User Manual

For

VDU Control Terminal

Of MEI633

Version: 1.1

DOCID- MEI633-VDU_CT-UM-1_1

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Version History

Version number	Date	Title or brief description of change	Author
Draft	22-06-2008	Initial Version	Suhasini.V
0.1	06-12-2008	Added new Screen shots	Lavanya.B
1.0	01-06-2009	Base Lined Version	Lavanya.B
1.1	12-08-2010	Point Flashing indications added in Point Indications Section	Suhasini.V

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1 Introduction

The VDU CT (PC based Operator's Command Cum Indication Panel) is a part of Electronic Interlocking System MEI633. It is used by the System Operator to give Commands to the System and to view the current Yard status. The VDU CT is equivalent in functionality to the conventional Domino type Control Panel. Instead of Domino type CCIP, the operator can use the VDU to give commands to the EIS. Instead of knobs and buttons as in a Domino type CCIP, the commands are given through mouse by selecting the appropriate commands from the drop down menus.

In an EIS System, both Panel Processor along with CCIP and a VDU CT can be connected, or any one can be connected as Operator Interface, as per the user railway requirement.

1.1 VDU CT Configuration:

The VDU CT consists of the following:

- Standard PC with minimum 17 " monitor, 3 GHz CPU Speed, 1 GB RAM
- Two Port Add-on Serial Card-
  - The VDU CT communicates with the two Communication Processors in Central Interlocking Unit through Serial Communication using OFC Interface. To provide redundant communication channels, a two port Serial card add-on card is used.
- RS232-OFC Converter –
  - The Serial Card has RS232 Interface which is converted to OFC interface using an external adapter.

1.2 Definitions and Acronyms

No	Term	Definition
1	VDU CT	Video Display Unit Based Control Terminal
2	UM	User Manual

1.3 Terminology

- Text format for Button Name is shown in Bold and Italic.
- Text format for Menu caption is shown in Italic.
- In this manual Examples for some of the operations have been illustrated with respect to RDSO Test Yard. The IP Diagram for the same is enclosed as Appendix -
- In the end of this manual some of the examples are explained in a video file that is also with respect to RDSO yard.

2 Installations and Uninstalling

2.1 System Requirements:

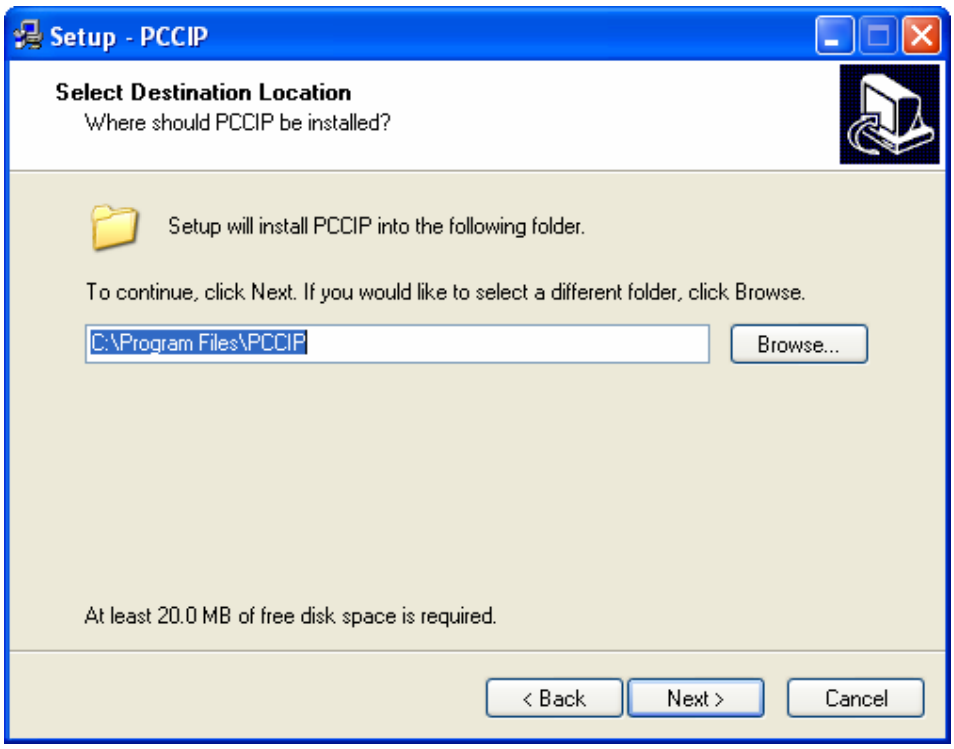
Operating System	: Win2000/WinXP
RAM	: 512MB or Higher
Processor	: Intel Pentium 4 or Higher
Hard Disk	: Minimum capacity of 40 GB.
Application Space	: 4 MB.
Screen Resolution	: 1024 X 768 or higher.

2.2 Installation:

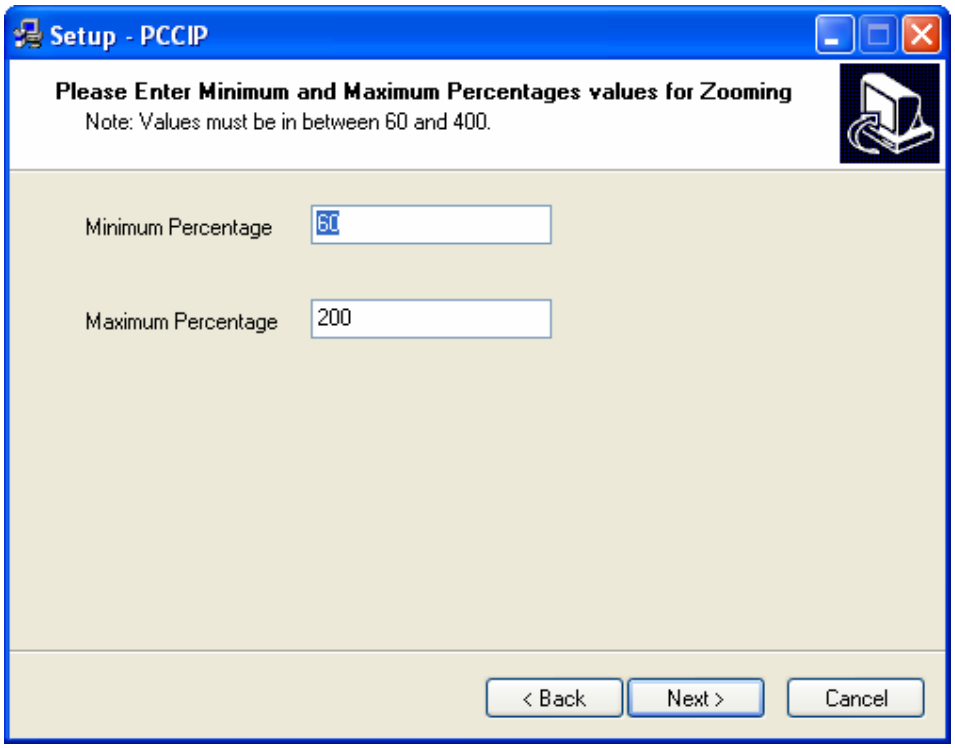
Following are the Steps to install the Software:

1. Close all the currently running applications, as some dll's files will be replaced. Double Click the PCCIP setup.exe file.

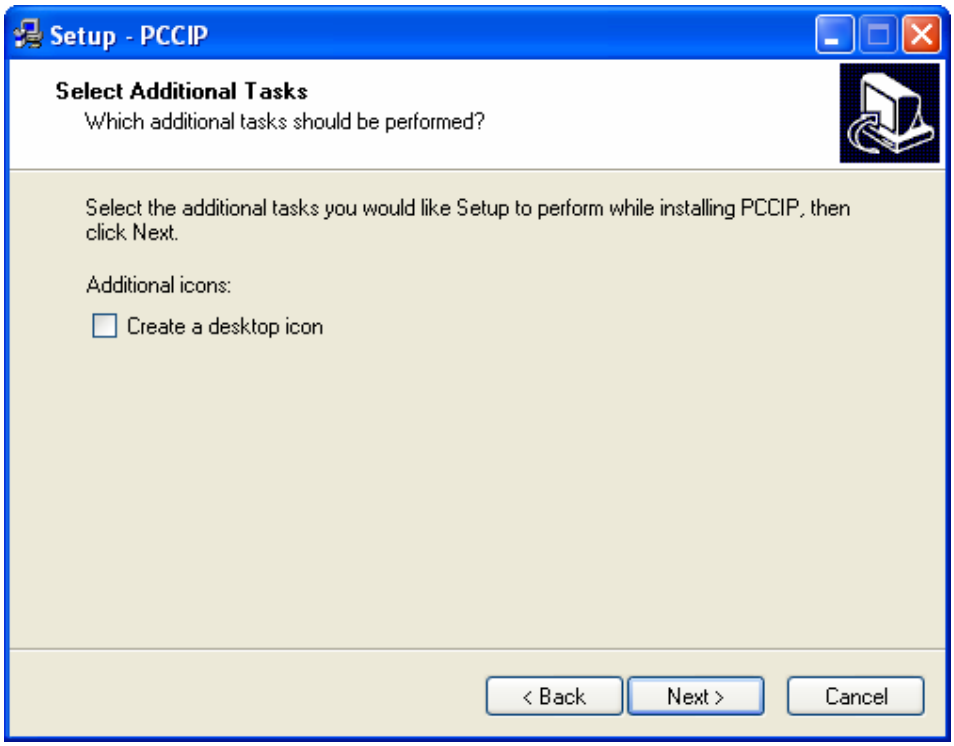
2. Select the Location where the application needs to be installed. And then Click ***Next*** Button.



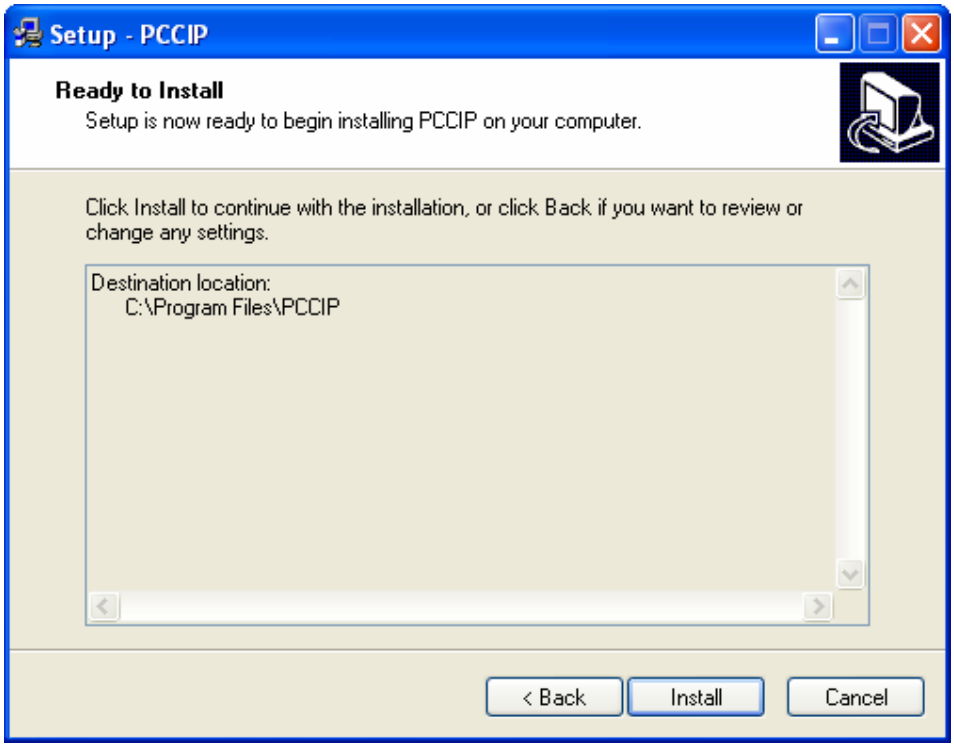
3. Enter the Minimum and Maximum Percentage values for Zooming in the Application. If you don't enter any values then it will take default values i.e. 60 and 200 for Min and Max. And then click ***Next*** Button.



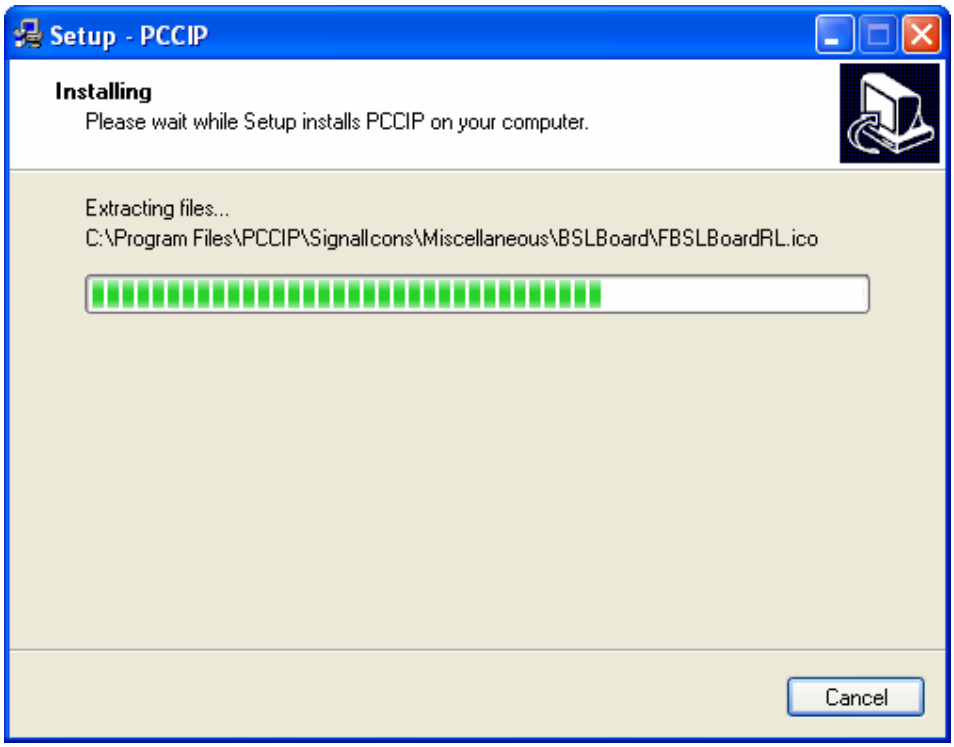
4. Tick Create a desktop icon check box if a shortcut is required at desktop. And then click ***Next*** Button.



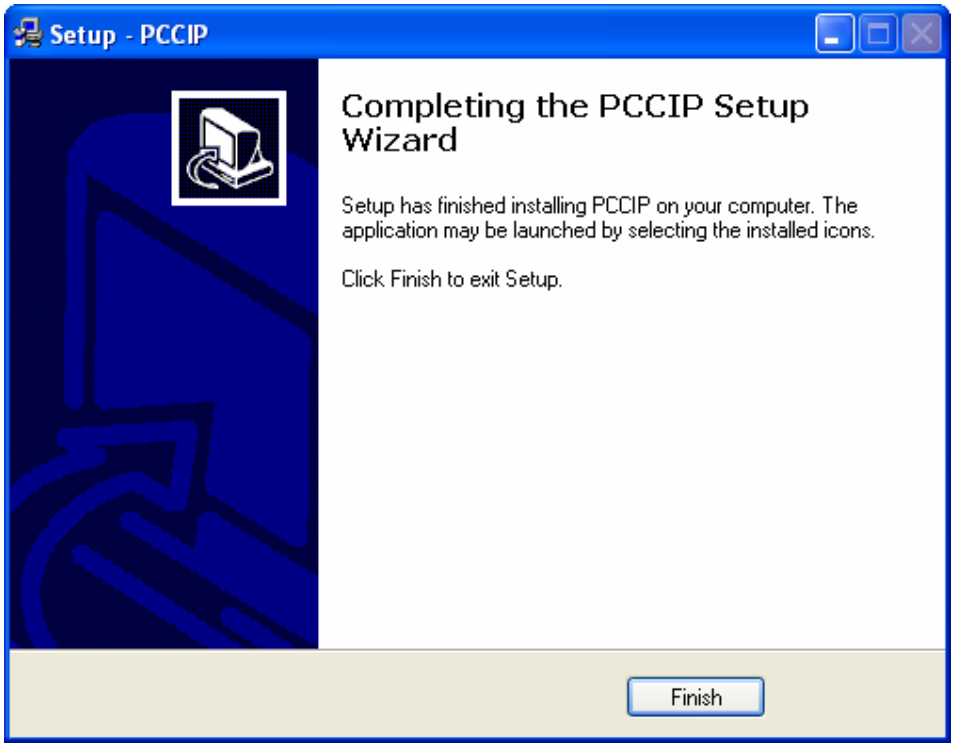
5. Click ***Install*** Button to install the application.



6. Progress of the Installation shall be shown.

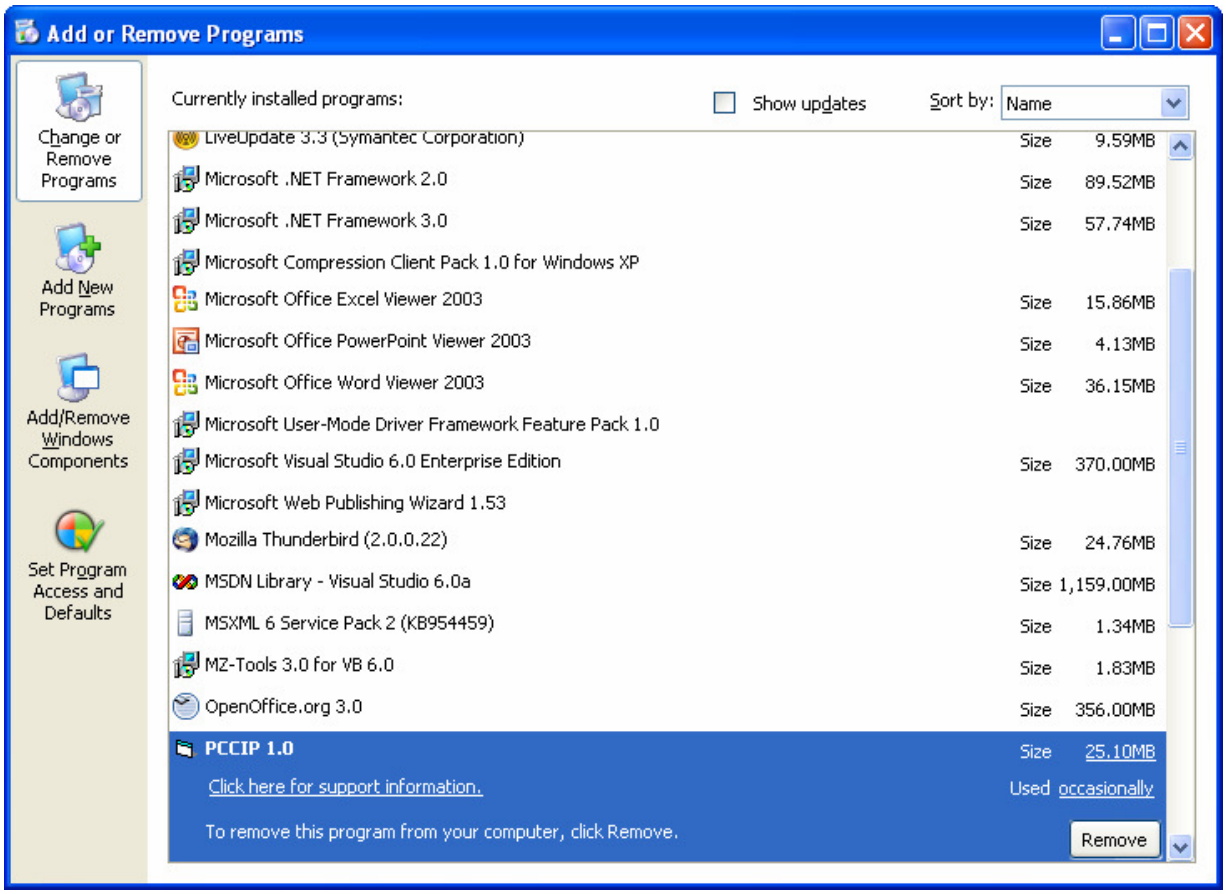


7. Click Finish button. Installation will be completed.

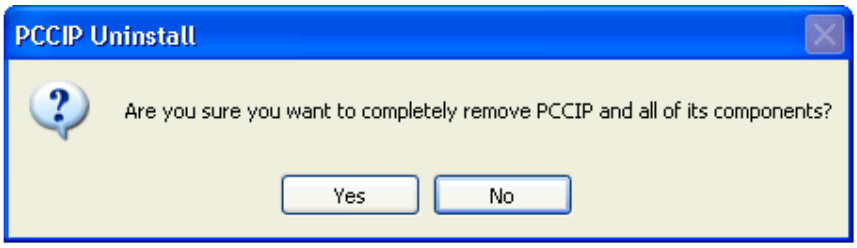


2.3 Uninstalling:

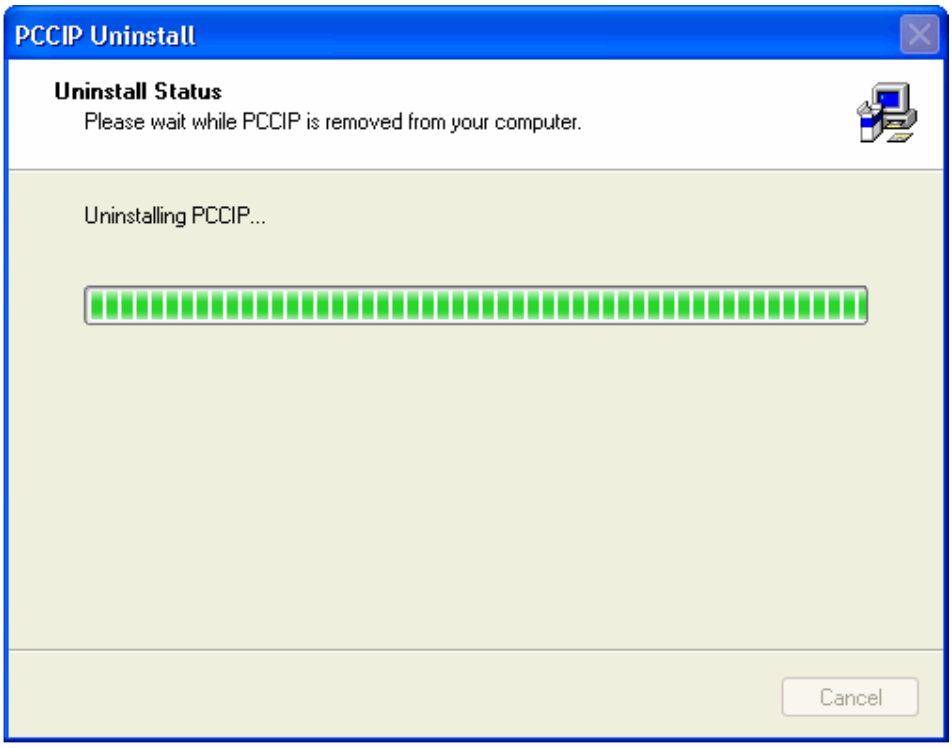
1. Click on Start → Settings → Control panel → Add/Remove programs.



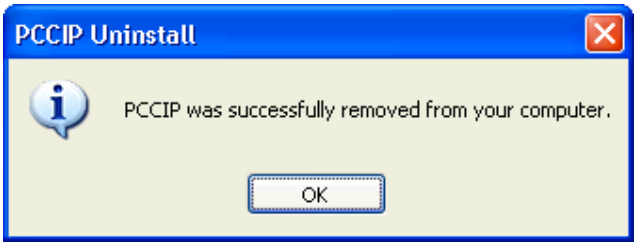
2. Go to the PCCIP program and click ***Remove*** Button. It shall ask for confirmation. Click ***Yes*** button.



3. Progress of the Uninstallation shall be shown.



4. It displays message box after completion of Uninstallation.



3 Getting Started

Pre Requisites:

To run PCCIP application, please ensure that following two points are met and also in sequence i.e. point 1 must be completed first then 2 point.

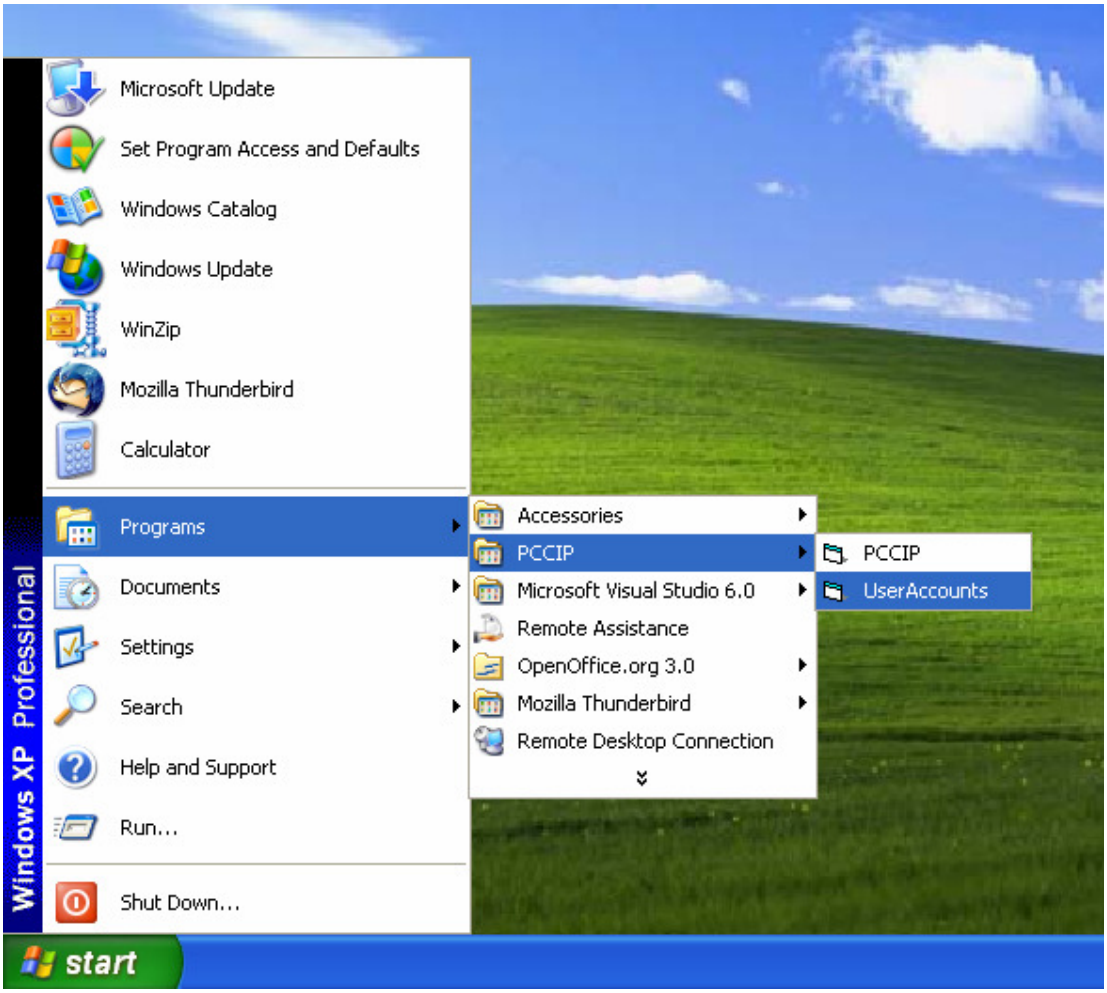
1. Yard specific database to be present in Database folder (this 'database' folder is present in application installed folder).
2. And also at least one user account exists(SM key User or SE key User).

For Example:

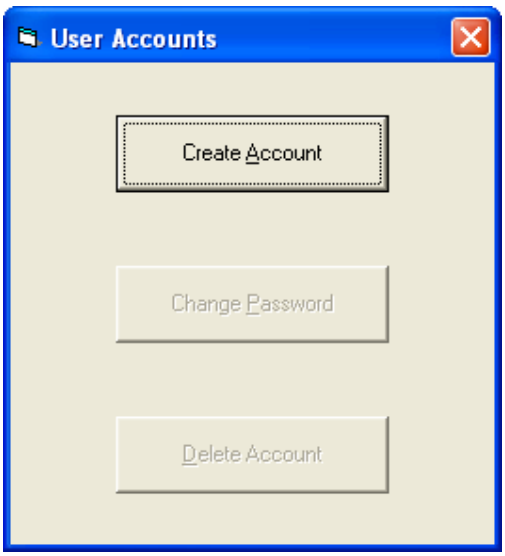
If application is installed in "C:\Program Files\PCCIP" then place Yard specific database Ex: RDSO.mdb (database file for RDSO yard) in "C:\Program Files\PCCIP\Database".

Procedure for Creating/Editing/Deleting user accounts is explained below. This same procedure can be followed later to configure user accounts.

1. Click on Start →Programs →PCCIP→ UserAccounts

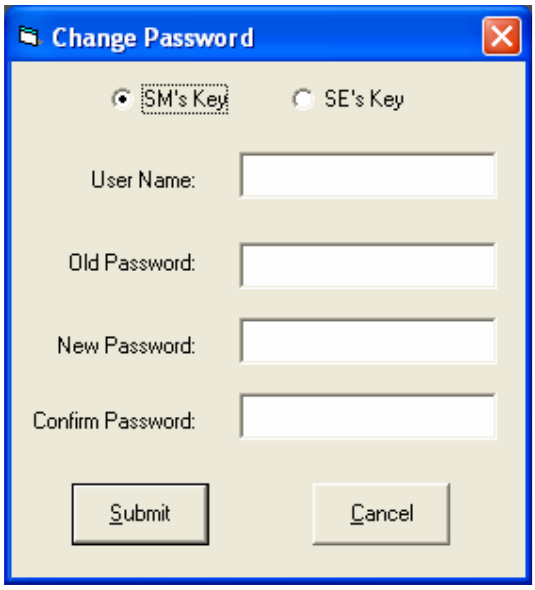


2. In User Account Window there are three buttons Create Account, Change Password and Delete Account. If no account exists then last two buttons will be disabled.

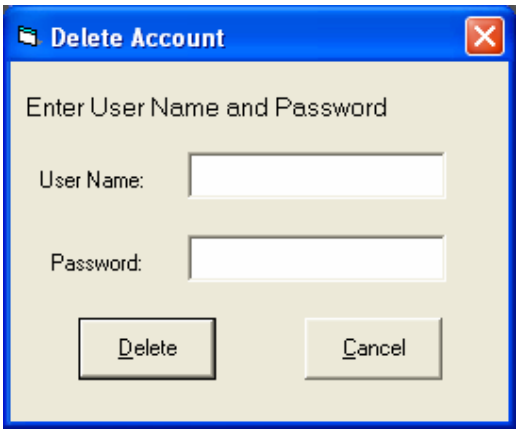


3. To Create New Account Click ***Create Account*** button. Then in Create New Account Window Select User account that will be used for SM's Key or SE's Key. And enter User Name and password. And finally Click ***Create*** Button.

4. To Change Password of the existing user Click ***Change Password*** Button. Then in change Password Window select SM's Key or SE's Key, enter the User Name, Old Password and New Password. Finally click ***Submit*** button.



5. To Delete the Existing Account Click ***Delete Account*** Button. Then in Delete Account Window Enter User Name and Password and Click Delete Button.

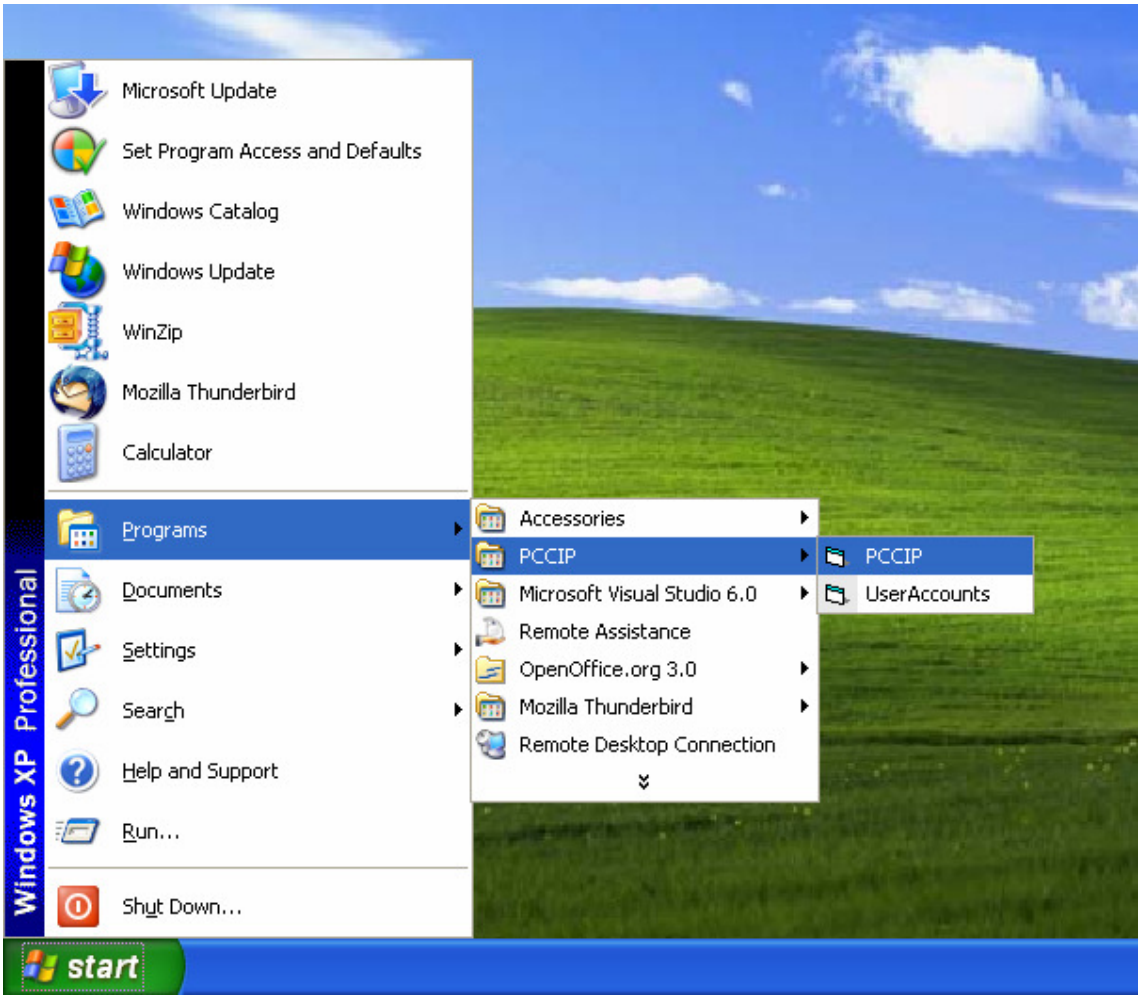


Note:

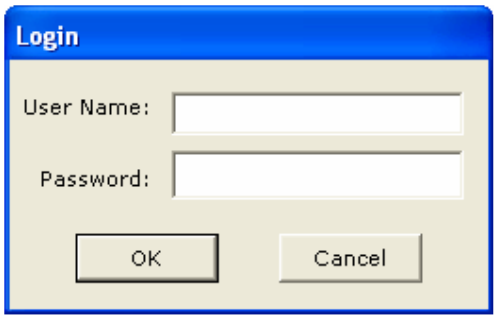
As a security measure some restrictions are kept in User Accounts such as Length of the Password must be at least 6 characters and Number of Users cannot exceed 20.

- Steps to Start the PCCIP Application

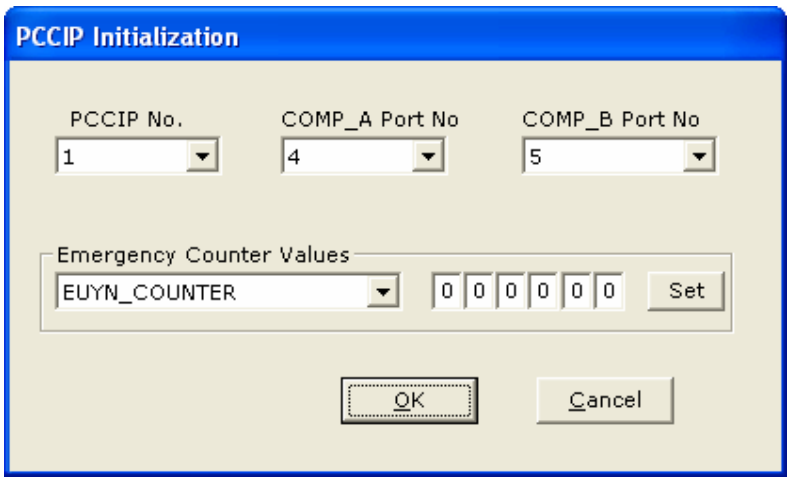
1. Click on Start →Programs →PCCIP→ PCCIP



2. Login window will be shown. In this enter any valid Username and password, i.e. User Account created in User Accounts application. And click ***OK*** Button.



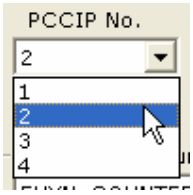
3. Next PCCIP Initialization Window will be shown. Enter the Configuration Parameters and Click OK Button.



Each Parameter in the window is explained below:

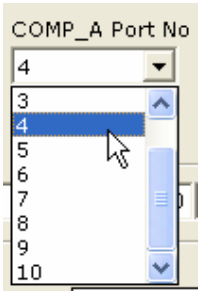
VDU CT No.:

VDU CT Number. To select a VDU CT number click the down arrow button. It displays a list of choices containing numbers. Then among these options select any one option by clicking the left button of the mouse.



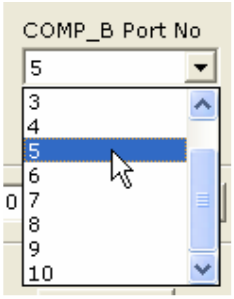
Port No A:

Port number A. To select a Port Number click the down arrow button. It displays a list of choices containing numbers. Then among these options select any one by clicking the left button of the mouse.



Port No B:

Port number B. To select another Port number click the down arrow button. It displays a list of choices containing numbers. Then among these options select any one by clicking the left button of the mouse.

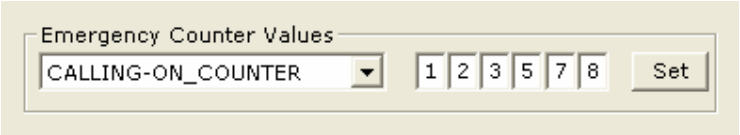


Counter Values:

- Emergency Counter Values. To enter values to the counter select the Counter from the list.

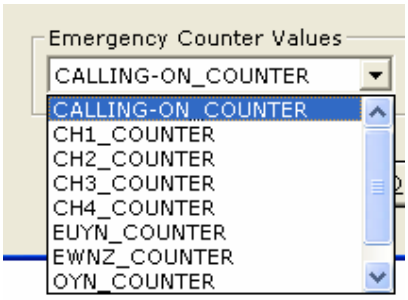
This list consists of following counters

- Crank Handle Counter.
- CallingOnCounter.
- Emergency Cancellation Counter.
- Emergency Route Release counter.



Number of items in the list may vary.

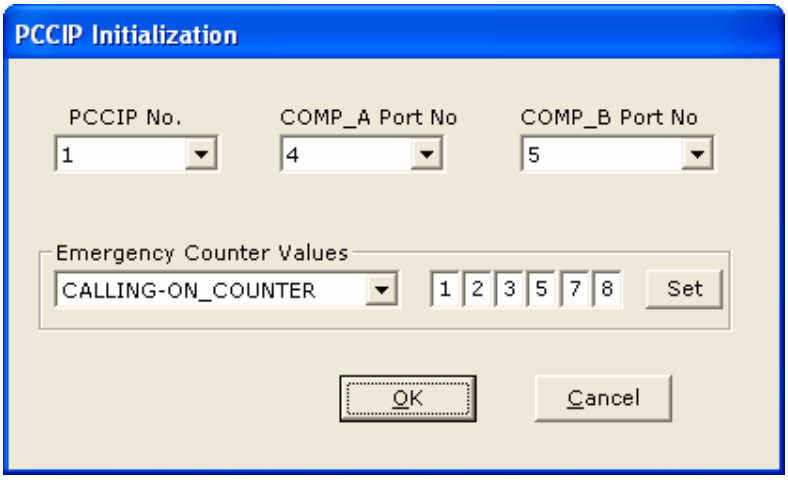
Ex: If a yard consists four crank handles then list includes four crank handles counters.



- To enter the counter values select the required counter and enter the numbers in the counter value boxes.

- After entering required values click the ***Set*** Button.

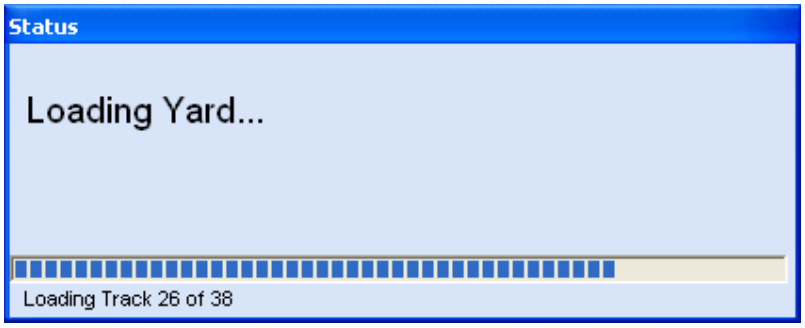
. This it shall ask for authentication i.e. User Name and password.



- Enter the correct user name and password and click ***OK*** Button to set the counter values or else click ***Cancel*** button to cancel it.

- Counter Values are saved when VDU CT is closed. Already saved Counter values are displayed whenVDU CT is started next time.

4. Yard shall be displayed and it shows progress bar.



5. Finally Yard is displayed .It consists of tracks and panel buttons and other miscellaneous elements in the yard. Now required operation in the yard can be performed.

4 Changing VDU CT to Active Command Panel

In case both PP and VDU CT are connected, then only one of them should be used to give commands to the System, while both of them can provide the indication of Yard status.

By default, the VDU CT is set to Indication Mode. If the Operator desires to use the VDU CT for giving commands it should be changed to Command mode.

In Indication mode, the VDU CT Application provides all the indications. In Indication mode, all the menus except those required for changing the VDU CT to Active Command mode are disabled. To use PC as Active Command Panel, execute the following steps:

- Enable SM Key or SE Key in VDU CT.
- Change VDU CT to Command mode using Panel/PC Key Control.
- Change the Panel/PC key to PC Position, and remove the Panel/PC Key.
- Remove the SM Key from Domino Panel.

5 Operator Commands and Indications

This Section describes the Commands and Indications provided by the VDU CT application.

5.1 SM Key

Station Master Key Control is equivalent to the SM key on the Domino Panel.

The 'KEY IN" LED ON indicates that the SM's key is enabled in the Active Command Panel.

The Yellow color of the SM Key Icon indicates that the SM key is enabled in the VDU CT.

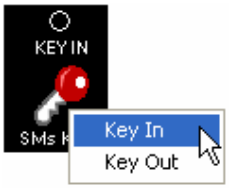
The Operator should remove the SM key from the Domino Panel and then enable the SM key in VDU if he desires to set the VDU in Command mode.

SM key enabled in the VDU CT

SM key disabled in the VDU CT, Key-In in Domino Panel

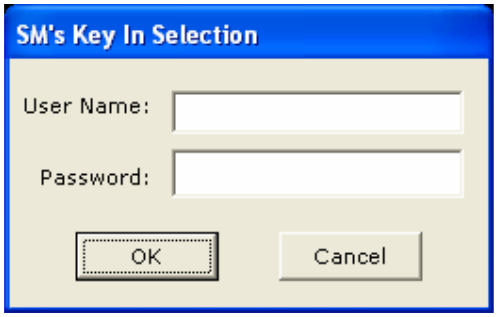
5.1.1 SM Key In/Enable:

The SM key is enabled in the VDU CT through password authorization. To enable the SM key, Right click on the key. A pop up menu is displayed. Click on the Key In menu option.



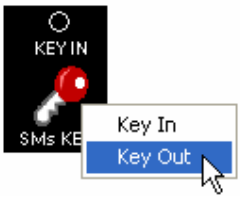
SM key authorization window appears on the screen

Enter User Name and Password, which are created at the User Accounts Application for Station Master and click ***OK*** button to Enable SM Key IN. Else press ***Cancel*** button.

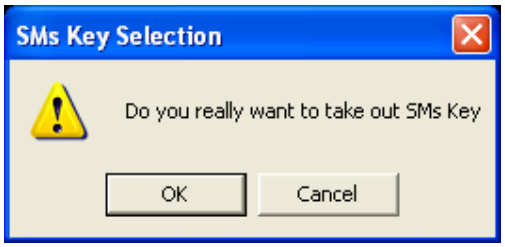


5.1.2 SM Key out/Disable Operation:

To disable SM key, right click on the SM key icon. A pop up menu is displayed. Click on the Key Out menu option.



The confirmation pop-up window appears on the screen. Click on 'Yes' to confirm SM key Out Operation.



5.2 SE's Key

SE's (Station Engineer's) Key Control is equivalent to the SE key on the Domino Panel.

The 'KEY IN" LED ON indicates that the SE's key is enabled in the Active Command Panel.

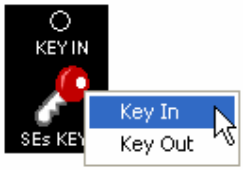
The Yellow color of the Key Icon on the SE Key Control indicates that the SE key is enabled in the VDU CT.

SE key enabled in the VDU CT

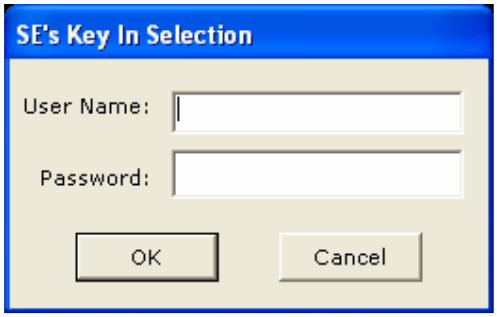
SE key disabled in the VDU CT, Key-In in Domino Panel

5.2.1 SE Key In/Enable:

The SE key is enabled in the VDU CT through password authorization. To enable the SE key, Right click on the key. A pop up menu is displayed. Click on the Key In menu option.

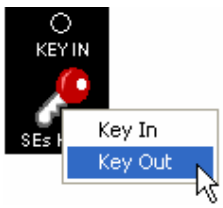


SE key authorization window appears on the screen. User Name and Password, which are created at the User Accounts Application for Station Engineer and click ***OK*** button to Enable SE Key IN. Else press ***Cancel*** button.

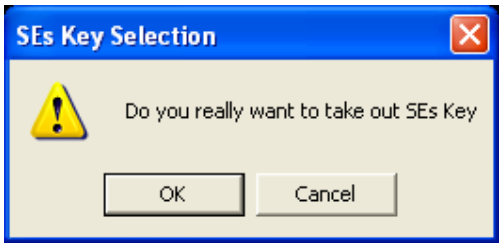


5.2.2 SE Key out/Disable Operation:

To disable SE key, right click on the SE key icon. A pop up menu is displayed. Click on the Key Out menu option.



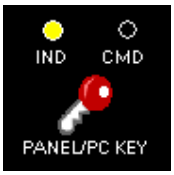
The confirmation pop-up window appears on the screen. Click on 'Yes' to confirm SM key Out Operation.



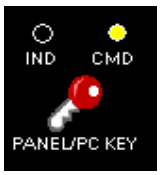
5.3 Panel/PC Key

This key control is used to change the VDU CT Operational Mode. When the VDU CT Application is invoked, it is set to Indication mode by default.

IND: Indication Mode
CMD: Command Mode.



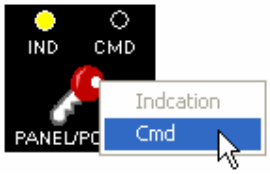
Indication Mode



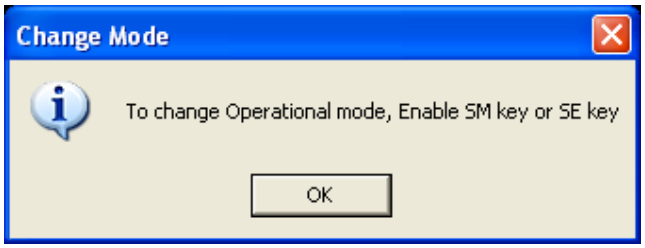
Command Mode

5.3.1 Changing the Operational Mode:

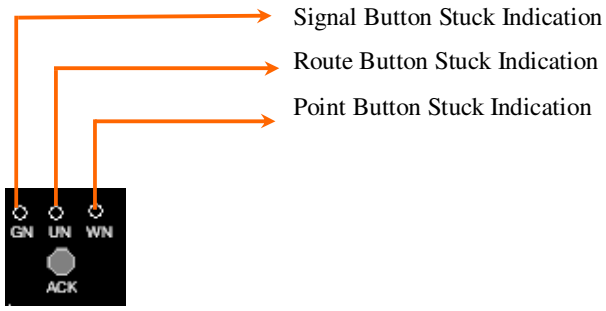
The Mode Change Operation is valid only when the SM's key or SE's key is in. To change the Operational mode, right click on the Panel/PC Key. If the SM key or SE key is enabled in VDU CT, a pop up menu is displayed. Click on the desired mode.



If the SM key or SE key is not enabled, the following pop-up message appears on screen.



5.4 Button Held Indication and Acknowledgement:



Signal Button Stuck

Route Button Stuck

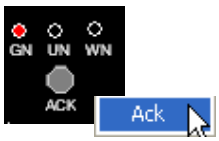
Point Button Stuck

If any Signal, Route or Point Button is stuck on the Domino Panel, the corresponding LED shows Red indication as shown above, and is accompanied by a Buzzer.

The Buzzer can be stopped by acknowledging the fault.

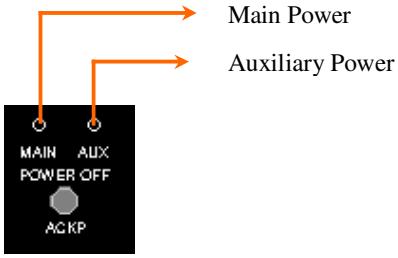
To acknowledge the Button stuck fault, Right click on this image.

Click on the Ack menu option.



The Indication LEDs shall be restored to their default state (blank) if the button stuck fault is removed.

5.5 Power off Indication and Acknowledgement



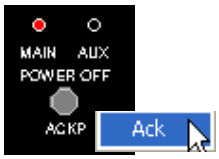
Indications:

Main LED 'ON': System Operating on 'MAIN' Power Supply

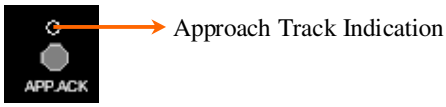
Aux LED 'ON': System Operating on 'AUX' Power Supply

Buzzer and Acknowledgement:

When Main Power Supply fails, a Buzzer is turned on to alert the operator. To acknowledge the fault, right click on this image, a pop up menu is displayed, then click on the Ack menu option. The Buzzer stops when the fault is acknowledged by the Operator.



5.6 Approach Track Indication and Acknowledgement



Indications:

LED 'ON' : Approach Track is Occupied.

Buzzer and Acknowledgement:

When Approach Track is occupied, a Buzzer is turned on to alert the operator. To acknowledge, right click on this image, a pop up menu is displayed, then click on the Ack menu option. The Buzzer stops when the fault is acknowledged by the Operator.

5.7 Isolated Track circuit Failure Indication and Acknowledgement

Indications:

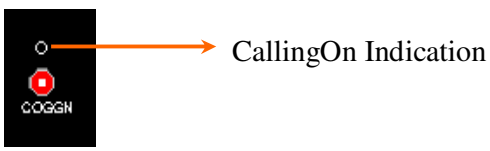
LED ‘ON’: Track Circuit is failed

Buzzer and Acknowledgement:

When Track circuit fails, a Buzzer is turned on to alert the operator. To acknowledge, right click on this image, a pop up menu is displayed, then click on the Ack menu option. The Buzzer stops when the fault is acknowledged by the Operator.

5.8 Calling On Indication

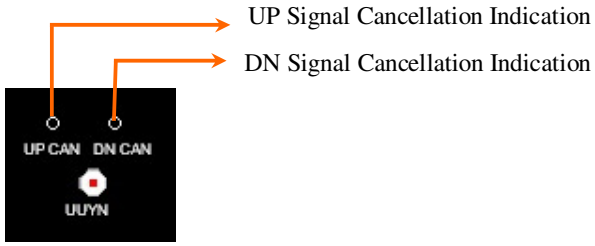
The Calling ON LED provides a Red flashing when calling on route set is in progress and also when calling on route cancellation is in progress.



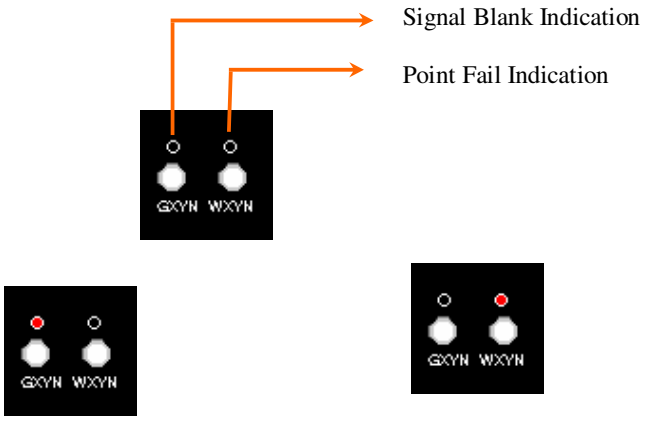
Calling On Red Indication

5.9 Route cancellation Indication

The Route cancellation LED shows a flashing Yellow Indication when the route cancellation is in progress. The 'UP CAN' LED provides the indication for 'UP' direction Signals and 'DN CAN' LED provides the indication for 'DN' direction Signals.



5.10 Signal Blank and Point Fail Indication and Acknowledgement

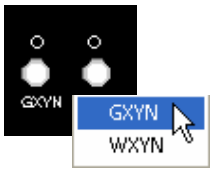


Signal Blank - Red Indication

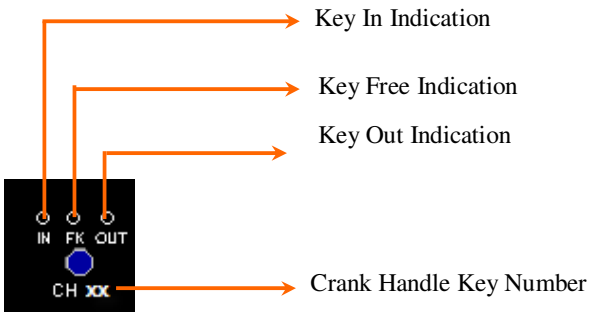
Point Failure - Red Indication

Acknowledgement:

Right click on this image a pop up menu is displayed. Click on the GXYN menu option to acknowledge Signal failure. Click on 'WXYN' to acknowledge Point failure.



5.11 Crank handle operation and Indications

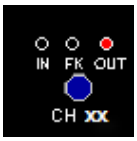


IN: 'Yellow' Indication which is turned on when the CH is in and locked.
FK: 'Yellow' Indication when the Crank Handle is free.
OUT: ' Red' Flashing Indication when the Slot is Normal and the Key is 'IN'
A Steady 'Red' Indication when the Slot is Normal and Key is out

Indications:

Crank handle – IN Yellow Indication

Crank handle - FREE Yellow Indication



Crank handle – OUT Red Indication

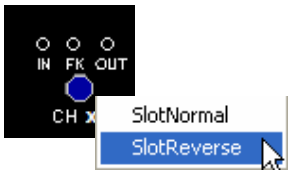
- Ex: For crank handle with name as CH1.

Slot Normal Operation:

Right click on the image, a pop up menu is displayed. Click on the SlotNormal menu option.

Slot Reverse Operation:

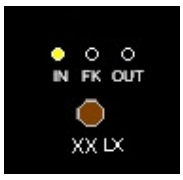
Right click on the image, a pop up menu is displayed. Click on the SlotReverse menu option.



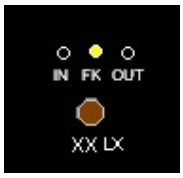
5.12 Level Crossing Gate operation

IN: 'Yellow' Indication which is turned on when the LC gate key is IN and locked.
FK: 'Yellow' Indication when the Level Crossing gate is free.
OUT: ' Red' Flashing Indication when the Slot is Normal and the Key is 'IN'

A Steady 'Red' Indication when the Slot is Normal and Key is out.



Level Crossing Gate IN – Yellow Indication



Level Crossing Gate FREE – Yellow Indication

Level Crossing gate OUT - Red Indication

- Ex: For level crossing gate with name as 701LX

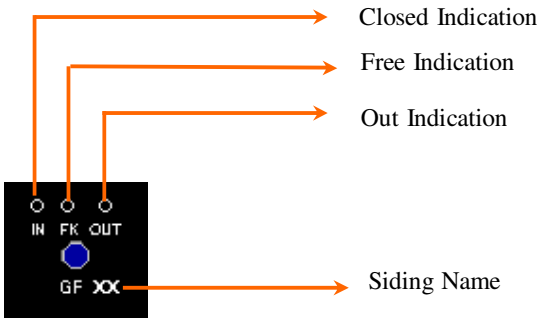
Slot Normal operation:

Right click on this image, a pop up menu is displayed. Click on the SlotNormal menu option.

Slot Reverse operation:

Right click on this image, a pop up menu is displayed. Click on the SlotReverse menu option.

5.13 Sidings Operation



IN: 'Yellow' Indication which is turned on when the Siding key is IN and locked.
FK: 'Yellow' Indication when the Siding is free.
OUT: ' Red' Flashing Indication when the Slot is Normal and the Key is 'IN'
A Steady 'Red' Indication when the Slot is Normal and Key is out

Indications:

Siding In – Yellow Indication

Siding Free – Yellow Indication

Siding Out – Red Indication

Ex: Siding with name as GF1

Slot Normal operation:

Right click on this image, a pop up menu is displayed. Click on the SlotNormal menu option.

Slot Reverse operation:

Right click on this image, a pop up menu is displayed. Click on the Slot Reverse menu option.

5.14 UP Overlap Time Release

UP Overlap Time Release indication is Normally Off and it flashes when Up Overlap Release is in Progress.

5.15 Down Overlap Time Release

Down Overlap Time Release indication is normally Off and it flashes when Down Overlap Release is in Progress.

5.16 Generic LED, Button and Label

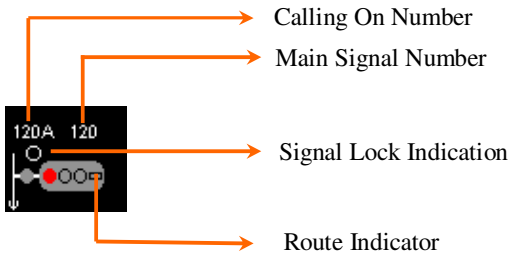
Generic LED, Button and Label is created by user by using the Yard Design software. Here Button shall have a Pop Up menu to perform Button Press and Release Operation.

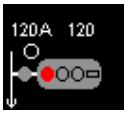
5.17 Signal Indications and Operation

5.17.1 Signal Indications:

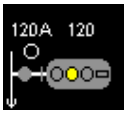
Signal Indication reflects the status of the Signal lamp in the field.

- Home signal with 3 aspect, Calling on and Route indicator shall have following indications.

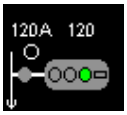




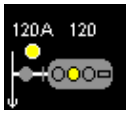
120 Signal – Red Indication



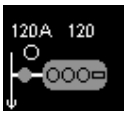
120 Signal – Yellow Indication



120 Signal – Green Indication

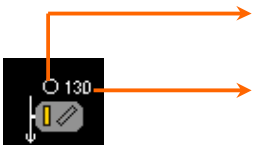


120 Signal – Signal Lock Indication



120 Signal – Blank Indication

- Shunt Signal Indications



130 Signal ON - Yellow Indication

130 Signal OFF - Yellow Indication

5.17.2 Signal Operations

All Stop Signals will have the following Operations:

- Route Set.
- Signal Cancel.
- Route Cancel

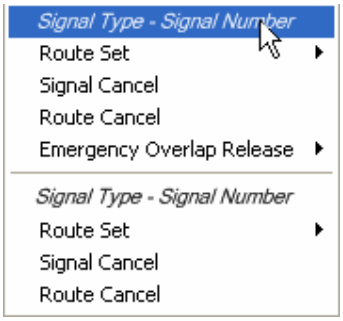
Additional operations may be shown depending on the type of the signal.

- Home signal shall have Emergency Overlap Release menu option.
- Semi Automatic signal shall have Automatic Mode menu option.

5.17.2.1 Signal Menu Format

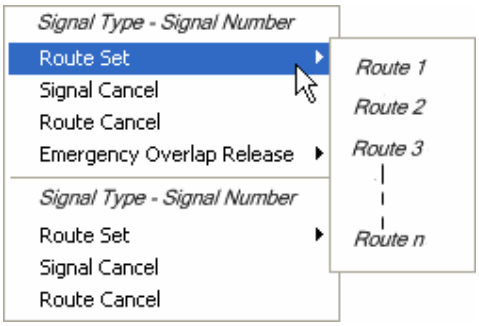
- Depending on the Signal Type menu options may vary.
  - Route Set Menu option has one Sub Menu and this menu consists of routes for that particular Signal.
  - Emergency Overlap Release Option has one sub menu and this menu consists of routes for that particular Signal.

Signal Type – Type of the Signal. Ex – Home, Starter, Calling On etc



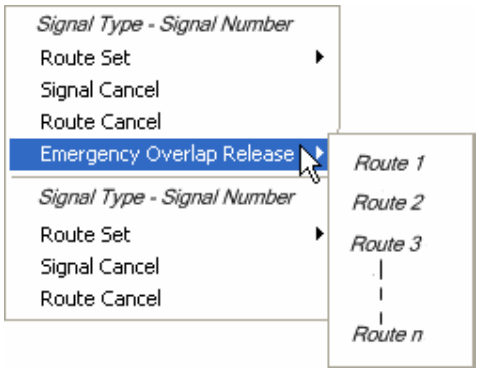
Signal Number – Number for the Signal. Ex: S120, S10 CO120 etc

- Route set menu option consists of one more level i.e. routes for that signal



Route 1, Route 2, Route 3-..Route n are Route names for that particular *Signal Number*

- Emergency Overlap Release menu option consists of one more level i.e. routes for that signal
- Semi-Automatic signal has one more menu option i.e. *Auto Mode Enable*.



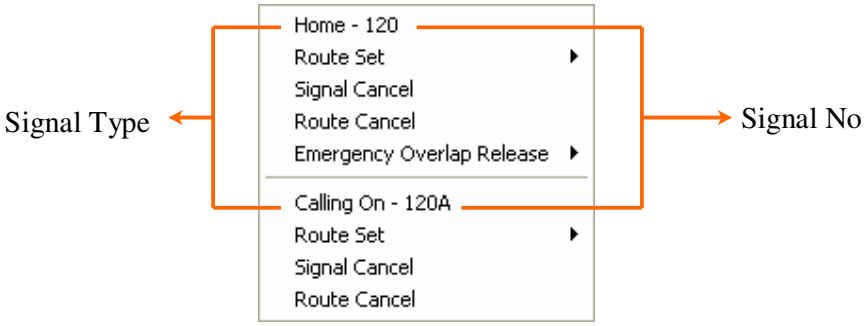
Route 1, Route 2, Route 3…….Route n are Route names for that particular *Signal Number*

5.17.2.2 Signal Menu Examples

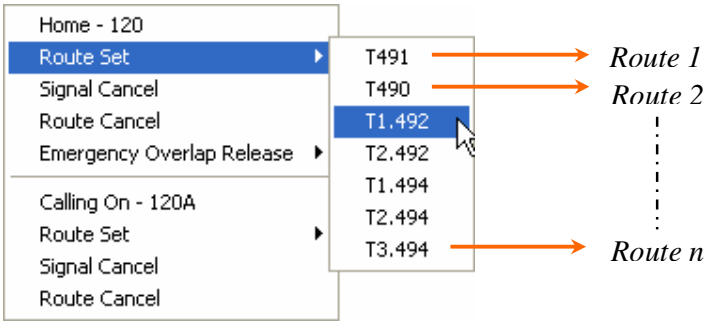
- For a typical Home signal,

  Home signal NO: 120, its routes are - T491, T490…….
  Its calling on name 120A, its routes are - T491, T490…
  Its Emergency Overlap routes - T491, T490…
  Menus will look like

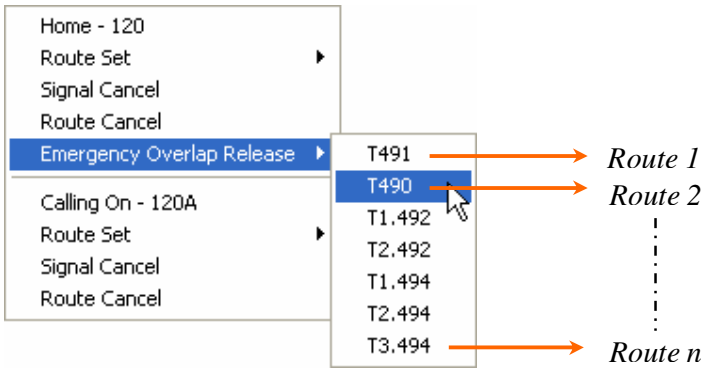
Signal menu for this signal shall be



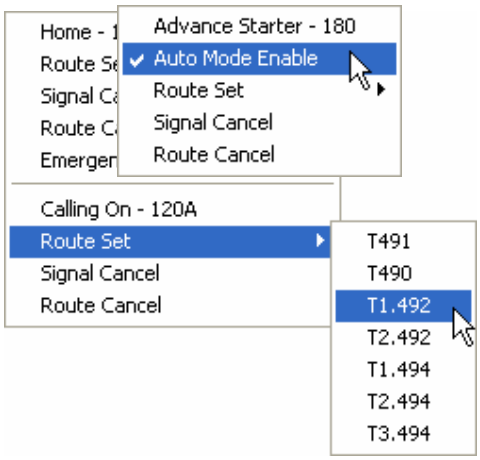
Main Signal Routes menu shall be



Emergency Overlap Release Routes menu shall be



Calling On Routes menu shall be

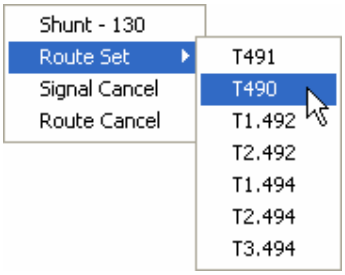


- For a typical shunt signal

Shunt signal with name 130 and its routes T491…….

Signal menu for this signal shall be

Routes menu shall be

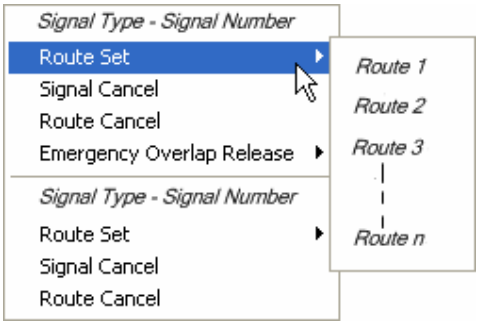


- For a typical Semi Automatic signal:

  Click on this menu option to enable or disable auto mode. Tick mark in the menu shows that signal is in auto mode Otherwise signal is in normal mode.

5.17.2.3 Route Setting

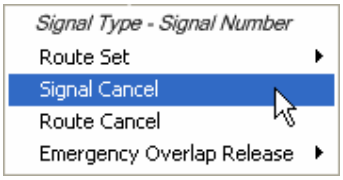
Right Click on the signal icon, a pop up menu is displayed. Go to Route Set menu option and in that Click on the required route in the routes sub menu.



Route 1, Route 2, Route 3…….Route n are Route names for that particular *Signal Number*

5.17.2.4 Signal Cancellation

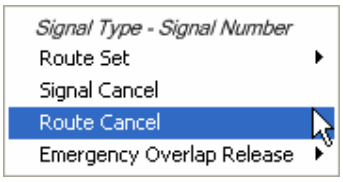
Right Click on the signal icon, a pop up menu is displayed. Click *Signal Cancel* menu option.



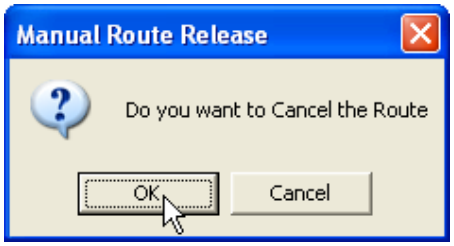
Signal Type – Type of the Signal. Ex – Home, Starter, Calling On, Advanced Starter etc
Signal Number – Number for the Signal. Ex : S120,S10 CO120,SH130 etc

5.17.2.5 Route Cancellation

Right Click on the signal icon, a pop up menu is displayed. Click *Route Cancel* menu option.
.



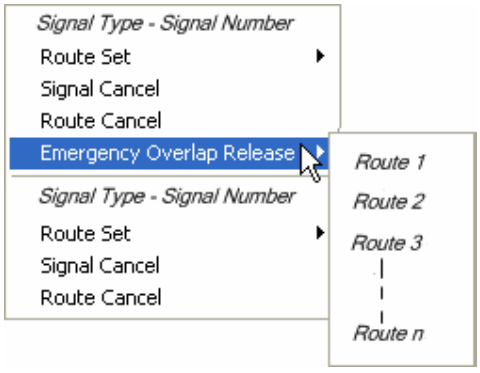
Signal Type – Type of the Signal.
Signal Number – Number for the Signal.



It asks for confirmation message box. Click ***OK*** button to cancel the route or else click ***Cancel*** button to abort the operation.

5.17.2.6 Emergency Overlap Release

Right Click on the signal icon, a pop up menu is displayed. Go to Emergency Overlap Release menu option and in that Click on the required route in the routes sub menu.



Route 1, Route 2, Route 3…….Route n are Route names for that particular *Signal Number*

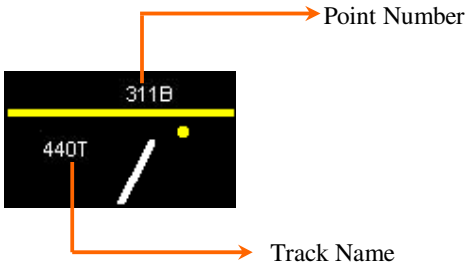
It asks for confirmation message box. Click ***OK*** button to cancel the route or else click ***Cancel*** button to abort the operation.

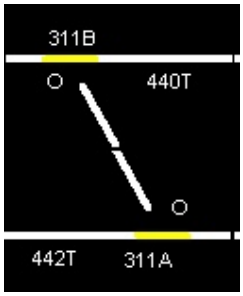
5.18 Point Indications and Operation

5.18.1 Point Indications

5.18.1.1 Point Normal Indication

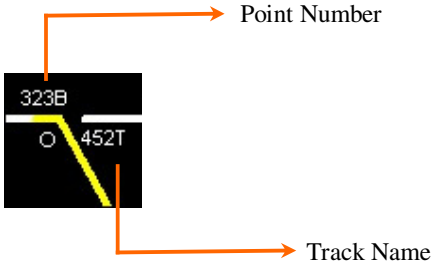
Point Normal Indication is provided as illustrated in the figures below.

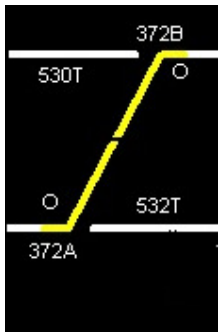




5.18.1.2 Point Reverse Indication

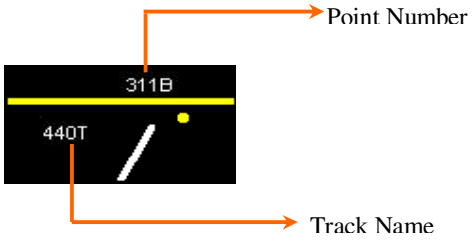
Point Reverse Indication is provided as illustrated in the figures below.





Point Lock Indication

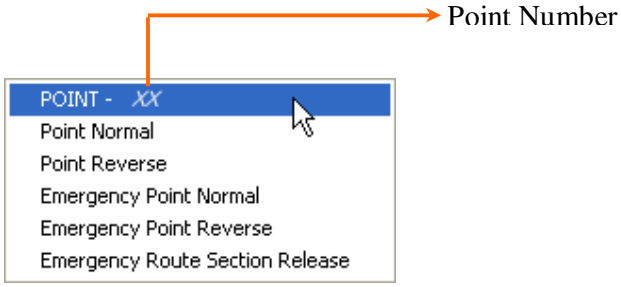
Point Lock Indication is provided by an LED at the Point Ends. The LED is off when the Point is free. When the Point is locked in the route, the LED provides Yellow Indication.



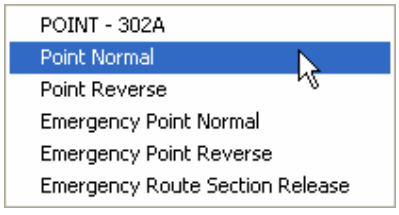
Point flash Indications are provided when point is operating to reverse position from normal position or normal position to reverse position. The Point appears like flashing in yellow color for short period till the point becomes normal or reverse.

5.18.2 Point Operations:

Right click on the track, which consist of at least one point, a pop up menu is displayed this is called Point Menu.



Ex: Point menu for point 302A

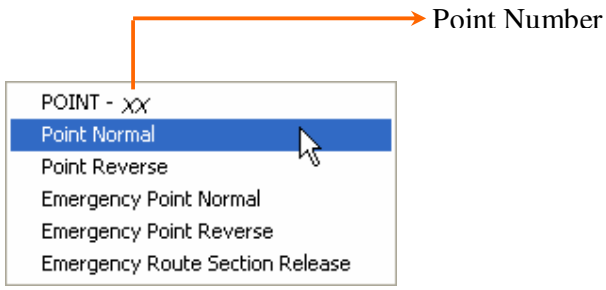


Note:

- Point Menu does not exist for the tracks, which does not contain any points.
- To get Point Menu ensure that track consists of at least one point.

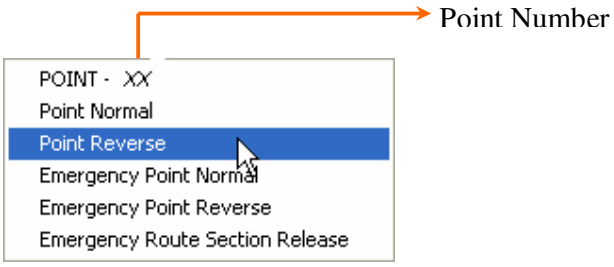
5.18.2.1 Point Normal operation

Right click on the track, a pop up menu is displayed. Click on the *Point Normal* menu option.



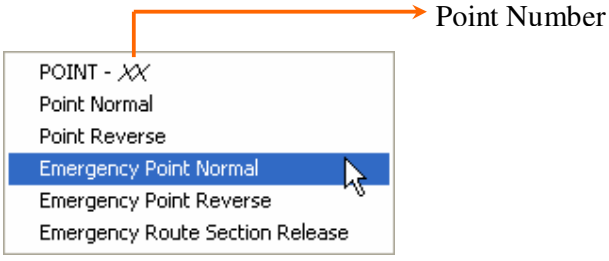
5.18.2.2 Point Reverse operation

Right click on the track, a pop up menu is displayed. Click on the *Point Reverse* menu option.

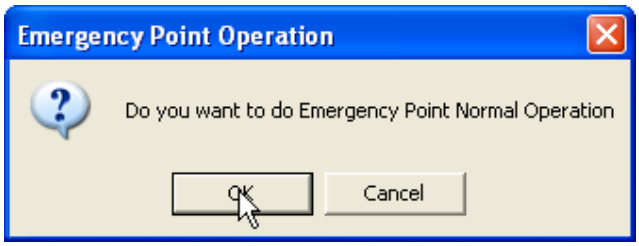


5.18.2.3 Emergency Point Normal operation

Right click on the track, a pop up menu is displayed. Click on the *Emergency Point Normal* menu option.

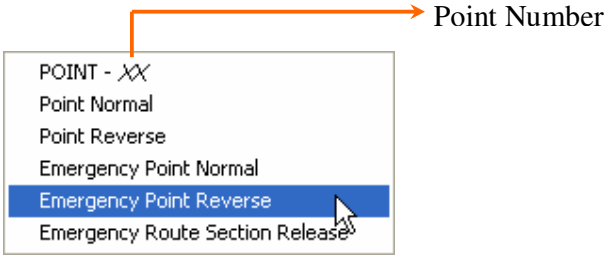


It asks for confirmation message box. Click ***OK*** button to do the operation else click ***Cancel*** button to do nothing.

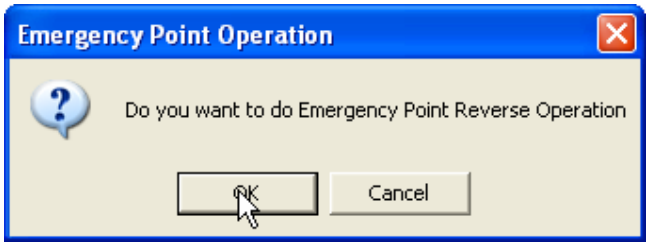


5.18.2.4 Emergency Point Reverse operation

Right click on the track, a pop up menu is displayed. Click on the *Emergency Point Reverse* menu option.

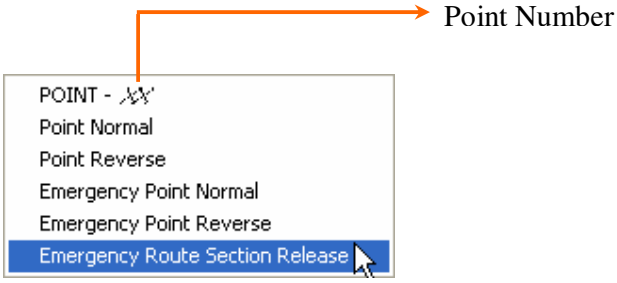


It asks for confirmation message box. Click ***OK*** button to do the operation else click ***Cancel*** button to do nothing.

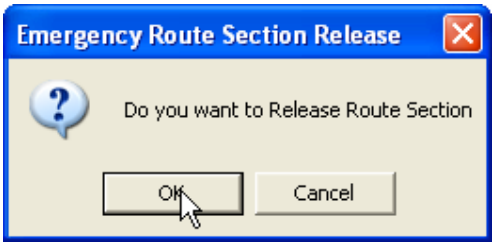


5.18.2.5 Emergency Route Section Release operation

Right click on the track, a pop up menu is displayed. Click on the *Emergency Route Section Release* menu option.



It asks for confirmation message box. Click ***OK*** button to do the operation else click ***Cancel*** button to do nothing.



5.19 Track Indications

- Track indications when Track is free:

  Normally i.e. when track is free its color shall be white.

- Track indications when Routes is Set.

  When the route is set Track color shall be yellow

- Track indications when Track is occupied.

  When the Track is occupied, its color shall be red.

5.20 Button Lock/Unlock Operation and Indication

Button Lock Operation allows disabling of operation for the selected functions. The Operations can be enabled again by unlocking the locked function operation.

5.20.1 Button Lock Indication

.

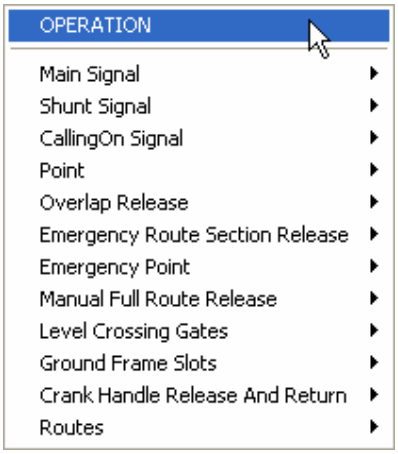
Default Indication (When nothing is locked or no menu item is checked)

Lock Indication (When any one item is locked or menu item is checked)

5.20.2 Lock or Unlock Operation:

Right Click on this image, a pop up menu is displayed this menu is called Button Lock/Unlock Menu. To Lock or Unlock the required button go to the required menu and click on it. This shall be explained in detail below.

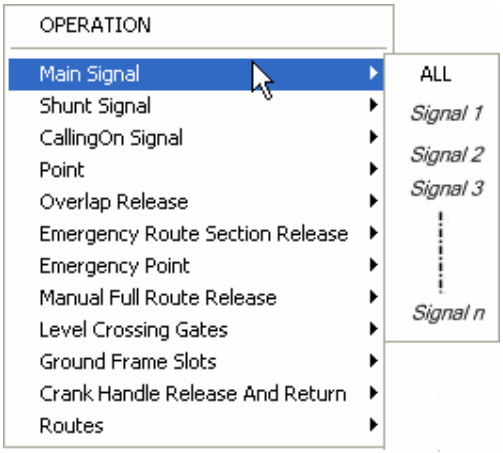
Button Lock/Unlock Menu:



Each Menu option is explained in detail below:

General Points:

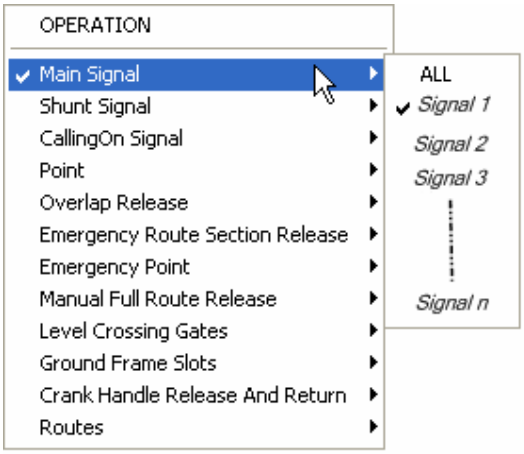
- ALL Option:
  - Click on this menu option to lock /unlock all the items in the menu.
- When a menu option is clicked, it will be checked i.e. a tick mark will be shown if it is previously unchecked or else it will be unchecked if it is previously checked.
- If a menu item is checked its main menu or parent menu will also be checked as shown below and color of Lock / Unlock image will be changed to yellow.



Signal 1, Signal 2, Signal 3,…….. Signal n are Signal numbers exist in the yard

5.20.2.1 Main Signal

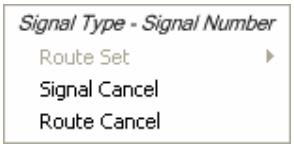
This menu consists of one sub level menu and this sub menu consist of signals. Tick mark on that particular item indicates that particular signal is locked.



Signal 1, Signal 2, Signal 3,..... Signal n are Main Signals numbers exist in the yard

Check mark on *Signal 1* indicates that *Signal 1* is locked.

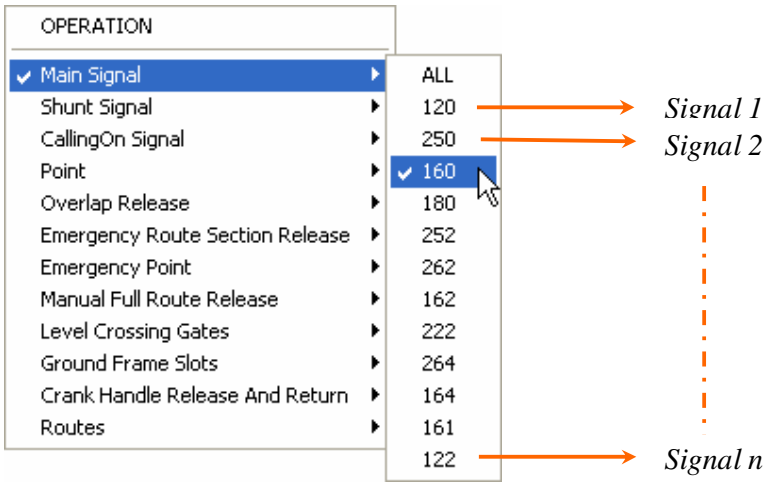
When a Signal is locked i.e. item is checked in the menu, for that signal menu *Route Set* menu option will be disabled. This is how we achieve Signal button Lock.



Example:

To Lock 160 Signal:

As explained earlier right click on the Lock/unlock icon, a pop up menu is displayed then go to Main Signal menu option, next in the sub level menu click on the 160 menu option. By doing this menu option will be checked i.e. a tick mark shall be shown.



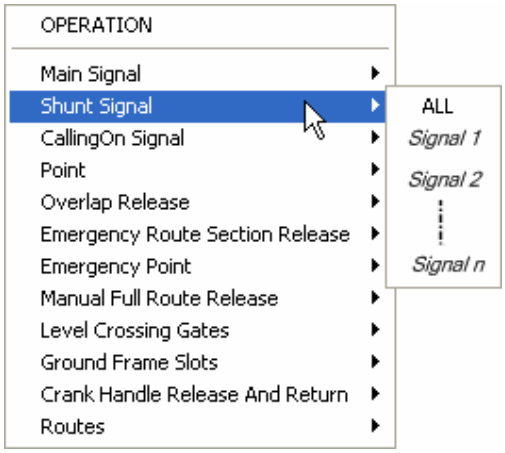
For the 160 Signal Menu Route Set menu option is disabled i.e. this signal button is locked..

To Unlock 160 Signal:

The process is same as for locking i.e. right click on the Lock/unlock icon, a pop up menu is displayed then go to Main Signal menu option, next in the sub level menu click on the 160 menu option. By doing this checked menu option will be unchecked i.e. tick mark will be removed..

5.20.2.2 Shunt Signal

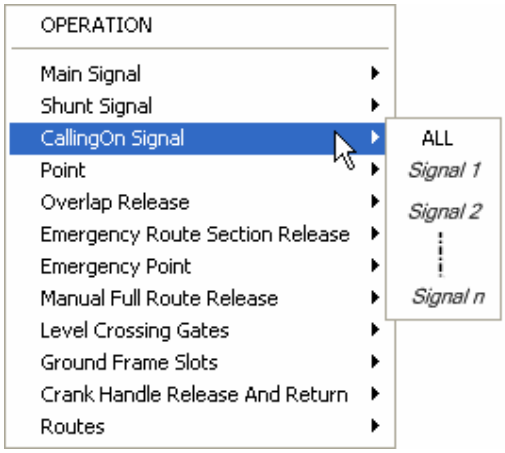
This menu consist of one sub level menu and this sub menu consist of shunt signals. Operation of Shunt Signal is similar to Main Signal except here signals are Shunt Signals.



Signal 1, Signal 2, Signal 3,..... Signal n are Shunt Signals numbers exist in the yard

5.20.2.3 Calling On Signal

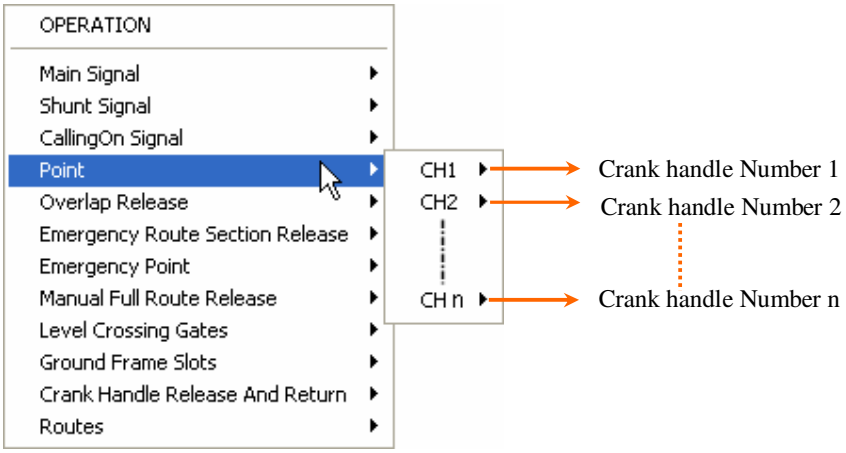
This menu consists of one sub level menu and this sub menu consists of Calling On signals. Operation of Calling On Signal is similar to Main Signal except here signals are Calling On Signals



Signal 1, Signal 2, Signal 3,…….. Signal n are Calling On Signals numbers exist in the yard

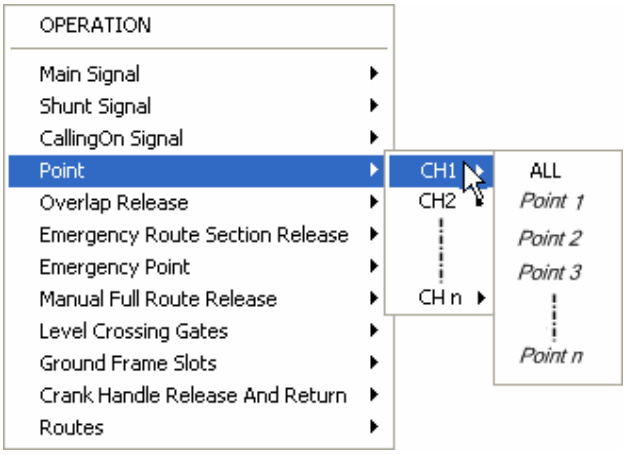
5.20.2.4 Point

- This menu consists of two sub level menus.
- First sub level menu consists of Crank Handles.



CH1,CH2,….CH n are Crank handles present in the yard

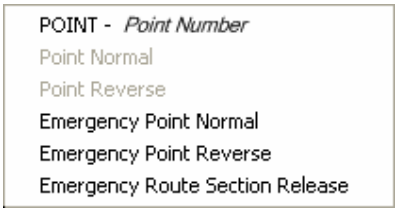
- Second Sub level menu i.e. for Crank Handle menu it consist of Points for that particular Crank Handle.



Point1,Point2,Point3……Point n are points numbers exists in the yard

Point button Lock Operation:

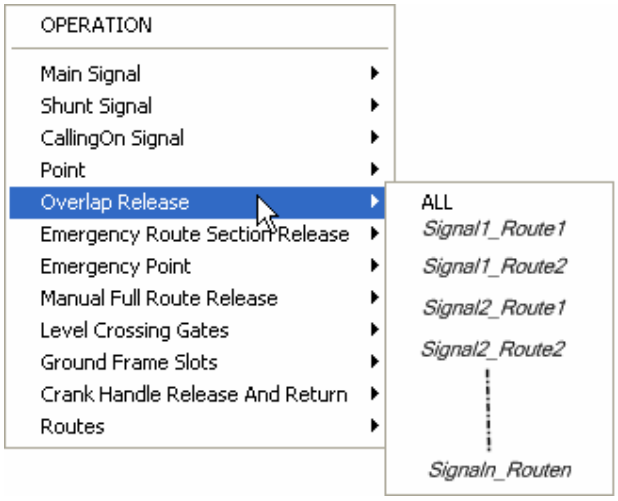
- Click on the required Point number by selecting it from the menu .
- When a point is locked i.e. item is checked in the menu, for that Point, *Point*
- *Normal* and *Point Reverse* menu options are disabled. This is how we achieve Point button Lock.



Point Number is Number of the particular point

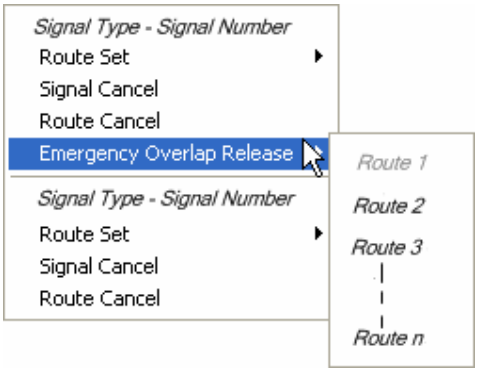
5.20.2.5 Overlap Release

- This menu has one sub level menu and this menu consists of routes for all the Home Signals i.e. Which are applicable for Overlap Release Operation.



Signal1, Signal2, Signal n are Signal numbers exists in the yard
Route1, Route2, Route n are Route number exists for that particular *Signal.*

- Route which is selected in Overlap release menu shall be disabled in its corresponding Signal menu.

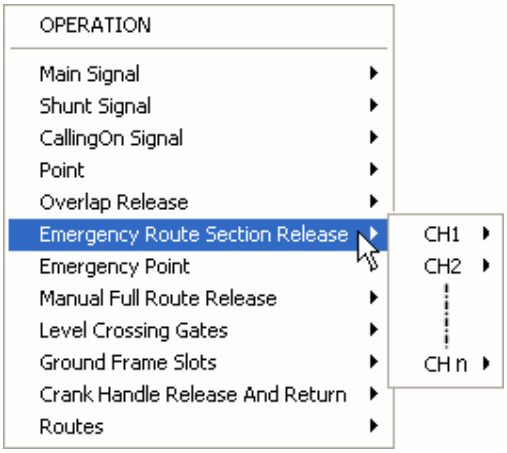


Signal Type – Type of Signal

Signal Number - Number of particular signal
Route1, Route2, Route3….. Route n are Route names for the Particular *Signal Number*
Route 1 is disabled in signal menu.

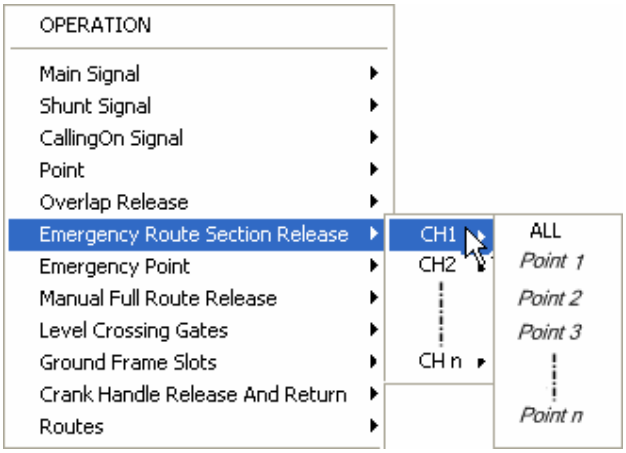
5.20.2.6 Emergency Route Release Section

- This menu consists of two sub level menus.
- First sub level menu consists of crank handles.



CH1,CH2,….CH n are Crank handles present in the yard

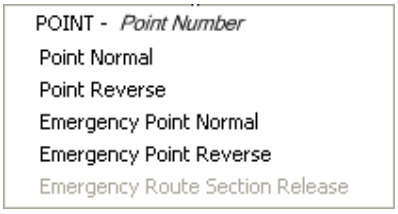
- Second sub menu i.e. this menu is from Crank Handle menu consists of points for that particular Crank handle.



Point1, Point2, Point3……..Point n is points numbers exists in the yard

Emergency Route Section release Lock Operation:

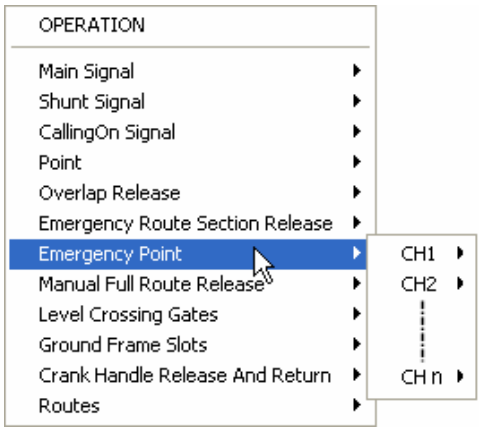
- Click on the required Point number by selecting it from the menu .
- When a point is locked i.e. item is checked in the menu, for that Point, *Emergency Route Section release* menu option is disabled.



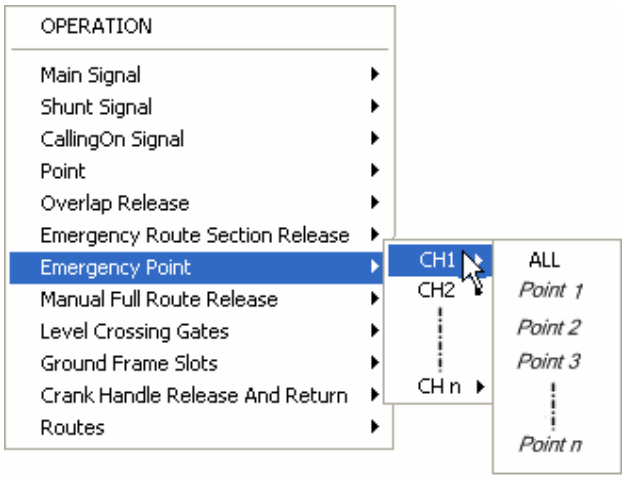
Point Number – Number of Point

5.20.2.7 Emergency Point

- This menu consists of two sub level menus.
- First sub level menu consists of crank handles.



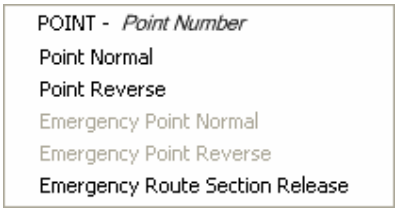
- Second sub menu i.e. this menu is from Crank Handle menu consists of points for that particular Crank handle.



Emergency Point Lock Operation:

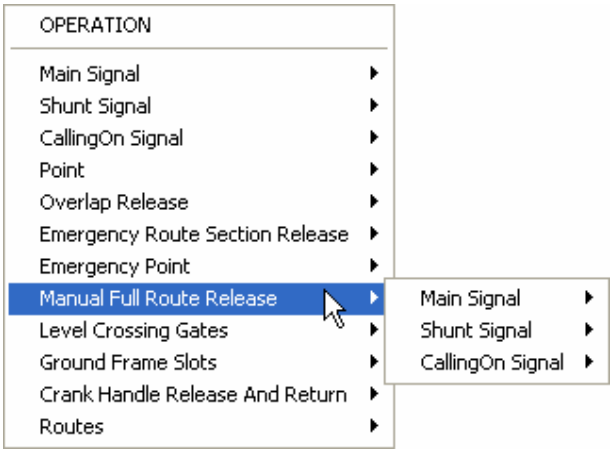
- Click on the required Point number by selecting it from the menu .

- When a point is locked i.e. item is checked in the menu, for that Point, *Emergency Point* Normal *and Emergency Point Reverse* menu options are disabled.

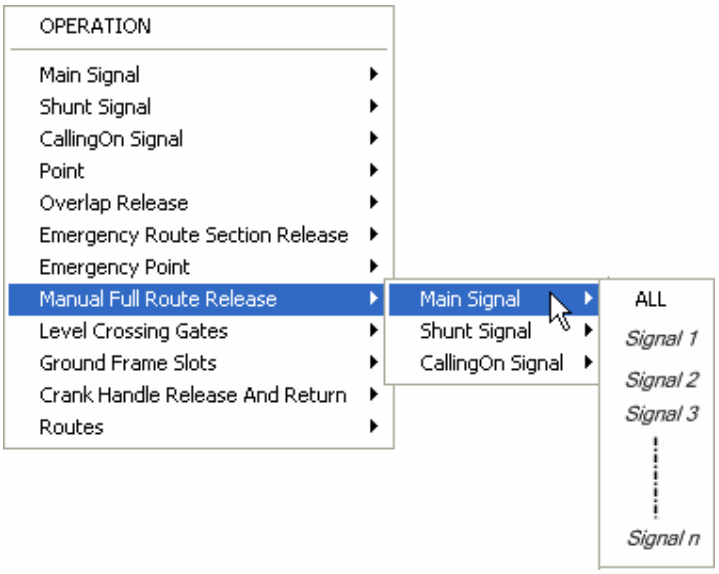


5.20.2.8 Manual Full Route Release

- This menu consists of two sub level menus.
- First Sub level menu consist of signal types i.e. main Signal, Shunt Signal and calling On Signal



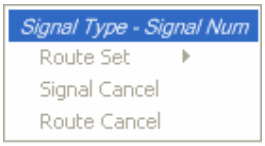
- Second sub level menu consists of signals for that particular signal types.



Signal 1, Signal 2, Signal 3,……. Signal n are Main Signals numbers exist in the yard

Manual Full Route Release Lock Operation:

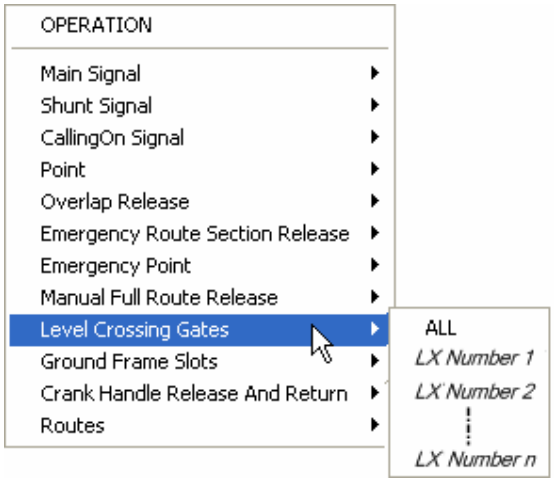
- Click on the required Signal number by selecting it from the menu .
- When this item is checked in the menu, for that *Signal Menu, Route Set, Signal Cancel* and *Route Cancel* Menu options are disabled.



Signal Type – Type of the signal
Signal Num – Number of the signal

5.20.2.9 Level Crossing Gates

- This menu consists of one sub level menu.
- This sublevel menu consist of Level Crossing Gates in the yard.



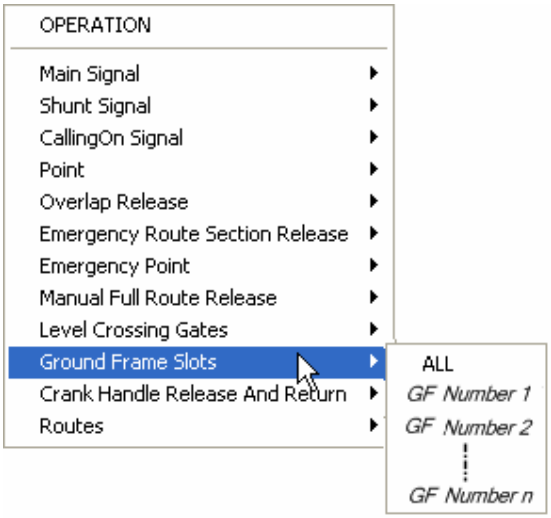
LX Number 1, LX Number 2,……LX Number n are all level crossing gate numbers present in the yard.

Level Crossing Button Lock Operation:

- Click on the required Level Crossing Gate number by selecting it from the menu
- When this item is checked in the menu, for that Level Crossing, Slot *Normal and Slot Reverse* Menu options are disabled.

5.20.2.10 Ground Frame Slots

- This menu consists of one sub level menu.
- This sublevel menu consist of Ground frames in the yard.



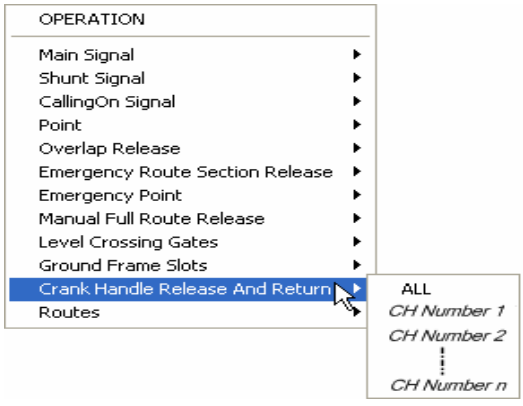
GF Number 1,GF Number 2,…….. GF Number n are all Ground Frames numbers in the yard

Ground Frame Slots Button Lock Operation:

- Click on the required Ground Frame Slots number by selecting it from the menu .
- When this item is checked in the menu, for that Ground Frame Slots, *Slot Normal and Slot Reverse* Menu options are disabled.

5.20.2.11 Crank Handle Release and Return

- This menu consists of one sub level menu.
- This sublevel menu consists of Ground frames in the yard.



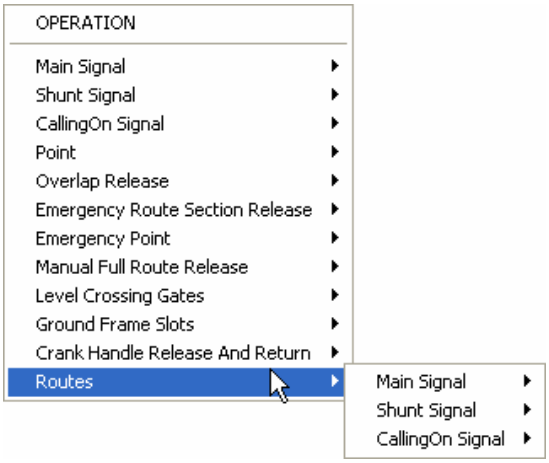
CH Number 1,CH Number 2,……CH Number n are all Crank handle numbers in the yard.

Crank Handle Button Lock Operation:

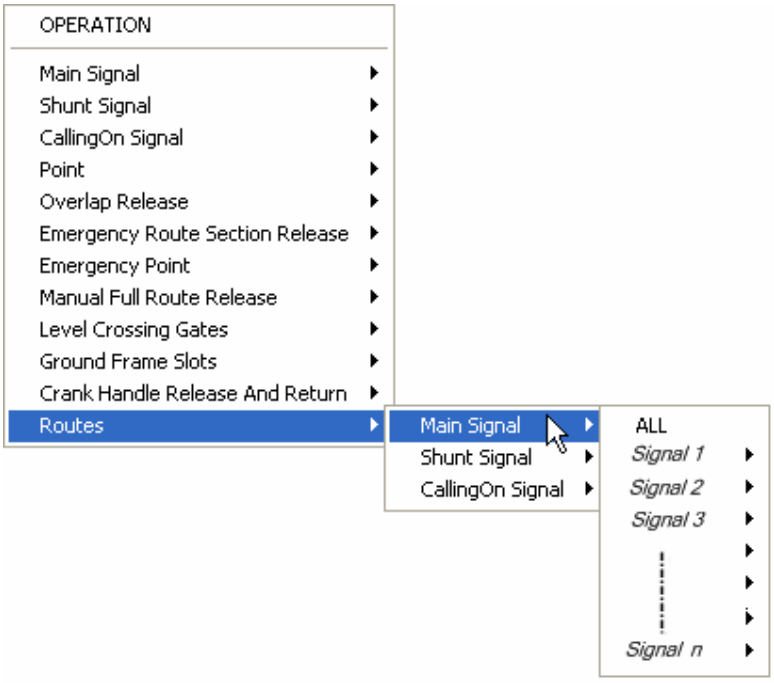
- Click on the required Crank Handle number by selecting it from the menu.
- When this item is checked in the menu, for that Crank Handle, *Slot Normal and Slot Reverse* Menu options are disabled.

5.20.2.12 Routes

- This menu consists of three sub level menus.
- First Sub level menu consist of signal types i.e. Main Signal, Shunt Signal and Calling-On Signal.

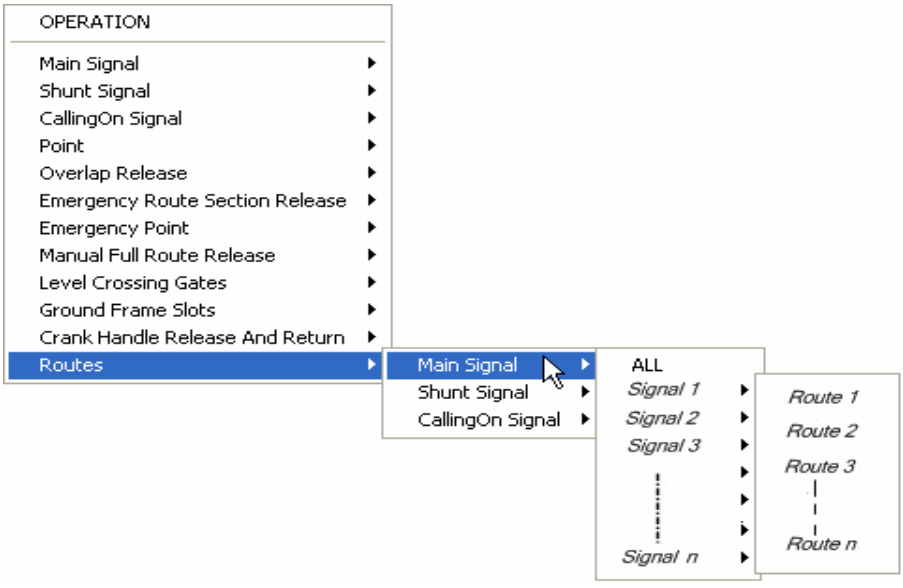


- Second sub level menu consists of signals for that particular signal types .



Signal 1, Signal 2, Signal 3,……. Signal n are Calling On Signals numbers exist in the yard

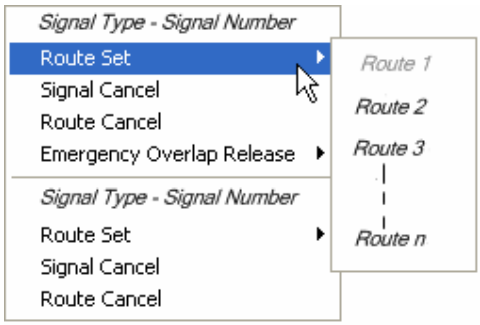
- Third sub level menu consist of routes for that particular signal.



Signal 1,Signal 2,Signal 3…… Signal n are all main signal present in the yard *Route 1, Route 2, Route 3,……Route n* are all routes present for that particular *Signal.*

Route Button Lock Operation:

- Click on the required route in the menu. When this is done in Signal menu for that route, in Route set menu option that particular route menu option is disabled.



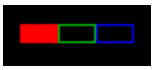
Route 1 is disabled

6 Application Active Indication

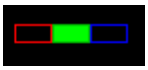
When this application is opened a continuous flashing of three boxes whose colors are Red Green, Blue will be displaying. Only one color at a given time shall be glowing. RGB Flash tells that PPCIP application is active.

Flashing of RGB:

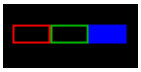
For 1st second only red color box glows



For 2nd second only green color box glows



For 3rd second only blue color box glows



For 4th second it repeats i.e. what is there in first cycle

7 Fault Indication and Messages

7.1 Fault Indications:

7.1.1 VIC Status Indication:

7.1.1.1 VIC – A Indications:

VIC-A is Active

VIC-A is Stand By

VIC–A is Not Available

7.1.1.2 VIC –B Indications

VIC–B is Active

VIC–B is Stand By

VIC–B is Not Available

7.1.2 Link Status Indication:

When Channel – A or Channel – B link is healthy, corresponding yellow indication will be flashing continuously. When Channel – A or Channel – B link is faulty, corresponding red indication will be shown steady.

Channel –A Link Status is Healthy

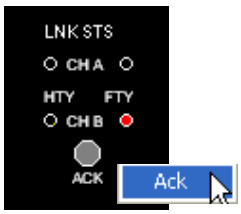
Channel – A Link Status is Faulty.

Channel – B Link Status is Healthy.

Channel – B Link Status is Faulty

Buzzer and Acknowledgement:

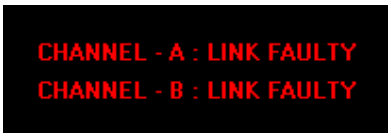
When Channel A link or Channel B Link fails, a Buzzer is turned on to alert the operator. To acknowledge the fault, right click on this image, a pop up menu is displayed, then click on the Ack menu option. The Buzzer stops when the fault is acknowledged by the Operator.



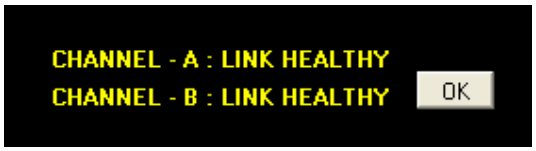
7.2 Fault Messages

7.2.1 Link Status:

When any of the channels link fails, a indication is shown in red color.

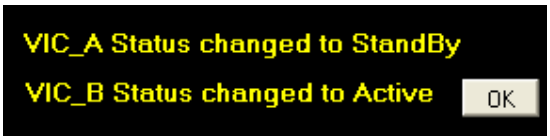


When any of the link is recovered., the indications is shown in yellow color along with one OK button. The indication message disappears if OK button is pressed.



7.2.2 VIC's Status:

If there is any change in VIC's status, its changed status will be displayed along with OK button and a buzzer is turned on to alert the operator. The Buzzer stops and the indication message disappears when the OK button is pressed by the Operator.



7.2.3 Wrong side Failure:

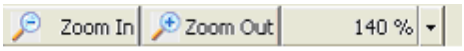
Any Wrong side Failure occurs at any of the OC, a message is shown in red color along with OK button and a buzzer is turned on to alert the operator. The Buzzer stops and indication message disappears when the OK button is pressed by the Operator.

7.2.4 CIU Critical Fault:

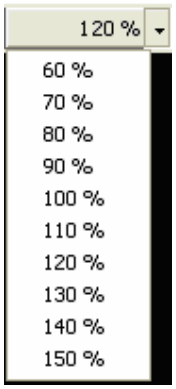
If CIU is shutdown due to any critical fault, a message is displayed in red color along with OK button and a buzzer is turned on to alert the operator. The Buzzer stops and the indication message disappear when the OK button is pressed by the Operator.

8 Zooming

- User Can Zoom In and Zoom Out the Yard. This can be achieved by Clicking ***Zoom In*** Button Or ***Zoom Out*** Button OR by selecting any of the Zoom Percentage values from the drop down list.



- To select Zooming Percentage click the down arrow button at the Zooming Toolbar. It displays a list of choices containing Percentages. Then among these options select any one by clicking the left button of the mouse.



While Zooming, a small Zoom Progress window will be shown.

9 Video Samples

The following Video samples illustrate various operations with reference to RDSO Test Yard.

9.1 Getting Started:

This video file shows tasks that are performed at start up such as Login, Port Selection, and Key Operations.

9.2 Route Operation

This Video file shows Route set, Signal Cancel, Route Cancellation Operations for 120-T491 Route.

9.3 Point Operation

This Video file shows Point Reverse and Point Normal Operations for 311B, 321B, 333B points.

9.4 Slot Operation

This Video file shows Slot Normal and Slot Reverse Operations for the CH2, CH3, GF1 Controls.

9.5 Button Lock Operation

This video file shows Signal Lock Operation for 120 Signal, Point Operation for 302A, Level Crossing Slot Operations, Crank Handle Operation for CH1, Route Operation for 130-T491 Route.