

# NAVIGATOR IP

Copyright (C) 2017 John Wainwright Systems Ltd. All rights reserved.  
Navigator IP Access Control is protected by copyright law and  
international treaties. The information contained in this publication is  
subject to change without notice

Client and Installer  
Operating Manual

## Table Of Contents

- **Introduction to Navigator IP**
- **Specification**
- **Software Setup**
- **Hardware Installation**
- **Technical Support**
- **Glossary of Terms**

## Introduction to Navigator IP

### Welcome To Navigator IP.

Congratulations on your purchase of Navigator IP – the advanced access control system designed, manufactured and supported by John Wainwright Systems LTD (JWS) in Great Britain. Navigator IP comprises two main elements: Hardware – a fully featured Two Door Network Access Control Unit ( and peripherals such as Card readers, Exit Buttons, locks etc.) and Software – a Browser based fully embedded web server compatible with PCs, Laptops, Tablets & Smartphones with no Internet connection required.

With thousands of systems installed through UK and Europe JWS continue to supply solutions to the original exacting standards of quality and reliability. Navigator IP focuses on Cost of Ownership with built in fault finding to minimise door down-time and engineer call outs.

This manual is best read whilst sitting at the computer, playing with the software and trying out the features for yourself. You'll soon find that even the most complex tasks can be achieved with just a few clicks of the mouse!

### What Can It Do?

Navigator IP's primary function is to manage, record and control the movements of your personnel throughout your installation. There are obvious advantages to be gained from owning such a system: -

Office managers can decide which members of staff are allowed to enter certain sensitive areas such as I.T. rooms and storage facilities.

Factory supervisors can restrict access to dangerous environments to reduce the risk of accidental damage to machinery (and workers!).

Hospital workers can be restricted from entering areas where there is a risk of infection or other dangers.

If an incident should occur, the log of movements prior to the time of the incident can be studied to give an insight into who may have been responsible.

The list goes on and on.

In addition to access control functions, Navigator IP also supports on board Input/Output which offer simple to manage monitoring and control of external points around the installation site.

### How Does It Work?

Your system consists of a single Navigator IP door controller or a network of door controllers positioned at strategic points around the installation, each door controller determine if any authorized persons are requesting entry (or exit) through the door. If a request for access has been made (by swiping a magnetic card through a swipe reader, or by presenting a proximity card to a proximity reader) then Navigator IP analyses the request and responds with either an access granted signal or an access denied signal.

Navigator IP's response will depend upon the following: -

- 1) Is the owner of the card being used allowed through this door?
- 2) If so, is the owner allowed through at this time?
- 3) If the card is limited to a maximum number of uses, are there any uses left?
- 4) If the card is limited to specific dates, is the date correct?

## Specification

**Navigator IP is a fully featured Two Door Access Control Unit supplied boxed with integral 12v DC 2.5A lock power supply - Simply connect your Navigator IP Door Controller directly to your PC / Laptop or via your Local Area Network (LAN) for additional Tablet and Smartphone wireless connectivity <sup>1</sup>**

Browser-based with in built Web Server (not cloud)  
 No Internet connection required <sup>2</sup>  
 PC, Laptop, Tablet or Smartphone compatible  
 Easy setup with no software installation required  
 Full Door Control with Event and Report analysis  
 Up to 200 doors & 10,000 users (2 doors per controller)  
 Multiple Door Groups, Time Zones & User Categories  
 Assisted Access / DDA Automatic Door Control  
 Email System: Alerts /Events /Break Glass monitoring  
 Battery Status Alerts with auto test & notification  
 Automatic Events Backup by Email Feature  
 Mini Events Windows & Live icon feedback  
 Cause & Effect Relationships  
 Full Database Import / Backup / Restore  
 Complete with a 12v DC 4.3A power supply  
 Standalone or networked via RS485 and / or Ethernet  
 Supports most popular Reader Technologies  
 Flash Upgradeable Firmware

1. Assuming you have a Wireless LAN
2. Internet required for external connectivity e.g. email, texts etc.
3. Texts will incur additional charges

### ELECTRICAL

Input Voltage	12v 4.3A (via Switch Mode PSU supplied)
PCB Current Consumption	250mA
Lock Supply	12v DC 2.5A (2 x 1.25A per controller)
On board Battery Charge Circuit	Yes: Battery Status Alerts with automatic test and notification
Doors per Access Control Unit or ACU)	2
Max Doors per Network	200 (100 Controllers)
Number of card holders	10,000
Block Programming via Site Codes	Yes
Readers per controller	4 (1x Entry / 1 Exit per door)
User Categories, Door Groups, Time zones	64
Managers	16
Relationships (Cause & Effect I/O)	16
Holidays	32
Number of events stored on Master (Backup manually and/or by Automated Scheduled emails)	20,000
Data retention during power loss	One year
DDA Assisted Access	Normal + 4 x Auto Door Impulse / Delay Settings
Full Database Import / Backup / Restore	Navigator IP CSV (Microsoft Excel, Numbers etc.)

## READER COMPATIBILITY

Clock & Data	Entry and Exit
Wiegand	Entry only
Other Reader Types	Most popular reader technologies

## INPUTS AND OUTPUTS

Lock Relay (1 per door)	Isolated 10A compatible with Fail Safe and Fail Secure locking devices
Aux Relay (2 per door)	1A Isolated with C, NO & NC contacts
Aux Inputs	Two per door ( 4 per controller)
RTE Exit button inputs	Yes
Door contact / Monitored Lock inputs	Yes
Monitored Break Glass inputs	Yes
Cabinet Tamper	Yes (Optical)
Interlock	Yes
Automatic Daylight Saving	Yes
Battery Self-Test	Yes (Daily or None)
Mains Monitoring	Yes

## CONNECTIVITY

Master (with built in Web Server)	IP (Static IP recommended but DHCP is supported). Internet connection not required
LAN SLAVE	LAN (UDP with Static IP or DHCP)
485 SLAVE	485 (wired via the Master)
Flash upgrade of units	Yes (Master and LAN Slaves)

## CABINET

280mm (h) x 230 mm (w) x 85mm (Inc. mounting feet). Allows fitment of 12vDC 7Ahr Sealed Lead Acid battery.

## COMPLIANCE



Meets the essential requirements of the following European Directives: Low Voltage 2006/95/EC; EMC 2004/108/EC; WEEE 2002/96/EC; RoHS 2002/95/EC Navigator IP Flyer v3 ©JWS 2017

## Recommended Wiring Specifications

Card reader and keypad 6 to 8 conductors, stranded, shielded (foil), drain conductor.  
For example: Alpha 5196, 5198, 5386, 5388, Belden 9553 22AWG (0.64mm) to 18AWG (1.02mm)  
50m

Door strike 2 conductors, solid copper 18AWG (1.02mm) 18AWG (1.02mm) 150m (500ft.)

Power Supply 3 conductors, solid copper 18AWG (1.02mm) 14AWG (1.63mm)\* 8m (25ft.)

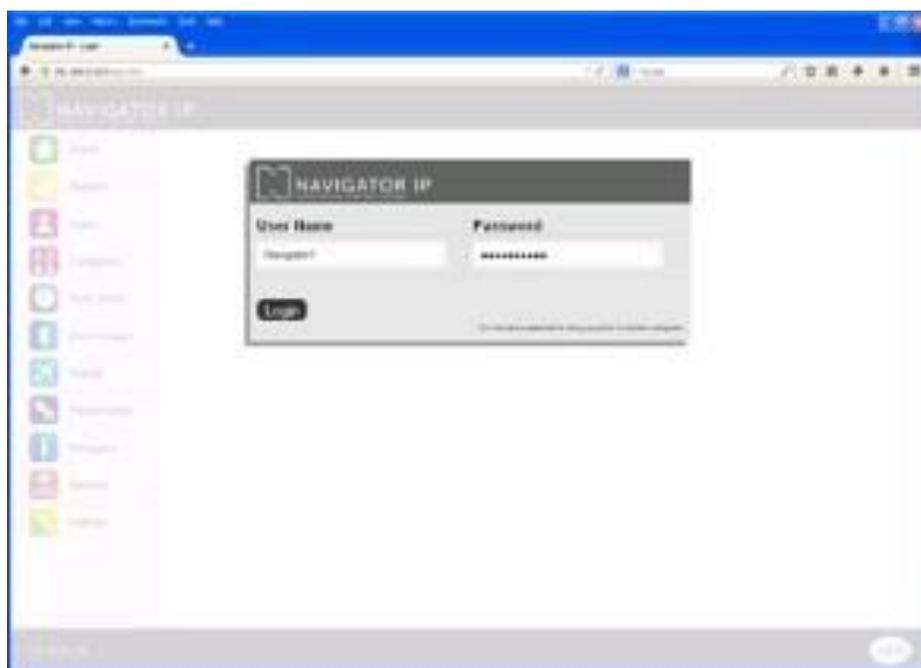
Ethernet CAT 5/5e - 100m (300ft)

RS485 bus, Star or Daisy Chain (on board EOL provided) Belden 9501 or equiv.(4000ft.) \* The Minimum Size Equipment Conductors for the AC mains required are 14 AWG if made of Copper or 12 AWG if made of Aluminium or Copper-Clad Aluminium. Do not use any switch-controlled outlets to power the system.

## Software Setup

Navigator IP has Software that looks and feels like a web site. You can use a Browser on any device you like to view & control Navigator IP (we recommend Internet Explorer). Straight out of the box, no software to purchase or licence!

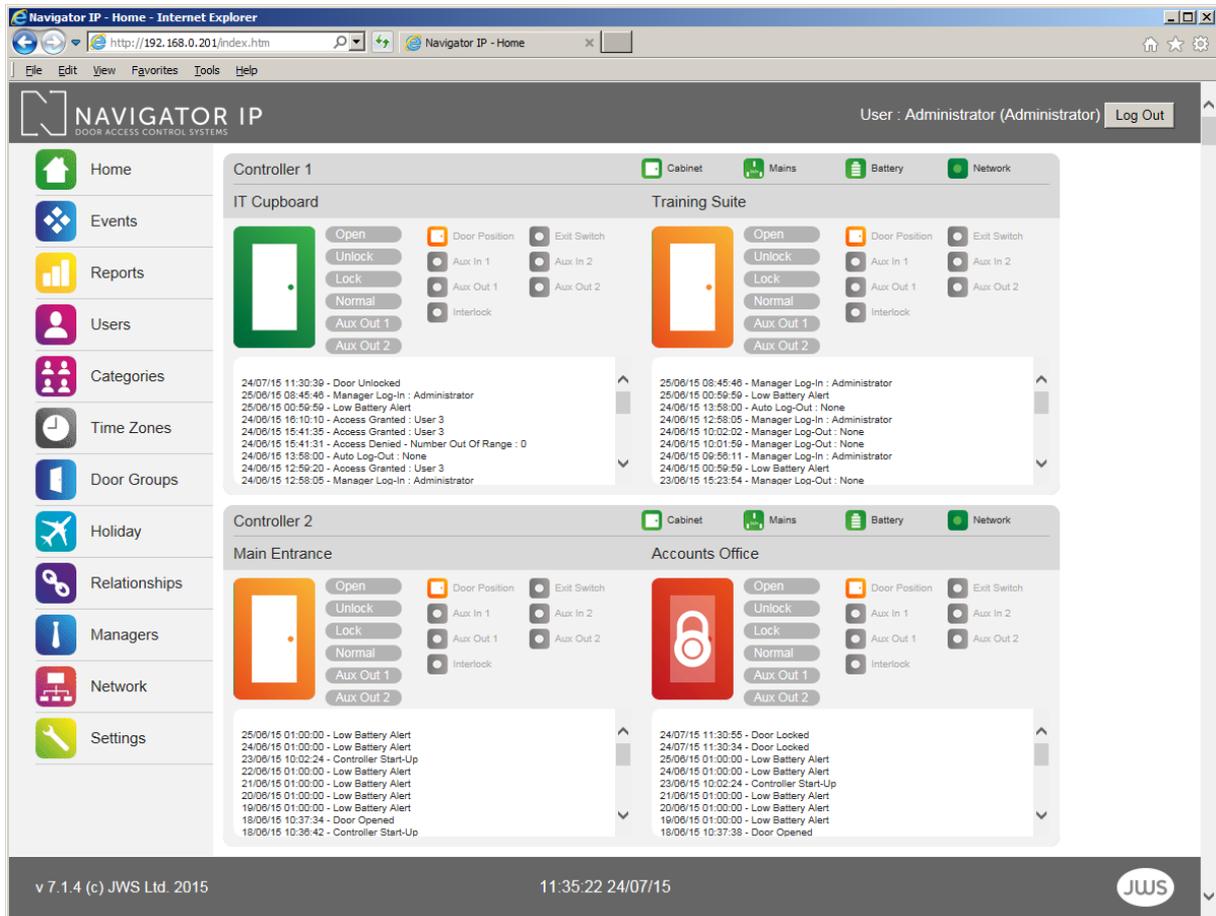
## Log-on



Enter your User Name and Password

- Contact your Systems Administrator for your password or create one on the Managers Page.
- Passwords must be between 10 and 20 characters long and contain at least one number and a Upper Case letter.
- Passwords must not contain special characters such as £,\$, %, & etc.

## Home Page



Navigator IP's Home page, simple and intuitive.

- Door Control – Open, Unlock & Lock
- Auxiliary Relay / Output control
- Live Door Status – Open, Unlocked & Locked
- Live Icon Status – Door Position, Exit Switch, Interlock, Auxiliary Relay
- Live Events Window per door
- Live Controller Feedback – Cabinet, Mains, Battery & Network

## Events

Event ID	Date	Time	Event Type/Code	Controller	Door	User	Manager
417814	17/03/16	13:36:16	Access Granted (Code 1)	Controller 2a (Unit 2)	Door 2a (Door a)	Winston Churchill (User 424)	Administrator
417813	17/03/16	13:36:13	Access Granted (Code 1)	Controller 5ab (Unit 5)	Front Door (Door a)	Bertie Higgins (User 78)	Administrator
417812	17/03/16	13:36:30	Access Granted (Code 1)	Controller 28a (Unit 28)	Door 28a (Door a)	Gaylord Focker (User 423)	Administrator
417811	17/03/16	13:35:46	Access Granted (Code 1)	Controller 5ab (Unit 5)	Back Door (Door b)	Gaylord Focker (User 423)	Administrator
417810	17/03/16	13:35:26	Access Granted (Code 1)	Controller 25b (Unit 25)	Door 25b (Door b)	Winston Churchill (User 424)	Administrator
417809	17/03/16	13:35:13	Access Granted (Code 1)	Controller 5ab (Unit 5)	Front Door (Door a)	William Smith (User 79)	Administrator
417808	17/03/16	13:34:47	Manager Log-In (Code 17)	Controller 1a (Unit 1)	Behind the Cool Wall (Door a)		Administrator
417807	17/03/16	13:34:45	Access Granted (Code 1)	Controller 5ab (Unit 5)	Back Door (Door b)	Winston Churchill (User 424)	
417806	17/03/16	13:34:11	Access Granted (Code 1)	Controller 5ab (Unit 5)	Front Door (Door a)	Bertie Higgins (User 78)	
			Access Granted (Code 1)	Controller 5ab	Back Door	William Smith	

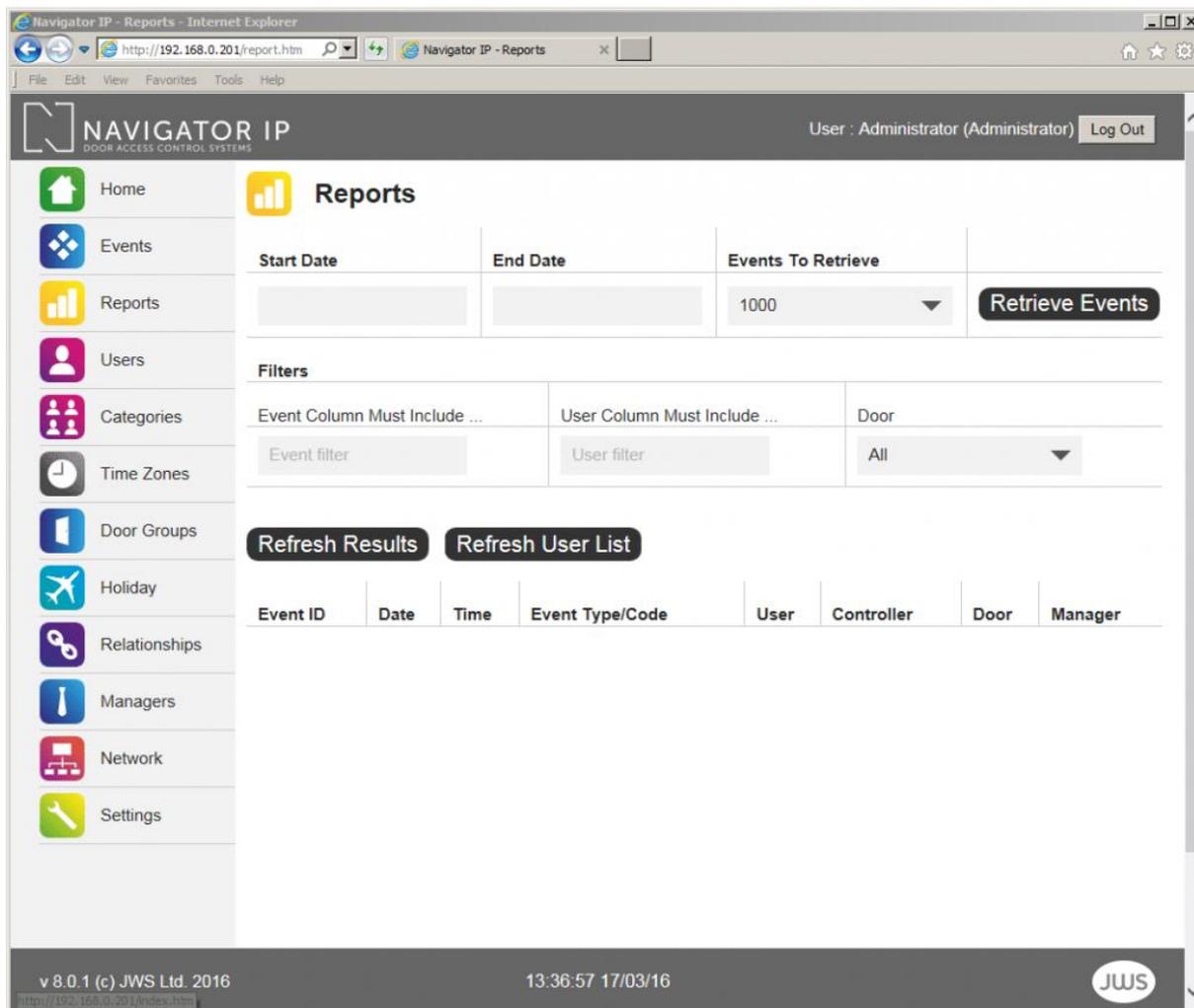
The Events page gives us a system wide view of current activity on your door and/or network of doors

- It displays the last 250 events and shows the following:
- Unique Event ID
- Event Date
- Event Time
- Event Type ( eg. Access Granted, Door Left Open etc.)
- Controller & Door Location
- The User
- The Operator (Person logged on to the system, if appropriate)

This page updates automatically every 10 seconds

The above information can be retrieved by using the Reports page and Exported via CSV file to a Spreadsheet of your choice

## Reports



### Generate Reports

- Time
- Date
- User
- Door
- Export Directly to CSV for Excel, Numbers etc

## Users

NAVIGATOR IP  
DOOR ACCESS CONTROL SYSTEMS

User : Administrator (Administrator) Log Out

**Users**

Number	Name	Status	User Category A	User Category B	Uses Allowed	Uses Left	Assisted Access	PIN	Signature	
1	User 1	Inactive	Not In Use	Not In Use	0	0	Inactive	No	Yes	Edit
2	William Vint	Active	01 - Total Access	Not In Use	0	0	Active	Yes	Yes	Edit
3	User 3	Inactive	Not In Use	Not In Use	0	0	Inactive	No	Yes	Edit
4	User 4	Inactive	Not In Use	Not In Use	0	0	Inactive	No	Yes	Edit
5	User 5	Inactive	Not In Use	Not In Use	0	0	Inactive	No	Yes	Edit
6	User 6	Inactive	Not In Use	Not In Use	0	0	Inactive	No	Yes	Edit
7	User 7	Inactive	Not In Use	Not In Use	0	0	Inactive	No	Yes	Edit
8	User 8	Inactive	Not In Use	Not In Use	0	0	Inactive	No	Yes	Edit

Search User name/number

[Load Users 0001-1000 For Backup](#)  
[Load Users 1001-2000 For Backup](#)  
[Load Users 2001-3000 For Backup](#)

v 8.0.1 (c) JWS Ltd. 2016 13:38:36 17/03/16 JWS

Control the Users by choosing from a number of options

- User Name
- User Category (Time Zone & Door Group)
- PIN
- Expiry Date
- Number of Uses
- DDA Assisted Access
- Full User Backup and Restore

## Categories

NAVIGATOR IP  
DOOR ACCESS CONTROL SYSTEMS

User : Administrator (Administrator) [Log Out](#)

### User Categories

Number	Name	Status	
1	Total Access	Enabled	<a href="#">Edit</a>
2	Staff M-F 1300-1330	Enabled	<a href="#">Edit</a>
3	User Category 3	Disabled	<a href="#">Edit</a>
4	User Category 4	Disabled	<a href="#">Edit</a>
5	User Category 5	Disabled	<a href="#">Edit</a>
6	User Category 6	Disabled	<a href="#">Edit</a>
7	User Category 7	Disabled	<a href="#">Edit</a>
8	User Category 8	Disabled	<a href="#">Edit</a>

[Backup](#)

v 8.0.1 (c) JWS Ltd. 2016      14:19:15 17/03/16      JWS

User Categories combine Time Zones & Door Groups

- Controlling Users by Time & Door parameters
- Choose from 64 User Categories
- 5 Times Zones per User Category
- 5 Door Groups per User Category
- “Total Access” default User Category for quick programming

## Time Zones

The screenshot displays the 'Time Zones' configuration page in the Navigator IP web interface. The page includes a navigation menu on the left with options like Home, Events, Reports, Users, Categories, Time Zones, Door Groups, Holiday, Relationships, Managers, Network, and Settings. The main content area shows a table of time zones with columns for Number, Name, Status, and an Edit button. Below the table is a pagination control showing page 1 of 8.

Number	Name	Status	Action
1	Total Access	Enabled	Edit
2	mf 1300-1330	Enabled	Edit
3	Time Zone 3	Disabled	Edit
4	Time Zone 4	Disabled	Edit
5	Time Zone 5	Disabled	Edit
6	Time Zone 6	Disabled	Edit
7	Time Zone 7	Disabled	Edit
8	Time Zone 8	Disabled	Edit

Below the table, there is a pagination control showing page 1 of 8, and a 'Backup' link.

### Set-up Time Zones for your Users

- Set-up Time Zones to control User Access
- Set-up Time Zones to control Free Access for doors
- Choose from individual or a combination of days
- Holiday Option
- 64 Time Zones

## Door Groups

The screenshot shows the Navigator IP web interface in Internet Explorer. The browser address bar shows <http://192.168.0.201/group.htm>. The user is logged in as Administrator (Administrator) and can click Log Out. The main content area is titled "Door Groups" and contains a table with the following data:

Number	Name	Status	Action
1	Total Access	Enabled	Edit
2	5a and b	Enabled	Edit
3	Doors 6 - 10a and b	Enabled	Edit
4	Door Group 4	Disabled	Edit
5	Door Group 5	Disabled	Edit
6	Door Group 6	Disabled	Edit
7	Door Group 7	Disabled	Edit
8	Door Group 8	Disabled	Edit

Below the table is a pagination control showing numbers 1 through 8, with a "Backup" link below it. The footer of the interface displays "v 8.0.1 (c) JWS Ltd. 2016", the time "14:20:14 17/03/16", and the JWS logo.

Set-up Door Groups for your Users

- Set-up Door Groups to control User Access by door(s)
- Choose from available doors
- 64 Door Groups

## Holidays

The screenshot shows the 'Holiday' management page in the Navigator IP web interface. The page title is 'Holiday' and it displays a table of holiday settings. The table has four columns: Number, Name, Status, and Date. There are 8 entries, all with a status of 'Disabled' and an 'Edit' button. A 'Backup' link is visible below the table. The sidebar on the left contains navigation icons for Home, Events, Reports, Users, Categories, Time Zones, Door Groups, Holiday, Relationships, Managers, Network, and Settings. The top of the interface shows the user is logged in as Administrator.

Number	Name	Status	Date
1	Holiday 1	Disabled	
2	Holiday 2	Disabled	
3	Holiday 3	Disabled	
4	Holiday 4	Disabled	
5	Holiday 5	Disabled	
6	Holiday 6	Disabled	
7	Holiday 7	Disabled	
8	Holiday 8	Disabled	

Set-up Door Groups for your Users and Access Control System

- 32 Holiday Settings

## Relationships

The screenshot shows the 'Relationships' page in the Navigator IP web interface. The page title is 'NAVIGATOR IP DOOR ACCESS CONTROL SYSTEMS'. The user is logged in as 'Administrator (Administrator)'. The main content area displays a table of relationships:

Number	Name	Status	Cause Event	Effect Event	E-Mail
1	Relationship 1	Disabled	-	-	Disabled <a href="#">Edit</a>
2	Relationship 2	Disabled	-	-	Disabled <a href="#">Edit</a>
3	Relationship 3	Disabled	-	-	Disabled <a href="#">Edit</a>
4	Relationship 4	Disabled	-	-	Disabled <a href="#">Edit</a>
5	Relationship 5	Disabled	-	-	Disabled <a href="#">Edit</a>
6	Relationship 6	Disabled	-	-	Disabled <a href="#">Edit</a>
7	Relationship 7	Disabled	-	-	Disabled <a href="#">Edit</a>
8	Relationship 8	Disabled	-	-	Disabled <a href="#">Edit</a>

Below the table, there is a pagination control showing '1' and '2' with navigation arrows, and a [Backup](#) link.

The footer of the interface displays 'v 8.0.1 (c) JWS Ltd. 2016', the time '14:21:04 17/03/16', and the JWS logo.

Powerful Cause & Effect software e.g. Send me an email when a Break Glass is pressed or a Door is left open!

- Cause Events per Controller, Door or User
- Effect Events (outcome) for Door(s) or User(s)
- Email feature

## Managers

The screenshot shows the Navigator IP web interface in Internet Explorer. The browser address bar shows 'http://192.168.0.201/manager.htm'. The page title is 'Navigator IP - Managers'. The user is logged in as 'Administrator (Administrator)' with a 'Log Out' button. The left sidebar contains navigation icons for Home, Events, Reports, Users, Categories, Time Zones, Door Groups, Holiday, Relationships, Managers, Network, and Settings. The main content area is titled 'Managers' and displays a table with the following data:

Number	Name	Log-In	Password	Privileges	E-Mail	
1	Administrator	Administrator1	*****	Administrator	post@jwsltd.co.uk	Edit
2	Manager 2			Administrator		Edit
3	Manager 3			Administrator		Edit
4	Manager 4			Administrator		Edit
5	Manager 5			Administrator		Edit
6	Manager 6			Administrator		Edit
7	Manager 7			Administrator		Edit
8	Manager 8			Administrator		Edit

Below the table, there are navigation arrows and the number '1' and '2'. A 'Backup' link is visible below the table. The footer of the interface shows 'v 8.0.1 (c) JWS Ltd. 2016', the time '14:21:34 17/03/16', and the JWS logo.

Set-up your System Managers profiles

- Password configuration
- Privileges configuration: Administrator or Operator
- Email address field

## Network

The screenshot shows the Navigator IP Network configuration page. The page title is "NAVIGATOR IP DOOR ACCESS CONTROL SYSTEMS". The user is logged in as "Administrator (Administrator)". The page contains a sidebar with navigation options: Home, Events, Reports, Users, Categories, Time Zones, Door Groups, Holiday, Relationships, Managers, Network, and Settings. The main content area is titled "Network" and displays a table of controllers.

Number	Name	Status	Connection	Visible	
1	Controller 1a	Enabled	LAN	Yes	<a href="#">Edit</a>
2	Controller 2a	Enabled	LAN	Yes	<a href="#">Edit</a>
3	Controller 3	Enabled	LAN	Yes	<a href="#">Edit</a>
4	Controller 4	Enabled	LAN	Yes	<a href="#">Edit</a>
5	Controller 5ab	Enabled	LAN	Yes	<a href="#">Edit</a>
6	Controller 6	Enabled	LAN	Yes	<a href="#">Edit</a>
7	Controller 7a	Enabled	LAN	Yes	<a href="#">Edit</a>
8	Controller 8	Enabled	LAN	Yes	<a href="#">Edit</a>

Below the table, there are navigation arrows and page numbers 1 through 8. There are also links for "Load Controllers", "Load Door A Data", "Load Door B Data", "Backup Controllers", "Backup Door A Data", and "Backup Door B Data".

At the bottom of the page, the version is "v 8.0.1 (c) JWS Ltd. 2016", the time is "14:21:59 17/03/16", and the JWS logo is visible.

### Door configuration for Standalone or Networked Navigator IP Controllers

- Standalone or Network (LAN or 485) configuration
- Door Names
- Card Reader Type (Entry / Exit)
- Interlock Enable/ Disable
- Access Time ( Lock Relay)
- Free Access Time Zones (2 per door)
- Auxiliary Input & Output Names

## Settings

**NAVIGATOR IP**  
DOOR ACCESS CONTROL SYSTEMS

User : Administrator (Administrator) [Log Out](#)

**Settings**

**Installation Details**

Client	Location	Site Code	Reader Type	Data Format	
JWS LTD	The Wall	1000	Clock & Data	1	<a href="#">Edit</a>

**E-Mail Settings**

SMTP Server	User Account	Password	
173.203.187.10	post@jwsLtd.co.uk	*****	<a href="#">Edit</a>

**Miscellaneous Settings**

UDP Port	UDP Timer	Use Signatures	Event Summaries	Number Of Users	
52355	500	No	No	1000	<a href="#">Edit</a>

**Auto-Expiry Settings**

Auto-Expiry Feature	Auto-Expiry Time (Days)	
Enabled	999	<a href="#">Edit</a>

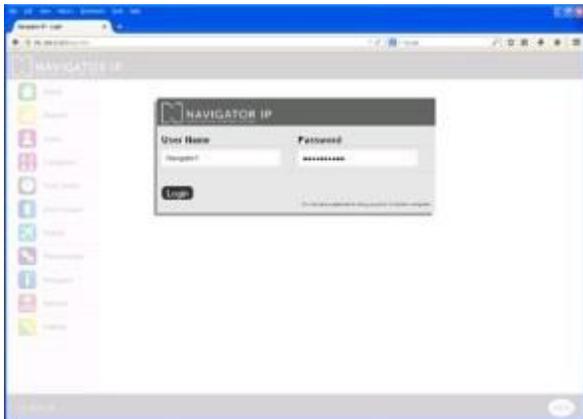
**Auto Log Off Settings**

v 8.0.1 (c) JWS Ltd. 2016 14:22:21 17/03/16

### System Settings, Utilities and Installers Page

- Installation details
- Email settings
- Auto Expiry settings
- Auto Log Off settings
- Door Override settings
- Miscellaneous
- System Utilities
- Installers Page

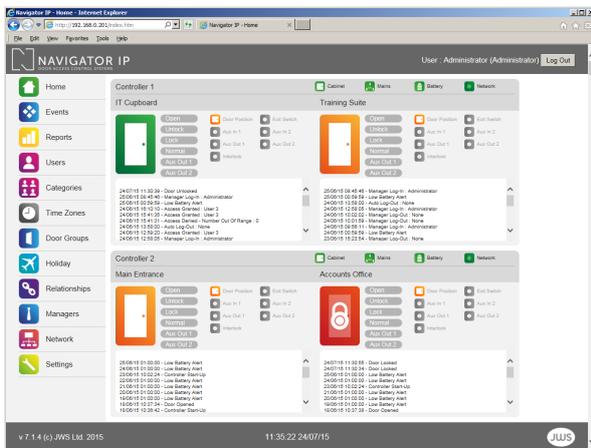
## Navigator IP Software First time?



### Open a Browser

Where possible use Internet Explorer, the Navigator IP software is designed to work with the most popular Browsers but we recommend IE. Please ensure you are using the current version of the Browser. (at time of writing it is IE 11). Enter the IP address of the Master Navigator IP Controller eg. 192.168.5.50 and Press Enter. A log on box will appear (as shown on the left)

Enter the default User Name & Password (supplied with documentation but not mentioned here for Security reasons). If successful the Navigator IP Home Page will appear as below



### Navigator IP Home Page

Now you are logged on and ready to explore Navigator IP. Check the Time & Date is correct at the bottom (if not please use Set Clock in the System Utilities pop up on the Settings page)

Tip: Per Controller Event Histories are by default Deactivated, they can be Activated by going to the Settings Page> Miscellaneous Settings> Events Summaries> Yes

We do not advise Event Histories are activated for Networks above ten doors (eg. Five networked Navigator IP Controllers)

Tip: You can 'hide' Controllers from the Home Page view using the Visible Settings per Controller on the Network Page – this is useful for big sites that only want to view Events and or Control Doors (Lock / Unlock etc.) on a specific number of Controller(s)

## Getting your Access Card or Fob working (setting up a User)

Navigator IP classifies types of Users into a category using the term **User Category**  
(by User we mean someone who has an Access Card or Fob)

The best way to explain **User Categories** is by a Users activity (i.e. what door(s) they are allowed to Access and what times of the day & days of the week)

### Worked Example:

Jane Smith is a Cleaner

Jane is allowed Access to: Front Door, Cleaning Store, Staff Room and Toilet\*

Jane works 17.00 to 19.00 Monday to Friday

\*(The assumption here is that Controllers and Doors are already configured and on-line)

Setup a **User Category** as follows:

1. Enable a **Time Zone** and call it 'Cleaner' (which we will select 17.00 to 19.00 Monday to Friday) > Click Save
2. Enable a **Door Group** and call it 'Cleaner' (which we will add doors: Front Door, Cleaning Store, Staff Room and Toilet ) > Click Save
3. Enable a **User Category** and call it 'Cleaner' (which will combine Time Zones & Door Groups) > Click Save
4. Activate a User and choose User Category Cleaner (In this case we have given Jane Smith Fob Number 46) > Click Save

Now that the Cleaner **User Category** has been set it can be applied to other Users (if applicable)

There are 64 User Categories (Total Access\* + 63)

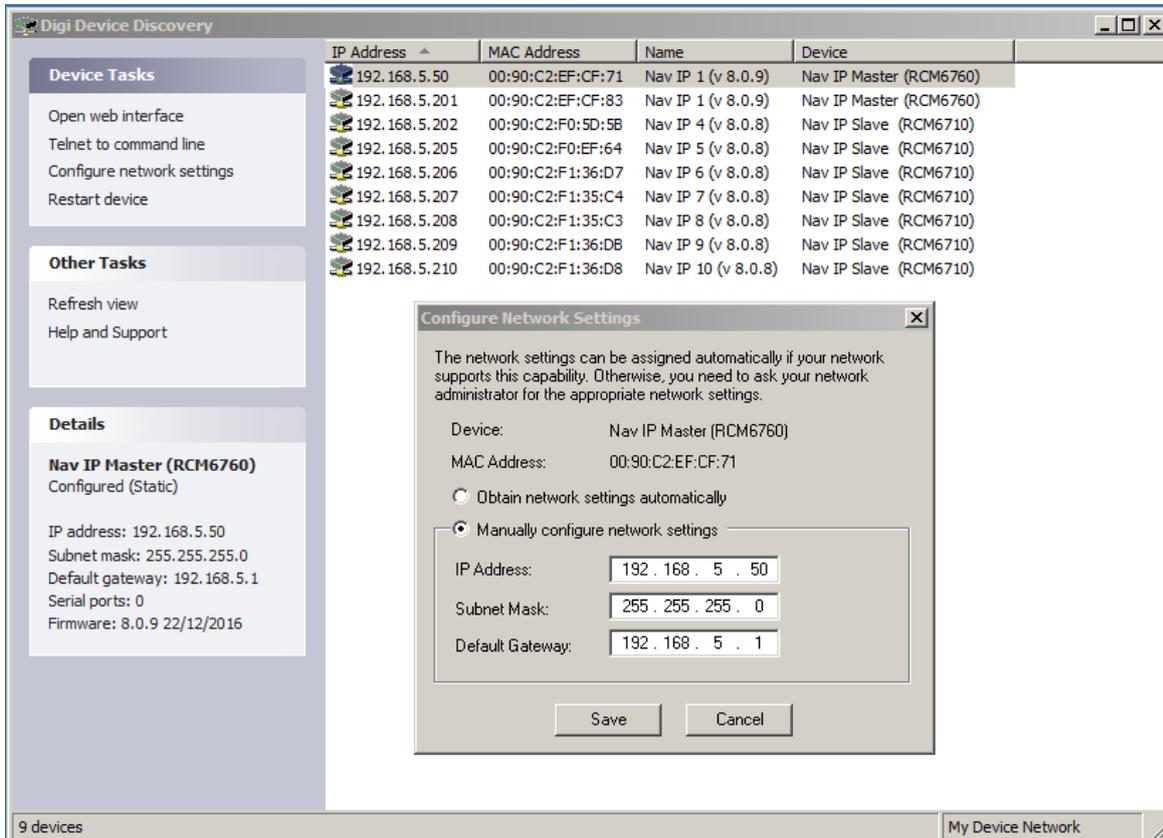
### \*Total Access

Navigator IP has a preset User Category called 'Total Access'

Users with Total Access are allowed 24/7/365 Access to any door

The Total Access User Category cannot be removed or edited

## Discovery Utility



Your Navigator IP Access Control Unit has an IP address which allows it to be contacted by your Browser. Should you forget the IP address of your Navigator IP Access Control Units this handy utility will find it for you:

Click [HERE](#) to download it to your PC / Laptop ( Windows Only)

## Hardware

### The Navigator IP Cabinet

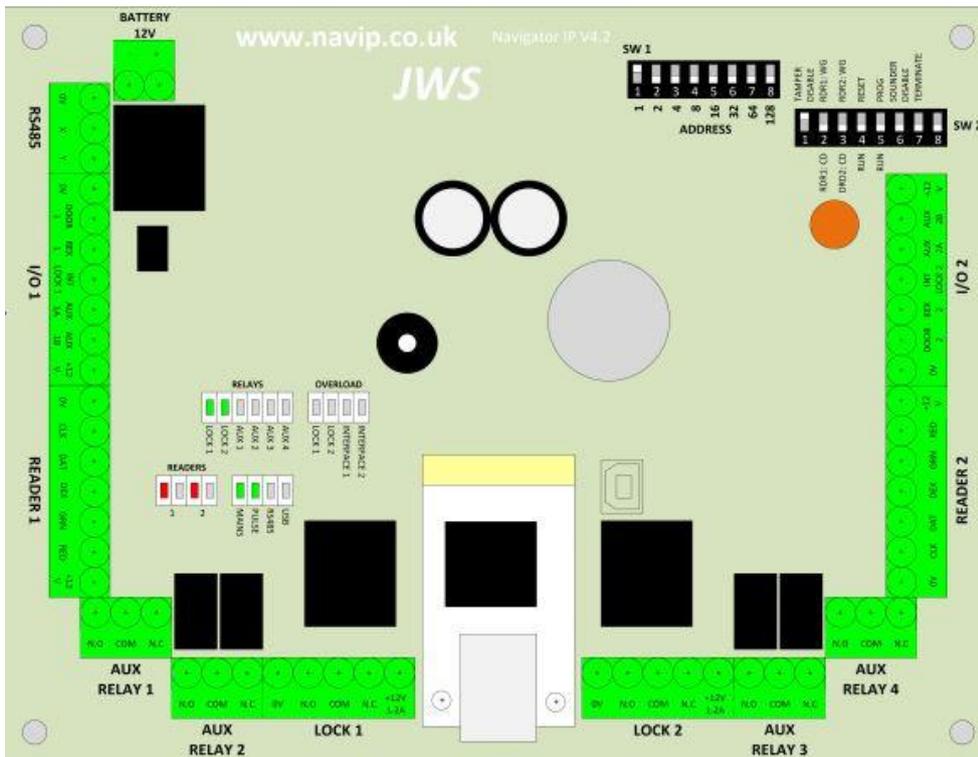


Powered Coated Steel Cabinet  
280mm (h) x 230 mm (w) x 85mm (Inc. mounting feet).  
Allows fitment of 12vDC 7.0Ahr Sealed Lead Acid battery.  
Complete with "lazy fold" feet  
Easy swap / serviceable Power Supply  
Multiple cut-outs for cable entry



Meets the essential requirements of the following European Directives: Low Voltage 2006/95/EC; EMC 2004/108/EC; WEEE 2002/96/EC; RoHS 2002/95/EC Navigator IP Flyer v3 ©JWS 2017

Navigator IP PCB is a Two Door Controller and can be used standalone or in an up to 200 door network



### How to set up IP addresses on Navigator IP

- Door A** (left hand side of PCB also known as Door 1)  
 I/O 1 | READER 1 | AUX RELAY 1 |AUX RELAY 2 | LOCK1
- Door B** (right hand side of PCB also known as Door 2)  
 I/O 1 | READER 1 | AUX RELAY 1 |AUX RELAY 2 | LOCK1

### Other Connections

- LAN: Main LAN connection (bottom centre of PCB)
- Battery: For connection of Sealed Lead Acid battery, observe the polarity
- RS485: For RS485 Networks

### DIP Switches

- SW1 (Controller Addresses)
- Binary Address Setting (Navigator IP Master is No. 1)
- SW2
- 1. Tamper Disable (overrides Optical Cabinet Tamper)
- 2. RDR1 CD: RDR1:WG Reader 1 Format Select (Clock & Data or Wiegand)
- 3. RDR2 CD: RDR2:WG Reader 2 Format Select (Clock & Data or Wiegand)
- 4. Reset \*Engineer only\*
- 5. Prog \*Engineer only\*
- 6. Sounder Disable: For Silent Operation
- 7. Terminate: End Of Line Resistor for RS485 Networks (set on last unit only on RS485 line) \*Engineer only\*
- 8. Spare

### LEDS

- Relays
- Lock 1
- Lock 2
- Aux 1
- Aux 2
- Aux 3
- Aux 4

### Overload

- Lock 1
- Lock 2
- Interface 1
- Interface 2

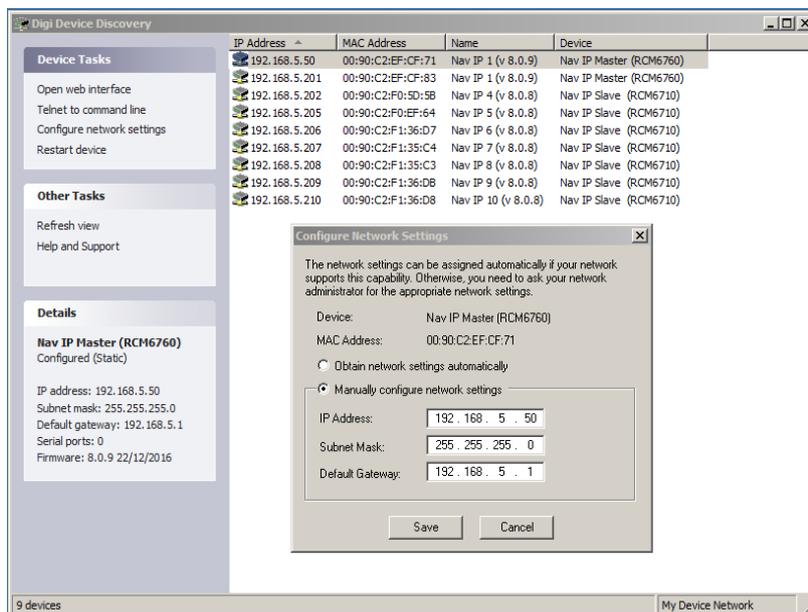
### Readers

- 1 Door A – Red: Lock Engaged / Green:Lock Released (Normally RED is ON)
- 2 Door B Red: Lock Engaged / Green:Lock Released (Normally RED is ON)

### Main

- Mains: Primary incoming power (Normally ON)
- Pulse: System Heatbeat (Normally FLASHING)
- RS485: Activity on RS485 Network (Normally FLICKERING when an RS485 network is attached)
- USB: When unit is being programmed via USB (Normally FLICKERING when an USB lead is attached)

The Navigator IP Master Access Control Unit has its own GUI (a User Interface) which allows you to change its IP address.



The Master's IP address should always be statically assigned not DHCP.

For Navigator IP Lan Slave Access Control Units you can set the IP address using the NavIP Discovery Utility. (this can also be used for the Master is desired). We recommend using the Static IP setting. ( image shown on the left). It is advisable to run your IP addresses in a similar pattern to the Controller / Door Numbering e.g. a Navigator IP six door system

- Controller 1 (Master) 192.168.1.101 (Doors 1 and 2)
- Controller 2 (Lan Slave) 192.168.1.102 (Doors 3 and 4)
- Controller 2 (Lan Slave) 192.168.1.103 (Doors 5 and 6)

### Want to connect to your router?

Before proceeding make a note of the IP range / address of your network switch / router (this will be provided by the manufacturer) eg. 192.168.1.1

Plug Navigator IP into your network (i.e. to your network switch / router via a CAT5 cable)

You do not need CAT5 Crossover cable just a CAT5 'Patch' cable

Set a Static IP - This can be done easily using the supplied Navigator IP Discovery Utility or the Navigator IP GUI itself ( Go to the Settings Page)

Please ensure you configure the IP address for Navigator IP in the same range ( but not same address) as your Router Email Facility / Gateway

Please ensure you enter the details of your Gateway on the settings page should you wish to use the Email facility

eg.

IP Range 192.168.1.1

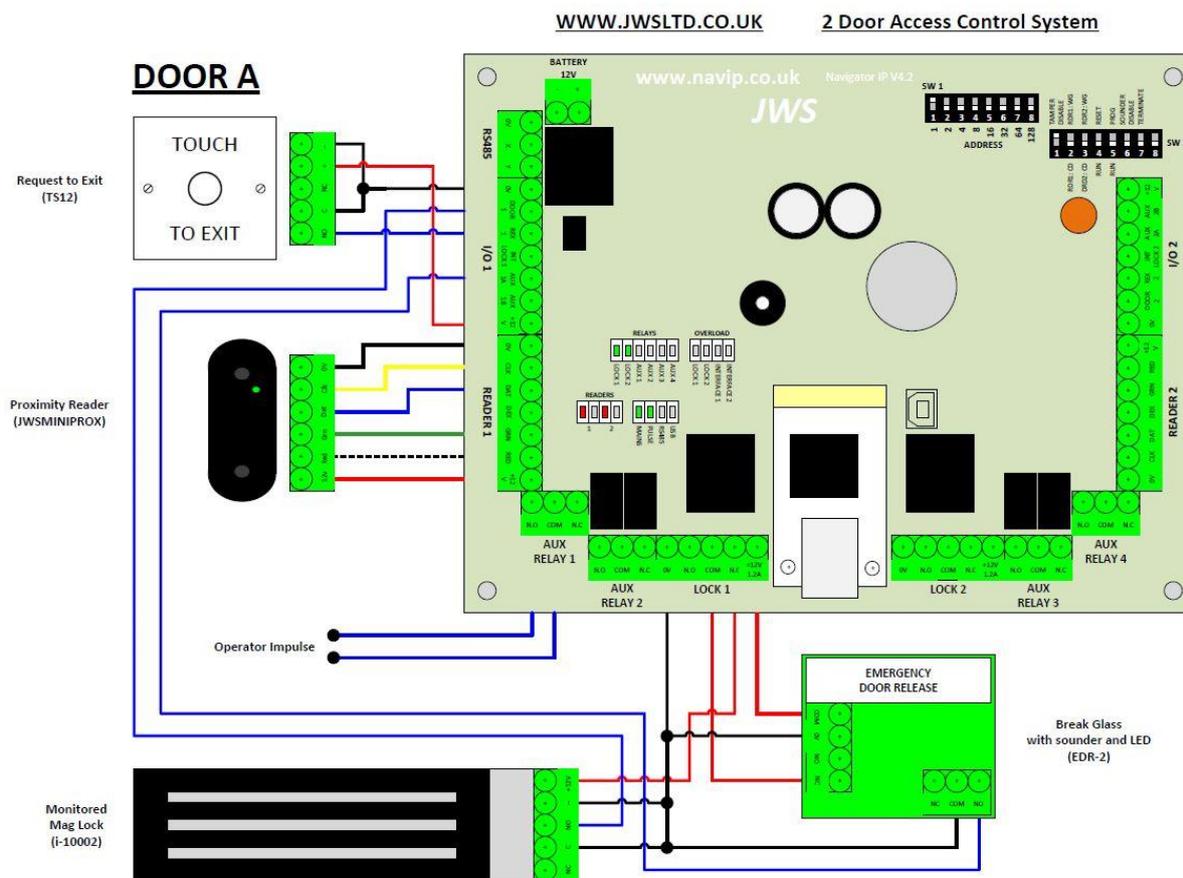
Navigator IP Static IP address 192.168.1.10

Navigator IP Static IP Gateway address 192.168.1.3

Once complete you can then access it via a PC, ipad / tablet etc. by entering 192.168.1.10 in your Browser

You can also access it via a smart phone ( Navigator IP is not optimized for mobile phone use)

## Installation / Wiring Overview



Shown above is the overview of wiring for a single door system using a JWSMINIPROX proximity reader, a JWS TS12 Exit Switch, a JWS Monitored Maglock with RGL EDR-2 Breakglass

The operator Impulse is shown for illustrative purposes only to show the installer that Navigator IP is fully compatible with Automatic Door Openers.

Please note you must always fit a diode or varistor across the lock terminals (not shown)

Free Technical Support from the manufacturer

For technical support in the UK  
Call JWS on 01761 414700,

Monday to Friday from 9:00  
a.m. to 4:00 p.m. GMT.

## **Section 8 - Glossary**

This section provides explanations for some of the terms with which you may be unfamiliar.

### **Access Control**

This is the process whereby personnel on a site are restricted from gaining access to protected areas using a system of door controllers and pass keys - usually cards.

### **Authority Levels**

There are three levels of security clearance: -

*Manager* is the highest level of authority and allows access to all features within the program.

*Supervisor* is the middle level of authority and allows the user to do everything that an operator can do as well as other more advanced tasks such as changing time zones and door groups.

*Operator* is the standard level and allows access to everyday functions such as enabling and disabling cards, locking and unlocking doors and reviewing past events.

### **On-Line/Off-Line Doors**

Door controllers that are responding to commands promptly and correctly are said to be on-line. The icons for these doors will appear normal.

Door controllers that are not responding to commands are said to be off-line. The icons for these doors will have an off-line symbol superimposed over the top.

### **Door Addresses**

Each door on your network must have a unique identity number or address. Addresses start from 1 and run sequentially upwards with no gaps.

Your door controllers (physically located at each secure door) must be programmed with the correct addresses so that they correspond with the list on your computer.

### **Default door settings**

Access granted time = 5 seconds

Access denied time = 3 seconds

Door open too long alarm time = 10 seconds

Enable anti-tailgating= Yes

Report door forced= Yes

No alarms in free access mode= Yes

Door image= first image found on disk

### **Free-Access Periods**

Free access periods are used to force doors to automatically unlock themselves at pre-determined times thereby allowing total freedom of movement for personnel without needing to swipe cards/present tokens etc.

Each door may be associated with up to 5 free-access periods.

## **Time Zones**

A time zone consists of a user defined set of five minute periods running from midnight to midnight on each of the seven days of the week.

Individual five minute periods can be set to be active or inactive for any or all of the seven days of the week allowing flexible control of timed activities within the system.

## **Access Granted**

The user is allowed to pass through the door.

The door lock will be released for a short time and the green LED will be illuminated.

## **Access Denied**

The user is not allowed to pass through the door.

The door lock will be not be released and the red LED will be illuminated.

## **Magnetic Stripe Card**

A plastic card (similar to a bank or credit card) that carries a magnetic stripe along the length of the card (usually on the back).

Information can be encoded into the stripe and this data can be read when the card is passed through a card reader (a process known as 'swiping').

## **Swipe Reader**

This is a card reader that is usually mounted at the side of a protected door.

Running the card through the reader allows the door controller to read the information off the magnetic stripe and report it to the central computer.

## **Swiping**

The act of running a magnetic card through the read channel of a magnetic card reader.

## **Proximity Card**

A device containing data that can be read simply by bringing it into the range of a proximity reader. No physical contact is required.

Examples of such devices include cards, key fobs and tags.

## **Proximity Reader**

A device that is capable of reading data from a proximity card whenever one is brought into close proximity.

Short-range readers operate over distances of a few centimetres.

Long-range readers can operate over distances of several metres.

## **Door Groups**

A simple example will clearly illustrate the function and use of door groups.

Suppose that a site has 23 protected doors, 4 of which lead into storage rooms of one type or another. It is highly likely that only certain personnel should have access to the contents of those store-rooms.

Creating a door group (called 'Store-rooms' perhaps) containing just those four doors and then associating those personnel with that door group (via a user category) will ensure that only the chosen personnel will be able to access those rooms.

## **User Categories**

Understanding the concept of the user category is fundamental to the operation of your system. They are best illustrated by a simple example.

Let's assume that you employ contract cleaners who are only allowed onto your premises between 7pm and 9pm on weekday evenings. Once on the premises, they must have access to all areas except the air-conditioned computer room.

Step 1 - define a 'Cleaners' time zone that is active from 7pm to 9pm, Monday to Friday.

Step 2 - define a 'Cleaners' door group that contains all doors except the computer room door.

Step 3 - define a 'Cleaners' user category that has just one time zone and door group pair - you guessed it - the 'Cleaners' time zone and the 'Cleaners' door group !

Step 4 - issue access control cards to the cleaning personnel. Make sure that each card is only associated with the 'Cleaners' user category.

Job Done !

## **Time Zone And Door Group Pairs**

Each user category can be associated with up to five time zone and door group pairs.

Each pairing defines one set of access rights for personnel associated with the user category.

When the computer receives a card read from a door controller, it checks to see which user category (or categories) that cardholder is associated with. It then checks each time zone and door group pair to see if any of them match the current situation.

If a match is found, then the access granted signal is generated (the user gets shown the green light).

If no match is found, then the access denied signal is sent (the user sees a red light).

## **Click/Left Click**

This is a very common term in computing.

It means 'press and then release the left mouse button'.

Click and Left Click are interchangeable terms.

## **Right Click**

This is a very common term in computing.

It means 'press and then release the right mouse button'.

## **Double Click**

This is a very common term in computing.

It means 'press and then release the left mouse button twice in quick succession' i.e. two quick left-clicks !

## **Windows**

Usually refers to Windows 95, Windows 98 or Windows 2000 operating systems.

(c) Microsoft Corp.

## **WAV files**

A popular format for storing sound clips on a computer.

## **Re-booting**

'Re-booting' is the 'nerdy' term for shutting down your computer and then starting it up again!

Windows 95 and 98 insist that you should shut down the system using the correct method i.e. Click the 'Start' button then choose the 'Shut Down ...' option. This calls up the 'Shut Down Windows' dialog box. You can now choose to 'Restart' the computer.

Note: In some rare situations, you may be better off shutting the computer down, switching off the mains power and then re-starting the whole system. If you feel this may be of benefit, choose the 'Shut-Down' option instead.

## **Isolating Inputs**

I/O module inputs can be isolated either programmatically or by using the I/O Modules pop-up menu. Changes of state of an isolated input will be ignored by the system until such time as it is re-connected.

## **Reconnected Inputs**

I/O module inputs that have been isolated can be re-connected either programmatically or via the I/O modules pop-up menu. Re-connected inputs behave normally.

## **Guard Tours**

Guard tours are used to define pre-determined paths that your security guards should follow when patrolling your site.