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RX-SSTV v2.3.1

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FreeWare

Easy and back-to-basics Slow Scan TV software using a soundcard
Specially designed for SWL's and HAM's who do not need TX

Special thanks to beta testers:

Nigel G4DCQ
James 2E0JHJ
Machteld ON2DHT

What is RXSSTV?

RX-SSTV is an easy and back to basics SSTV decoding program. It automatically saves received SSTV-images (any supported mode is detected automatically too). Uses the powerful MMSSTV Engine © JE3HHT - Makoto Mori!
Because SWL's don't need TX, this part of the program can be left out. No cumbersome settings for com-ports, ptt interfaces and no accidental transmissions by activating the TX by mistake! A totally harmless program for even the youngest of SWL's who want to discover the world of digital communications, like SSTV.
Still, why no TX? Why? Primary because there are so many, many SSTV programs out there that do a great job receiving and transmitting SSTV, but none for the SWL (short wave listener) that is PTT'ing risk-free.

Also ideal for receiving SSTV from the International Space Station ISS! Is why by default Robot-36 mode is used. However, the program will detect any available SSTV-mode that it receives and activate the automated saving process. You won't miss any received images.

What does RXSSTV Do?

- Automatically saves received SSTV-images (any supported mode is detected automatically too)
- Uses the powerful MMSSTV Engine © JE3HHT - Makoto Mori
- Easy to use and specially designed for SWL's or HAM's who don't need TX or for anyone who just like to monitor SSTV signals.
- Adjustable DSP and Spectrum settings. It decodes well even under noisy band conditions!
- You can copy/save/edit the received SSTV images (JPG or BMP)
- Unlimited history storage.
- No cumbersome TX com-port settings, just connect your soundcard to your receiver, tune to a SSTV frequency and your set!
- Logs embedded FSKID's
- Automatically saves any received SSTV image!
- can be controlled by CAT

Supported SSTV Modes

MMSSTV Engine, 37 different modes! RX-SSTV supports the following SSTV modes:

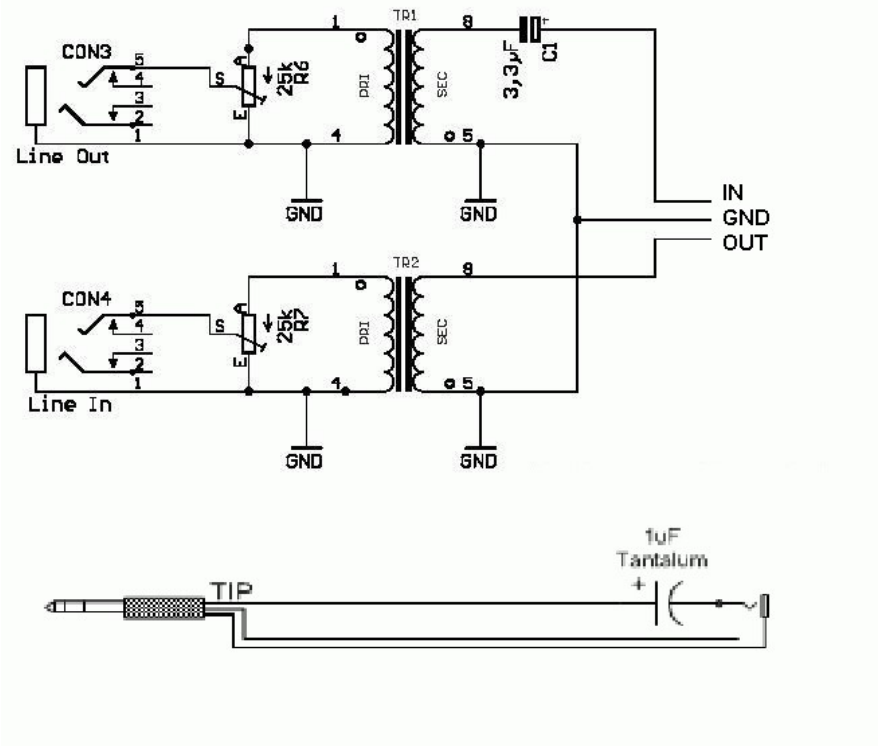
- B/W 8
- B/W 12
- Robot 24
- Robot 36
- Robot 72
- AVT 90
- Scottie 1
- Scottie 2
- Scottie DX
- Martin 1
- Martin 2
- SC2-180
- SC2-120
- SC2-60
- PD-50…PD-290
- P3, P5, P7
- MP73,MP115,MP140,MP175
- MR73,MR115,MR140,MR175
- ML180,240,280,320

RXSSTV Technical Features

- . Automatically detect SSTV mode
- . Automatically save received SSTV images
- · Unlimited history buffer.
- . DSP capabilities
- · Multiple soundcard support.
- · Threshold adjustable noise activated squelch control.
- · SSTV Signal strength/quality value available for squelch and display.
- · It decodes well even under noisy band conditions!
- · Soundcard clock error measuring and compensating capability.
- · A fast AFC mode can be used to track doppler shifting signals·
- . Ability to read and write and edit BMP files.
- · Color settings of spectrum and Waterfall.
- . Save images as JPG (with definable compression) or BMP files
- . add comments to the filename or embedded stamp
- . log's FSK-ID
- . Extra large view
- · Easy to use!

Connection Interface

You need to connect your soundcard's LINE IN (or MIC IN) to your receiver to be able receive SSTV-signals. There are several kits available on the Net, or just connect your soundcard with a shielded cable to your receiver (not recommended because it does not isolate your PC from your transceiver/receiver).



What is Slow Scan TV?

Slow-scan television (SSTV) is a picture transmission method used mainly by amateur radio operators, to transmit and receive static pictures via radio in monochrome or color.

A technical term for SSTV is narrowband television. Broadcast television requires huge 5, 6 or 8 MHz wide channels, because it transmits 25 or 30 pictures per second (in the NTSC, PAL or SECAM systems), but SSTV usually takes up to only 3 kHz of bandwidth. It is a much slower method of still picture transmission, usually lasting from about eight seconds to a couple of minutes.

Since SSTV systems operate on voice frequencies, amateurs use it on shortwave (also known as HF by amateur radio operators), VHF and UHF radio.

SSTV uses analogue frequency modulation, in which every different value of brightness in the image gets a different audio frequency. In other words, the signal frequency shifts up or down to designate brighter or darker pixels, respectively. Color is achieved by sending the brightness of each color component (usually red, green and blue) separately. This signal can be fed into an SSB transmitter, which in part modulates the carrier wave.

There are a number of different modes of transmission, but the most common ones are Martin M1 (popular in Europe) and Scottie S1 (used mostly in the USA)[3]. Using one of these, an image transfer takes 114 (M1) or 110 (S1) seconds. Some black and white modes take only 8 seconds to transfer an image.

A transmission consists of horizontal lines, scanned from left to right. The RGB color components are sent separately one line after another in the order R, G, B. Some Robot modes use a YC color model, which consists of luminance (Y) and chrominance (R-Y and B-Y). The modulating frequency changes between 1500 and 2300 Hz, corresponding to the intensity (brightness) of the color component. The modulation is analogue, so there is not a defined number of pixels in each line; they can be sampled using any rate (though in practice, the image aspect ratio is conventionally 4:3). Lines end in a 1200 Hz horizontal synchronization pulse of 5 milliseconds (after all color components of the line have been sent).

Did you know that:

- thousands of pictures can be received every day on your receiver? Whether it is on long- or shortwave, on CB or VHF and UHF, you can come across them everywhere.
- They can be received on HF (e.g. 3730 kHz LSB, 14.230 MHz USB, 21.340 MHz, 27.700 MHz and 28.680 MHz)
and on VHF (e.g. 144.500 MHz FM) and UHF frequencies like 433.400MHz FM....
and from the ISS at 145.825 MHz
- SSTV was used to transmit images of the far side of the Moon from Luna 3!
- SSTV was used to transmit images from inside Apollo 7, Apollo 8, and Apollo 9, as well as the Apollo 11 Lunar Module television from the Moon, see Apollo TV camera.

Why send pictures over the radio?

The ancient Chinese proverb, "A picture is worth a thousand words," is just as true today as it was thousands of years ago. Vision is our highest bandwidth sense and the primary source of information about the world around us. Material is easier to understand and more enjoyable when images accompany verbal descriptions. Would you watch television with your eyes closed? Do you look the other way when talking to someone in person? Why not make your ham radio contacts more interesting by including pictures?

SSTV Frequencies

Frequencies

Using a receiver capable of demodulating single-sideband modulation, SSTV transmissions can be heard on the following popular frequencies:

Band	Frequency	Mode
80 meters	3845 kHz (3730 in Europe)	LSB
40 meters	7170 kHz (7043 in Europe)	LSB
20 meters	14230 kHz	USB
15 meters	21340 kHz	USB
10 meters	28680 kHz	USB
2 meters	144.500 Mhz *145.800 Mhz (only RX! from ISS)*	FM

Note: This list isn't complete, only the most popular bands are listed.

Setup SSTV Engine

This function opens the dialog box, with which the user can control the parameters of the engine. Several functions are discussed here, but I would like to recommend to visit http://mmhamsoft.amateur-radio.ca to find all the details of each function (or in the MMSSTV help), MMSSTV and the engine itself.

SSTV Engine

SSTVENG.DLL = SSTV Engine © JE3HHT - Makoto Mori (MMSSTV)
http://mmhamsoft.amateur-radio.ca

Setup RX-SSTV

This function opens the dialog box, with which the user can control the parameters of the RX-SSTV program. Most functions are self explanatory.

Setup Options

Auto Save Received Images

Enabling this option will save every received picture to your harddisk (into the History). Folder ..\HISTORY
Filename format: Year-month-day_hour.minutes.seconds
2014-12-09_10.49.55.jpg
The filename can change according to the settings you make in the RX-SSTV Setup:
Add the FSK-ID will show: <date>_<time>_<call>.jpg
Add Comment to filename will show: <date>_<time>_<call>_<comment>.jpg

Automatic Start/detect SSTV (Setup->RX-SSTV)

When the Auto button in the RX (Start) mode pane is depressed, MMSSTV automatically starts the receive operation in response to the start trigger signal. The start trigger signal is called VIS signal, which consists of the 1200Hz marker signal and the SSTV mode code (1100Hz and 1300Hz FSK). RXSSTV detects the signal by using a resonant FSK demodulator, and automatically starts the receive operation if it finds the mode supported.

Tip: squelch level can reduce false starts:

Squelch (Setup -> SSTV Engine -> RX)
Four levels (Lowest, Lower, Higher, and Highest) for the trigger threshold can be selected.
Lowest makes RXSSTV trigger with the weakest signal.
Highest makes RXSSTV trigger with the strongest signal. In other words, only the strong signal can kick off the receive operation.

The automatic detection is always ON, unless you manually change it in the Setup RX-SSTV menu. There you can disable it: “Auto Start/Detect SSTV Modes”

Default save format

Is the format of the pictures that are being saved.
Can be JPG with adjustable compression/quality ratio or BMP (best quality, but largest).
JPG or BMP
Use JPG to minimize space on your harddisk.Use BMP to have maximum quality but uses more diskspace.
This can also be selected during saving at any time.

Embed Date/Time/Call in Picture
This will paste the current system time and date into the image itself (bottom) when the image is received.
The format is: RX-SSTV year-month-day hh:mm:ss => 2008-Dec-25 19:30:10
Can be set to “always” to embed date/time on all saved images or only when saving in history, or disabled by selecting “Never”.
It will look somewhat like this: 2021-06-09_15.17.48.JPG

Use MMSSTV filename format
Enable this to use the standard MMSSTV style of fine name format.
It will look somewhat like this: 20240422185608.JPG

Include FSK-ID (call):
This will add the decode call from the FSK-ID (in any) in the stamp.

Add Comment to Picture:
You can add a comment to the stamp too. Ideal to add the frequency to the stamp etc.

Include SSTV mode in stamp
Enable to allow RX-SSTV to paste the SSTV mode of the received image into the time stamp.
Example: RX-SSTV | Robot 36 | Date & Time

Remember screen position
Will place RX-SSTV on start-up at the screen position it was last closed.

Save last received image
With this option enabled the last received image will be saved to the hard disk (in the folder where RX-SSTV is installed).
It will always save the last image separately but with the same file name:
RXSSTV-Last Received.JPG
Function? For example, allowing a FTP program to use the last received image of RX-SSTV and upload it on a website automatically.

Use IrfanView
In menu Edit will appear an option to paste and edit the active image to irFanview.
IrfanView is a freeware imageviewer: http://www.irfanview.com/

Reset
This will Reset RX-SSTV and the SSTV engine to their defaults.
Use in case of trouble, malfunctioning, experimenting with settings etc.

Partial Save
This mode will save images when they are being received but only if the image is at least 2/3 received.
Use this when you are listening on a very busy frequency so RXSSTV can save partial received pictures.
Sometimes when several stations are transmitting over each other and the received image of the prior station gets lost (which is normal because the new "interfering" station is triggering the receive engine again).

Large View
You can switch between normal and double sized view! You do need to restart RXSSTV to apply the changes.
Show Mode, FSKID && Time of Last RX: Shows you the SSTV mode, FSK-ID (if decoded) and time of last received image in big font on the main screen+.

Log FSK ID's.
Just like MMSSTV does when it decodes a call sign from an SSTV signal. (log call from FSKID encoded sstv images)
These are stored in the file "FSKID_Calls.txt"
You can view them from the View-menu "View FSK ID log"
Format: call, date and time
Example: ON6MU = 9/12/2014 10:17:34

Be sure RX-SSTV and the engine is set to decode FSKID.
Setup-menu -> RX-SSTV... -> Log FSKID (Calls)
-> SSTV Engine... -> RX -> Decode FSKID

Note: Of course the sender must include the FSKID to work.
HAM's can set in MMSSTV this interesting feature in the setup menu.

Embed FSK ID
To write the received FSKID in the embedded stamp. If no FSKID is received no call will be written.

You can also add the FSK-ID to the default filename when autosaving the images. This option can be enabled in the Setup menu using ' FSK-ID in Filename'

Add the FSK-ID will show: <date>_<time>_<call>.jpg
When you disable ' FSK-ID at end of filename' the FSK-ID will be written at the front of the filename: <call>_<date>_<time>_<call>.jpg

Assign History Folder
The program will use the folder named 'History' when the default history folder is selected. It could be something like:
C:\RXSSTV\History

When you assign another folder you'll need to enable 'User Defined' and click on the '...'-button. You'll be able to select any folder you want, create or rename a folder.

Auto switch to RX window
you will automatically be switched to the RX window when residing in the History tab and an incoming SSTV signal is decoded.

Transparent Font:
Enables a Font Transparent background, improved with shadow for readability
In combination with **Font Bold** a clear information stamp will be visible.

Tools

Picture Viewer:

A handy little viewer which allows the user to browse through the History and Save folder. It shows the image in real resolution (1:1). You can delete, rename, copy, zoom and edit a picture

Desktop Pixel Magnifier:

Ideal to zoom in at any level on any picture. Yes even parts of your desktop! Handy to really get a good close look at those received images.

Mode Buttons
Quick Access User-definable SSTV Modes
Manual start

In case RXSSTV does not automatically start receiving, or you want to force receiving a picture that is not at the beginning, push one of the mode buttons (or the drop down list which contains every available SSTV mode of the MMSSTV Engine). Then click RX-button to start decoding in your selected mode.

Tip: In JA, HL, and US, try Scottie 1. In EU, try Martin 1.

However, normally it isn't a big problem as the software will auto detect the mode used, switch to that mode, and decode the picture automatically.

Remember that the modes where the 5 buttons are set up in can be changed in the Setup -> RXSSTV menu. Also the default mode can be assigned to any of these 5 mode buttons.

DSP

AFC
Enable/Disable AFC. This is the automatic frequency control of the synchronization signal frequency to which the AFC of the engine locks. The default frequency of the synchronization signal is 1200Hz, but it can be changed by AFC.

LMS
Enable/Disable the LMS filter mode which can reduce de noise (noise smoothing) and/or improves the notch capabilities

BPF
Enable/Disable the Band Pass Filter. It switches between OFF (no bandpass filter) or a very sharp bandpass filter
[0-OFF], broad, sharp, [very sharp]

Tip: These and many other addition DSP settings can be changed in the Setup->SSTV Engine

Slant Adjust

Even if you have the sampling frequency accurately calibrated, the other station might not have it done correctly. To facilitate the slant adjustment, you can activate the automatic slant adjustment function.
To activate this function:
Click "Slant" button in the RX window, or go to Setup SSTV Engine: RX -> check Auto Slant.
It should be noted, however, that this function will not always give a satisfactory result when you have multipath or QRM, which causes jitters in the synchronization.

Ideal would be to calibrate! This can be

ReSync

RXSSTV automatically gets the receive operation synchronized with the transmitted image except in case of AVT90. However, at times it fails to do so under very bad RX conditions (image looks wrongly colored).
If this situation happens, try clicking ReSync button in the RX window

History Storage

The RX history is also used for a permanent buffer, although unwanted pictures can be deleted, or even the entire history contents.
To save an image manually (can be at any time during reception) click the “Save into History” button.
Remember, when in automatic mode (by default) received pictures are automatically saved in the history folder with a date and time stamp in the filename.
Stored images in the history (or in the save folder when using Save As button) can be copied (to the clipboard), deleted, or edited.

In Setup RX-SSTV this automatic saving mode can be disabled “Auto Save Received Images”.
Saved images can be JPG with adjustable compression/quality ratio or BMP (best quality, but largest). This can also be selected during saving at any time.

BMP format: It should be noted that one image requires about 200KB disk space, and thus 256 images require about 50MB. Pay attention to the disk space of your PC.

Default Filenames

"[Countrydate]_[System Time in mm.hh.ss].bmp"
Example: 24-10-08_11.16.20.BMP

<Date> = the current date is saved in format:
dd-mm-yy or mm-dd-yy according to your PC settings

When you add the FSK-ID: <date>_<time>_<call>.jpg
when you add a Comment to filename: <date>_<time>_<call>_<comment>.jpg

UISS

For those who don't know about UISS, in short: This program has been designed for packet communication with ISS (International Space Station), PCSat, ANDE or 'compatible' satellites with ease...
Download it here please: http://users.belgacom.net/hamradio/uiss.htm

How to run RX-SSTV from UISS?
There are several ways to do this:
1) In UISS: go to Setup->Extra->"Run Application on StartUp"
there you can browse to the RX-SSTV folder and let UISS start RXSSTV automatically.

2) To add the following parameter to UISS icon please right-click icon for properties,
and add the following at the end of the Target-string (properties-box):
    /RUN[path]
example:
    /RUNd:\ham\rxsstv\RXSSTV.EXE
of course you replace the above with your rx-sstv path!
After this UISS will run RX-SSTV as it starts

3) copy the contents of the RX-SSTV folder to UISS \ExternalPrograms folder.
Next time you start UISS you'll see RXSSTV in the Launch-menu.

Calibration

The easiest way is to use Auto Slant in the SSTV Engine Setup (RX). This is set by default. The program will try to auto adjust slanted images.
Setup->SSTV Engine->RX->Auto slant

However, the best way is to calibrate RX-SSTV to a WWV signal (10Mc, 15Mc etc.). This is how:

- Go to Setup-menu->SSTV Engine->Misc and push "Adj" button near the bottom left
- Next you can select full screen for best resolution. The screen should be mostly all black to start..
- Right clicking the screen anywhere near the white line will position green to help with the alignment .
- See the example screen with the diagonal "slanted" white line.
- You should receive the WWV signal that sounds like CW (although its coordinated universal time) for a little while Full screen will get you the highest resolution. This may take a few minutes.
- You should start seeing a reasonably straight white line but it may be on an angle.
- Single click on the very bottom of the line and then again at the very top of the line. The dialog box should close and a new clock number will be set. You may need to repeat this operation a couple time to get the hang of it

- If you get a line with a lot of slant, you may need to do this procedure a few times. The more vertical the line gets after each adjustment, capturing more of the line will get you the highest accuracy. (points further apart from each other will get the highest accuracy) Full screen dialog box with a full length line from the top of your monitor to the bottom will get you the best results.
- Right click on the screen to get the green positioned near the white line to check vertical alignment for best results.
- Once the line is as vertical as you can get it, you have now corrected your sound card crystal frequency. Your receive crystal is now corrected.

If everything goes wrong you can use the backup file: sstveng.bak or use RESET function in the RX-SSTV SETUP options.

TX?

No TX. Why? Because there are many many SSTV programs that do a great job receiving and transmitting SSTV, but none for the SWL (short wave listener). Because SWL's don't need TX this part of the program can be left out. No settings for com-ports, ptt interfaces and no transmissions by activating the TX by mistake! A totally harmless program for even the youngest of SWL's who want to discover the world of digital communications, like SSTV.

Legal- And Donation Info

RX-SSTV is NOT public domain, but it is for free!!! Released as FreeWare.
There is no registration and no payment. The author keeps the copyright and all other rights.
Permission to sell RX-SSTV for profit is prohibited. Please contact the author for permission.

It uses the freeware engine: SSTVENG.DLL (© MMSSTV Engine JE3HHT - Makoto Mori

Any support you can provide for the RX-SSTV project is greatly appreciated.
If you find it useful and would like to make a contribution please send it to my address (to be found at qrz.com), or via my PayPal account 

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RXSSTV is Freeware. There is no registration and no payment obligated. The author keeps the copyright and all other rights!

It is not allowed to:
- Modify or patch the program, or in any way disassemble or change anything.
- distribute the program without all the matching files
- Distribute the program under another name than RX-SSTV*.*
  only the extension (*.ARJ, *.LZH, *.ZIP and others) may vary.
- Ask money otherwise then the real costs of transport.
  Asking money for each program is strictly forbidden under this concept.

It is permitted to:
- use this program freely
- make as many copies as you like and give them away, if complete with:
  RXSSTV.EXE
  SSTVENG.DLL (© MMSSTV Engine JE3HHT - Makoto Mori)
  SSTVENG.INI
  SSTVENG.BAK
  TABCTL32.OCX
  MANUAL.PDF
  SC_SELECT.MMW

AND UNALTERED!
By using the program you accept these conditions.
NO GUARANTEE !
The one who thinks of any action on behalf of local regulations, then it is not allowed to use this program!

Hardware/Software Requirements

- A Windows based PC or Linux PC running WinE
- Windows XP/Vista/Windows 7/8/10/11.
- Soundcard that support minimum 16bit 11025Hz mono format...
- A receiver...

History and what's new in this version

Version 2.3.1

Log related issues:

- - Log Only FSKID Calls: did not filter out the FSKID calls, hence logging all calls: Fixed
- - The log showed the wrong filename: previous saved/received image. Fixed
- - Issues with log when "Save last received image" is switched on. Fixed

Special thanks for this release goes to James 2E0JHJ!

Version 2.3.0

- New: Option to automatically add the received SSTV mode into the picture filename.
- New: Three options to select logging type: 1) FSK-ID valid received call, 2) All received pictures including pictures where no FSK call is detected (tagged as NoCall in the log), 3) no log at all.
- New: Improved setup layout.
- New: The limited internal FSKID log viewer is now replaced with (c) Windows Notepad or the associated text editor.
- New: Stay On Top: keeps RX-SSTV on top of other running programs.
- Now includes a highly tuned and much improved MMSSTV Engine settings Spectrum/Waterfall. Also a backup of the default sstveng.ini will be added during install/. Thanks to Nigel G4DCQ for Engine settings.
- Max comment length reduced from 30 to 20 characters.
- New: Erase the RX screen.
- Resetting RX-SSTV now offers three options: 1) Reset RX-SSTV settings only, 2) reset MMSSTV engine only, 3) reset all.
- PictureViewer: an enlarged file list has been added to accommodate longer filenames when including the SSTV mode in the save picture filename.'
- PictureViewer: now also has a directory selector to allow browsing through folders and seperate fast access button to user defined folder (if applicable).
- When using Windows 11/10 and the classic PaintBrush isn't found, it will open the default Windows Picture Editor/viewer.'
- Bug Fix: Prevent multiple instances from running (app.previnstance).
- Extra confirmation built-in when deleting the entire history folder.
- Bug fix: Opening "Sound and Control Devices" now correctly opens the Record box and device input settings.
- During install a backup file of the MMSSTV-engine: SSTVENG.BAK will be added with the superior Nigel G4DCQ settings.
- New major installation update: previous installation directory is now detected (if any) - installation on 64bit win10/11 had some issues. This alkl is fixed now. ,(users that still using XP can download the old version)
- New app Icon
- minor debugging and improvements

Version 2.2.0

- bug fix: Adding a "Comment" does not appear on the picture unless "Include FSK-ID" is selected: fixed
- New: Font can be set to Bold (date/time/comment stamp)
- New: Font can be set as transparent (date/time/comment stamp) and the font will have a black shadow for readability
- New: Log FSK-ID Calls now also includes the SSTV mode in which the image was received (FSKID_Calls.txt)
- New: you can optionally enable extra info with enlarged font (FSK-ID, Mode, Time) when using large SSTV screen
- New: You can now choose between RXSSTV- or MMSSTV filename format
- Setup window rearranged, enlarged and cosmetics
- Changed: Icons on the main screen RX-tab and History-tab have new and more logic icons
- Changed: The main start/stop button caption has been changed: "Receiving..." is replaced with the word "Listening..."
- some minor bugs fixed
- Updated Installation, Help and RXSSTV includes now sc_select.mmw (c)MMSSTV

Version 2.1.6

- New URL for support group/forum
- tweak of the position of bottom text (date stamp)
- BPF is set off by default (BPF = band pass filter)
- Improved installation

Version 2.1.5

- RX-button is now called "Receiving". Also the tooltips of that button are more explanatory for beginners
- Options (when you Right mouse-click for options in History-view) are placed more logically and use of separators for easier view
- Default modes have been set to PD120 which is now widely used in ISS
- A long time bug fixed: when you went to the History to Browse with the direction buttons they did not work at first click (needed a second click and thereafter no problems).
- Picture Viewer: large format SSTV images was not shown in the correct size when the Picture Viewer is opened: fixed
    - when right click in RX image or opening a file in the Picture Viewer, the file will automatically be selected in the file list
    - on some systems the last few characters of the file names were not shown: fixed
    - minor layout improvements
    - The "Open Folder" button was disabled when changing folder: fixed
- And some other minor tweaking, cosmetic changes and improvements

Version 2.1.0

- new: Auto switch to RX window (you will automatically be switched to the RX window when residing in the History tab and an incoming SSTV signal is decoded)
  option also available in the Edit-menu as of course in the right-click mouse button options in the History tab.
- new: Open History Image in Picture Viewer
- new: Open Saved Image in Picture Viewer
- new: Browse in Save Folder...
- changed in File menu: Browse History -> Browse in History folder...
- The "Open File" dialog will now show all types of compatible bitmap types: jpg and bmp together (not just one type at a time)
- bug fix: prevent Run-time error "521': Can't open Clipboard. This caused a crash of RX-SSTV. The reason for the fault was accessing the clipboard at the very same moment as another application (or running more than one copy of RX-SSTV)
- The build-in Picture Viewer now also shows the complete path and filename
- new About window

Version 2.0.1

- prevent invalid FSKID character hence error in saving file

Version 2.0.0

- New: Open dialog: Open any picture (jpg,bmp) from any folder and open it with your assigned default program (often the Windows picture viewer)
- New: History- and Save folder Picture Viewer. It shows the image in true size (1:1)
- New: Flip FILE-ID in the filename (front or back of the default file format)
- New: Add a 'Comment' to the received picture (next to the embedded time and date)
- New: Add the 'Comment' also to the filename
- The optional 'Comment' is shown in the Titlebar (RX-SSTV->Setup->Add Comment to Picture)
- New: Change the History image storage directory. Also handy if you want to have a collection of history folders, or useful if your history folder gets too large etc.
- New: button to open an image in the Picture Viewer
- New: a pixel magnifier (zoom) that enables you to zoom in on a received picture or anything else on your desktop.
- New: Tools menu: contains the Picture Viewer and Desktop Pixel Magnifier
- Bug fix: Sometimes images were saved two times in the History folder (one with FSK-ID and one without)
- Shortcut keys added to Copy (CTRL C), Open file (CTRL O), Picture Viewer (F5). You can now also delete a file using the DEL key. F11=setup SSTV Engine, F12=Setup RX-SSTV
- RX-SSTV setup layout adjustments and new options added
- Program position on the screen now remains unique for each installed copy
- The embedded program id stamp is changed from: RX-SSTV | to RXSSTV: (gives somewhat more space to add a comment)
- Several bugs fixed, code optimisation and revision
- Installation program using improved compatibility for Windows 10

Special thanks to Arno PD3ADN

Version 1.4.3

- New: optional add FSK-ID to the filename when saving
- bug fix: height of the main screen is increased to fix partially hidden icons when large fonts are used in the OS
- bug fix: The file counter showed "empty" when there was one picture was in the History folder: fixed
- Signal Spectrum FFT default
- bug fix: RX-SSTV freezes when closing the program using the menu File->Exit (thanks Cor PD0RKC)

Version 1.4.2

- bug fix: did not save image without FSKID when autosaving and embed FSKID is on
- new: selected file number and total saved pictures is displayed in history
- new: "Confirmation on Delete" : disable to turn off the confirmation dialog
- on fresh installation JPG on quality 85% is used by default (instead of bmp)
- some other minor bugs solved

Version 1.4.1c

- bug fix FSK-ID stamp fixed, but still beta!

Version 1.4.1

- View FSK-ID log now has info on how to receive and use it.
- Some improved error trapping
- Debugged logging embedded FSKID calls (beta)
- Default Auto Resync and Auto Slant is set on in the SSTV-Engine
- MMSTV url updated
- New: FSKID list shows total of decoded calls
- New: FSKID list Refresh (reloads the latest list)
- New: FSKID log can include the filename (optional)
- and other minor improvements

Version 1.4.0

- New: large view! Can be switched between normal and double sized view.
- New: Log FSK ID's. Just like MMSSTV does when it decodes a call sign from an SSTV signal. (log call from FSKID encoded sstv images)
- New: View FSK ID log (FSKID_Calls.txt = call, date and time)
- New: Embed FSK ID (call sign) in the embedded stamp
- New: Save partially received images to history (2/3 received)
- Bug in Windows 7 and 8 opening the sound settings: fixed
- Menu File->'Run Explorer' is now called 'Browse History'
- Menu Setup->'Soundcard Input' is now called 'Sound Control and Devices"
- Sometimes IrFanView was not found if installed: fixed
- fix: Go to the next file in the list when deleting a picture from the History
- and other minor bug fixed

Version 1.3.1

- 'Windows 64bit error SNDVOL.EXE: now new method in detecting windows versions hence solving the SNDVOL not found issue

Version 1.3.0

- On some Win7 systems the error SNDVOL32. Fixed
- Add sstv mode to image timestamp (In Menu Setup RX-SSTV. Optional and default enabled)
- Save last received image to a fixed name (RXSSTV-LastReceived.jpg), for example: upload on a website
- Manual now in PDF format

Version 1.2.2

- “RX-SSTV" was forgotten in timestamp utc
- Looks for RX-PSK31, if installed then user can run it from the file menu
- Slightly improved program icon

Version 1.2.0

- Use local time or UTC time in the default filenames and in the embedded date & time stamp
- IrfanView awareness: If IrfanView is installed on your PC then you'll get an extra option to choose between IrfanView instead of ms-paint to edit
- right-mouse-click options in the picture window
- some options in the menus were enabled in sections (RX or History tab) where the option(s) was not applicable: fixed
- last image viewed in history remains selected after switching between RX and History
- some minor bugs fixed

Version 1.1.0

- New: JPG support (XP/Vista, win 95/98 users probably need to download Microsoft gdiplus):
  choose JPG compression/quality
  choose between bmp/jpg as default or during save
- New: remember last screen position (optional enable/disable)
- Bug fix: blanc/or same save when RX was running and user is in History
- Error 380 fixed and improved error trapping
- Saving format is now yyyy-mm-dd_hh.mm.ss => 2008-12-25_19.30.10
- New: Embed date and time into picture (optional: never, only when saving in history, always)
- In History and want to save the image, then the viewed picture filename is used by default (not current date/time)
- Renames automatically files in existing history for compatibility
- Reset RX-SSTV and the SSTV engine to their defaults (Setup)

Version 1.0.1

- Icons in tab-window were to large on some systems: fixed
- Tab order of the keys fixed
- Help now contains calibration explanation

Version 1.0.0

- Mother of all versions ;-)

At Last...The End

For the newest version you can look at my homepage:
http://www.qsl.net/ON6MU

For the latest received SSTV images please visit:
http://www.cqsstv.tk/

Many greetings and God Bless!

Guy, de ON6MU
Belgium

Please consider to buy me a coffee: PayPal Thank you!