

ES-Key Pro RO

ES-Key



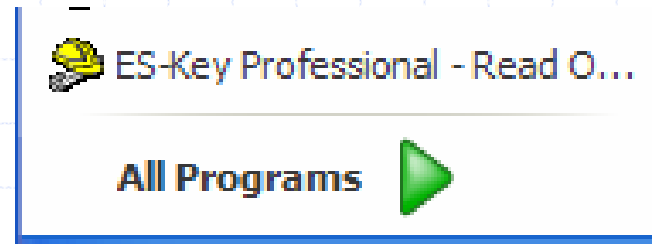
Class1

Ocala, FL

1-800-533-3569

ES-Key Pro

ES-Key




ES-Key Pro Software can be started with the desktop Icon or from the Start Menu

Disclaimer

ES-Key

Disclaimer

WARNING - Use this product with caution!

 READ the contents of this window and the ADDITIONAL WARNING INFORMATION/CONDITIONS OF USE before responding to the user warning question.

YOUR actions can influence the behavior of a networked electronic system.

Depending on the application, the consequences of your improper actions could cause serious operational malfunction, damage to equipment, and physical injury to yourself and others.

Only those persons who understand the warnings contained herein and agree to the conditions of use may use this product.

ADDITIONAL WARNING INFORMATION/CONDITIONS OF USE

DO YOU FULLY UNDERSTAND ALL WARNING INFORMATION?
and
DO YOU AGREE TO THE CONDITIONS OF USE?

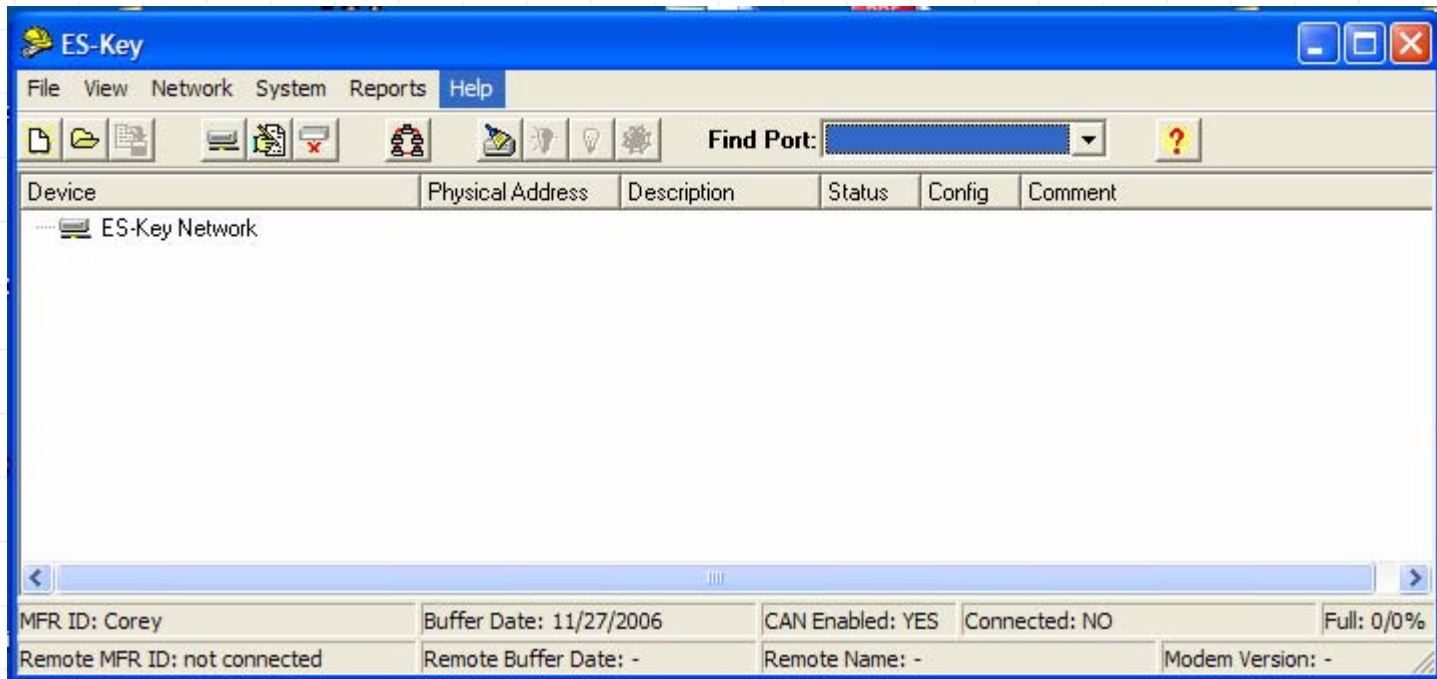
YES - I DO UNDERSTAND and AGREE TO THE CONDITIONS OF USE ON BEHALF OF MYSELF AND MY EMPLOYER

NO - I DO NOT UNDERSTAND

The software has a Warning Message that must be agreed to before the software will actually run.

Start-Screen

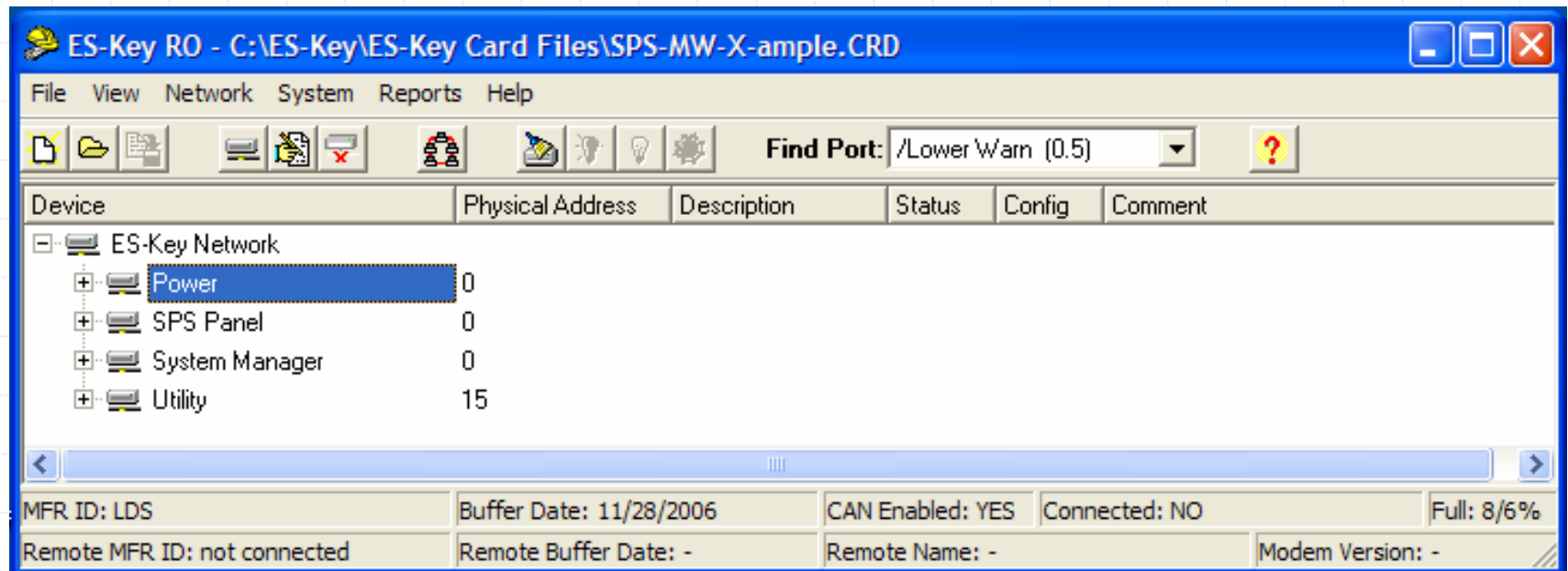
ES-Key



The first screen displayed will be empty unless a previously saved file is loaded.

Orientation

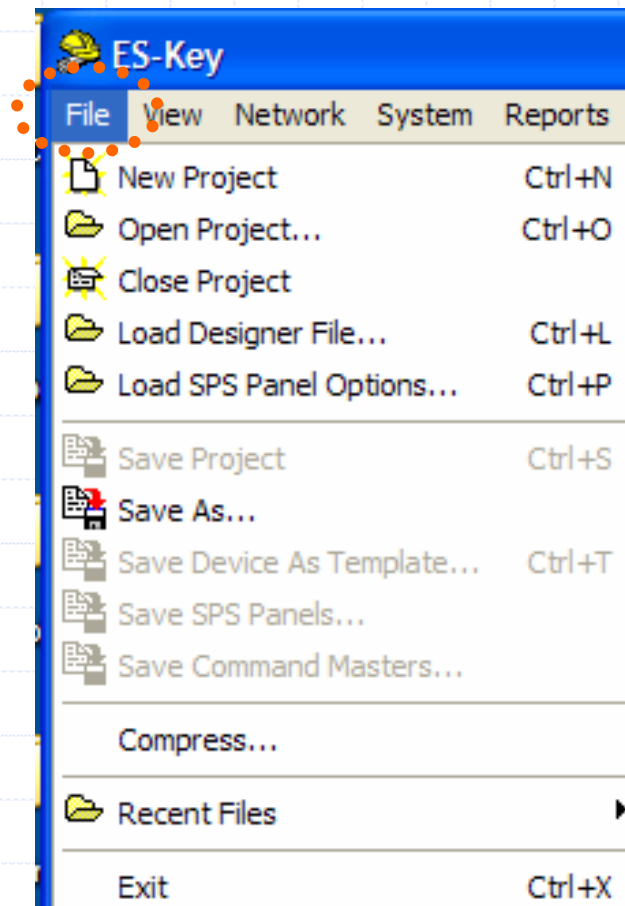
ES-Key



The following slides will discuss the various menus available to the user.

File Menu

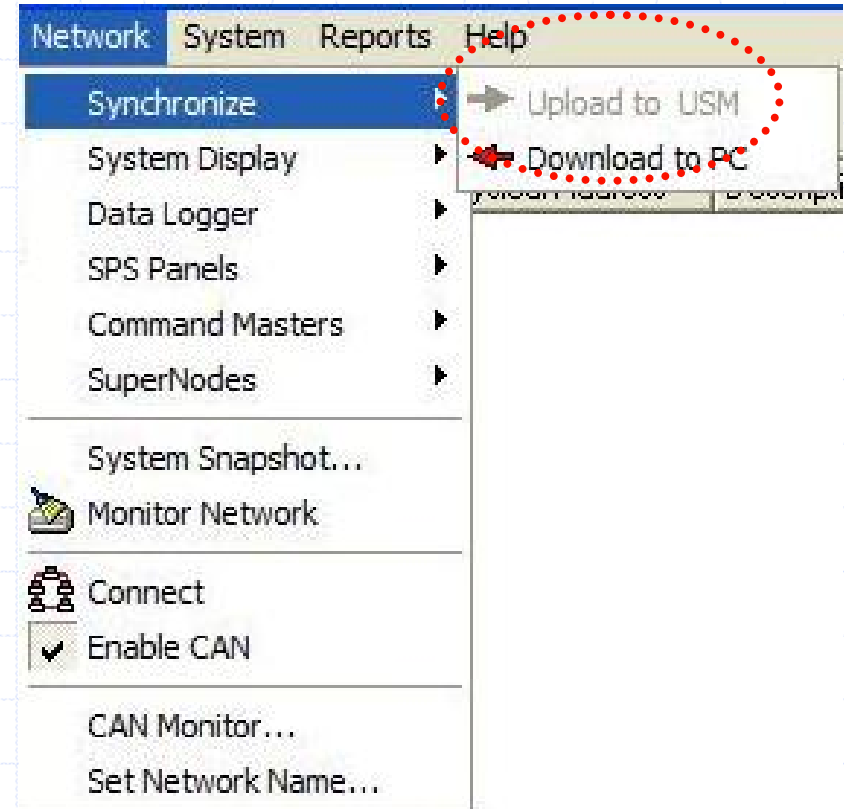
ES-Key



The File drop down menu allows saving and loading of card files and projects

Network Menu

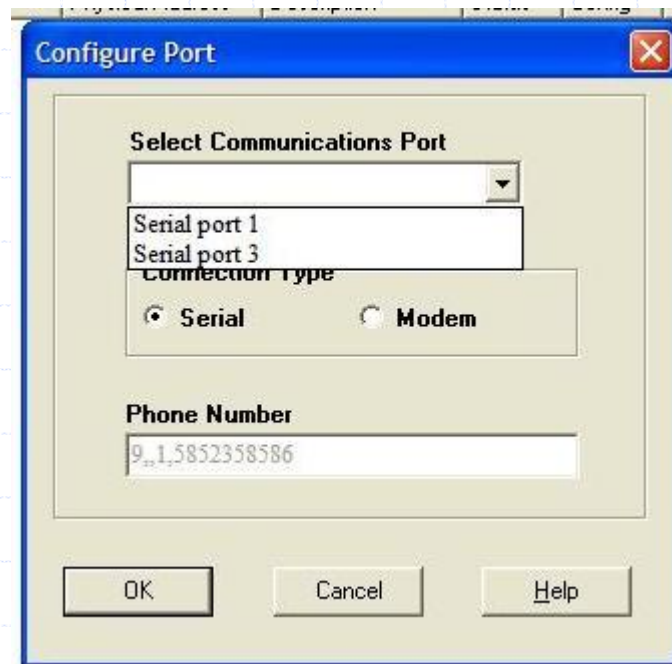
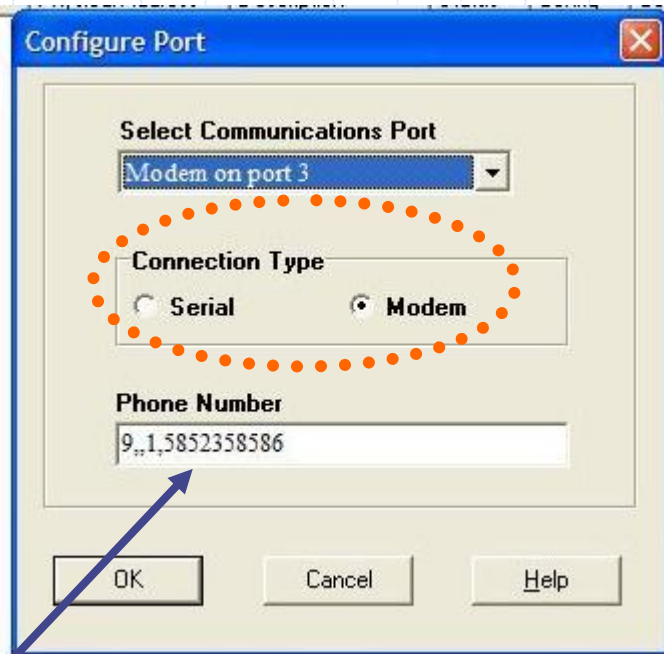
ES-Key



- ◆ The Network Menu provides access to the C.A.N. Bus
- ◆ Note: Upload is greyed out....

Com Port

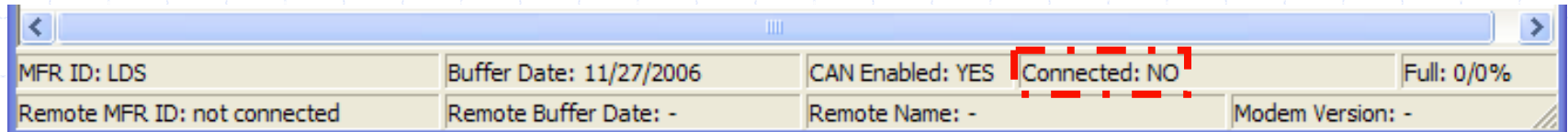
ES-Key



- ❖ The communications port must be configured for serial or modem.
- ❖ If set to modem, this is where the phone number is entered.

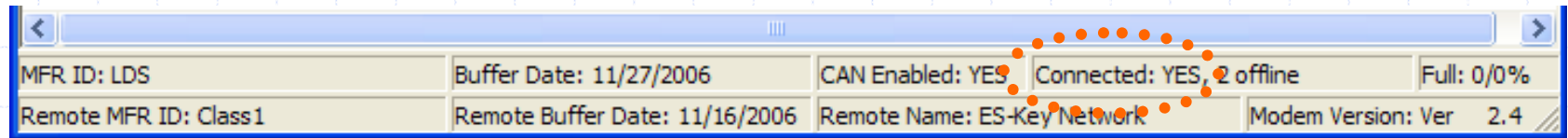
Connection Status

ES-Key



A screenshot of a software status bar. The bar is divided into several sections. The first section contains 'MFR ID: LDS'. The second section contains 'Buffer Date: 11/27/2006'. The third section contains 'CAN Enabled: YES'. The fourth section contains 'Connected: NO', which is highlighted with a red dashed rectangular box. The fifth section contains 'Full: 0/0%'. The bottom row of the bar contains 'Remote MFR ID: not connected', 'Remote Buffer Date: -', 'Remote Name: -', and 'Modem Version: -'. A red arrow points from the 'Connected: NO' box down to the second screenshot.

MFR ID: LDS	Buffer Date: 11/27/2006	CAN Enabled: YES	Connected: NO	Full: 0/0%
Remote MFR ID: not connected	Remote Buffer Date: -	Remote Name: -	Modem Version: -	



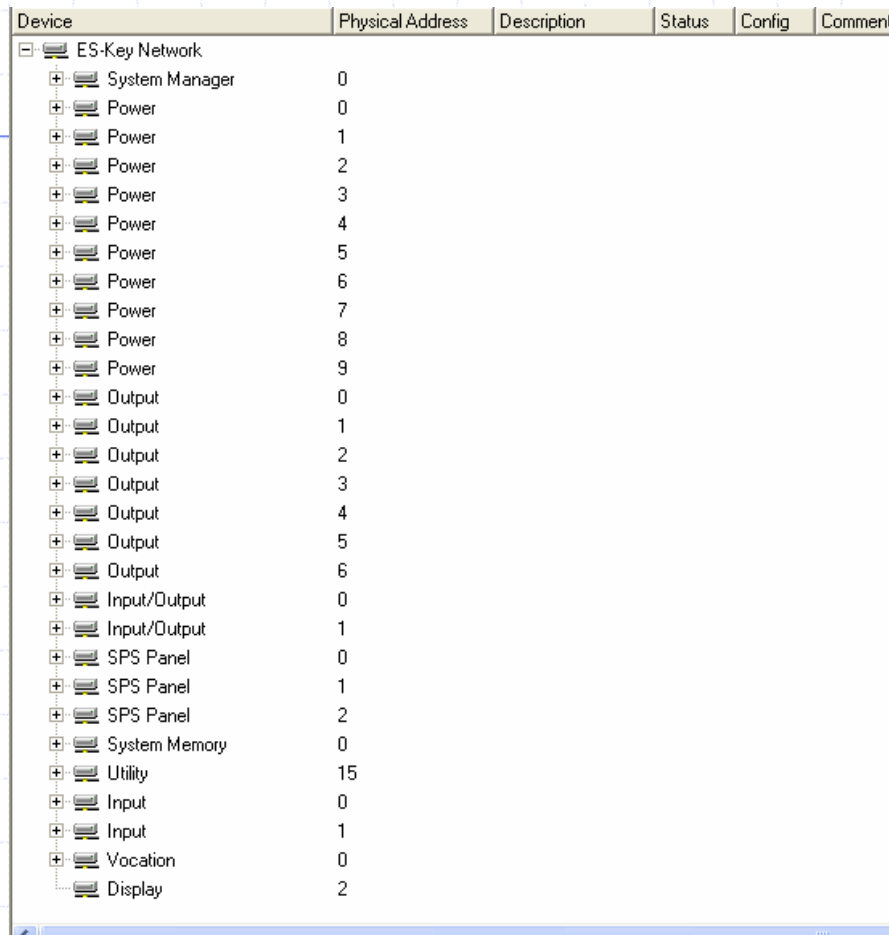
A screenshot of the same software status bar, but now showing a different connection status. The 'Connected' field now reads 'Connected: YES, 2 offline' and is circled with orange dots. The 'Remote MFR ID' field now reads 'Class1'. The 'Remote Buffer Date' field now reads '11/16/2006'. The 'Remote Name' field now reads 'ES-Key Network'. The 'Modem Version' field now reads 'Ver 2.4'. A red arrow points from the 'Connected: YES, 2 offline' field down to the text below. A blue arrow points from the 'Modem Version' field up to the text below.

MFR ID: LDS	Buffer Date: 11/27/2006	CAN Enabled: YES	Connected: YES, 2 offline	Full: 0/0%
Remote MFR ID: Class1	Remote Buffer Date: 11/16/2006	Remote Name: ES-Key Network	Modem Version: Ver 2.4	

Status Bar provides connection information

Main Window

ES-Key



The screenshot shows a window titled 'ES-Key' with a table of system components. The table has columns for 'Device', 'Physical Address', 'Description', 'Status', 'Config', and 'Comment'. The 'Device' column lists various hardware components, each preceded by a small icon and a plus sign. The 'Physical Address' column shows the corresponding address for each device. The 'Description' column is empty. The 'Status', 'Config', and 'Comment' columns are also empty.

Device	Physical Address	Description	Status	Config	Comment
ES-Key Network					
System Manager	0				
Power	0				
Power	1				
Power	2				
Power	3				
Power	4				
Power	5				
Power	6				
Power	7				
Power	8				
Power	9				
Output	0				
Output	1				
Output	2				
Output	3				
Output	4				
Output	5				
Output	6				
Input/Output	0				
Input/Output	1				
SPS Panel	0				
SPS Panel	1				
SPS Panel	2				
System Memory	0				
Utility	15				
Input	0				
Input	1				
Vocation	0				
Display	2				

The Main Window shows devices that are in the system including their addresses.

Devices and I/O

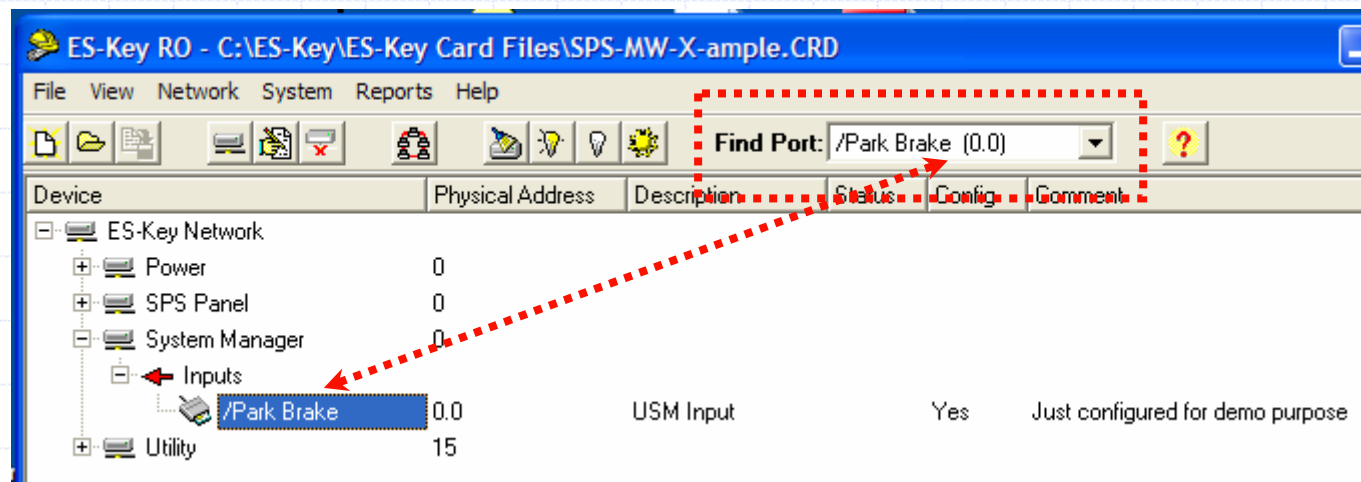
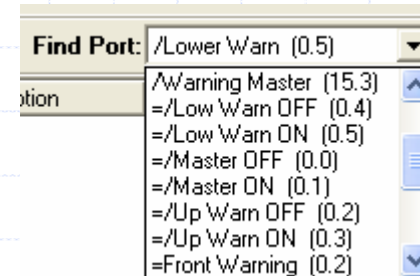
ES-Key

Device	Physical Address	Description	Status	Config	Comment
ES-Key Network					
Power	0				
Outputs					
=Upper Wrng LGT	0.0	PDM Output	Yes		Will operate with the Upper Warning Switch and Master Warning switch thru Multiplex Switch Power ON
=Lowr Wrng LGT	0.1	PDM Output	Yes		Will operate with the Lower Warning Switch and Master Warning switch thru Multiplex Switch Power
=Front Warning	0.2	PDM Output	Yes		Configured to operate with the Master Switch thru SETTINGS (Staged) and multiplexed to Lower warning S
=Rear Warning	0.3	PDM Output	Yes		Configured to operate with the Master Switch thru SETTINGS (Stage) and multiplexed to Upper warning Sv
SPS Panel	0				
Inputs					
Off Master	0.0	SPS Input	No		
Master Warning	0.1	SPS Input	No		Classic Rocker will be used as a Master Warning Switch
OFF Up Warn	0.2	SPS Input	No		
/Upper Warn	0.3	SPS Input	Yes		
OFF Low Warn	0.4	SPS Input	No		
/Lower Warn	0.5	SPS Input	Yes		
Outputs					
System Manager	0				
Inputs					
/Park Brake	0.0	USM Input	Yes		Just configured for demo purpose
Utility	15				
Outputs					
/Scene Mode	15.2	UTL Output	Yes		Active with Park Brake and used in the Settings Window (Load Management)
/Warning Master	15.3	UTL Output	Yes		Active with the Master Switch and used for Stage in the Settings Panel

The Main Window Provides basic circuit information about modules, Inputs, Outputs and Configuration Status along with any notes if present

Find Port

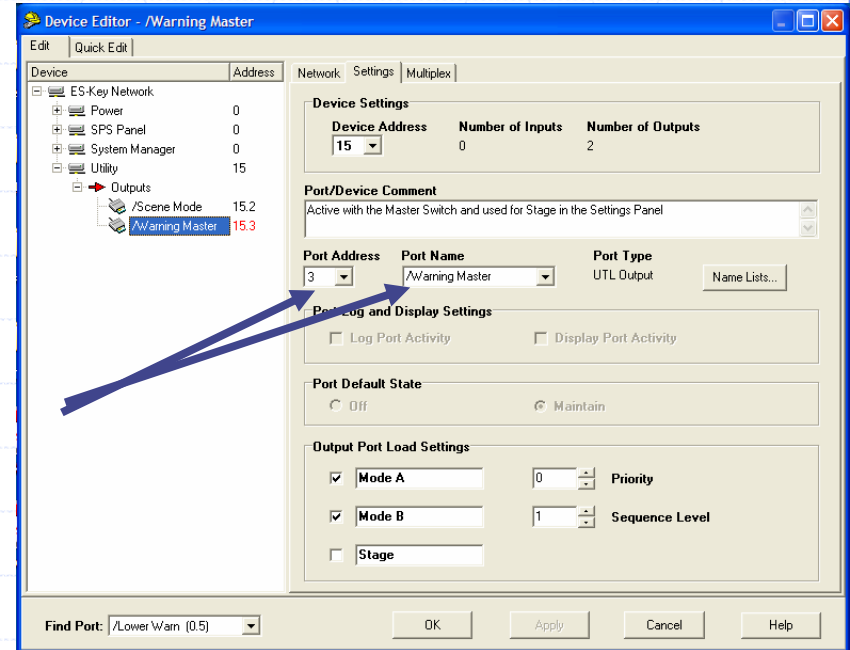
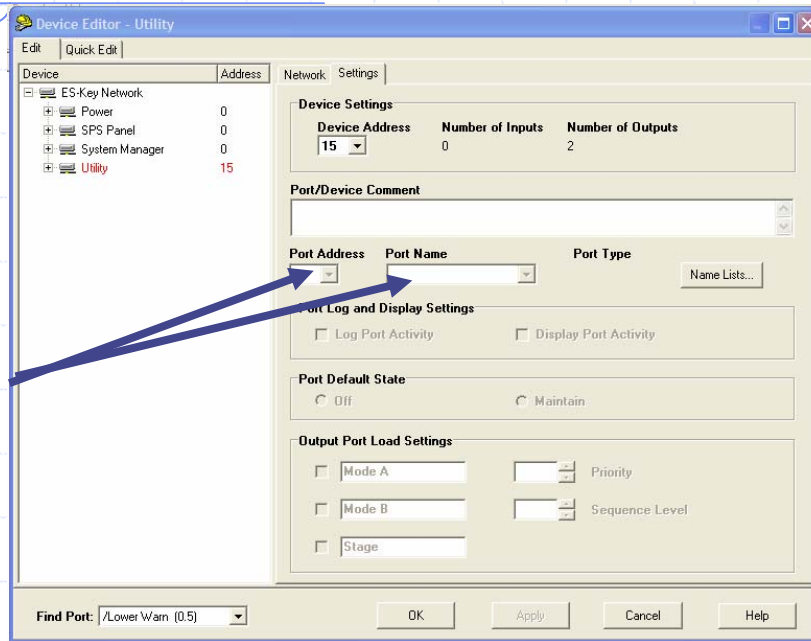
ES-Key



A utility called Find Port is available from the Main Window. Any port in the system can be located and selected here. It is then highlighted for easy identification.

Editor Window

ES-Key



The Editor Screen is where each input and output is configured. They can be named, the port number assigned and even the module address can be changed.

Port Settings

ES-Key

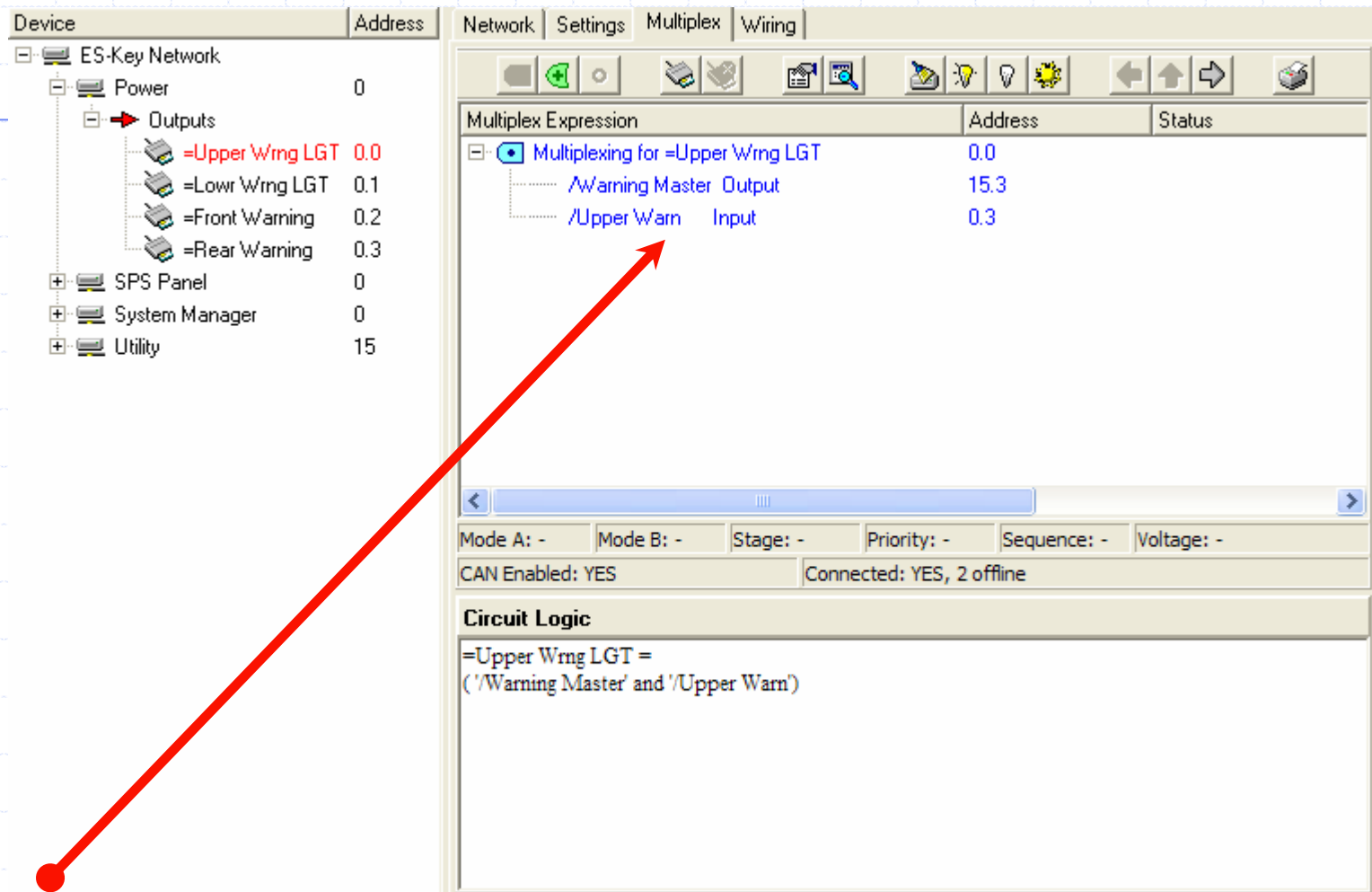
The screenshot shows the ES-Key software interface. On the left is a tree view of the ES-Key Network hierarchy. The main area contains the following sections:

- Device Settings**:
 - Device Address: 0
 - Number of Inputs: 0
 - Number of Outputs: 4
- Port/Device Comment**:
 - Will operate with the Upper Warning Switch and Master Warning switch thru Multiplex Switch
 - Power ON state should be ON
- Port Address**: 0
- Port Name**: =Upper W/rng LGT
- Port Type**: PDM Output
- Port Log and Display Settings**:
 - ☐ Log Port Activity
 - ☐ Display Port Activity
- Port Default State**:
 - ☐ Off
 - ☒ Maintain
- Output Port Load Settings**:
 - ☒ Mode A, Priority: 0
 - ☒ Mode B, Sequence Level: 1
 - ☐ Stage

- ◆ Settings Tab (Window) Address – Port – Name – Output Default
- ◆ Load Management (Master – Scene – Response – Priority – Sequence)
- ◆ Comments (Notes to clarify operation)

Port Multiplexing

ES-Key



The screenshot displays the ES-Key Network configuration interface. On the left, a tree view shows the network structure: ES-Key Network, Power (Address 0), Outputs, SPS Panel (Address 0), System Manager (Address 0), and Utility (Address 15). The Outputs section includes: =Upper Wrng LGT (0.0), =Lowr Wrng LGT (0.1), =Front Warning (0.2), and =Rear Warning (0.3). The main window has tabs for Network, Settings, Multiplex, and Wiring. The Multiplex tab is active, showing a table of Multiplex Expressions. A red arrow points from the text below to the first row of this table.

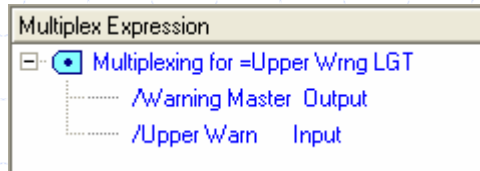
Multiplex Expression	Address	Status
• Multiplexing for =Upper Wrng LGT	0.0	
-/Warning Master Output	15.3	
-/Upper Warn Input	0.3	

Below the table, there are fields for Mode A, Mode B, Stage, Priority, Sequence, and Voltage, all currently set to '-'. It also shows 'CAN Enabled: YES' and 'Connected: YES, 2 offline'. At the bottom, the 'Circuit Logic' section contains the expression: =Upper Wrng LGT = ('/Warning Master' and '/Upper Warn').

This window provides the multiplexing expression (Circuit (Port) Operation)

System Logic

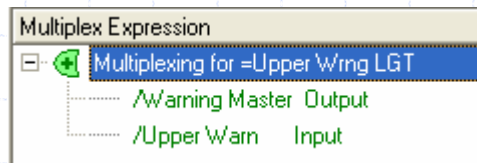
ES-Key



Circuit Logic

=Upper Wrng LGT =
('/Warning Master' and '/Upper Warn')

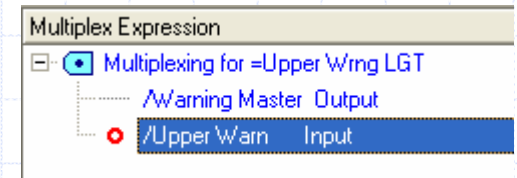
AND Logic



Circuit Logic

=Upper Wrng LGT =
('/Warning Master' or '/Upper Warn')

OR Logic



Circuit Logic

=Upper Wrng LGT =
('/Warning Master' and not '/Upper Warn')

NOT Logic

The ES-Key System uses very simple logic to set-up circuit operation.

Complex Logic?

ES-Key

Multiplex Expression		Address
[-] [icon] Multiplexing for =Upper Wrng LGT		0.0
..... /Upper Warn Input		0.3
..... [icon] /Lower Warn Input		0.5
[-] [icon] Sum Term Expression		
..... /Park Brake Input		0.0
..... /Warning Master Output		15.3
..... /Scene Mode Output		15.2
[-] [icon] Product Term Expression		
..... /Lower Warn Input		0.5

Circuit Logic
=Upper Wrng LGT = ('/Upper Warn' and not '/Lower Warn' and ('/Park Brake' or '/Warning Master' or '/Scene Mode' or ('/Lower Warn')))

Circuit Logic may be combined to create more complex conditions of operation.

Live Status

ES-Key

Network Settings Multiplex Wiring

Multiplex Expression Address Status

Multiplexing for =Upper Wrng LGT	0.0	
/Warning Master Output	15.3	
/Upper Warn Input	0.3	

Mode A: - Mode B: - Stage: - Priority: - Sequence: - Voltage: -

CAN Enabled: YES Connected: YES, 2 offline

Circuit Logic

=Upper Wrng LGT =
('Warning Master' and 'Upper Warn')

Address Status

0.0	Off
15.3	Off
0.3	Off

Network Settings Multiplex Wiring

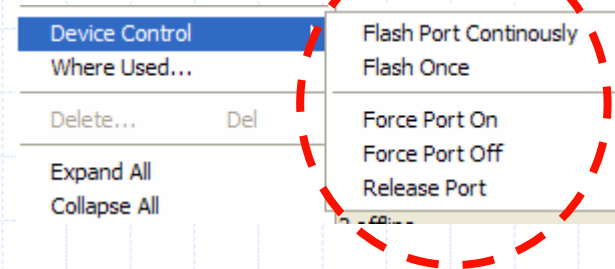
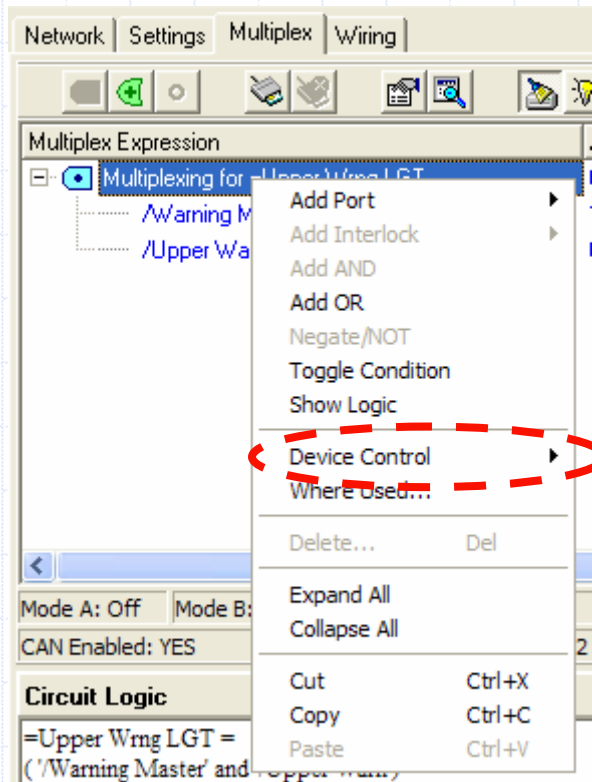
Multiplex Expression Address Status

Multiplexing for =Upper Wrng LGT	0.0	On
/Warning Master Output	15.3	Off
/Upper Warn Input	0.3	Off

- ◆ The current status of the port can be displayed in this window
- ◆ The brush icon must be enabled to get this information
- ◆ The multiplex logic status is displayed here as well

Device Control

ES-Key



Choice of port operation is available in this menu

It is important to release control of the circuit before proceeding with diagnostics in most cases

Control of the outputs and inputs is performed using the device control drop down menu

Any Es-Key circuit can be split easily using device control.

Force the output ON and if the load activates, the problem will be on the input side of the system.

If the load does NOT turn ON, then the problem will be from that specific output on the Power Module through the ground of the load.

Force the Input ON and if the load activates, the problem is between switch common and the input module.

(Switch, Feed or connection to the Input Module)

If the load does NOT turn ON, then the problem is the input on the module.

NOTE: If multiple arguments are present, it will be necessary to activate those circuits also (either forced or physical)

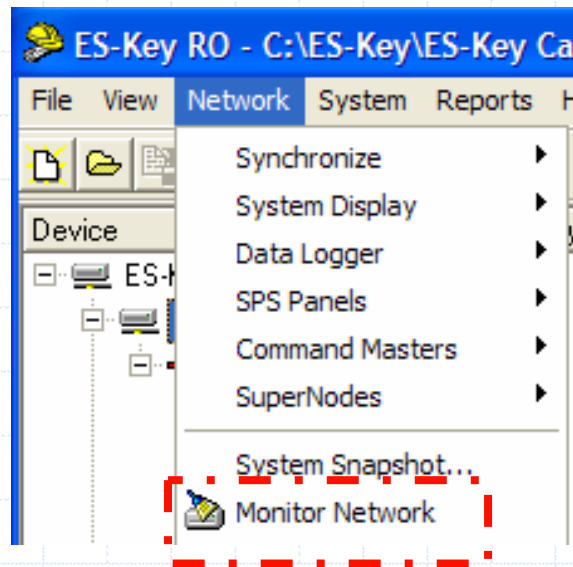
Most problems can be diagnosed with the system.

The software should get you to within a few feet of the problem.

At that point, basic electrical troubleshooting will easily pin-point the problem.

Network Monitor

ES-Key

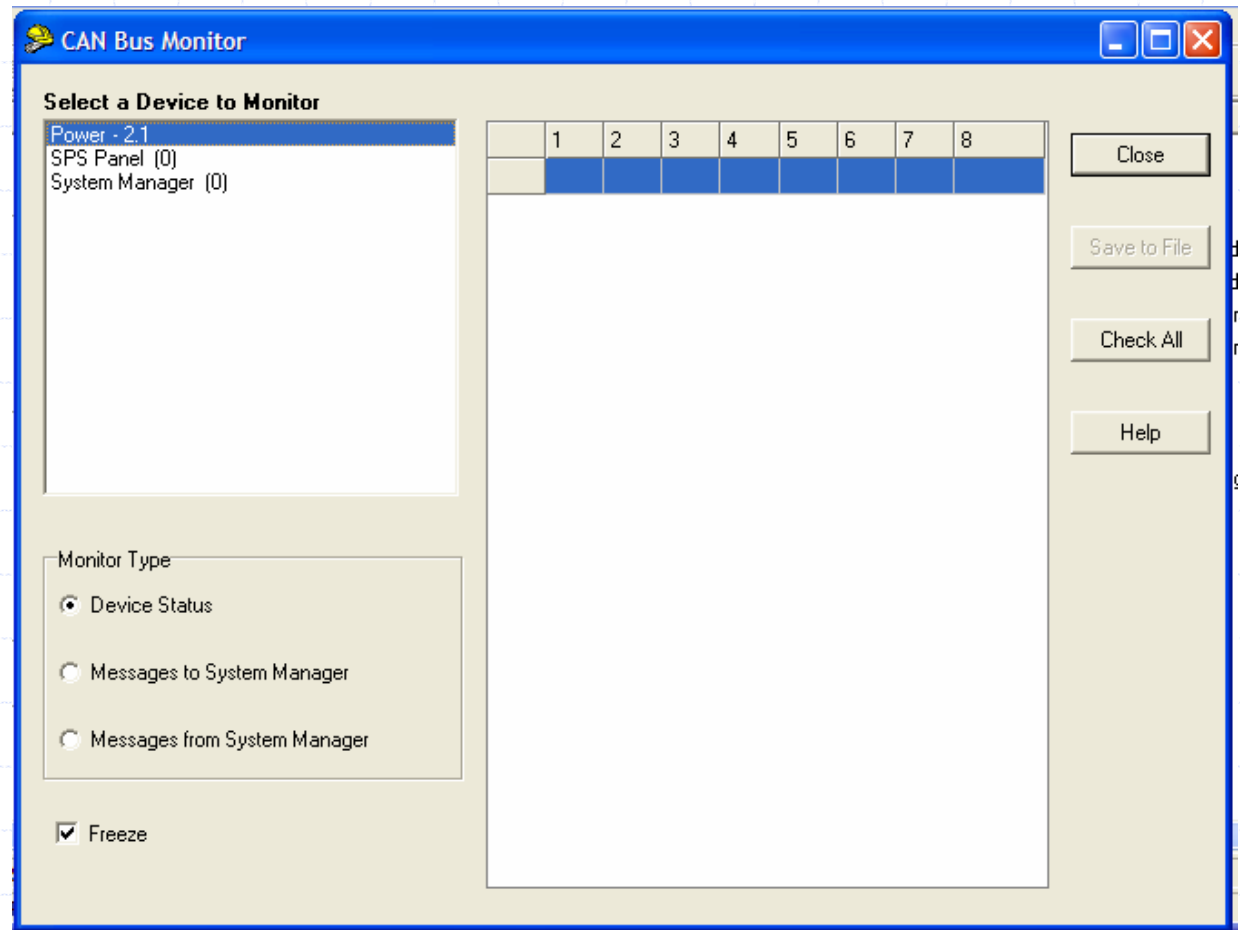
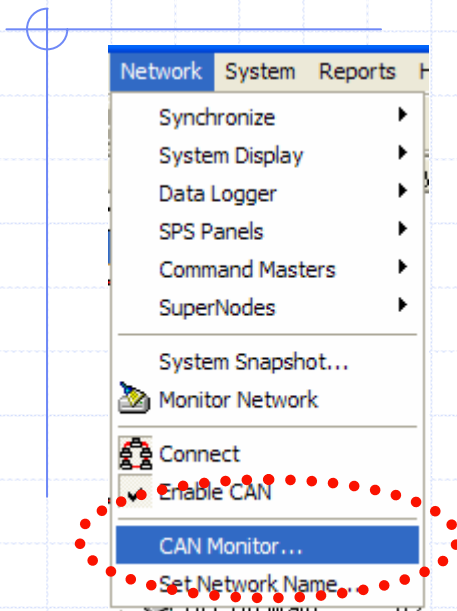


Device	Physical Address	Description	Status	Config
ES-Key Network				
Power	0			
Outputs				
=Upper Wrng LGT	0.0	PDM Output	Off	Yes
=Lower Wrng LGT	0.1	PDM Output	Off	Yes
=Front Warning	0.2	PDM Output	Off	Yes
=Rear Warning	0.3	PDM Output	Off	Yes
SPS Panel	0			
Inputs				
Off Master	0.0	SPS Input	Off	No
Master Warning	0.1	SPS Input	Off	Yes
OFF Up Warn	0.2	SPS Input	Off	No
/Upper Warn	0.3	SPS Input	Off	Yes
OFF Low Warn	0.4	SPS Input	Off	No
/Lower Warn	0.5	SPS Input	Off	Yes
Outputs				
System Manager	0			
Inputs				
/Park Brake	0.0	USM Input	Off	Yes
Utility	15			

The I/O status can be monitored through the Main Window Network Menu.

CAN Monitor

ES-Key



The Controller Area network has its own Monitor Screen accessed from the Network pull down menu.

C.A.N. Monitor

ES-Key

Select a Device to Monitor

Power (0) - 2.1
SPS Panel (0) - 2.6
System Manager (0) - Online

Monitor Type

☒ Device Status

CAN Bus Monitor

Select a Device to Monitor

Power (0) - 2.1
SPS Panel (0) - 2.6
System Manager (0) - Online

Monitor Type

☒ Device Status

☐ Messages to System Manager

☐ Messages from System Manager

☐ Freeze

	1	2	3	4	5	6	7	8
1	00	06	00	FF	F0	77	00	00
2	00	06	00	FF	F0	77	00	00
3	00	06	00	FF	F0	77	00	00
4	00	06	00	FF	F0	77	00	00
5	00	06	00	FF	F0	77	00	00
6	00	06	00	FF	F0	77	00	00
7	00	06	00	FF	F0	77	00	00
8	00	06	00	FF	F0	77	00	00
9	00	06	00	FF	F0	77	00	00
10	00	06	00	FF	F0	77	00	00
11	00	06	00	FF	F0	77	00	00
12	00	06	00	FF	F0	77	00	00
13	00	06	00	FF	F0	77	00	00
14	00	06	00	FF	F0	77	00	00
15	00	06	00	FF	F0	77	00	00
16	00	06	00	FF	F0	77	00	00
17	00	06	00	FF	F0	77	00	00
18	00	06	00	FF	F0	77	00	00

The device status including version will be displayed and actual messages being parsed can also be monitored.

This presentation is designed to familiarize you with the software and suggest possible uses and procedures.

Specific questions about the database or apparatus can best be answered by the OEM.

General hardware or software questions can be answered by the OEM or Class1.

Wrapup

ES-Key

◆ Questions?

◆ Website Available

◆ <http://www.es-key.com>

◆ <http://www.class1.com>