

BARC April 2023

The G3YMC HF Miscellany

QDX Digital Transceiver

UK CW Table and Club Log

6m Dipole

QDX - Digital Transceiver

Details

Created: 09 October 2021
Last Updated: 04 April 2023
Hits: 331759



QDX: a feature-packed, high performance, five-band (80, 60, 40, 30, 20m) or six-band (high bands 20, 17, 15, 12, 11 and 10m) 5W Digi-modes transceiver kit, including embedded SDR, 24-bit 48 ksps USB sound card, CAT control, synthesized VFO with TCXO reference.

Click!
Shop order
\$69

The "QDX" (QRP Labs Digital Xcvr): a feature-packed, high performance, five-band (80, 60, 40, 30 and 20m) or six high-HF band (20, 17, 15, 12, 11 and 10m) 5W Digi-modes transceiver kit, including embedded SDR receiver, 24-bit 48 ksps USB sound card, CAT control, synthesized VFO with TCXO reference. QDX transmits a SINGLE SIGNAL, it is not an SSB modulator with associated unwanted sideband and residual carrier, or intermodulation due to amplifier non-linearity. QDX outputs a pure single signal.

QDX is suitable only for single tone FSK modes, which covers the majority of digital modes in use today. This includes everything in WSJT-X, JS8Call, some fldigi modes e.g. RTTY, Olivia and more. QDX is not suitable for on/off keyed modes such as CW because it does not have click-reducing RF envelope shaping; furthermore it is not suitable for phase shift keyed modes such as PSK31 or modes involving multiple concurrent tones such as WinLink.

Many thanks to Ross VK1UN for his extensive and tireless assistance designing and testing filters for the high bands version of QDX (20, 17, 15, 12, 11 and 10m version).

The Optional enclosure is black anodized extruded aluminium, very sturdy and elegant. The enclosure size is 89 x 63 x 25mm without protrusions. The front and rear panels are drilled and cut to match the QDX PCB with laser-etched lettering. The enclosure includes four self-adhesive feet.

List of features:

- Five bands version 80, 60, 40, 30 and 20m or six high-bands version 20, 17, 15, 12, 11 and 10m
- 5W output at 9V supply (can be built for 4-5W at 12-13V supply) - note lower power at higher bands e.g. 10m, approx 3.5-4W
- Single signal transmission (zero unwanted sideband, zero residual carrier, zero intermodulation distortion)
- Solid-state band switching and transmit/receive switching under CAT control
- High performance embedded SDR SSB receiver with 60-70dB of unwanted sideband cancellation
- Built-in 24-bit 48ksps USB sound card
- Built-in USB Virtual COM Serial port for CAT control
- Si5351A Synthesized VFO with 25MHz TCXO as standard
- Easy to build single-board design, Professional quality double-sided, through-hole plated, silk-screen printed PCBs
- All SMD components factory assembled
- Connectors: 2.1mm power barrel connector, USB B (for audio and CAT control), BNC RF input/output
- Built-in test signal generator and testing tools
- Receive current 100mA, Transmit current 1.0-1.1A for 5W output with 9V supply (around 0.7A for 5W with 13V supply).
- I-Q output mode if you wish to use a PC SDR program for demodulation rather than the internal SDR
- QFU firmware update for lifetime free firmware updates, easy installation on any PC without drivers, software or hardware e.g. programmer
- Optional aluminium extruded cut/drilled/laser-etched black anodized enclosure (88.6 x 63 x 25 mm)

QDX works well on 60m, as documented by John AE5X at <https://ae5x.blogspot.com/2021/11/spectrum-analysis-qdx-on-60m.html>. Outside the range 3.4-14.5MHz, QDX can be used as a receiver, with some loss of sensitivity. Firmware versions 1.06 onward can operate on any amateur band from 2200m to 4m, but hardware changes will be needed (correct filters etc).

QDX Review QST March 2023

QRP Labs QDX 5-Band HF QRP Digital Transceiver

Reviewed by Charles Powell,
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The QRP Labs QDX Digital Transceiver is a low-power, low-cost radio for digital operations. The reviewed unit covers five HF bands — 80, 60, 40, 30, and 20 meters — and the maximum power output is 5 W, with support for digital modes only. It comes in a kit to be built, and you can buy a fully assembled unit for an extra \$45. See Figure 1 for the kit parts packaging. The printed circuit board (PCB) comes with pre-installed surface-mount device (SMD) components (Figures 2 and 3 show each side of the PCB). It includes an embedded software-defined receiver (SDR), 24-bit 48 kilo samples per second (kS/s), a USB sound card, CAT control, and a synthesized VFO with TCXO reference. The QDX transmits a single, clean output signal, as it is not an SSB modulator with associated unwanted sideband and residual carrier, or intermodulation due to amplifier non-linearity (more on this later).

The QDX is suitable for single-tone operations. It is reported on the QDX forum that successful RTTY operation has been accomplished. It is not suitable for CW operation using *fldigi* or similar programs. It is my understanding that there is no waveform shaping that would prevent key clicks. Modes that require multiple simultaneous tones, such as Winlink, are not possible with the QDX. Also, the QDX is not capable of phase-shift keying, such as PSK31. Per the product description,

QDX is suitable only for single tone FSK modes, which covers the majority of digital modes in use today. This includes everything in WSJT-X, JS8Call, some fldigi modes e.g. RTTY, Olivia and more. QDX is not suitable for on/off keyed modes such as CW because it does not have click-reducing RF envelope shaping; furthermore, it is not suitable for phase shift keyed modes such as PSK31 or modes involving multiple concurrent tones such as WinLink.

Description and Kit Assembly

While it does require a computer, the unit has only four connections on the rear panel: an antenna BNC port, a power connection, a 3.5-millimeter PTT, and a single



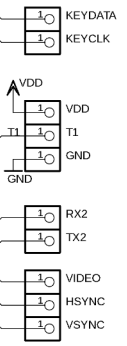
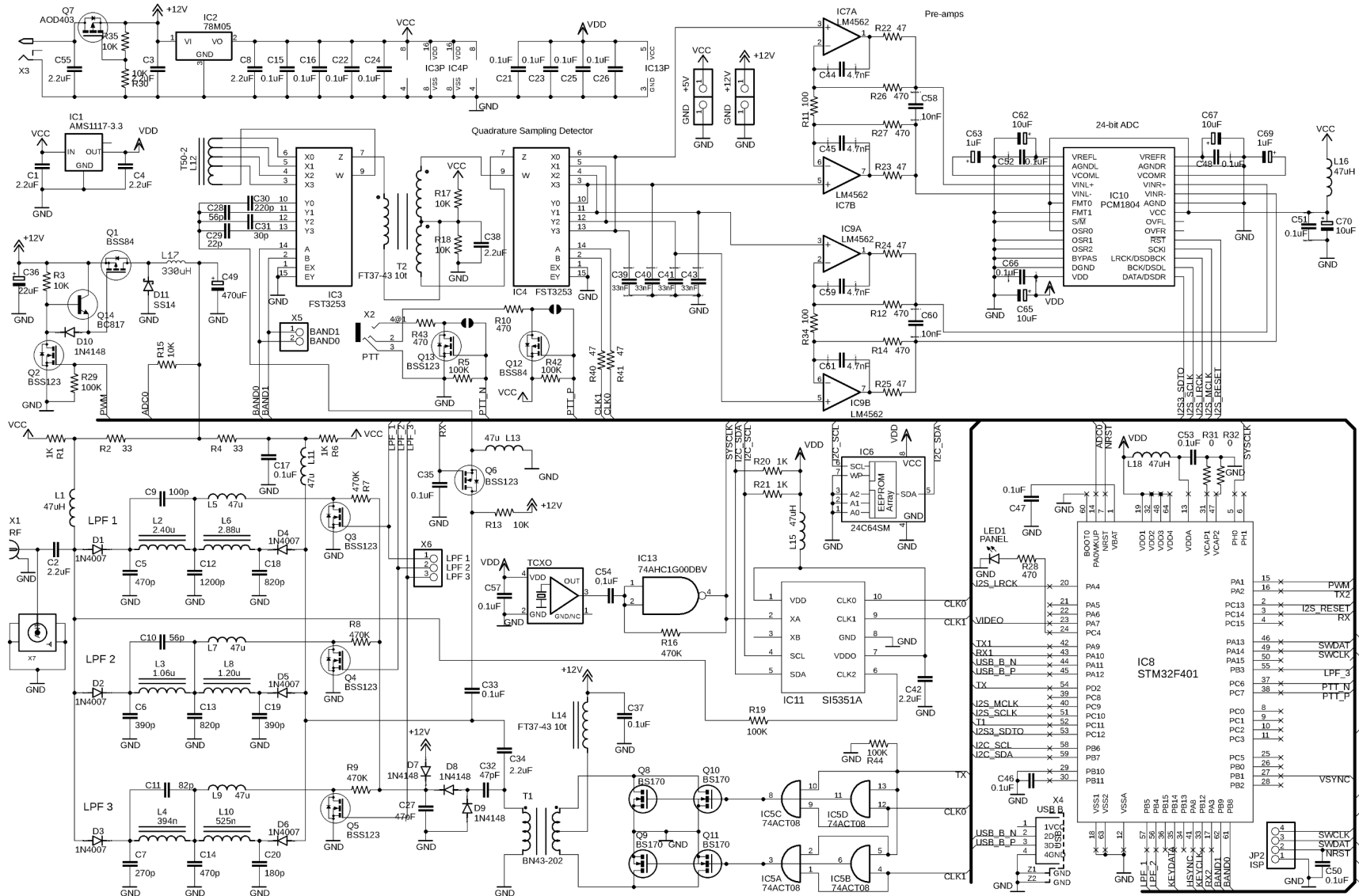
Figure 1 — The QDX kit with parts packaging.

USB type B port that handles both CAT control and audio (see Figure 4). When all the necessary physical connections are made, the unit becomes a “black box” that requires no other user intervention.

Since Revision 3 (Rev3, now Rev4), QRP Labs added a standard 3.5-millimeter plug for an external PTT connection that can be used without modification between the QDX and the QRP Labs 50 W PA. The PTT output can also be configured for use with any other amplifier.

Bottom Line

The QRP Labs QDX is a low-cost digital transceiver with a clean RF output signal for the supported digital modes. Setting it up is fast and easy, perfect for portable and permanent installations.




The G3WGV CW Table

John G3WGV set up the CW table many years ago. The object is for each year to compete on the number of DXCC worked on each of the HF bands up to and including 6m. An informal thing, no prizes, but a way to keep our interest in the hobby up and compete with your friends.

I aim to get ahead of Mike G4DDL!

<https://ukcwtable.org.uk/index.html>



The United Kingdom CW Table

[About](#) | [Rules](#) | [Current table](#) | [History](#) | [Last year's table](#) | [Statistics](#)

What's it all about?

The purpose of the Annual UK CW Table is to encourage CW activity on the HF bands and six metres. Each year participants start afresh and work as many DXCC entities as possible between 00:00Z on 1st January and 24:00Z on 31st December.

All UK* Radio Amateurs are invited to participate.

You do not have to be active on all bands to make an entry. You do, however have to make all QSOs on Morse code if you want them to count! All CW QSOs are valid for the UK CW Table: rag chewing, contests, general DXing. No QSL cards or other confirmation are required: you are on your honour to report your score honestly.

* For the purposes of this table, "UK" is taken to mean any radio amateur in G, GD, GI, GJ, GM, GU or GW.

History of the table

The CW table started off in 1983 as a friendly fun challenge between Roger, G3SXW and Nigel, G3TXF. In those days the table operated on the six main bands only. It wasn't until 1990 that G3MXJ and G3WGV joined in the fun. In 1991 the WARC bands were added and in 1994 the table was opened up to all UK radio amateurs.

The 6m band was added in 1999 as it was felt that with a new sunspot maximum coming along soon it would be interesting to see what we could all work. The table was maintained by G3TXF from 1983 to 1996. G3WGV has been maintaining the table since 1997.

Every year we welcome new people to the table and every year someone decides to make it their year for taking top place. Along the way some remarkable records have been set. Others simply enjoy the challenge of trying to better their previous year's score. UK CW table participants can be heard in all the big pileups and many of them are also keen DXpeditioners.

In 2005, the table became an fully on-line system, with data collection and table distribution entirely via G3WGV's web site. In 2008 an all new system was implemented with its own subdomain, making the score submission simpler and reducing the complexity of the table updating system. Club Log and the UK CW Table were fully integrated in 2023, so updating your Club Log log also updates this table. The table now has its own domain.

Hopefully lots of CW operators will continue to join and support the table for many years to come.



The United Kingdom CW Table

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Rules

We managed for 27 years without formal rules. Over time various principles have been adopted by mutual consent and it is perhaps now time that these were formalised.

1. The UK CW Table is open to all radio amateurs in G, GD, GI, GJ, GM, GU and GW (hereinafter "the UK").
2. The Table is based on Club Log's Club League. Participants must be registered on Club Log, join the Club Log UKCW Table club league and upload their log to Club Log on a regular basis. Additionally you can Subscribe to a more formal weekly table, see [How to participate](#).
3. The table runs annually from 00:00Z on 1st of January to 23:59Z on 31st December.
4. There are no prizes.
5. All CW QSOs made using your participating call sign count for the table (also see rules 5 and 6 below).
6. If you operate a contest call as *sole operator* then you can count QSOs made with that call. Alternatively, you are welcome to submit separate entries for the contest call. Multi-operator contest QSOs cannot be counted.
7. The Subscription weekly table is updated at midnight (24:00) on Sunday.
8. A notification e-mail is sent to all Subscribers when the table has been updated.

Issue 6, 15-Jan-2023

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UK CW table web site updated 2023-01-11



The United Kingdom CW Table

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The 41st annual UK CW Table (09-Apr-2023)

Last QSO	Callsign	1.8	3.5	7.0	10.1	14.0	18.0	21.0	24.9	28.0	50	Total	DXCC
09-Apr	G3TBK	61	73	116	88	153	128	159	146	161	1	1086	200
03-Apr	G5LP	0	63	108	85	121	106	150	129	149	1	912	192
09-Apr	GM0OPS	62	66	116	54	105	83	118	103	135	0	842	174
08-Apr	G3SWH	50	52	74	52	96	89	122	114	133	0	782	170
09-Apr	G3WGV	45	58	77	51	82	54	97	59	117	4	644	159
09-Apr	G0ORC	0	53	65	45	67	60	87	75	106	0	558	146
06-Apr	GM3YOR	0	38	43	30	59	43	80	61	116	0	470	162
09-Apr	G4FJW	0	0	107	48	54	13	87	42	74	0	425	145
29-Mar	MD0CCE	64	7	9	19	57	35	58	59	101	2	411	147
08-Apr	G4IIY	53	37	39	0	57	7	64	19	61	0	337	97
05-Apr	M0NGN	0	0	38	3	59	30	55	25	64	0	274	133
08-Apr	G4DDL	17	33	40	7	44	18	40	23	40	0	262	88
09-Apr	G3YMC	0	13	35	32	50	25	43	24	33	0	255	78
03-Apr	G4SND	39	32	29	7	29	19	27	9	41	0	232	89
09-Apr	G3SZG	27	28	18	23	14	16	19	25	60	0	230	100
02-Apr	G3VGZ	45	16	29	1	30	2	22	1	13	0	159	60
02-Apr	G3VYI	40	19	19	2	9	15	11	3	22	0	140	63
AVERAGE		46	39	57	34	64	44	73	54	84	2	472	130
PARTICIPATION		65%	88%	100%	94%	100%	100%	100%	100%	100%	24%		

Automatically created for Subscribers from the [ClubLog UK CW Table League](#) on **2023-04-10 at 00:00Z**
e-mail subscribe@ukcwtable.org.uk to subscribe to this service (UK radio amateurs only - see Rules)

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UK CW table web site updated 2023-01-11

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About Club Log

Introduction by Michael G7VJR

Club Log is a web-based application that analyses log files from radio amateurs all over the world. Using the logs, Club Log offers you a wide range of reports for your own benefit, and identifies large scale trends from the sum of all activity in the database.

If you participate in Club Log by uploading your log you will receive:

- **Personal DXCC reports** and league tables, including HF and Satellite modes
- **Detailed analysis** of your log, using researched DXCC information
- **Grid squares and zone charts** for your log, again based on detailed research
- **A personal timeline** of your activity (DXCCs per year, band and mode info)
- Your own **log search tool**, eg. to link from your web page or QRZ profile
- A filtered **DX Cluster** which only tells you about DX you still 'need'
- A say in the Club Log **most wanted report**: your log is part of the trend data
- Access to **propagation and activity predictions**, using everyone's logs
- **QSL suggestions** to help you send out just the cards you need
- **OQRS** (Online QSL Requests) to make direct and bureau QSLing faster and easier, powered by Log Matching
- **Definitions and raw data**: Everything you see in Club Log is shared freely and openly with the entire amateur radio community, and backs the callsign logic used in most logging software.
- **Expeditions tools** including charts, stats, log search, QSL and fund raising tools for qualifying expeditions
- **Live Streams** to make it engaging and interactive to work DXpeditions
- Satisfaction from taking part in and improving a free DXing resource.

The 6m Dipole Project

