



SCOTTY Filetransfer User's Manual

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1 Welcome

1.1 Welcome

Welcome to the world of advanced communication... welcome to the world of SCOTTY!

This manual has been designed to help you take full advantage of your SCOTTY solution. It is not only a comprehensive guide to the operation of the system, it also provides technical details, simple step by step instructions on how to perform the most common applications, and more. We recommend you read this manual carefully in order to fully benefit from SCOTTY's advanced solutions.

Company background

SCOTTY founded in 1994 and is headquartered in Austria with offices in the United Kingdom , USA and the Philippines.

By recognising niche markets and offering customised products for specialised applications, SCOTTY has gained enormous expertise in the development of live video, audio and data communication through satellite and terrestrial networks.

Market sectors

- portable solutions
- vehicle solutions
- encryption solutions
- maritime solutions
- aero solutions

Please find detailed information on our website: www.scottygroup.com

1.2 Customer Support

Contacting SCOTTY's Customer Services & Technical Support:

Europe, Middle East, Africa	+43 316 409 426 support.emea@scottygroup.com
The Americas	+1 770 825 0574 support.americas@scottygroup.com
Asia Pacific	+63 2 833 7783 support.asiapac@scottygroup.com

If you need urgent help for your SCOTTY solution, call the appropriate customer support number for your part of the world:

Europe, Middle East, Africa	Austria (GMT +1): +43 664 454 2827
The Americas	Atlanta, USA (GMT -6): +1 770 380 7186
Asia Pacific	Philippines (GMT +8): +63 917 537 0624

Please always include the serial number of your SCOTTY unit or license.

Test numbers

ISDN numbers (64 kbit/s and 2x64 kbit/s):

- Austria: +43 316 407849
- USA: +1 770 246 9082
- Asia: +63 2 581 1093

IP number:

- Austria: 193.154.221.198
or demograz.scottygroup.com
USA: 209.155.96.99
- or demoatlanta.scottygroup.com

2 Setting Up

2.1 Setting Up the Software

SCOTTY Filetransfer supports a wide range of network interfaces, from IP based networks to ISDN and analogue modems. If ISDN shall be used, a CAPI Version 2.0 – compatible ISDN – card should be installed and configured.

To install the software, carry out the following steps:

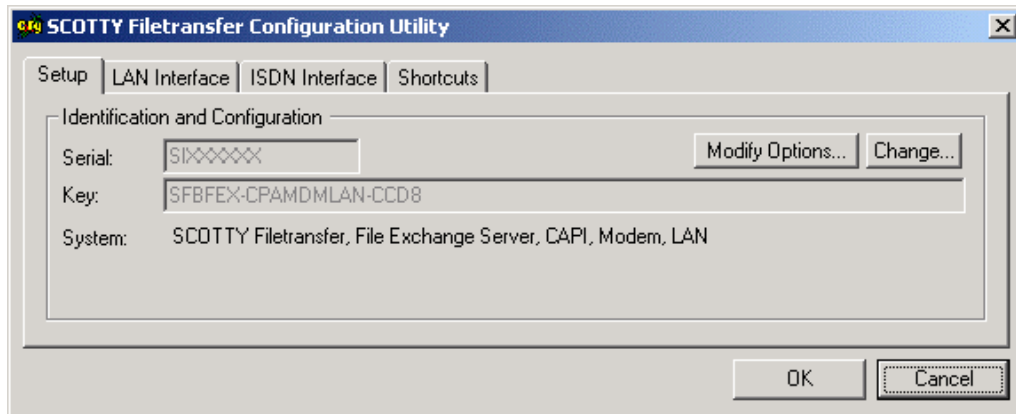
- Run setup by inserting the delivered CD or manually by double-clicking the **Setup** program.
- Follow the steps through the installation process by clicking on **Next >**.
- The SCOTTY Configuration-Utility starts in order to configure the software. Enter your serial number and license key and follow the steps by pressing on **Next>**. See section The Configuration Utility for details on this program.
- Installation is now complete. A doubleclick on the pre-defined "Filetransfer" icon starts the software.

2.2 The Configuration Utility

The Scotty Configuration Utility is only needed when the SCOTTY Filetransfer used for the first time or when changing the system configuration. By choosing **Start | Programs | Scotty Filetransfer | Config**, the **SCOTTY Configuration Utility** window is opened.

2.2.1 The "Setup" - Tab

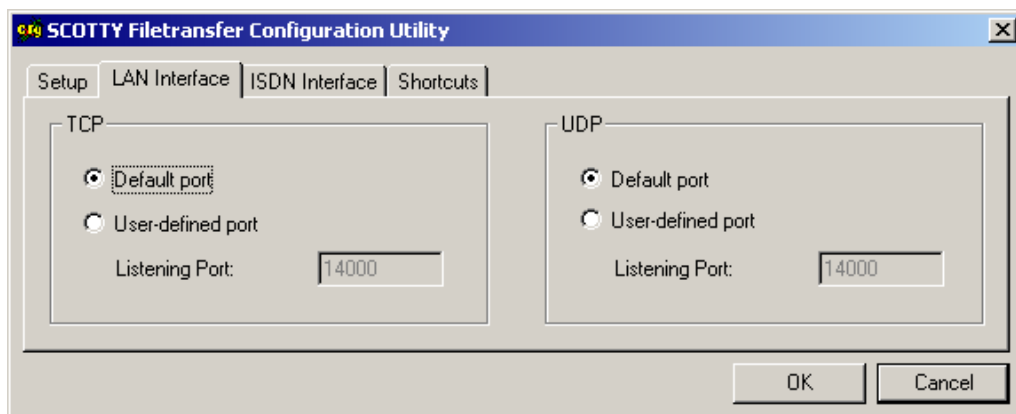
The **Setup** tab displays the configuration of the installed system. The configuration of the system can be changed when a new key is provided by SCOTTY. By pressing the **Change...** button the new key can be entered. Pressing the **Modify Options** button opens a dialog which provides, after consultation of SCOTTY, an easy way to change the system configuration without editing the key manually. Free key-tokens can be added or removed manually in this way. The **Add** button is used to add, the **Remove** button to delete and the **Modify** button to change entries.



The Configuration Utility dialog box, the folder Setup

2.2.2 The "LAN Interface" - Tab

The **LAN Interface** page allows the configuration of the LAN-TCP and LAN-UDP (optionally) settings.

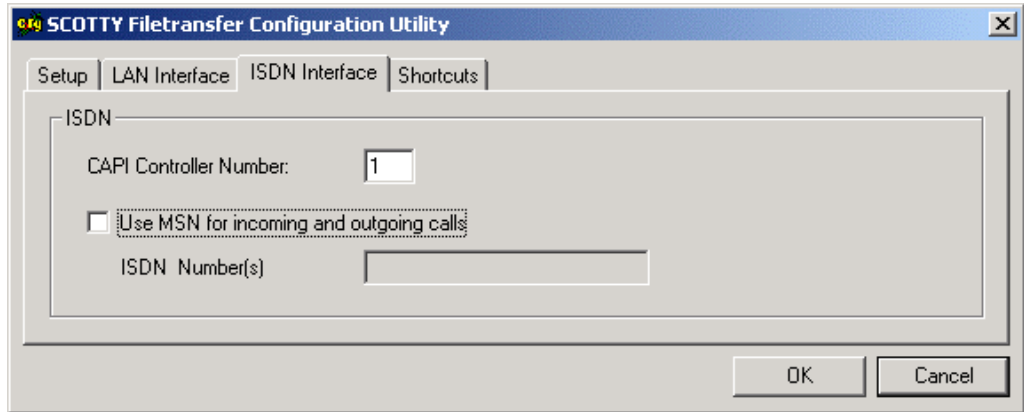


The Configuration Utility dialog box, the folder LAN Interface

The SCOTTY Filetransfer uses the **Default port** (14000) by default for both incoming and outgoing calls. Selecting **User-define port**, a different port value can be entered into the **Listening Port** field. The system is then reachable only by this port number. The port setting is also used for outgoing calls if no port is specified in the phone number.

2.2.3 The "ISDN Interface" - Tab

For configuring the ISDN – settings of the Filetransfer software the **ISDN Interface** folder is present.



The Configuration Utility dialog box, the folder ISDN Interface

Controller Number defines the number of the CAPI ISDN Controller to be used. Multiple Subscriber Numbers (MSN) are usually used if more than one ISDN device share a single ISDN line. By selecting the checkbox **Use MSN for incoming and outgoing calls** and entering the **Number(s)**, the system becomes configured to this MSN number. Incoming calls with other MSN numbers will be ignored, outgoing calls use this MSN. If the system should be reached within more than one MSN number, the numbers can be entered, separated by commas. When making calls, the first MSN number is used for the first line, the second number for the second line if entered.



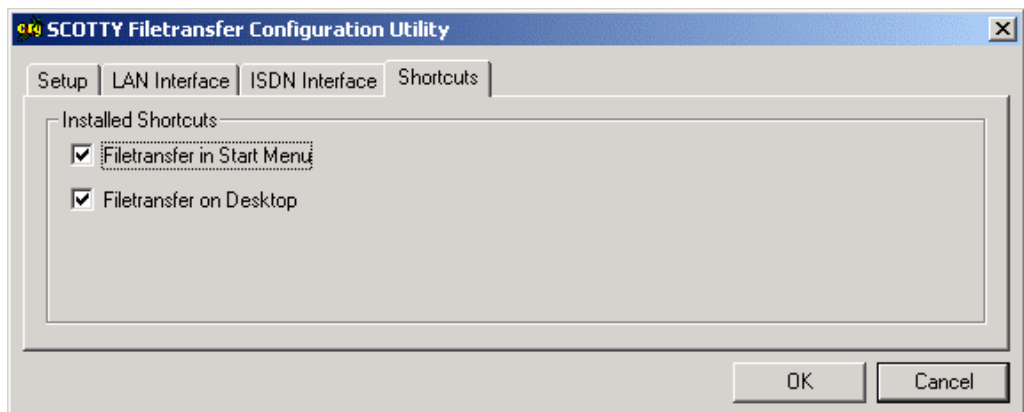
If MSN is used, the system is only reachable through number(s) with the last digits matching the provided MSN numbers.



Active MSN's are shown under **Help | About Filetransfer**.

2.2.4 The "Shortcuts" – Tab

With the **Shortcuts** tab, the existing shortcuts can be managed. It is possible to create or remove one Shortcut at the desktop or in the start menu.



The Configuration Utility dialog box, the folder Shortcuts

When pressing OK the settings are saved and will take effect on the Filetransfer software next time it is started.

2.3 LAN Connection

The SCOTTY Filetransfer LAN interface supports TCP/IP and UDP/IP (optional) based file transfer. While the widely used TCP/IP protocol is defined for low-delay and highly reliable networks, the unique SCOTTY UDP/IP protocol is especially designed for highest data throughput, even in networks with high packet loss and long delays.

Both protocols are based on standard IP. The IP connectivity can be established in many different ways, like Ethernet, broadband modem, or dial-up. Please refer to your service provider or system administrator about installation of your IP connection.

For outgoing calls, SCOTTY Filetransfer automatically switches to the "LAN-UDP" interface when a LAN phone number is used. The TCP/IP based protocol can be selected by switching to the "LAN-TCP" interface in the phone book or in the menu **Options | Dialing**. Incoming calls are always possible using TCP/IP and UDP/IP, regardless of these settings.



To connect calls behind a Firewall, the UDP and/or TCP port specified in the Config Utility (14000 by default) needs to be opened in the Firewall's settings. To receive incoming calls behind a Firewall or NAT router, the UCP and/or TCP port must be routed to the SCOTTY Filetransfer system (also known as portforwarding).

2.3.1 INMARSAT-BGAN Satellite Terminal via IP

For the best throughput, please use the BGAN background service. In the SCOTTY Filetransfer software, use the "LAN-UDP" interface and choose a dial rate close to the BGAN terminal's maximum data rate (usually 512kbit/s).

To receive incoming calls the SCOTTY Filetransfer software needs to be reachable from the Internet. The BGAN terminal either supports automatic port forwarding, like the Hughes HNS terminal, port forwarding can be configured, or the terminal can be used in modem mode, like Thrane&Thrane Explorer.

2.4 ISDN Connection

The ISDN cable is plugged into to the ISDN socket of the CAPI ISDN card, and the local ISDN Network-Terminator (NT).

Inside the SCOTTY Filetransfer, choose "ISDN" as **Default Interface** in the dialog **Options | Dialing**.



The current "D - channel protocol" on location must be correctly configured (e.g. Euro-ISDN, AT&T 5ESS, etc.) – see chapter Setting the D-Channel Protocol.



In some areas (e.g. parts of the USA) only Nx56 kbit/s ("Restricted") connections are available. Sometimes data connections and/or long distance or international lines must be specially cleared. Please refer to the local ISDN provider for relevant information.

2.4.1 Setting the D-Channel Protocol

The system must be correctly configured to the local "D - channel protocol". (e.g. Euro-ISDN, AT&T 5ESS, etc.). Because the ISDN interface can also be used for other applications like, for example, the fax program, this setup must be located outside the SCOTTY Filetransfer application.

Configuration of the CAPI driver of the ISDN-card is not part of SCOTTY Filetransfer and therefore the configuration has to be performed using the ISDN-driver. Details on setup and configuration can be found in the corresponding manual of the ISDN-card.

2.4.2 INMARSAT-GAN Satellite Telephone

The ISDN cable is plugged to the ISDN socket of the CAPI ISDN Adapter, and the ISDN socket of the satellite telephone or the SCOTTY I-Adapter. A doubleclick on the pre-defined "Filetransfer" icon starts the software. By selecting an entry from the phone book and choosing the "Dial" button a 2x64k call is performed (if supported by the GAN terminal or the SCOTTY I-Adapter). Pressing "Low Cost" dials a 1x64k connection.



*By selecting "Use 00 as Prefix (Satellite-Style Dialing)" in the dialog **Options | Dialing** (see chapter Dialing, Setting the Dialing Parameters for details), the desired phone number is automatically converted into a satellite-compatible style. Few CAPI ISDN cards may require adding an additional "#" at the end of the calling number.*



The current "D - channel protocol" must be correctly configured for the satellite phone (usually Euro-ISDN) – see chapter Setting the D-Channel Protocol.

For details see chapter Appendix or ask the local SCOTTY representative.

2.4.3 INMARSAT-B Satellite Telephone via ISDN Adapter

The satellite telephone is connected to the synchronous interface of the ISDN Adapter. The ISDN connector of the ISDN adapter is similar to the ISDN connector of a GAN terminal. Please refer to the chapters for the INMARSAT-GAN satellite telephone.

2.5 Modem Connections

A wide number of different modems are supported by SCOTTY Filetransfer including external modems, internal modems, satellite phones, null modem

links and modem emulations. Please refer to the modem's manual on how to install and connect your modem to the phone line and your system.

For all the different types of modems, up three different types of interfaces are defined inside the SCOTTY Filetransfer, namely "Modem" for all types of analog modems, "Mini-M" for Inmarsat Mini-M satellite phones and "Nullmodem" for null-modem data links.

Each of these interfaces can be configured separately in the menu **Options | Dialing**. One of them can be configured as default interface. See chapter Dialing, Setting the Dialing Parameters for details on this.



It is not possible to assign one and the same device (e.g. a particular COM-port) to more than one interface (e.g. to the "Modem" and "Mini-M" interfaces) at the same time.



*By selecting "Use 00 as Prefix (Satellite-Style Dialing)" in the dialog **Options | Dialing** (see chapter Dialing, Setting the Dialing Parameters for details), the desired phone number is automatically converted into a satellite-compatible style.*

2.5.1 Analog Modem

The SCOTTY Filetransfer software accesses a analog modem using a serial COM-port, which is either a physical interface of the system, or emulated by e.g. the device driver of an internal modem. A doubleclick on the pre-defined "Filetransfer" icon starts the software. By selecting an entry from the phone book and choosing the "Dial" button a call is performed.

The interface has to be configured properly in the menu **Options | Dialing**. Choose "Modem" as **Default Interface**. **Device** defines the COM port the analog modem can be accessed at, **Rate** specifies the data rate used on the COM port, and has to match the setting of the modem. The connection speed itself is automatically negotiated by the modems at the beginning of the data transmission.



SCOTTY Filetransfer uses standard Hayes AT-commands to communicate with the modem. Please contact your local SCOTTY representative, if this needs to be adapted.

2.5.2 Inmarsat Mini-M

The serial cable is connected to the serial socket of the Inmarsat Mini-M modem and a COM port of the system. A doubleclick on the pre-defined "Filetransfer" icon starts the software. By selecting an entry from the phone book and pressing the "Dial" button a 2400 bit per second (bps) call is performed.

The values defined in the menu **Options | Dialing** do not affect the data link of the satellite phone, but the serial link between the satellite phone and the system itself. Choose "Mini-M" as **Default Interface**. **Device** defines the COM port the satellite phone is connected to, **Rate** the data rate used by the satellite modem to communicate at the serial port. These settings must match the settings of the satellite phone.

2.5.3 Null modem

Null modem data links are used to directly connect two systems using a serial null modem cable. The null modem cable is connected to one COM port at each system in this case. A doubleclick on the pre-defined "Filetransfer" icon starts the software. By selecting an entry from the phone book and choosing the "Dial" button a call with the selected data rate is performed.

The data link has to be configured properly in the menu **Options | Dialing**. Choose "Nullmodem" as **Default Interface**. **Device** defines the COM port the null modem cable is connected to at each device, **Rate** the data rate used for the null modem connection, which has to be set to the same value at each system.

3 First Steps

3.1 First Steps

In the following section we want to make the user familiar with the basic functions of the SCOTTY Filetransfer software. The most important features of the Filetransfer are described step by step to be carried out very easily.

3.2 Starting the SCOTTY Filetransfer

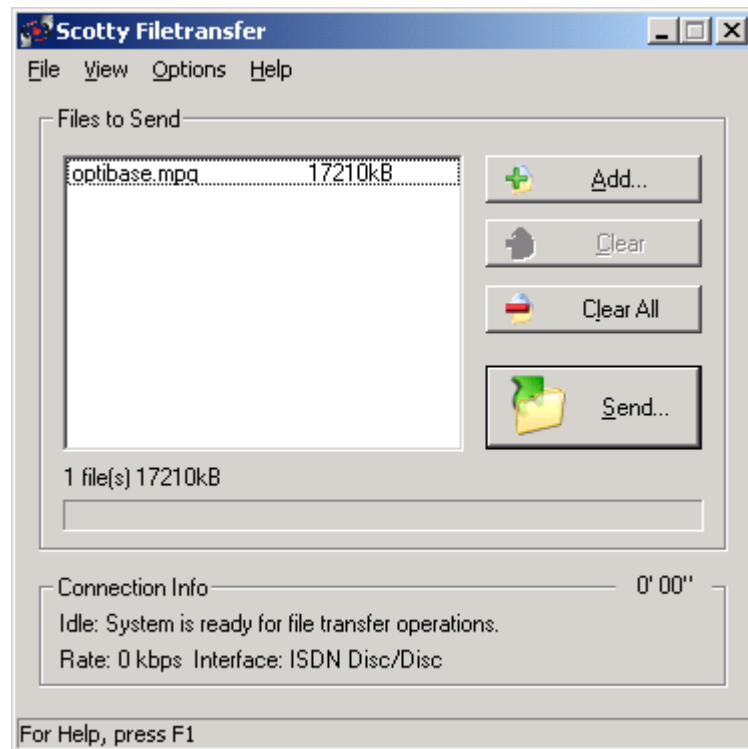
Step 1: Switch on the unit, Windows loads itself automatically.

Step 2: When Windows is ready, choose the Filetransfer icon on the desktop.



3.3 The Main Window

After double-clicking on the SCOTTY Filetransfer icon, it takes a few moments for the system to initialize. The running initialization steps are displayed in the status bar at the bottom of the Main Window. Data-communication is ready to begin once this process is complete.



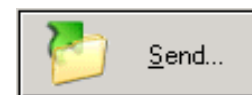
The Scotty Filetransfer Main Window

For details see chapter SCOTTY Details.

3.4 Making a Call

Step 1: If necessary, add additional files to the list of files to be transferred using the button **Add...** It is not possible to initiate a data transfer if this list is empty.

Step 2: From the main window of the SCOTTY Filetransfer select the **Send...** button.



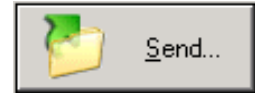
Step 3: Select the entry of the desired party and press **Dial** or **Low Cost**.

Alternatively you can directly enter the phone number into the **Number** edit field. If you do not want to use the keyboard, clicking at the button **Pad** opens a dial pad which can be used to enter the number with the input device.

For details see chapter Send, Send Files.

3.5 Checking, Editing or Creating a Phone Book Entry

Step 1: From the main window of the SCOTTY Filetransfer select the **Send...** button.



If this button is not accessible you can access the Phonebook using the menu bar at **View | Phonebook...**

Step 2: If you want to check or edit a phone book entry, click the **Edit Entry** button to display information about this specific phone book entry.

Step 2: If you want to create a new phone book entry, click on **New Entry**. Enter name and number and press **OK**.



In order that the ISDN or modem telephone number is valid regardless of the systems present location and the available network type, the telephone numbers should have the following format: +<country code><area code><number>, e.g.+43 316 407849.

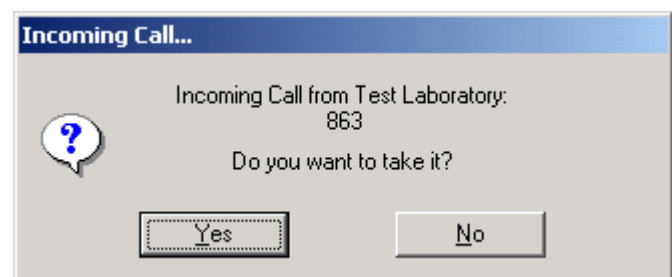


There are two ways to address a LAN partner: IP-address (e.g. 121.23.24.11) or hostname (e.g. demograz.scottygroup.com). Optionally, the called port can be added after a colon (e.g. 121.23.24.11:15000).

See chapter Creating or Modifying a Telephone Book Entry for details on this.

3.6 Receiving a Call

An incoming call is announced by the **Incoming Call** dialog box of the opened SCOTTY Filetransfer.



The Incoming Call dialog box

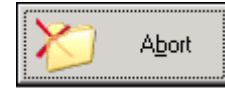
Step 1: Click **Yes** to accept the call.



If no action is taken, the system reacts according to the pick-up settings (see chapter Preferences, Setting the System Parameters). If the automatic pickup is activated there, the call is put through after a moment's pause.

3.7 Terminating a Call

Step 1: The ongoing transfer can be terminated by clicking the **Abort** button.



3.8 Placing the Filetransfer in the Systray

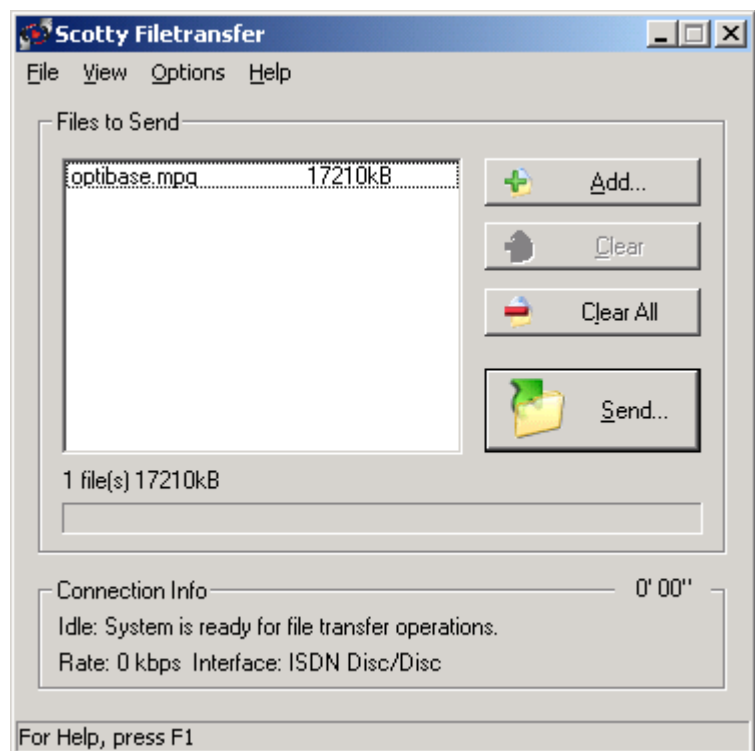
By clicking on the Filetransfer icon in the Systray the Filetransfer can be hidden from the Taskbar, still ready to receive calls. By clicking on the icon again, the Filetransfer application returns to normal operation.

Congratulations! You have now mastered the main functions of the SCOTTY Filetransfer successfully.

4 SCOTTY Details

4.1 The Main Window

The SCOTTY Main Window comprises of the title bar, the menu bar, and the File Transfer interface. The menu bar includes the menu options **File**, **View**, **Options** (when not deactivated – see chapter Preferences, Setting the System Parameters) and **Help**, whose functions are described in the next pages.



The Scotty Filetransfer Main Window

The SCOTTY Filetransfer makes it possible to exchange stored files between two SCOTTY communication systems through a direct data transfer. This feature has been specially designed to exploit the available network data rate to the highest possible degree. This high efficiency is also achieved when, for example, long signaling delays occur during satellite connections.

Clicking on **Add...** opens another dialog to select the files to be transferred. The selected files are added to the File Transfer list and are automatically copied

into a separate transfer folder on the hard drive. After a file is successfully transferred, it is deleted from this folder.

Clear removes the selected file from the list and deletes it from the transfer folder.

Clear All deletes the entire list and all files in the transfer folder.

Clicking **Send...** starts the transfer of the displayed files. See chapter Send, Send Files for details on this.

After selecting the desired remote station, the connection is made, the files are transferred, and the connection is then immediately ended. The same functionality is true for Send, Download and Exchange.

When a file transfer is started, the SCOTTY remote system displays the **Received Files** dialog box (see chapter Received Files, Listing the Received Files).

A running transfer can be discontinued through **Abort**.

The name of the file being transferred, how many Bytes have already been successfully transferred, as well as the actual data rate are continually displayed. A bar gives a visual representation of the progress of the transfer.

If the optional File Exchange Server is configured, the File Transfer dialog gets expanded:

Changing **Outbox for** allows to review and modify the files prepared for a specific client. Choosing **<Transfer>** switches the File Transfer dialog back to normal operation.

Pressing **Add** allows to add a file to the specified Outbox.

With **Clear** one entry in the specified Outbox can be removed

Clear all removes all files in the specified Outbox.

Pressing the **Exchange** button starts the file exchange. A phone number is suggested automatically by searching the phonebook for an entry having the same name than the target station.

For convenience, the system's username set in **Options | File Exchange** is shown in the caption of the File Transfer dialog.

For details, see chapter File Exchange Server, Setup and Operation.



If the connection is suddenly broken when transferring a file with the SCOTTY File Transfer system, it is not necessary to retransmit the entire file. The SCOTTY File Transfer will finish the transfer from the point of disconnection without any data loss.



Files can also be transferred simultaneously in both directions. The data transfer rate is then hardly reduced. Transfer rate measurements have shown that a file transfer in only one direction over a 64 kbit/s INMARSAT-B connection is 61 kbit/s; a two directional simultaneous transfer sinks the transfer rate only to 60 kbit/s in each direction.



Because, as mentioned before, the file(s) to be transferred are copied onto a separate folder on the hard drive, individual files can be assembled - for example from several floppy discs.

4.2 The File Menu

The File menu includes the following items:

Send...	F2
Download...	F3
Disconnect	Shift+F2
Exit	F10

4.2.1 Send, Send Files



The Dial dialog box

The menu item **Send...** displays the Telephone Book in order to start the data transfer. This button is only selectable if the list of files to be transferred is not empty. The user can now choose the desired remote station from the list with the help of the mouse or keyboard or alternatively directly enter the phone number into the edit field **Number**. In case of selecting an entry from the phone book the number is displayed inside this edit field as well.

One click on **Dial** or a doubleclick on the remote station name in the Telephone Book closes the Dialog and begins the dialing to the selected remote station. A

dialog box is displayed while the dialing is taking place. If the **Cancel** button is pressed, the dialing process is aborted.

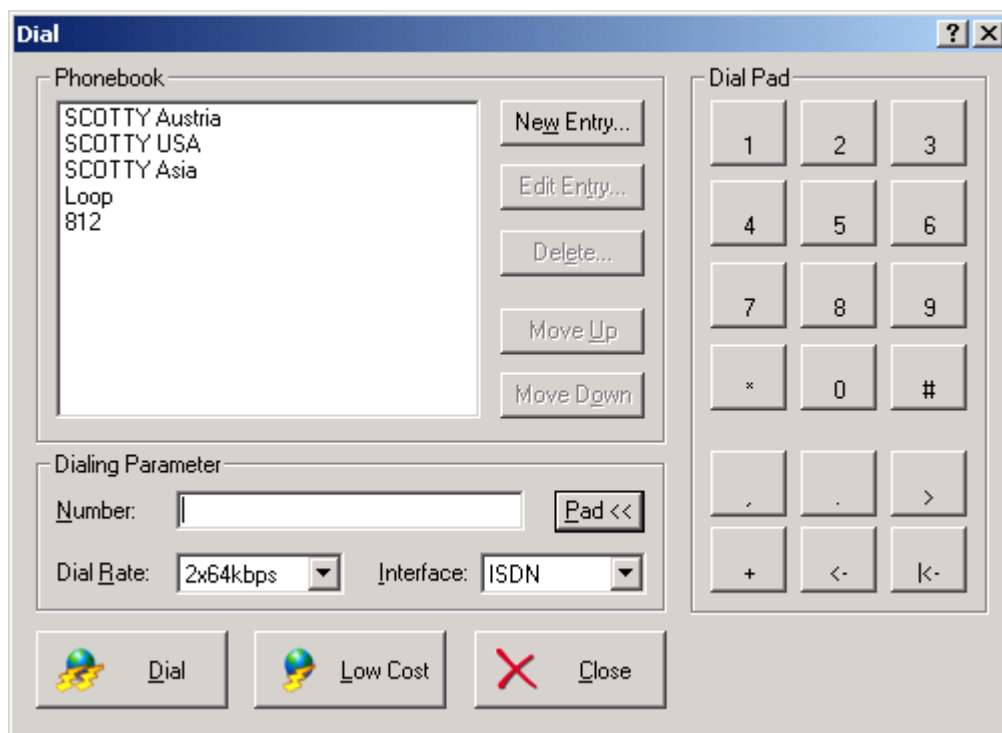
Low Cost begins a data transfer to the selected remote station with a reduced bandwidth. For example, an ISDN connection using only one B-channel (instead of the normal two), reduces the running costs of a connection by fifty percent.

Close closes the dialog.

Dial Rate allows the user to select the dial rate to be used. The available choices are dependent on the selected interface. For the LAN-UDP interface, the chosen rate is used as initial rate and adapted automatically during the call.

Interface selects the interface to be used for this call. The available choices are dependent on the present hardware and the program configuration.

Pad >> brings up an additional dial pad (see below) used to directly enter a phone number without using the keyboard. This dial pad can be hidden by clicking **Pad <<**.



The Expanded Dial dialog box

New Entry... opens a dialog box to create a new Telephone Book entry (see chapter Creating or Modifying a Telephone Book Entry).

Edit Entry... opens a dialog box to alter the currently selected entry (see chapter Creating or Modifying a Telephone Book Entry).

Delete... is used to delete the currently selected entry. If this operation is confirmed by a **Yes** then the selection is deleted.

Move up repositions the entry one step up in the column.

Move down repositions the entry one step down in the column.



The user can create a Telephone Book entry for every desired remote station. This entry stays valid even if the system's location is changed. For ISDN and modem connections, by entering the data of the system's current location under **Options | Dialing**, Filetransfer automatically knows if the dialing prefix must be dialed. This "intelligent" Telephone Book administration also makes the same Telephone Book valid for varying communication networks (ISDN, INMARSAT, modem). Furthermore, copying a different system's Telephone Book into the system is possible.

4.2.2 Creating or Modifying a Telephone Book Entry

The Edit Entry dialog box

The dialing parameters for a remote station can be entered by pressing the button **New Entry...** or **Edit Entry...** in the expanded Telephone Book dialog box.

Name defines the name of the remote station which appears in the Telephone Book. If the network supports "caller's number" the name of the remote station is also displayed on an incoming call.

The telephone number of the remote station is entered in the **Number** field (the appropriate format is described in chapter Format for Entering the Telephone Number).

Interface describes the type of network interface used. Depending on the hardware configuration, varying settings can be chosen. Usually the field is left on "Automatic" – meaning the default interface set under **Options | Dialing** (see chapter Dialing, Setting the Dialing Parameters) is used, or another available interface identified by the phone number entered.

Dial Rate defines the used data rate for the call. According to the set interface, several rates can be selected. Usually the field is left on "Default"- meaning the default value of the used interface is taken. The default values for each available interface can be set under **Options | Dialing**.

Mode defines the network mode to be used. Usually Unrestricted (Nx64) is used, although for some areas, such as parts of the USA, Restricted must be chosen (Nx56).

OK confirms the entry and closes the dialog box.

Cancel aborts the changes and closes the dialog box.



If a Telephone Book entry is set to a value which is not supported by the currently used hardware, it is indicated "Not Supported" and the default values will be automatically used.

4.2.3 Format for Entering the Telephone Number

The Telephone Book supports different number formats, the basic distinction is between LAN addresses and phone numbers for ISDN and modem.

ISDN and modem telephone number format:

+<country code><area code><number>

Example: +43 316 407849

Spaces can be inserted to make the numbers more readable if desired.

If the "+" in the telephone number is not entered, the number is dialed directly without alteration. This option can be useful when, for example, an internal call is dialed through an in-house system.

In order to ensure that the Telephone Book entries remain valid independent of location and network type (e.g. ISDN, INMARSAT), an "intelligent" process is implemented to make the numbers entered in the Telephone Book continue to function regardless of the current situation. When such a telephone entry beginning with "+" is selected, the codes necessary for the current network type are added and, according to the settings under **Options | Dialing**, prefixes are either added or prefix numbers in the Telephone Book entry are ignored. For example, a domestic call (e.g. through ISDN) is recognized by Teleporter automatically, triggering the removal of the international prefix.



If "+" is entered in the telephone number local calls are also handled as long distance calls. Due to the inconsistency in dialing local calls inside the United States, it is advisable to enter the entire number to be dialed without using the "+" sign for local calls.

If different numbers are required for a remote station (e.g. two ISDN lines) the entire numbers can be entered separated by commas. Moreover it is possible to enter the common part followed by a dash and the rest of the number segments separated by commas.

Example: +1 408 252 9447,+1 408 252 9457

Example: +1 408 252-9447,9457

LAN telephone numbers can be entered the following way:

- IP address (e.g.: 121.23.24.11)
- Host name (e.g.: demograz.scottygroup.com)

Optionally, the called port can be added after a colon (e.g. 121.23.24.11:15000). If no port address is specified, SCOTTY Filetransfer will use the port value specified in the Config utility.

4.2.4 Download

Download... will download files from a File Exchange Server (optional). A dialog box requesting username and password to log on to the server opens. After entering username and password, the Phone Book is opened in order to select the remote station.

4.2.5 Disconnect, Terminating a Call

This terminates an ongoing call and the system returns to the standby mode.

4.2.6 Exit, Ending the Program

This function shuts down the SCOTTY Filetransfer.

4.3 The View Menu

This menu enables to view the Phonebook and the Received Files dialog.

The following items are available:

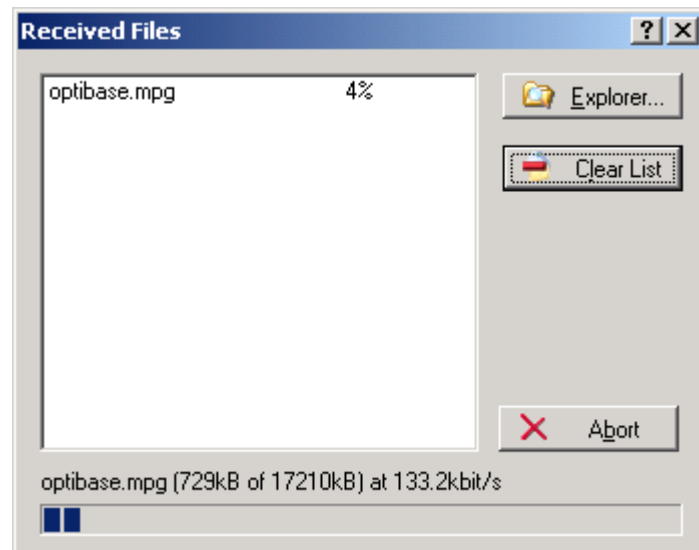
Phonebook...	Ctrl+H
Received Files...	Ctrl+R

4.3.1 Phonebook

Using the menu entry Phonebook, the Phone Book is opened in order to view or modify the Phone Book entries. Details can be found in chapter Send, Send Files.

4.3.2 Received Files, Listing the Received Files

If a file is received by the SCOTTY Filetransfer, the **Received Files** dialog box is automatically displayed.



The Received Files dialog box during a transfer

The **Received Files** dialog box displays a list of files already received as well as the transfer progress of the currently transmitted file. This is also displayed by a bar.

Clear List deletes the list (though naturally not the files in the Incoming folder).

Explorer... starts Windows Explorer. It is then very easily to copy, move, or open received files.

Close closes the dialog box.

Abort cuts off the currently active transfer of a file.

If the system is operating in File Exchange mode (optional) additional information is displayed to the user by showing the sender of a transmitted file. See chapter File Exchange Server (optional) and File Exchange Server, Setup and Operation for details on this.



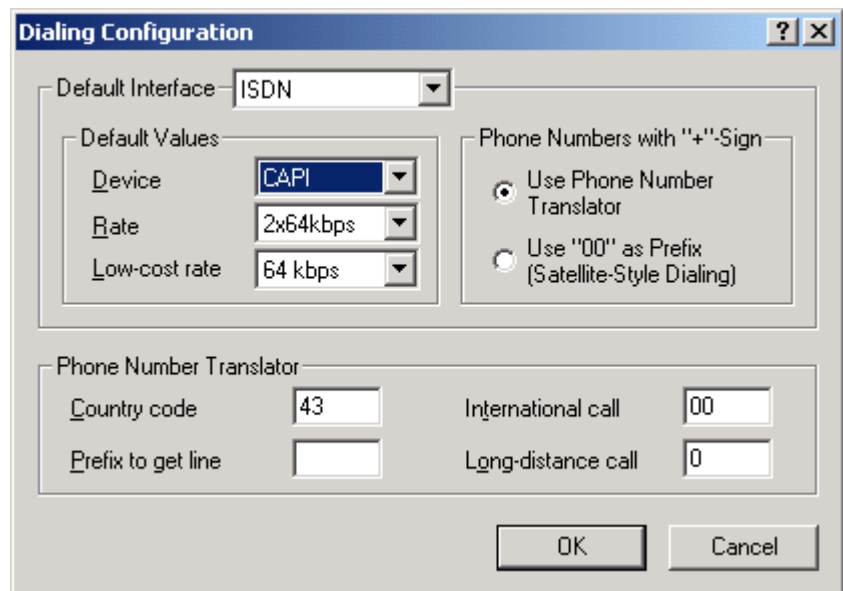
If the SCOTTY Filetransfer software is active but unattended and the Automatic Pickup feature is activated (see chapter Preferences, Setting the System Parameters), the system can connect and receive file transfers automatically. After disconnection the dialog box Received Files remains visible. When the system is reattended, the user is then immediately aware that a file had been received earlier.

4.4 The Options Menu

Defining the configuration presets is done through the **Options** menu. The following menu features are available:

Dialing...	Ctrl+D
Directories...	Ctrl+Q
Preferences...	Ctrl+P
File Exchange...	Ctrl+F
Factory Defaults...	

4.4.1 Dialing, Setting the Dialing Parameters



The Dialing Configuration dialog box

In the **Dialing Configuration** dialog box, the interface and the standard values for the dialing process can be set.

Default Interface describes the type of network interface used. This is usually set automatically when the Filetransfer software is loaded unless manually altered. The choice of interfaces which can be selected is limited by the currently used configuration.

For phone book entries (see chapter Creating or Modifying a Telephone Book Entry) with the interface set to "Automatic", the selected interface is used unless substituted by an interface identified by the phone number.

For each **interface** the standard values for the dialing process can be set in the **Default Values** section. These are active when the corresponding interface is used for dialing, unless overridden by manual entries in the Telephone Book.



These values are individually saved for each interface. All interface-specific settings should be defined in this dialog so that the Telephone Book entries remain as universal as possible (interfaces set to "Automatic" and all settings set to "Default"). This ensures that the Telephone Book entries can be used regardless of the currently used network type (e.g. ISDN or INMARSAT).

Device defines which particular device should be used by the interface. This may be the specific COM-port if a serial device is selected, or the CAPI-interface of the ISDN device.

Rate and

Low-cost rate set the standard value of the network data rate for the corresponding buttons in the Telephone Book.



It is not possible to assign one and the same device (e.g. a particular COM-port) to more than one interface (e.g. to the "Modem" and "Mini-M" interfaces) at the same time.

Phone Numbers with "+"-Sign controls how the system translates phone numbers with a prefixed "+"-sign. If the radio button **Use Phone Number Translator** is checked, the settings entered in the section **Phone Number Translator** are used. If the radio button **Use "00" as Prefix (Satellite-Style Dialing)** is activated, phone numbers beginning with a "+"-sign are automatically converted into a satellite compatible style by substituting the "+"-sign with "00". Note: A "#" is not added but usually also not needed.

The settings in section **Phone Number Translator** are essential for the automatic completion of the telephone number. This setting must be reentered when changing the system's location.

In the field **Country code** the country prefix of the system's current location is entered. For example, 43 in Austria, 49 in Germany and 1 in the USA.

In the field **International call**, the prefix to call internationally must be entered. In Europe, usually "00" must be entered here, "011" should be entered in the USA.

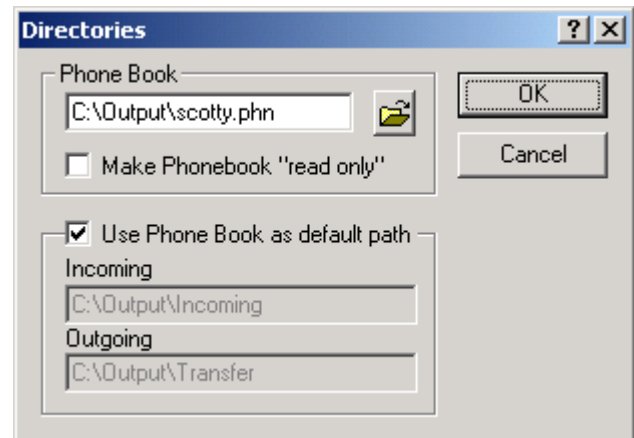
In the field **Long-distance call**, the prefix to call long distance must be entered. In Europe, usually "0" must be entered here, "1" should be entered in the USA.

If a prefix is needed to get an outside line, this is entered in the **Prefix to get line** field.

OK closes the dialog box and saves the current settings.

Cancel closes the dialog box without saving the settings.

4.4.2 Directories, Setting the SCOTTY Directory Structure



The Directories dialog box

With this dialog box the directory structure used by the SCOTTY Filetransfer can be controlled.

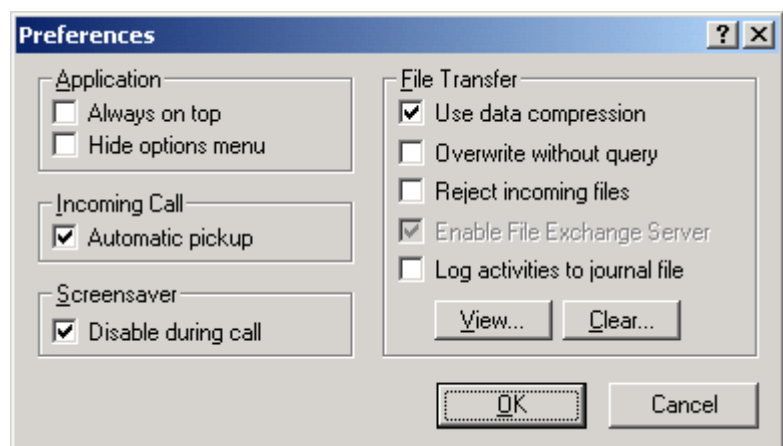
Phone Book defines the location of the phone book. By activating **Make Phonebook "read only"**, the phone book cannot be modified by the user.

If **Use Phone Book as default path** is activated, the folders used for the file transfer utility or the optional SCOTTY File Exchange Server are located in the same directory than specified for the phone book. Otherwise the user can manually specify which directories should be used for incoming and outgoing files.

OK closes the dialog box and saves the current settings.

Cancel closes the dialog box without saving the settings.

4.4.3 Preferences, Setting the System Parameters



The Preferences dialog box

This dialog box enables the user to manipulate some general settings as well as to set the system's reaction to an incoming call.

Always on top prevents the windows of other applications to cover the SCOTTY Filetransfer windows.

Hide options menu removes the menu option **Options** from the menu bar (though its corresponding shortcuts remain active). This can prevent unintentional changes in these settings. Through the shortcut Ctrl+P the **Preferences** dialog box can be displayed and used to re-enable **Options**.

In the section **Incoming Call**, the system's reaction to an incoming call is set.

Automatic pickup defines the behavior when no user input follows an incoming call. When the system receives a call, a dialog box is displayed enabling the user to take or reject the call. If there is no input and **Automatic Pickup** is activated, the call is automatically taken.

Screensaver selects if the system's screensaver gets disabled during a connection.

In the section **Data Channels**, the parameters of the data channels is adjusted.

If the checkbox **Use data compression** is selected, all files get compressed for transmission if possible and decompressed by the SCOTTY system on remote site automatically.

By selecting **Overwrite** without query different files with the same filename get overwritten in the incoming-directory of the partner station without confirmation by the user.

Reject incoming files prevents files from a remote station to be received.

Enable File Exchange Server enables the optional File Exchange Server (see File Exchange Server (optional) for details).

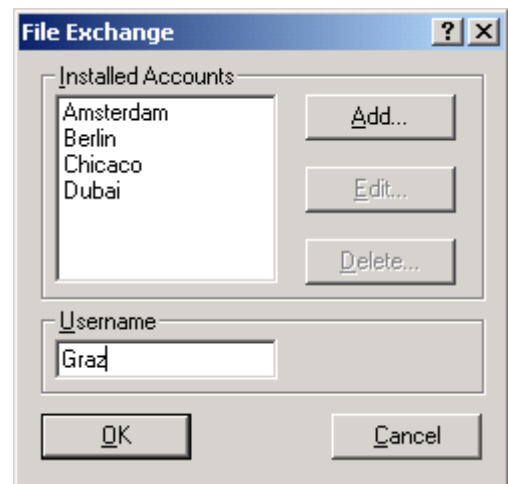
When enabling **Log activities to journal file**, every activity of the file transfer (no matter if successful or not) is logged to a journal file. The file can be viewed by clicking on the button **View...** and it can be emptied by clicking on the button **Clear...**

OK saves the chosen settings.

Cancel cancels the changes and closes the dialog box.

4.4.4 File Exchange Server (optional)

The **File Exchange** dialog box allows the configuration of the File Exchange Server feature. It is available only if this option is installed in the system.



The File Exchange dialog box

Installed Accounts indicates which accounts are available on the local system. An account can be used by a remote system to download prepared files, or, if File Exchange is configured on both sides, for bi-directional file exchange.

With **Add...** a new remote user account can be added to the system. The **Account Settings** dialog box opens where **Username** and **Password** can be specified. A remote system needs these settings to be able to log on to the account. For file exchange, **Username** is also used to find the phone book entry to connect to the remote system.

Edit... allows to edit the selected user account.

Use **Delete...** to remove the chosen account from the system. If empty, the account's incoming and transfer folders are also deleted.

Username specifies the system's username. During a file exchange, this entry, in conjunction with the password set in the account for the remote system, is used to log on.

OK closes the dialog box and saves the current settings immediately.

Cancel closes the dialog box without saving the settings.

For details, see chapter File Exchange Server, Setup and Operation.

4.4.5 File Exchange Server, Setup and Operation

The new SCOTTY File Exchange feature (optional) greatly enhances the existing SCOTTY File Transfer. It is not only possible to actively send files to a target system, but also to retrieve files provided at a remote system. The SCOTTY File Exchange combines receiving and transmitting files and therefore provides full data exchange between two systems.

The SCOTTY File Exchange Server can be used in two different scenarios:

- **Download only:** In this mode clients can download files from the File Exchange Server. For this mode only the server needs to be equipped with the File Exchange Server option, the clients need not have to have this option.
- **File Exchange:** In this mode each station features the File Exchange Server option. Files are transferred bi-directional between a central server and the individual clients, or even between any two stations. In this mode the exchange process can be initiated either by the server or the client.



These two different scenarios do not exclude each other but only define different ways of operation. Set up of networks operating both scenarios together is easily possible.

Download Only Mode

In this operation mode multiple clients can download files from a File Exchange Server. For each client an individual outbox is available on the server where the files for the download are prepared. Also, for each client a different password can be used to protect the prepared files from unauthorized download.

The server needs to be configured as following:

- For each client add an account with **Options | File Exchange**. Username and password can be chosen freely for each client.
- Check if **File Exchange Server** is activated in **Options | Preferences**.
- For unattended server operation, check if **Automatic pickup** is enabled in **Options | Preferences**. To monitor download activities on the server while not attended, **Log activities to journal file** in **Options | Preferences** can be enabled.

After configuration, files can be prepared on the server for downloading:

- Choose which files should be prepared for any particular client by selecting the client's name from the **Outbox for** list.
- Use the **Add...**, **Clear** and **Clear All** buttons to modify the list of files that shall be transferred to the client.
- Repeat above steps to prepare files for different clients.

A client can connect to the server at any time and download the files prepared:

- Select **File | Download**.
- Enter **Username** and **Password**. These entries must match the settings for this client's account on the server.

- The **Dial** dialog opens. Connect to the server using the server's phone number and desired connection speed.
- Files prepared on the server are transferred to the client. The **Received Files** dialog opens and shows the progress of the transfer.
- On the server, each file is removed from the client's outbox after successful transfer and will therefore not be transferred again during a following download session.
- After all prepared files for this client have been transferred, the client automatically disconnects the call.

File Exchange Mode

In this operation mode multiple systems exchange data amongst each other. Each station can be configured with a number of accounts representing remote stations paired to this station. Which station is paired with which other is just a matter of needs; in a pure server-client scenario for example, a central server is paired with each client, but no client is paired with another client. For each pair of systems a different password can be used to protect the files from unauthorized access.

When two stations are paired, an outbox and an inbox with the name of the other station is created on each system. When a file exchange takes place, files provided in the outboxes on each side are transferred to the corresponding inboxes at the other side.

The stations need to be configured as following:

- Each station must have an unique name, which must be set in **Options | File Exchange**, field **Username**.
- For pairing two systems, add an account on both sides with **Options | File Exchange**. Set **Username** to the unique name of the remote side. Use the same **Password** on both sides to protect the connection.
- Repeat above step for each exchange connection to be configured.
- A phone book entry can be created to simplify dial-up to a paired system. Open the phone book with **View | Phonebook** and add a **New Entry**. Set **Name** to the unique name of the remote system.
- Check if **File Exchange Server** is activated in **Options | Preferences**.
- For unattended server operation, check if **Automatic pickup** is enabled in **Options | Preferences**. To monitor exchange activities on the system while not attended, **Log activities to journal file** in **Options | Preferences** can be enabled.

After configuration, files can be prepared on a station to be sent to a paired system:

- Choose for which other station files should be prepared by selecting the station's name from the **Outbox for** list.
- Use the **Add...**, **Clear** and **Clear All** buttons to modify the list of files.
- Repeat above steps to prepare files for different stations.

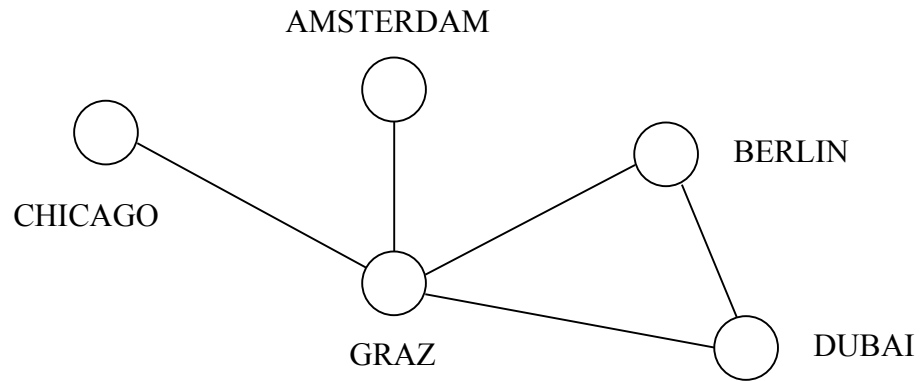
A station can connect to a paired station at any time and exchange prepared files amongst each other:

- Select the station you want to connect to in the Combo Box **Outbox for**.
- Additional files can be added to this outbox if desired. The outbox can be left empty if files should be downloaded only.
- Click on the **Exchange** button.
- The system suggests the phone number to connect to the remote system if found in the phone book. Press **Dial** or **Low Cost** to start connecting, or choose **Phone Book** to use a different phone number or connection speed.
- Files prepared on this station are transmitted. At the same time files prepared on the other station are received. The **Received Files** dialog opens and shows the progress of this transfer.
- Each file is removed from the corresponding outbox after successful transfer and will therefore not be transferred again during a following exchange session.
- After all prepared files have been exchanged the call is automatically disconnected.

Example File Exchange Setup

The picture below shows a sample File Exchange setup. The station "Graz" acts as a central server for the clients "Amsterdam", "Berlin", "Chicago" and "Dubai" - so each client needs to be paired with the central server.

Additionally, the stations "Dubai" and "Berlin" are also paired to each other, so that they can not only exchange files with the server "Graz", but also directly with each other.



Demonstration scenario for the optional File Exchange Server

The name of each station ("Graz", "Chicago" etc.) is configured on the particular system in **Options | File Exchange**, field **Username**.

The station "Graz" has four accounts configured: "Amsterdam", "Berlin", "Chicago" and "Dubai". Passwords used are "AmGra", "BerGra", "ChicGra" and "DubGra". No phone book entries are required as the clients dial up the exchange connections in this example.

The station "Chicago" has only one account configured, username set to "Graz", password set to "ChicGra". Additionally, a phone book entry named "Graz" is set up, holding the phone number to reach "Graz".

The station "Amsterdam" is configured similarly to "Chicago": one account named "Graz", password "AmGra", and a phone book entry called "Graz".

In the station "Berlin" two accounts are configured: "Graz" with password "BerGra", and "Dubai" with password "BerDub". Also, two phone book entries are added, called "Graz" and "Dubai".

Finally, "Dubai" has two accounts: "Graz" with password "DubGra", and "Berlin" with password "BerDub". Two phone book entries are set up, named "Graz" and "Berlin".

In operation, files to be sent to the clients are prepared in the corresponding outboxes on the server "Graz". The sever operator chooses the client name in the file **Outbox for** and can review and modify the file list for this client.

On the client side **Outbox for** is set to "Graz". If desired, files can be prepared to be uploaded to the server. Pressing the **Exchange** button initiates the exchange process: The phone number to reach "Graz" is suggested, pressing **Dial** connects to the server. Files for "Graz" are sent, files prepared for the client are received. When the transfer has finished the call is disconnected. **Received files** can be located by pressing the **Explorer** button and changing to the "Graz" folder.

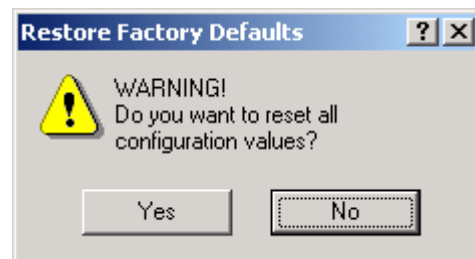
Because each clients' data is independently stored on the server, it doesn't matter when the clients connect to the server. For example, files can be provided at the central server during the day and exchanged by the clients

during the night. The next day, the outbox directories at the server are empty and the inbox directories are filled with uploaded files.

The stations "Berlin" and "Dubai" can additionally exchange files directly with each other. The setting **Outbox for** is used to switch between the outbox for the server and the other station. The file exchange process between "Berlin" and "Dubai" can be initiated from either side; the setting **Outbox for** on the called side is automatically updated to indicate the exchange partner station.

On the station "Berlin" for example, **Outbox for** can be switched between "Graz" and "Dubai". Pressing the Exchange button automatically suggests the appropriate phone number, depending on the current setting of **Outbox for**. Received files are stored in the folder "Graz" or in the folder "Dubai", depending from which station the files came.

4.4.6 Factory Defaults, Restoring the Factory Defaults



The Restore Factory Defaults dialog box

This function opens the dialog box to restore the factory defaults. The user's settings are restored to the original factory values.



*The **Restore Factory Defaults** window is only available in the idle mode. During a call, the dialog can not be opened.*



***Restore Factory Defaults** permanently overwrites all current settings! Especially the settings in the dialog box **Options | Dialing** under "Number Prefix" should then be checked.*

4.5 The Help Menu

The following menu options are available:

Help Topics	F1
Context Help	Shift+F1
About Filetransfer	Ctrl+F1

4.5.1 HelpTopics, the SCOTTY Help System

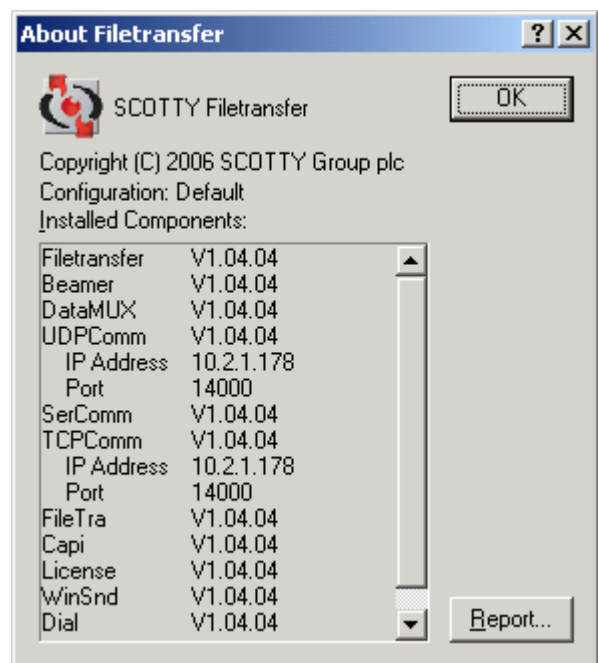
The SCOTTY on-line help is opened through this menu option.

4.5.2 Context Help, the Topical Help

The contextual help feature is started through this function. When this menu option is clicked, the mouse arrow transforms into a question mark ("?") and it is then possible to click on an element (i.e. menu option, button, dialog box) to display information on that element.

A click on the question mark at the top right corner of a window or dialog box will display help information on the available features. Pressing F1 also opens the help function.

4.5.3 About Filetransfer, Displaying the SCOTTY Configuration



The About Filetransfer dialog box

The system's version number and a list of installed components are displayed in this menu option. If the **Report** button is pressed, a text file with a more

detailed installation listing is opened. This information is important when technical support from SCOTTY is necessary.

4.6 Shortcuts

In order to simplify the operation of the system, various "Shortcuts" are available. Frequently used functions can be activated directly through the use of certain key combinations instead of using the menus.

Key	Function	Menu	Chapter
F1	display help	Help	The Help Menu
Ctrl+F1	information on Filetransfer	Help About Filetransfer	About Filetransfer, Displaying the SCOTTY Configuration
F2	send	File Send	Send, Send Files
Shift+F2	hang up	File Disconnect	Disconnect, Terminating a Call
F3	download	File Download	Download
F10	end Filetransfer	File Exit	Exit, Ending the Program

Further Shortcuts:

Key	Function	Menu	Chapter
Ctrl+D	open dial dialog box	Options Dialing	Dialing, Setting the Dialing Parameters
Ctrl+F	open dialog box for file exchange server	Options File Exchange Server	File Exchange Server (optional)
Ctrl+Q	open dialog box for setting directory structure	Options Directories	Directories, Setting the SCOTTY Directory Structure
Ctrl+P	open dialog box for presets	Options Preferences	Preferences, Setting the System Parameters
Ctrl+R	Received Files	View Received Files	Received Files, Listing the Received Files

While the Telephone Book is displayed, the following "Shortcuts" are available (see chapter Shortcuts):

Keys	Function	Button
Enter	dial	Dial
Shift+Enter	low cost dial	Low Cost
Insert	insert new entry	New Entry
Shift+Up	move entry upwards in the column	Move Up
Shift+Down	move entry downwards in the column	Move Down

5 Appendix

5.1 Application Notes

Because SCOTTY network interfaces have been designed to be very universal, it is possible to connect the SCOTTY Communication systems directly to many network configurations and support various applications.

Detailed information for communication networks, specific applications, customized usage, etc. are discussed in this appendix.