### HowTo setup PowerSDR-IQ for PMSDR

#### Special note:

You should not use PowerSDR for your very first software installation! There are too many holes to fall in! It is much more easy to use Winrad in one of it's current available versions. In times of writing it is Winrad-1.61 (no longer developed), WinradHD-0.81, WinradPLUS-1.03, or WinradF-1.5. My recommendation is WinradHD, because it does have the full functional range of the original version, plus much more enhancements inside, for instance an improved DSP engine!

This is NOT a user guide for the program itself. Download it from the FLEXNET site and study the user manual carefully!

#### Good to know before installation:

- The PMSDR DLL does support **PowerSDR-IQ ONLY!**
- Last version available is 1.12.24, but I could not find an error free installable version on the net,
  - while v1.12.23 is doing well, and available on different Servers.
- The DLL supports all PowerSDR-IQ versions up to v1.12.xx
  - Versions starting v1.19.xx and higher are no longer supported, because they don't have the Ext-IO Interface any more!

#### PowerSDR-IQ settings:

After installing the PowerSDR-IQ version of your choice:

- Copy the three DLL Files in to the PowerSDR program folder:
  - $\circ$  c3260.dll
  - Extio\_PMSDR.dll (last version v3.2r9 for PowerSDR-IQ and G8JCFSDR)
     (Do not use this Extio PMSDR.dll for Winrad)
  - o mpusbapi.dll
- Start the PowerSDR program and click on **SETUP** (Upper left hand corner).

🗱 PowerSDR-IQ 🛛 v′	1.12.23 S\	/1EIA				
Setup Memory Wave	e Equalizer	XVTRs C	WX			
Start	VFO A				VFO Sync	T
		10	,000 0	00	VFO Lock	Step:
MOX		WW	$\sim$		7.000000	Save
MUT X2TR	Display					
Rec Play	9 900	9,9 920	9,9 940	9,9 960	9,9 980	10,00
AF: 50 🕂	-30					
	-40					
	50					
AGC-T: 90 🛨	-60					
	-70					
	-80					
Drive: 50 🛨	-90					
	-100					

💀 PowerSDR-IQ Setup
General       Ext. Ctrl       Audio       DSP       Display       Transmit       Keyboard       Appearance       PA Settings       CAT Control       Tests         Hardware Config       USB       Calibration       Filters       RX2       Options       ExtIO       BPF/LPF       Serial         Radio Model       SDR (Si570)       SDR (Si570)       IPT Address:       378       IPT Delay:       0       IPT Delay:       0       IPT Janus/0zy Control       IPT Janus/0zy Control       IPT Delay:       IPT Janus/0zy Control       IPT Delay:       IPT Janus/0zy Control       IPT Janus/0zy Control<
Wizard     Expert       Wizard     Receive Only       Expedd       Reset Database     Import Database         OK     Cancel

In the upcoming window click on **GENERAL**  $\rightarrow$  Hardware Config,

And set Radio Model as well as Receive Only as indicated.

Open **GENERAL**  $\rightarrow$  **ExtIO**, and set the check mark in to the **PM-SDR Enable** field.

🚟 PowerSDR-IQ Setup
General Ext. Ctrl Audio DSP Display Transmit Keyboard Appearance PA Settings CAT Control Tests Hardware Config USB Calibration Filters RX2 Options ExtIO BPF/LPF Serial PM-SDR Options PM-SDR Enable
Reset Database Import Database OK Cancel Apply

As an immediate response, the DLL control window will appear on the screen.

🗱 PowerSDR-IQ Setup	
General Ext. Ctrl Audio DSP Display Tr Primary VAC	ansmit   Keyboard   Appearance   PA Settings   CAT Control   Tests   
Primary Sound Card Setup Details	Sound Card Selection
Driver: MME	Unsupported Card
Input: M-Audio Delta 44 1/2 💌	Buffer Size
Output: Realtek AC97 Audio	2048 -
Mixer: None	Sample Rate Michain
Receive:	48000 - 50 -
Transmit:	Output Vo
Reset Database Import Database	ÚK Cancel Apply

Open the Audio  $\rightarrow$  Primary tab and choose your Soundcard, Sample Rate and Driver.

It is wise not to use the **Sound Card Selection** if you will find an entry for your card, because "supported" in this case is very strong FLEXNET hardware related! Use **Unsupported Card** instead, and set the details of your choice.

# It might be necessary here to play with the different driver versions available, unless you see a spectrum in PowerSDR-IQ!

Compared against the Winrad-DLL, the Extio\_PMSDR.dll for PowerSDR-IQ does not have any Quick-Tune, SKED nor CAT related controls inside, while in contrast to it, CAT is fully implemented in PowerSDR-IQ.



Amongst others it will enable the **Band** and **Mode** buttons for PMSDR control. Therefore you have to enable **CAT Control**, and the others as indicated.

PowerSDR-IQ Setup					
General   Ext. Ctrl   Audio   DSP	Display Transmit Keyboa	rd Appearance	PA Settings	CAT Control Tests	
CAT Control	PTT Control Enable PTT Port: COM1	Test	ID as:	PowerSDR	
B 1200 - Parity ne -			RTTY Offset	Diffset VFD A	
Data 🗸	DigL/U Returns LSB/L     FlexProfiler Installed	ISB	DIGL	Difset VFO B DIGU 2125 🛨	
Allow Kenwood Al Command					
Reset Database Import Database. OK Cancel Apply					

Important in here is the **CAT Control** only, while the others (**ID as**; **Allow Kenwood Al Command**) somehow interact with 3thrd party programs like HRD.

It would be interesting for you, that it is not essential to have a real corresponding Com-Port available. What ever you choose as a **Port** setting, it will work!

(Quite honestly, I don't know how they handle that, but it works. The PMSDR radio does follow your clicks in PowerSDR-IQ!)

DTR DigL/U Returns LSB/USB TexProfiler Installed Now Kenwood AI Command	Enable Offs Enable Offs DIGL 2125 🕂	et VFO A set VFO B DIGU 2125 <del></del>	Hit <b>OK</b> , that last keystroke will save all your settings!
	Cancel	Apply	

So, right now it is time to hit the **START** button, and hopefully you will see a Spectrum on your PowerSDR-IQ screen.



If you don't see it, go back to the Audio settings and play with the drivers, unless you will see a spectrum!

#### Swap I/Q channels

Because I have not found any possibility inside the program to swap the I/Q channels, it might be necessary to swap the position of your hardware input connectors in to the soundcard, unless you here the right voice-sound on LSB/USB mode!

🗱 PMSDR
About Debug Filters Advanced Settings
Show frequency on LCD
Mut Bias 2.46 V
Si570 Frequency ration
External Down-Converter Use external Downconverter Band LO [Hz]
2m 🔽 116000000 🔽
■ IF Pan-Adapter ■ Lock PMSDB on IF
F [Hz] ELEKFAn ▼ 8215000 ▼
Switchboard Delay
3th harmonic Mode (experimental)
Save actual as PMSDR default freq.
Use PMSL wnconverter
LO freq. calib 0 • • • LO=RF-IF 💽 IF [Hz] 48677000

<b>瞬 PMSDR</b>					
Advanced Settings					
About	Debug	Filters			
Auto Sel Selector — Pass thru Filter 1 Filter 2 Filter 3 -	ect ough [1 .> [2] .> [6] [12]	[MHz] f2 ▼ 6 ▼ ▼ 13 ▼ ▼ 30 ▼			
LPF>		2 🔽			
Save Filter Va					

There is nothing to say much over the DLL itself, unless you would like to play with the **Filters**, the experimental **3th Harmonic Mode**, or make use of the **Pan-Adapter Mode**, which I haven't yet tried.

## Have Fun!

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