

CW skimmer - SDRPlay

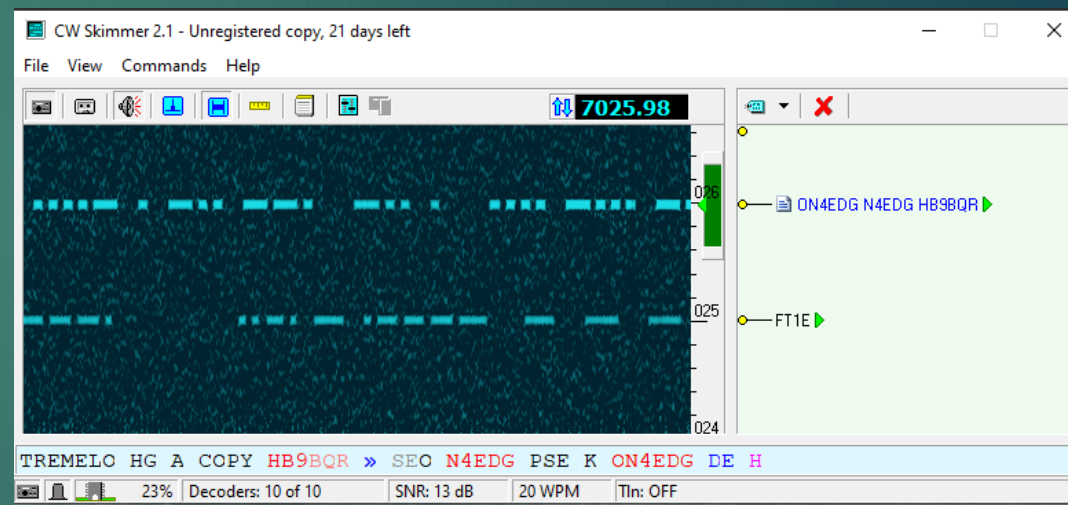


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Introduction to Skimmer softwares

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▶ Two versions

▶ One version with MMI :

- ▶ Provides on a bandmap a list of calls (following a CQ or not) or a plain text decoding on a frequency range.
- ▶ Provides a visual decoding of the signals (dot-dash)
- ▶ May provide with a list of spots (calls following a CQ or not, frequency, date time)
- ▶ It can be interfaced with an audio 3kHz output or an SDR IQ output.

▶ One server version running in background :

- ▶ Provides a list of spots (calls following a CQ or not, frequency, date time) decoded on one or several amateur bands (up to 7). This version directly interfaces an SDR.

Goal of Skimmer tests

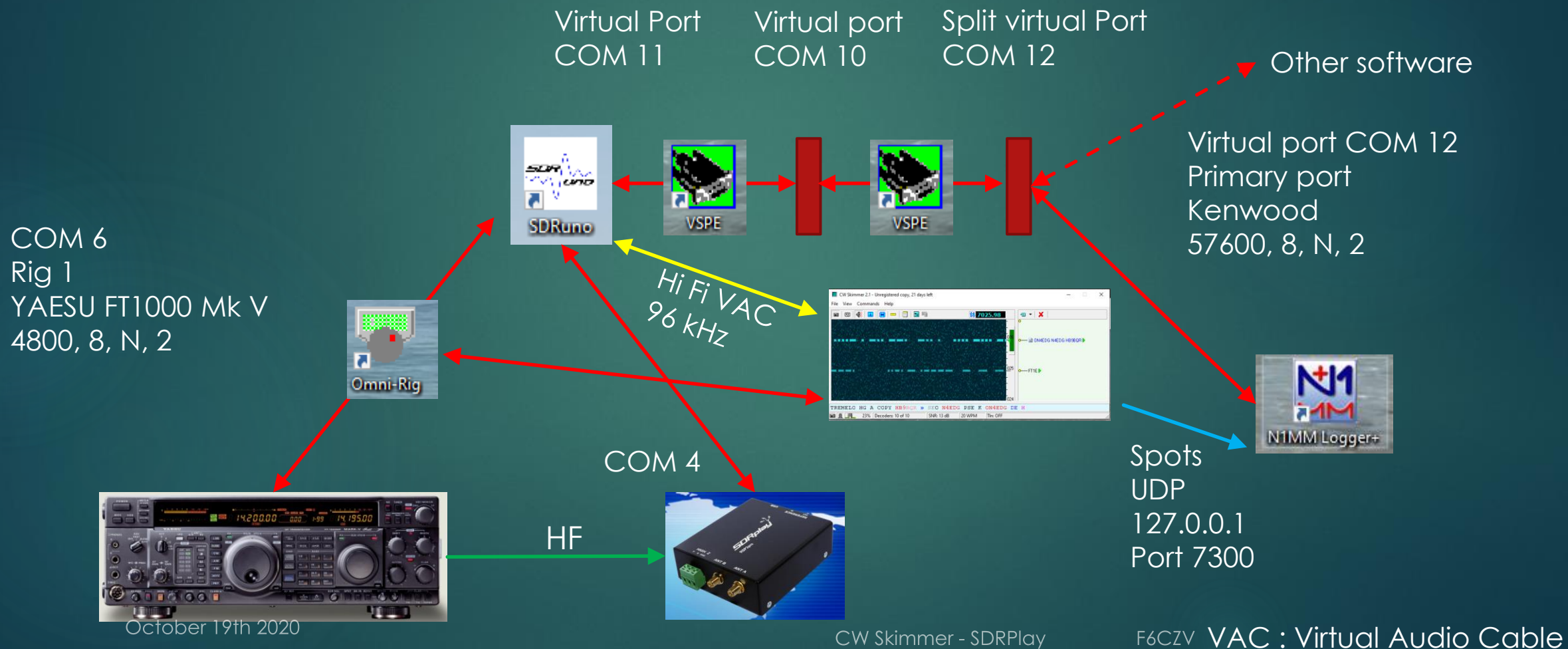
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- ▶ **Identify CW Skimmer advantages in a contest :**
 - ▶ in Search and Pounce mode (S&P)
 - ▶ in Run mode with a 500 ou 250 Hz filter

CW Skimmer

Test configuration

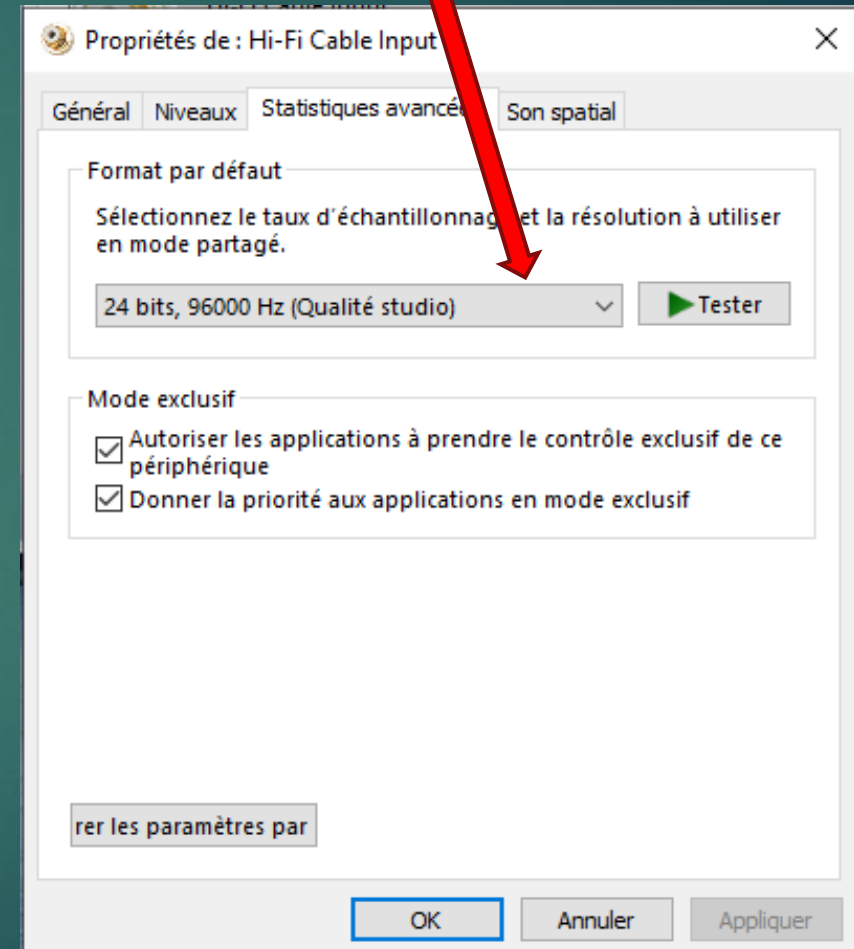
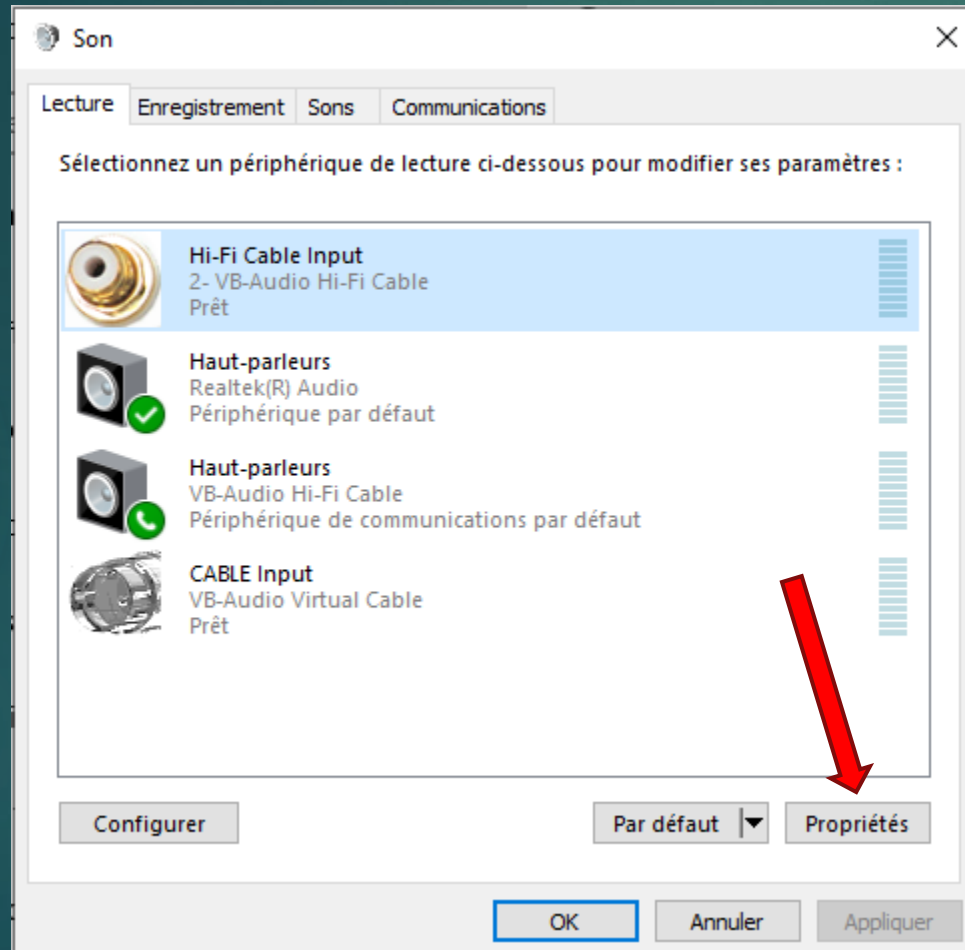
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Hi-Fi Cable Input configuration

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The sampling rate is constrained by the soundcard

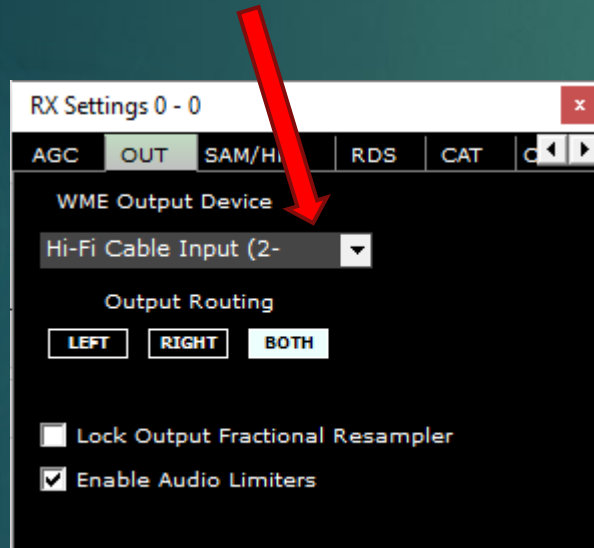


CW Skimmer with an IQ input

SDRUno configuration - IQ

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audio virtual cable output



Bandwidth

IQ mode output



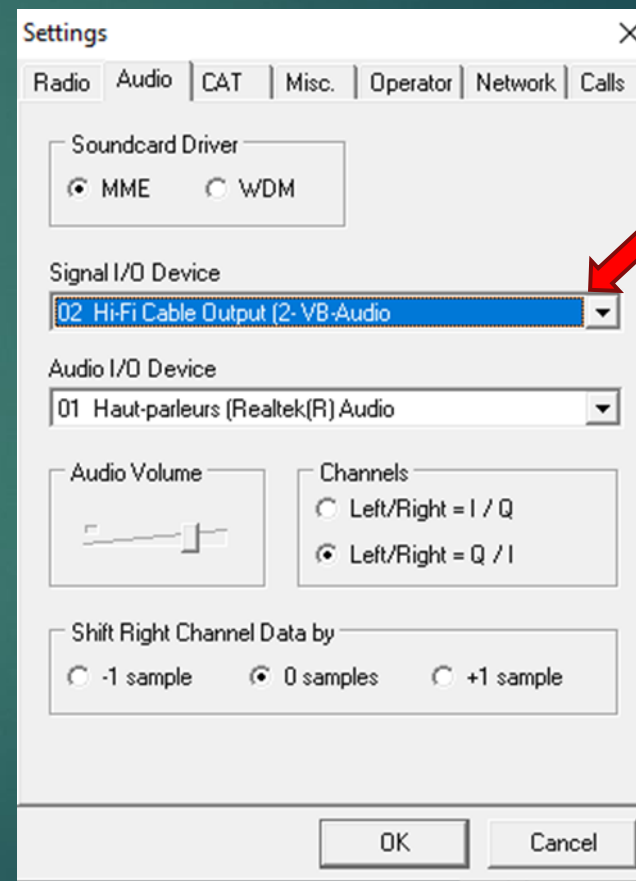
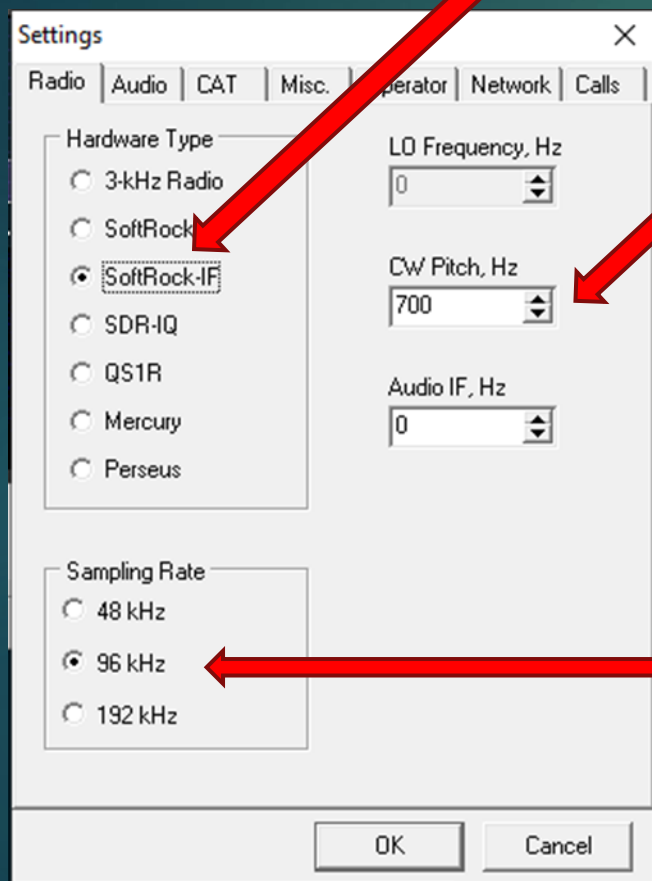
CW Skimmer configuration – IQ (1)

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To be checked for SDRPlay
to synchronize the
frequency display

Radio pitch to
synchronize the
frequency display

Depends on the PC
soundcard sampling rate

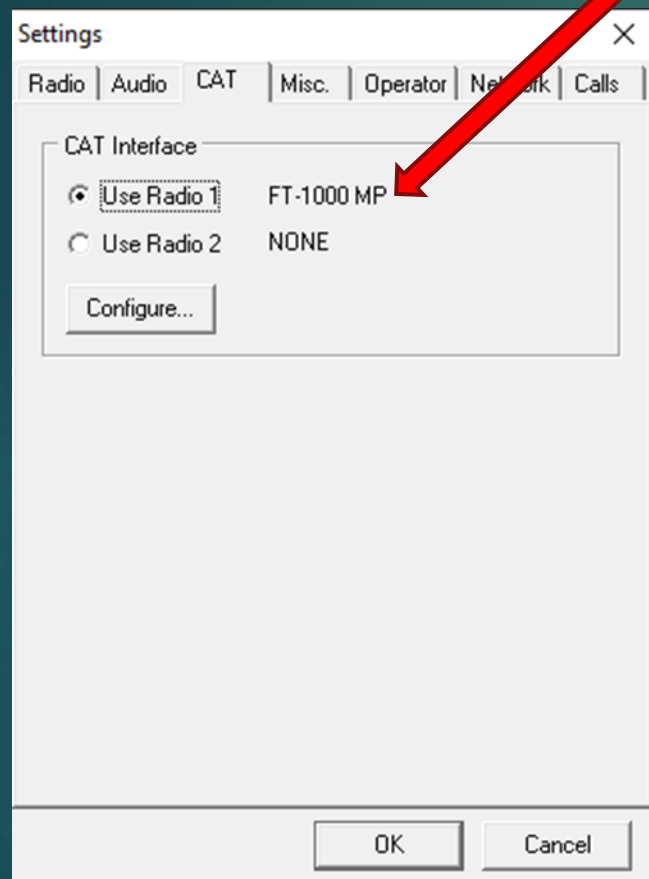


HiFi VAC output

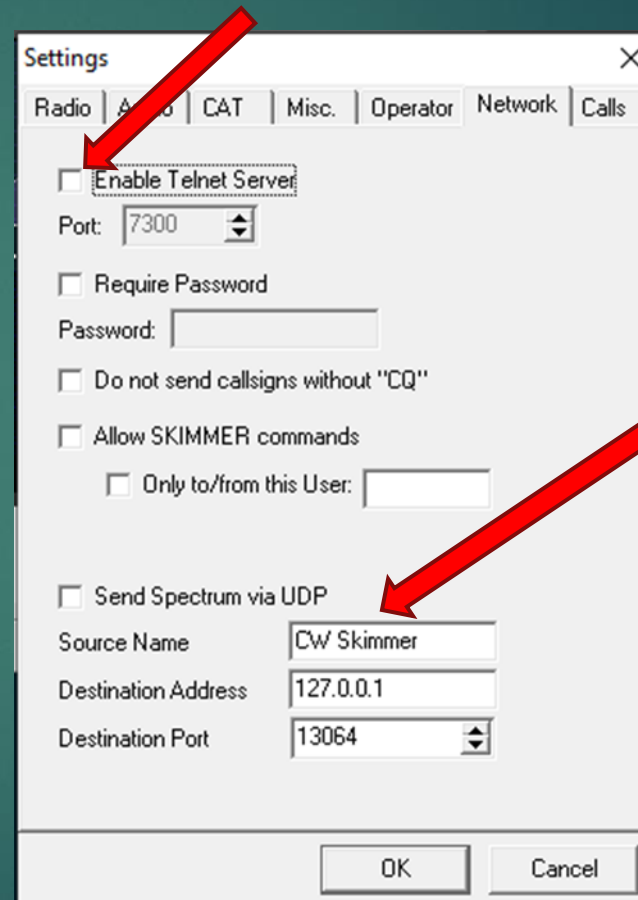
CW Skimmer configuration – IQ (2)

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Omni-rig
configuration



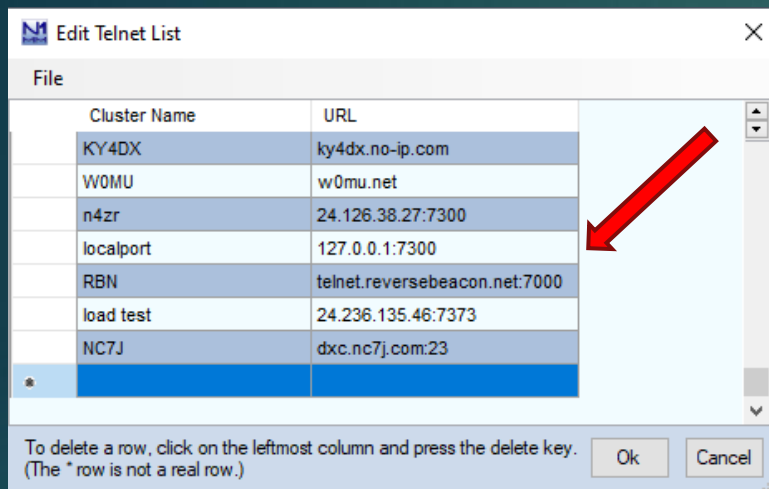
Spots broadcast
activation



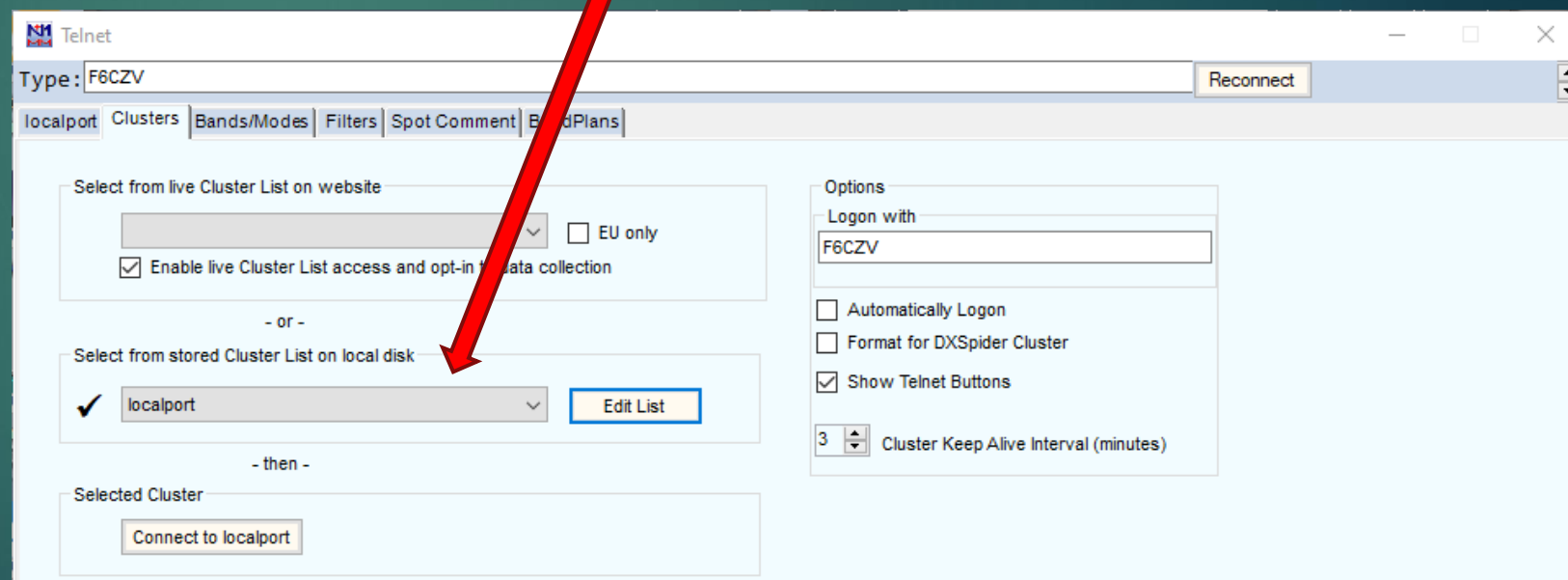
Can be used by the
N1MM+ Spectrum
window

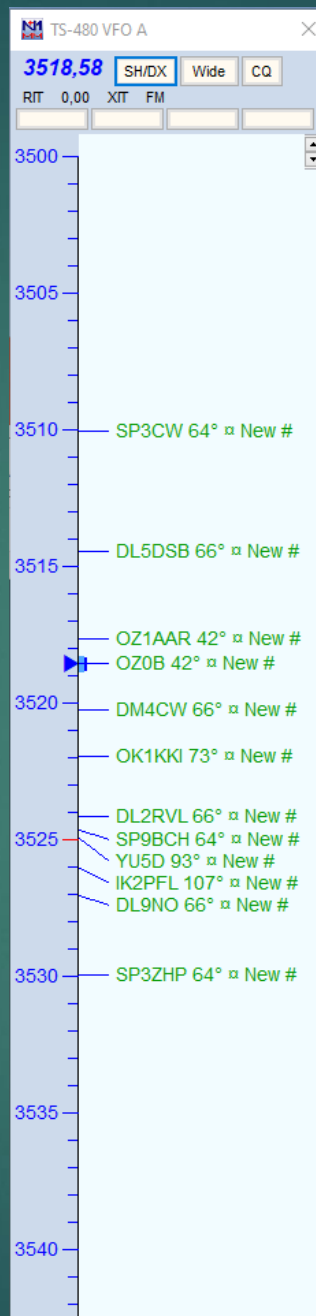
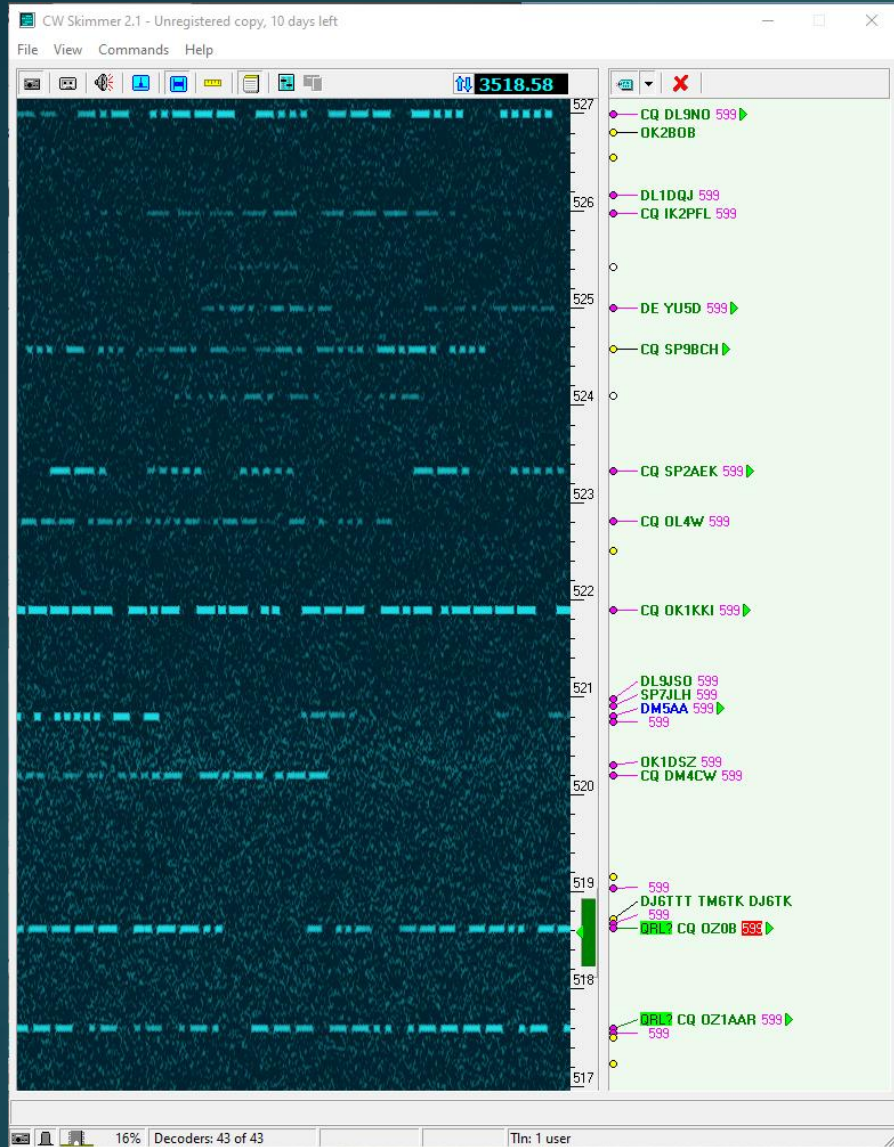
N1MM+ configuration

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Cluster selection





Callsigns

Freq	Utc	Call
3528.0	16:26:03	DJ3RA
3518.7	16:28:23	DJ6TK
3516.7	16:27:05	DL1A
3523.5	16:26:32	DL1DQ
3530.1	16:29:39	DL1DQJ
3515.7	16:26:46	DL1T
3515.7	16:25:54	DL2J
3519.2	16:25:46	DL2LRT
3524.1	16:28:20	DL2RVL
3514.4	16:28:33	DL5DSB
3521.0	16:26:45	DL9JSO
3527.0	16:26:30	DL9NO
3520.2	16:28:19	DM4CW
3520.8	16:27:55	DM5AA
3514.4	16:27:31	DO9PMA
3526.0	16:27:44	IK2PFL
3515.6	16:27:38	LY2TS
3518.5	16:29:24	N5NN
3520.3	16:28:25	OK1DSZ
3521.9	16:27:18	OK1KKI
3526.8	16:28:27	OK2BOB
3529.1	16:25:44	OK6N
3522.8	16:26:22	OL4W
3518.6	16:27:37	OZ0B
3517.6	16:27:36	OZ1AAR
3529.4	16:25:54	SE5E
3524.0	16:26:14	SO3D
3520.9	16:28:05	SP1GZF
3523.4	16:25:58	SP2AEK
3515.0	16:28:06	SP2HMT

Calls: 35

CW Skimmer with a 3 kHz input

SDRUno configuration – 3 kHz

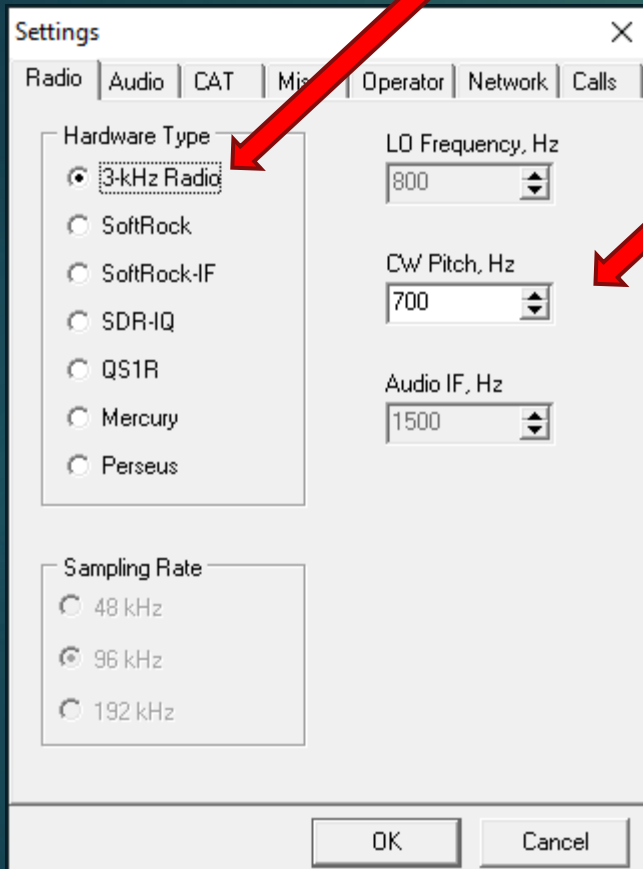
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Bandwidth

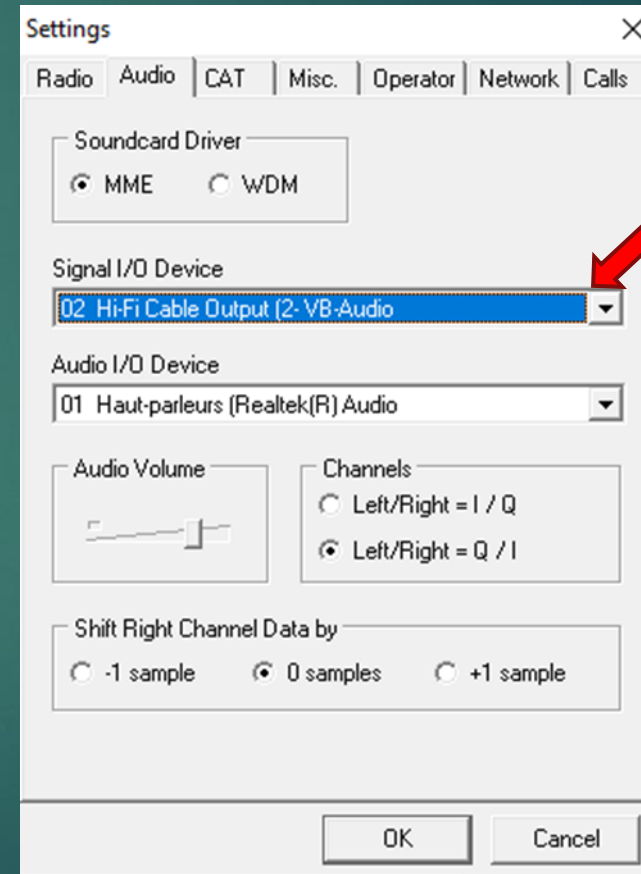


CW Skimmer configuration - 3 kHz (1)

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Radio pitch to
synchronize the
frequency display

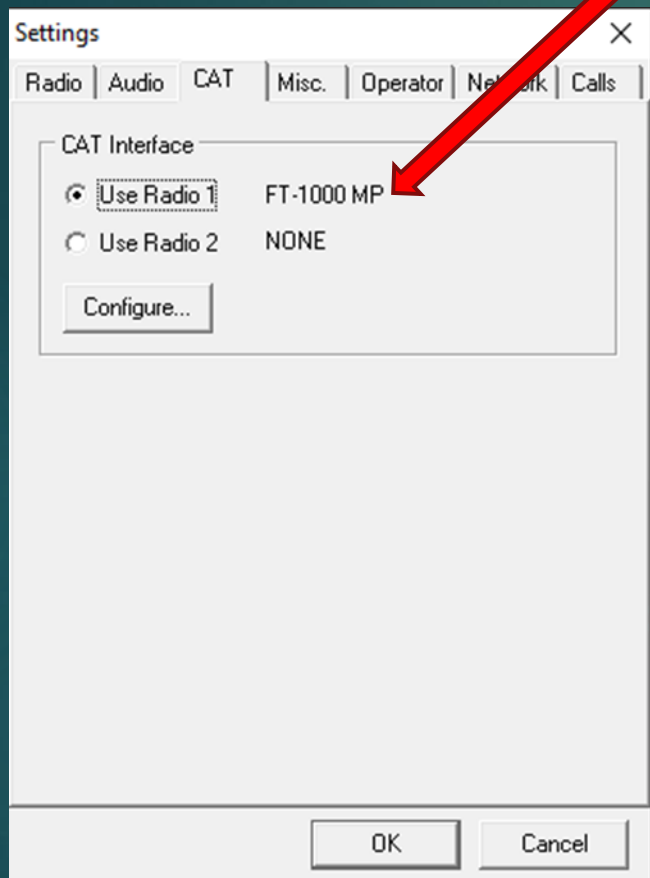


HiFi VAC output

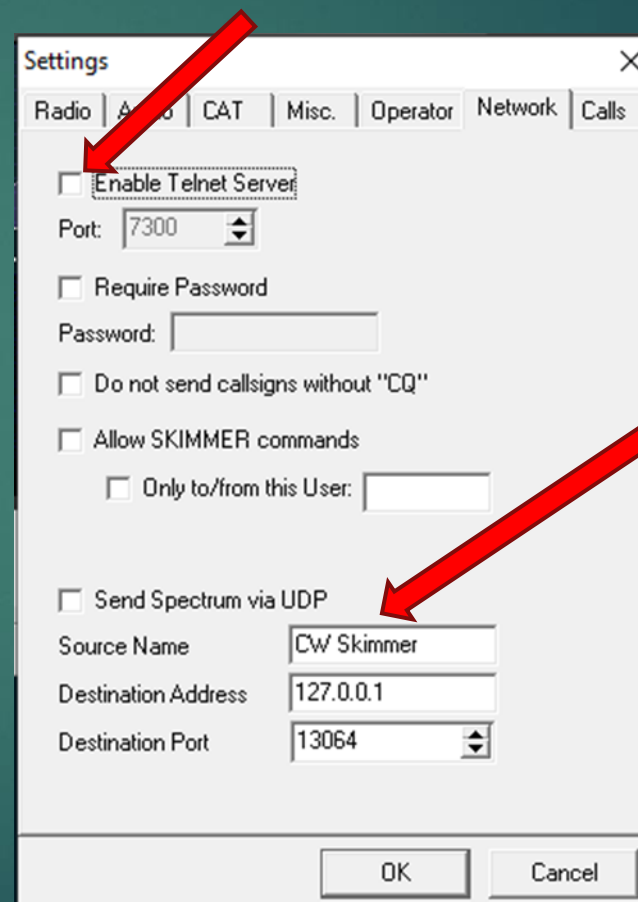
CW Skimmer configuration 3 kHz (2)

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Omni-rig
configuration



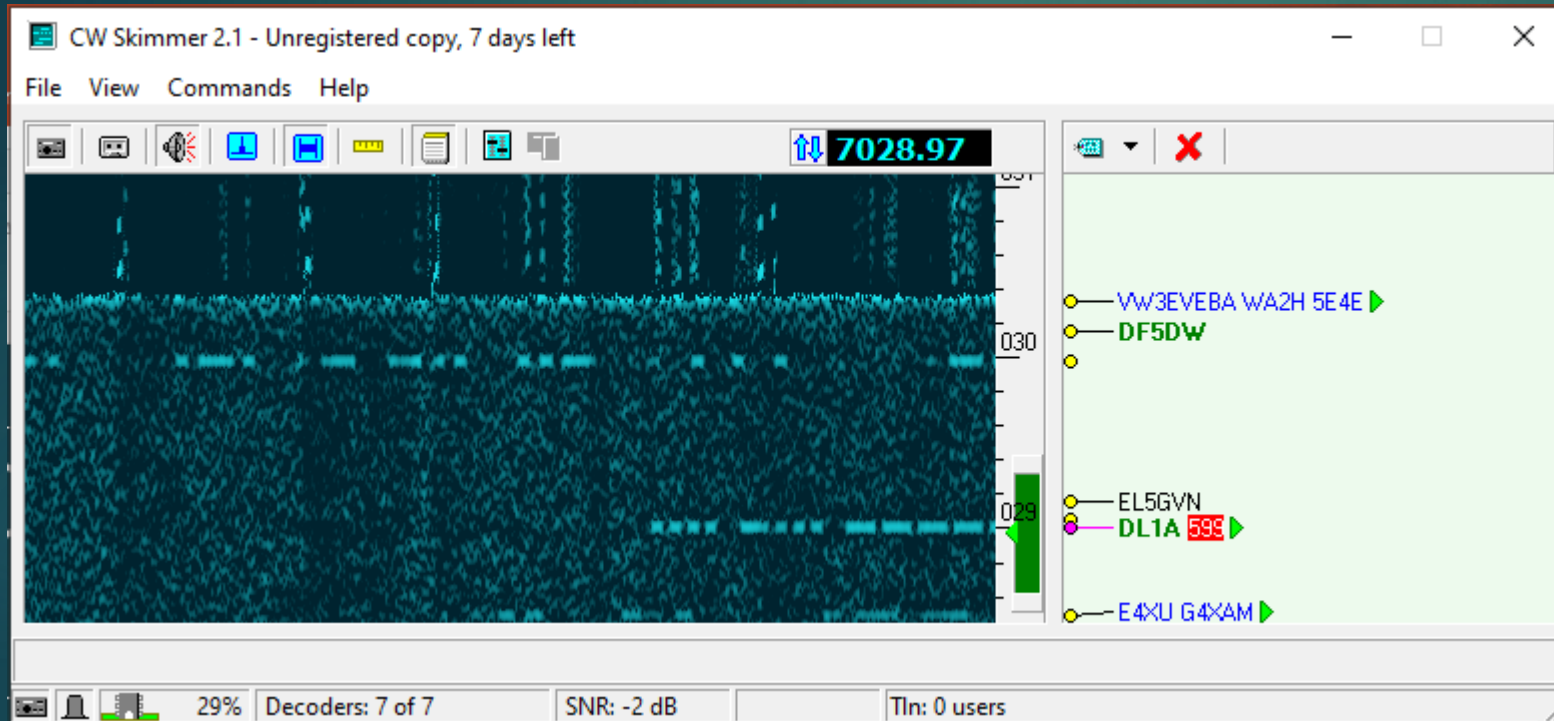
Spots broadcast activation
No interest with a 3kHz bandwidth



Can be used by the
N1MM+ Spectrum window
No interest with a 3kHz
bandwidth

CW Skimmer windows - 3 kHz

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Callsigns		
Freq	Utc	Call
7030.2	10:56:25	DF5DW
7029.0	10:56:16	DL1A
7029.0	10:56:10	DL1AVK
7029.0	10:52:51	EE2A

Calls: 4

Contest use

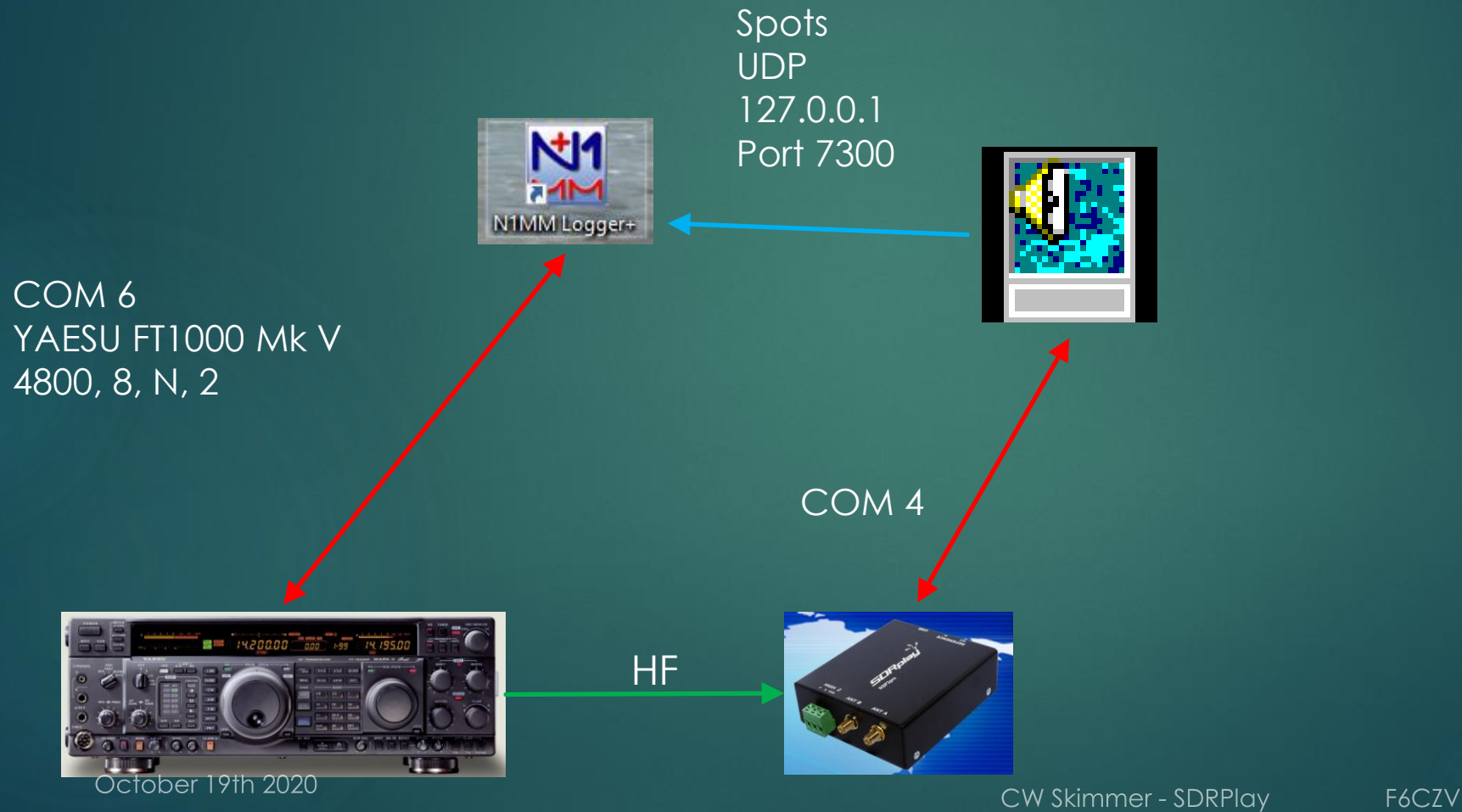
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- ▶ Scarcely decodes a pile-up in a 250/500 Hz bandwidth (Run mode)
- ▶ Ease the work either by the callsign decoding / plain text or by the visual decoding (dots / dashes) in the window. (there more and more stations sending CQ or reports at 35/40 wpm ☹)
- ▶ Supplies the band spots which are heard at the station and not in another country (+ for the S&P mode)

Skimmer Server

Test configuration

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Skimmer Server – SDRPlay Interface

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- ▶ **Download SDRPlayIntf from Dxatlas-SkimServer**
- ▶ **Download and install "API/HW Driver" if not already done (from the SDRPlay site)**
- ▶ **Place SDRPlayIntf.dll in the same folder as SkimSrv.exe. Any other DLL's in that folder must be removed.**

Skimmer Server configuration

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Skimmer Server v.1.6 - Trial, 10 days left

Status Skimmer Telnet Operator About

Receiver

Segment Bandwidth

Segments

<input type="checkbox"/>	1 800.0 to 1 891.0 kHz
<input checked="" type="checkbox"/>	3 500.0 to 3 591.0 kHz
<input type="checkbox"/>	7 000.0 to 7 091.0 kHz
<input type="checkbox"/>	10 100.0 to 10 191.0 kHz
<input type="checkbox"/>	14 000.0 to 14 091.0 kHz
<input type="checkbox"/>	18 068.0 to 18 159.0 kHz
<input type="checkbox"/>	21 000.0 to 21 091.0 kHz
<input type="checkbox"/>	24 890.0 to 24 981.0 kHz
<input type="checkbox"/>	28 000.0 to 28 091.0 kHz
<input type="checkbox"/>	28 091.0 to 28 182.0 kHz
<input type="checkbox"/>	50 000.0 to 50 091.0 kHz
<input type="checkbox"/>	50 091.0 to 50 182.0 kHz

Number of Threads

OK Cancel Apply

SDR selection

Bandwidth selection

Band selection

Skimmer Server v.1.6 - Trial, 10 days left

Status Skimmer Telnet Operator About

Port:

☐ Require Password:

☒ Post Only "CQ" Spots

Validation

OK Cancel Apply

Skimmer Server v.1.6 - Trial, 10 days left

Status Skimmer Telnet Operator About

Telnet Server

☒ Telnet Server OK

SDR Receiver

☒ SDR Receiver OK

Activity

Segment	Decoders
3 500.0 kHz	247

Decoders Number of CPU's

Spots in 30 min. CPU Load

Telnet Users Signals Decoded

OK Cancel Apply

Spots in N1MM+

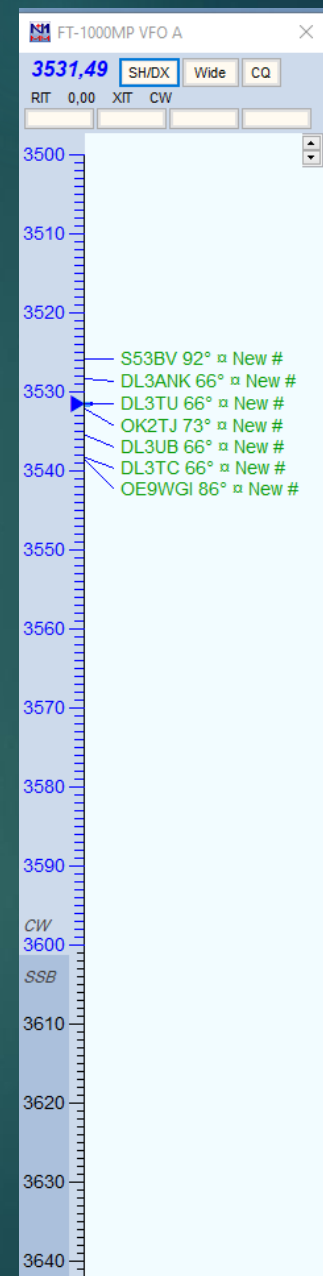
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Telnet

Type: F6CZV Reconnect

localport	Clusters	Bands/Modes	Filters	Spot Comment	BandPlans
3559.6	SN1T	17-oct.-2020	1636Z	8 dB 26 WPM CQ	<F6CZV-#>
3525.4	SN1T	17-oct.-2020	1635Z	9 dB 26 WPM CQ	<F6CZV-#>
3539.3	SN6A	17-oct.-2020	1652Z	15 dB 28 WPM CQ	<F6CZV-#>
3557.1	SN6A	17-oct.-2020	1640Z	13 dB 27 WPM CQ	<F6CZV-#>
3522.9	SN6A	17-oct.-2020	1637Z	14 dB 27 WPM CQ	<F6CZV-#>
3557.0	SP2AEK	17-oct.-2020	1644Z	7 dB 22 WPM CQ	<F6CZV-#>
F6CZV/P de SKIMMER 2020-10-17 16:53Z CwSkimmer >					
DX de F6CZV-#:	3525.8	S53BV	7 dB 25 WPM CQ	1653Z	
DX de F6CZV-#:	3529.8	DL3TU	8 dB 28 WPM CQ	1653Z	
DX de F6CZV-#:	3538.4	DL3TC	8 dB 28 WPM CQ	1654Z	
DX de F6CZV-#:	3535.4	DL3UB	22 dB 31 WPM CQ	1654Z	
DX de F6CZV-#:	3528.3	DL3ANK	7 dB 26 WPM CQ	1655Z	
DX de F6CZV-#:	3531.6	DL3TU	13 dB 28 WPM CQ	1655Z	

BYE	CONN	DVN	SH/DX	USERS	WWV
Clear NE	Yes DX	NE only	No DX	No VHF	F6CZV/P



Contest use

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- ▶ **Unusefull for the Run mode**
- ▶ **Supplies the spots heard at the station (S&P mode)**
- ▶ **Nota : If several bands are analysed allows to see the openings. That configuration was not tested due to the FT-1000 Field – SDRPlay interface**

Softwares

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- ▶ *CW Skimmer from Afreet Software*
- ▶ *Skimmer Server from Afreet Software*
- ▶ *Omni-rig from Afreet Software*
- ▶ *SDRUno from SDRPlay*
- ▶ *HiFi Virtual Audio Cable from VB-AUDIO Software*
- ▶ *VSPE from Eterlogic*
- ▶ *N1MM+*

References

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- ▶ **SDRplay :** <https://www.sdrplay.com>
- ▶ **Eterlogic :** <https://www.eterlogic.com>
- ▶ **CW Skimmer :** <http://www.dxatlas.com/CwSkimmer/>
- ▶ **CW Skimmer Server:** <http://www.dxatlas.com/SkimServer/>
- ▶ **HiFi VAC :** <https://vb-audio.com/Cable/index.htm#DownloadASIOBridge>
- ▶ **N1MM+ :** <https://n1mmwp.hamdocs.com/>