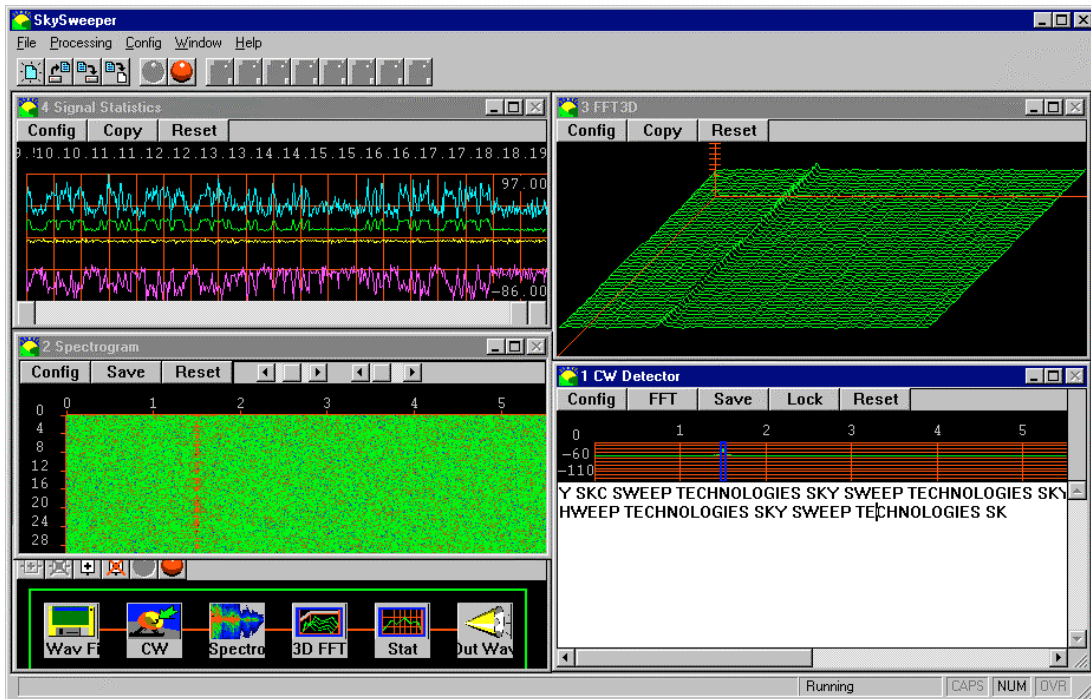


SkySweep Technologies



SkySweeper

Product family technical description (3.13/4.13/5.13)

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SkySweep Technologies

Company Overview

SkySweep Technologies is a Finnish high-tech company which goal is to provide world class solutions provides world class solutions for the high speed encrypted HF/VHF e-mail, data, GPS based positioning, radio DSP, radio signal analysis and decoding

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SkySweeper Overview

SkySweeper is a registered trademark of SkySweep Technologies company. It is sound card based radio signal decoding, analysis and transmitter software. SkySweeper is very easy to use and provides advanced user to interface to modify the decoding blocks and configuration in a very flexible way. The SkySweeper is compatible with all the HF /UHF/VHF transceivers including Winradio+VSC (Virtual Sound Card).

The minimum system requirements for SkySweeper are:

- CPU 1.2 GHz
- High quality internal or external sound card
- 30 MB of Hard Disk space
- 512 MB RAM
- Windows NT, 2000,XP or Vista operating system
- HF / VHF / UHF transceiver.

System Setup

General overview

The basic block structure of the program operation is shown in the picture (Figure 1) below:

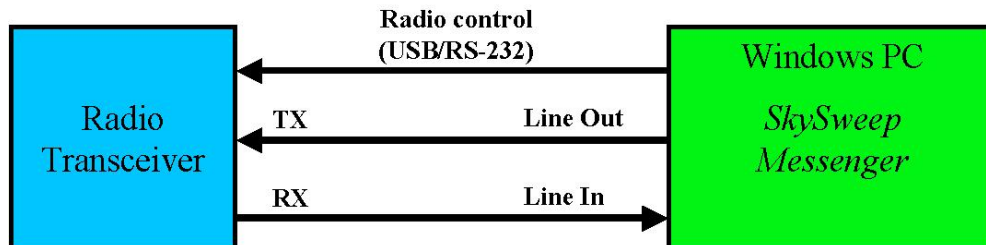


Figure 1

Radio Transceiver is the SSB HF/VHF/UHF transceiver. The SkySweeper is compatible with all the HF /UHF/VHF transceivers including Winradio+VSC (Virtual Sound Card).

Radio Interface Unit (optional) provides the galvanic or optical isolations between radio transceiver and the digital parts (PC and sound card). It also provides the USB<->RS-232 conversion. There are many suitable products for this. One recommended product is the USB Interface II by Microham: <http://www.microham.com/USB%20interfaces.html>

Sound Card makes the audio A/D and D/A conversions. If the computer is equipped with high definition onboard sound card like the latest Realtek or ADI products, it is strongly recommended to use those. If there's no high quality onboard sound card available, it is recommended to use external USB based Roland Edirol UA-1EX product. Please, note that the UA-1EX should be used with it's own driver not with the Windows default USB sound drivers. The link to the product description is: <http://www.roland.com/products/en/UA-1EX/>

SkySweeper Versions

SkySweeper Standard

SkySweeper Standard is the key member of the SkySweeper product family. Standard version is targeted to advanced HAMs or SWLs seeking optimal product for the most common HAM modes as well as decoders for the most common utility modes. It also provides wide range of DSP functions like filtering and high quality signal analyzers. To secure your investment SkySweeper Standard provides also future proof upgrade path to SkySweeper Standard Plus and Professional.

SkySweeper Standard Plus

SkySweeper Standard Plus is targeted to advanced HAMs or SWLs seeking even more decoders and analyzers than SkySweeper Standard provides. To secure your investment SkySweeper Standard Plus provides also future proof upgrade path to SkySweeper Professional.

SkySweeper Professional

SkySweep Professional is the most sophisticated member of the SkySweeper product family. This new, Professional version, is targeted toward Government Agencies, Professional Radio Monitoring and the advanced HAM or Utilities SWL. But, the PRO version is still simple enough that a hobbyist looking for a more advanced decoder will be pleased with it's ease of use and state of the art advanced features. SkySweeper PRO contains all the features of SkySweeper standard, but contains very advanced signal analyzers and decoding tools. There are analyzers for signal and modulation analysis such as a high resolution FFT, modulation speed, signal phase analyzers as well as bit domain analyzers. In addition there are several generic (universal) decoders (FSK, MFSK, MPSK, MSK, PAM and PSK) which are used to decode known/unknown transmissions. The generic decoders combined with universal bit tools provide the very best tools in the market for digital transmission decoding and analysis. These "generic" analyzers can be configured to almost any type of transmission mode. The more advanced the user, the more advanced the tools can become.

SkySweeper Features

The features of the SkySweeper versions are shown in table below:

Feature	STD	PLUS	PRO	Feature	STD	PLUS	PRO
3D-FFT	X	X	X	COQUELET-8		X	X
AGC	X	X	X	COQUELET-13		X	X
AUTO CORR	X	X	X	PICCOLO-6		X	X
CHAT	X	X	X	PICCOLO-12		X	X
IQ CONST	X	X	X	MFSK-36		X	X
CW TX	X	X	X	HIGH RES. SPECTRUM		X	X
CW RX	X	X	X	DTMF		X	X
DC LEVEL	X	X	X	CTCSS		X	X
DC REMOVE	X	X	X	STANAG 5066		X	X
LOG FILES	X	X	X	STANAG 4285 RX		X	X
FFT	X	X	X	STANAG 4285 TX		X	X
WATERFALL	X	X	X	MIL-STD-188-110A/B RX		X	X
FILE SCROLL	X	X	X	MIL-STD-188-110A/B TX		X	X
GAIN	X	X	X	FED-STD-1052 RX		X	X
INTERNET	X	X	X	FED-STD-1052 TX		X	X
MFSK16 RX	X	X	X	STANAG 4539 RX		X	X
MFSK16 TX	X	X	X	STANAG 4539 TX		X	X

2MFSK16 TX	X	X	X	OFFLINE BIT ANALYZER			X
2MFSK16 RX	X	X	X	ONLINE BIT ANALYZER			X
4MFSK16 TX	X	X	X	PHASE ANALYZER			X
4MFSK16 RX	X	X	X	QPSK RX	X	X	X
NOISE SQUELCH	X	X	X	QPSK TX	X	X	X
MULTIPLE SOUND CARDS	X	X	X	RECORDER	X	X	X
OWN CONFIG	X	X	X	RECORDER SQUELCH	X	X	X
FREQUENCY SHIFT	X	X	X	SIGNAL STATISTICS	X	X	X
PSK31 RX	X	X	X	TX CONTROL	X	X	X
PSK31 TX	X	X	X	RTTY RX	X	X	X
PSK63 RX	X	X	X	RTTY TX	X	X	X
PSK63 TX	X	X	X	SATURATE	X	X	X
PSK125 RX	X	X	X	SIGNAL VIEW	X	X	X
PSK125 TX	X	X	X	SKYBOOST RX	X	X	X
TX MACROS	X	X	X	SKYBOOST TX	X	X	X
RECORDER TIMER	X	X	X	PICTURE AUTO SAVE	X	X	X
SIGNAL POWER	X	X	X	ACARS	X	X	X

AMTOR	X	X	X	FELD-HELL RX	X	X	X
AUDIO EXPANDER	X	X	X	FELD-HELL TX	X	X	X
CHANNEL EQUALIZER	X	X	X	FILTER DESIGN	X	X	X
DSC	X	X	X	GMDSS	X	X	X
DGPS	X	X	X	HFDL	X	X	X
HF-FAX	X	X	X	MARTIN-1	X	X	X
HUM REMOVE	X	X	X	MARTIN-2	X	X	X
KG84			X	MEDIAN FILTER	X	X	X
HISTOGRAM ANALYZER			X	MIL-STD-188- 141A (ALE)	X	X	X
MIXER	X	X	X	FS-1045	X	X	X
NAVTEX	X	X	X	NOTCH BANK	X	X	X
NOISE REDUCE	X	X	X	PACTOR-1	X	X	X
SOUND CARD CLOCK CALIB	X	X	X	PSK105-HELL RX	X	X	X
SCOTTIE-1	X	X	X	PSK105-HELL TX	X	X	X
SCOTTIE-2	X	X	X	PSK245-HELL RX	X	X	X
AMTOR SELCAL	X	X	X	PSK245-HELL TX	X	X	X
ICAO SELCAL	X	X	X	SHIP	X	X	X
SYNOP	X	X	X	SITOR-A	X	X	X

SITOR-B	X	X	X	SSTV TX	X	X	X
GENERIC FSK DECODER			X	SSTV RX	X	X	X
GENERIC MFSK DECODER			X	GENERIC MPSK DECODER			X
WEFAX	X	X	X	GENERIC MSK DECODER			X
GENERIC PSK DECODER			X	GENERIC PAM DECODER			X
HF PACKET (AX.25)	X	X	X	FSK BIT ANALYZER			X
FSK SPEED ANALYZER			X	PSK SPEED ANALYZER			X
GENERIC MPSK DECODER			X	VHF PACKET (AX.25)	X	X	X
OLIVIA RX	X	X	X	OLIVIA TX	X	X	X
SkyOFDM RX			X	SkyOFDM TX			X

Release Notes

Release note for the version 3.13

Changes in the SkySweeper Standard version 3.13 (released 03.03.2008) compared to the SkySweeper Standard version 3.12.

Note

Version 3.13 does not need new activation code if you have registered 3.x standard version.

New features

Improvements

- New generation MIL-STD-188-141A ALE decoder

Bug Fixes

- SITOR-A character repetition problem fixed
- HFDL position report problem fixed
- Several bug fixes to HFFAX

Release note for the version 4.13

Changes in the SkySweeper Plus version 4.13 (released 03.03.2008) compared to the SkySweeper Plus version 4.12.

Note

Version 4.13 does not need new activation code if you have registered 4.x plus version.

New features

Improvements

- New generation MIL-STD-188-141A ALE decoder
- Improved STANAG 4285 decoder
- Improved MIL-STD-188-110A decoder

Bug Fixes

- SITOR-A character repetition problem fixed
- HFDL position report problem fixed
- Several bug fixes to HFFAX

Release note for the version 5.13

Changes in the SkySweeper Professional version 5.13 (released 03.03.2008) compared to the SkySweeper Professional version 5.12.

Note

Version 5.13 does not need new activation code if you have registered 5.x professional version.

New features

Improvements

- New generation MIL-STD-188-141A ALE decoder
- Improved STANAG 4285 decoder
- Improved MIL-STD-188-110A decoder
- New generation SkyOFDM modem (RX & TX)

Bug Fixes

- SITOR-A character repetition problem fixed
- HFDL position report problem fixed
- Several bug fixes to HFFAX