



## WaveMail

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**27.10.00 Is it possible to connect more than one modem to WaveMail?**

YES. WaveMail can handle up to 7 modems. Any mix of supported modems is allowed (SWISS-PTC, Packet-Radio, Telephone Modem, Inmarsat).

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**27.10.00 If several modems are used, can WaveMail communicate over all modems at the same time?**

YES. WaveMail can establish links and exchange messages over several modems at a time. As an example, WaveMail at Station\_1 might exchange messages over HF-radio (Swiss-PTC) with remote Station\_2, at the same time exchange messages over Inmarsat with Station\_3 and again over HF-radio over a second Swiss-PTC modem with Station\_4 ...

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**27.10.00 Is it possible to use different types of modems between two WaveMail stations? We would like to use the Swiss-PTC if possible, however if the propagation conditions on HF-radio are bad we would like to use an Inmarsat terminal as a backup.**

YES. You can define more than one link between 2 Stations.

In your example you would define a link over SWISS-PTC and a link over Inmarsat. You could then connect several times a day over the SWISS-PTC link (manually or scheduled). In addition to that, you can set the scheduler for the Inmarsat-link to connect every day at 18:00. Like this, all messages which have not been transferred over HF-radio by 18:00 will be transferred over Inmarsat.

This allows to minimize traffic charges by using HF-radio as much as possible and still you can make sure that messages are transferred at least once a day (even when HF-propagation is bad).

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**27.10.00 Is it possible to control an Antenna Rotor from WaveMail?**

YES. There is an add-on product called WMROTOR. In WMROTOR you can define the Azimuth for every remote station. The antenna will then be rotated according to the defined azimuth for the connected remote station. Communication between WMROTOR and an antenna rotor controller is over RS-232. WMROTOR can be configured for various rotor controllers.

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**27.10.00 Can WaveMail be installed on a LAN so that several users can send/receive mail from their PC?**

YES. WaveMail can be installed in Client-Mode on several PCs on a LAN. The users on the LAN can send/receive mail to/from other WaveMail stations and other users on the LAN. The basic WaveMail License allows up to 9 local users on a LAN. If you need the License for more users, you can get it from Schuemperlin Engineering AG. There are Licenses for up to 19, 49 or 99 local users.

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**27.10.00 Can I send/receive mail from WaveMail to/from the Internet e-mail system?**

YES. You can exchange mail with Internet mail. You can also send/receive messages with attachments.

In order to connect a WaveMail network with the Internet mail system, the WaveNet gateway must be running on one of the WaveMail stations in your network. WaveNet is an add-on product to WaveMail.

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**27.10.00 How can I connect a WaveMail network with our in-house mail system in the headquarter?**

Through WaveNet. WaveNet is a gateway which connects a WaveMail network with the Internet mail system (SMTP/POP3). Your in-house mail system sure has a gateway to the Internet mail system. Therefore, by connecting a WaveMail network to the Internet using WaveNet, you have a connection between WaveMail and virtually any other mail system.

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**27.10.00 I have heard of a Wavemail freeware?**

There is another product with the same name available on the Internet. That other product has nothing to do with our WaveMail, unfortunately they just use the same name.

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**27.10.00 Can WaveMail be used over ISDN?**

10.04.01

YES. External ISDN-adapters (connected to the serial port of the PC) support AT-Hayes commands. Therefore you can configure WaveMail like for a normal Telephone Modem. The ISDN-adapter must be set to use X.75 or V.110 or V.120 connections (AT-commands for this setting vary from manufacturer to manufacturer, see adapter manual). You should add this command together with the command for factory default settings to the 'Initialization string(s)' of the 'Modem properties' dialog in 'Station Setup'.

Example for ZyXel OmniNet.D and X.75 :

```
AT&F  
ATB00
```

If you have a PCMCIA or USB ISDN-adapter, then you need a Virtual COM port for WaveMail. Most PCMCIA or USB ISDN-adapters come with a Virtual COM driver.

If you are using WaveMail over TCP/IP (see below) then you can use any ISDN-adapter which is supported by Windows Dial-Up Networking (no virtual COM port driver necessary).

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**27.10.00 How can I take advantage of the new feature 'WaveMail over TCP/IP' which is new in version 1.09?**

WaveMail now allows to use TCP/IP connections to connect two WaveMail stations.

Applications:

- If you have a WaveMail station in a location where you have a local Internet provider but the service is sometimes down, then you can take advantage of the low cost of the Internet while your Internet access is available. If your local Internet access is down, you can still use HF-radio as backup.
  - If you have a short/medium distance radio-network running WaveMail (for example a regional Packet-Radio network), you can use TCP/IP to connect that network with a station or another network which is far away (outside the radio range of your network).
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**27.10.00 Will WaveNet be obsolete with the new WaveMail version which supports TCP/IP?**

NO. WaveMail over TCP/IP just uses TCP/IP as a transport medium. If you want to exchange messages between a WaveMail network and the Internet mail system you still need WaveNet on one of the WaveMail stations in your network.

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**27.10.00 Can the ISDN services of an Inmarsat M4/GAN terminal be used with WaveMail?**

10.04.01

YES. You can use this ISDN service just like ordinary ISDN. However you should only use X.75 protocol (due to the long delays over satellite links, V.110 and V.120 are inefficient over Inmarsat).

The NERA WorldCommunicator offers PPP-connections over the RS-232 port of the WorldCommunicator, however this service can not be used with WaveMail. You need an external (or PCMCIA or USB) ISDN-adapter and connect it to the S0-Bus of the WorldCommunicator. If you are using WaveMail over TCP/IP, then you can use the built-in terminaladapter of the NERA WorldCommunicator because Windows Dial-Up Networking supports the PPP-protocol.

08.11.00 **Is it necessary to define a Link to a remote WaveMail-station in the Network-Setup if it is always the remote station who establishes connections.**

YES. Only remote stations with a defined Link in your Network-Setup can exchange messages with your WaveMail station.

WaveMail uses information defined on the Link page of the Network-Setup both when calling other stations and when receiving calls from other stations.

When making a call, WaveMail gets the necessary information for a connection from the Network-Setup:

- Station-ID of remote station
- modem to use
- phone number / call / IP-Address of remote station
- password (if applicable)

When receiving a call, WaveMail gets the necessary information to accept a connection from the Network-Setup:

- Station-ID of remote station
- password (if defined)

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08.11.00 **A remote station sometimes connects over SWISS-PTC, sometimes over Inmarsat and sometimes over TCP/IP. It is always the remote station that starts the connection, we never call the remote.**

revised  
21.12.00

**Is it necessary to define an individual Link to the remote station for every modem being used?**

NO. A remote station can exchange messages with your station over any modem, as long as you have defined at least one Link to the remote station.

Example:

You have a SWISS-PTC and a telephone modem connected to your station. You have only defined a Link to the remote station over SWISS-PTC.

The remote station can connect your station and exchange messages over telephone modem even if no Link is defined over telephone modem.

When receiving a call, WaveMail just checks, whether the remote stations Station-ID can be found in one of the Links defined in Network-Setup and whether the password matches (if defined).

**But !!**

But if you are using the "*Maximum Message Size*" option (in SETUP / STATION SETUP / MODEM PROPERTIES), then you should at least define a link over the modem which has the biggest (or unlimited) value for "*Maximum Message Size*" (links over other modems can also be defined but the link over the modem with the biggest value for "*Maximum Message Size*" is important, because otherwise messages might be rejected by WaveMail)

(background: from those modems over which links are defined to a particular remote station, WaveMail takes the highest value of "*Maximum Message Size*" to determine whether a message should be accepted for that station or rejected because of oversize).

Example:

Your station and a particular remote station both have a SWISS-PTC modem and an Inmarsat-MiniM. You defined a "*Maximum Message Size*" of 20kB for the SWISS-PTC and 100kB for the Mini-M.

If you only define a link over the SWISS-PTC to that remote station, the remote station can connect your station both over SWISS-PTC and Inmarsat-MiniM. However your WaveMail station would reject messages for that remote station if their size is over 20kB (because the "*Maximum Message Size*" for the modem defined in the only link to that remote station is 20kB).

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### We are running WaveMail as TCP/IP-Server. What IP-Address should we enter in the Link Properties of Network-Setup for a remote station with a non-static IP-Address (dial-up)?

If the remote station uses a dial-up connection to the Internet (this is the typical case), it is probably always the remote station which establishes the connection. As your WaveMail TCP/IP-Server station is then the called station, the values for 'Modem' and 'Phone number / Call of remote station' are not used by your WaveMail and therefore you can enter any IP-Address (e.g. 0.0.0.0).

Maybe you do not even have to add a new Link for that particular remote station. If the remote station sometimes uses a SWISS-PTC and sometimes uses TCP/IP to connect, then you might already have defined a Link for the SWISS-PTC. As soon as there is at least one Link defined for a remote station, that remote station can connect over whatever means are supported by your WaveMail station. But watch out if you are using the the "*Maximum Message Size*" option, see above Qustion/Answer.

### 28.11.00 Using US Robotics telephone modems

Some types of US Robotics modems use a non-standard command to set factory-settings. As a default, WaveMail sends the command AT&F to telephone modems when opening the modem. This command sets factory-settings in almost all types of telephone modems. However some US Robotics modems need the command AT&F1 instead. Therefore you need to add a line to the INITIALIZATION STRING(S) box in the Modem Properties dialog of WaveMail (otherwise some US Robotics modems may behave in a strange way).

In WaveMail:

Select STATION SETUP from the SETUP menu.

Click on the PROPERTIES button next to the desired Telephone Modem.

In the Modem Properties dialog, click on the ADVANCED SETUP button.

Add the following line to the INITIALIZATION STRINGS(S):

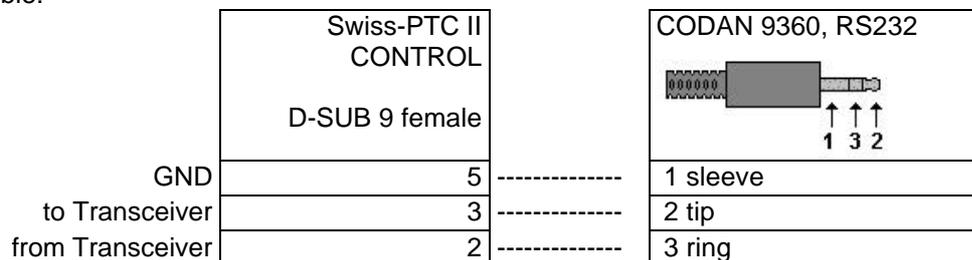
**AT&F1**

### 10.04.01 Using Transceiver Control with a CODAN 9360

In order to use the Transceiver Control feature of WaveMail with a CODAN 9360 transceiver, you need:

- to connect the correct cable between the CONTROL connector of the Swiss-PTC-II modem and the RS-232 connector of the CODAN 9360
- to configure settings on CODAN 9360 for parameter RS-232 as follows: **COMPUTER, 1200 baud**

Cable:



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**07.01.02 Changing parameters for Packet-Radio modems**

WaveMail configures Packet-Radio modems with default parameters which work fine for most applications. However there are two situations where you should add different parameters.

**1. TX-Delay**

The default value for the TX-Delay is T 25 (on most Packet-Radio modems this value is multiplied by 10 and therefore corresponds to 250 msec). On some modems (e.g. TNC-3) the TX-Delay is not multiplied and therefore you should enter a higher value (e.g. T 250).

How to do that:

In WaveMail open SETUP / STATION-SETUP. Then click on PROPERTIES next to the desired PACKET-RADIO modem. The MODEM PROPERTIES dialog will be displayed. Click on ADVANCED SETUP and enter the following line in the INITIALIZATION STRING(S) box:

**T 250**

**2. Optimizing performance of the Packet-Radio link**

If on a particular frequency only one Packet-Radio link is active at a time, you can optimize the throughput by setting more aggressive parameters. If several links are active at the same time then you should not change the default parameters.

How to set aggressive parameters:

In WaveMail open SETUP / STATION-SETUP. Then click on PROPERTIES next to the desired PACKET-RADIO modem. The MODEM PROPERTIES dialog will be displayed. Click on ADVANCED SETUP and enter the following lines in the INITIALIZATION STRING(S) box:

**P 128**

**@T2 20**

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**07.01.02 WaveMail and Thuraya**

Tests have been made with WaveMail (1.09c) and an ASCOM 21 Thuraya phone. This setup works fine without any problems. The same applies for higher WaveMail versions and for the HUGHES Thuraya phone.

Setup of WaveMail for Thuraya:

- in STATION SETUP select ADD MODEM
- then select TELEPHONE MODEM
- select 19200 as baudrate

- make sure that the baudrate on the ASCOM 21 / HUGHES is also 19200 (MENU - SETTINGS - Data Link Rate)

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**07.01.02 WaveMail and Iridium**

Tests have been made with WaveMail (1.09c) and a MOTOROLA 9500 Iridium phone. It works but there is a little problem due to a strange behaviour of the MOTOROLA 9500: The Iridium phone gives the CONNECT message and sets DCD active as soon as the line at the other end of the connection is ringing. Normally the CONNECT should only come after the modem on the other side answers the call and the connection is established. WaveMail starts to login when it receives the CONNECT message (and DCD signal) but because this message comes too early (before the connection is really established), WaveMail will make several attempts to login. In most cases this worked fine, but if it takes long to establish the connection, WaveMail might give a timeout.

Setup of WaveMail for Iridium:

- in STATION SETUP select ADD MODEM
- then select TELEPHONE MODEM
- select 19200 as baudrate

- make sure that the baudrate on the MOTOROLA 9500 is also 19200

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**12.10.05 Timezones with WaveMail**

Within WaveMail, there are no timezones. WaveMail just uses the local time of the PC. However, when messages travel between the WaveMail network and the Internet, then there is the possibility to adjust WaveMail time (local time) to Internet time (using timezones).

You can manually edit the file WAVEMAIL.INI in the WaveMail program directory in order to adjust handling of date and time. You only need to do that on the WaveMail station at the gateway (where WaveNet is running).

Manually edit WAVEMAIL.INI: In section [WM-GENERAL] you can add a value for the parameter TIMEOFFSET.

Example (11 hours offset to UTC):

```
[ WM-GENERAL ]  
TIMEOFFSET=11
```

Note: normally there is already a [WM-GENERAL] section in WAVEMAIL.INI (with ThisStation and LicenseCode parameters). Watch out that there is only one such section (do not add a second [WM-GENERAL] section).

You have to restart WaveMail before the change is effective.

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**12.10.05 Using Digipeaters with Packet-Radio modems (Via)**

If the Packet-Radio-connection to a remote station should be established through a digipeater, you just have to add the Via-call(s) in the Link Properties dialog for that connection (in Network Setup).

In the field *'Phone number / Call of remote station'* you can enter the destinations call followed by the Via-call(s). e.g.

```
DEST1 VIAST1 VIAST2
```

In this example DEST1 is the call of the destination station, VIAST1 is the first Via and VIAST2 is the second via.

You could also enter: DEST1 via VIAST1 VIAST2

The max. number of characters in this field is 30. This allows for at least 3 Via-calls.

If you encounter any problems, you should consult the Packet-Radio modems manual to check whether a different syntax is necessary for the 'Connect' command.

**26.10.05 Number of entries in the 'Connect Log'**

In menu 'Special' you find the item 'Show Connect Log'. This will bring up a list with a summary of the last connections. By default, the number of entries is limited to 200. In WaveMail versions 2.01 and higher it is possible to change this limit.

You can manually edit the file WAVEMAIL.INI in the WaveMail program directory in order to adjust this limit.

Manually edit WAVEMAIL.INI: In section [WM-GENERAL] you can add a value for the parameter CONNECTLOGLINES .

Example (set limit to 300 entries):

```
[ WM-GENERAL ]  
ConnectLogLines=300
```

Note: normally there is already a [WM-GENERAL] section in WAVEMAIL.INI (with ThisStation and LicenseCode parameters). Watch out that there is only one such section (do not add a second [WM-GENERAL] section).

You have to restart WaveMail before the change is effective.

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**26.10.05 Call WaveMail from an external application or batch file to send a file as an attachment**

Starting with WaveMail version 2.01 it is possible to call WaveMail from an application or from a batch-file in order to send a file as an attachment. The filename is passed as a command line parameter when calling WaveMail.

This feature helps to automate the process of sending an attachment. Sending an attachment is normally done by manually creating a new message and selecting the file to attach in the 'Add Attachment' dialog. This is quite easy, however if this procedure has to be executed very often, it might be easier to automate this process.

for more information see: Application note '*Calling WaveMail from an application or a batch-file to send a file as attachment*' (file WaveMail\_SendFile.pdf).