PORTABLE DIGITAL WITH YOUR PHONE

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n4jhc.com

PHONE-BASED DIGITAL?

- Audio between radio and phone
- No data cable required
- Phone handles encoding/decoding
- Radio passes the sound

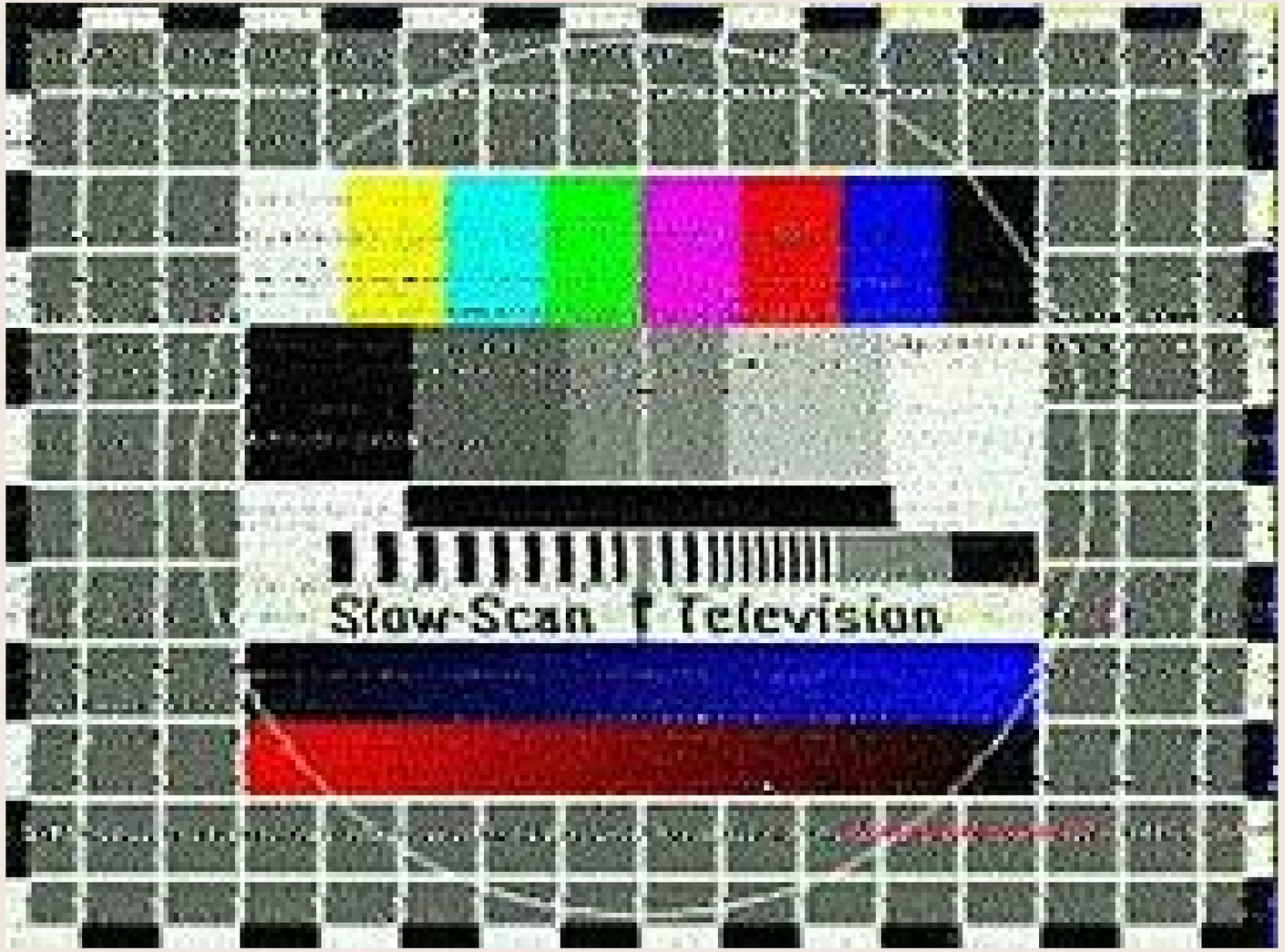
PHONE-BASED DIGITAL?

- NOT FT8
- SSTV
- APRS
- Ribbit / Rattlegram

WHY?

- Ability to pass traffic messages easily
- Send data reliably and quickly
- Send something other than voice

SLOWSCAN TELEVISION (SSTV)



SLOWSCAN TELEVISION (SSTV)

3 kHz bandwidth

8 seconds - multiple minutes

Single Frame

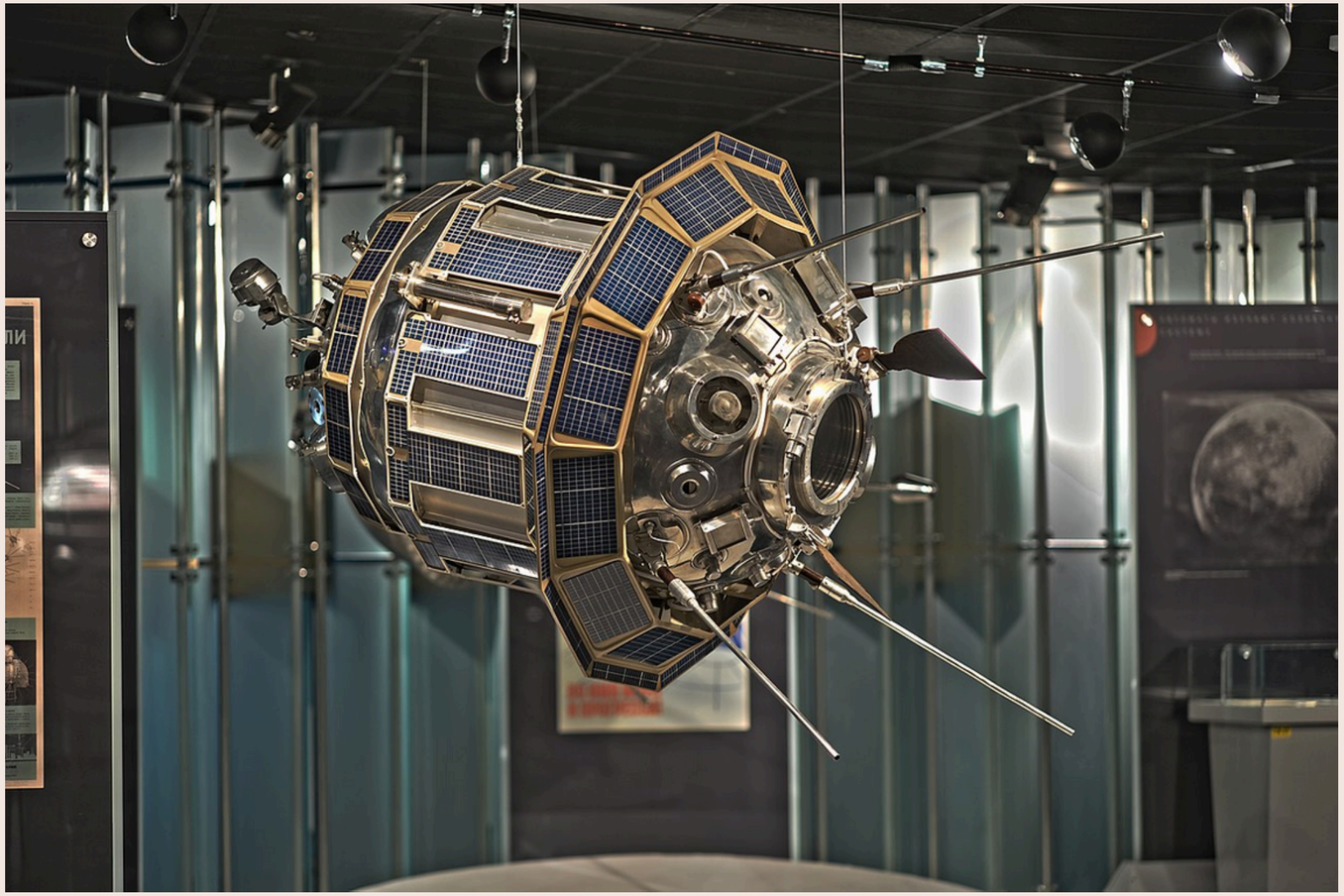
HF/VHF/UHF

SLOWSCAN TELEVISION (SSTV)

Introduced 1957 by Copthorne Macdonald
120 lines x 120 pixels/line
Black & White Image

Originally on 11 meters
1968 - FCC authorized SSTV on the HF bands

SLOWSCAN TELEVISION (SSTV)



Luna 3 - Launched in 1959

SLOWSCAN TELEVISION (SSTV)

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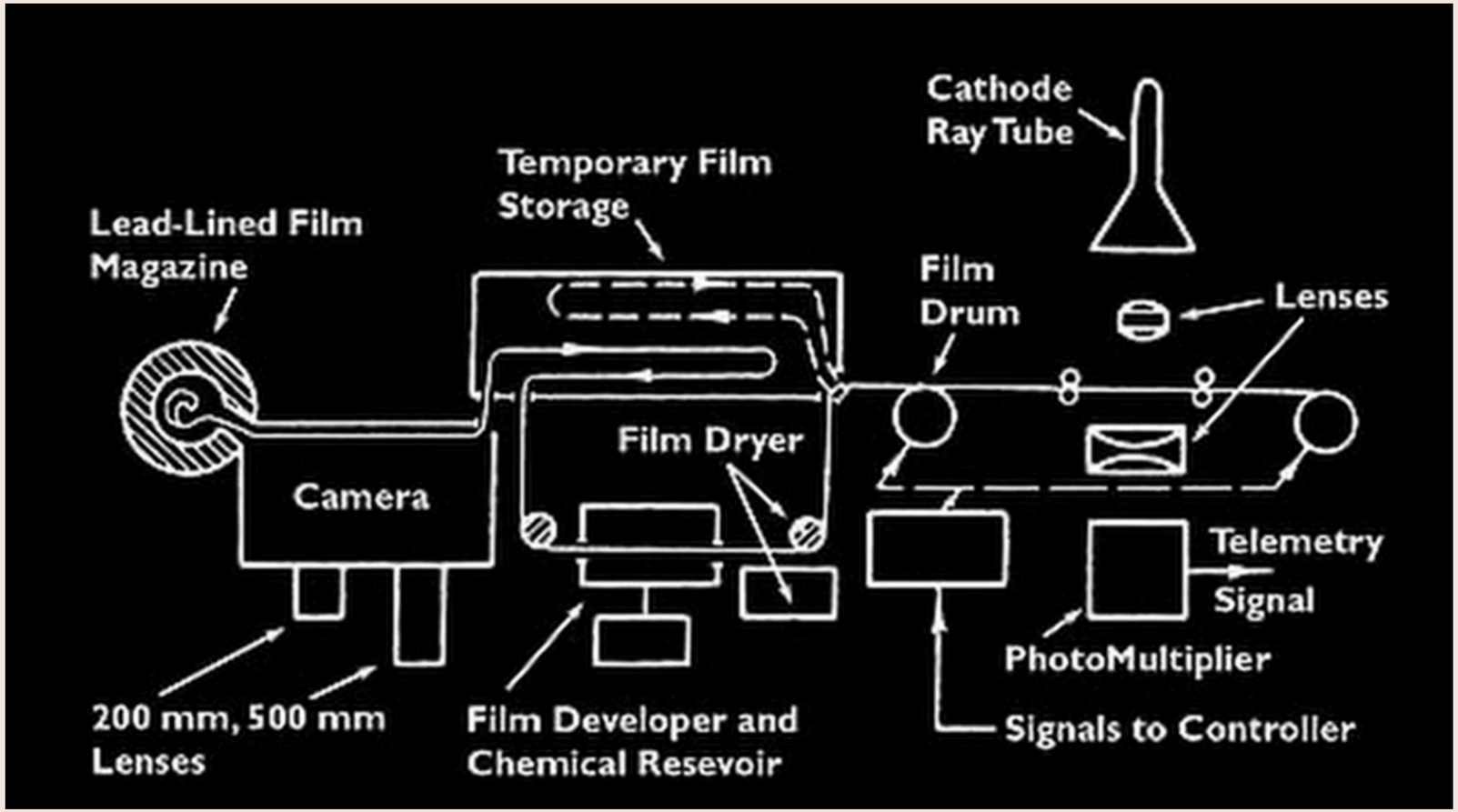

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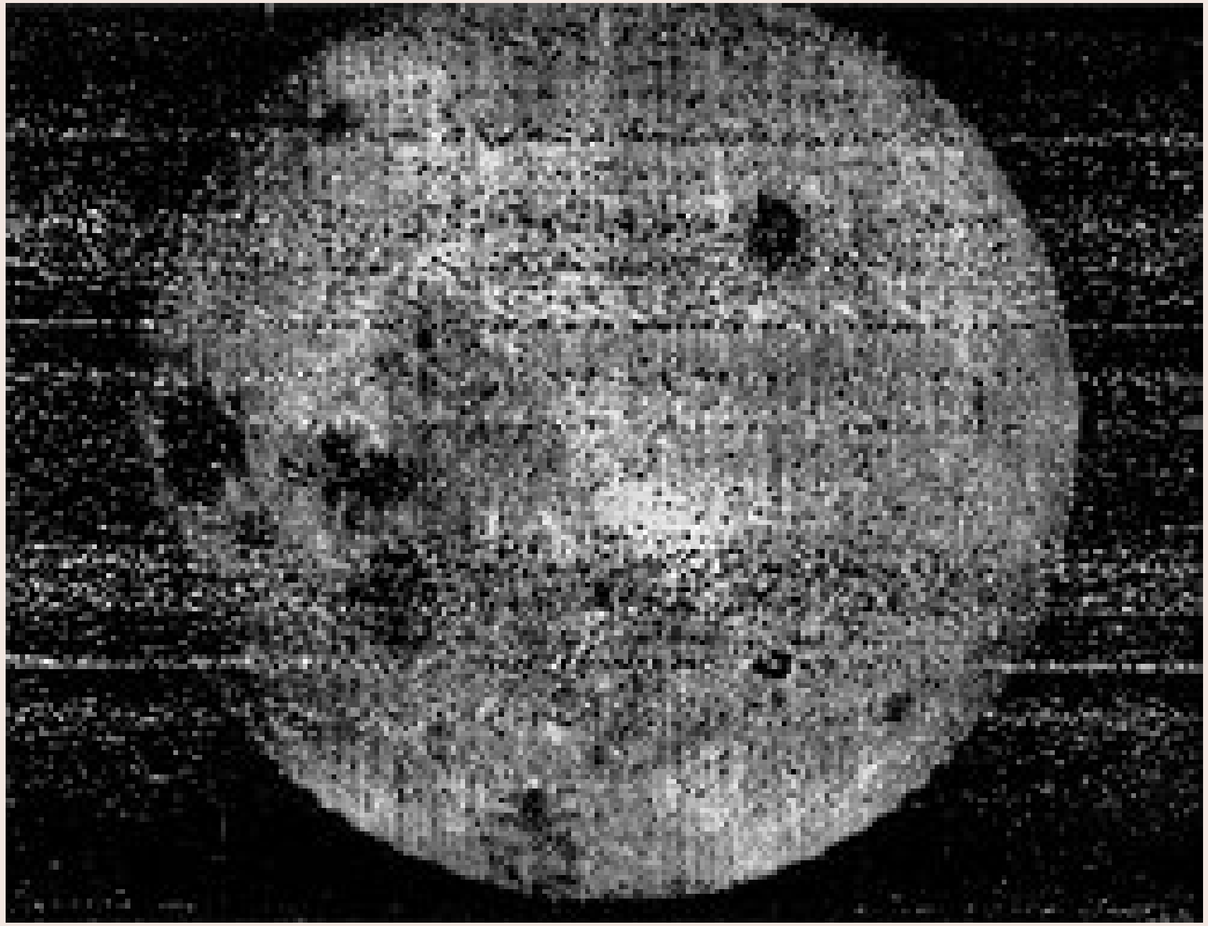

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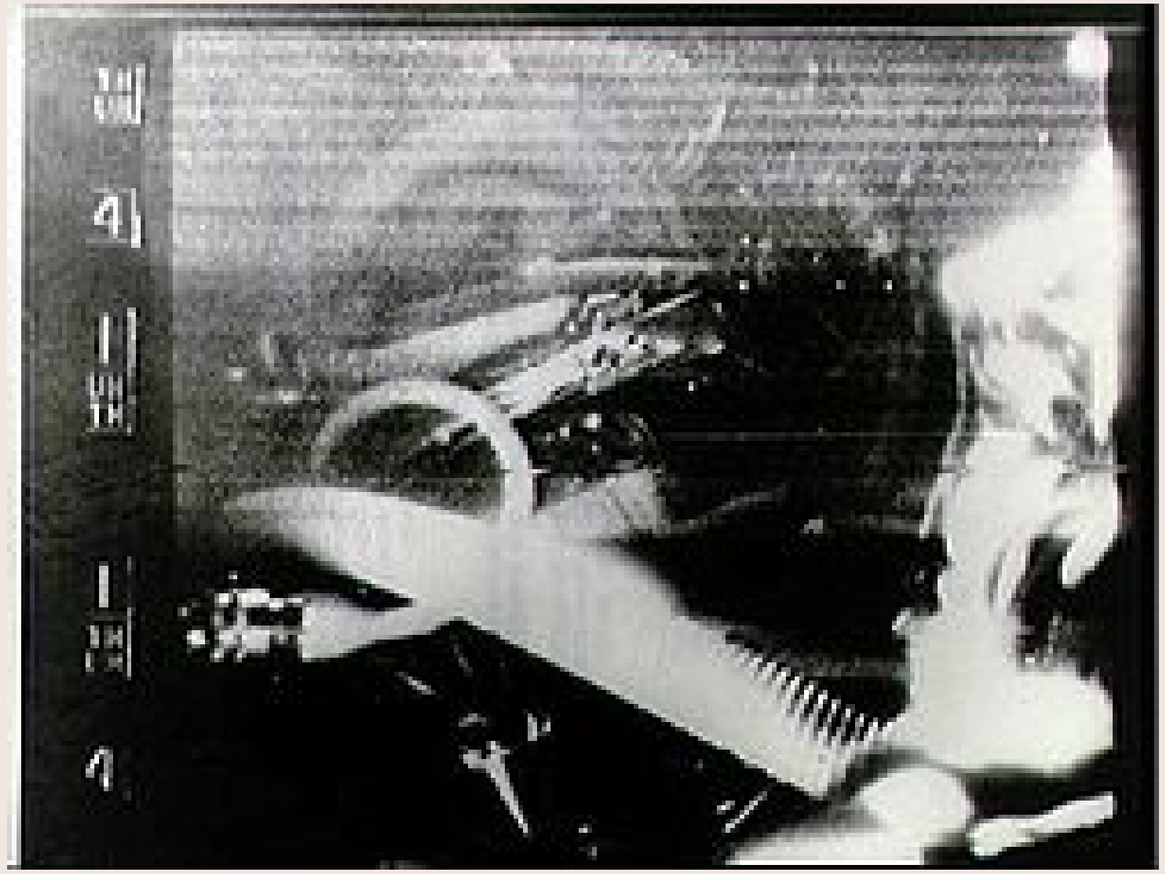
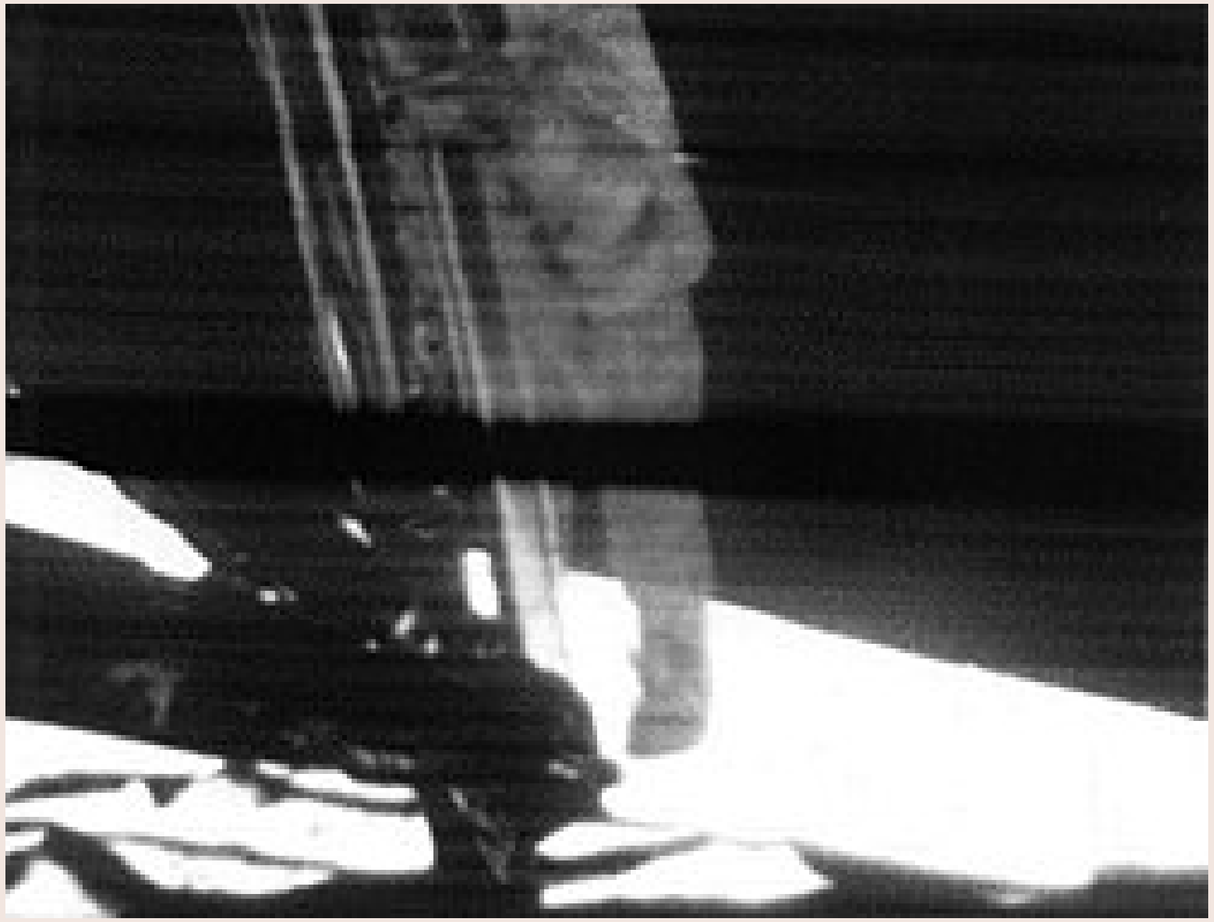
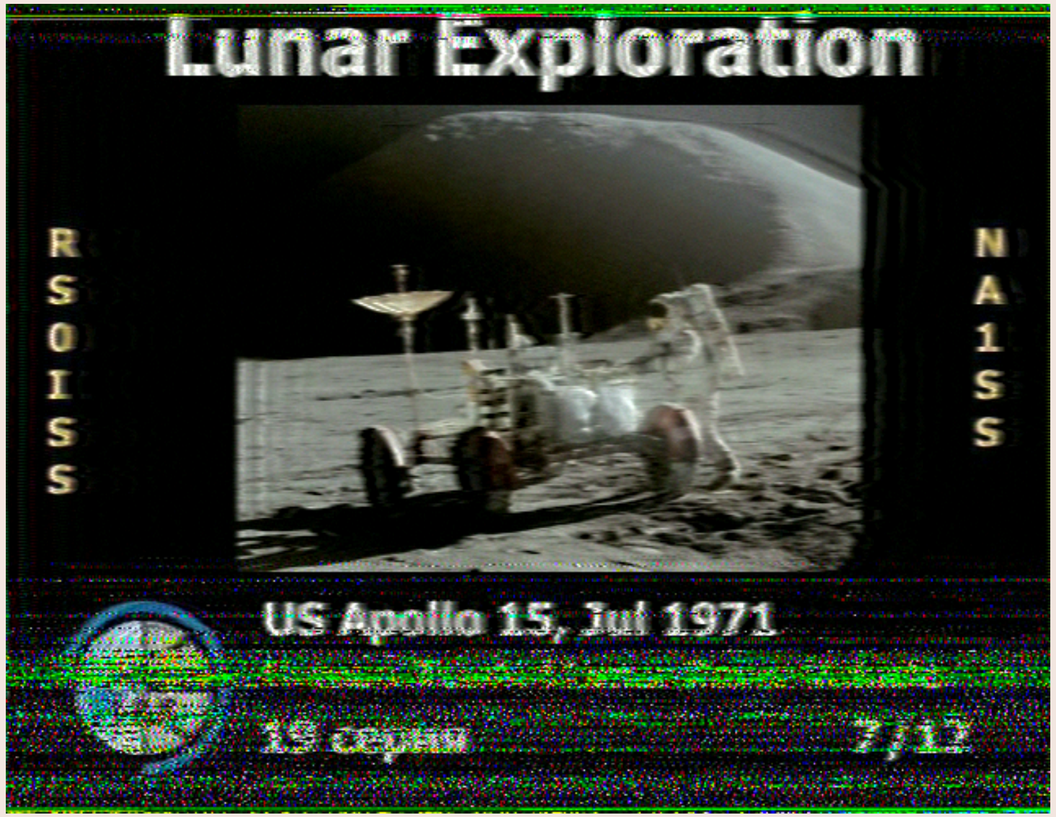




Faith 7 - Apollo 11 Lunar Module

SLOWSCAN TELEVISION (SSTV)

Why Now?



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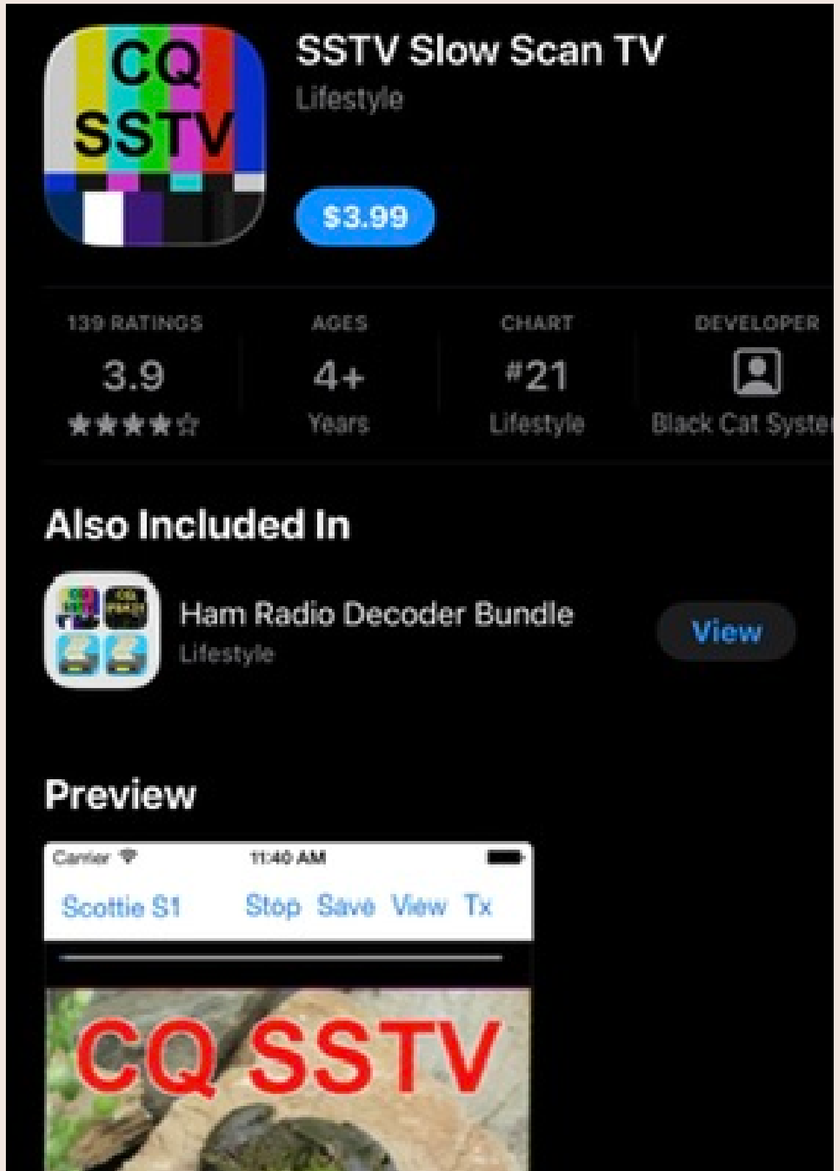

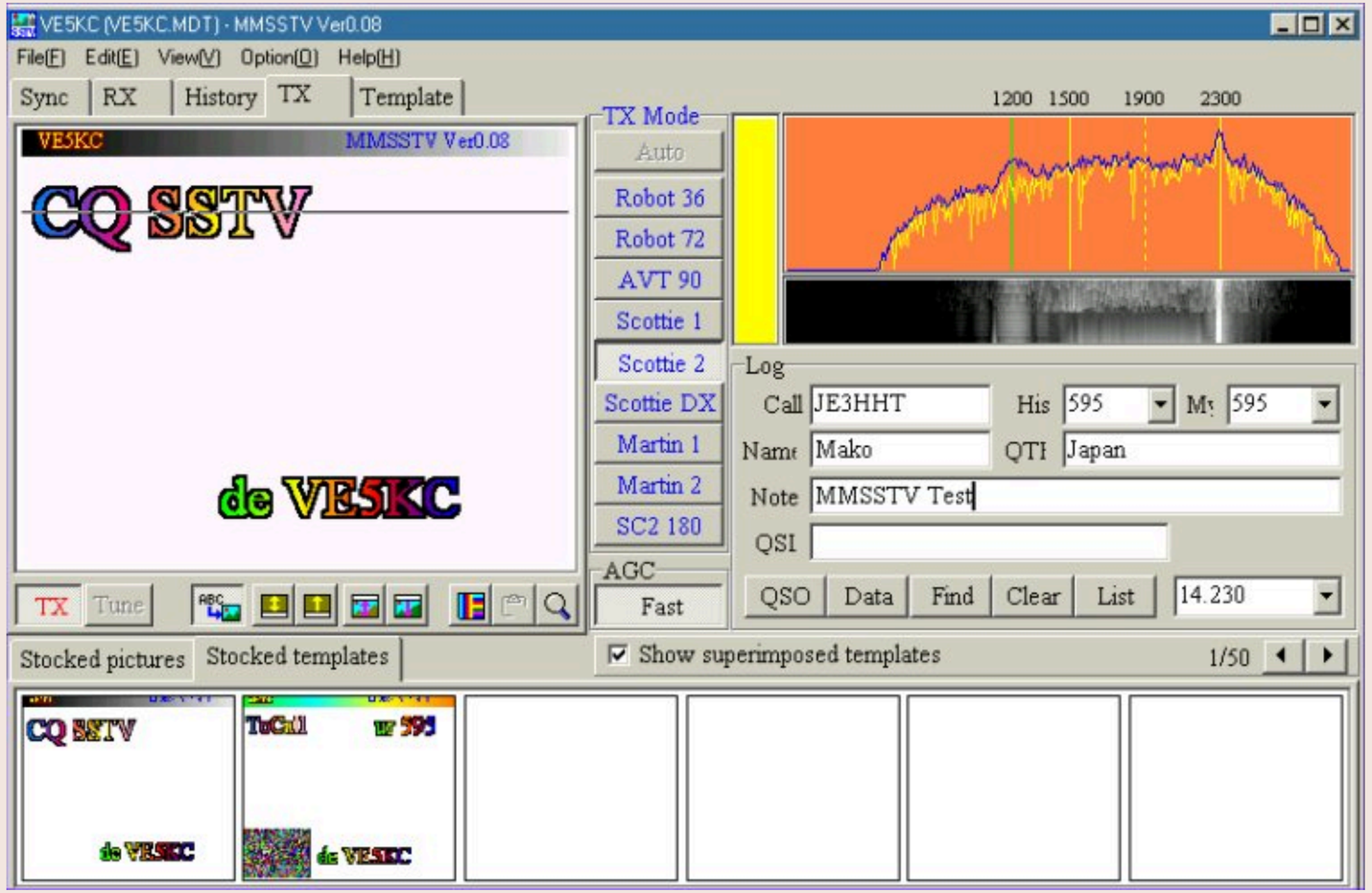

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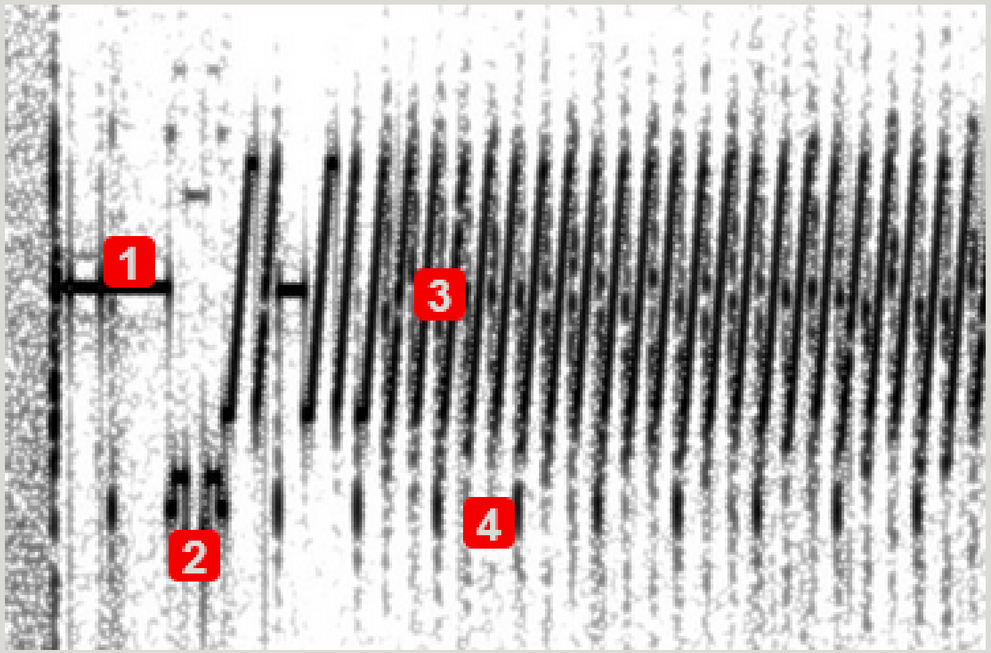
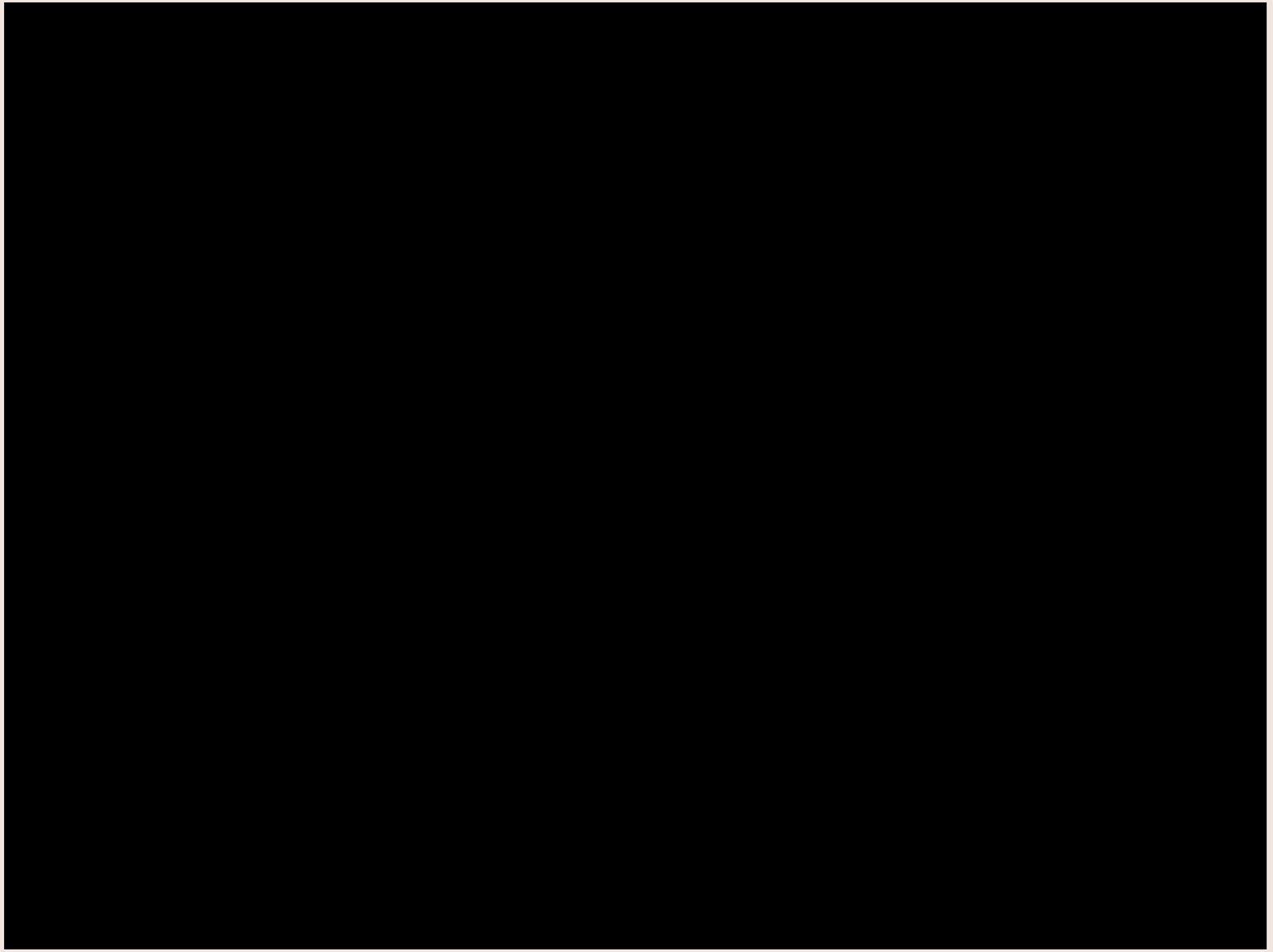


A spectrogram of the beginning of an SSTV transmission

1 Calibration header
2 VIS code
3 RGB scanlines
4 Sync pulses

ROBOT 36

320 x 240 px
0.36s/line
114s/image

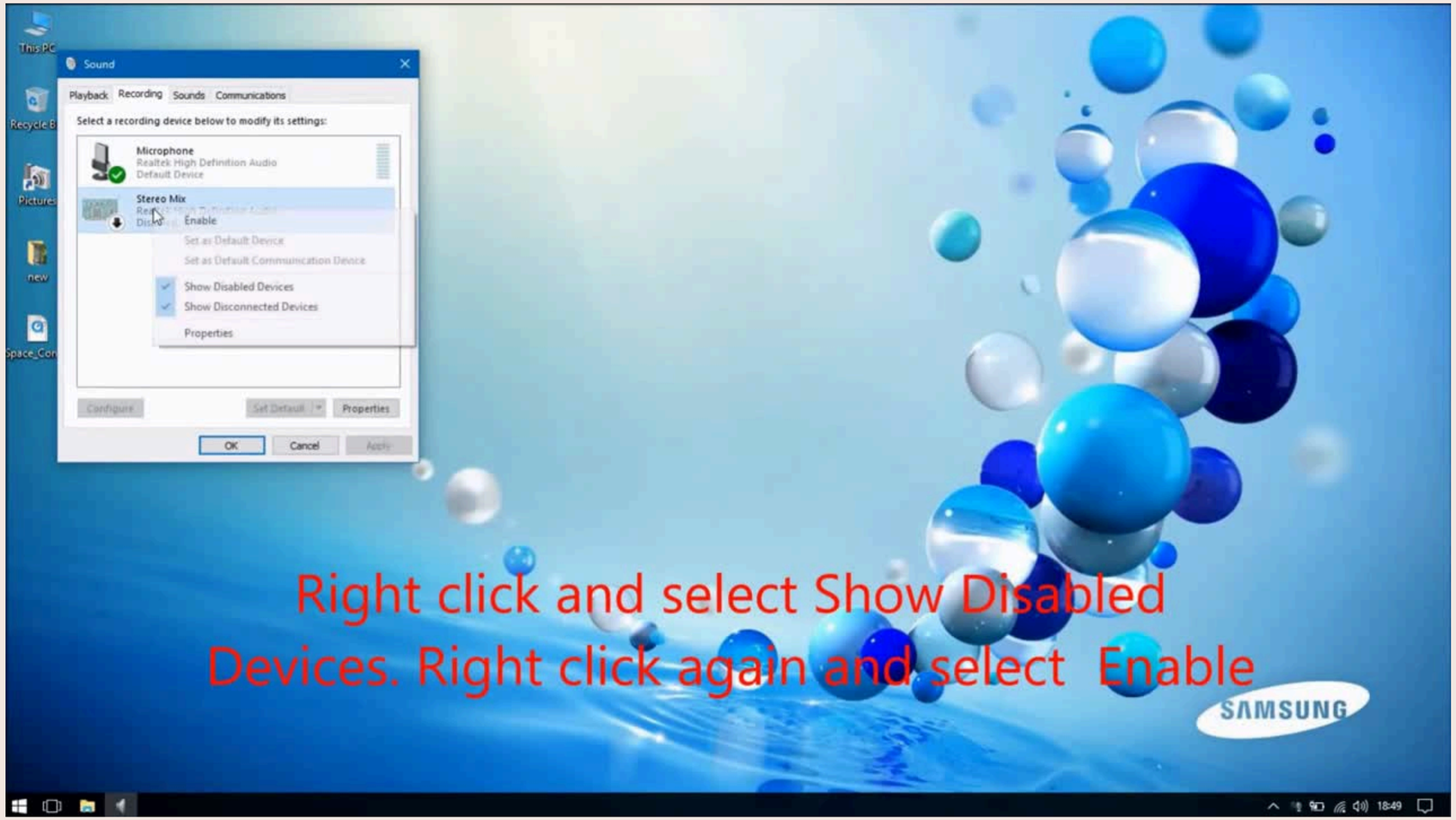


PD 120

640 x 496px

~ 0.24s/line

~ 120s/image



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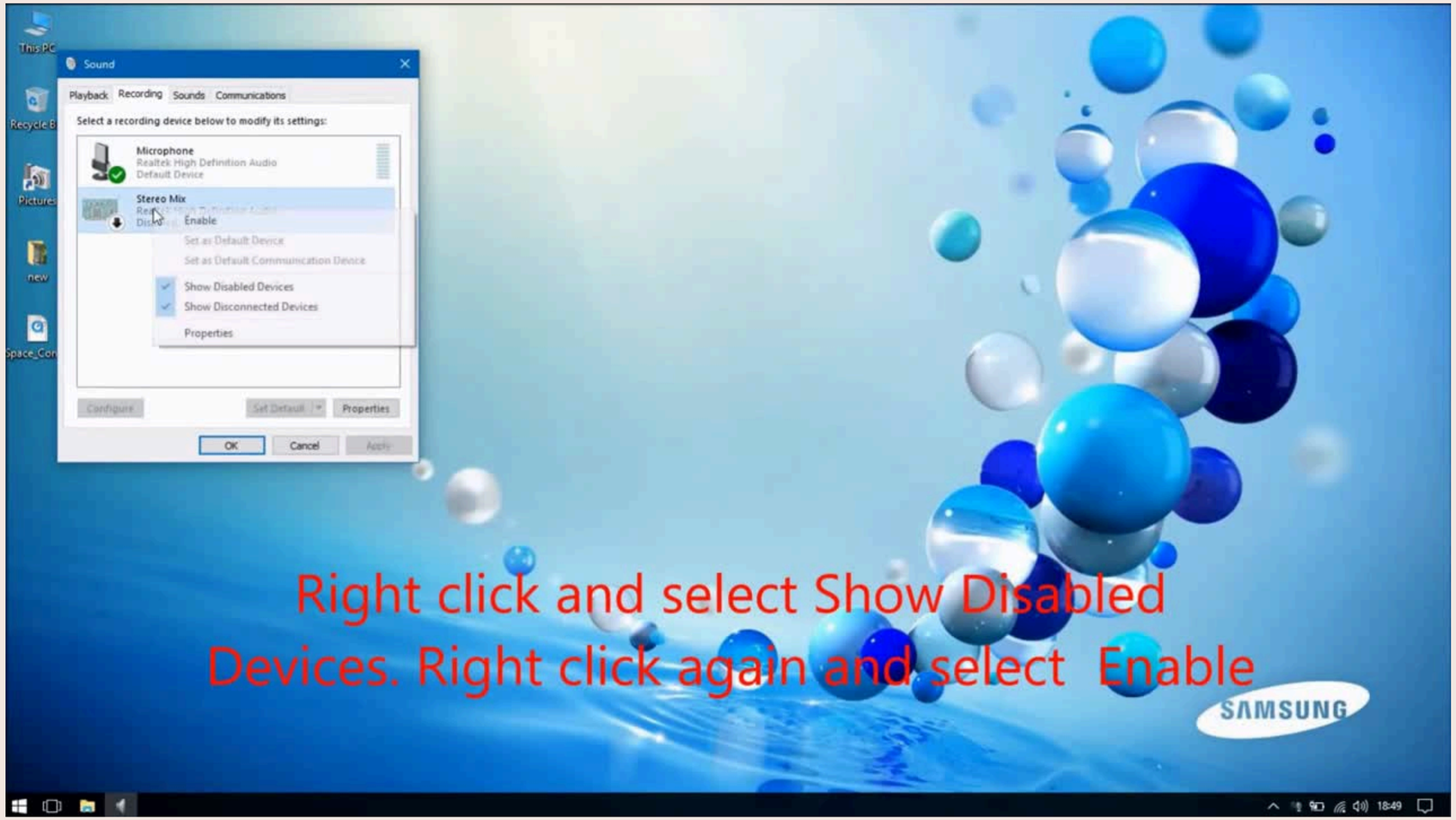
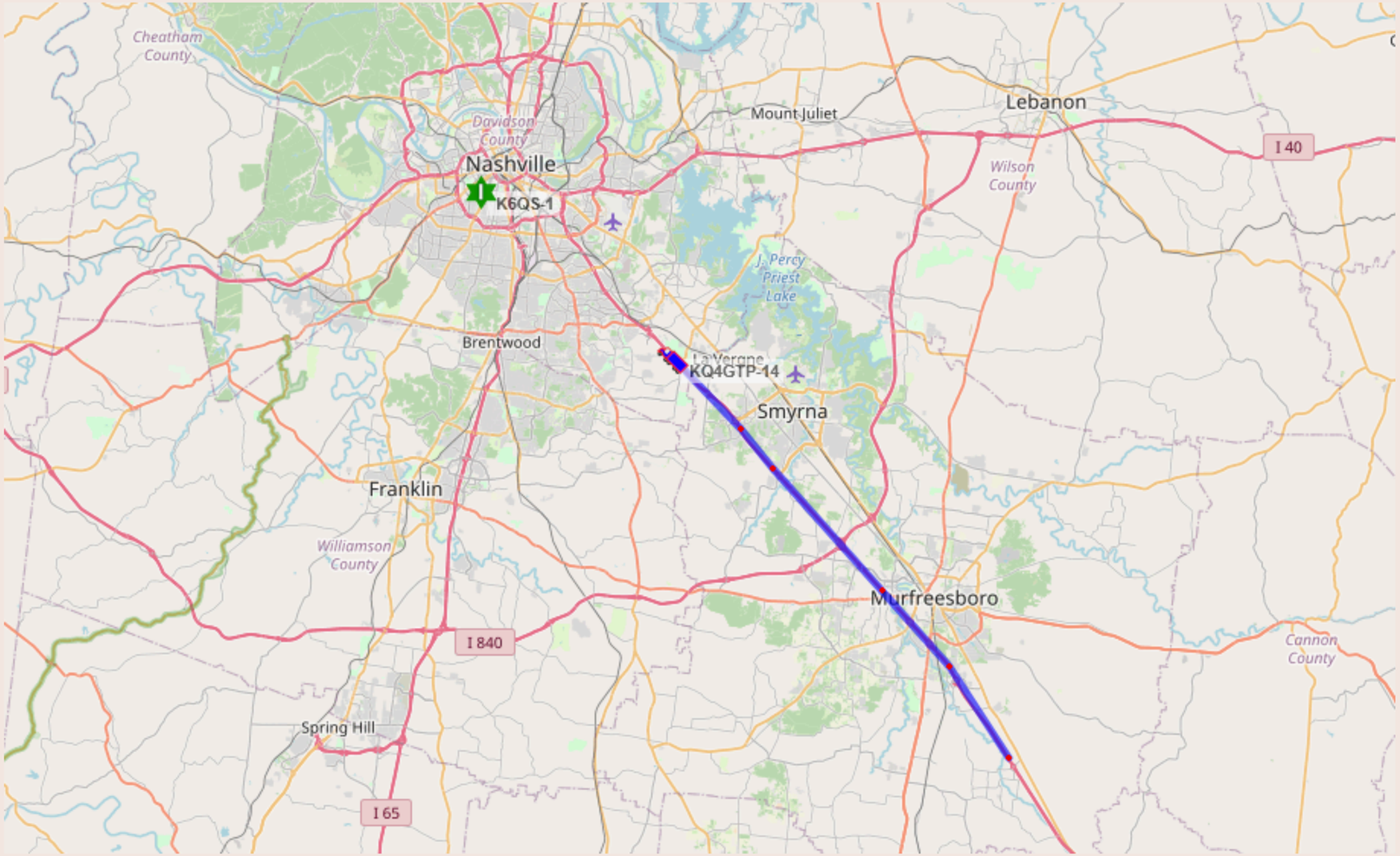


SLOWSCAN TELEVISION (SSTV)

AUTOMATIC PACKET REPORTING SYSTEM



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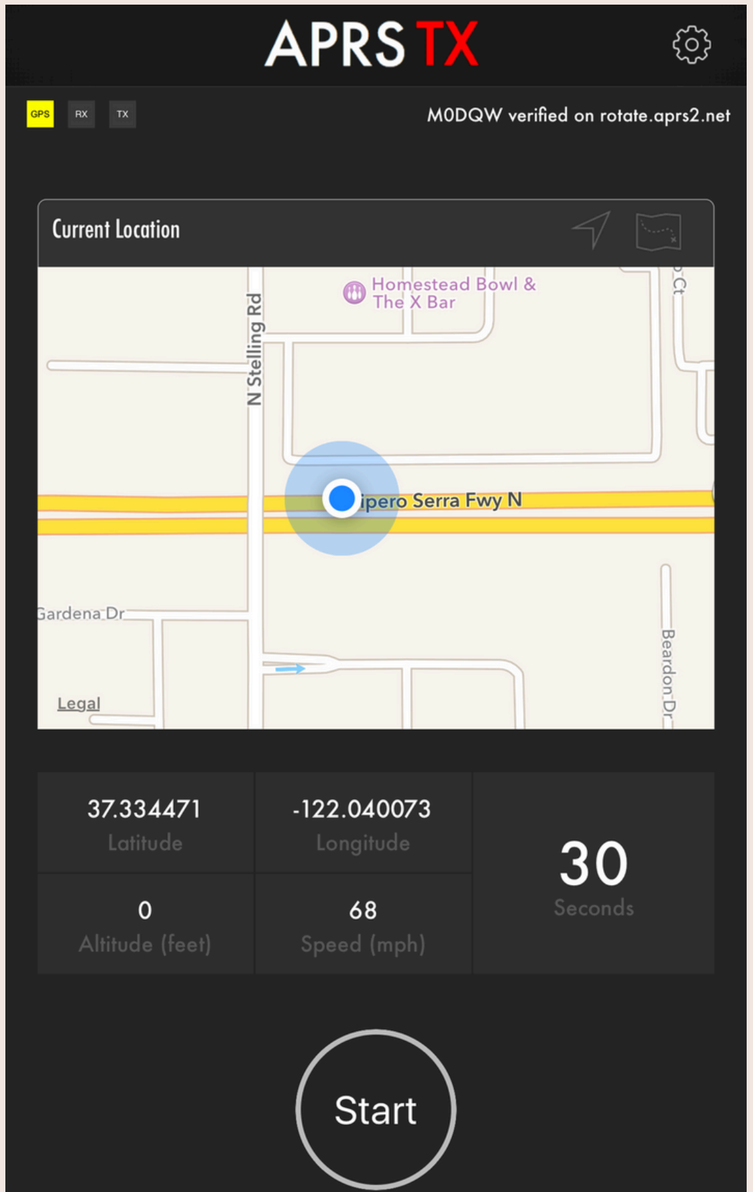


AUTOMATIC PACKET REPORTING SYSTEM

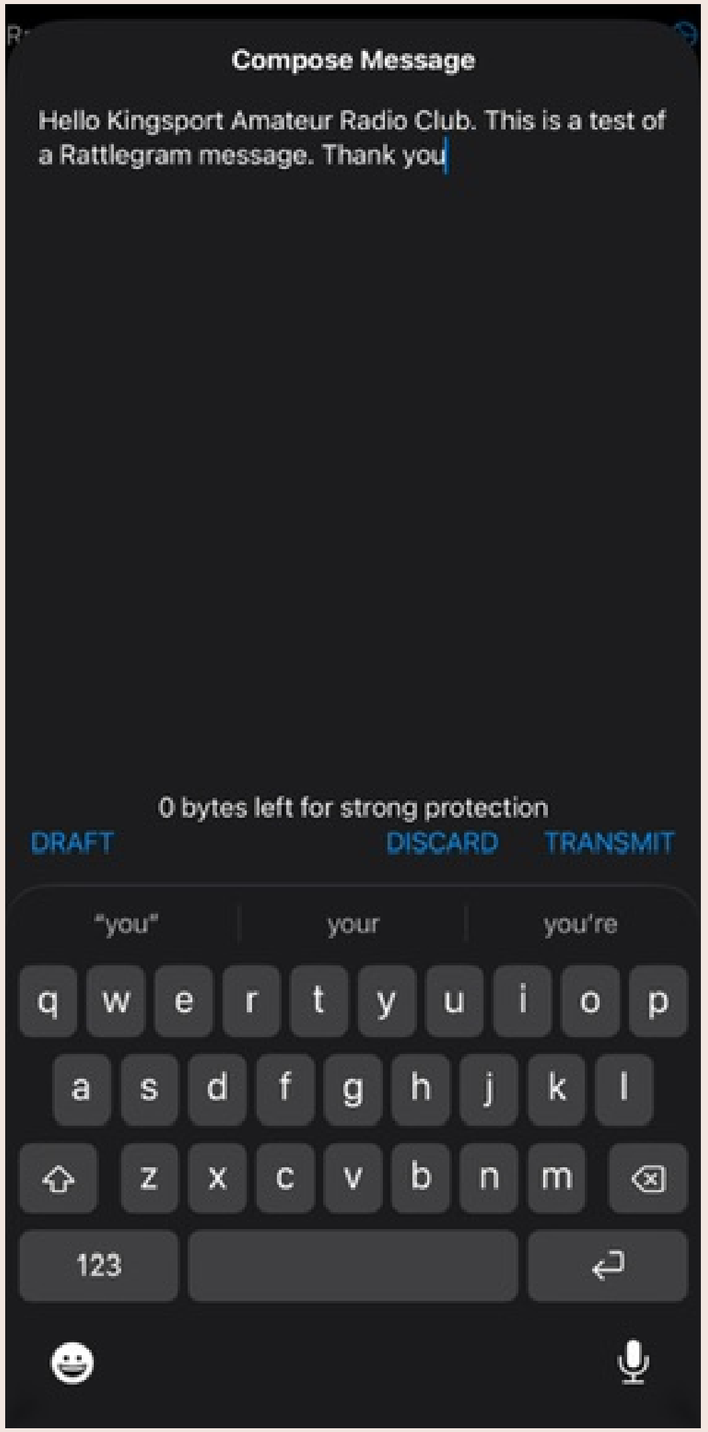
RIBBIT / RATTLEGRAM

NEW DIGITAL TEXT MESSAGING MODE FOR VHF/UHF EMERGENCY COMMUNICATIONS

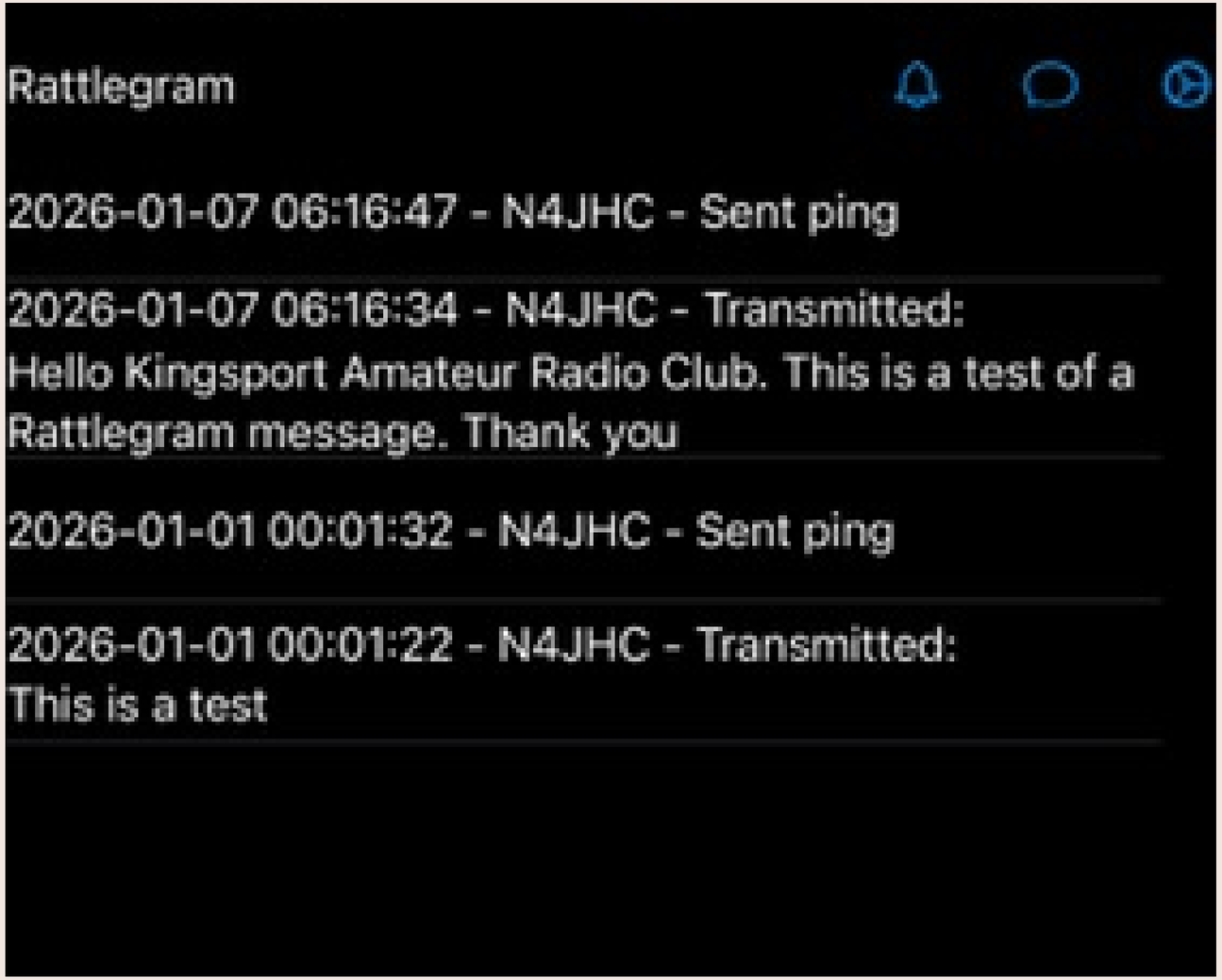
RIBBIT / RATTLEGRAM

~ 80 Characters

No additional hardware

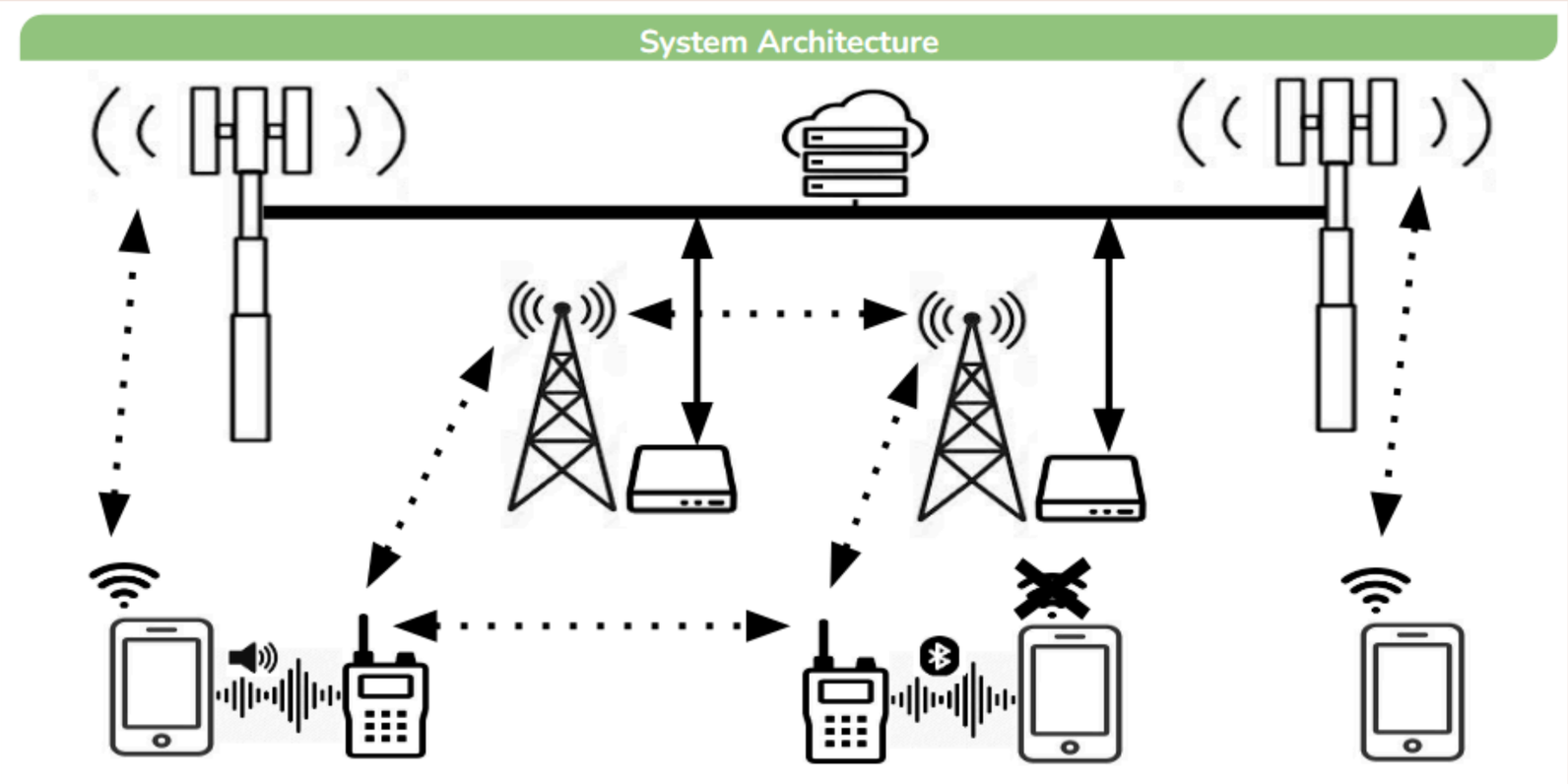


RIBBIT / RATTLEGRAM



"EXPERTS"
CONSPIRACY THEORISTS

RIBBIT / RATTLEGRAM



OTHER THINGS TO CHECK OUT

- Packet Radio (AX.25)
- PSK 31
- Winlink
- DMR/YSF/D-Star

OTHER THINGS TO CHECK OUT

- Terminal Node Controller (TNC)

ANY QUESTIONS?

- Slow Scan Television (SSTV)
    - Luna 3 Russian Spacecraft (sorry)
- Automatic Packet Reporting System (APRS)
- Ribbit / Rattlegram