MICOM

Advanced HF Radio Solutions

2006

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Advanced HF radio solutions

MICOM

High Grade Solutions

☑ Used by governmental customers throughout the world.
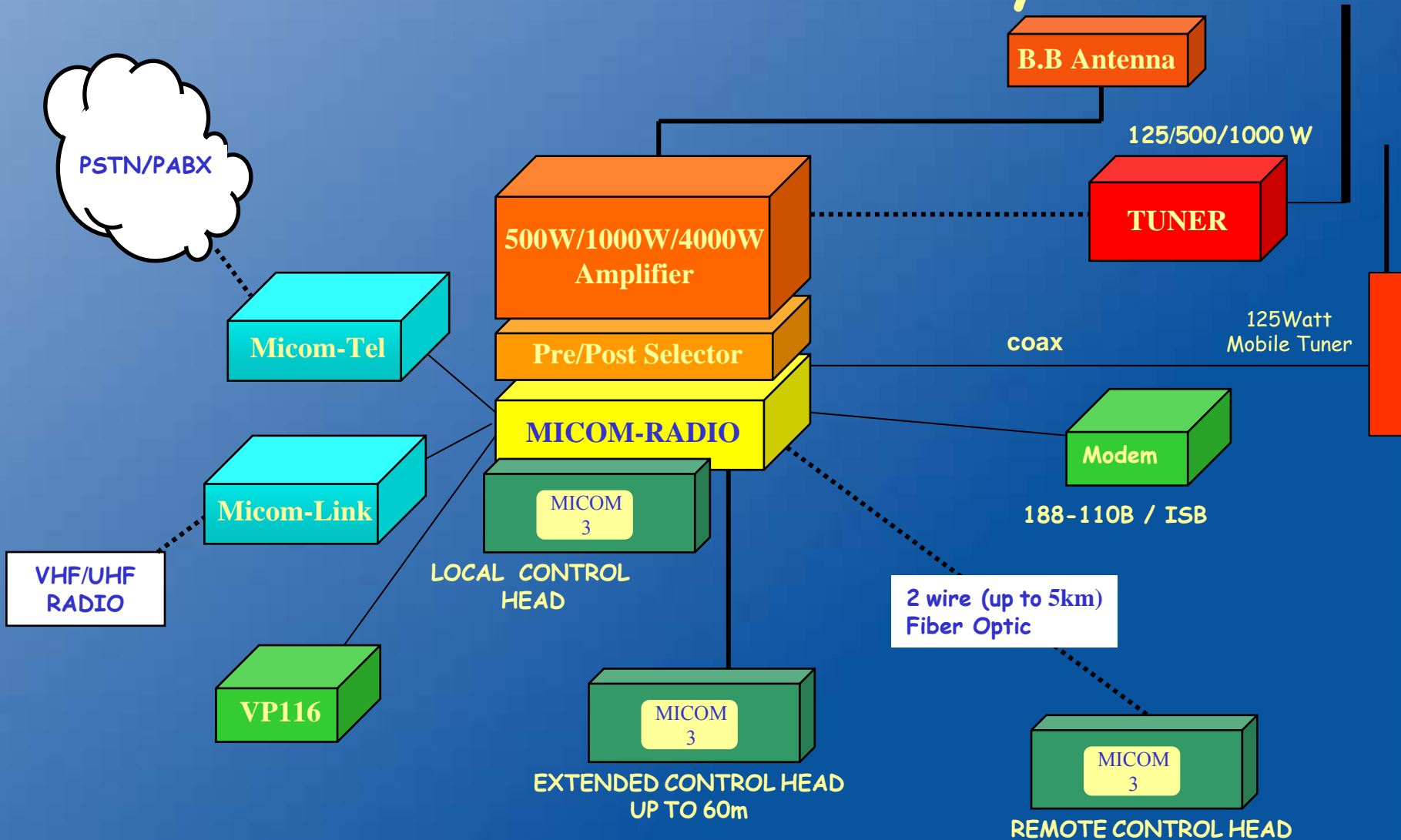
Professional
High grade
modular solutions!

MICOM -3

MICOM-2

JITC Certified

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MICOM-2 Family

JITC Certified

Micom-2TS

Micom-2ES

Micom CarryOn2

Micom-2RS

Micom Trooper2

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MICOM-3 Family

JITC Certified

Micom3 Carry On

Micom 3 Ranger

Micom3 Trooper

Micom 3Front Mount

Micom 3Trunk Mount

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MICOM-3 Enhanced Capabilities

- Enhanced capabilities through optional features.

- System flexibility based on DSP Ready for future growth.

- ISB- For High speed modem interface 19.2Bps, Link-11/22

- USB connector for key board & DBM messages

- AVL / GPS application

- GPS Internal or External

- Full function remote control head operation over 2 Wire or Fiber Optic.

- 4800bps modem Internal or External

- Encryption based on AES Internal or External

- Vocoder –Digital Voice Enhancement Internal or External

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MRC (*MICOM* Radio Control)

PC Control Applications for control and program

- One Software package that includes full radio control, RSS ALE and RSS RADIO
- Log file to record the ALE activity
- Support USB communication port
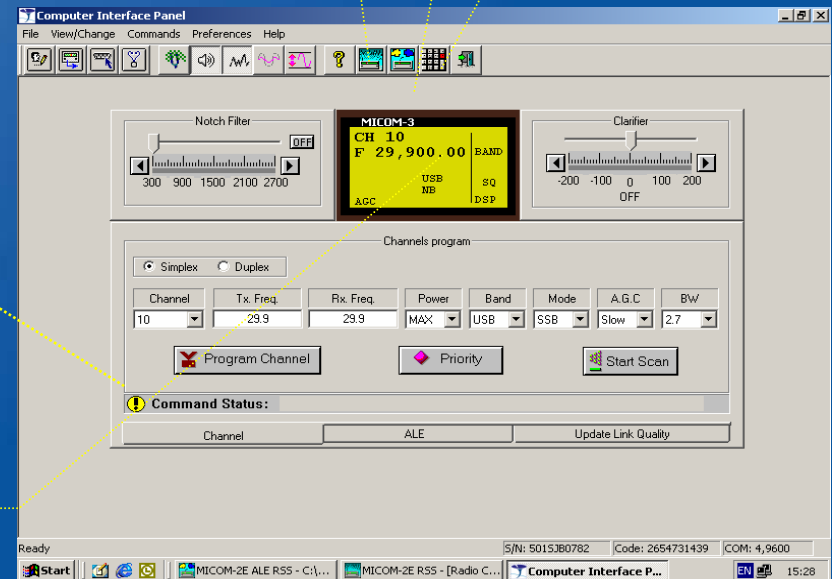- On line channel programming
- Panel Control menu

ALE

RSS

RADIO

RSS

Radio Panel

Channel Programming

RADIO

DISPLAY

Computer Interface Panel

File   View/Change   Commands   Preferences   Help

MICOM-3
CH 10
F 29,900.00   BAND
            USB   SQ
AGC   NB   DSP

Notch Filter
OFF
300 900 1500 2100 2700

Clarifier
-200 -100   0   100 200
OFF

Channels program

⦿ Simplex   ○ Duplex

Channel	Tx. Freq.	Rx. Freq.	Power	Band	Mode	A.G.C	BW
10	29.9	29.9	MAX	USB	SSB	Slow	2.7

Program Channel   ◆ Priority   Start Scan

⚠ Command Status:

Channel	ALE	Update Link Quality

Ready   S/N: 501SJB0782   Code: 2654731439   COM: 4,9600

Start | MICOM-2E ALE RSS - C:\... | MICOM-2E RSS - [Radio C... | Computer Interface P... | EN | 15:28

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MICOM - High Power Solutions

Growing in Power
& Performance

Micom RM125

Micom RM500

Micom 1KW System

Micom 4KW system

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MICOM RM500R High-Power RM-HF Transceivers

- 500Watt, 1000Watt and 4000Watt
- Complete base station Transceiver
- Based on Micom-3 radio
- PPS – Integrating site with PPS for co-site configuration
- Power amplifier and power supply Redundancy
- Excellent Spectral Purity
- 19" Rack Mount Radio
- Solid-State
- Auto Tuning
- 110/220VAC
- VSWR up to 4:1
- BIT

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Remote control head over Fiber Optic Link

Control head

Desktop configuration

Fiber cable

up to 2.5 miles

FIBER UNIT

RM-125

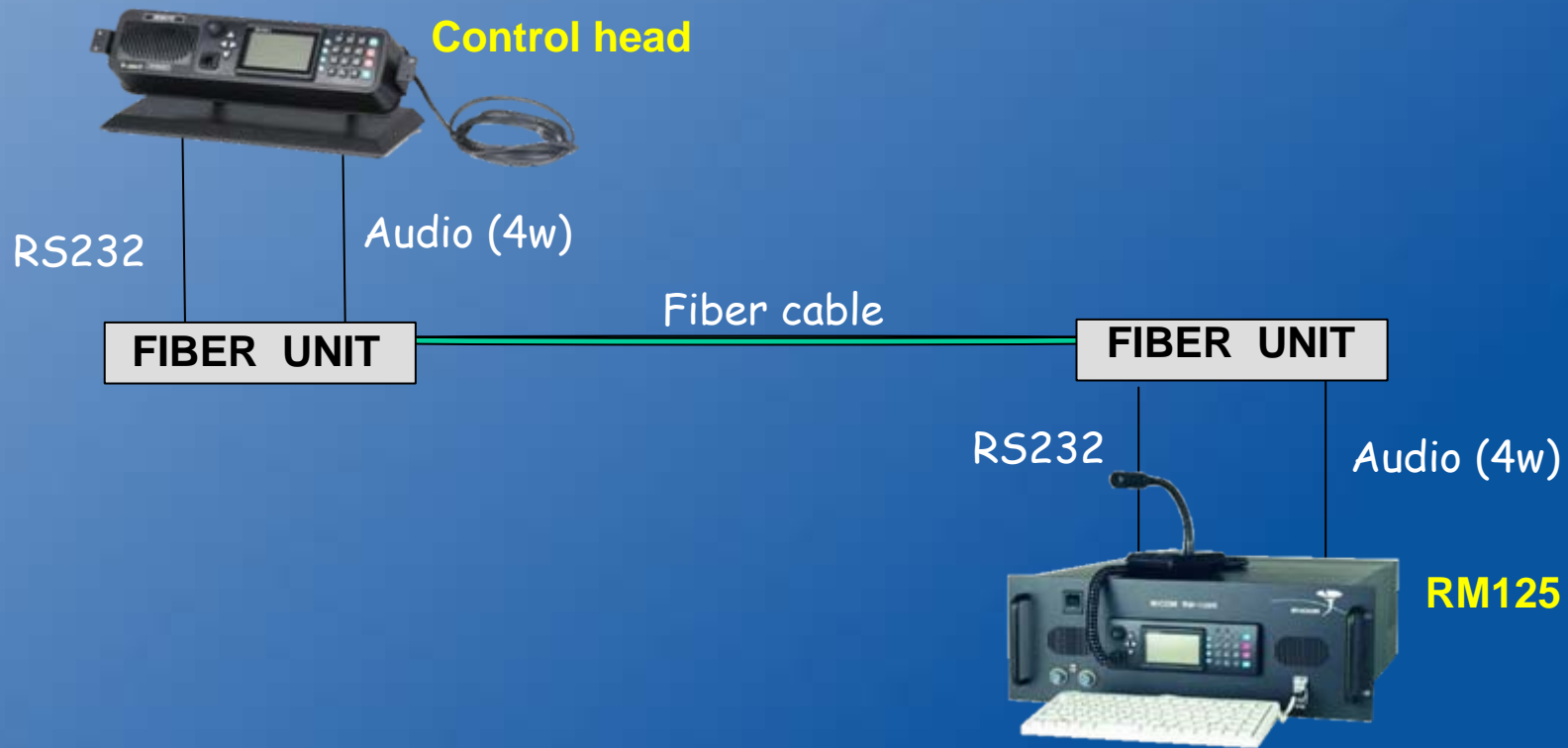**19" rack configuration**

Fiber cable

up to 2.5 miles

Control Unit

FIBER UNIT

RM-125

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Remote control head over Fiber Optic Link

Control head

RS232

Audio (4w)

Fiber cable

FIBER UNIT

FIBER UNIT

RS232

Audio (4w)

RM125

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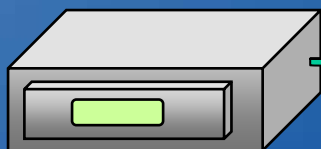
Remote control head over 2 wire

Control head

2 wire line – up to 3km

RM125

Power Amplifiers
500/1000/4000 Watt PEP & AVG

General Spec
3rd Order IMD.................. >36 dB below pep
RF Noise.............................. >75 dBc/Hz below full rated power
Spurious Emissions .... –60 dBc or better at up to ±5
percent from Fc, –80 dBc or better at greater than ±5
percent from Fc
Harmonic Levels................... –63 dBc
Temperature .... Operating,-10 to +60 °C

4000watt

500watt

1000watt

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MICOM Accessories

Micom-Link

External Modem/Vocoder

Voice/Data
AES encryption

Micom-Tel

2 Wire/Fiber Optic
Remote -Control

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Embedded Modem/Vocoder

Embedded Modem/VOCODER inside the Micom
without form-factor modifications:
- Full control by the radio panel
- AES Secure

Modes of operation:
- Clear voice mode
- Clear Digital voice and data
- Secure Digital voice and data

LORD
BOARD

Deep interleaver setting parameter supporting
penetration of long fades and large noise bursts

MODEM/VOCODER
BOARD

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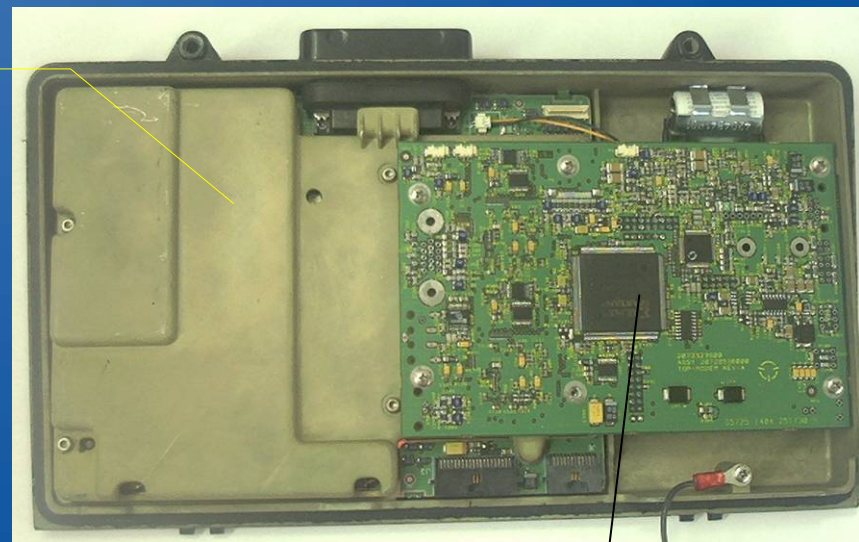
Modem/Vocoder Secure AES

- Stand Alone with selectable keys and Vocoder mode (Clear / Secure)

- Deep interleaver setting parameter supporting penetration of long fades and large noise bursts

- Commercial Audio accessories

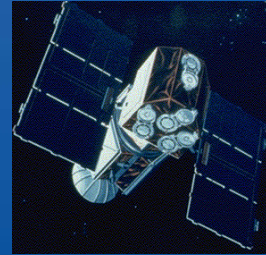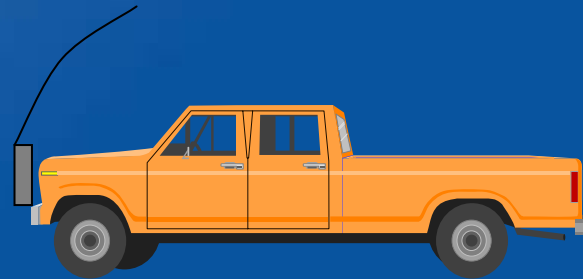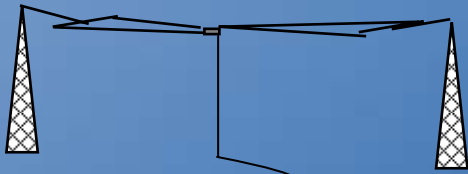- Data transceiver per MIL-STD 188-110B 4800

MICOM Applications

Micom Track
GPS based Automatic Vehicle Location (AVL) over HF

HF long range communication

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- **Long range GPS based, vehicle & vessel tracking/monitoring.**

- **Cellular Coverage/ Radio Relay independent operation.**

- **No Cellular provider fees or air time charges.**

- **Fixed cost tracking solution.**

- **High system accuracy.**

- **Graphical display over vectored maps.**

- **Easy Route Planning & Tracking.**
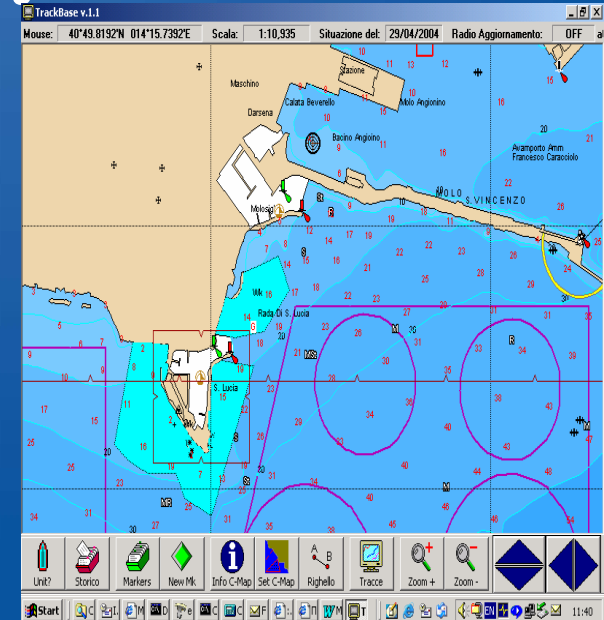
Mobile Antenna Tuner for Voice

Frequency Band	1600 -to 30000 kHz.
Input Power	-Nominal 125 W
Tuned Antenna Input Impedance	50Ohm with VSWR $\leq$ 1.4.
Tuning time from memory	300 mSec
RF power used for tuning	3to 6 W
DC supply voltage	12+VDC with less than 1A
Dimensions Tuning unit - Whip	530x 128 x 114 мм 6ft.
Operation Temperature Range	30 - to 60° C / -22° to 140° F
Storage Temperature Range	40 -to 85° C / -40° to 185° F
Humidity	20- %95to 85 ° C / -4° to 185° F

FM to HF-SSB Link
For Search & Rescue Operations

FM
Network

HF
Network

Head Quarters

FM Radio

MICOM-Link

MICOM HF Radio

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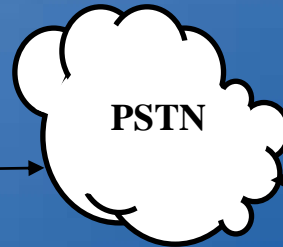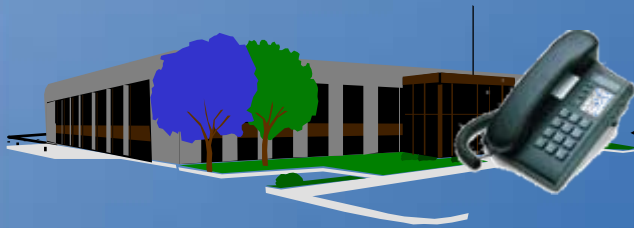# **Micom-Tel**

Micom-
Base Station

Control Center

PSTN

Fully automatic interconnect,
with no operator assistance!

Mobiles with Micom-2E ALE radios
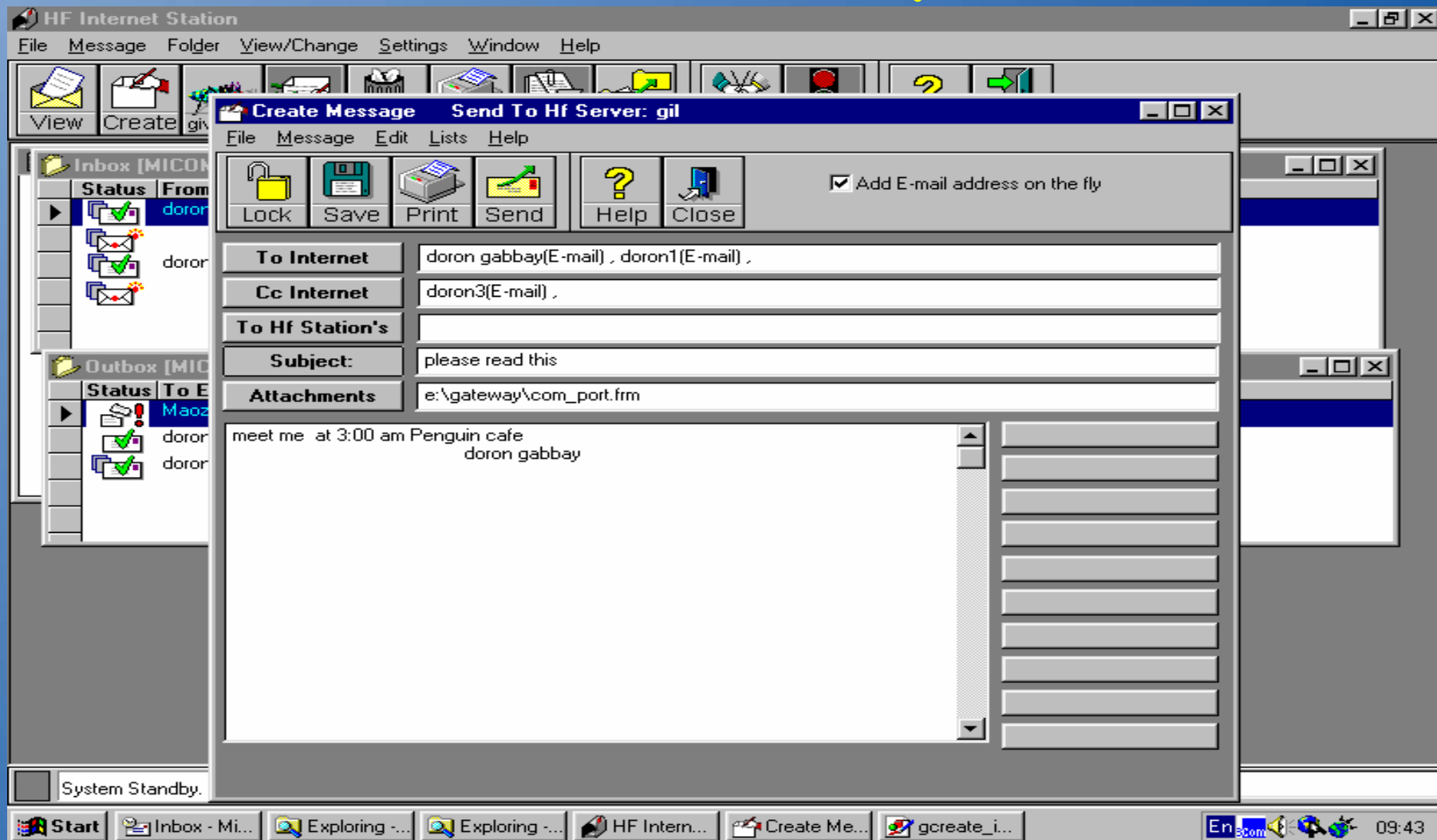
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CARABINIERI

STATE TROOPER

Mobile Antenna Tuner for Data

Frequency Band	1.6-30Mhz
Input Power	125Watt
Tuned Antenna Input Impedance	1.5
Tuning time from memory	300mSec
RF power used for tuning	5-7Watt
DC supply voltage	12+VDC with less than 1A (by the coax cable)
Dimensions - Tuning unit - Whip	
Operation Temperature Range	30 - to 60° C / -22° to 140° F
Storage Temperature Range	40 -to 85° C / -40° to 185° F
Humidity	20- %95to 85 ° C / -4° to 185° F

Micom Mail /Gateway

Micom Multi-Net Capability

- Micom Multi-Net operation
  - Scanning multiple NETs (up to 20) simultaneously   (MIL-STD188-141B enhancement)
  - Enhanced System configuration
  - Keeping interoperability with certified ALE radios

- ACS-Adaptive Customize Signalization

- Directory FIFO management to 20 over the air saved addresses
 (temporary directory to enable the users to select the addresses to save)

- Bi-directional LQA exchange with link on the best channel in real time

NET1

NET3

NET2

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Multi-net Radios Scanning NET1,NET2,,,