



Service Selector Administration

Administrator Manual

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Safety Summary

The following general safety precautions must be observed during all phases of operation, service and repair of this equipment. Failure to comply with these precautions or with specific warning elsewhere in this manual violates safety standards of design, manufacture and intended use of the equipment. Livewire Connections Ltd. assumes no liability for the customer's failure to comply with these requirements.

GROUND THE EQUIPMENT

To minimise shock hazard, the equipment chassis must be connected to an electrical ground.

AVOID INTERFERENCE

To avoid interference, do not run cables parallel to AC wiring, or near fluorescent lights or other high magnetic or electrical fields. Interference from these types of sources causes equipment to be faulty and will automatically void warranty conditions.

AVOID LONG CABLE LENGTHS

Any cable longer than 5 metres must be shielded, and all peripheral equipment must be grounded.

DO NOT OPERATE IN AN EXPLOSIVE ATMOSPHERE

Do not operate the equipment in the presence of flammable gases or fumes. Operation of any electrical equipment in such an environment constitutes a definite safety hazard.

DO NOT SERVICE OR ADJUST ALONE

Do not attempt internal service or adjustments unless another person, capable of rendering first aid resuscitation, is present.

KEEP AWAY FROM LIVE CIRCUITS

Operating personnel must not remove equipment covers. Only qualified maintenance personnel must make component replacement and internal adjustment. Do not replace components with the power cable connected. Under certain conditions, dangerous voltage may exist even with the power cable removed. To avoid injuries, always disconnect power and discharge circuits before touching them.

DO NOT MODIFY CONFIGURATION OF SOFTWARE

This product is a self-contained system installed and configured by a qualified distributor. Modification of software configuration can result in loss of communications and increased airtime bills. Configuration can only be done by and on written instruction by a qualified distributor.

ALWAYS FOLLOW MANUFACTURERS ADVICE

Suppliers and manufacturers of communications equipment and peripherals provide a wide range of advice on the correct installation of their equipment. The customer should always aim to follow the guidance as provided by suppliers and manufacturers.

Table of Contents

1	ADMINISTRATION AND USER INTERFACE	5
1.1	INTRODUCTION	5
1.2	MANAGEMENT AND CONFIGURATION OPTIONS	5
1.3	GETTING STARTED – LOGIN	6
1.4	MAIN DIALOG	6
	<i>1.4.1 Download Log Button</i>	<i>7</i>
	<i>1.4.2 Configure... Button</i>	<i>7</i>
	<i>1.4.3 Upgrade Firmware Button</i>	<i>8</i>
	<i>1.4.4 Download Upgrade Log Button</i>	<i>8</i>
	<i>1.4.5 Passwords Button</i>	<i>8</i>
	<i>1.4.6 Current Connection Info Button</i>	<i>9</i>
	<i>1.4.7 About button</i>	<i>9</i>
2	CONFIGURATION OF THE SERVICE SELECTOR	10
2.1	EDIT SERVICE BUTTON	10
	<i>2.1.1 Add a Service</i>	<i>11</i>
	2.1.1.1 Add a LAN-based Service	11
	2.1.1.2 Add a Dialup-based Service	13
	<i>2.1.2 Modify a Service</i>	<i>15</i>
	<i>2.1.3 Delete a Service</i>	<i>15</i>
2.2	APPLYING THE CHANGES	15
2.3	NETWORK BUTTON	16
2.4	SETUP PORT FORWARDING RULES	18
	<i>2.4.1 Add a port forwarding rule</i>	<i>18</i>
	<i>2.4.2 Modifying a port forwarding rule</i>	<i>19</i>
	<i>2.4.3 Deleting a port forwarding rule</i>	<i>20</i>
2.5	LOAD CONFIGURATION BUTTON	20
2.6	SAVE CONFIGURATION BUTTON	20
2.7	RESTORE DEFAULT BUTTON	20
2.8	RESTART SERVICE SELECTOR	21
	APPENDIX A – MENU TREE	22
	APPENDIX B – LIST OF COMPONENTS	23
	APPENDIX C – ABBREVIATIONS AND ACRONYMS	24
	APPENDIX D – SERVICE SELECTOR LOG	25
	APPENDIX E – TECHNICAL SPECIFICATION	26
	APPENDIX F – FACTORY DEFAULT CONFIGURATION	27
	APPENDIX G – SUPPORT	28

1 Administration and User Interface

1.1 Introduction

This manual details the configuration options for your service selector through the **Service Selector Administration** software. Configuration can be carried out prior to installation from a single PC or Mac connected directly (using a cross over cable, not provided) to the Service Selector or after installation over the onboard network.



Figure 1.1.1 – Service Selector Network Management

To configure the Service Selector it is essential that the computer running the Service Selector Administration software is within the same IP address range as the Service Selector (default: 192.168.5.1).


1.2 Management and Configuration options

The **Service Selector Administration** software allows you to apply firmware upgrades, download engineering logs and configure all connection aspects of the **Service Selector**.

The most important function the **Service Selector Administration** software provides is to **Configure** the **Service Selector**. The configuration includes 5 parts:

1. **Edit services** - defines the services listed on the **Service Selector User Application**.
2. **Configure Network** - defines the onboard Local Area Network (LAN) and the Email Only settings.
3. **Setup Port Forwarding Rules (optional add-on)** – defines the port forwarding rules being applied.
4. **Load Configuration** - loads the configurations from an existing configuration (.cfg) file.
5. **Save Configuration** - saves current services and network configuration to a .cfg file.
6. **Restore Defaults** - will reset services and network configuration to Factory default, detailed under **Appendix F – Factory Default Configuration**.
7. **Restart Service Selector** – will force the Service Selector to do a full system restart.

1.3 Getting Started – Login

Double click the **Service Selector Administration** Icon () on the computer to start the Service Selector Administration software. This will bring up the User Login dialog (Figure 1.3.1).

If you know the IP address of the Service Selector, you can enter it in the 'Service Selector Address' field here. Alternatively, you can enter the Service Selectors DNS name, ServiceSelector.ipg. Enter your password in the Password field (the default passwords is "password") and tick the Save Password box if you want this password to be saved on this computer.

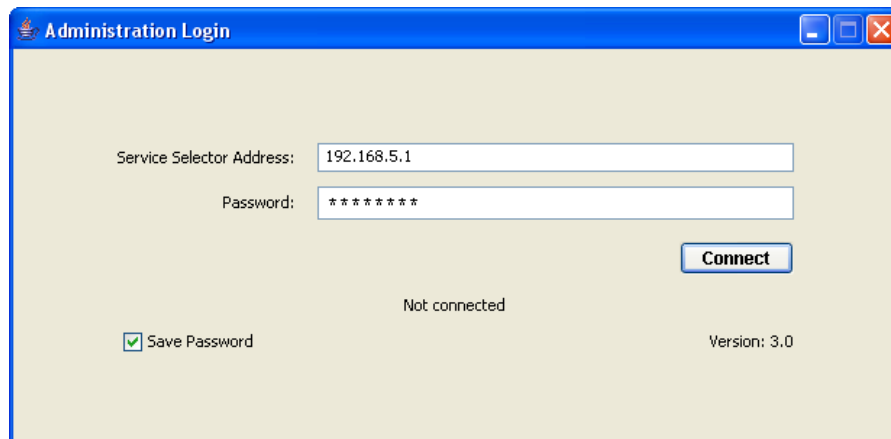


Figure 1.3.1 – Service Selector Administration Login

By clicking the **Connect** button the **Service Selector Administration** software will try to connect to the Service Selector. If successful, you will be presented with the **Main** screen for the **Service Selector Administration** software, as shown on Figure 1.3.2.

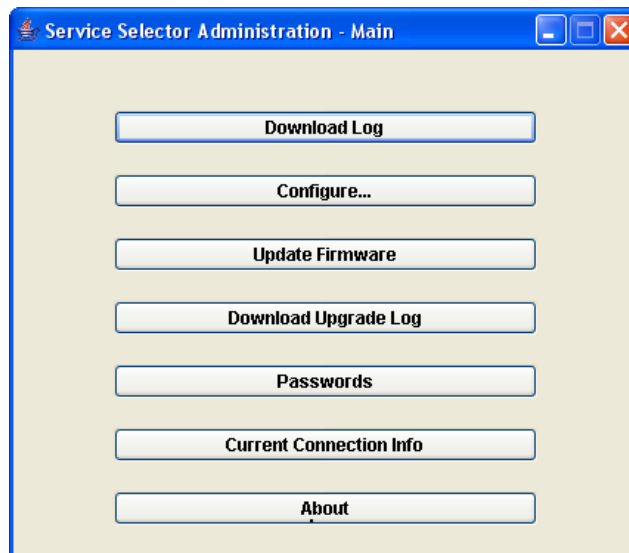


Figure 1.3.2 – Main dialog

1.4 Main dialog

The **Main dialog** of the **Service Selector Administration** software allows the Operator to select different functions via single clicks.

The Main dialog box includes 5 function buttons:

1. **Download Log**
2. **Configure...**
3. **Update Firmware**
4. **Download Upgrade Log**
5. **Passwords**
6. **Current Connection Info**
7. **About**

1.4.1 Download Log Button

By clicking the **Download Log** button, the Operator is presented with a standard **Save File** window. After navigating to the desired destination directory simply enter a name for the Administrator log and press **Save**. The Log file will be saved with a .log format extension.

The following items are captured in the Administrator log file:

- **History:** current firmware version
- **Update History:** initial firmware version, upgrade time and version after upgrade
- **Update Log:** details of the upgrade operation
- **Admin Log:**
- **User Log**
- **Contents of Syslog:** the system log (syslog) file of Service Selector
- **Network Configuration:** current configuration of all network ports.
- **Port Forwarding Configuration (optional add-on)**
- **Activity Log:** the activity log of **Service Selector User Application**.

1.4.2 Configure... Button

By clicking the **Configure** button, the operator will be presented with **Service Selector Administration - Configuration** dialog.

The **Configuration** dialog has eight buttons which are discussed in more detail under section 4.

- **Edit Services**
This will let you edit the services which will appear on the **Service Selector User Application** GUI.
- **Configure Network**
Allows you to configure the essential information that the Service Selector requires in respect of network configuration.
- **Apply Changes**
The button is only available when there has been a change in the Service Selector **Services** or **Network** configuration.
- **Setup Port Forwarding Rules (optional add-on)**
Allows you to configure port forwarding rules on incoming traffic.
- **Load Configuration**
This will load a Services and Network configuration from a .cfg file that was saved earlier via the **Save Configuration** button.

- **Save Configuration**
Saves the current services and network configuration to a .cfg file that can be used by the **Load Configuration** button (see previous paragraph) on the **Configuration** dialog.
- **Restore Default**
Allows you to restore the factory default configuration.
- **Restart Service Selector**
Allows you to do a full system restart on the Service Selectors.

1.4.3 Upgrade Firmware Button

Upgrades are released to add features and new communications systems / services to the Service Selector. These software upgrades will be provided to customers via the Livewire Connections web site where detailed descriptions of each upgrade file. If in any doubt as to whether to install a particular upgrade, please contact Livewire Connections directly.

Having previously downloaded the required software update from Livewire Connections website, the Operator should select the **Upgrade Firmware** button. This will present the **Open File** window from which the Operator can navigate to the downloaded upgrade file. Once the correct file is chosen simply select 'Open' and the upgrade will automatically be loaded to your **Service Selector**.

Please note: depending on the selected upgrade, the **Service Selector** may now reboot in which case normal service will resume after approximately 30 seconds.

1.4.4 Download Upgrade Log Button

By clicking the **Download Upgrade Log** button, the Operator is presented with a standard **Save File** window. After navigating to the desired destination directory simply enter a name for the Upgrade log and press **Save**. The Log file will be saved with a .log format extension.

The following items are captured in the Upgrade log file:

- **Update History:** initial firmware version, upgrade time and version after upgrade
- **Update Log:** details of the upgrade operation

1.4.5 Passwords Button

By clicking the **Passwords** button, the Operator is presented with a dialog to change the User or Admin Password.

Click either **Set User Password** or **Set Admin Password** depending on which password you would like to change. The **Change User/Admin Password** dialog will be displayed with the following parameters:

- **Admin Password**
Enter the current admin password in this field to confirm that you have authentication to change the password.

- **New Password**

Enter the new password of your choice.

- **Confirm**

Retype the same password entered into the New Password field to confirm that the password was correctly entered.

1.4.6 Current Connection Info Button

By clicking the **Current Connection Info** button, the Operator is presented with a dialog displaying the IP settings for the current selected service. The dialog will display both fixed IP settings as well as IP settings received from a DHCP server which can be useful for troubleshooting.

1.4.7 About button

By pressing the **About** button, the operator will be shown the current version of Firmware installed on the Service Selector together with the Service Selector's software serial number. (See Figure 1.4.5.1).

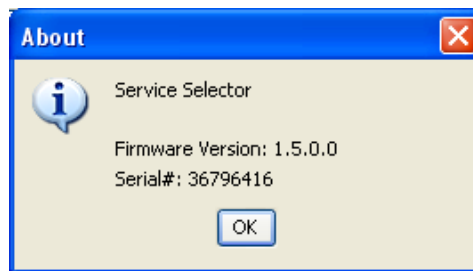


Figure 1.4.5.1 – About

2 Configuration of the Service Selector

The following sections provide the overview and detail on the configuration of the Service Selector. The configuration starts from the **Service Selector Administration – Configuration** dialog (Figure 2.1).

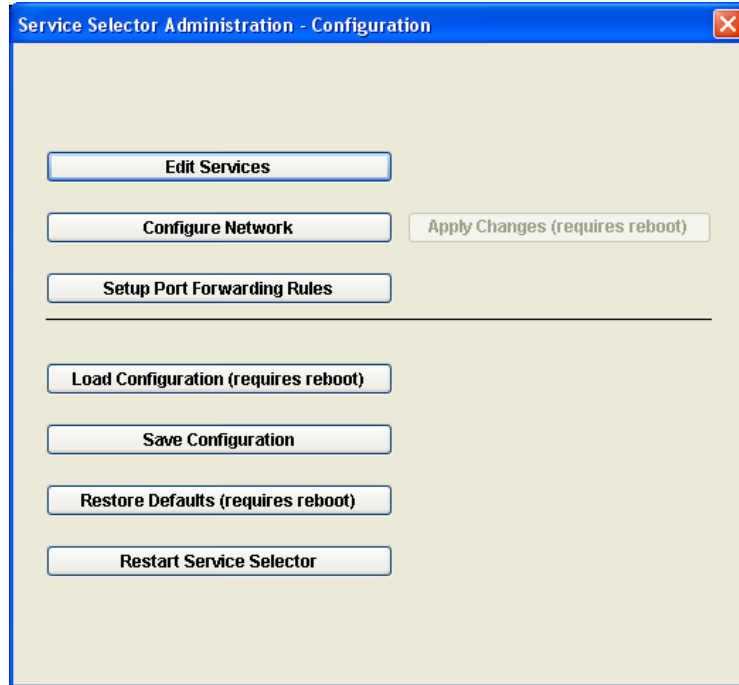


Figure 2.1 – Configuration dialog

2.1 Edit Service Button

By clicking the **Edit Services** button, the **Services Configuration** dialog box will be presented.

Edit Service has five main functions:

- **Add** a service – only available if the service list is not full
- **Modify** a service – only available if a current service is highlighted
- **Delete** a service – only available if a current service is highlighted
- **Move up** a service in the list - only available if a current service is highlighted
- **Move down** a service in the list- only available if a current service is highlighted

This is an essential operation as it defines the data services accessible through the Service Selector. As services are added here they will be made available under the **Service Selector User Application**.

The maximum number of services that can be supported by the Service Selector is five as there are five physical ports on the back of the Service Selector. As soon as five services have been defined, the **Add** Service button will change to a greyed out state.

By clicking the **Add** button, a **Service Type** dialog box will appear as shown on Figure 2.1.1.

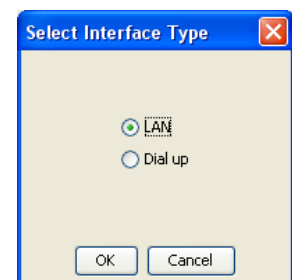


Figure2.1.1 – Select Interface Type

Two service Types are available: **LAN**-based services and **Dial up**-based services.

The LAN-based services refer to those services connected to the service selector by either LAN1 or LAN2 connections on the rear of the device. Currently these include: **ADSL, WiFi, VSAT** and **Generic Network**.

The Dial up-based services refer to those connected by any other port on the rear of the device and currently include: **ISDN, MPDS, 9.6K data, GSM** and **GPRS**.

2.1.1 Add a Service

2.1.1.1 Add a LAN-based Service

Before adding a LAN-based Service, please make sure the LAN equipment you wish to use has been physically connected to the LAN port. For example, if you wish to configure a VSAT service, the **LAN port 1** of the Service Selector will need to be connected to the VSAT router via a network cable.

Select **LAN** and click **OK** on the **Select Interface Type** dialog, (see figure 2.1.1). The LAN-based **New Service** dialog Box (Figure 2.1.1.1a) will be displayed.

Figure 2.1.1.1a – Add a New LAN-based Service

To add a LAN-based service, you will need to enter the following parameters:

- **Service name**
This is the name (max 12 characters) that will be used to identify the particular service under the Service Selector User Application.
- **Interface**
From the drop down menu select the LAN port to which your new device is physically connected.
- **Template**
Choose the most appropriate service from the drop-down list. This defines how the Service Selector will try to communicate with the attached device.

Current available **Service Types** include: **ADSL, Generic Network, VSAT** and **WiFi**. If the available LAN-based service types do not address your requirements, please contact Livewire Connections, and we will assist you in identifying the suitable LAN-based service for your installation.

- No User Timeout**
 This field is used to enter the timeout value of the **Service Selector User Application**. This timeout determines when to close a connected service after the **Service Selector User Application** has closed. This feature is a security feature used to drop non-fixed-fee services if a user forgets to disable a service. The value is in seconds and can either be 0 for no timeout or any other value higher than 30 seconds.
- DHCP**
 When adding a LAN-Based service, we suggest you setup **DHCP** to **Yes** (default option) by selecting it from the drop-down menu. This means you will simply use the IP address, Network mask and DNS addresses allocated to you by the new device. There may be certain occasions when this is not suitable, particularly when your new device cannot be configured to hand out addresses (act as a DHCP server). In these occasions set **DHCP** to **No** under the drop down menu and configure your IP Address / Network Mask, Gateway and DNS manually as described above.
- Gateway**
 If using a static IP address configuration (DHCP set to 'No') enter the IP address for your new device here, otherwise leave this blank (default DHCP 'Yes' option). This field will be greyed out if DHCP is set to Yes as the gateway is then received automatically.
- IP Address/ Subnet Mask**
 If you want to connect to your new device using a static IP address (DHCP set to 'No') enter the appropriate address and subnet mask here. These fields will be greyed out if DHCP is set to Yes as these settings are then received automatically.
- DNS**
 If using a static IP address configuration (DHCP set to 'No') enter up to two appropriate DNS server addresses. These fields will be greyed out if DHCP is set to Yes as these settings are then received automatically.

To illustrate the configuration of a new LAN-Based connection, we are adding a new VSAT connection and have selected **Yes** for the **DHCP** configuration as shown in Figure 2.1.1.1.

When you have finished entering the information for the new device press the **OK** button.

This will take you to the **Services Configuration** dialog as shown in Figure 2.1.1.1c below and show the newly added VSAT service and its specified interface LAN 1.

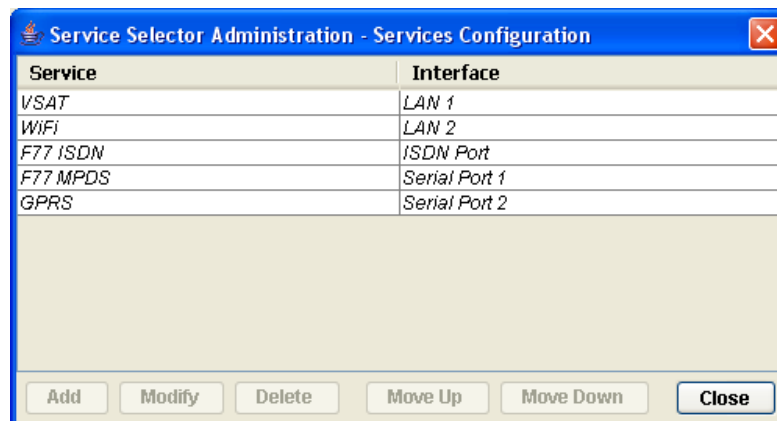


Figure 2.1.1.1b – After Added a New LAN-based Service

2.1.1.2 Add a Dialup-based Service

Before adding a dialup-based Service, it is important to ascertain that the modem/device to be used has been physically connected to one of the dialup-ports.

Select **Dial Up** and click **OK** on the **Select Interface Type** dialog (Figure 2.1.1). The dialup based **New Service** dialog Box (Figure 2.1.1.2a) will be displayed.

Figure 2.1.1.2a – Add a New Dialup-based Service

To add a Dial up-based service, you will need to enter the following parameters:

- Service name**
 This is the name that will be used to identify the particular service under the Service Selector User Application.
- Interface**
 From the drop down menu select the dialup port to which your new device is physically connected. You can make a choice from three available dialup service interfaces: ISDN, Serial Port 1 and Serial Port 2.
- Template**
 Choose the most appropriate service from the drop-down list. This defines how the Service Selector will try to communicate with the attached device.

There are a wide range of available Service Templates falling under the general headings of: **Inmarsat, Generic, GSM, GPRS, Iridium, and Livewire**.

If the available Dialup-based service types do not satisfy your requirements, please contact Livewire Connections, and we will assist you in identifying the suitable Dialup-based service for your installation.

- No User Timeout**
 This field is used to enter the timeout value of the **Service Selector User Application**. This timeout determines when to close a connected service after the **Service Selector User Application** has closed. This feature is a security feature used to drop non-fixed-fee services if a user forgets to disable a service. The value is in seconds and can either be 0 for no timeout or any other value higher than 30.

Please Note that we highly recommend that a 30 seconds timeout is used for all services which do not have a fixed cost. This will help avoid rogue calls and unexpected airtime bills when someone has left a connection open, having forgotten to disconnect it. Livewire Connections Ltd takes no responsibility for any call charges which might arise from using the Service Selector.

- **Init Sequence**

This field allows entry of an alternative **AT command Sequence** which may be required to enable or disable specific options on your attached communication device. By default this field should be left blank.

- **Number Dialed**

The number to be dialled during the connection process is entered here. Typically this would be the Internet access number supplied by an Internet Service Provider or, with Inmarsat, a short code for direct internet access via the Land Earth Station (LES) such as 28#. Please note all numbers should be followed by a # symbol.

- **Username / Password/ Confirm Password**

Enter a username, password and confirmation password if user authentication is required by the Internet Service Provider or Gateway administrator.

- **Idle Timeout**

This is the length of time, in seconds, the connection will be maintained in active status without network data being sent when the access level is set to **Full Access**. Once the timeout is exceeded the active service will drop the call returning to a ready for call state. This is reflected in the **Service Selector User Application** by the call indicator lights going from all green to all yellow.

The default timeout for all dialup services in Full Access mode is 120 seconds allowing users to browse internet without dropping the connection during dead time (ie when reading a webpage).

As an example the complete configuration of a new Inmarsat Fleet77 service is shown in Figure 2.1.1.2a.

Press the **OK** button to accept all new settings and finish adding the new dialup service. This will take you back to the Services Configuration dialog which now shows the added F77 ISDN service using ISDN Port, see Figure 2.1.1.2b.

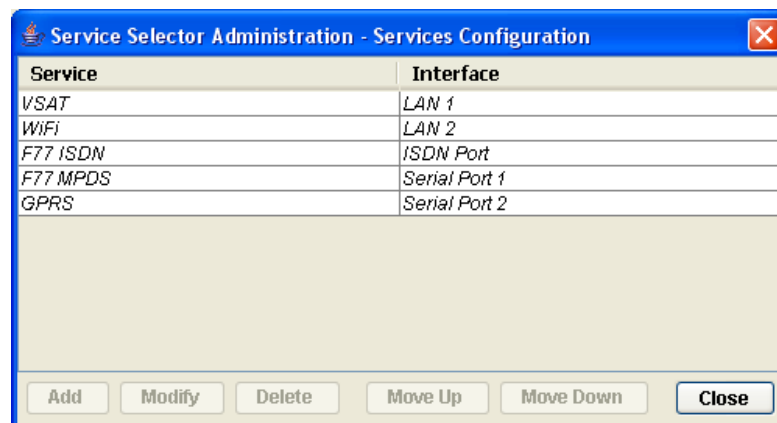


Figure 2.1.1.2b – After Added another New Dialup-based Service

2.1.2 Modify a Service

Highlight a service from the **Service Configuration** list (Figure 2.1.1.2b). The **Modify** button is now available, and by clicking on the **Modify** button, the Modify service dialog appears.

The **Modify Service** dialog manages the same parameters as the **Add Service**, and allows the Operator to change each item when and where necessary. Remember, when you finish the modifications to click the OK button which will return you to the **Service Selector Administration - Services Configuration** dialog.

Please be advised that modifying the profile parameters can impact the operation and performance of the Service Selector. It is therefore recommended that any modifications on service type and profile should only be done under guidance from, or by your communications supplier. Please note, any changes made to a service will also make all the counters reset.

2.1.3 Delete a Service

Highlight a service from the **Service Configuration** list (Figure 2.1.1.2b). The **Delete** button is now available. After clicking the **Delete** button, the Remove Service warning dialog appears. Click on the Yes button to confirm the deletion of the service. You will now be returned to the **Service Configuration** dialog which is no longer showing the deleted service.

By pressing the **Close** button on the **Service Selector Administration - Services Configuration** dialog box (Figure 2.1.1.2b) you will return to **Service Selector Administration – Configuration** dialog box.

2.2 Applying the Changes

The actions for adding, modifying and deleting services will not be written to the Service Selector until confirmed explicitly.

It is therefore necessary for you to click **Apply Change** to write the new service configuration to the Service Selector's configuration file. If **Apply Change** is not clicked, the **Service Selector User Application** will continue to show the old service configuration.

As shown in Figure 2.2.1 below the **Apply Changes** button is now available, as you have made changes via the **Edit Services** dialog. To confirm the changes made, press the **Apply Changes** button.

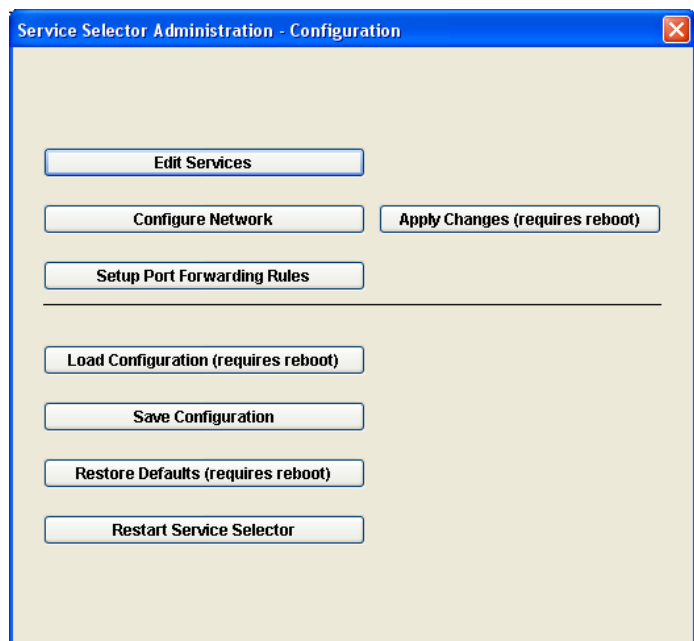


Figure 2.2.1 – Apply Changes button

After pressing the **Apply Changes** button, the popup dialog box shown in Figure 2.2.2 will appear.

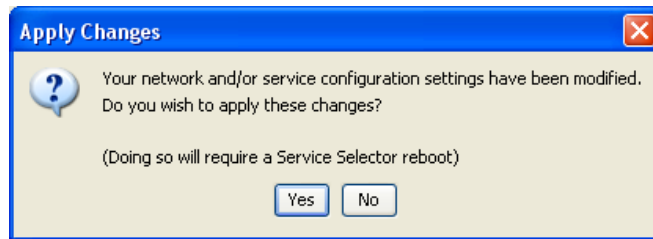


Figure 2.2.2 – Apply Changes Dialog Box

After pressing the **Yes** button on the **Apply Changes** dialog box you will be prompted again with a **Service Modification** box warning you that these changes will result in all counters being reset. By pressing the **Yes** button on the **Service Modifications** dialog box you will write the changes to the Service Selector configuration file, and then reboot **Service Selector**. After rebooting, the Service Selector User Application will have the new services as part of its GUI and operational infrastructure.

2.3 Network Button

When you click on the **Network** button on the **Service Selector Administration – Configuration** dialog, you will get the **Network Configuration** dialog as shown in Figure 2.3.1.

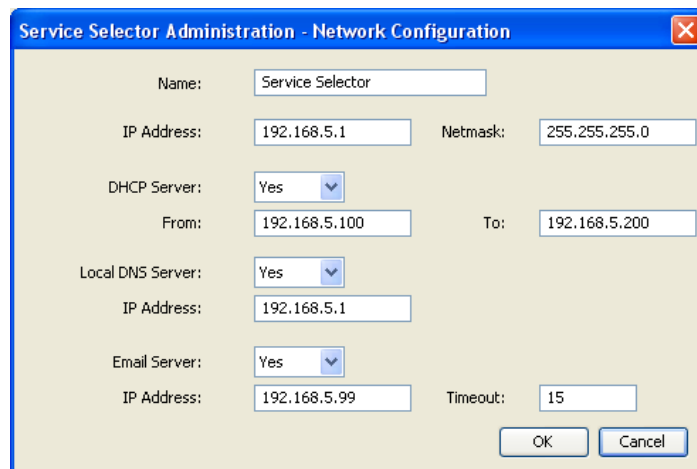


Figure 2.3.1 – Service Selector Administration – Network Configuration

This shows you the factory default values of **Service Selector Administration – Network Configuration**. By using the network configuration, you can configure the following parameters:

- Name**
 This is the name for **Service Selector User Application** dialog. By changing the **Service Selector Name** here, the window name shown on the left-top of **Service Selector User Application** will be changed.
- IP Address / Netmask**
 This specifies the IP address and netmask for the **Service Selector's on-board LAN port**. All traffic between the **Service Selector** and the on-board network is via this Ethernet port.

- **DHCP Server**

If the **DHCP Server** option is set to **Yes**, the **Service Selector** will act as a DHCP Server, and hand out addresses to DHCP clients from the specified range of IP addresses entered in the **From** and **To** text boxes (user definable). For client computers which are connected to the on-board LAN, a dynamic IP address can be provided by the Service Selector, or a static IP address outside of the **From / To** address range and excluding the Service Selectors own address can be defined (Please ask your network Administrator which fixed IP Address to use).

If the **DHCP Server** option is set to **No**, the IP address range Text Boxes will be greyed out. All computers connected to the on-board LAN will need to be configured with static IP address, or an alternative DHCP server will need to be set up.

- **DNS Server**

If the **Local DNS Server** option is set to **Yes**, you will need to define the IP address of the DNS Server. It is suggested that the Service Selector's IP Address is used as the DNS Server's IP Address.

The Service Selector needs to be the default DNS Server to resolve the **Service Selector Address** (on the **Service Selector Administration** and **Service Selector User Application** Login dialog).

If the **Local DNS Server** option is set to **No**, you will need to define the IP address of the default DNS server on your on-board LAN. The IP address of the DNS Server comes from your ISP.

- **Email Server**

When you use the **Service Selector User Application** in **Email Only** mode, the Service Selector restricts access off the vessel to a single IP address on the network, typically your email server.

If the **Email Server** option is set to **Yes**, you need enter the specific IP address of the Email Server or corresponding machine in the IP address field. This address should be static and therefore not chosen from the DHCP IP address range and should correspond to the static address set on the target computer.

The **Timeout** defines the number of seconds the connection will be maintained in active status without network data being sent when the access level is set to **Email Server only** mode. The purpose of this timeout is to allow scheduled email services to automatically establish a connection when doing a send/receive and to drop that connection in an efficient manner. By selecting the **Email Server** option, the **Service Selector User Application** dialog will show the **Full Access** and **Email Server** control buttons, which let you swap between **Full Access** and **Email Server** mode.

If the **Email Server** option is set to **No**, the **Full Access** and **Email Server** control buttons will not appear on the **Service Selector User Application** GUI. The **Service Selector User Application** software will operate in Full Access or Disabled modes only. This means that all computers connected to the on-board LAN can access the Internet via the Service Selector when one of the services is up and the timeout duration has been defined.

After the setup of **Network Configuration**, press the **OK** button to return to the **Service Selector Administration – Configuration dialog** box. The **Apply Changes** button is

now available, as the network configuration has changed. Click on the **Apply Changes** button to confirm the changes you have made in the network parameters. Press the **Yes** button on Figure 4.19 to make the network configuration changes take effect, and to reboot the Service Selector.

2.4 Setup Port Forwarding Rules

By clicking the **Setup Port Forwarding Rules** button, the **Port Forwarding Rules** dialog box will be presented (figure 2.4.0.1).

This dialog has three main functions:

- **Add** a new rule
- **Modify** an existing rule – only available if a existing rule is highlighted
- **Delete** an existing rule – only available if a existing rule is highlighted

This list gives the Operator an overview of the existing rules that are in place. All rules are read by the Service Selector from top to bottom where the first rule that matches a packet is applied to it.

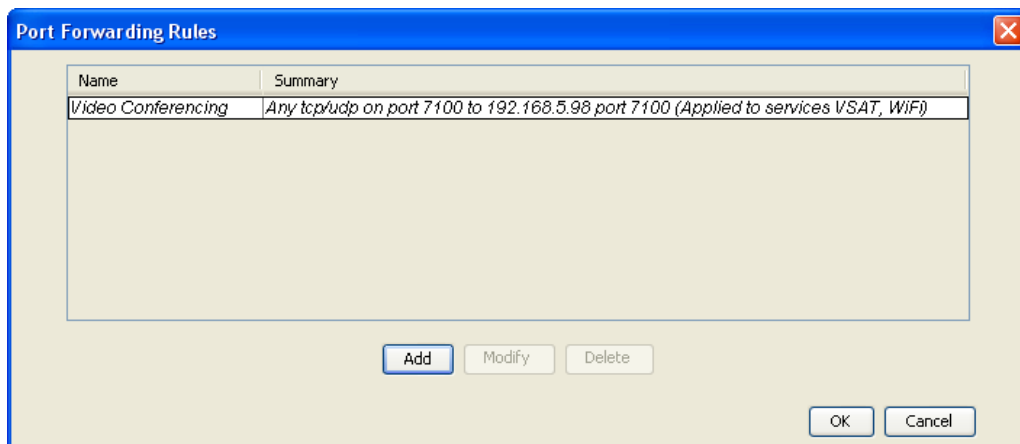


Figure 2.4.0.1 – Port Forwarding Rules

2.4.1 Add a port forwarding rule

Clicking the **Add** button will bring up the **Configure Rule** dialog (figure 2.4.1) where new port forwarding rules are created. To add a new port forwarding rule you need to enter the following parameters:

- **Rule name**
This is the name that will be used to identify the particular rule in the Port Forwarding Rules list.
- **Destination Address**
This is the IP address of the PC on the LAN side which the traffic on the particular port is going to be forwarded to.
- **Services it applies to**
The ticked services are the services which the new rule will apply to.
- **IP Protocol**

Select the protocol(s) which the port forwarding rule requires (most often TCP and UDP unless otherwise specified).

- **Incoming Port Number/Range/List**

This option will appear when the user chooses to forwarding TCP, UDP or both. Three options will then appear on the right letting the Operator choose between forwarding an individual port, range or list. Se below for example where NNNN is a port number,

- Individual = NNNN
- Range = NNNN:NNNN
- List = NNNN,NNNN,NNNN

- **Destination Port Number**

This option will appear when the Operator chooses to forward an individual port number. Enter the port number which the computer on the LAN is expecting an incoming connect on.

- **Protocol Number**

This option will appear when the Operator chooses to forward a specific protocol number. For protocol numbers please see section "protocol" in the RFC791 document.

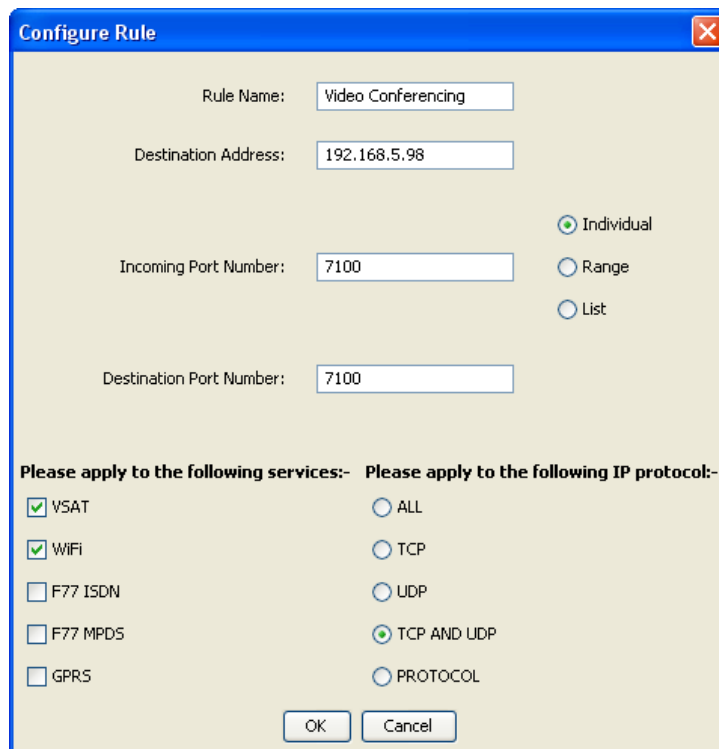


Figure 2.4.1 – Service Selector Administration – Network Configuration

2.4.2 Modifying a port forwarding rule

Highlight a rule from the **Port Forwarding Rules** list (Figure 2.4.0.1). The **Modify** button is now available, and by clicking on the **Modify** button, the Configure Rule dialog appears.

The **Configure Rule** dialog is the same dialog used when the rule was created. See section 2.4.1 for information on the various available parameters. Remember, when you finish the modifications to click the OK button which will return you to the **Port Forwarding Rules** dialog.

2.4.3 Deleting a port forwarding rule

Highlight a rule from the **Port Forwarding Rules** list (Figure 2.4.1.1). The **Delete** button is now available. After clicking the **Delete** button, the Remove Rule warning dialog appears. Click on the Yes button to confirm the deletion of the rule. You will now be returned to the **Port Forwarding Rules** dialog which is no longer showing the deleted rule.

2.5 Load Configuration Button

Clicking the **Load Configuration** button on the **Service Selector Administration – Configuration** dialog displays a standard 'open file' dialog. Choose a previously saved configuration file and click on the **Open** button.

The configuration download Confirm window will be presented (Figure 2.5.1).

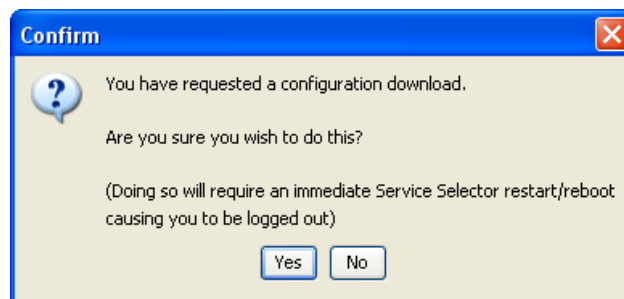


Figure 2.5.1 – Confirm Load Configuration

Press **Yes** to confirm the configuration download and to restart the Service Selector.

2.6 Save Configuration Button

Clicking the **Save Configuration** button on the **Service Selector Administration – Configuration dialog** box will display a standard 'save file' dialog. Enter a file name and press the **Save** button. The new .cfg file will appear in the folder. This configuration file can now be used for the **Load Configuration** function.

It is very convenient to save configurations for future use, when more than one configuration scheme is to be used for the Service Selector, e.g. normal operations, Owner aboard, Charter configuration, Mediterranean, Caribbean, etc. This enables the Operator to quickly switch between the various schemes without having to reconfigure the Service Selector ever time.

2.7 Restore Default button

The **Restore Default** function is used to restore the Service Selector's **Factory Default** settings. This will remove any **Service** settings and replace any changes to **Network** settings since the installation of the service selector. ***This may lead to a loss of network connectivity with the Service Selector.*** By default, no services are specified and Network settings are as shown in Figure 2.3.1. Always backup your current configuration before choosing this option (**Save Configuration** – Section 2.6).

After clicking **Restore Default** the user will be asked to confirm this command (Figure 2.7.1). Pressing the **Yes** button, will restore the factory defaults and restart the service selector.

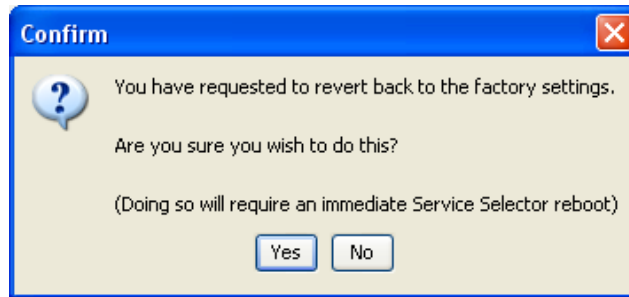


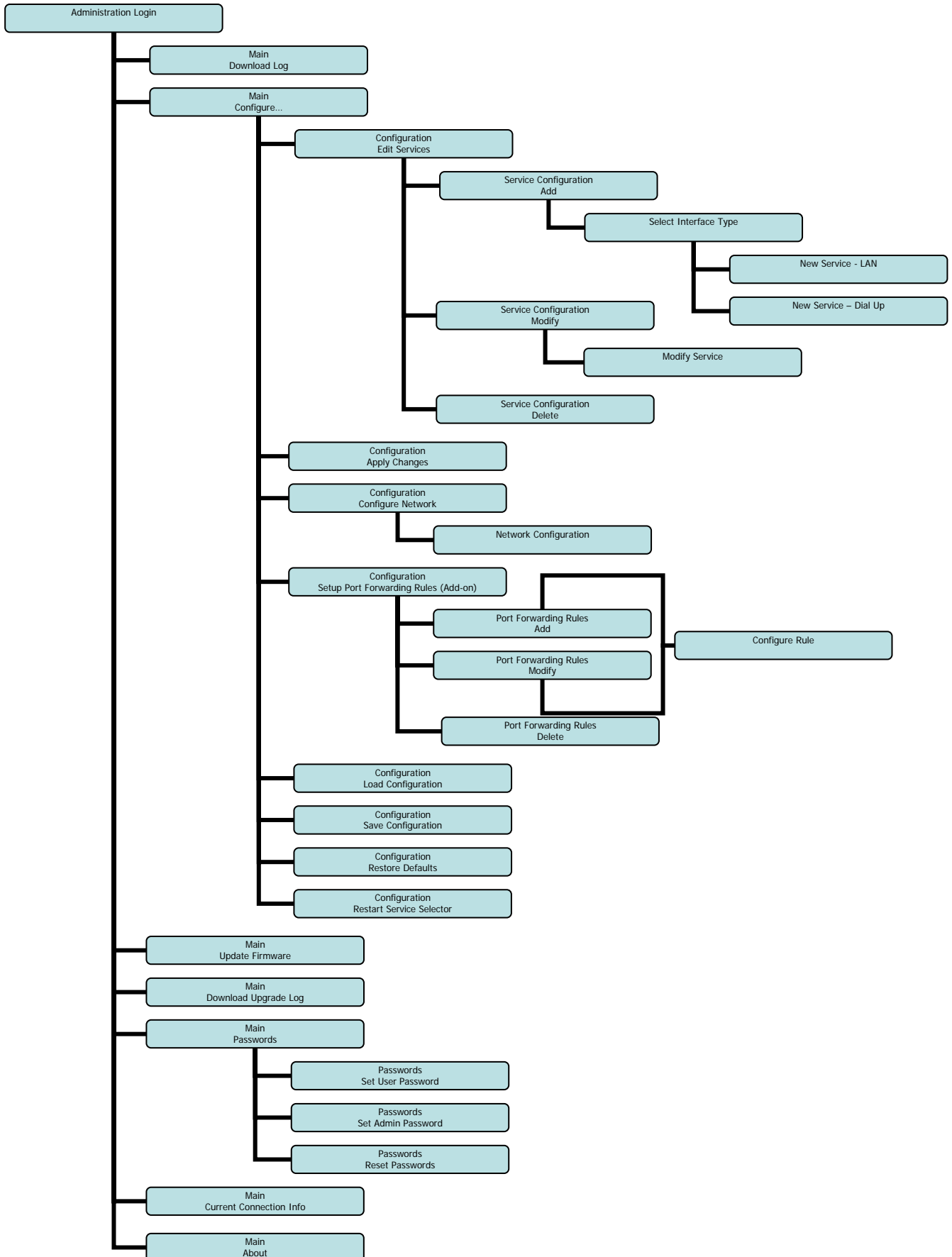
Figure 2.7.1 – Factory Setting Confirmation

2.8 Restart Service Selector

The **Restart Service Selector** button is used to force the Service Selector to do a full system restart.

Appendix A – Menu Tree

The Service Selector can provide multiple screen User Interfaces, subject to the platform it is installed upon: PC/Windows, MAC/OS.X, Linux, etc. To provide a generic reference the following menu tree has been provided.



Appendix B – List of Components

The following list of components and part numbers should be referred to when ordering spares or replacements for the Service Selector (IPG SSLW77):

- SSLW77-120 Service Selector Unit
- SSLW77-121 Power Supply (AC/DC)
- SSLW77-122 CD: Manuals and Software
- SSLW77-123 Mounting Kit
- SSLW77-124 Power Supply (DC/DC) (optional)
- SSLW77-125 Cable Set (optional):
 - 3x LAN, RJ-45 cable
 - 2x Serial cable

Livewire Connections will be able to advise on additional communications components should the current installation not provide the most optimum and cost-effective communications and network infrastructure required by the vessel of this class.

Appendix C – Abbreviations and Acronyms

9.6k	9600 bits per second
AC	Alternating Current
ADSL	Asynchronous Digital Subscriber Line
CAT-5	Category 5 cable
COM	Communications Port
DC	Direct Current
DVB	Digital Video Broadcast-Return Channel via Satellite
F33	Inmarsat Fleet 33 Satellite Terminal
F55	Inmarsat Fleet 55 Satellite Terminal
F77	Inmarsat Fleet 77 Satellite Terminal
GPRS	General Packet Radio Service
GSM	Global System for Mobile telecommunications (Groupe Spécial Mobile)
ISDN	Integrated Services Digital Network
LAN	Local Area Network
LWC	Livewire Connections
MAC	Macintosh Computer (Apple Corporation)
MPDS	Mobile Packet Data Service (Inmarsat)
PC	Personal Computer
PSTN	Public Services Telephone Network
QoS	Quality of Service
SS	Service Selector (Livewire Digital Ltd.)
VSAT	Very Small Aperture Terminal
Wi-Fi	Wireless Fidelity

Appendix D – Service Selector Log

The Service Selector Logs are maintained on the Service Selector. Clicking the **Download Log** management button, the Operator can download the current log file to a directory for further investigation.

The log file maintains track of all significant actions, including Version History, Upgrade History, Upgrade Log, Admin Log, User Log, Content of Syslog, Network Configuration, Activity Log (switching services, the state of the connection, and the activation / clearing of counters) for a minimum of 45 days. The activity log and its specific contents can be found in Appendix D in the Service Selector User Manual.

The Log file is a .log format file. It includes:

- **History:** current version of Service Selector
- **Update History:** Initial Version, Upgrade time and version after upgrading
- **Update Log:** the behaviours of Upgrade operation
- **Admin Log**
- **User Log**
- **Contents of Syslog:** the syslog file of Service Selector
- **Network Configuration:** which is current configuration of all network ports (such as Ethernet ports, PPP port and loopback port) and related information
- **Port Forwarding configuration (optional add-on)**
- **Activity Log:** the activity log of **Service Selector User Application**

Appendix E – Technical Specification

The Service Selector SSLW77-120 has the following technical specifications:

Technical Specifications	
Interfaces	1x Euro-ISDN 3x Ethernet 2x Serial
Dimension	Height: 50mm Width: 275mm Depth: 172mm
Weight	2.0 ± 0.5kg
Supply Voltage (Input)	AC 100 ~ 240V (50/60Hz) Single Phase 1.6A (max)
Power Supply (Output)	DC12V - 60W
Approvals	FCC Part 15, Subpart B, Class B ICES-003, CSA C108.8 Class B EN55022: 1998 Class B EN61000-3-3: 1995 + A1: 2001 EN55024: 1998 + A1: 2001 89/336/EEC, Amended by 92/31/EEC, 93/68/EEC, and 98/13/EEC

Table E – Technical Specifications SSLW77-120

Appendix F – Factory Default Configuration

The Service Selector Factory Default Configuration settings are shown in Figure F.1 and F.2. The Factory default configuration can be restored at any time by clicking **Restore Defaults** on the Service Selector Administration – Configuration window (Figure 3.5).

It is however strongly recommended to save the current configuration before restoring the Factory Default configuration by clicking **Save Configuration** on the Service Selector Administration – Configuration window.

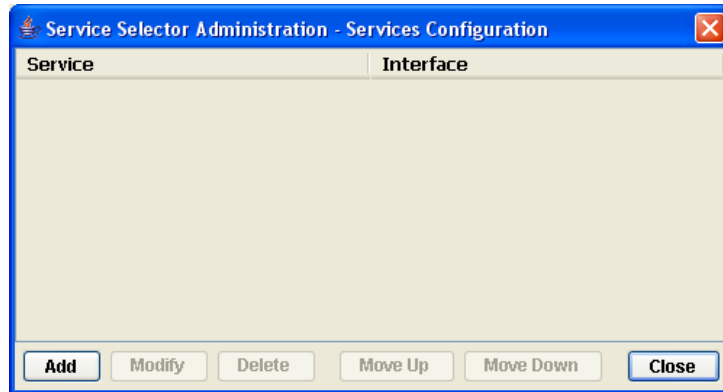
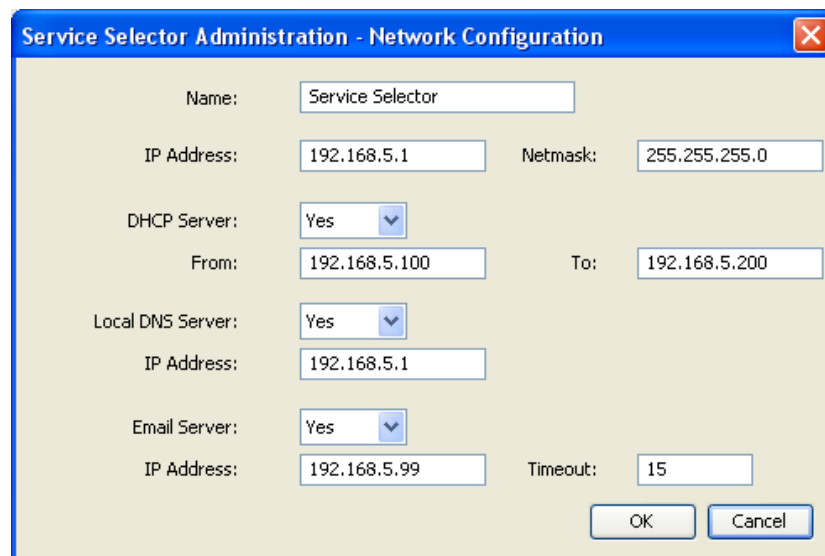


Figure F.1 – Service Configuration

The screenshot shows a window titled "Service Selector Administration - Network Configuration". It contains the following fields:

- Name: Service Selector
- IP Address: 192.168.5.1
- Netmask: 255.255.255.0
- DHCP Server: Yes (dropdown)
- From: 192.168.5.100
- To: 192.168.5.200
- Local DNS Server: Yes (dropdown)
- IP Address: 192.168.5.1
- Email Server: Yes (dropdown)
- IP Address: 192.168.5.99
- Timeout: 15

At the bottom right, there are "OK" and "Cancel" buttons.

Figure F.2 – Service Selector Administration – Network Configuration

Appendix G – Support

Should you require additional information, or have any questions with regard to Service Selector and associated services, please contact Livewire Connections.

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