

# OH1KH's additions to cqrlog 2.0.5 rev 5

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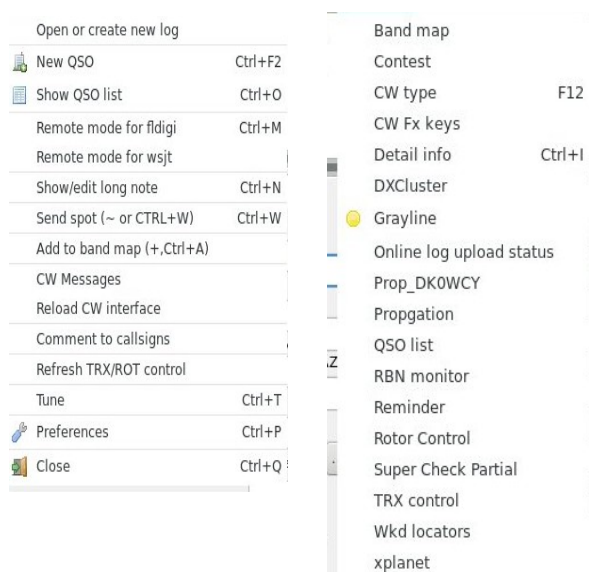
# Selections

I have made some additions to OK2CQR's logging program Cqrlog. Here is a brief description of them.

You can find source code from <https://github.com/OH1KH/cqrlog> From source code root you will find README.OH1KH that explains what is done and what bugs are found/fixed

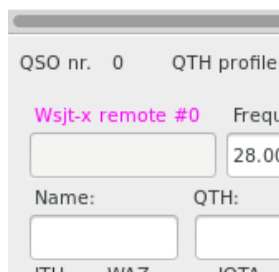
Added remote mode for WSJT-X. Communication is made via UDP that is supported from WSJT-X 1.5.0 upwards.

This property is found also from Cqrlog original from version 1.9.1 - → .



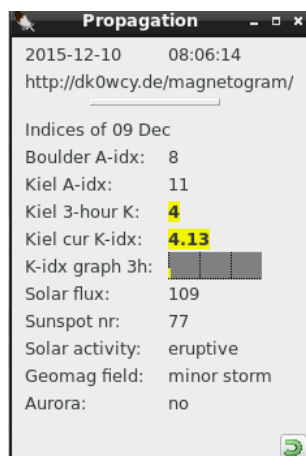
From window selection list you can find now some new properties.

“Wsjtx monitor “ is visible only if WSJT-X remote mode is selected.




When remote mode is selected it shows last received WSJT-X packet type number after text “Wsjt-x remote” text. Also color of text changes while receiving packets. These will show you that UDP link is alive between these programs.

## Prop\_DK0WCY



The screenshot shows a window titled "Propagation" with the following data:

2015-12-10 08:06:14	
<a href="http://dk0wcy.de/magnetogram/">http://dk0wcy.de/magnetogram/</a>	
Indices of 09 Dec	
Boulder A-idx:	8
Kiel A-idx:	11
Kiel 3-hour K:	4
Kiel cur K-idx:	4.13
K-idx graph 3h:	
Solar flux:	109
Sunspot nr:	77
Solar activity:	eruptive
Geomag field:	minor storm
Aurora:	no

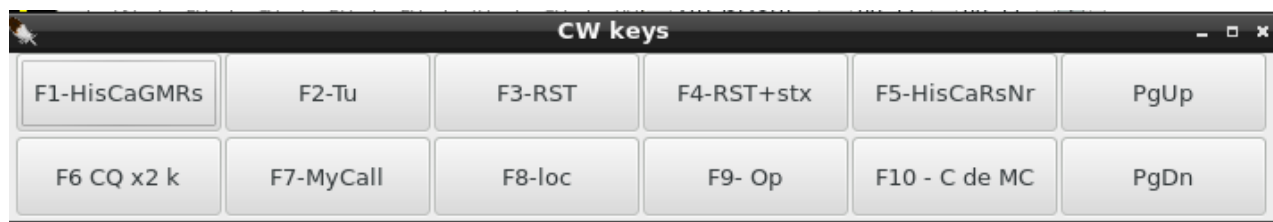
This propagation form is an alternative showing details from dk0wcy page with 3 hour graphical display of K-index.

As Boulder information at dk0wcy is one days old top of form shows time when information is read from dk0wcy web page.

"Indices of" - shows the age of Boulder data. Kiel information is up to date as they are produced by dk0wcy.

There is also link to dk0wcy web page. By clicking it page opens to default browser.

## CW Keys



The screenshot shows a window titled "CW keys" with a grid of buttons:

F1-HisCaGMRs	F2-Tu	F3-RST	F4-RST+stx	F5-HisCaRsNr	PgUp
F6 CQ x2 k	F7-MyCall	F8-loc	F9- Op	F10 - C de MC	PgDn

CW keys from has new buttons PgUp and PgDn that are not configurable.

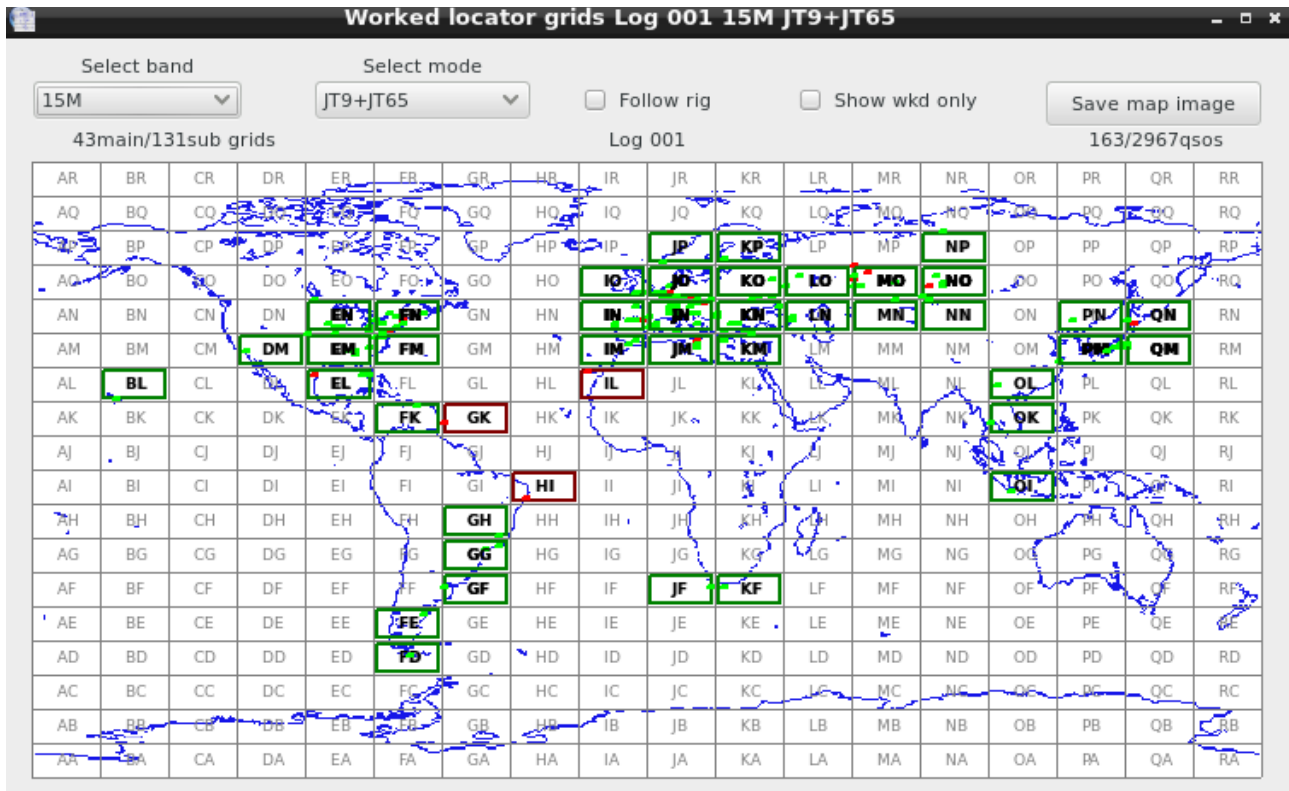
They alter CW speed in same way as keyboard keys PgUp and PgDn.

Done this because of two reasons:

My small HP Compaq mini laptop did not have PgUp and PgDn keys at all on it's keyboard!

When using external keyboard and CW keys form with mouse you always had to first focus NewQso form to be active and then press PgUp / PgDn keys. Now you can do it from same focused form that you launch memories with mouse.

# Worked grids



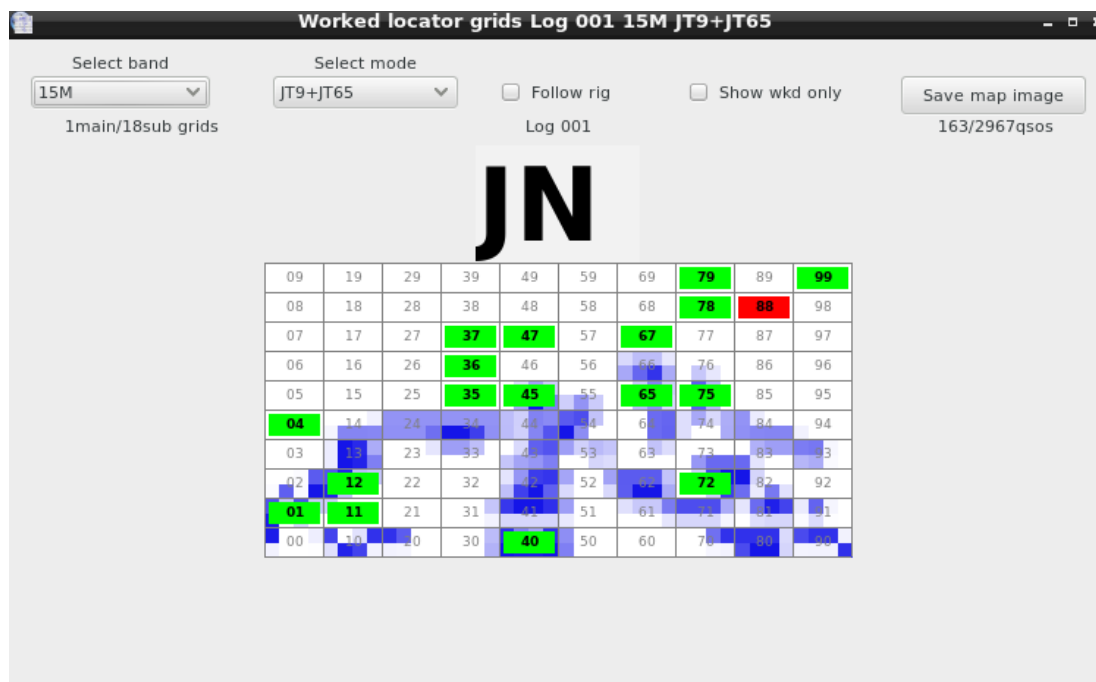
I moved this from my previous project from SourceForge. It was made to show up worked locator grids from JT65-HB9HQX early version's logs. It fits cqrllog nicely and gives graphical view of locators worked in addition of cqrllog's own text based information.

As for JT-mode workers this map us useful also for V-,U-,SHF workers who are collecting locator grids.

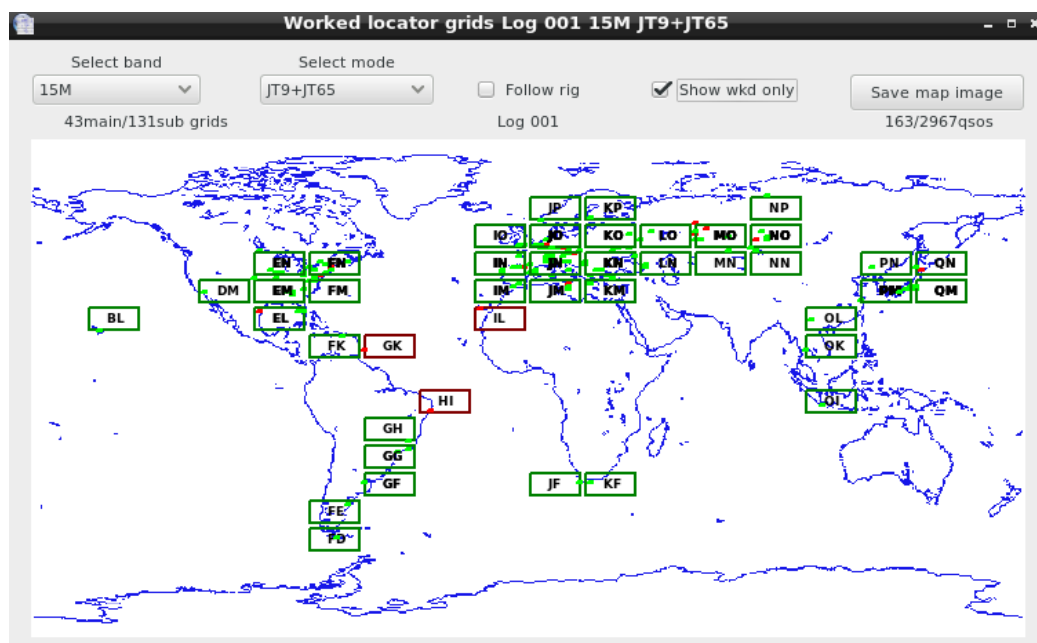
Map shows worked grids on selected band and mode, or all bands and modes. Or you can select "Follow rig" and then map follows band and mode that rig is sending to cqrllog via rigctld.

Confirmed main grids show up as green, unconfirmed as red. Sub grids show up with dots inside main grid with corresponding colors.

You can click any main grid to zoom it. Again colors tell you about confirmation.



Clicking again on zoomed main grid brings back whole map.

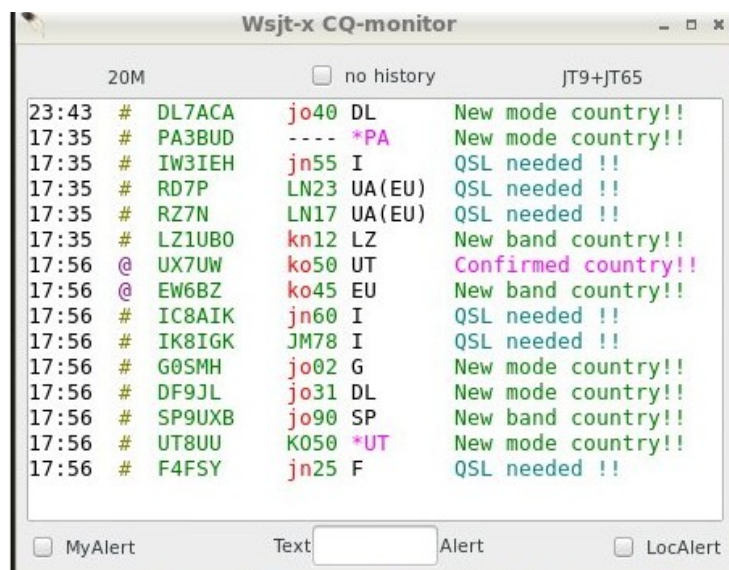


By selecting "Show worked only" removes non worked grids from map.

At any time you are able to save map currently shown as an image for other purposes.

Grid map, unfortunately, does not scale. So size is what it is and you have to accept that. Sorry, but it simplified a lot the production of graphics.

# Wsjt-x CQ-monitor



Wsjt-x CQ-monitor form opens when you select "Wsjt-x remote" from "File".

You can close this form and reopen it later via Window/Wsjt-x CQ-monitor that is visible only when remote mode is selected.

Top line will show band and mode that is in use, Checking "no history" will clean monitor on every decoded RX-period. If not checked form will show also older Cqs (scrolling) to see what you missed while having a coffee break :)

At bottom there are 3 alerts to select. The priority of alerts is same as numbering here. Higher priority alert overrides others. Alert is executed only once per minute (decoding section).

1. **"My Alert"** will alert if someone answers your cq-call. It is useful if you are reading your mails, Facebook or what ever on another desktop while calling CQ with Wsjt-x :)
2. **"Text Alert"** will alert if text of monitor line includes your definition. To have alert from "New country" just type "w c" on text box between "Text" and "Alert".  
Text box text can contain spaces, but not at start or end.
3. **"Loc Alert"** will alert when there is new main grid that you have not worked on this mode&band.

Line at CQ-monitor contains:

- time
- mode (# JT65, @JT9)
- callsign with green up-case letters if not worked this band&mode, red low-case letters if already worked here
- locator grid with green and up-case if not worked on this mode&band, red low-case letters green numbers if main grid is worked but sub grid is new or completely red low-case if sub grid is worked on this band&mode.
- country prefix. Added with asterisk \* and different color if station is calling directed CQ like: CQ DX, AS, AF, OC, NA, SA .. what ever, it also notices the old standard way calling DX like: CQ CALLSIGN DX.  
It is set as warning for you to check that you are in directed area before answering to CQ.  
I.E. In case of CQ DX you should be in DIFFERENT CONTINENT as the CQ caller.
- information of DXCC status compared to your logged qsos.

You can start Wsjt-x qso by double click a monitor line. Wsjt-x will move to callers QRG and initiate TX.

A line where someone has answered to you (your call is first at Wsjt-x data line) has "=" sign just at start of callsign. Clicking that line does not continue qso.

Wsjt-x remote does not allow this kind of command preventing automated qsos. So at this case you have to go to Wsjt-x screen and initiate report sending by yourself.

Either qso is started from CQ-monitor, or Wsjt-x screen itself, the opponent callsign is added right away to New QSO's callsign field of cqrlog. This way you can see right away if you have had qso with this station on other modes/bands and also all other information like DXCC status, QRZ/HamQTH information etc.

When you either press "Log QSO" at wsjt-x main window or logging is done automatic when sending "73" you will get wsjt-x's logging form open.

After finishing with it, and pressing OK, information is transferred also to cqrlog database.

If you have enabled auto search from QRZ.com/HamQth.com in cqrlog's preferences all information is fetched during your first transmit (report sending).

You may alter that information at NewQSO form and it is saved along with wsjt-x logging form information.

In case that fetched data has same, but longer locator than wsjt-x qso the longer is logged.

I.E wsjt-x data gives KP01, but QRZ.com KP01TN, the longer (more complete) is logged.

If locators differ wsjt-x locator is used.

## Wsjt-x alerts

In my setup I use USB-sound card for WSJT-X and other digital modes and PC's own sound card for alerts. This is my alert script. Check you have "aplay" (change if needed) installed and that it uses right sound card for output.

voice\_alert.sh:

```
#!/bin/bash
# //audio file name (prefix) played on alert
# //can be:'my'= answer to my cq,
# //    'loc'=new main grid,
# //    'text'=text found from line Ex. 'w c' on text field fits to "New country"
# // create files you want to be played
# scirpt is seeking names with '.wav' suffix! Change if needed
#select audio card(if needed) and play alert message
aplay ~/.config/cqrlog/voice_keyer/$1.wav
```

Alert can be just anything you can do with bash scripting. I does not have to be audio alert. Just keep the name of the script same and check same (the first, \$1) parameter to see what alert is in question and do your script based on that.

# Settings

## CQRLOG

Reading data from wsjtx

☐ Run wsjtx after entering to Remote mode for wsjtx-x

Path to wsjtx:

Frequency from:   
☐ CQRLOG   
☒ wsjtx   
☐ default 3.600

Mode from:   
☐ CQRLOG   
☒ wsjtx   
☐ default JT65

Port: 2237   
Address: 0.0.0.0

Cqrlog acts as UDP server that listens at specified address. It defaults to 127.0.0.1 (localhost) but can be changed to any network interface address the PC running cqrlog has.

If you need access from other PC, I.E. your wsjt-x is running on some other networked pc, you should use cqrlog PC's

network address. Or you can also use address "any" 0.0.0.0 to make cqrlog listen on all interfaces of the PC. This is very handy if you run wsjt-x on same and sometimes on different PC than cqrlog. So there is no need to touch setup always.

There is no valid IP address format check so you have to type right formatted address. Normally there is no need to change port number.

If you run wsjt-x on another computer and have also rig connected to that computer you need to check frequency and mode from wsjt-x to get right values to log.

It works also when everything runs on same PC so it is a good default. You may consider also use of CQRLOG selection then.

## WSJT-X

Settings

General Radio Audio Tx Macros Reporting Frequencies Colors Advanced

Logging   
☒ Prompt me to log QSO   
☐ Convert mode to RTTY   
☐ dB reports to comments   
☒ Clear DX call and grid after logging

Network Services   
☒ Enable PSK Reporter Spotting

UDP Server   
UDP Server: 127.0.0.1 ☒ Accept UDP requests   
UDP Server port number: 2237 ☒ Notify on accepted UDP request   
☒ Accepted UDP request restores window

At wsjt-x settings/reporting you have to use the localhost IP address 12.7.0.0.1 to network address your cqrlog computer has, if your cqrlog runs on another PC than wsjt-x.

If you have just on PC the localhost address should not be changed.

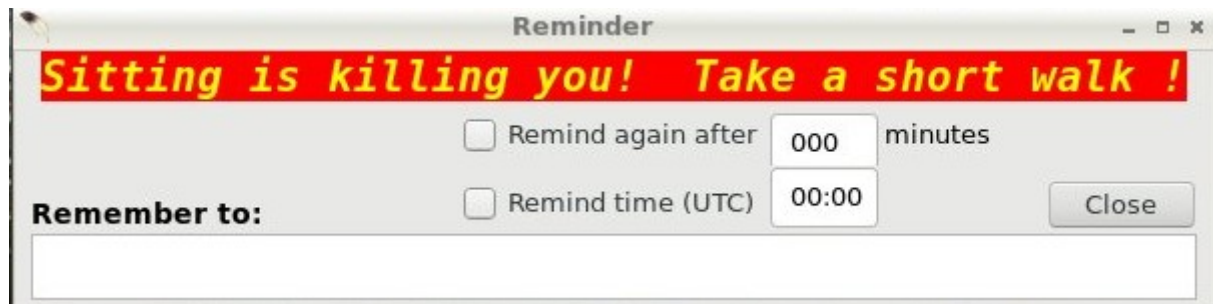
You can start Wsjt-x qso by double click a monitor line. Wsjt-x will move to callers QRG and initiate TX.

Wsjt-x's Configuration/Settings/Reporting requires at least "Accept UDP requests" selected to get this working.

Finally you must check both PC's firewall settings so that they do allow UDP traffic to specified address/port.



# Reminder



Reminder is a pop-up form that is **off** by default at program start.

You may initiate reminding based on UTC time or based on passed minutes , but not both.

Closing form will initiate the timer. If your linux has several desktops this pop-up will show up on the top of current desktop. No matter on what desktop your cqrllog is open.

At least it works so with Fedora's LXDE desktops that I have here in use.

You can also write something useful to "Remember to:" memo. ( 255 characters, one line )

For example "Sked on 20m with OH1XYZ" or " Call wife" or "Pick kids from school" to remember what to do at right time while you are busy with your qsos.

All settings are saved over program restart.

## Contest support



The screenshot shows a window titled "Contest" with the following fields and controls:

- Call**: Text input field.
- RST s**: Text input field containing "599".
- NR s**: Text input field.
- MSG s**: Text input field.
- RST r**: Text input field containing "599".
- NR r**: Text input field.
- MSG r**: Text input field.
- Save QSO**: Button.
- ☐ **SPACE is TAB**: Checkbox.
- ☐ **Tru**: Checkbox.
- ☐ **Inc**: Checkbox.
- ☐ **No**: Checkbox.
- ☐ **MSG is LOC**: Checkbox.

**RECOMMENDATION:** Make new log for each contest, do not allow qrz/hamqth search. It slows things.

**Note:** This is **NOT** a contest logging add-on!!!

It is meant to be a tool for "Sunday testers working in Tourist Class". Do not expect wonders!

Form Contest is just a "child form" for NewQSO to make qso logging faster when working in contests. With **Tru** and **Msg is Loc** setting it is useful also in VHF, UHF, SHF Tropo, Es etc. openings for fast qso logging.

Form Contest has following fields:

- **Call** when you leave this field callsign is moved to NewQSO, to see if you have qso before.
- **RST s** copied from NewQSO, so should correspond used mode. Can be changed.
- **Tru** means you like to change true reports. Useful in some high band contests and Es and tropo openings.
- **NR s** serial number to send. If **Inc** is checked it will auto increment. You may change this number at any time. Increment goes on from typed number.
- **MSG s** sometimes you may need an additional message with number, or just a message with no number. On high band contests you may type your locator here.
- **RST r** copied from NewQSO, so should correspond used mode. Can be changed.
- **NR r** serial number you receive.
- **No** if no serial number then setting this changes tab order so that it jumps directly to MSG r from Call (and after that NR r). Note: you can feed only numbers to NR r field.
- **MSG r** message you receive, if **MSG is LOC** is checked then message will be placed **ONLY** to NewQSO/Grid field **NOT** to received rst field
- **Save QSO** "clicks" Save QSO butt599on at NewQSO, increments NR and clears fields.
- **SPACE is TAB** when checked space bar acts like TAB-key moving to next field.  
Note! This prevents typing space (mainly to MSG fields).

TAB-key moves cursor between fields. So contest qso goes like this:

type callsign → press TAB → type contest rxnumber → press TAB → type contest message → press ENTER.

Or hit ENTER after rxnumber if no additional message is exchanged.

Pressing ESC once returns cursor to the end of typed call for fixing. It also stops CW keying if initiated. New log seek (qrz seek, not recommended) is done when leaving call field. Pressing ESC twice returns cursor to call field and clears it for completely new call.

Remember that pressing ENTER key at any field saves qso with existing values. However there must be call sign at least three characters long. Sent/Received number and message are not needed.

Contest numbers and messages are saved in log into RST fields separated by spaces like. 599 001 MSG  
This has two benefits:

- CW macros work without any programming change. If you set “send RST”-macro it sends also contest number and message, and when not in contest it sends just RST.  
However a small modification to original is made. If you use %rs for RST it will send 5NN. Now modified version sends also T for zero. So you will have 599 001 like 5NN TT1.
- Backup of logs work without any change. RST field just are a bit longer.

ADIF export is modified so that it separates RST fields to right tags.

```
<RST_SENT:3>599<STX:3>001
<RST_RCVD:3>599<SRX:3>002
```

```
<RST_SENT:3>599<STX:3>003<STX_STRING:2>SA
<RST_RCVD:3>599<SRX:3>003<SRX_STRING:2>dd
```

```
<RST_SENT:3>599<STX:3>002<STX_STRING:2>SA
<RST_RCVD:3>599<SRX:3>003<SRX_STRING:2>kb
```

```
<RST_SENT:3>599<STX:3>001<STX_STRING:2>SA
<RST_RCVD:3>599<SRX:3>002<SRX_STRING:2>SB
```

Freq	Mode	RST_S	RSTR
28	CW	599 001	599 002
21.0766	CW	599 003 SA	599 003 dd
21.0766	CW	599 002 SA	599 003 kb
21.0766	CW	599 001 SA	599 002 SB

Html export will look like this

Most contests expect Cabrillo log format. There is no support for this. You have to make ADIF export of qsos and then use separate program if you want to send logs.

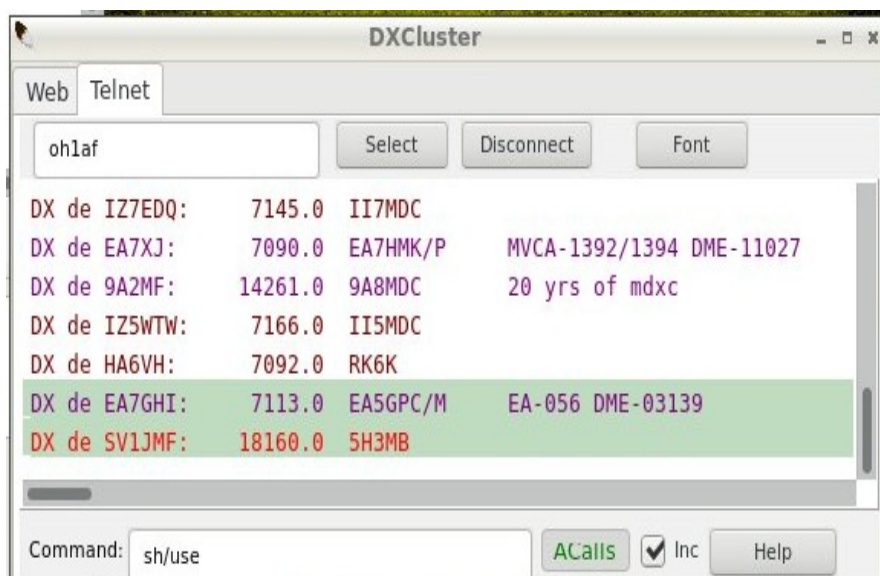
I found nice adif2cabrillo program for Linux from <http://users.telenet.be/on4qz/> that supports ADIF importing.

Starting is bit complicated: you have to have qt5 and (qmake-qt5 if your distro is Fedora) to be able to compile it.

Then there are no templates for different contests. You have to create them, but after that it serves you well!

It accepts nicely exported ADIF format from cqrllog and dig out STX and SRX as expected.

# DXCluster



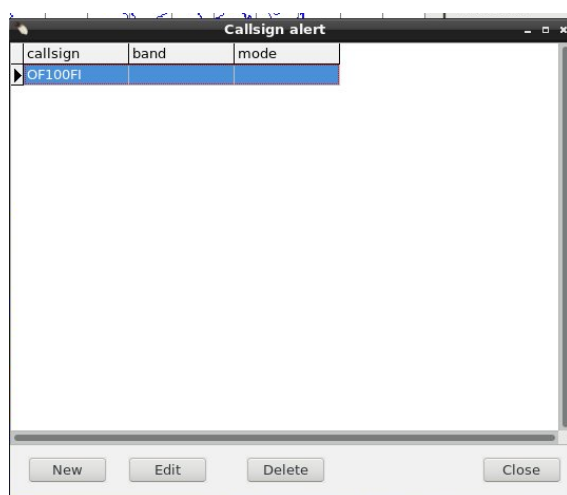
Have you ever typed dxcluster command wrong ?

Then you had to write whole command again from beginning.

Or are you talking with someone giving one comment every now and then.

Now it is easier as you can scroll back your 5 last typed commands, fix typing errors or add just new comment part to talk command.

Using Ctrl-Z will scroll around 5 last typed commands for reusing them.



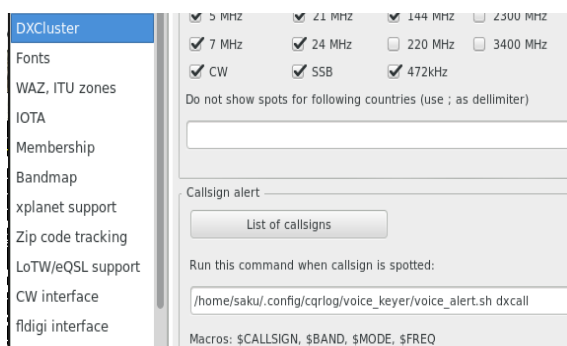
Are you looking at certain stations from DXCluster spots?

Button "ACalls" opens callsign alert list form where you can define your alerting calls list.

Closing Alert calls list will turn "ACalls" text green and activates alert.

Another push of this button turns it black again and deactivates alerts.

If you are looking for example all stations that have IARU suffix you just create new alert call as callsign IARU and then close Callsign alert list and check "Inc" checkbox.



It will change call hunting to be regexp where alert is done if (any of) your alert call line(s) will fit on any part of DXCluster spot callsign. Without "Inc" alert hits only when spot callsign is exactly same as alert call line.

Callsign alert-list is just the same that you can access via Preferences/DXCluster "List of callsigns".

It is just faster to operate directly from DXCluster form.

To get this working you have also to define alerting command at Preferences/DXCluster.

You can use same alert command as with Wsjt-x CQ-monitor alerts.

With Wsjt-x CQ-monitor alerts fixed names for different alerts are used.

With DXCluster alert you can define alert sound file name as parameter after alerting command at Preferences/DXCluster.

## Fldigi XmlRpc remote

XmlRpc remote connection to fldigi is an alternative way to transfer qso data to cqrlog.

With XmlRpc cqrlog acts as client what is opposite way compared to wsjt-x remote where cqrlog acts like server. Because of this cqrlog can not know if “save to log” button is pressed at fldigi because it tells it’s information only when asked.

This leads to situation where fldigi logging can not be used to act like indicator to cqrlog to save qso and saving must be done by operator on cqrlogs side.

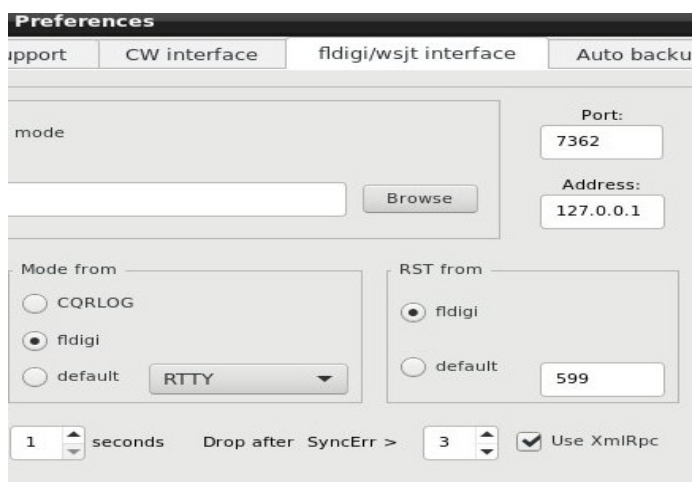
There are two ways to save qso:

- Press “save qso” on cqrlog’s NewQSO form and press save on fldigi. You get entry to both logs.
- Press “Save this qso” on fldigi XmlRpc form. You get qso saved to cqrlog and fldigi entry is cleared, **but not saved**.

When using XmlRPC:

- You get qrz/HamQth data immediately after adding call to fldigi’s call field
- You see qso before/dxcc statistics from cqrlog before firing TX the first time
- You can run fldigi on other (networked) computer than cqrlog

## Settings



Cqrlog’s preferences/fldigi/wsjt interface there are some new settings.

Port and Address for fldigi network connection and selection to use XmlRpC.

With selection you can choose “the old way” for fldigi remote, or the XmlRpc way.

Port number should be ok, but IP address may change depending your needs.

Address is normally 127.0.0.1 (localhost) if you run fldigi on same PC than cqrlog.

If you have fldigi running on other PC put here the IP address of fldigi-PC. There is no IP address validation, so

you have to type correctly formatted address.

Parameter "Drop after SyncErr >" automates remote mode closing when fldigi is closed. But as it may affect also (in slow PCs) fldigi starting by cqrlog it can be changed. **0** disables, **1-20** means timer rounds until drop. When closing happens leaves to NewQSO field "Comment QSO" text "Socket error, check fldigi!"

At fldigi-PC side **remember to open firewall** for TCP traffic to port 7362 from your network.

In all cases fldigi must be started from command line with parameter:

**fldigi --xmlrpc-server-port 7362**

When closing fldigi properly and answering YES to save setup changes the next start should open xmlrpc server without parameters.

# Use



When you have activated fldigi remote and checked “Use XmlRpc” on preferences, texts that you type are transferred to cqrllog by polling fldigi with speed you have set on

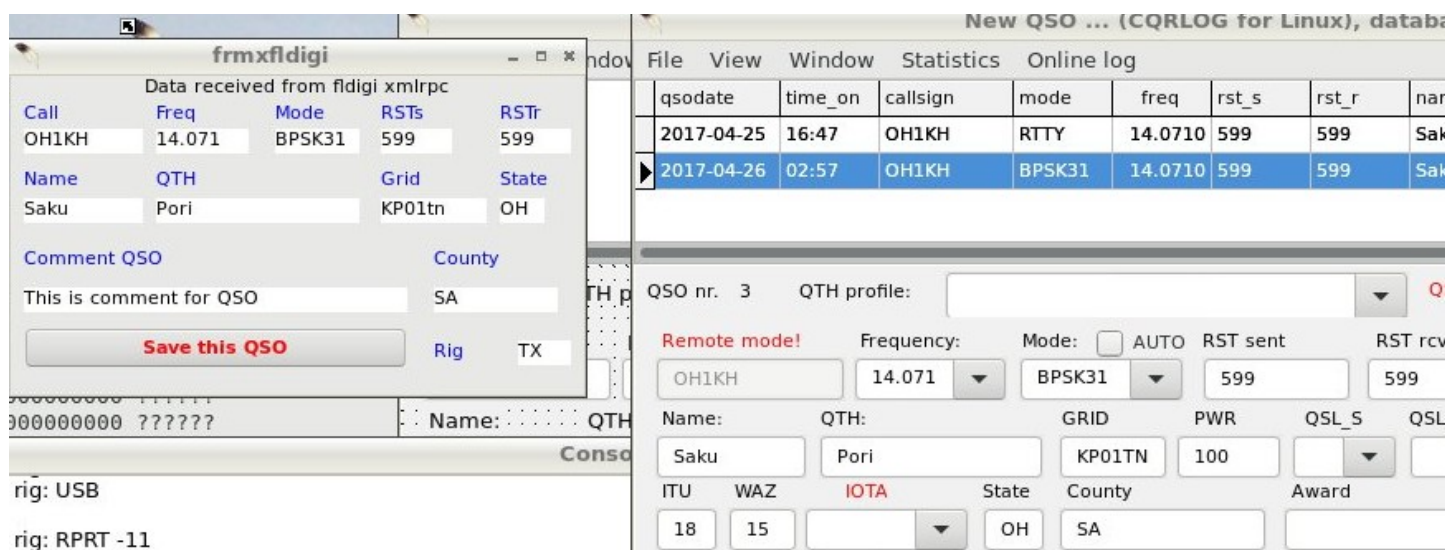
preferences “Try to load QSO from fldigi every X seconds”.

When remote for fldigi is opened a new status form is shown. It shows data that have been received from fldigi. If you can’t see any changes you have to check port and address settings (both fldigi and cqrllog) and firewall settings.

There is more information about XmlRpc at:

[http://www.w1hkj.com/FldigiHelp-3.21/html/xmlrpc\\_control\\_page.html](http://www.w1hkj.com/FldigiHelp-3.21/html/xmlrpc_control_page.html)

If everything is OK you should see something like this:



## Some notes

- fldigi’s **pr** (Province) is transferred to cqrllog’s **County**
- fldigi’s **Country** is not transferred
- **Save this qso** is shown after you have **call**, **time on**, **rst\_in**, **rst\_out** and **TX** fired once it hides again when qso data is cleared.
- **Save this qso** **saves only to cqrllog**, fldigi’s qso data is just cleared.