



# SafecomLink

(Also known as VarAC)

WHEN EVERYTHING FAILS,  
SAFECOMLINK DELIVERS

V 1.2





# About SafecomLink



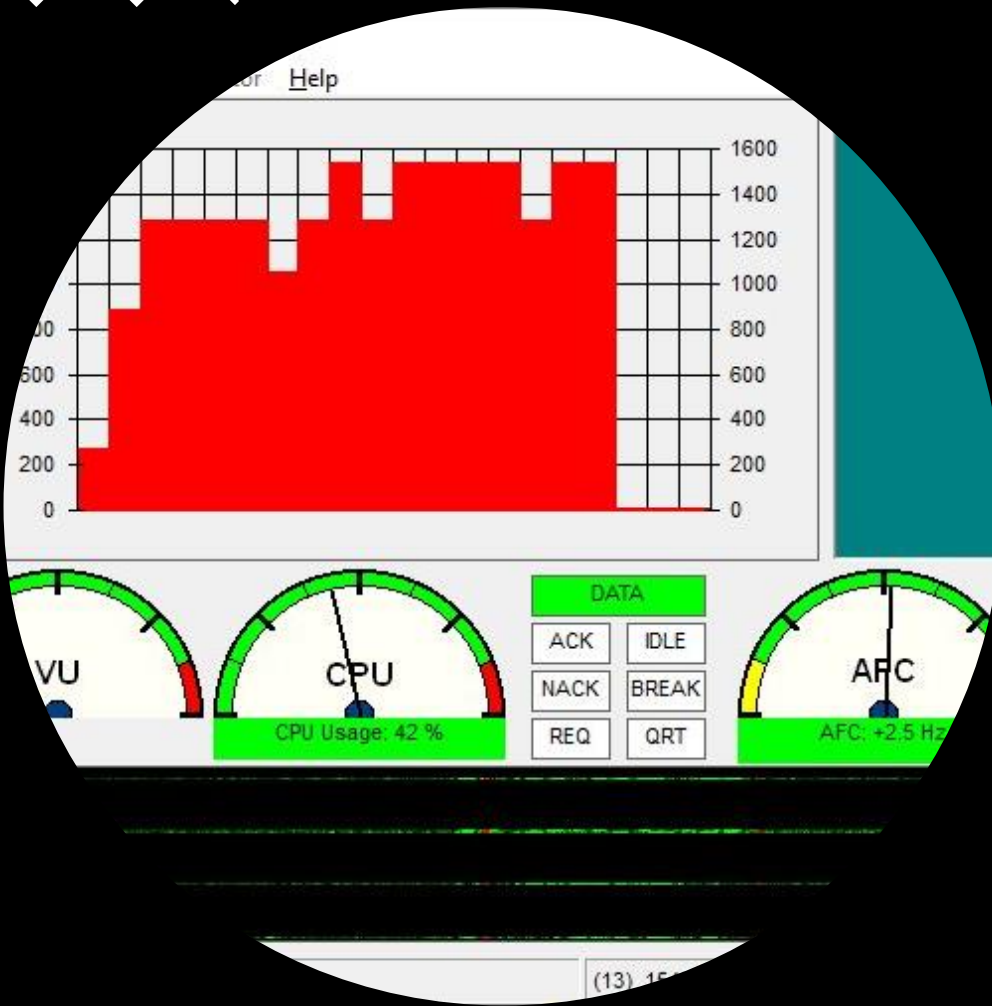
SafecomLink offers robust radio communication software, equipped with a diverse range of features tailored to support both routine daily operations and emergency communication requirements.



# The VARA protocol

SafecomLink utilizes the advanced VARA protocol, renowned for its exceptional capabilities in delivering high-speed, error-free data transfer across HF/VHF/UHF frequencies.

The protocol exhibits resilience against challenging signal-to-noise ratios and ensures optimal performance even at low transmission power levels.



# ● SafecomLink performance

Unmatched performance within the industry

**-22dB**  
SNR

Well-received even  
in harsh conditions  
and low power

**7,050**  
Bps

HF / Satellite  
Top speed

**25,210**  
Bps

VHF/UHF  
Top speed



# ● SafecomLink user base

SafecomLink stands as the premier emergency communication platform worldwide.

**50,000**

Users

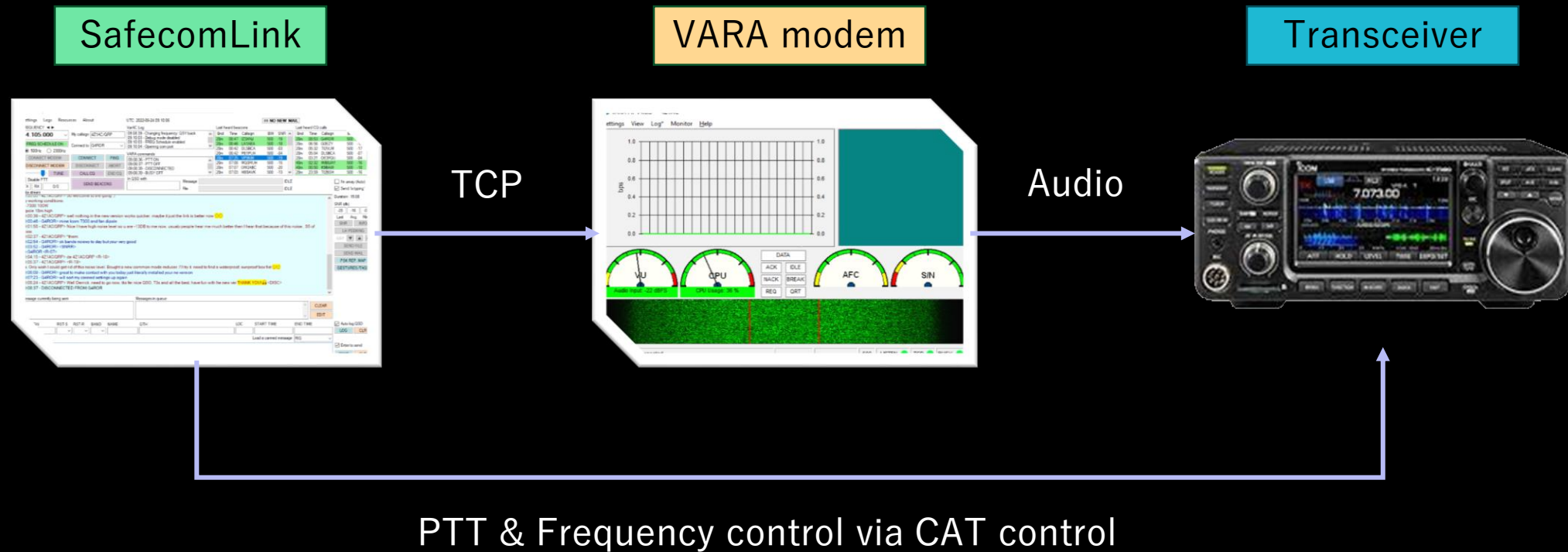
Widely used In over 100 countries by:

- Emergency communication agencies
- Crisis management agencies
- Amateur radio operators



# ● SafecomLink Architecture

Simple and easily maintainable architectural design



# ● SafecomLink Transceiver Control

SafecomLink performs all necessary tasks to activate your transceiver. It supports multiple transceiver models and popular "bridge" software.

## Supported Direct CAT control manufacturers:

- Kenwood
- Icom
- Yaesu
- Elecraft
- Flexradio
- Apache labs
- Anytone
- Alinco
- Elad
- Tentec
- Xiegu
- SmartSDR
- QRP Labs
- Expert electronics
- And more...

## Supported "Bridge" Software

OmniRig

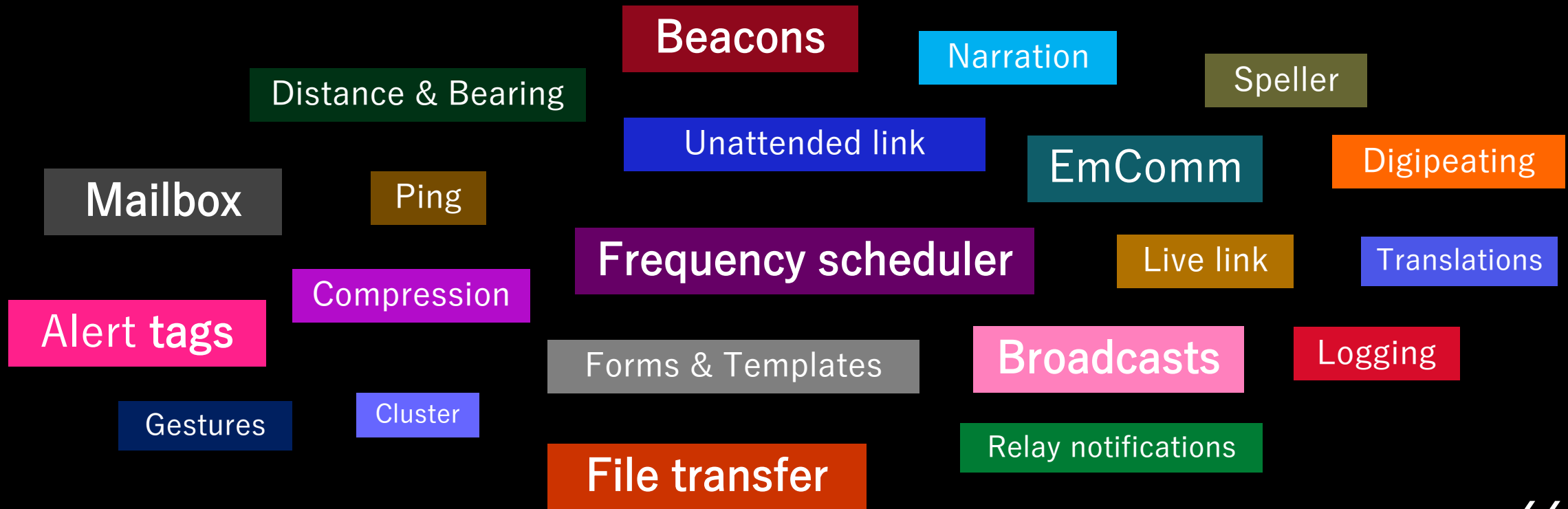
Hamlib

FLRig



# ● All-in-one solution

Everything you need, all in one place.







# SafecomLink

## Operational Mode





## Daily Operations with SafecomLink

SafecomLink equips you with all the essentials to ensure prompt, reliable delivery of your messages, whether you're navigating the sea, traversing land, reaching remote regions, or soaring through the skies.





# Daily operations features

Live Link – Connect and chat

Hand raise – Request a Live Link

Contact history – keeping track of every bit

SafeMail Box- Send & Receive mails

Synchronous frequency hop – for optimal link

File transfer – Including images

Profiles – Easy switch between different setups

Safelink Cluster – For cross-band operations

GPS integration - Reflect current location



# ● Live Link

- IS TYPING indicator
- Multilingual
- Message queue
- Periodic Caller ID (to comply with local regulations)
- Emojis, tags, gestures & sounds
- Logging communication history
- Bidirectional SNR exchange
- Automatic logging
- Tracking SNR levels on a live graph

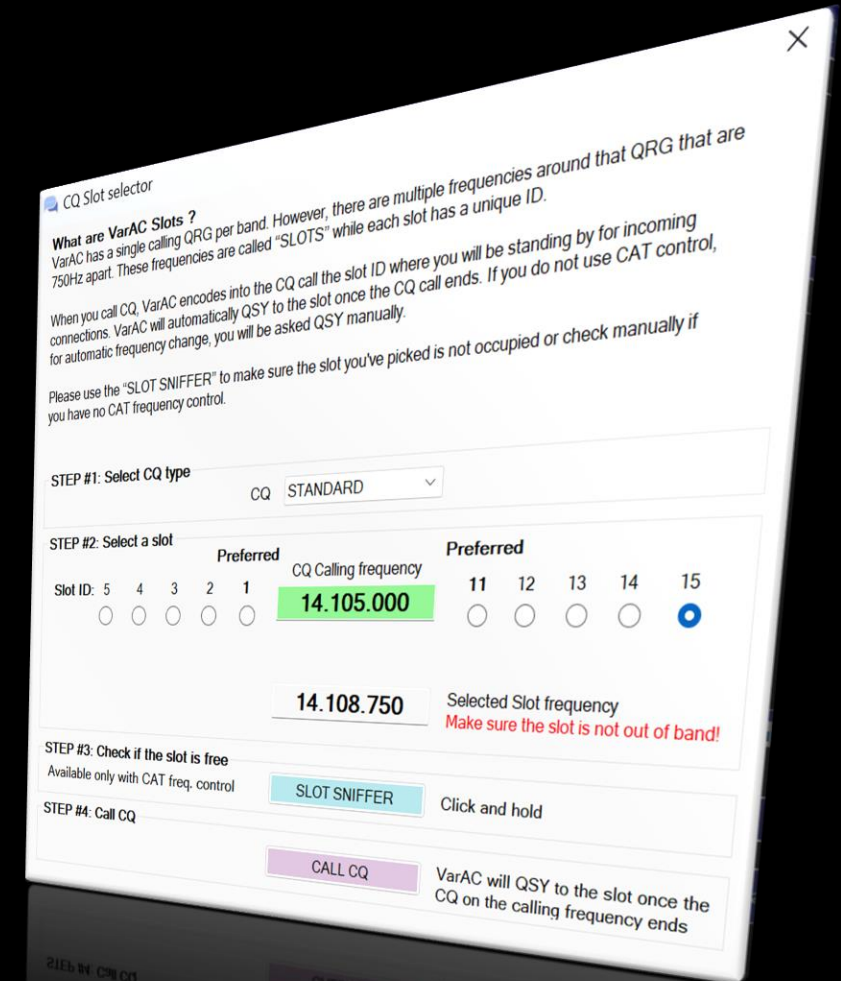
The image displays the VarAC software interface, which is used for digital voice communication. The main window shows a chat log with various messages and status indicators. A 'RECEIVING (40/91)' status is visible. The interface includes a frequency display set to 14.105.000, a call sign of 4Z1ABC, and a 'BUSY' indicator. A 'SEND BEACONS' button is highlighted. The chat log shows messages such as '19:22:41 - INCOMING CONNECTION REQUEST.. Hold tight!', '19:22:48 - CONNECTED TO 4Z1ABC', and '19:23:01 - 4Z1ABC<ORP> <AWAY> I'm away. Please leave a message. de <FC4Z0ACQ<ORP>'. A 'SEND BEACONS' button is highlighted. Below the main window, a 'SNR history chart' is shown, titled 'VarAC QSO on 28.106.500 at 2023-08-31 23:13:06'. The chart plots SNR (dB) on the y-axis (ranging from -25 to 10) against time on the x-axis (ranging from 23:15:00 to 23:45:00). Two data series are shown: 'Miro (NC32)' in blue and 'VK3FEB' in orange. The orange line shows a positive SNR trend, while the blue line shows a negative SNR trend. The interface also features a 'SEND VMAIL' button and a 'SEND FILE' button.



# ● Hand Raise

The hand raise feature is utilized to alert all receiving stations of your interest in initiating a Live Link.

- Customize the reason for your hand raise to be included.
- Choose a destination frequency to accept the Live Link.
- Utilize the frequency sniffer to validate that the destination frequency is available.



# Contact history

Manage all contact data, which includes:

- Metadata from previous links
- Live link chat history
- Broadcasts
- Beacons and hand-raises

The screenshot displays the 'Callsign history' application interface. It features several sections:

- Recent information:** Fields for Name (Paul), QTH (Meilen nr Zurich), and Locator (JN47HG).
- Buttons:** History lookup, QRZ Lookup, and PSK Reporter Lookup.
- Beacons history table:**

Bnd	Time	BW	SNR
20m	2022-09-21 12:00	500	-14
20m	2022-09-21 11:24	500	-20
20m	2022-09-21 10:54	500	-19
20m	2022-09-21 10:23	500	-19
20m	2022-09-21 08:20	500	-16
20m	2022-09-21 08:05	500	-16
20m	2022-09-21 07:34	500	-14
20m	2022-09-21 06:47	500	-13
- CQ calls history table:**

Bnd	Time	BW	SNR
20m	2022-09-21 15:37	500	+00
20m	2022-09-21 15:37	500	-06
20m	2022-09-21 15:35	500	-02
20m	2022-09-21 15:35	500	-01
40m	2022-09-20 02:46	500	-01
40m	2022-09-20 02:46	500	-02
40m	2022-09-20 02:43	500	-03
40m	2022-09-20 02:41	500	+00
- Previous QSOs (stored ADIF records) table:**

QSO Time	Band	Frequency	RST-S	RST-R	Locator	QSO duration (min)
2022/09/16 17:50:46	20m	14.105000	-17	-06		7
2022/09/05 15:13:13	20m	14.105000	-14	+06		3
2022/09/05 11:41:10	20m	14.105000	-18	-04		11
2022/09/03 00:12:30	40m	7.105000	-10	+01		2
2022/09/02 08:38:41	20m	14.104250	-21	-12		5
2022/09/02 08:18:45	20m	14.104250	-13	+02		14
2022/08/30 20:58:14	20m	14.105000	-13	-15		2
- Chat history:** A scrollable text area containing a conversation log with timestamps and call signs (e.g., 10/07/2022 10:23:28 - 4Z1AC> H Paul. Nice to see you on the slot :)).





# SafeMailBox

- SafeMails left for unattended stations
- Relaying SafeMails to a third party through a mediator
- Relay notifications - receive alerts about pending SafeMail
- Queueing SafeMails for delayed delivery

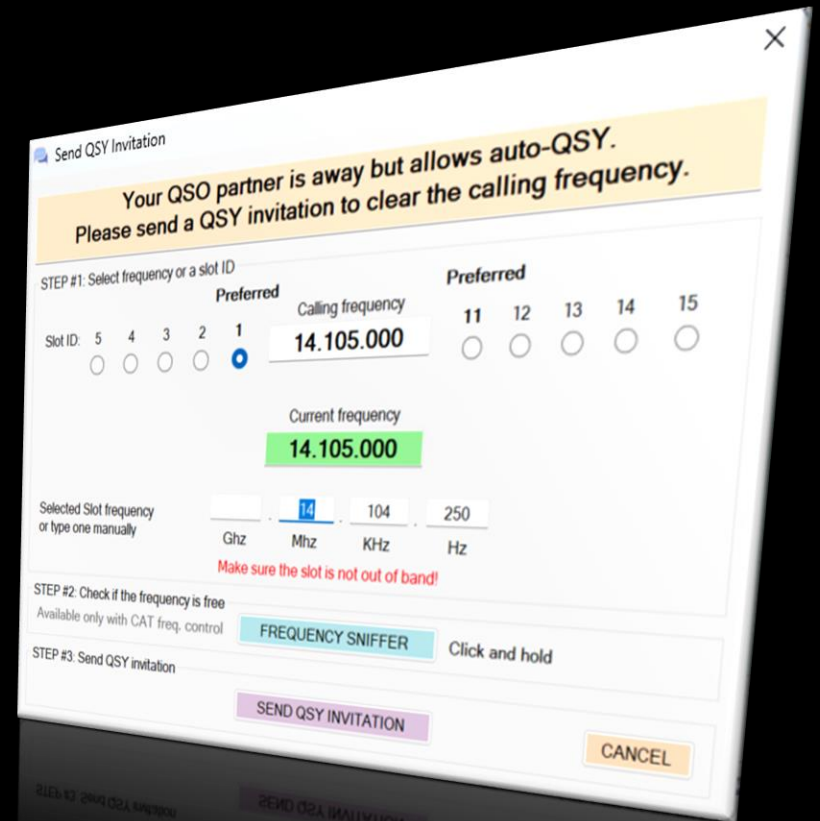


# ● Synchronous frequency hop

- Smooth transition to another frequency during an ongoing link
- Clearing a shared calling frequency once a link is established
- Hop sniffer: ensuring the target frequency is available

Two types of hops:

- Quick hop - shifts up or down a slot (default is 750Hz)
- Freeform hop - allows selection of a frequency





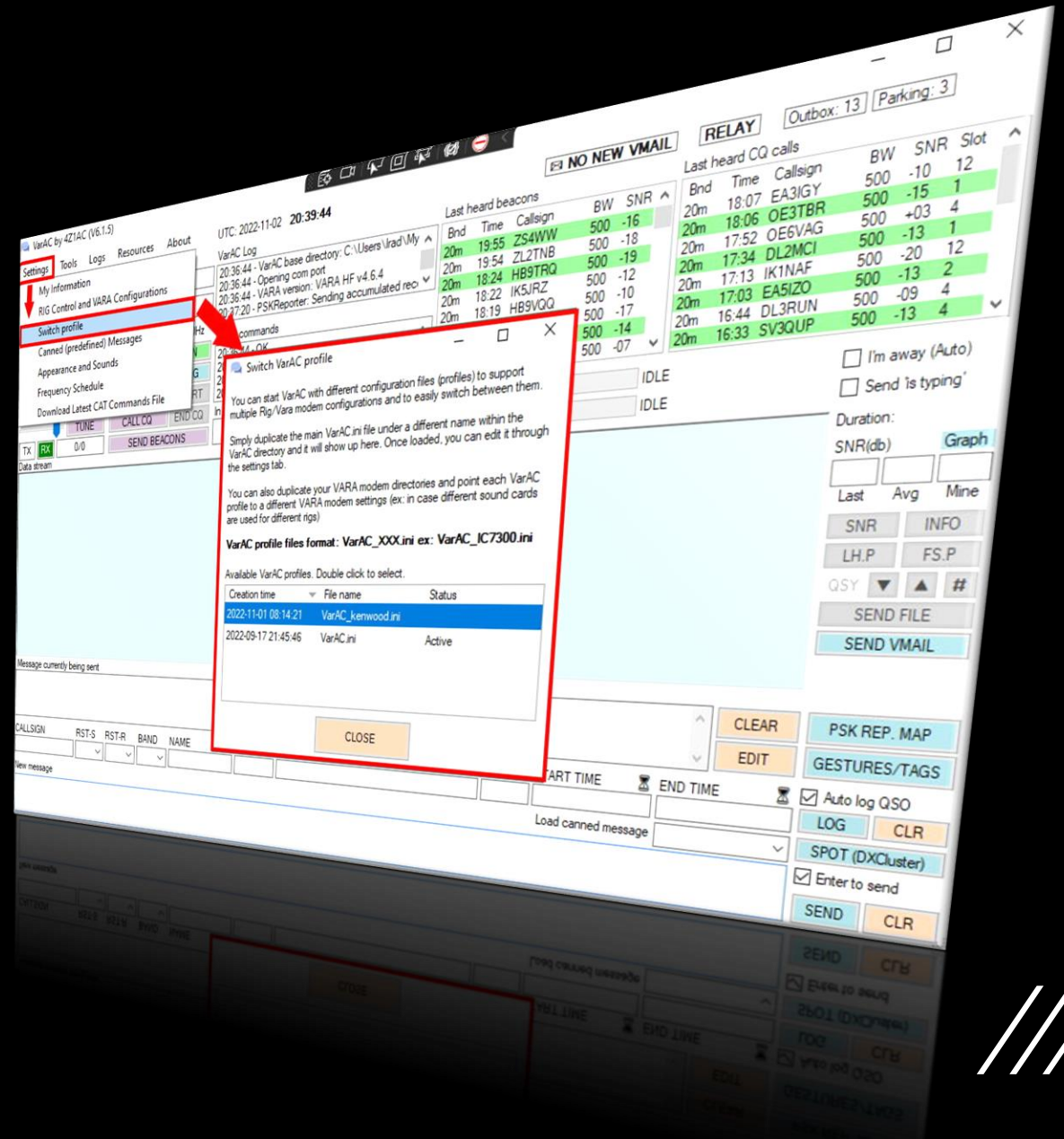
# ● File / Image transfer

- Sending/receiving binary files of any type
- Displaying images (PNG/JPG/GIF) in the live-link stream
- Performing file compression
- Enforcing incoming file size limits



# Profiles

- Supporting multiple transceivers/setups
- Quickly switching between profiles



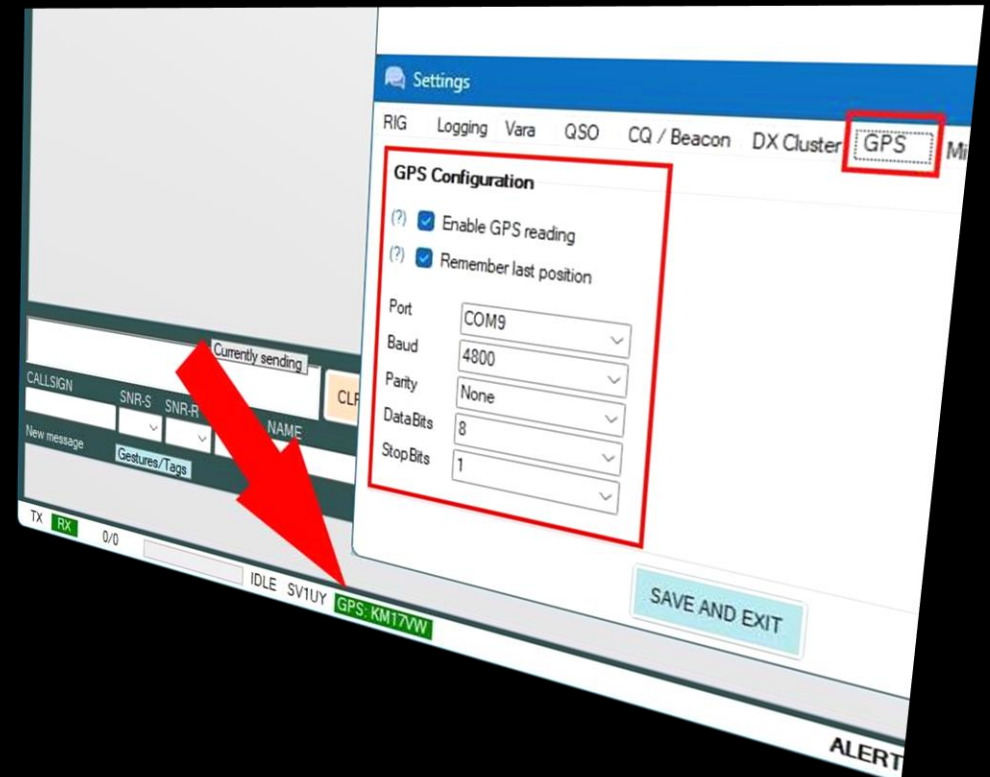
# ● SafecomLink Cluster

- Operate multiple profiles from a single installation.
- Manage multiple transceivers simultaneously.
- SafecomLink resources will be shared among all instances, including mailbox and alerts.
- Ideal for cross-band SafeMail relays.



# ● SafecomLink GPS integration

- Works with typical NMEA GPS devices
- Instantly fills in your Grid location
- Remembers your last position when starting up
- Shares location effortlessly with preset message tags





# ● Additional features

- Listening mode (PTT disabled)
- Customization of appearance (font size and colors), including dark mode
- Blocking list
- Pings for link validation testing
- Away status (automatically toggled when unattended)
- Displaying link distance and bearing
- Translation (using Google Translate)
- Speller (English only)
- Real-time narrations (messages, alerts, beacons, hand-raises, broadcasts...)





# SafecomLink

Emergency Communication Mode





# Emergency communications with SafecomLink

When confronted with a crisis, SafecomLink stands as the sole platform offering a complete and all-encompassing emergency communications solution.





# EmComm Key features

Broadcast: a one-to-many messaging system

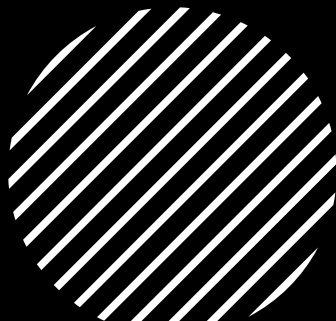
Beacons: keeping track of EmComm stations

Alert tags: real-time alerts (with visual and sound)

Digipeating: for extended reach

Forms: standardized emergency messages

Frequency scheduler: optimal message delivery 24/7

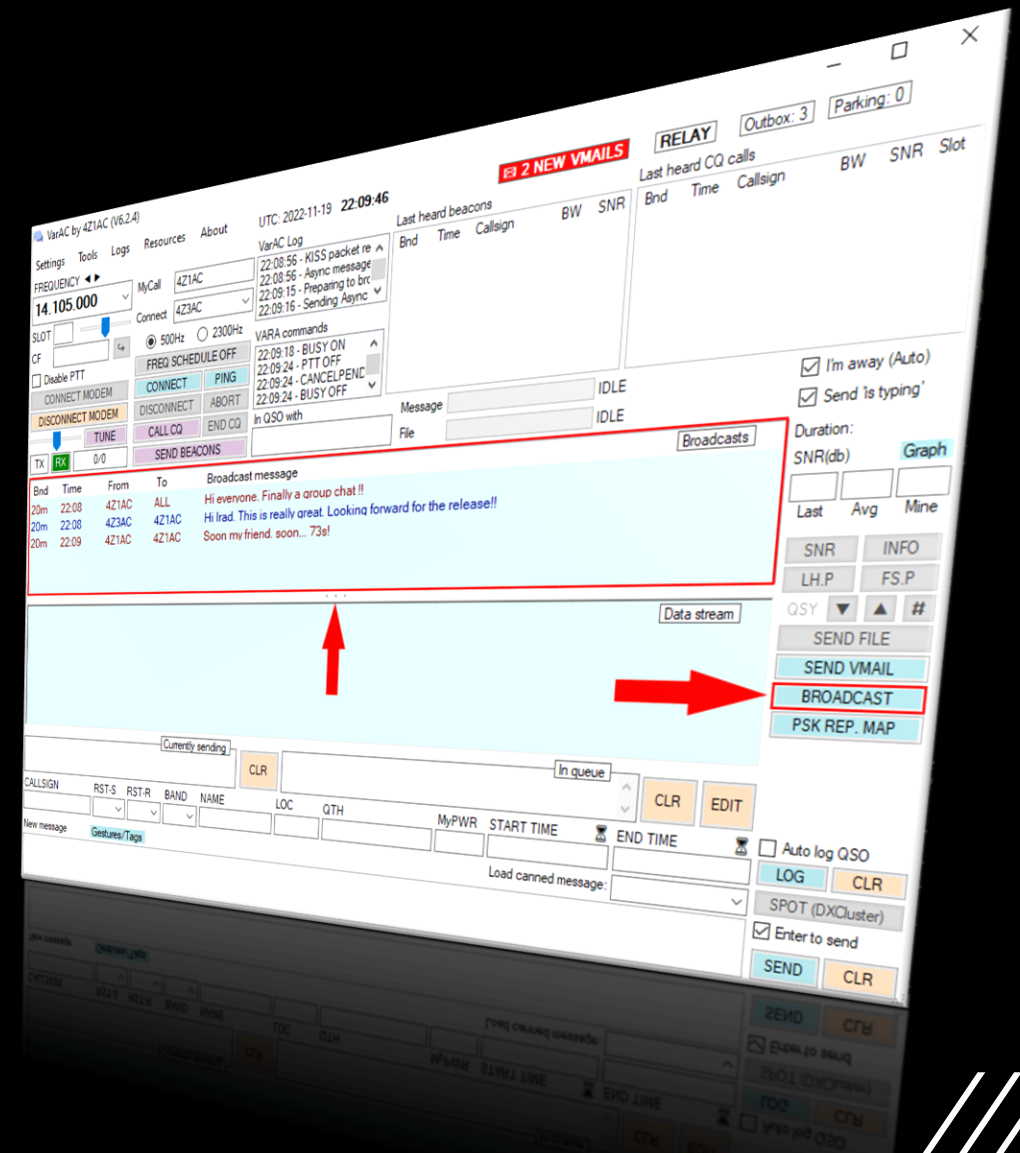




# Broadcasts

Broadcasts consist of asynchronous message packets:

- Sending alerts to multiple destinations at once
- Adapting speed levels for optimal delivery
- Utilizing predefined messages/alerts



# Beacons

Beacons are transmissions sent periodically at fixed intervals:

- They indicate your availability status to others
- See who else from your team is available
- Used to assess EmComm station propagation
- Beacon intervals can be customized

The screenshot displays a radio software interface with several windows. The 'Last heard beacons' window shows a table of beacon data:

Bnd	Time	Callsign	BW	SNR
20m	22:13	W4RJG	500	-16
20m	22:13	K1DOW	500	-09
20m	22:08	SA7FKR	500	-17
20m	22:04	N2SCD	500	-21
20m	22:01	NC3Z	500	-05
20m	21:39	M0SUY	500	-22
20m	21:02	SM7DUZ	500	-16
20m	20:55	DB2LP	500	-16

The 'Last heard CQ calls' window shows another table:

Bnd	Time	Callsign	BW	SNR	Slot
20m	22:02	MW0KJN	500	-19	3
20m	21:06	CO2DC	500	-19	1
20m	20:50	DB2LP	500	-11	1
20m	20:47	DL5FCF	500	-13	1
20m	19:53	DL1ARS	500	-17	1
20m	19:15	EA4GDK	500	-11	1
20m	19:06	S51SG	500	-14	12
20m	18:56	LA7GM	500	-06	4

The interface also includes various control panels for settings, frequency, and communication actions like 'SEND BEACONS' and 'SEND VMAIL'.



# ● Alert Center & Alert tags

Alert tags are pre-defined strings that generate visual and sound alerts upon reception.

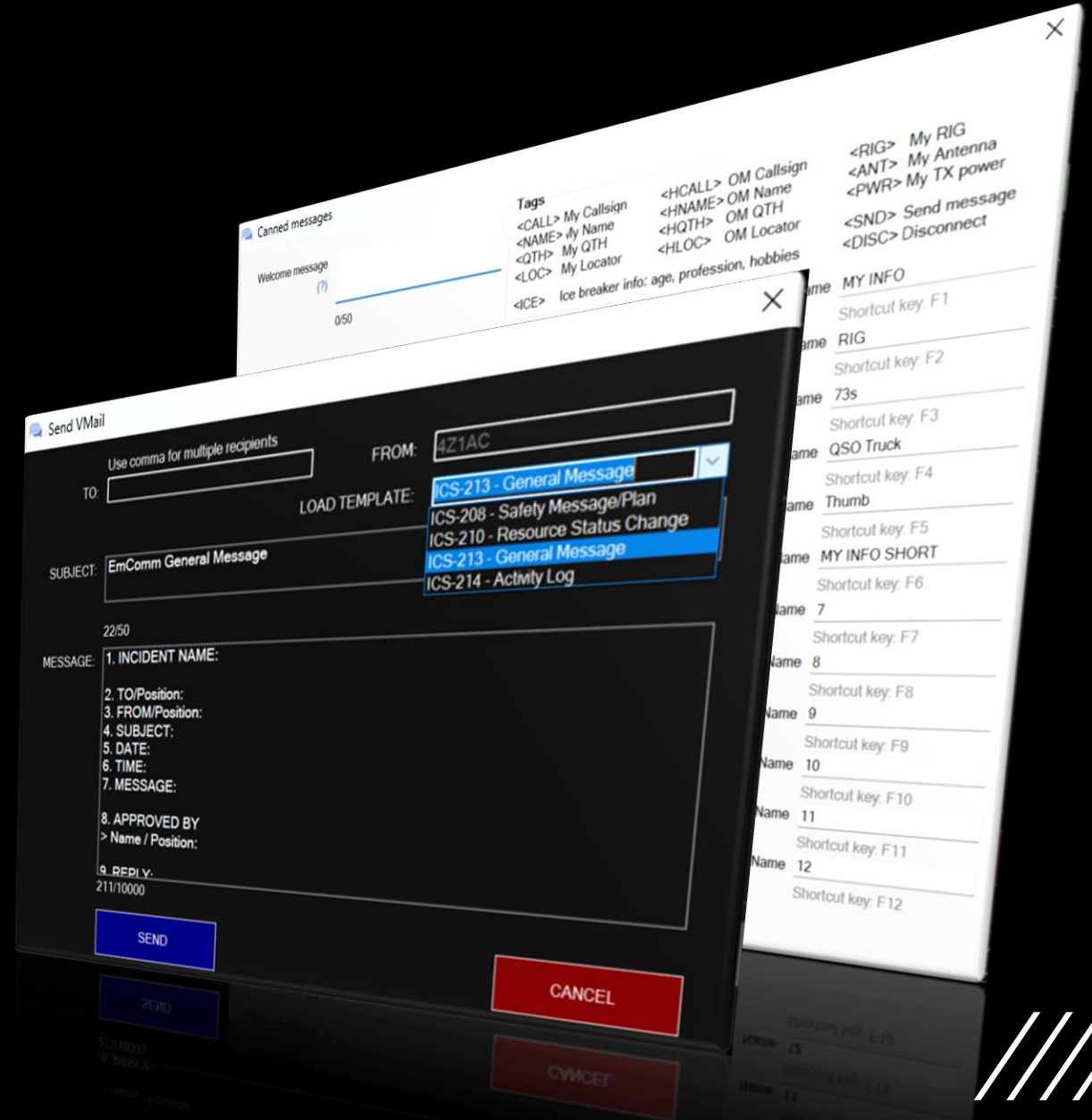
- Sent in one-to-one or one-to-many formats
- Customized tracking is available for Beacons, Hand-raises, Broadcasts, and Chat
- Alert visualization can be customized
- Easily distribute the alert tag dictionary among EmComm group operators



# Forms & Templates

SafecomLink includes standard predefined EmComm message templates (ICS standard).

- Create your own templates.
- Send prewritten messages with keyboard shortcuts.





# ● Frequency scheduler

- Automatically switch frequencies or bands as needed.
- Maintain contact with your EmComm stations around the clock.
- Support up to 10 schedules.



# ● SafecomLink Packages

Most Popular

	Standard	Pro	Enterprise
Live Link (Chat)	X	X	X
Automatic frequency change	X	X	X
Beacons	X	X	X
GPS integration	X	X	X
Transceiver control	CAT Only	Multiple protocols	Multiple protocols
Broadcast		X	X
MailBox		X	X
Frequency scheduler		X	X
File/Image transfer		X	X
Alert Center		X	X
Logging			X
Message templates			X
Path finder			X
Hand-Raise			X
Image compression			X
Link performance analyzer			X
Setup profiles			X





Thank you

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SAFECOMLINK DELIVERS

