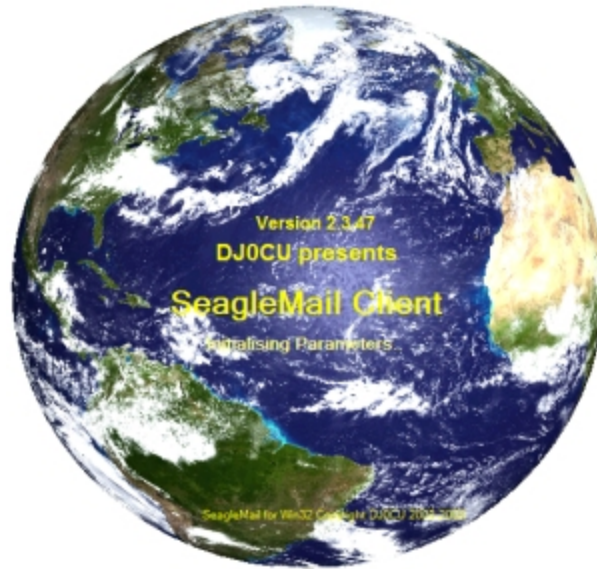


# SeagleMail Primer



Welcome to SeagleMail your one stop HF Email program for Yachts and small boats.

## Introduction

Although we are in the second decade of the 21st century it is still expensive to use satellites to transfer data on a regular basis, this is because satellite companies want maximum return on their investments. Because of this satellite data transfer is out of reach for most hobby boat owners, plus the fact that you are usually just given an Internet connection so that you can use your own email program as normal. This sounds great on the face of it, but most email program that you use on a daily basis are not designed for boats at sea and are therefore missing some useful additions like:

- + Automatic Compression.
- + Automatic encryption.
- + Connections to weather providers.
- + Radio control
- + Voice output.

and other needful things

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In addition to the above mentioned functionality SeagleMail has been designed with the following in mind:

- **Be simple to use.**  
Just pick the Host station available and connect. Everything else like the downloading uploading of mails is done automatically.
- **Installation**  
SeagleMail requires zero setting up, i.e. works out of the box.
- **Make best use of bandwidth.**  
SM works via Pactor III Modems which make the best use of available bandwidth and conditions.
- **Be reliable.**  
As SM has been tested over a period of 18 months you can be sure that teething problems have been sorted out.
- **Use the latest technology.**  
Pactor Modems from SCS the fastest method of transferring data via HF in the civilian area.
- **Be secure.**  
If you are sending sensitive business or private mails the Internet is about the most insecure place you can imagine, therefore easy and secure encryption is essential. SeagleMail offers seamless encryption/decryption.
- **Family follows on Twitter.**  
No problem, with SeagleMail you can update your Tweets direct from SeagleMail.

## Architecture

The program consists of two parts: The Host which has a permanent connection to the Internet and deals with passwords and management of users. It would also normally scan a number of frequencies and has an inbuilt Scan Manager for this purpose.

The Client which is the Remote program and would be installed on the Yacht or remote site. The Host can service many Clients with no actual limit being programmed in, however the quality of the connection and amount of data being transferred will effectively limit the number in practice. However you can have many Hosts so that more bandwidth would be available for the Clients. In a world wide setup you would have the Hosts placed at strategic locations around the Globe to enable world wide coverage.

SeagleMail has been thoroughly tested both in the USA and Europe on a 24/7 basis for the last 18 months. In Austria it was used as emergency backup in case of catastrophic events. The beta version of the Host ran successfully in this capacity for almost two years.

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SeagleMail can be setup to work with any Email server, but practice has shown that using Google Mail as the outgoing server to be very reliable. Google Mail also has the advantage that communication with the Google servers is encrypted using SSL , also all outgoing mails are checked against Google Mail own virus checker. Because each Client needs a separate Email address for POP3 mail a different approach has to be used, therefore an additional dedicated POP3 email server is required so that each Client ideally has his own email address and access also to a web based email Client so that during shore stays email can be collected and sent directly via the Internet. To aid this capability the Client is also able to send and receive mails directly via the Internet using whichever server is required.

All Hosts that are connected to the same system are updated automatically, this allows world wide synchronisation of the Host for on the fly adjustment of valid users. At present the system is set up so that the synchronisation of all Hosts is within 20 minutes. This time frame can be easily adjusted to requirements.

SeagleMail is a Cloud based system, this means that all Mail is stored on the Cloud. SeagleMail only downloads mail on request i.e. a connection from the Client, all mails are then downloaded during the connection (JIT) Zipped into one file and sent to the Client/received from the Client. Only sending one compressed file each time reduces switch over overheads of the transfer protocol. Being a Cloud based system means that the Host itself does not have to store any mail and makes synchronisation in that respect not necessary. A Client can pick up mail from any Host on the system and of course send mail for forwarding to any Host At present it is not possible for a Client to act as a repeater i.e. sending emails from Client to Client, however it is possible to send any computer file from one Client to another, so in effect it would be possible to pass on a message to another Client for forwarding, however this would have to be done manually and there is no automatism like a Client - Host connection.

To keep up with the times an easy method of updating Twitter and Facebook have been included however these functions are experimental as there appears to be no reliable provider of Email updating of the above. Hopefully in the future Twitter and Facebook itself will offer this functionality.

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## Modem

SeagleMail works together with the [SCS](#) series of [PTCII Modems](#). This company has been in the business of making HF Modems for over 20 years and have built up a reputation in that area second to none. Below is a picture of the latest Modem to come out of the SCS laboratory.



## The SCS P4 Dragon

## Advantages of using the SeagleMail system

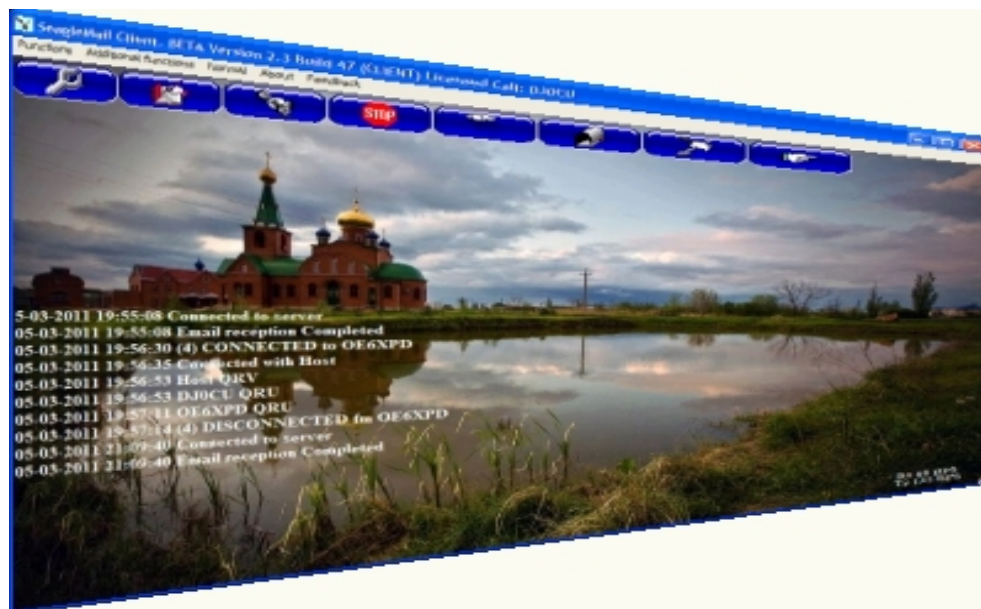
1. Probably the most important reason, a tested system, only in rare cases is software tested for this length of time with the end user usually being the guinea pig. SeagleMail will work first time out of the box.
2. A Cloud based system. No emails will be lost due to one of the Hosts going down, Emails are only deleted in the Cloud when confirmation of receipt has been received.
3. Compression. All emails are automatically compressed before sending using the standard Zip algorithm. Text emails can end up being only 5% of their original size. This leads to an enormous saving of HF bandwidth.

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## SeagleMail Client main screen



The Main screen can also be individualised.



Referring to the top Picture, top left **Settings**:

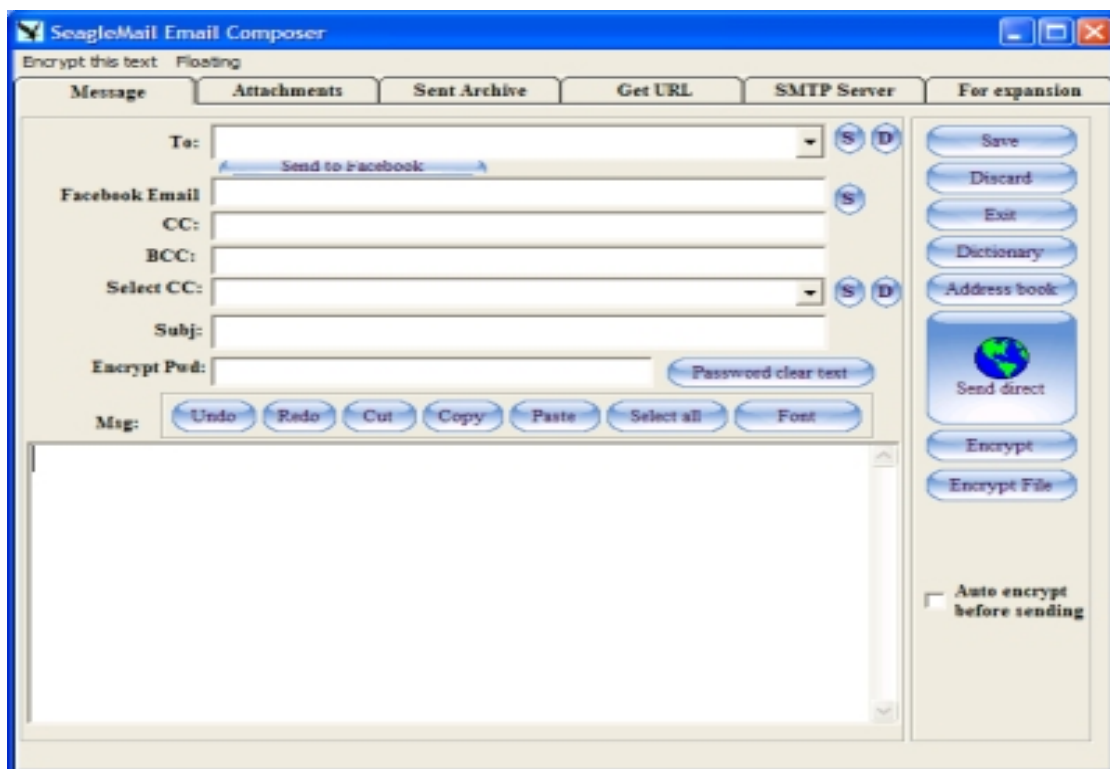
Within the settings screen it is possible to set up the Com's manually, this is normally not needed as SeagleMail requires zero effort and the Com's is always detected automatically,

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however on computers with more than one Client running it might be advisable to manually set the second Client. Without going through the screens in detail which would overload the White Paper these are the remaining screens for setting:

- **PSKA Levels.**
- **Callsigns.**
- **Login Password.** Each Client needs to have a login password for connections to the Host
- **Phone book** including frequencies of stations for calling.
- **Request POP3**( For downloading Emails from your Home Email server)
- **Button look.** The buttons can be changed to suit taste.

## The Composer

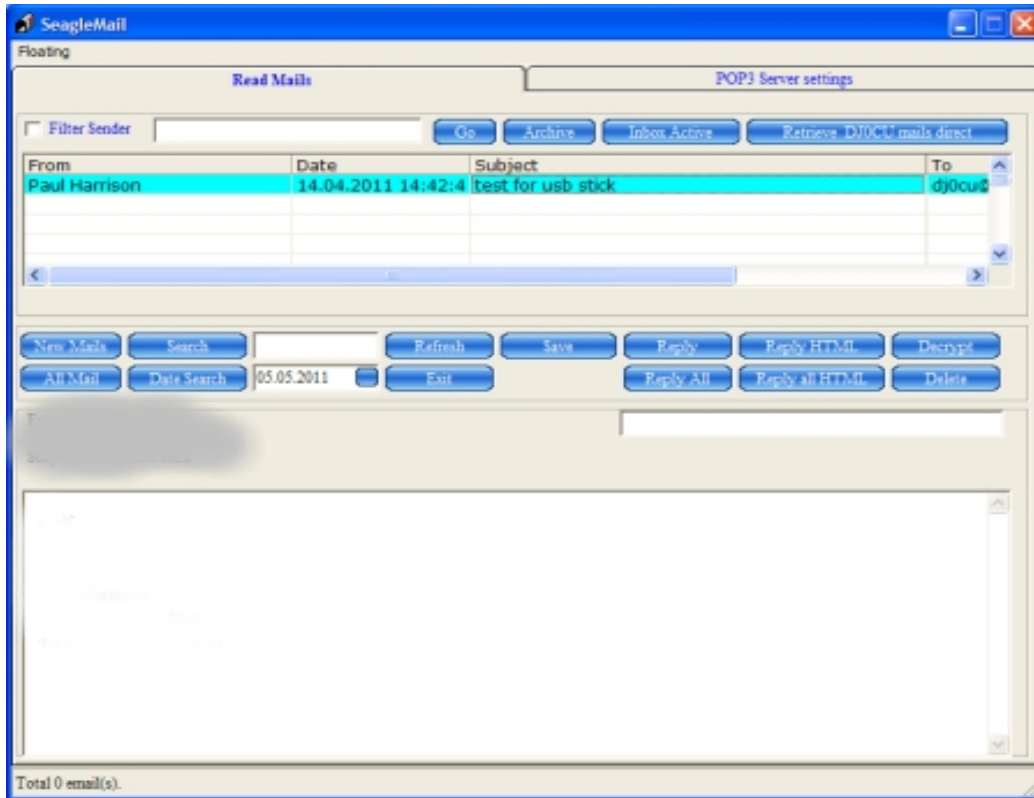


This takes the form of a standard email composer screen and if you are used to using outlook or similar email composers then it will present no difficulties. Included is a dictionary with over 100,000 English words. An easy one click method of encrypting mails if you are sending the mail to another Client, otherwise the mail can be encrypted using AES 256 bit. A separate Program is available for your recipients to use if they are not using the SeagleMail system to enable them to decrypt mails.

Of course CC, BCC and attachments etc are catered for.

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## The Reader



As can be seen about the Reader takes the form of a standard Email Reader

### Connect:

The Connect screen allows you to initiate a call to the Host. The callsigns are saved in a list together with their frequencies. If your radio is controlled by the PTC then you can set up the frequency automatically.

### Weather request

You can request a Grib weather report. To display the Grib chart a separate program is required which can be downloaded for free from the Internet. You can also request a Grib weather report with the direct feature (not going via HF radio, instead directly via your ISP).

### Mail POP3

SeagleMail of course has an Email reader, here mails can be read like any email reader and archived. Included is a powerful search feature allowing searching by text , date or sender. Encrypted emails from another Client can be decrypted automatically, or manually if they have been manually encrypted with very little effort.

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## Some additional features

In the Client there are a number of additional features, although they are also included in the Host software they really only can be used with the Client.

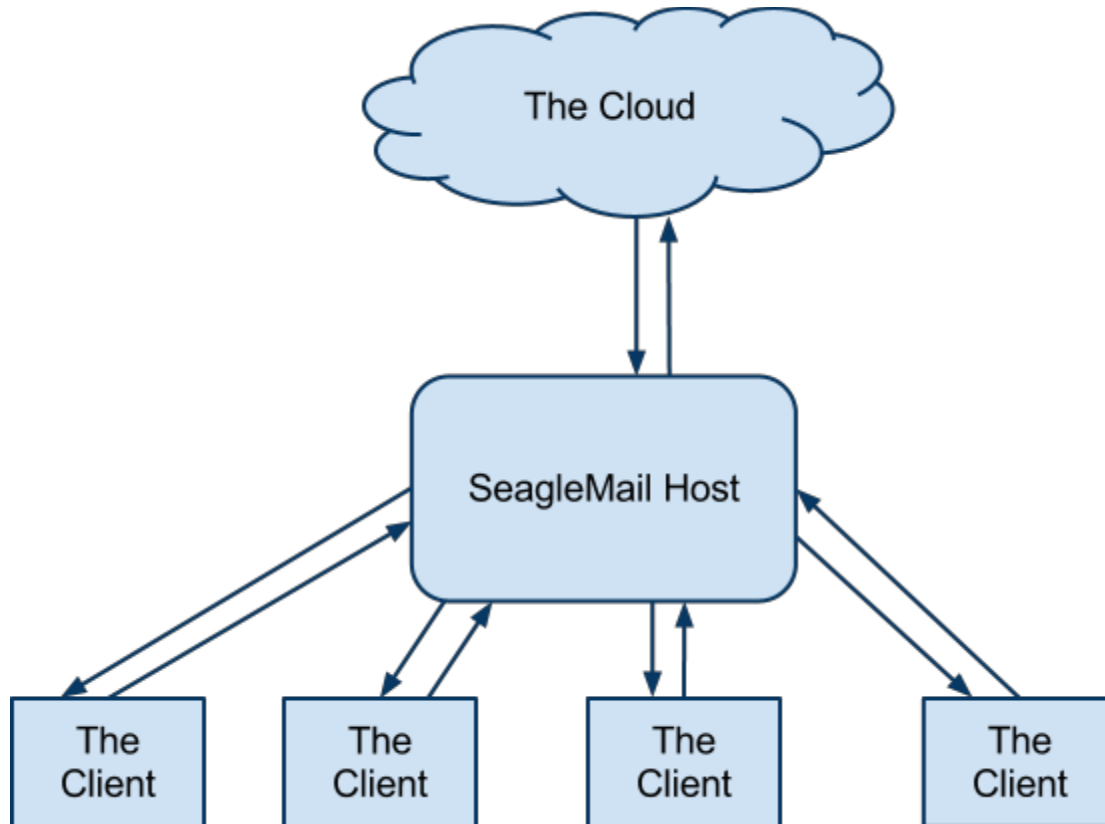
1. **Web cam.** It is possible with the Client to include a Web-cam picture within a HTML mail, this is a one click operation. Obviously this feature is dependant on your computer having a web-cam set up. During a Client <> Client connection you can also manually send Web-cam or request a Web-cam download.
2. **Scan manager.** Included is a comfortable scan manager, although it is probably not so important as for the Host.
3. **Chat mode.** In a Client <> Client connection it is possible to chat with one another.
4. **Terminal mode.** A terminal mode is available, this allows being able to reach various settings of the PTC. Entering and leaving Terminal mode is a one or two click operation.
5. **Voice.** If voice is selected then various operations are also spoken, this allows following what is happening without actually having sit in front of the computer.

As mentioned above these are some of the addition features and probably the most important ones, a detailed explanation will be available in the operation manual.



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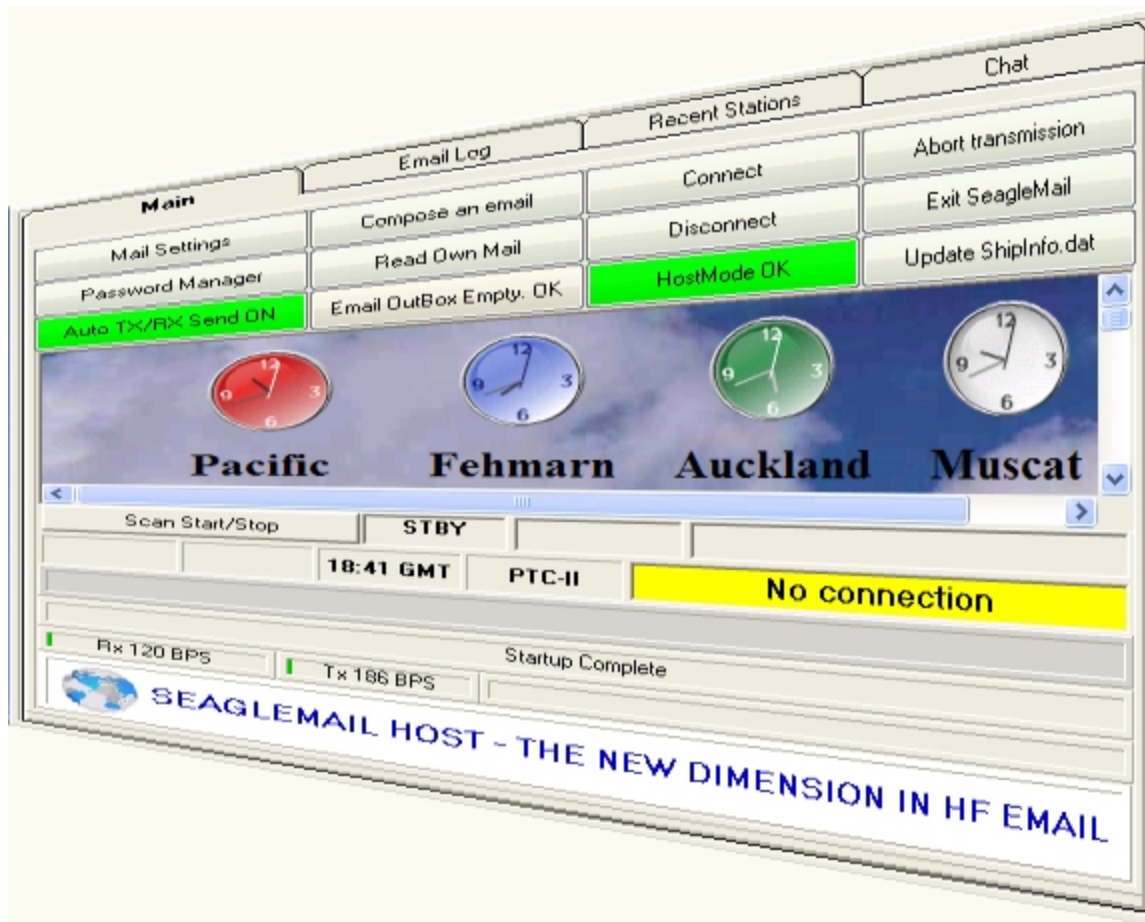
## Host description



The above shows the normal setup of the Host and Clients. All mail is sent or retrieved during a connection (JIT) therefore it is imperative that a fairly fast Internet connection is available to the Host. Around 2mb or more would however be sufficient. HF Email exchange is in any case low volume data exchange and together with compression the Host only takes a few moments to retrieve or send the mails. If there were a larger amount of Data to be retrieved then the connection to the Client would be open for a little while longer, but obviously a quick Internet connection, means lower Email retrieval time.

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## The main Host screen



Above is the Host screen, in addition to those functions discussed in the Client the Host also has a password management facility. Here log-in passwords, Email passwords and various other parameters are stored. The database which the screen controls can be updated within 20 mins world wide allowing new users to be added, or users removed or disabled. Password exchange between the Host and Client is encrypted.

All Hosts are Radio Mail Server (RMS) Gateways and synchronized automatically via the Cloud.

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## Conclusion

The above is a quick summary of the most important aspects of SeagleMail. To recap the main reasons for using SeagleMail.

- Ease of use.
- Transparent compression
- Built-in encryption/decryption
- Screens mimic popular email Clients so that you feel at home using it.
- Tested software
- Radio control
- Voice
- Webcam manager
- Chat screen
- Scan manager

No other HF Email software can offer all these advantages.