Hermes
A Delay Tolerant HF Radio Device for Long Distance Autonomous Digital Communications
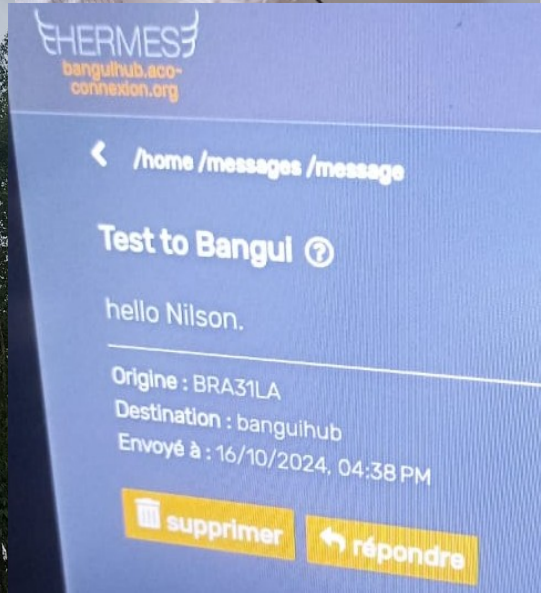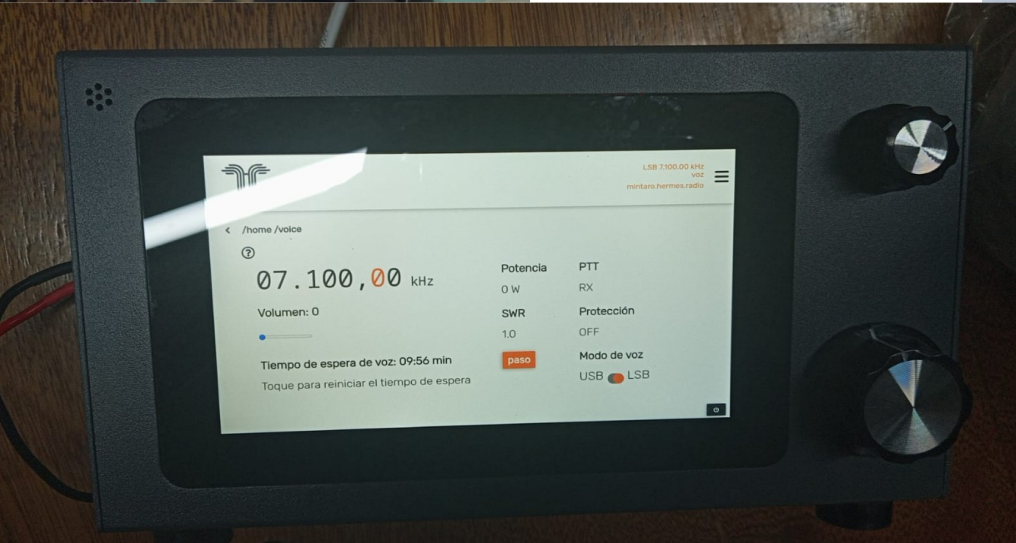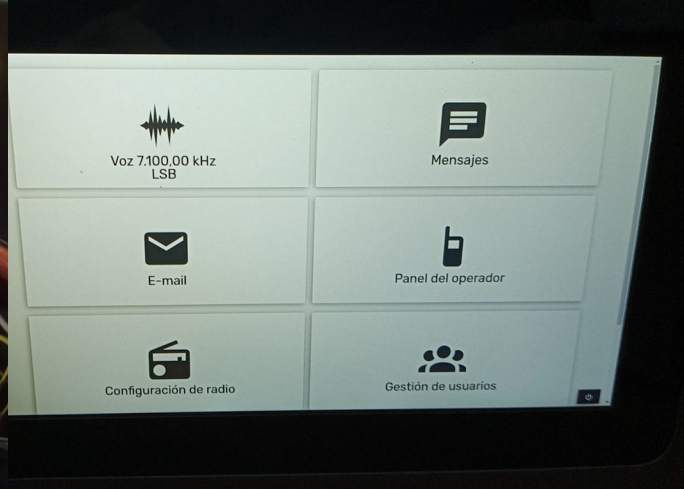

RHIZOMATICA

HERMES

Why Develop HERMES ?

- With social organizations and remote communities, first in the Amazon rainforest, and then around the world, Rhizomatica has been designing, building and testing HERMES since 2017 to create reliable, secure, long-range, autonomous voice and digital communications

- Powered by HF radio, HERMES enables voice and data communication over long distances (1000s of kilometers) with very low power consumption and without the need for Internet or satellites. It can be installed practically anywhere

- Due to its low power usage and small size, HERMES can be installed in both mobile and fixed remote monitoring settings, such as boats or weather stations, to send real-time GPS coordinates, photos and sensor data

- As an option, HERMES uses state of the art encryption and password protection to keep communications safe. HERMES is compatible with HAM radio regulations as all security features are optional and software-configurable

RF SIGNALS

sBitx

Voz 7.100,00 kHz LSB

Mensajes

E-mail

Panel del operador

Configuración de radio

Gestión de usuarios

LSB 7.100,00 kHz
voz
mintaro.hermes.radio

/home /voice

07.100,00 kHz

Volumen: 0

Potencia	PTT
0 W	RX
SWR	Protección
1.0	OFF

Tiempo de espera de voz: 09:56 min
Toque para reiniciar el tiempo de espera

paso

Modo de voz
USB ⚪ LSB

HERMES
banguihub.aco-connexion.org

‹ /home /messages /message

Test to Bangui ⓘ

hello Nilson.

Origine : BRA31LA
Destination : banguihub
Envoyé à : 16/10/2024, 04:38 PM

🗑 supprimer   ↩ répondre

WHAT IS UNDER THE HOOD?

- Both software and the radio hardware platform are completely open source, all docs are online at the Hermes Wiki.
- Hardware: sBitx v3+ from HF Signals Software Defined Radio (SDR) with 25/40 Watts output power on 80 M to 10 M bands.
- SSB digital voice radio, PTT microphone, dual mode - simultaneous voice and data
- Compute and interface via Raspberry Pi 4/5 with a 7-inch touch screen
- Powered with 12VDC. Power consumption in receive: 600 mA, transmit: 9A
- Dimensions: 25cm x 15cm x 5cm and weighs about 2Kgs
- Data link: Mercury - Rhizomatica's FOSS software digital modem for HF. Uses VARA (ARQ protocol) for the data link layer. New protocol being developed by Rhizomatica
- Data transmission - UUCP (pre-Internet store and forward protocol)
- Functionality: Full email system and app-based chat that route globally
- Public messages and secure, password-protected image, voice, text and file exchange between stations – Interface in English, Spanish, French and Portuguese
- Intuitive touch screen web interface for operation and administration

Links

- The Radio: http://hermes.radio / https://www.rhizomatica.org/hermes

- Mailing list: https://lists.riseup.net/www/info/hermes-general

- Interested in developing a project or contributing to the coding: projects@hermes.radio

- To purchase: eqpt@hermes.radio

- Developed by Rhizomatica - APC LocNet Partner: https://www.rhizomatica.org

Mike Jensen – mike@apc.org http://www.apc.org/locnet