



## **Service Selector Administration 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.

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# 1 Administration and User Interface

## 1.1 Introduction

This manual details the configuration options for your service selector through the **Service Selector Administration** tool. 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 Tool has the same IP address range as the service selector (default: 192.168.5.1).

Please refer to the Service Selector Installation Manual on how to install the **Service Selector Administration** tool.


## 1.2 Management and Configuration options

The **Service Selector Administration** tool 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** tool 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** GUI.
2. **Network** - defines the onboard Local Area Network (LAN) settings.
3. **Load Configuration** - loads the configurations from an existing config (.cfg) file.
4. **Save Configuration** - saves current services and network configuration to a .cfg file.
5. **Restore Defaults** - will reset services and network configuration to Factory default, detailed under **Appendix F – Factory Default Configuration**.

## 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 Interface (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 any name ending with .ipg as shown. Do not change the default password!

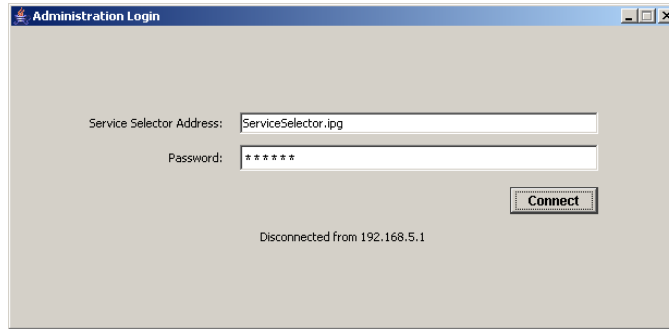


Figure 1.3.1 – Service Selector Administration Login

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

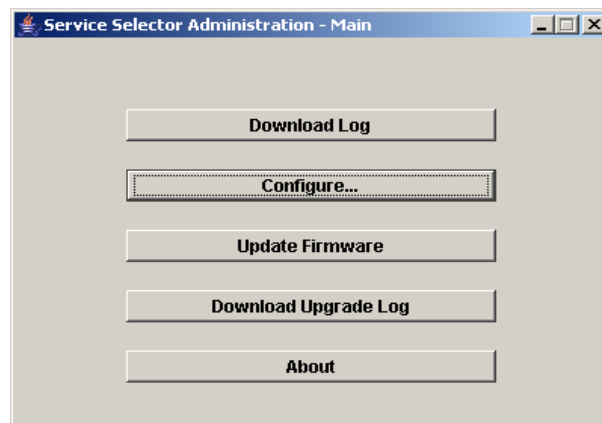


Figure 1.3.2 – Main Interface

## 1.4 Main Interface

The **Main Interface** of the **Service Selector Administration** tool 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. **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:** reserved area for additional administrator information

- **User Log:** details of user actions and requests
- **Contents of Syslog:** the system log (syslog) file of Service Selector
- **Network Configuration:** current configuration of all network ports.
- **Activity Log:** the activity log of **Service Selector User Application**.

## 1.4.2 Configure... Button

After clicking the **Configure** button, the operator will be presented with **Service Selector Administration - Configuration** interface (Figure 1.4.2.1) will appear.

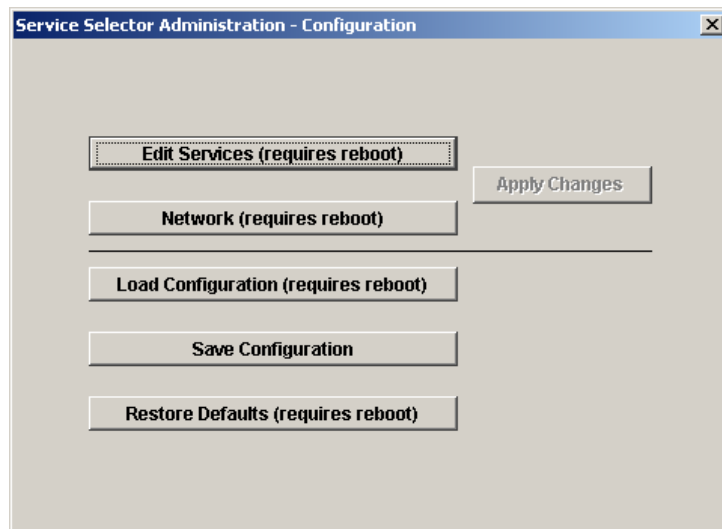


Figure 1.4.2.1 – Configuration Interface

The **Configuration** interface has six 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.
- **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.
- **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 interface.
- **Restore Default**  
Allows you to restore the factory default configuration.

### 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 About button

By pressing the **About**, the operator will be shown the current version of Firmware installed on the Service Selector is shown (See Figure 1.4.5.1).

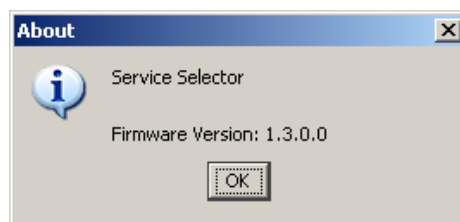


Figure 1.4.5.1 – About

## 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** interface (Figure 2.1).

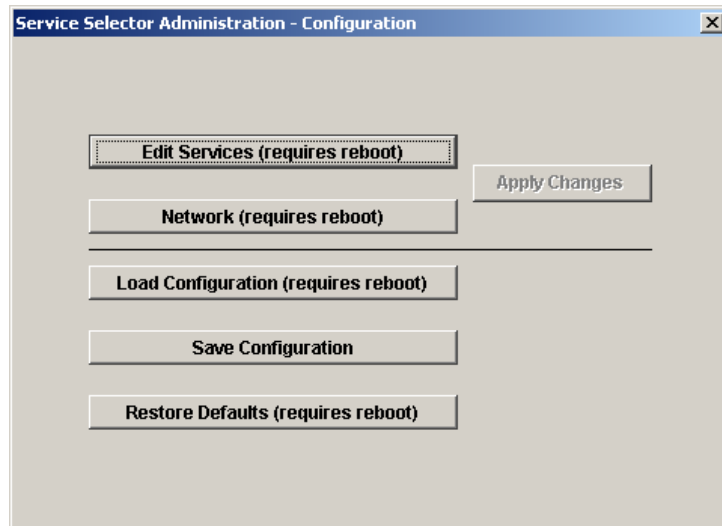


Figure 2.1 – Configuration Interface

### 2.1 Edit Service Button

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

Edit Service has three main functions:

- **Add** a service
- **Modify** a service – only available if a current service is highlighted
- **Delete** a service – 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 soon as five services have been defined, the **Add** Service button will change to greyed out.

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

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



Figure 2.1.1 – Select Interface Type

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 Dialup-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 an ADSL service, the **LAN port 1** of the Service Selector will need to be connected to the ADSL router via a network cable.

Select **LAN** and click **OK** on the **Select Interface Type** dialog, 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 that will be used to identify the particular service under the Service Selector User Application.
- **Service Type**  
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.

- **Interface**  
From the drop down menu select the LAN port to which your new device is physically connected.
- **IP Address/ Subnet Mask**  
If you are wanting to connect to your new device using a static IP address (DHCP set to 'No') enter the appropriate address and subnet mask here. Leave these fields blank if you want to obtain an IP address automatically from the new device (default DHCP 'Yes' option).
- **DNS**  
If using a static IP address configuration (DHCP set to 'No') enter up to two appropriate DNS server addresses, otherwise leave blank (default DHCP 'Yes' option).
- **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). On these occasions set **DHCP** to **No** under the drop down menu and configure your IP Address / Network Mask 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).

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

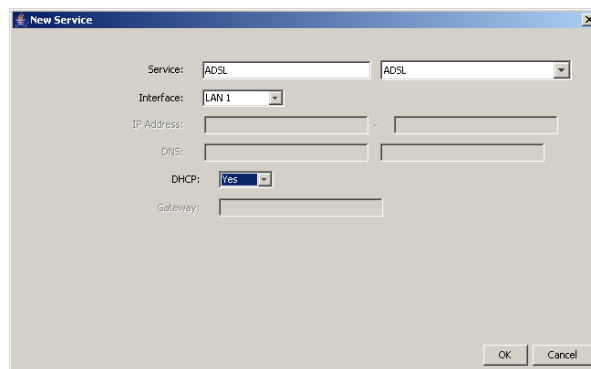


Figure 2.1.1.1b – After Adding a New LAN-based Service

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

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

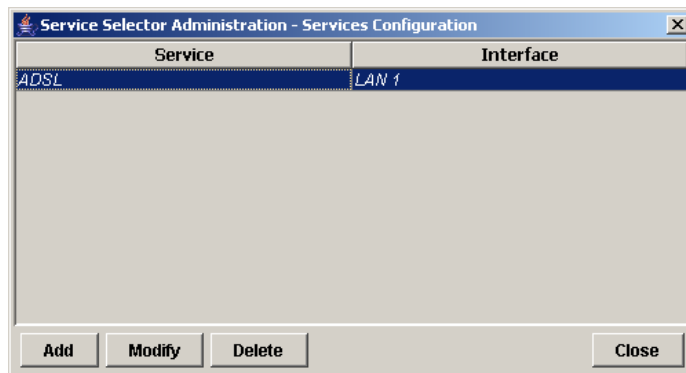


Figure 2.1.1.1c – After Added a New LAN-based Service

### 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 Dialup-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.
- **Service Type**  
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 Types falling under the general headings of: **Inmarsat, Generic, Dialup, 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.

- **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.
- **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 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 access code for direct internet access via the Land Earth Station (LES). 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.
- **Timeout (Secs)**  
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 with 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 page).

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

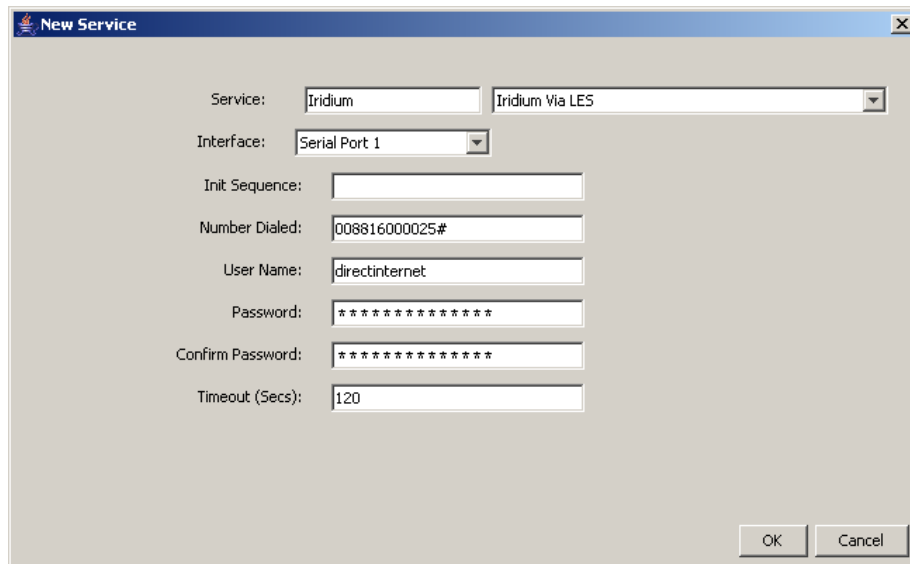


Figure 2.1.1.2b – Adding a New Iridium Dialup Service

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 interface which now shows the added Iridium service using Serial Port 1, see Figure 2.1.1.2c.

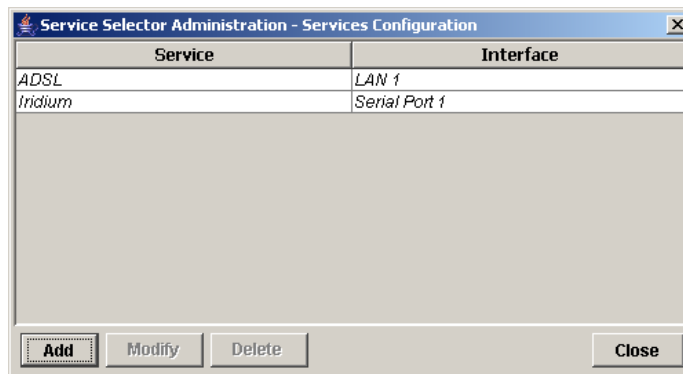


Figure 2.1.1.2c – After Adding another New Dialup-based Service

### 2.1.2 Modify a Service

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

The **Modify Service** interface 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** interface.

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.

### 2.1.3 Delete a Service

Highlight a service from the **Service Configuration** list (Figure 2.1.1.2c). 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** interface which is no longer showing the deleted service.

By pressing the **Close** button on the **Service Selector Administration - Services Configuration** dialog box (Figure 2.1.1.2c) 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.

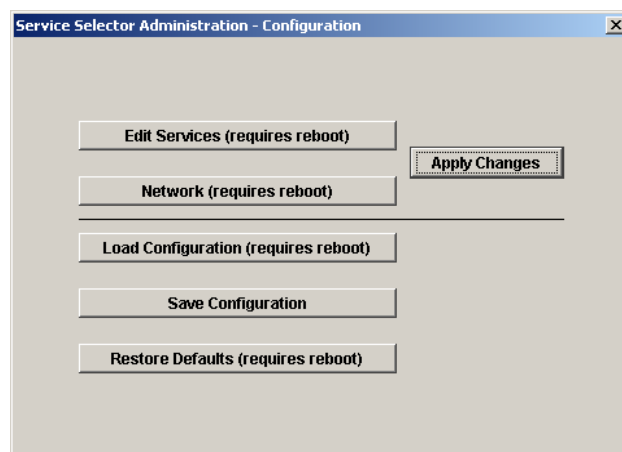


Figure 2.2.1 – Apply Changes button

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

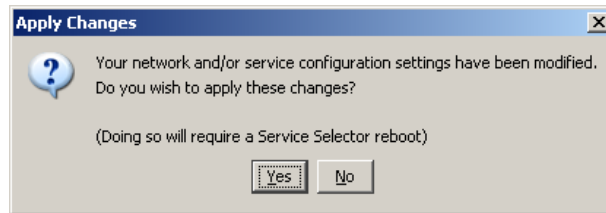


Figure 2.2.2 – Apply Changes Dialog Box

By pressing the **Yes** button on the **Apply Changes** 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.

While the changes so far have concentrated on the services, it is also possible to change the **Network** configuration.

## 2.3 Network Button

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

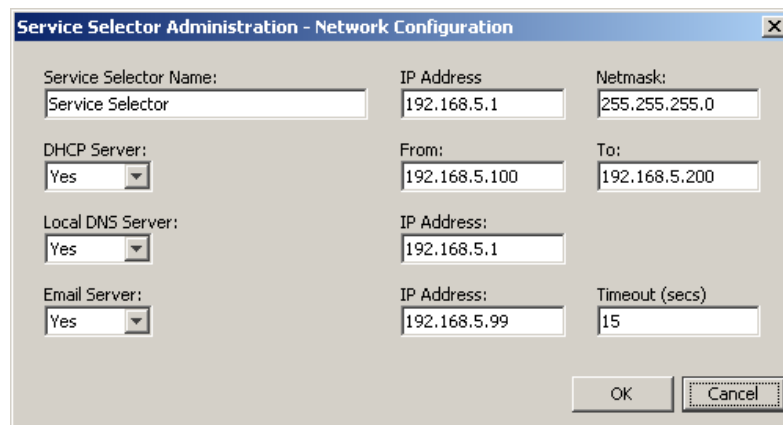


Figure 2.3.1 – Service Selector Administration – Network Configuration

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

- **Service Selector Name**  
This is the name for **Service Selector User Application** interface. 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 host 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 interface).

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 Server** 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** interface 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** service interface. The **Service Selector User Application** software will operate in Full Access mode 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 2.2.2 to make the network configuration changes take effect, and to reboot the Service Selector.

## 2.4 Load Configuration Button

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

The configuration download Confirm window will be presented (Figure 2.4.1).

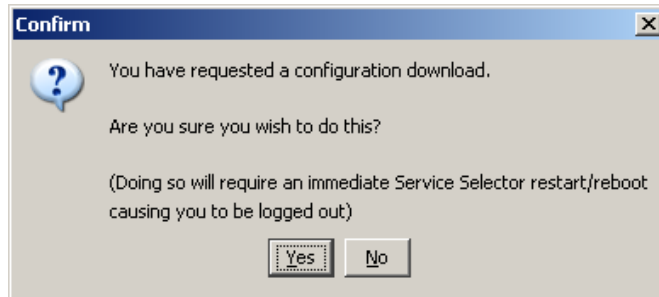


Figure 2.4.1 – Confirm Load Configuration

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

## 2.5 Save Configuration Button

Clicking the **Save Configuration** button on the **Service Selector Administration – Configuration dialog** box will display a standard 'save file' interface. 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.

## 2.6 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 Appendix D Figure D.2. Always backup your current configuration before choosing this option (**Save Configuration** – Section 2.5).

After clicking **Restore Default** the user will be asked to confirm this command (Figure 2.6.2). Pressing the **Yes** button, will restore the factory defaults and restart the service selector.

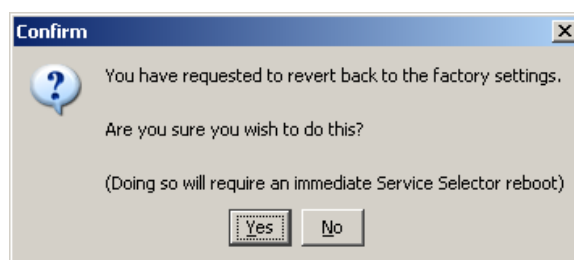
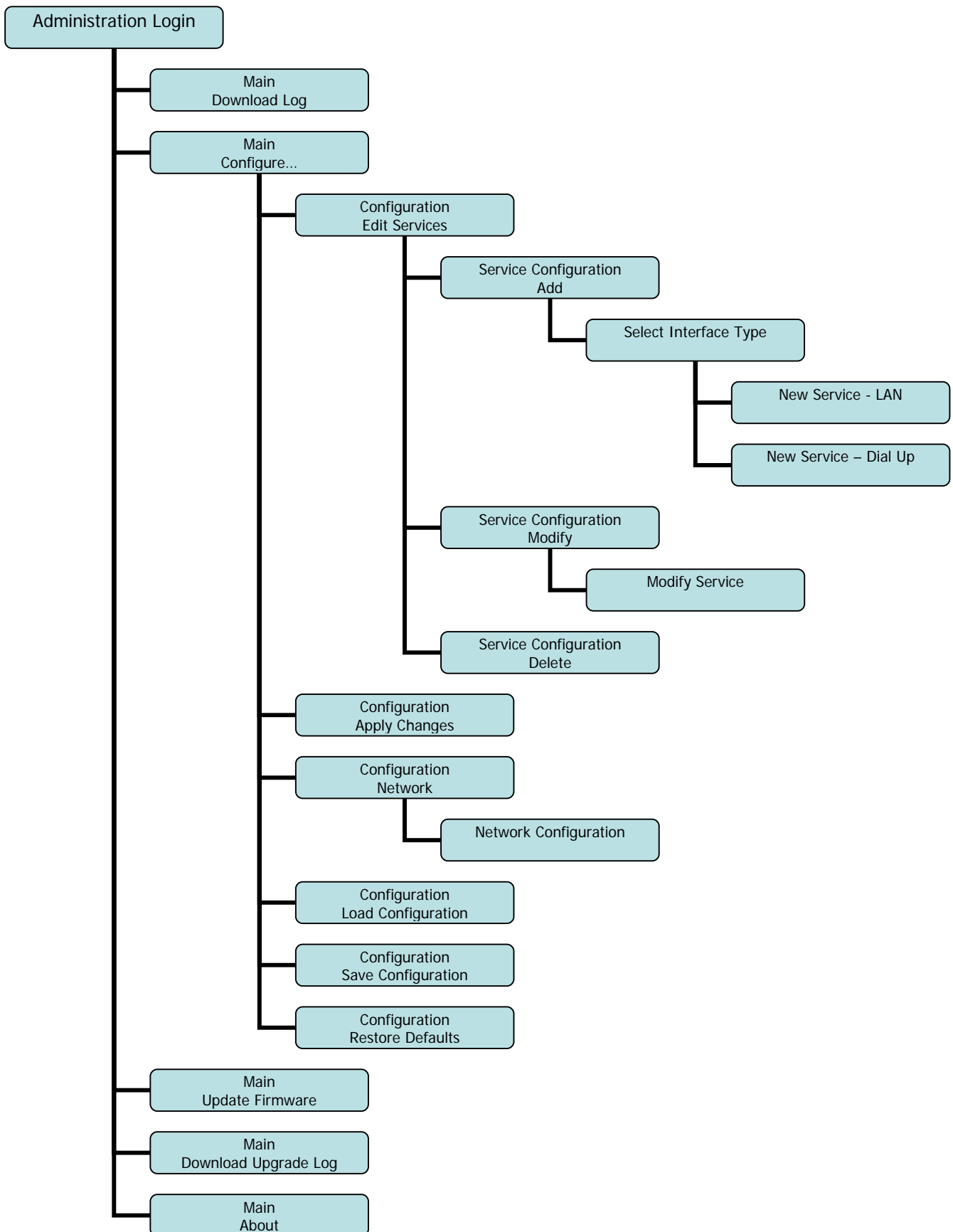


Figure 2.6.2 – Factory Setting Confirmation

## 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 – 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
SS	Service Selector (Livewire Digital Ltd.)
VSAT	Very Small Aperture Terminal
Wi-Fi	Wireless Fidelity

## Appendix C – 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	AC 100 ~ 240V (50/60Hz) DC 12V
Power Supply	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 D – Factory Default Configuration

The Service Selector Factory Default Configuration settings are shown in Figure D.1 and D.2. The Factory default configuration can be restored at any time by clicking Restore **Defaults** on the Service Selector Administration – Configuration window (Figure 2.1).

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 (Section 2.5).

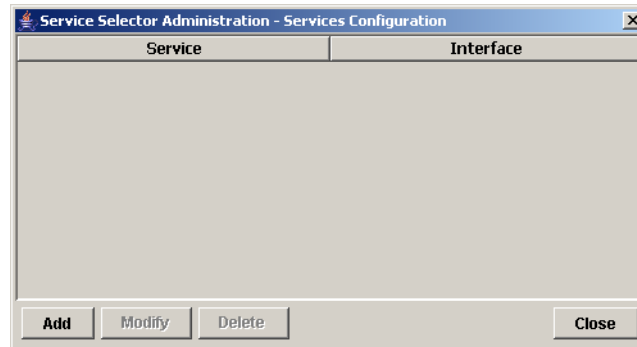


Figure D.1 – Service Configuration

Figure D.2 – Service Selector Administration – Network Configuration

## Appendix E – 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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