SStM32H4TT

Emergency hat localization system over ham radio

SSeMiconductors 2023

The SStM32H4TT is an emergency localization system to avoid losing your hats. Internal studies at SSeMiconductors Inc. have showed wearing hats with an SStM32H4TT system enabled reduces the long-term risk of hat loss by up to and over 62.1%.

SStM32H4TT communicates with the user at the UHF 70cm ham radio band. It sends a message containing the coordinates of the device, along with a picture of it's surroundings. To receive this data, an SDR such as the provided SSM-brand RTL-SDR is recommended to easily record the data to later be decoded by a computer.

The transmission consists of two overlaid signals. One signal over [REDACTED] (30WPM, 600Hz) contains information the registered user's callsign and the device's [REDACTED] in the MAIDENHEAD format. The second signal transmits images from the devices camera over the [REDACETD] mode of the [REDACTED] picture format.

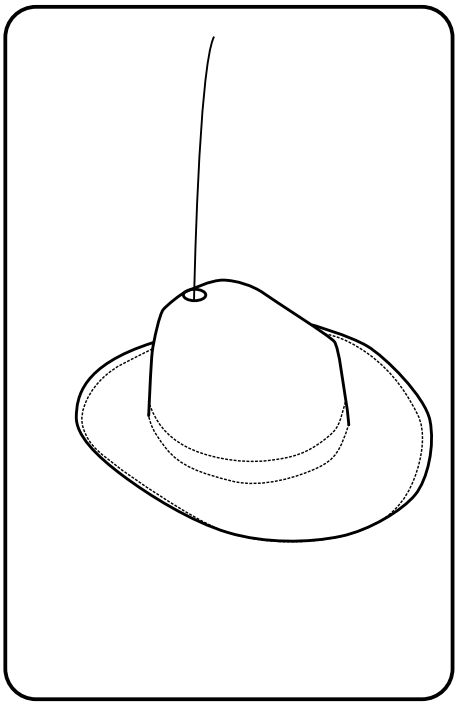

Fig.01
SStM32H4TT installed inside a hat.

Device characteristics:

Transmission frequency: 434.450MHz
Transmission mode: 12.5kHz FM (narrow-FM)
Transmission schedule: every whole 5 minutes (08:00, 08:05, 08:10 ...)
Transmission power: 0.5W
Battery time: about 10 hours.