in the command line prompt. The Circuit Grid Window will open.

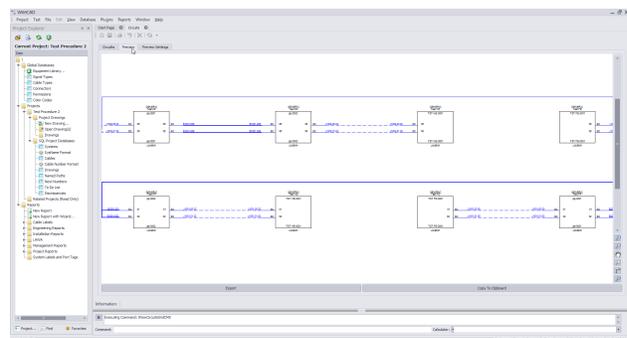


2. Select the Circuit Numbers you would like to Export.

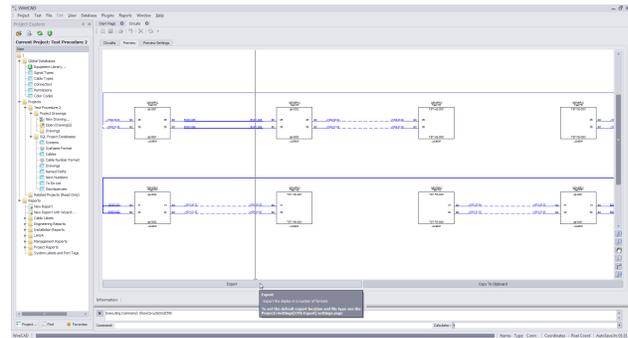
Note: You can select multiple circuits by dragging down with your mouse clicked, by holding **[Shift]** and selecting a set or by holding down **[CTRL]** and selecting multiple records individually.



3. Select the **[Preview]** Tab.

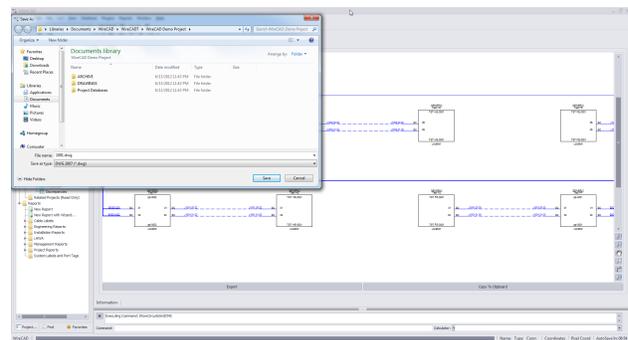


4. Verify the circuits shown are the ones you would like use and click [Export].



5. A Windows explorer window will come up. Enter where you would like to export to, what you would like this file to be called and what file type you would like to export as.

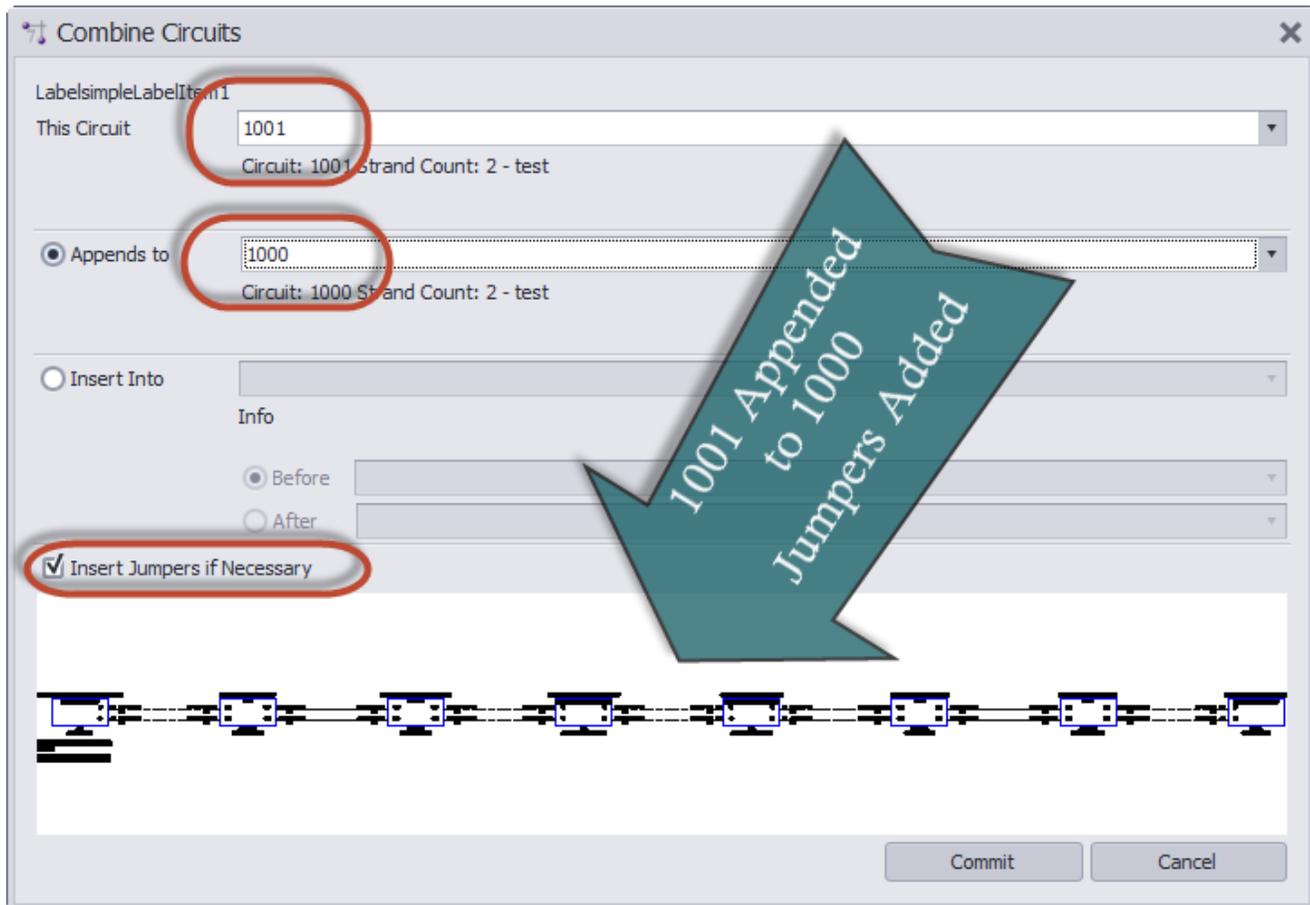
Note: All of these settings can be automated in the **Settings Menu**.



6. Click [Save]. Your exported file will now be created and placed in the location you have specified.

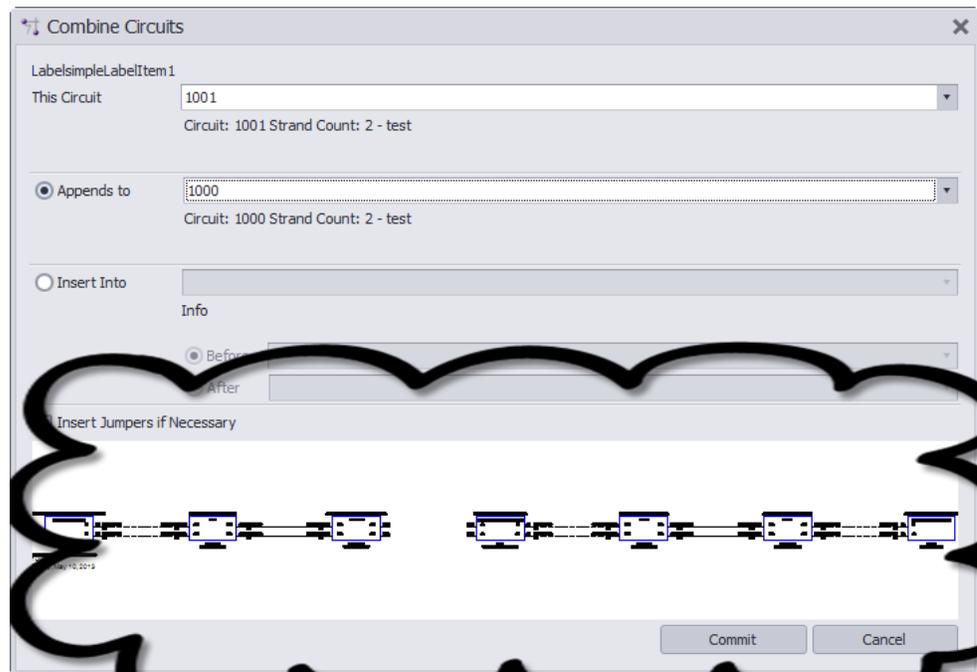
2.2.7 Combining Circuits

WireCAD CMS tools support the concept of combining circuits. Circuits to be combined must have the same Strand Count. The Circuit Name/Number of the Circuit that is being appended or inserted will be discarded.



This Circuit	The Circuit Name/Number of the circuit that will be appended or inserted into another circuit. This circuit Name/Number will be discarded if successfully appended or inserted.
Appends To	The Circuit Name/Number of the circuit that will be appended to.
Inserts Into	The Circuit Name/Number of the circuit that will be inserted into
Before	Before this SysName
After	After this SysName
Insert Jumpers if Necessary	It is possible to create collections of cables in a circuit that do not interconnect. If you do not select this option you will create collection of cables that do not interconnect.

Preview



[Commit]

Do it.

[Cancel]

Dump out without any changes.

2.3 Cable Types

In order to create a Backbone segment in WireCAD, you will need to create a Cable Type with the correct amount of Cores.

This will guide you through creating a new Cable Type.

New Cable Type

File

Manufacturer ID: Select Manufacturer Cable Type or P/N:

Description:

Cable Char Z: Cable OD:

Cable Gauge: Cable Rating:

Cable Weight: Standard Length:

Core/Conductor Configuration

Shielding: Is Multi Core: Core Count: 1

Conductors Per Core: 1 Conductor Count Including Shield(s): 1

Default Core/Fiber Mode:

Color Code Applies To:

Conductors Cores None

Color Code:

Information: |

2.3.1 How to Create a New Cable Type

Wiki Links:

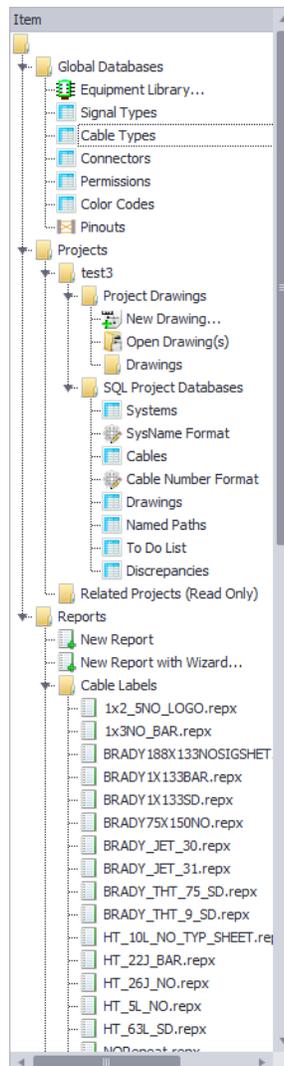
Cable Management Specific Features and Functions

[http://wirecad.com/wiki/index.php?](http://wirecad.com/wiki/index.php?title=Cable_Management_System_Specific_features_and_functions)

[title=Cable_Management_System_Specific_features_and_functions](http://wirecad.com/wiki/index.php?title=Cable_Management_System_Specific_features_and_functions)



1. In your Project Explorer, double click the *Cable Types Database*.



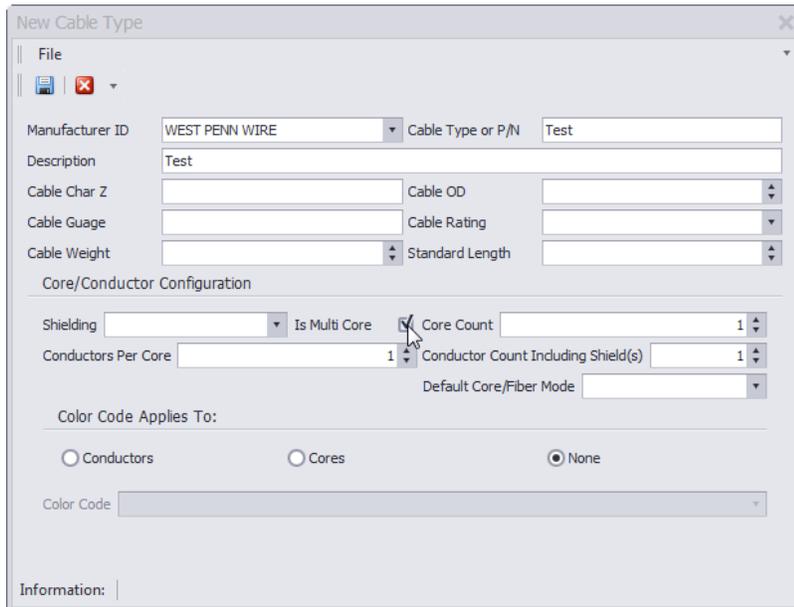
2. Click the New Icon. (This is the blank paper icon next to the diskette save on the top left of your screen.)



3. A new window will pop up asking for information on this cable type.

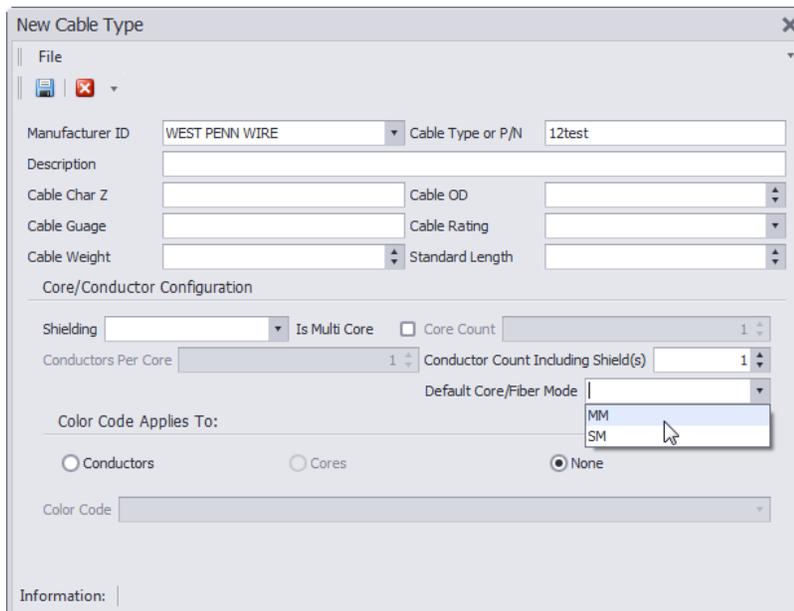
4. Fill in all information about this cable including **Manufacturer, Cable Type or P/N & Description**. No other fields are required but are available to use at your discretion.

5. If this cable is a multi core cable, you will need to check the **Is Multi Core** box and select how many cores are in this cable.



6. Select the [Default Core\Fiber Mode].

Note: To label specific cores as SM or MM, see step 8.



7. Click the [Save] icon (diskette).



If you need to define SM and MM, please follow steps 8.

11. Double click in the **Fiber Mode** field and enter SM or MM for this strand.

Note: If a series of cores are the same Fiber Mode Type, you can highlight the top one, drag down, and press CTRL+D to automatically populate additional fields.

Core Number	Core Color Code	Conductor Number	Conductor Color	Conductor Gauge	Note	Fiber Mode
1	01	1	1			
2	02	2	2			
3	03	3	3			
4	04	4	4			
5	05	5	5			
6	06	6	6			
7	07	7	7			
8	08	8	8			
9	09	9	9			
10	10	10	10			
11	11	11	11			
12	12	12	12			
13	13	13	13			

12. Click the [Save] button (diskette) to save changes.

2.4 Equipment

WireCAD v7 for ENTEnterprise has been pre-populated with devices specific to fiber operations.

If you are unable to find your specific equipment, you will need to create a new Equipment Definition.

This section will guide you through creating a new Equipment Definition, adding & deleting I/O ports and modifying display preferences.

New Equipment

New Equipment

Who Makes It and What's it Called

Manufacturer*

EquipmentName/Model/Part Number*

Description*

SysName Prefix*

* = Required

Next > Cancel

2.4.1 How to Create a New Equipment Definition

Wiki Links:

How To Access Your Equipment Library

http://wirecad.com/wiki/index.php?title=Accessing_Equipment_Library

How To Add a New Manufacturer To Library

http://wirecad.com/wiki/index.php?title=How_To_Add_A_New_Manufacturer_To_Library

How To Create A New Equipment Definition

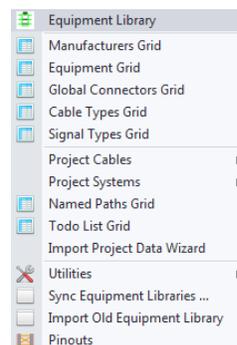
http://wirecad.com/wiki/index.php?title=HOWTO:New_Equipment_Definition

How To Customize Your Equipment I/O

http://wirecad.com/wiki/index.php?title=Customizing_Equipment_I/O



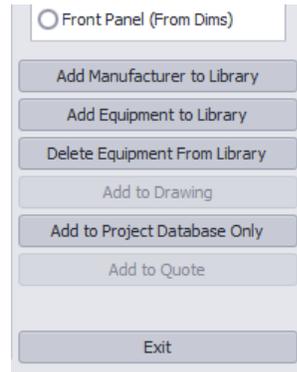
1. Click **Advanced Tools>Equipment Library**
OR Database>Equipment Library OR
Command Line shortcut LE.



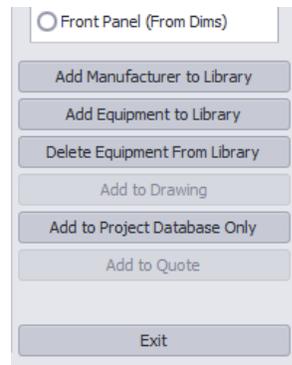
2. Use the search/find bar to first determine if your equipment is currently in the library.



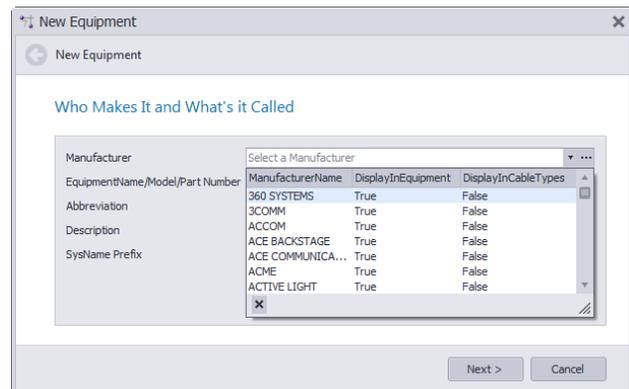
3. On the right hand side of the screen, you will see multiple buttons including [Add Manufacturer To Library] & [Add Equipment To Library]. (If your manufacturer is not listed, please see the section titled **Add Manufacturer to Library.**)



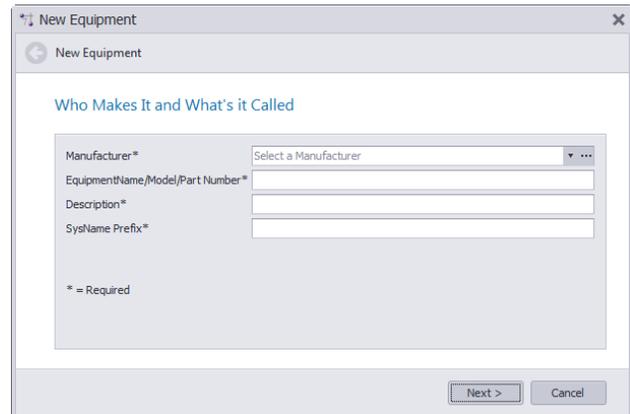
4. Click [Add Equipment to Library].



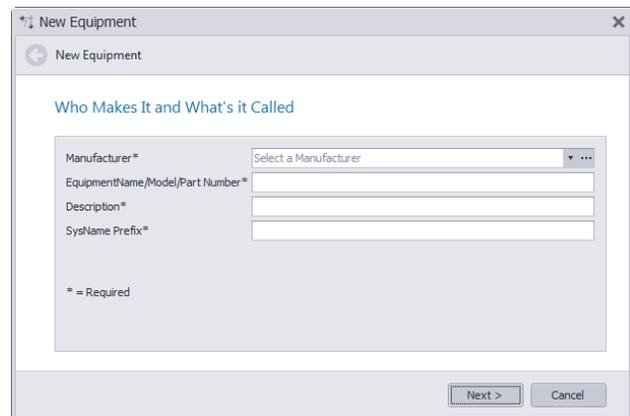
5. In the dialog window, start by selecting the **Manufacturer** field and select who makes your equipment



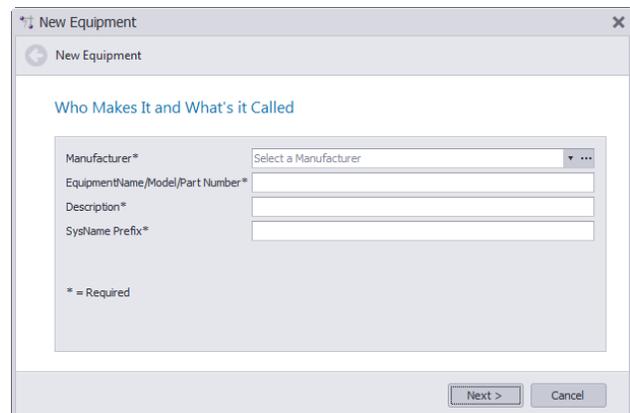
6. Enter in the Model/Equipment Name of your Equipment.



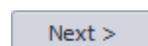
7. In the **Description** field, enter something that will describe this type of equipment. Example: Laptop, Desktop Computer, Router, LCD Display etc.



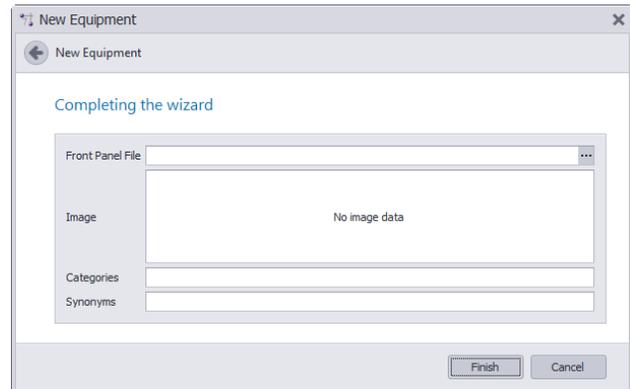
8. The SysName **Prefix** field is how the SysName will be shown after a SysName assignment. Example: Field Laptop = FLD LPT, Desktop Router = RTR, ect.



9. Click [Next].



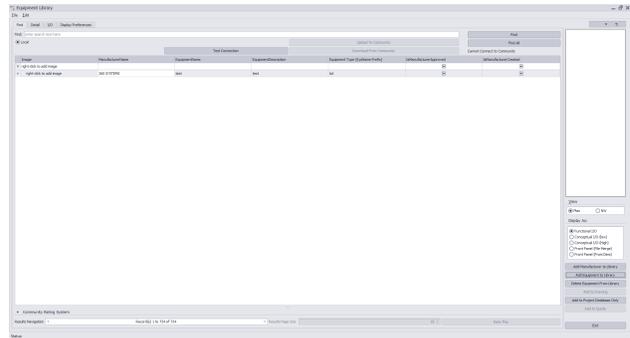
10. The wizard will advance to the next page asking you to add a Front Panel File, Image, Category & Synonym. None of these fields are required; however, if you plan to use the Rack Builder tool it is advised that you select a Front Panel file.



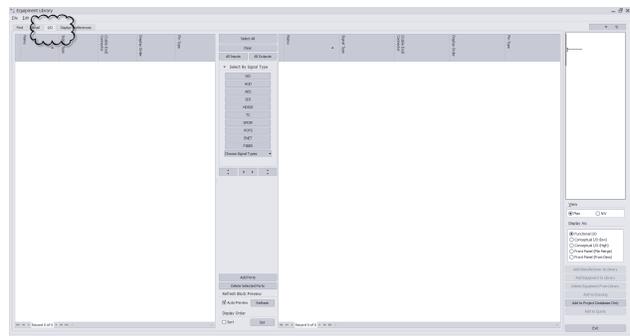
11. Click [Finish].



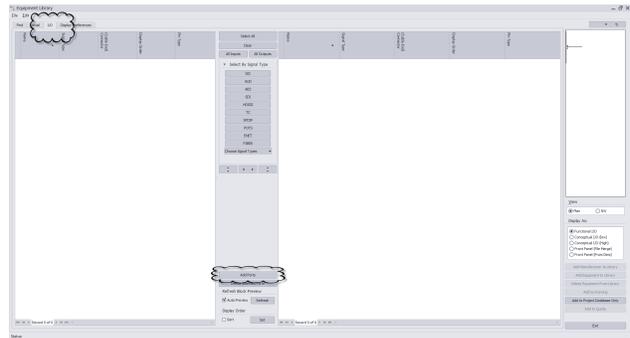
12. You will now be taken back to the Equipment Library with your new equipment in the grid.



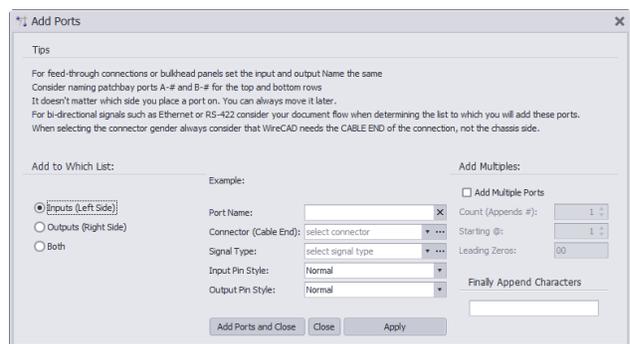
13. Select the I/O Tab.



14. In the middle of the screen, Click The [Add Ports] button.

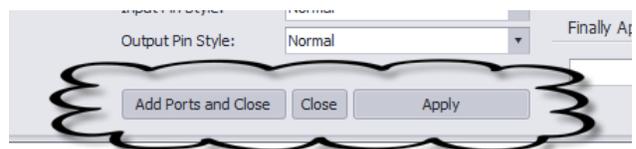


15. Enter in all port information including **Name**, **Connector Type**, **Signal Type**, **Pin Style**, etc. Do this for all ports on this device.



Note: You can add multiples of the same port type by clicking the Add Many checkbox and entering in how many of this specific port you would like. WireCAD will append a port number to the string in the **Name** field. Example: with the Inputs radio button selected, enter the value PORT- into the **Name** field, check the Add Multiples and set the Starting Number to 1 and the Count to 32. Click [Apply] and 32 records will be created in the Inputs list. The name field will be populated with the values PORT-01 through PORT-32.

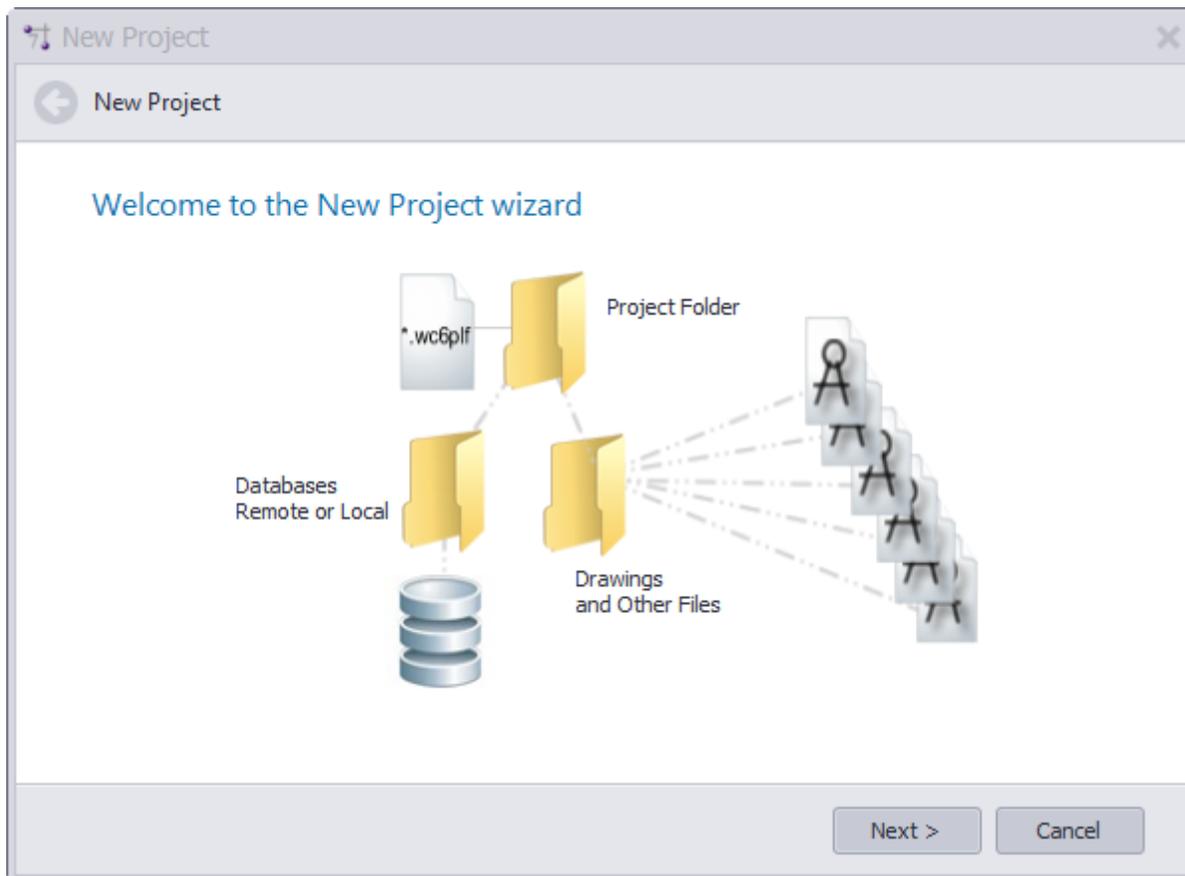
16. When you are finished, click [Apply] to add the ports and leave this dialog open or click [Add Ports and Close] to add the ports and close this dialog.



2.5 Projects

This section will guide you on how to create a New Project using a SQL Server Database.

You will need to have your network administrator or IT department set up a SQL Database and create user access for all WireCAD users who will have access to this Database.



2.5.1 How to Create a New SQL Project

Wiki Links:

How To Create a New Project

http://wirecad.com/wiki/index.php?title=HOWTO:New_Project

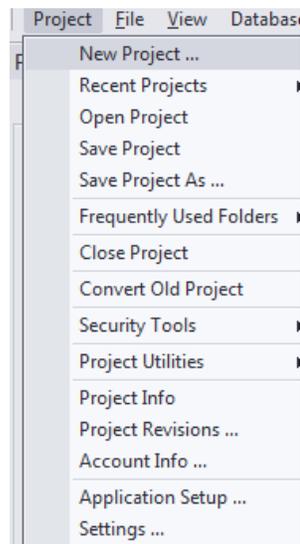
How To Move A Project To A Different SQL Server

<http://wirecad.com/wiki/index.php?title=HOWTO:MoveProjectServer>

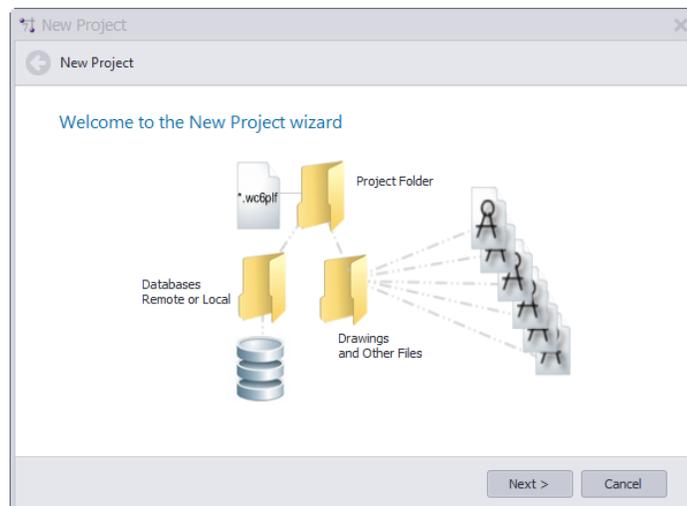


Create a New Project

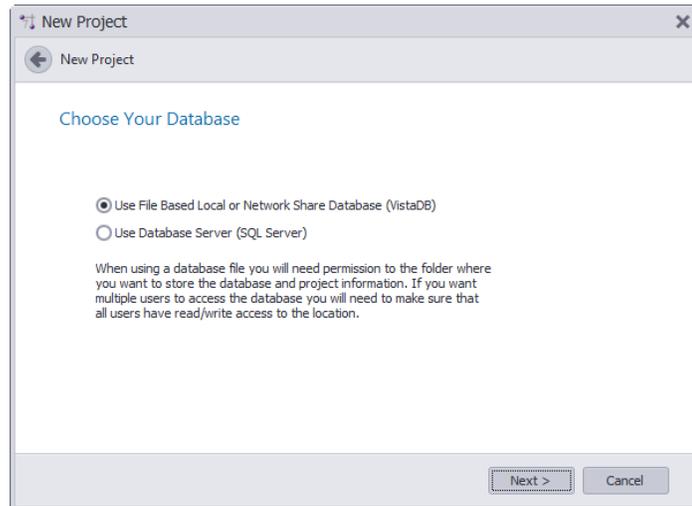
1. With WireCAD open, click **Project>New Project**.



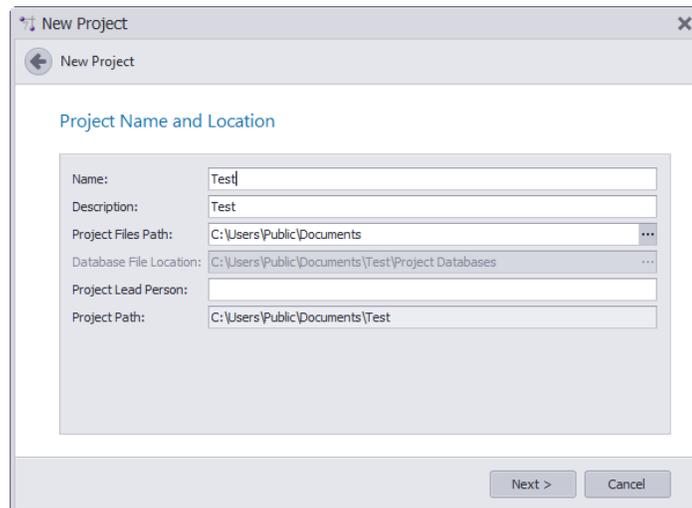
2. A new window will open saying “Welcome to the New Project Wizard”. Click [Next].



3. On the next page, select *Use Database Server (SQL Server)* and click [Next].



4. Enter a **Project Name**, **Description** and select a **Project Files Path**. This is where your project files will be saved. This is different than your Database files and will not be located in the same directory. It should be on a network share visible to other users of the project. Click [Next].



5. Enter in your SQL Server database information and click [Next]. (

Note: Please contact your IT department if you are unsure of any information required on this page.)

The screenshot shows the 'New Project' dialog box with the 'Database Server Information' tab selected. The fields are filled with the following information:

- Database Host: localhost
- Database Name: test3
- Use Windows User Validation:
- Database User: (empty)
- Database Password: (empty)

Buttons: 'Test Connection', 'Next >', and 'Cancel'.

6. Verify that all information looks correct and click [Next].

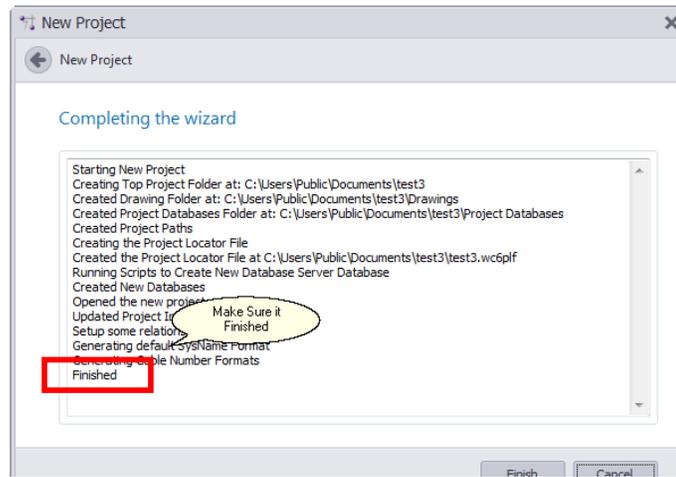
The screenshot shows the 'New Project' dialog box with the 'Confirm Information' tab selected. The 'Confirm Your Settings' section displays the following information:

- Project Name: test3
- Description: test3
- Path: C:\Users\Public\Documents
- DB Host: localhost
- DB Catalog: test3
- Using Windows Security

Text: 'If everything looks right click next to create the project'

Buttons: 'Next >' and 'Cancel'.

7. Wait for WireCAD to build your project and then click [Finish]. You are now ready to start working in your new SQL Project.

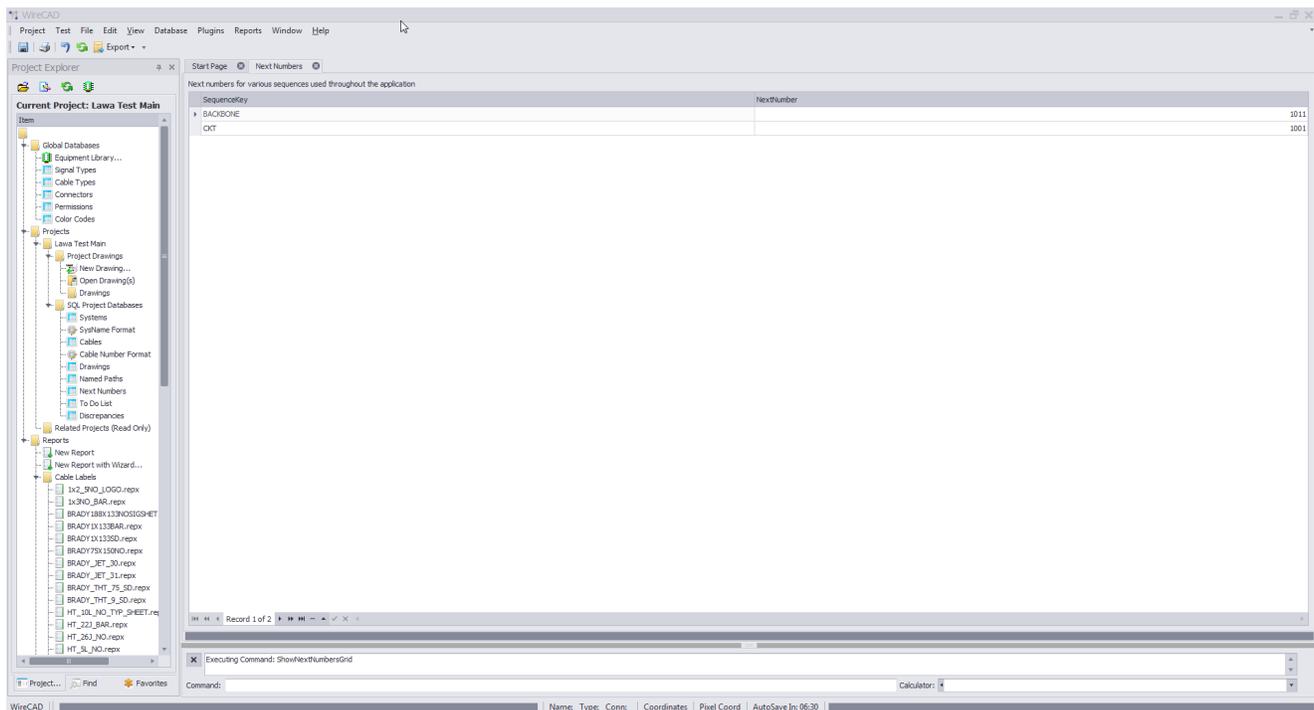


2.6 Next Numbers Grid

The Next Numbers Grid will show you the next available Cable number based on your Cable number format. To access the **Next Numbers Tool**, type NN in the command line prompt.

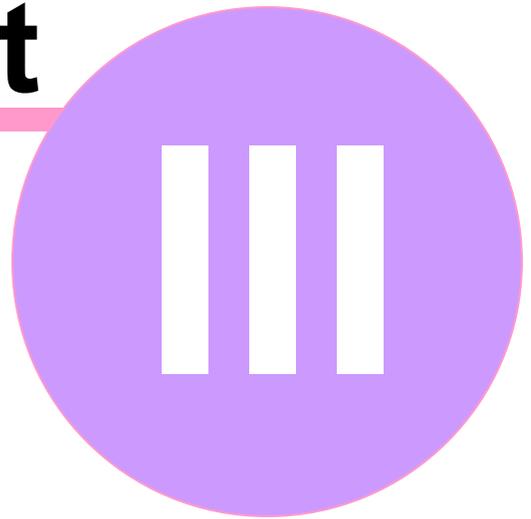
This grid will show you both **Backbone Cable Numbers** as well as **Standard Cable Numbers**. As you progress through your project, these numbers will change.

To edit these numbers (such as in the event of deleted Backbones) simply click in the Next Number box and fill in the correct number. Be sure that you are not entering a number that is already in use.



Note: Yours will look different as the Next Numbers grid will automatically create entries for each new sequence used by the application.

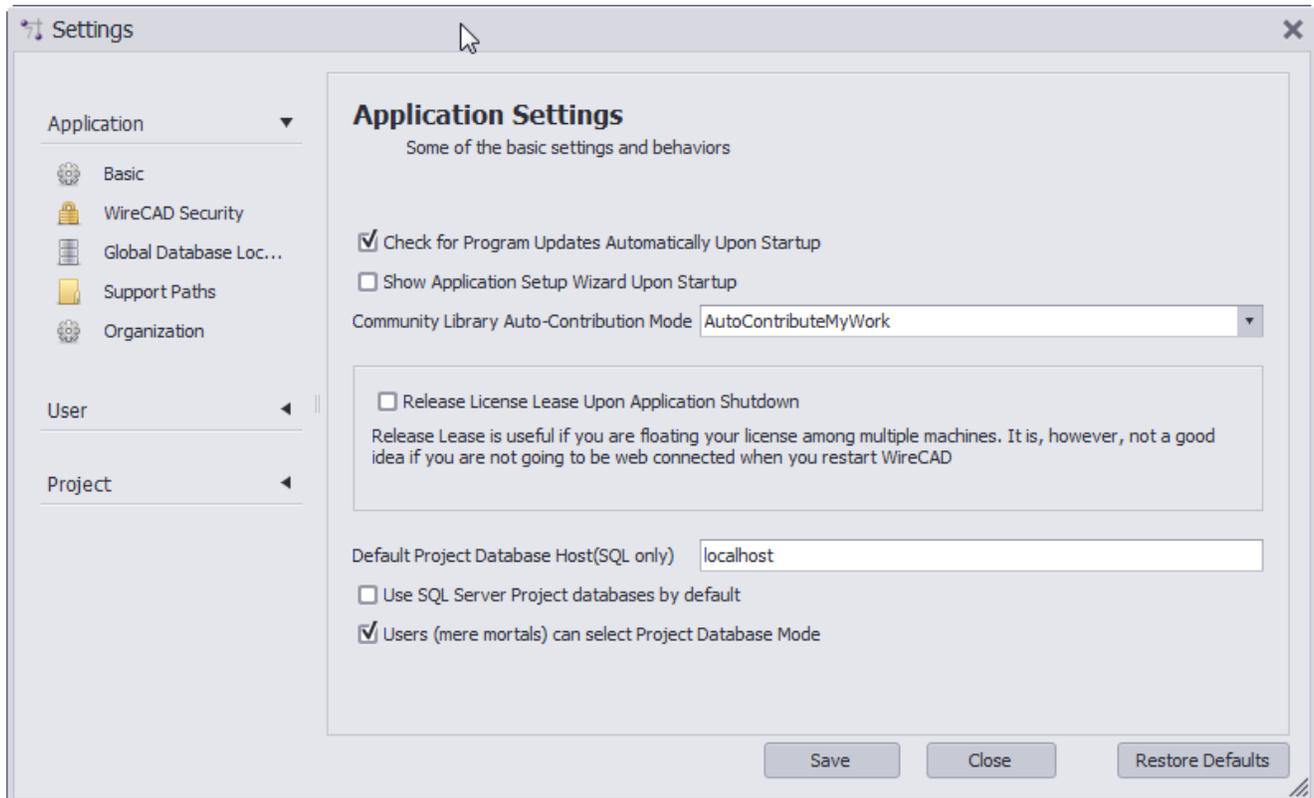
Part



3 Settings and Options

To access the settings menu, click **Project>Settings**. Then select one of the three default sets of settings **Application**, **User** or **Project** by clicking on the down arrow.

Note: Third party plugins may register their own settings categories and panels. Shown are the stock settings.



Topic Sub Sections

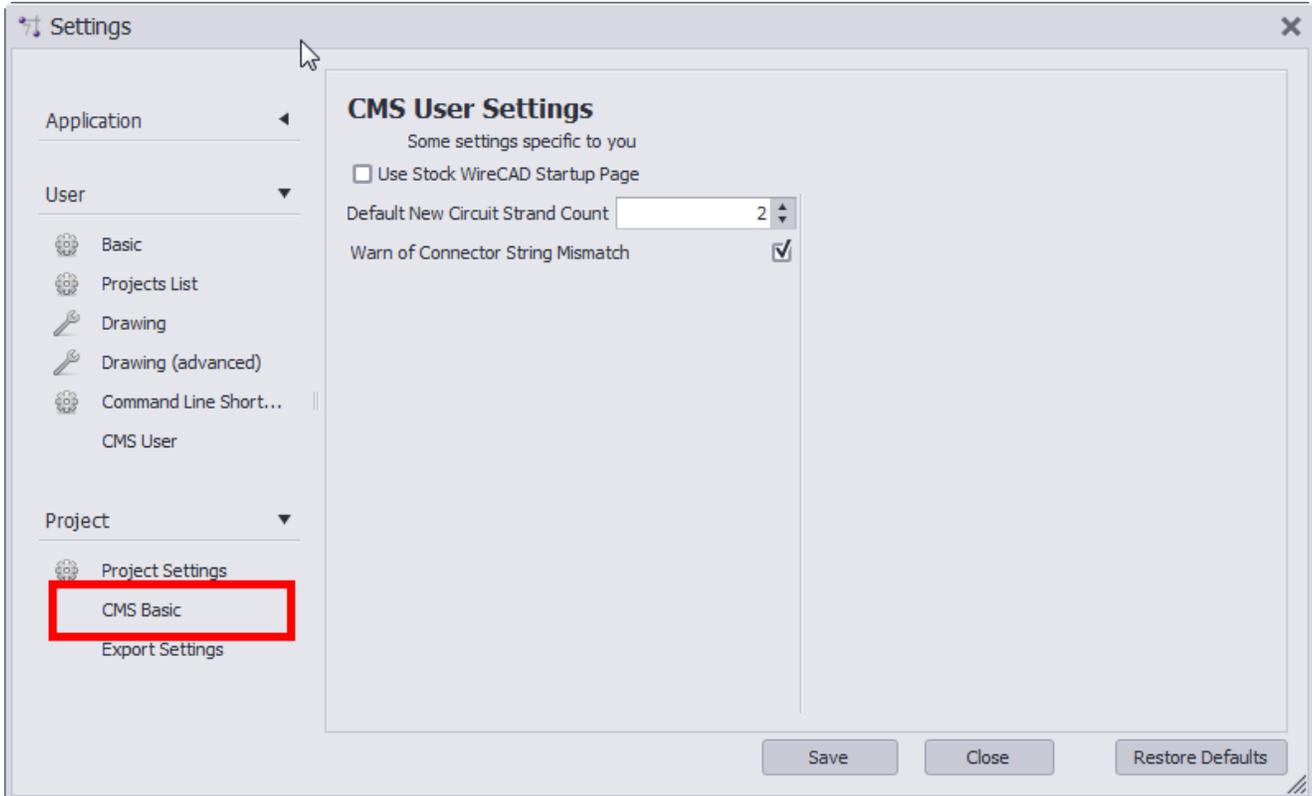
User Settings ⁶⁷

Project Settings ⁶⁹

3.1 User Settings

These are the additional user settings that pertain specifically to the CMS module.

Project>Settings[User][CMS User]



Use Stock WireCAD Startup Page

Note: Doing this will remove all buttons and functionality of the startup page requiring you to use the command line shortcuts.

CMS User Settings

Some settings specific to you

Use Stock WireCAD Startup Page

This will change your Startup page from the CMS specific page to the default WireCAD page.

Default New Circuit Strand Count

Default New Circuit Strand Count

When creating a new circuit, a default strand count for jumpers is created. This will change that strand count to a different value.

Warn Of Connector String Mismatch

Warn of Connector String Mismatch



Having this box checked will allow a warning message to display anytime WireCAD detects that 2 ports being connected have a different connector type.

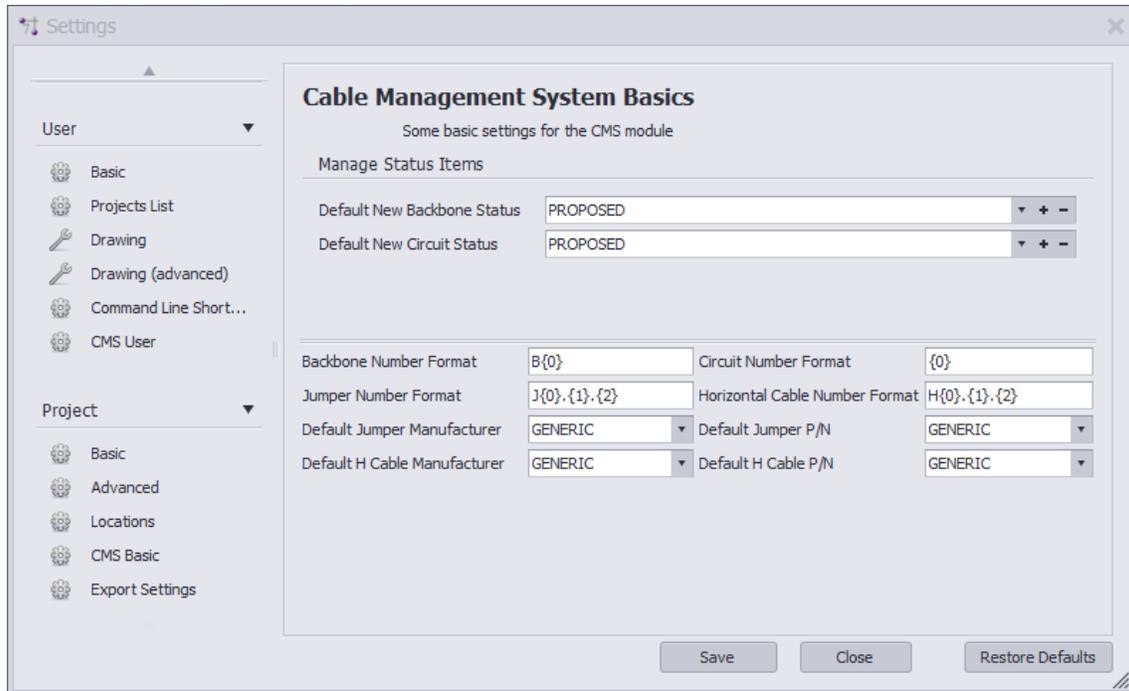
3.2 Project Settings

These are the additional project settings that pertain specifically to the CMS module.

Note: You will need to have an open project in order to access these settings.

Note: These settings are project specific and will need to be created for each new project.

Project>Settings[User][CMS User]



Default New Backbone Status

Default New Backbone Status: PROPOSED

When creating a backbone, you have the ability to mark a "status" on that backbone such as "In Use", "Proposed" ETC. Using the **[+]** button, you can create new status items. Selecting a status will cause that to become the default for all backbones in this project.

Default New Circuit Status

Default New Circuit Status: PROPOSED

Just like above, when creating a Circuit, you have the ability to mark a status on that circuit. Again, using the **[+]** button, you can create a new status.

Backbone Number Format

The variable {0} contains the next number in the Next Numbers grid for Backbones.
Define the string format of the next Backbone number.

Circuit Number Format

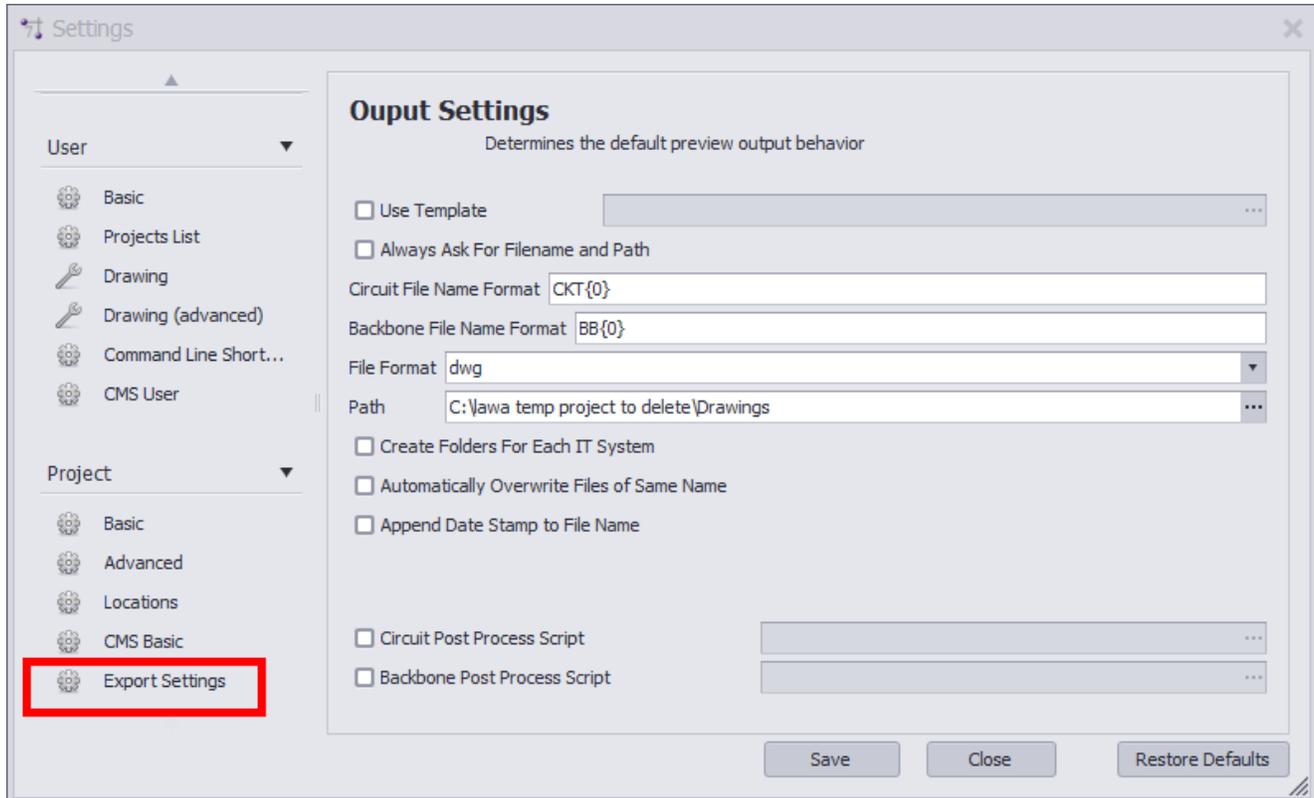
The variable {0} contains the next number in the Next Numbers grid for Circuits.
Define the string format of the next Circuit number.

Jumper Number Format

The variable {0} contains the Circuit base number.
The variable {1} contains the Strand Number of the circuit for this jumper
The variable {2} contains the Ordinal Number of the circuit for this jumper.
Define the string format of the next Jumper number.

3.3 Output Settings

Project>Settings[Project][Export Settings]



Use Template

Path to a template drawing that the output will be exported into. Your template drawings can contain any page borders or layouts and settings that you wish.

Always Ask for Filename and Path

You are involved in the filename selection and path

Circuit File Name Format

Sets the file name format for Circuit output.
{0} = Circuit Name

Backbone File Name Format

Sets the file name format for Backbone output.
{0} = Backbone Number

File Format

Presets the output format.

Path

Where do we output.

Create Folders for Each IT System

Create a new folder for each IT System and output the preview to that folder.

**Automatically Overwrite
Files of Same Name** Self-explanatory

**Append Date Stamp to File
Name**

**Circuit Post Process
Script** Path to a c# file which will be run post export but pre write-to-disk. See the Post Process Scripts^[72] topic for more information.

**Backbone Post Process
Script**

3.4 Post Process Scripting

Post Process Scripting of the output of the Visualizers in WireCAD allow you to customize the final appearance of the created document.

What follows are two example scripts, one for the Circuit output and the other for the Backbone output. The process is the same for both. Only the method signature is changed.

NOTE: While these scripts can be edited using the Plugins>Script Editor Runner... tool they cannot be executed (run) by it.

These scripts can be found in c:\users\public\wirecad\wirecad7\scripts\

Circuits Export Script Example

```
using System;
using System.Data;
using System.Text;
using System.Windows.Forms;
using System.Diagnostics;
using System.Reflection;
using System.IO;
using WireCAD;
using WireCAD.Interfaces;
using VectorDraw.Professional.vdObjects;
using VectorDraw.Professional.vdFigures;
using VectorDraw.Professional.vdPrimaries;
using VectorDraw.Professional.vdCollections;
using WireCAD.ProjectFile.DAL;
using VectorDraw.Geometry;

/// <summary>
/// Circuits Export Post Process Script to fill titleblocks
/// </summary>
public class TitleBlockFiller
{
    public static void Run(Workspace ws, Circuits c, vdDocument doc)
    {
```

```

string drawingName = Path.GetFileName(doc.FileName);
//change this next line to be your titleblock name
string BlockNameToUpdate = "ansi";
//loop through the layouts and search for our insert to update
vdLayout layOut = doc.LayOuts.FindName("ANSI_B");

foreach (vdFigure figure in layOut.Entities)
{
    if(figure is vdViewport)
    {
        vdViewport vp = figure as vdViewport;
        vp.ZoomExtents();
        vp.Update();
    }

    if (figure is vdInsert)
    {
        //cast our base figure into an insert object so we can access its
properties
        vdInsert insert = (vdInsert) figure;
        //now we will test to see if the insert name is one that
        //we know to be a titleblock
        //Modify this to meet your needs
        if (insert.Block.Name.ToLower().Contains(BlockNameToUpdate))
        {
            //need to fix it.
            //this next bit makes it insert get the latest version from
the blocks table
            insert.Update();
            insert.Invalidate();

            //we got one so let's set the attributes
            //we will use the safeSetAttribute function so that if the
attribute doesn't exist it won't
            //fail
            //Modify this to meet your needs

            ws.Utilities.SafeSetAttributeValue(insert, "SHEET", layOut.
Name);
            ws.Utilities.SafeSetAttributeValue(insert, "Drawing_Name",
Path.GetFileNameWithoutExtension(drawingName));
            ws.Utilities.SafeSetAttributeValue(insert, "DWG_Number", c.
CktNO);
            ws.Utilities.SafeSetAttributeValue(insert, "COMPANY", "Slate
Gravel Co");
            ws.Utilities.SafeSetAttributeValue(insert, "ADDRESS",
"Number 1 Quarry Way");
            ws.Utilities.SafeSetAttributeValue(insert, "ADDRESS2",
"Bedrock - The World");
            ws.Utilities.SafeSetAttributeValue(insert, "DATE", DateTime.
Now.ToShortDateString());
            ws.Utilities.SafeSetAttributeValue(insert, "Scale", "NTS");
            insert.Update();
            insert.Invalidate();
            doc.Redraw(true);
        }
    }
}

```

```

    }

    vdText t = new          vdText(doc);
    t.TextString = string.Format("CKT - {0}\n{1}",c.CktNO, c.CktDescription);
    t.HorJustify = VectorDraw.Professional.Constants.VdConstHorJust.VdTextHorRight;
    Box bb = layOut.Entities.GetBoundingBox(true,true);
    t.Height = .25d;
    t.InsertionPoint = new gPoint(bb.Right-3,bb.Top-2);
    layOut.Entities.AddItem(t);

    doc.ActiveLayOut = layOut;

}
}

```

Backbones Export Script Example

The only difference in the two examples is the method signature. Use the code above replacing:

```
public static void Run(Workspace ws, Circuits c, vdDocument doc)
```

With:

```
public static void Run(Workspace ws, CMSSettings settings, vdDocument doc)
```

As such:

```

using System;
using System.Data;
using System.Text;
using System.Windows.Forms;
using System.Diagnostics;
using System.Reflection;
using System.IO;
using WireCAD;
using WireCAD.Interfaces;
using VectorDraw.Professional.vdObjects;
using VectorDraw.Professional.vdFigures;
using VectorDraw.Professional.vdPrimaries;
using VectorDraw.Professional.vdCollections;
using WireCAD.ProjectFile.DAL;
using VectorDraw.Geometry;

/// <summary>
/// BB Post Process Script to
/// Fill titleblocks
/// </summary>
public class TitleBlockFiller
{
    public static void Run(Workspace ws, string[] exportInfo, vdDocument doc)
    {
        MessageBox.Show(string.Format("{0}-{1}-{2}",exportInfo));

        string drawingName = Path.GetFileName(doc.FileName);
        //change this next line to be your titleblock name
        string BlockNameToUpdate = "ansi";
        //loop through the layouts and search for our insert to update
        vdLayout layOut = doc.LayOuts.FindName("ANSI_B");

        foreach (vdFigure figure in layOut.Entities)
        {

```

```

        if (figure is vdViewport)
        {
            vdViewport vp = figure as vdViewport;
            vp.ZoomExtents();
            vp.Update();
        }

        if (figure is vdInsert)
        {
            //cast our base figure into an insert object so we can access its
properties
            vdInsert insert = (vdInsert) figure;
            //now we will test to see if the insert name is one that
            //we know to be a titleblock
            //Modify this to meet your needs
            if (insert.Block.Name.ToLower().Contains(BlockNameToUpdate))
            {
                //need to fix it.
                //this next bit makes it insert get the latest version from
the blocks table
                insert.Update();
                insert.Invalidate();

                //we got one so let's set the attributes
                //we will use the safeSetAttribute function so that if the
attribute doesn't exist it won't
                //fail
                //Modify this to meet your needs

                ws.Utilities.SafeSetAttributeValue(insert, "SHEET", layOut.
Name);
                ws.Utilities.SafeSetAttributeValue(insert, "Drawing_Name",
Path.GetFileNameWithoutExtension(drawingName));
                ws.Utilities.SafeSetAttributeValue(insert, "DWG_Number",
exportInfo[1] + "-" + exportInfo[2]);
                ws.Utilities.SafeSetAttributeValue(insert, "COMPANY", "Slate
Gravel Co");
                ws.Utilities.SafeSetAttributeValue(insert, "ADDRESS",
"Number 1 Quarry Way");
                ws.Utilities.SafeSetAttributeValue(insert, "ADDRESS2",
"Bedrock - The World");
                ws.Utilities.SafeSetAttributeValue(insert, "DATE", DateTime.
Now.ToShortDateString());
                ws.Utilities.SafeSetAttributeValue(insert, "Scale", "NTS");
                insert.Update();
                insert.Invalidate();
                doc.Redraw(true);
            }
        }
    }

    vdText t = new vdText(doc);
    t.TextString = string.Format("Riser {0}-{1}", exportInfo[1], exportInfo[2]);
    t.HorJustify = VectorDraw.Professional.Constants.VdConstHorJust.VdTextHorRight;
    Box bb = layOut.Entities.GetBoundingBox(true, true);
    t.Height = .25d;
    t.InsertionPoint = new gPoint(bb.Right-3, bb.Top-2);

```

```
        layOut.Entities.AddItem(t);  
        doc.ActiveLayOut = layOut;  
    }  
}
```

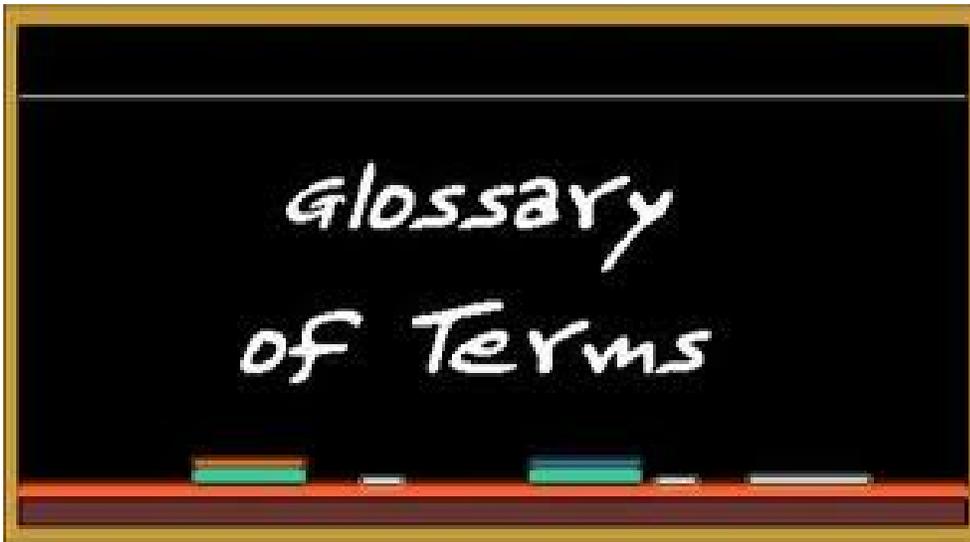
Part



4 Glossary

This Glossary contains information on WireCAD nomenclature and definitions that you may not be accustomed to.

Also included is a description of each term to help you better understand exactly what is being discussed



Cable: A record in the cables database that describes the connection between two pieces of equipment. A cable record will have information on the originating (source) equipment and the terminating (destination) equipment, as well as ports, connectors, signal and Cable Types, etc..

Cable Type: A Cable Type is a definition describing a specific manufacturer's cable. The Cable Type describes the make, model, description and other meta data about the specific cable. In addition the Cable Type also describes core or conductor level data. A Cable Type has a one-to-many relation to its core/conductor data. The core/conductor data describes color codes and fiber modes.

CFE: Customer Furnished Equipment. Alternately, Client Furnished. Also known as Owner Furnished Equipment. This is equipment to which we must connect but is otherwise not tracked by, or of any other concern to us.

Circuit: A circuit in WireCAD is defined as a collection of cables. Each circuit may have a Name, Description, and other meta data. A circuit also has a strand count to indicate the number of connections made from the originating device on through to the terminating device. Circuits have a one-to-many relationship with the cables in the Cables database. Each circuit may have many cables but a cable can belong to only one circuit.

CMS: Cable Management System. WireCAD v7 includes a new feature called the CMS Module. This is an advanced way to track, manage and edit your cable information within WireCAD. It also allows you to start your work flow with cable and system data entry rather than the standard flow of functional diagrams first.

Core: A core refers to the strands or conductor inside of a cable. A multi-core cable is one in which a core represents a logical unit. For example: assume we have a 144 strand fiber cable; we will create a Cable Type with 144 cores. If we have a 50 pair cable (100 conductors) our core count will be 50, one for each logical unit. In this case each pair.

Database: WireCAD uses "Databases" to store pertinent information required on both a project and global level. This information is then accessed by WireCAD on an as needed basis. The database is simply a "storage tank" or file with this information. There are at least two databases running at any time within WireCAD v7; the Global Equipment Database stores information on device definitions, Signal Types, Cable Types, etc., and the Project Database contains project specific data like SysName and Cables, Backbones, Circuits etc.

Equipment Definition: An equipment definition is simply a set of information regarding a piece of equipment you may use in your project. The equipment definition will include information such as Make, Model, Part Number, and I/O Port information etc. When you create an "Equipment Definition" you are simply entering this information into WireCAD so it is later accessible to create Functional Blocks, reports etc.

Equipment Library: The Equipment Library is the interface in WireCAD that allows you to access and modify your Equipment Definitions - I/O information and Display preferences for your functional blocks.

.EXE: .exe refers to a file being an "executable" file type. This means that when you double-click on this file, it will open into its own program and run as such.

Functional Block Diagram: A functional block diagram is one in which boxes represent equipment and lines represent cables between equipment. Functional Block Diagrams differ from schematics in one important way. The concept of a junction in the middle of a cable is unsupported due to the fact that there is always a piece of equipment that facilitates the junction. Such as a splitter, splice or terminal block.

Global Database: Your global database is where non project specific information is stored. This includes information related to Equipment Definitions, Cable Types, Color Codes etc.

I/O: I/O refers to Input and Output Ports on an equipment definition.

Latest/Newest Build: This refers to the revision number of WireCAD. The higher the number, the newer the build is. The newest build number is always posted on the WireCAD website.

Project Database: Your Project Database is where any project specific information is stored. This includes SysName and Cable Numbers, Drawings, SysName & Cable Number formats etc.

Rack Builder: The Rack Builder is a tool in WireCAD that creates a visual representation of a rack layout based on the location and elevation information that was entered when doing a SysName assignment.

SQL: Structured Query Language. When referring to SQL in WireCAD, chances are we are referring to a SQL Server Database. This is simply a database created on a SQL server that is being used to store WireCAD Databases.

SysName: In WireCAD you will see "SysName" referred to quite often. A sysName is a unique identifier for a specific piece of equipment in your project. The reason WireCAD requires a SysName is because you may have an infinite number of a specific make and model of equipment in your drawing, however WireCAD needs to distinguish each of those apart. Think of it like a license plate for your vehicle. There may be 1000 white Toyota Camrys on the road so to distinguish each apart, you have a license plate number to uniquely identify yours.

Wiki: ('wɪki?)

— n

- a. a web application that allows anyone visiting a website to edit content on it.
- b. (as modifier): wiki technology

[from Hawaiian wiki-wiki quick, coined by Ward Cunningham (born 1949), US computer programmer who invented the concept]

WireCAD has our own Wiki page that we use to share how tos and other documentation regarding WireCAD.

Part



5 Additional Resources

WireCAD Wiki Pages 

5.1 WireCAD Wiki Help Pages

Please follow the links below for further information regarding WireCAD topics. You can also view www.wirecad.com/wiki for any information not listed in this manual.

If you have a question on something not found in the Wiki articles, please let us know and we will be glad to create one.

Use any of the topic text as a search term to find the article without entering the full url.

How To Convert a Vista Project to a SQL Project

http://wirecad.com/wiki/index.php?title=Convert_Vista_Project_To_SQL_Project

How To Create a New Project

http://wirecad.com/wiki/index.php?title=HOWTO:New_Project

Cable Management Specific Features and Functions

http://wirecad.com/wiki/index.php?title=Cable_Management_System_Specific_features_and_functions

How To Customize Your Equipment I/O

http://wirecad.com/wiki/index.php?title=Customizing_Equipment_I/O

How To Access Your Equipment Library

http://wirecad.com/wiki/index.php?title=Accessing_Equipment_Library

How To Add a New Manufacturer To Library

http://wirecad.com/wiki/index.php?title=How_To_Add_A_New_Manufacturer_To_Library

How To Create A New Equipment Definition

http://wirecad.com/wiki/index.php?title=HOWTO:New_Equipment_Definition

How To Upload Equipment To Community Server

http://wirecad.com/wiki/index.php?title=Uploading_Equipment_To_Community_Server

How To Move A Project To A Different SQL Server

<http://wirecad.com/wiki/index.php?title=HOWTO:MoveProjectServer>

WireCAD Support is available Monday through Friday to help with any questions or concerns.

Please feel free to contact us at

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A Note About the Index

The following index is generated from the online text and as such the page numbers may represent a sub chapter heading instead of the actual page.

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