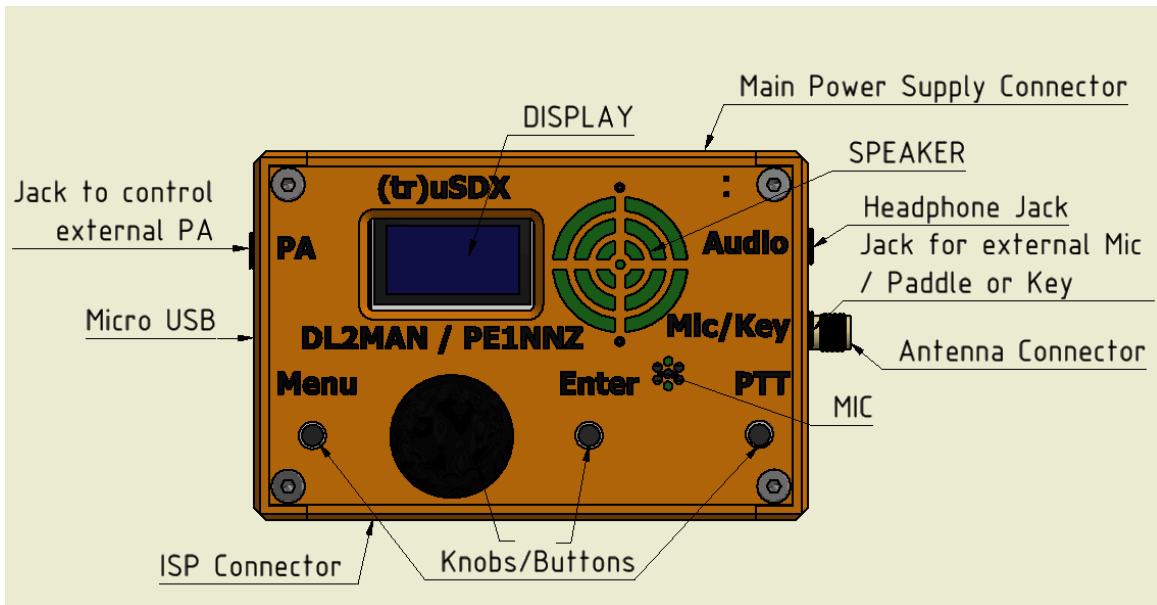
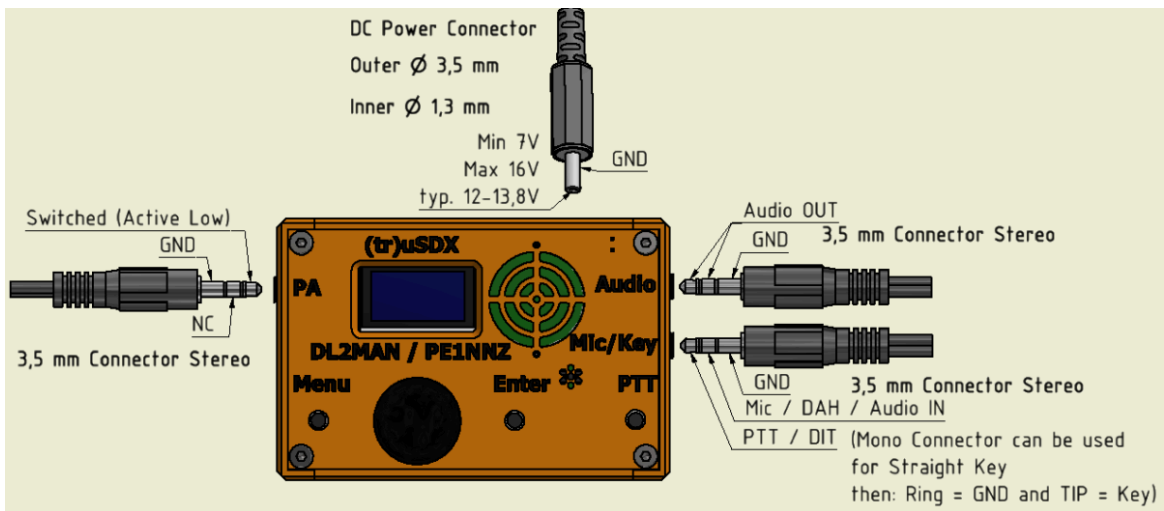


4 (tr)uSDX Manual

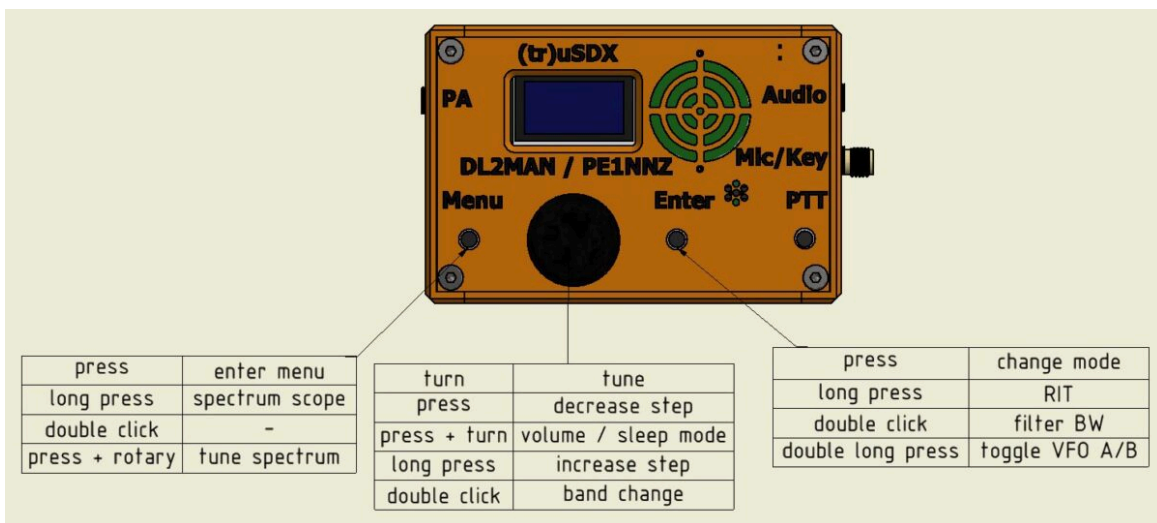
General Overview:



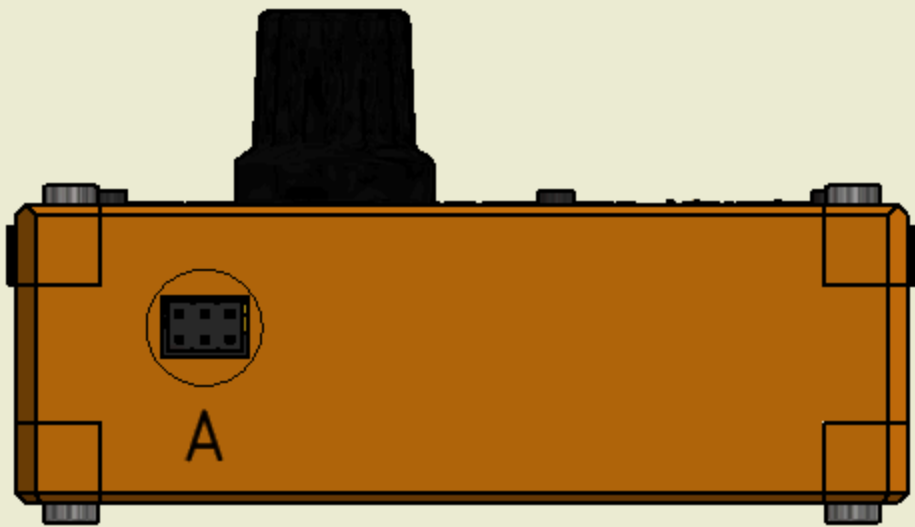
Overview: Pin-Out of external connections



button shortcuts:

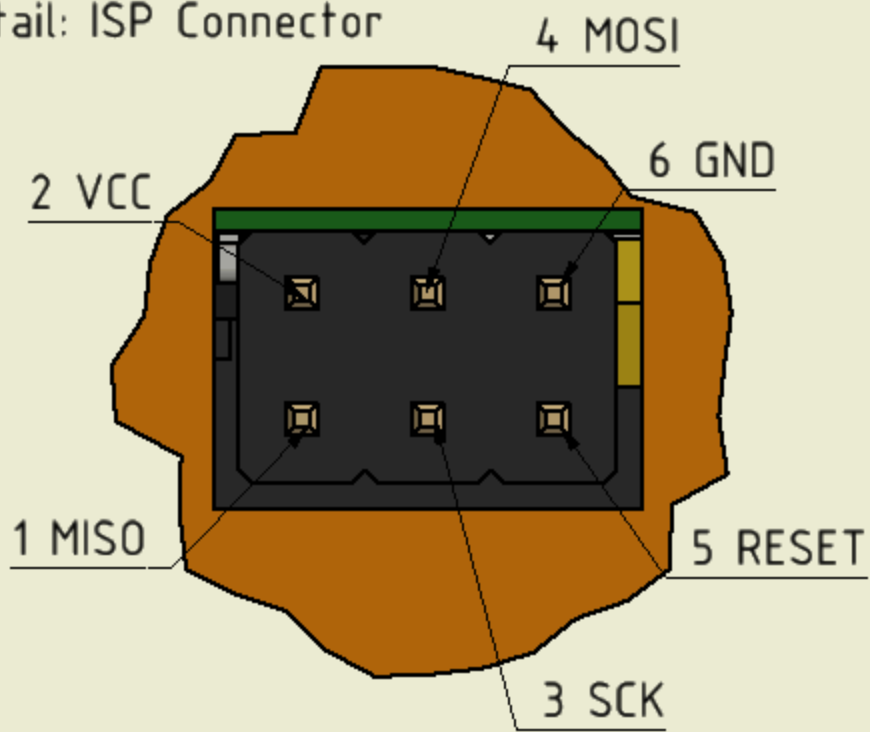


- When external Speaker / Headphone is connected, on-board speaker will be disconnected / disabled.
- When external Microphone / Paddle / Key is connected, on-board Microphone will be disconnected / disabled.
- USB and Power Supply can be connected at the same time. Main Power Supply has always priority and will be preferred over USB 5V by the rig, when connected.



A (5 : 1)

Detail: ISP Connector



(tr)uSDX #4 - How to use it

DL2MAN



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General Usage / Overview

CAT usage

Here is a guideline how (tr)uSDX CAT can be used on other operating systems:

- Linux: <https://forum.dl2man.de/viewtopic.php?p=4108#p4108> <
<https://forum.dl2man.de/viewtopic.php?p=4108#p4108>>
- Mac: <https://gist.github.com/relistan/bd9c4b8bab55b81c0374f30bf565bbe0> <
<https://gist.github.com/relistan/bd9c4b8bab55b81c0374f30bf565bbe0>>

(tr)uSDX - Setup for DigiModes and C

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Setup for DigiModes and CAT Control.

Firmware 2.00t and above, requires a baudrate setting of 115200 (instead of 38400), the supported CAT protocol is Kenwood TS-480.

Digital modes without Audio Cables

It is also possible to use digital modes over USB cable ONLY (no audio cables and sound cards are needed!), the audio stream is transported over the CAT serial interface. You need to have at least firmware version 2.00u or newer to make it working.

There are various applications that supports the (tr)uSDX CAT streaming protocol:

- Digimode usage (WSJT-X, JS8CALL, WinLink) on your Windows/Linux PC or Raspberry PI is facilitated with a special **(tr)uSDX CAT streaming Driver < <https://dl2man.de/wp-content/uploads/2022/01/wp.php/trusdx-audio.zip>>**.

Below a video demonstration:

(tr)uSDX - digimodes without audio c
DL2MAN



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Streaming audio over USB

- **FT8CN < <https://github.com/N0BOY/FT8CN/releases>>** is a famous FT8 app for Android and supports (tr)uSDX CAT streaming since version 0.91, all is needed is a USB-OTG cable from the phone to the (tr)uSDX. (here an old beta: **FT8CN 0.91 Beta10 20230910 <**

https://github.com/N0BOY/FT8CN/files/12566887/FT8CN_0.91_Beta10_20230910.apk.zip)

- [PocketRXTX and jAReC < https://www.yo3ggx.ro/soft.html >](https://www.yo3ggx.ro/soft.html), from Dan YO3GGX, is an extensive transceiver dashboard on your PC or mobile phone that implements (tr)uSDX CAT streaming support.

More details about the supported CAT commands and extensions (such as CAT streaming) can be found here: [5 \(tr\)uSDX Details < https://dl2man.de/5-trusdx-details/ >](https://dl2man.de/5-trusdx-details/)

Frequency Calibration

(tr)uSDX - how to calibrate frequency
DL2MAN



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Reference Oscillator Calibration

Spectrum Display

Firmware 2.00t and above do have a spectrum display, when holding the left button and tuning the frequency dial. Here a video about the feature:

(tr)uSDX Beta firmware - now with sp
DL2MAN



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Spectrum scope hile holding left button

Menu Functions

The following Information is NOT 100% accurate and needs to be updated:

Ⓛ=Left ⓔ=Encoder Ⓡ=Right button, Ⓞ=turn, -=hold button (longer), ○○=fast double click, ○-○-=slow double click, ○- Ⓞ=hold button and turn

Action	(Menu) Function	Values
on (E) -	Factory Reset	
o	VFO	20kHz..99MHz
(L)	Enter menu	
(L) - o	Quick Enter menu	
(R)	Menu Exit	
(E) - o	1.1 Volume	1-15 in 6dB steps, 0 is Power-Off
off (L)	Power-On	
(R)	1.2 Mode	LSB, USB, CW, AM, FM
(R) (R)	1.3 Filter BW	Full, 3000, 2400, 1800, 500, 200, 100, 50 Hz
(E) (E)	1.4 Band	80,60,40,30,20,17,15,12,10m
(E)	1.5 Tuning Steps ↓	10M, 1M, 0.5M, 100k, 10k, 1k, 0.5k, 100, 10, 1
(E) -	1.5 Tuning Steps ↑	
(R) - (R) -	1.6 VFO Mode	VFO-A, B, Split
(R) -	1.7 RIT	ON, OFF
rit (R)	RIT Exit	

Action	(Menu) Function	Values
	1.8 AGC	ON, OFF
	1.9 NR	0-8 exponential averaging step
	1.10 ATT	0, -13, -20, -33, -40, -53, -60, -73 dB
	1.11 ATT2	0-16 in 6dB steps
	1.12 S-meter	OFF, dBm, S, S-bar
	2.1 CW Decoder	ON, OFF
	2.4 Semi QSK	ON, OFF
	2.5 Keyer speed	10-40 Paris-WPM
	2.6 Keyer mode	Iambic-A, B, Straight
	2.7 Keyer swap	ON, OFF
	2.8 Practice	ON, OFF
	3.1 VOX	ON, OFF
	3.2 Noise Gate	0-255 in 6dB steps
	3.3 TX Drive	0-8 in 6dB steps, 8=constant amplitude
	3.4 TX Delay	0-255 ms
	4.1 CQ Interval	0-60 s
Ⓛ	4.2 CQ Message	Transmit CQ text

Action	(Menu) Function	Values
	8.1 PA Bias min	(0-255) representing 0% RF output
	8.2 PA Bias max	(0-255) representing 100% RF output
	8.3 Ref freq	si5351 crystal frequency in Hz
	8.4 IQ Phase	0.180 degrees
	10.1 Backlight	ON, OFF

on (E)	Factory Reset	(R)(R)	Audio Filter
-			
(L)	VFO	(E)(E)	Band
(L)	Enter menu	(E)	Tuning Steps ↓
(L)- (L)	Quick Enter menu	(E)-	Tuning Steps ↑
(R)	Menu Exit	(R)-	VFO-A, B, Split
		(R)-	
(E)- (L)	Volume/Power-Off	(R)-	RIT
off (L)	Power-On	rit (R)	RIT Exit
(R)	LSB, USB, CW, AM, FM	4.2 (L)	Transmit CQ message

on ⓔ-	Factor y Reset	Ⓡ Ⓡ	Audio Filter	⓪	VFO	Ⓡ- Ⓡ-	VFO-A, B, Split
Ⓛ	Enter menu	ⓔ ⓔ	Band	ⓔ- ⓪	Volume/ Power- Off	Ⓡ-	RIT
Ⓛ- ⓪	Quick Enter menu	ⓔ	Tunin g Steps ↓	off Ⓛ	Power- On	rit Ⓡ	RIT Exit
Ⓡ	Menu Exit	ⓔ-	Tunin g Steps ↑	Ⓡ	LSB, USB, CW, AM, FM	4.2 Ⓛ	Transmit CQ message
1.1	Volume	1.9	NR	2.7	Keyer swap	8.1	PA Bias min (0% RF)
1.2	Mode	1.10	ATT	2.8	Practice	8.2	PA Bias max (100% RF)
1.3	Filter BW	1.11	ATT2	3.1	VOX	8.3	Ref freq
1.4	Band	1.12	S- meter	3.2	Noise Gate	8.4	IQ Phase

1.5	Tuning Steps	2.1	CW Decoder	3.3	TX Drive	10.1	Backlight
1.6	VFO Mode	2.4	Semi QSK	3.4	TX Delay		
1.7	RIT	2.5	Keyer speed	4.1	CQ Interval		
1.8	AGC	2.6	Keyer mode	4.2	CQ Message		

[Click here for \(tr\)uSDX Details < https://dl2man.de/5-trusdx-details/>](https://dl2man.de/5-trusdx-details/)

[\(tr\)uSDX < https://dl2man.de/>](https://dl2man.de/)

[FORUM < https://forum.dl2man.de>](https://forum.dl2man.de)

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[Impressum < https://dl2man.de/imprint/>](https://dl2man.de/imprint/)