

RC50 RapidM Government Communications Suite

HF e-mail made easy



HF e-mail

- Compressed email client

Internet e-mail

- Microsoft Outlook™ Compatible
- SMTP, RFC 2821

ARQ Data Protocol

- Based upon STANAG 5066 V1.2
- Automatic Data Rate Change (DRC)
- Automatic Link Maintenance (ALM)

Platforms

- Windows™ 2000, and XP

HF e-mail Communications

The **RC50** RapidM Government Communications Suite provides the ability to send and receive e-mails efficiently and reliably over HF radio links and the Internet.

RC50 simplifies the task of setting up the HF Network by using pre-configured network configuration.

RC50 is compatible with standard e-mail applications like Microsoft Outlook™, which is used by the user to read and write e-mails.

RC50 contains a STANAG 5066 ARQ based protocol stack that provides networked, error-free and efficient communication over HF radio links.

Compressed e-mail client

RC50 increases throughput by means of RFC 1952 standardized compression.

The compressed e-mail client supports prioritization of e-mails, sending higher priority e-mail first.

Should the transmission of an e-mail be interrupted or preempted by a higher priority e-mail, the interrupted e-mail will be resumed at an appropriate time.

ALE, DRC and ALM

RC50 uses the optional ALE (Automatic Link Establishment) function of the **RM4** modem to enable multi-frequency operation.

RC50 continually maximizes throughput by monitoring the signal quality and adjusting the data rate through DRC in accordance with the link quality.

If the radio channel is no longer viable for communication the **ALE** is used to select a different channel for continued communication (ALM channel change).

RC50 GUI

- Pre-configured HF Network
- E-mail delete/re-prioritize
- E-mail throughput/utilization
- Channel status (SNR, BER)
- Radio status, S-meter, VSWR

The **RC50 GUI** uses a simple pre-configured HF Network configuration that allows for easy configuration.

The **RC50** structures status information to allow the user to pinpoint faults, failures and inefficiencies in the HF Network.

Operational Modes

- Data Mode: Robust and error-free e-mail transmission
- Voice Mode

RC50 gives the user complete control to use the radio for data or voice transmission as required by the user. The **RM4** has the ability to sense the PTT signal allowing the **RC50** to automatically stop data transmission when the user uses the radio for voice transmission.

RM4 ALE Function

The **RM4** ALE function provides MIL-STD-188-141B Automatic Link Establishment (ALE).

RM4 ALE is utilized by **RC50** to provide the user with Multiple Frequency HF Network capabilities.

The **RM4** ALE setup is automatically done by the **RC50** based upon a pre-configured HF network.

Sending email

Link Status

Tx/Rx	Remote Address	Type	State	Throughput	Rx SNR	BER	DS	SWR	Channel	Frequency	Efficiency	Info
	10.44.0.2	SOFTLINK	ESTABLISHED	1168 bps	26	7	0.7 Hz	0	0	Hz	<div style="width: 36%; background-color: orange;">36%</div>	

Message Queue

Active Messages Archived Messages

Stat	Prior	Atta	Tx/R	Progress	To / From	Message Subject	Start Date	Size	Elapsed Time	Remaining Time
				<div style="width: 2%; background-color: orange;">2%</div>	bob@vwater.example.com	Test 1	2008/02/08 03:1...	97 KB	00:01:29	~ 11 minutes

Receiving email

Link Status

Tx/Rx	Remote Address	Type	State	Throughput	Rx SNR	BER	DS	SWR	Channel	Frequency	Efficiency	Info
	10.44.0.1	SOFTLINK	ESTABLISHED	2619 bps	54	7	1.7 Hz	0	0	Hz	<div style="width: 81%; background-color: orange;">81%</div>	

Message Queue

Active Messages Archived Messages

Stat	Prior	Atta	Tx/R	Progress	To / From	Message Subject	Start Date	Size	Elapsed Time	Remaining Time
				<div style="width: 28%; background-color: orange;">28%</div>	tom@fire.example.com	Test 1	2008/02/08 03:1...	97 KB	00:01:35	~ 5 minutes

Fig 1: RC50 RapidM Government Communications Suite GUI

CATEGORY	CAPABILITY
DATA LINK PROTOCOLS	STANAG 5066 based data-link protocol
STANAG 5066 STACK	ALE (Automatic Link Establishment) ALM (Automatic Link Maintenance) DRC (Automatic Data Rate Change) ARQ Data (Automatic Repeat on Request) Collision Avoidance and Recovery
NETWORK PLANNING & CONFIGURATION	Network wide 5066/ALE Addressing HF frequency planning & selection Pre-configured HF Network
HF MESSAGING CLIENTS	Compressed Email Client (based upon CFTP)
LAN EMAIL CLIENTS	POP3 (RFC 1939, excluding APOP) SMTP (RFC 2821, excluding authentication)
HF MESSAGE MANAGEMENT	Message resumption Message grouping to destination Priority-based message queuing Message delivery failure notification Pull-messaging functionality
MODEM INTERFACES	Ethernet (Data + Modem Control)
HF MODEMS	RapidM RM4 HF Modem & ALE Controller <ul style="list-style-type: none"> o Supports MIL-STD-188-141A (ALE) & Occupancy Detection o Waveforms: <ul style="list-style-type: none"> o STANAG 4539
HF RADIOS	See RM4 User Manual

Apex Corporate Park
Quintin Brand Street
Persequor Park
Pretoria, South Africa
0020

Rapid Mobile Pty (Ltd)
Tel: +27 (0) 12 349 0000
Fax: +27 (0) 12 349 0010
e-mail: info@rapidm.com
web: www.rapidm.com