Exeter Amateur Radio Society

Raynet Exeter

Using Fldigi Macros for QSOs

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1. Introduction

This document explains:

1. What is an Fldigi macro?
2. How to edit the Fldigi macros and set them to something useful
3. How to start a QSO using macros
4. How to respond to a CQ using macros

This is not a full Fldigi tutorial. It assumes that you have installed and configured it for operation with your computer and interface device to your transceiver. This document is the "next step" and assumes that you now want to start using Fldigi and have a QSO.

The full Fldigi manual is at http://www.w1hkj.com/downloads/fldigi/fldigi.pdf

2. What is an Fldigi macro?

When you use Fldigi in "manual mode", which is laboriously typing in every word used in the QSO, you soon discover that you slow down the QSO so much that the person you are talking to soon wonders if you have gone away. You also discover that for most QSOs there is a lot of repeated information, such as the list of equipment you are using, your QTH, locator, ID, age, etc.

In their most simplest use, macros are collections of frequently used text that are used as pre-recorded bursts of text that you may use in a QSO. For instance

CQ CQ CQ de M0NRJ CQ CQ CQ de M0NRJ

is stored in a macro that can be replayed by pressing the **F1** button on the keyboard or clicking on the **CQ>|** button to start a QSO.

A macro's real usefulness is that it can include "tags". Every tag has a value that is substituted when the macro is replayed.

An Example

I edit the **F3** macro so that it contains:

My callsign is <MYCALL> and I live in <MYLOC>.

When replayed, Fldigi substitutes the tag values that you set in the Fldigi **Configure Operator** screen. Although you did not realise it at the time, when setting up Fldigi you were setting tag values for use in macros.

If I had set **Callsign** to *M0NRJ* and **QTH** to *Witheridge* Fldigi would generate

My callsign is M0NRJ and I live in Witheridge.

More tags

A full list of the tags is in Appendix 1. To avoid being overwhelmed simply take note of the first ten tags. These are enough to get you started.

Having created such a powerful short-cut system, the Fldigi authors quickly realised that they could

control any aspect of Fldigi in this way. So you can switch modes, change audio frequency, change the word-per-minute rate, alter rise and decay times, switch to receive mode, etc. This is why the Fldigi Manual section on Macros initially appears so complicated to new data mode users.

3. How to edit the Fldigi macros and set them to something useful

Fldigi comes with macro buttons pre-loaded with useful short messages and tags. This tutorial will assume that you have not changed these. To use the macros, it is best to use the mouse and not touch the keyboard F-keys,

Macro button bars

Frequent Fldigi users soon found that 12 macro buttons really limited their vocabulary so Fldigi has four banks of function keys giving a total of 48 macros. You can select how many rows of buttons to display in Fldigi in the **Configuration → UI → Macros** screen. It only allows one or two button rows and they can be positioned in different vertical positions on the screen, called **schemes**.

You can change which set of twelve macro values are shown in a row by left-clicking on the digit at the right-hand-side of the button row. This sequences through the four possible button choices for that row.

Editing a Macro button

You can change the text stored in a macro by moving the mouse over the button. A pop-up will show you options:

Left click – Execute
Fkey – Execute
Right click – Edit

Fldigi comes pre-configured with useful macros for the first two macro button rows. A label on the button describes the macro. For example, look at **F1** labelled as **CQ >|** by right-clicking on the button. This is a macro for calling CQ with your callsign.

The macro editor has two panes. The left side one is the contents of the macro. The right side is a list of tags that you can use in the macro.

Controlling Transmit/Receive

As you can see from the tags in the Appendix, **<TX>** and **<RX>** turn the transmit on and off for the duration of the transmission. Close the edit window and look at **F3** labelled **QSO >>**. You will see there is no closing **<RX>** tag, which means that after using this macro, the transmit key will still be in operation and you are expected to continue either with manual typing of another macro. This explains the button labelling of

>> play the macro and continue transmitting
>| play the macro then stop transmitting
|| continue transmitting, play the macro and stop transmitting

Setting Tag Values

Close the edit window and look at **F6** or **Me/QTH**. The use of the **<RST>** tag is interesting in that the contents would appear to be blank. So this means that during the QSO you need to enter the RST of the received signal in the box labelled **In** near the top of the screen. You should also enter the **Operator** name as soon as you know it, so it can be used in the **<NAME>** tag in the **KN||** macro.

This obviously means that you have to update Fldigi screen information during the QSO as well as choosing and using macros. Because you have to set tag values, choose macros and enter freehand text during the QSO, this tutorial attepts to give you the sequence to do things.

Using the preset macros

At this point you should tune to one of the PSK31 HF bands and display QSO data in the receive data window. This will give you example information to use when setting tag values.

Look at each macro's contents by right-clicking on it and look up each tag that is used. This list will show you the tags that have no value and that need setting during the QSO. The obvious ones that need to be set are **<CALL>**, **<NAME>**, **<QTH>** and **<RST>**. Move the mouse of the upper data window that shows the received data.

Click-right and you can see that you can quickly set these tag's values from the text data over under the mouse.

An example

If the sender's name is *Roberto*, move the mouse over the name, click right and move the mouse until **Name** is highlighted. Click left and the **<NAME>** tag value is now set to *Roberto*. You can see confirmation of this in **Op** field above the data window.

In a QSO you will need to do this with each of the other received pieces of data to set **<CALL>**, **<QTH>** and **<RST>**. These are the other ham's callsign, their location and their received RST.

One final task is to edit the **Brag** button contents so that your rig, computer, antenna, interface are all identified.

4. How to start a QSO using macros

	What you do	What you receive
1	Locate a quiet piece of the spectrum and move the cursor to that audio frequency. Wait for 3 seconds to ensure there is no activity on that frequency.	
2	Left-Click on **CQ>|**. Expanding the macro this means: <TX> CQ CQ CQ de <MYCALL> <MYCALL> <MYCALL> CQ CQ CQ de <MYCALL> <MYCALL> <MYCALL> pse k <RX> Which sends the following text: *Start transmitting* **CQ CQ CQ de M0NRJ M0NRJ M0NRJ** **CQ CQ CQ de M0NRJ M0NRJ M0NRJ pse k** *Stop transmitting*	
3		**M0NRJ M0NRJ de SP3TDT SP3TDT SP3TDT kn**
4	Watch the data receive window and wait for a reply. When an operator responds, move the mouse over the operator callsign and set the **Call** tag value with a right-click. Read off the signal strength and enter the RST into the **In** field near the top of the screen	
5	Left click on **QSO>>**. Left-click on **Me** Left-click on **QTH** Type "Your RST is <RST> <RST>" Left-click on **KN||** Expanding the macros this means: <TX> <CALL> de <MYCALL> my name is <MYNAME> <MYNAME> my QTH is <MYQTH>, loc: <MYLOC> Your RST is <RST> <RST> btu <NAME> <CALL> de <MYCALL> k <RX>	

	This will send the following text: *Start transmitting.* **SP3TDT de M0NRJ** **my name is Nick Nick** **my QTH is Crediton, loc IQ81kn** **Your RST is 589 589** **btu SP3TDT de M0NRJ k** *Stop transmitting*	
6		**M0NRJ de SP3TDT** **my name is Andrzej Andrzej** **my QTH is Warsaw, loc JN5ae** **Your RST is 579 579** **btu Nick M0NRJ de SP3TDT k**
7	Move mouse over the operator name and set the **Name** tag value with a right-click. Move mouse over the RST information and set the **RST** tag value with a right-click.	
8	Left click on **QSO>>**. Left click on **Brag.** Left click on **KN‖.** Expanding the macros this means: <TX> <CALL> de <MYCALL> << <MYCALL>, <MYNAME> >> Age: ... Rig: ... Pwr: ... Ant: …. OS: Linux Soft: <VER> Web: ... Email: …. btu <NAME> <CALL> de <MYCALL> k <RX> This will send the following text: *Start transmitting* **SP3TDT de M0NRJ** **<< M0NRJ, M0NRJ >>** **Age: …** **Rig: ...** **Pwr: ...** **Ant: ….** **OS: Linux** **Soft: Fldigi v 3.21.65**	

	Web: ... **Email: ….** **btu Andrzej SP3TDT de M0NRJ k** *Stop transmitting*	
9		**M0NRJ de SP3TDT** **<< SP3DTD, SP3TDT >>** **Age: 28** **Rig: Yaesu FT-857D** **Pwr: 30 watts** **Ant: G5RV** **OS: Windows Vista** **Soft: Fldigi version 3.21.40** **Interface: Digimaster Pro+** **btu Nick M0NRJ de SP3TDT**
10	Left-click on QSO>> Left-click on SK‖ Expanding the macros this means: <TX> <CALL> de <MYCALL> tnx fer QSO <NAME>, 73, God bless. <ZDT> <CALL> de <MYCALL> sk <RX> This will send the following text: *Start transmitting* **SP3TDT de M0NRJ** **tnx fer QSO Andrzej, 73, God bless.** **2013-03-22 21:22Z SP3TDT de M0NRJ sk** *Stop transmitting*	
11		**M0NRJ de SP3TDT** **Thanks for QSO. My QSL is** **100% via esql.cc Goodbye and** **good luck, Nick** **2013-03-22 21:23Z M0NRJ de** **SP3TDT sk**
	Now you need to add this information to your station log.	

Appendix 1. Fldigi macro tags

<FREQ> my frequency

<MODE> mode

<MYCALL> configuration call

<MYLOC> configuration locator

<MYNAME> configuration name

<MYQTH> configuration QTH

<MYRST> my RST

<ANTENNA> configuration antenna

<VER> Fldigi version

<CALL> other stations callsign

<INFO1> S/N or other data contained in first info field of status bar

<INFO2> IMD or other data contained in second info field of status bar

<LOC> other stations locator

<NAME> other stations name

<QTH> other stations QTH

<RST> other stations RST

<MAPIT> map other stations locator on google

<MAPIT:adr | lat | loc> map other stations address, latitude-longitude or locator as specified

<CLRRX> clear RX pane

<CLRTX> clear TX pane

<GET> text to NAME/QTH

<TALK:on | off | t> Digitalk On, Off, Toggle; this is a Windows only tag and Digitalk must be running

<LOG> save QSO data to logbook immediately

<LNW> log at xmt time

<CLRLOG> clear log fields

<EQSL:[message> submit the current log entry to www.eQSL.cc This macro tag should be put before <LOG> or <LNW>

<QSOTIME> insert current logbook time HHMM, ie 0919

<ILDT> insert current local date-time in iso-8601 format, ie 2011-08-28 04:16-0500

<LDT> insert Local date-time, ie 2011-08-28 04:16-0500

<IZDT> insert Zulu date-time in iso-8601 format, ie 08/28/2011 04:16 CDT

<ZDT> insert Zulu date-time, ie 2011-08-28 09:16Z

<LT> insert local time, ie 0416

Macros 46/142<ZT> insert zulu time, ie 0916Z

<LD> insert local date, ie 2011-08-28

<ZD> insert Zulu date, ie 2011-08-28

<WX>

<WX:xxxx> insert current weather data from METAR as specified on WX configuration tab. See WX configure.

Replace xxxx with the 4 letter METAR designator for a report on a station other than the one specified on the weather configuration tab.

<CNTR> insert current value of contest counter

<DECR> decrement contest counter

<INCR> increment contest counter

<XIN> send exchange in string

<XOUT> send exchange out string

<XBEG> mark exchange in start

<XEND> mark exchange in end

<SAVEXCHG> save marked text to contest exchange in

<RX> receive

<TX> transmit

<TX/RX> toggle Transmit / Receive

<SRCHUP> search UP for next signal

<SRCHDN> search DOWN for next signal

<GOHOME> return to waterfall cursor to sweet spot

<GOFREQ:NNNN> move waterfall cursor to freq NNNN Hz

<QSYTO> same as left-clk on QSY button

<QSYFM> same as right-clk QSY button

<QSY:FFF.F[:NNNN]> Qsy to transceiver frequency in kHz, optional waterfall (Audio) frequency in Hz (If

not specified, it i not changed). Several QSY frequencies, or ranges of frequencies provided by one increment, can be proposed, in which case the first frequency after the current frequency is chosen.

<RIGMODE:mode> send CAT command to transceiver to change to a valid mode

<FILWID:width> send CAT command to transceiver to change to a valid filter width. Example to QSY to sweetspot (center of bandpass filter) and select narrow filter: <QSYTO><FILWID:200>. Example to restore previous waterfall cursor frequency and bandwidth: <QSYFM><FILWID:2700>

<FILE:> insert text file; a file selection box will open when this tag is selected during editing

<IDLE:NN.nn> transmit idle signal for NN.nn sec

<TIMER:NN> repeat this macro every NN sec

<TUNE:NN> transmit single tone tune signal for NN sec

<WAIT:NN> insert delay of NN seconds before transmitting

<REPEAT> repeat macro continuously

<SKED:hhmm[:YYYYDDMM]> schedule execution to begin at time and optionally date specified

<CWID> transmit a CW callsign identifier Macros 47/142<ID> transmit mode ID using waterfall video text

<TEXT> transmit video text defined on ID configuration tab

<TXRSID:on | off | t> transmit RSID on, off, toggle

<RXRSID:on|off|t> receive RSID on, off, toggle

<NRSID:NN> transmit multiple RsID bursts

 - NN < 0 will transmit NN bursts for current modem and then return to Rx

   NN > 0 will transmit NN bursts for current modem and continue in Tx

   NN = 0 will transmit 1 bursts and continue (same as NN = 1)

<DTMF:[Wn:][Ln:]tones Transmit DTMF tone sequence at start of transmission. Options are W-wait n msec, default 0, L-tone symbol length n in msec; default 50 msec, '-', ' ' and ',' insert silence symbol eg: <DTMF:W250:L100:1-256-827-3200>

<POST:+/-nn.n> CW QSK post-timing in milliseconds

<PRE:nn.n> CW QSK pre-timing in milliseconds

<RISE:nn.n><RISE:nn.n> CW rise time in milliseconds

<WPM:ww[:ff]> CW WPM, ww = word rate, optional ff = Farnsworth rate

<AFC:on | off | t> AFC on, off, toggle

<LOCK:on | off | t> lock waterfall cursor; on, off, toggle

<REV:on | off | t> Reverse on, off, toggle

<MACROS:> load a new macro defs file; file prompt when editing macro