

SSTV

OH-KY-IN ARS

March 5th , 2019

Definition

SSTV - Slow Scan Television

One of the image modes

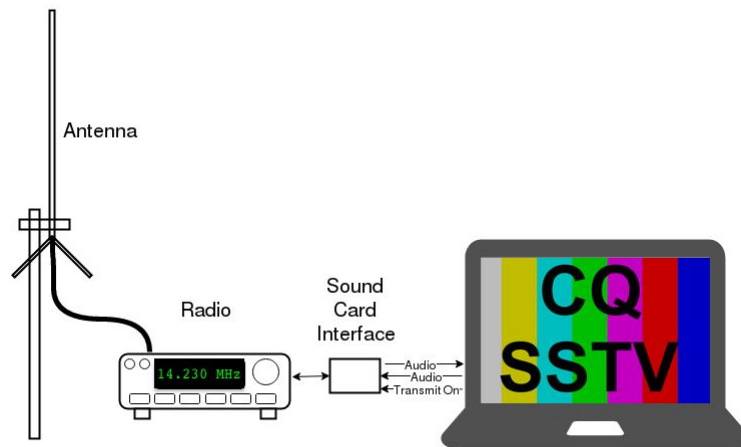
- ATV - Amateur Television (i.e. Fast Scan Television)
- DTV - Digital Television
- WEFAX - Weather Facsimile
- Hellschreiber - Text mode similar to facsimile

Encodes an image as a series of analog tones for transmission via radio

Reduced horizontal and vertical to reduce bandwidth

Equipment

- Radio
- Sound Card Interface
- Decoding software



Software

MMSSTV - Windows

QSSTV - Linux

MultiMode Cocoa - Mac

MultiScan 3B - Mac

Macrobot - Mac

Robot36 - Android

CQ SSTV - iPhone

Software

Which software is the best?

It depends!

Features

- Hardware
- Portability
- Image management
- Text overlay management
- QSO logging
- Modes

Modes

Over 70 Modes!

Most popular:

- **Scottie**
 - S1 - 110s, 320x256, RGB
 - DX - 269s, 320x256, RGB
- **Martin**
 - M1 - 114 s, 320x256, RGB
- **PD**
 - PD-120 - 126s, 640x480, YCrCb
- **Robot**
 - Robot 36C - 36s, 320x240, YCrCb

Scottie Mode



Martin Mode



SSTV Mode - Robot



Scottie versus Martin



Demo

Calling Frequencies / Center of Activity

Domestic - HF

- 80m
 - 3.845 MHz LSB
 - 3.857 MHz LSB
- 40m
 - 7.171 MHz LSB
- 20m
 - 14.230 MHz USB
 - 14.233 MHz USB - Alt
- 15m
 - 21.340 MHz USB
- 10m
 - 28.680 MHz USB

Domestic - VHF/UHF

- 6m
 - 50.680 MHz FM
 - 50.950 MHz USB
- 2m
 - 144.550 MHz USB
 - 145.500 MHz FM
 - 145.800 MHz FM - ISS
- 1.25m
 - 223.850 MHz FM
- 70cm
 - 430.950 USB

DX - RX & TX

- 80m
 - 3.640 MHz LSB - Australia
 - 3.730 MHz LSB - Europe
- 40m
 - 7.043 MHz LSB - Europe
- 20m
 - 14.240 MHz USB - Europe

DX - RX in US Only

- 11m
 - 27.700 MHz USB - France, Australia
 - 27.420 MHz USB - Australia
 - 27.235 MHz USB - Northern Ireland

QSO

Very similar to your standard phone, CW or FT8 QSO

First - Listen!

Calling CQ

1. Transmit SSTV image w/CQ SSTV and call
2. Receive response
3. Respond w/ their call, your call, signal report and possibly 73
4. Receive 73
5. Transmit 73 if you haven't prior

Answering a CQ

1. Watch for CQ
2. Respond w/ their call, your call, signal report
3. Receive report
4. Transmit 73

Station ID

FCC Rules Part 97 - Rules of the Amateur Radio Service, Subpart B - Station Operation Standards, §97.119 - Station identification, Subparagraph 4:

By an image emission conforming to the applicable transmission standards, either color or monochrome, of §73.682(a) of the FCC Rules when all or part of the communications are transmitted in the same image emission

CQ Examples



Signal Report

Two Ways to Report

- RSV
 - R - Readability
 - S - Signal Strength
 - V - Video
- P - Picture Quality
 - P0 through P5

RSV Signal Report

R - Readability

1. Unreadable
2. Barely readable
3. Readable with considerable difficulty
4. Readable with practically no difficulty
5. Perfectly readable

S - Signal Strength

1. Fain signal
2. Very weak
3. Weak
4. Fair
5. Fairly good
6. Good
7. Moderately strong
8. Strong
9. Very strong

V - Video

1. Barely perceptible
2. Poor
3. Fair
4. Good
5. Excellent

P Signal Report

P5 - Broadcast quality

P4 - Typical quality with slight or minimal noise

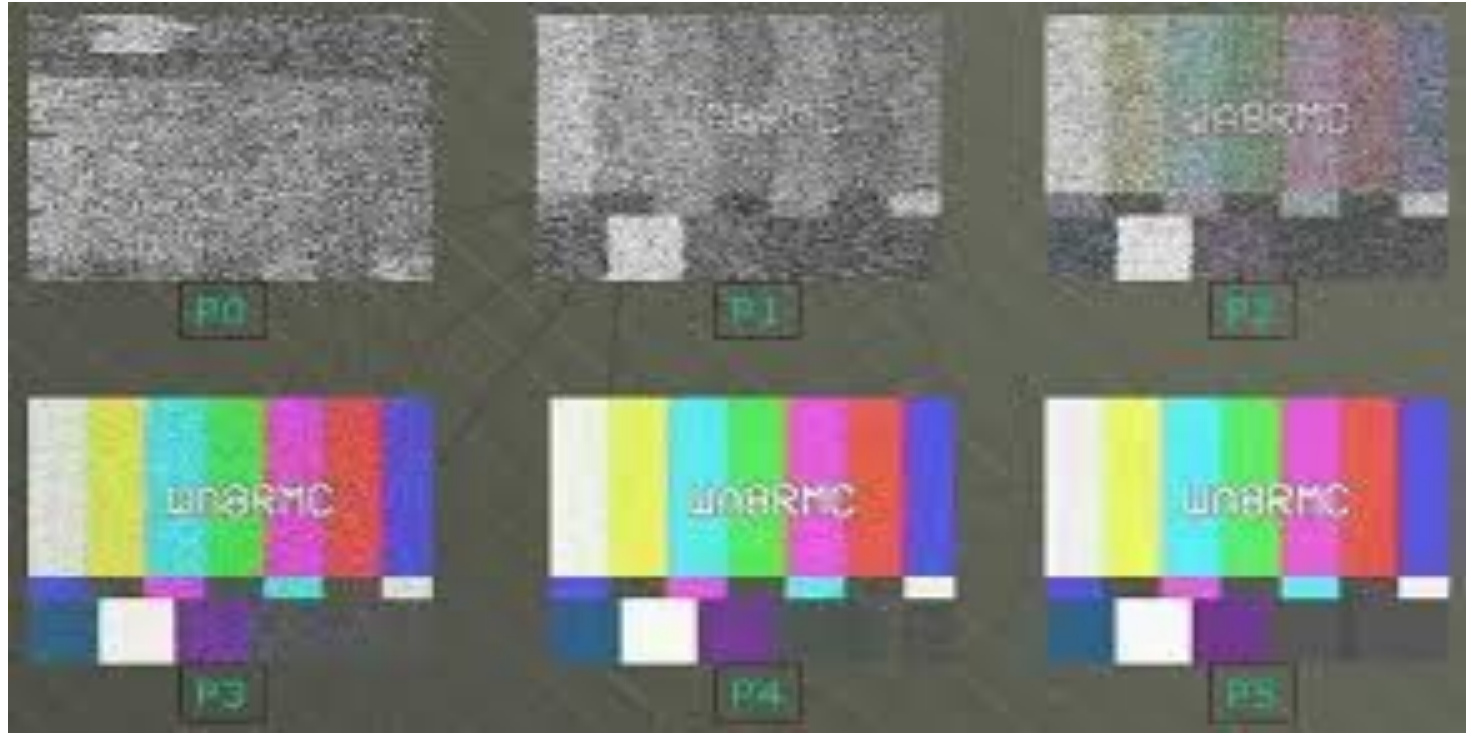
P3 - Usable but somewhat noisy

P2 - Barely usable with lots of noise

P1 - Barely see the image

P0 - Unusable

P Signal Report - Examples



Example from WA8RMC

QSO Example



Tips

- SSTV is 100% duty cycle
- Beware overdriving
- Compile image library before starting a QSO
 - Size your images appropriately beforehand
- Compile text overlay library before starting a QSO
- If answering a CQ, reply with the same mode
- If the calling frequency seems busy, you can always add QSY ____ MHz
- Have fun!

Resources

- ARRL
<http://www.arrl.org/sstv-slow-scan-television>
- SSTV Handbook
<http://www.sstv-handbook.com/>
- SSTV Transmission Modes
http://www.g0hwc.com/sstv_modes.html
- Larry WB9KMW's Page on SSTV Signal Reports
http://www.wb9kmw.com/WB9KMW/tutorial/SSTV_signal_report.pdf
- Larry WB9KMW's MMSSTV Tutorial
http://www.wb9kmw.com/WB9KMW/sstv_files/tutorial/SSTV_tutorial.pdf