WSPR

WEAK SIGNAL PROPAGATION REPORTER

How to use iWSPR

Radio connection cable examples

Available on the App Store

IW2MVI · IZ2XCV · IW2NVW

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Rev. 4 - 10/2018

How to use iWSPR

Instructions

iWSPR is really easy to use: just insert your "Callsign" and "Locator" and then change the "Power" and the "Dial Frequency" in relation of your working condition.

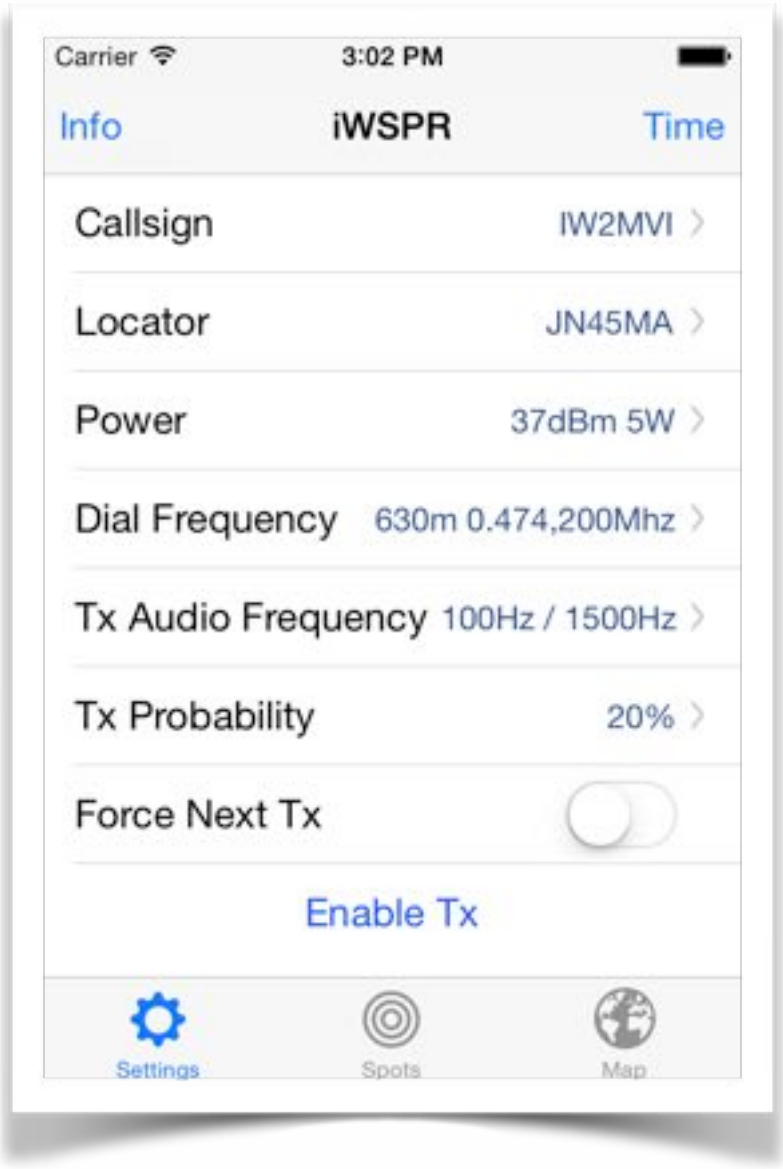
You had to set your radio always in USB mode and dial the frequency reported in "Dial Frequency".

You can also change the "TX Audio Frequency", set the "TX Probability" or "Force the Next TX".

Once you are ready click "Generate TX" and then "Enable TX". The button will become red and a popup window will appear during transmission.

To avoid distortion and overload of your radio keep the audio level as low as possible.

You can find more info about WSPR mode on the official site.



How to connect your device to a radio

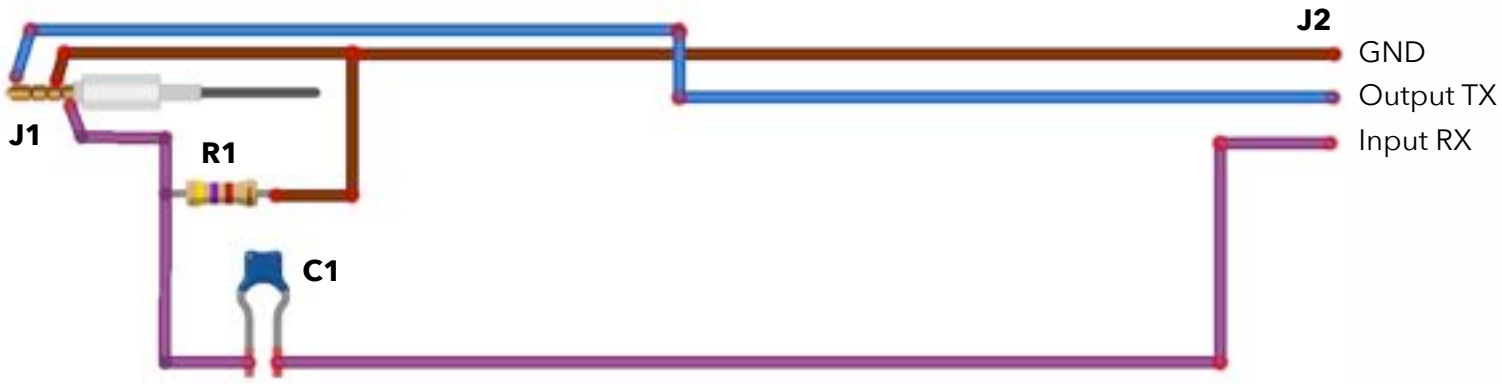
The simplest cable you can make is made by two wire and a 3 pole (stereo) 3,5mm jack connector. Wire the left channel (TIP) to the input of your radio data port or mic and the ground to the ground. If you have problem regulating ALC just add a small potentiometer (1Kohm).

Starting from iOS 10 it's highly recommended to use the "Lightning to 3.5mm Headphone Jack Adapter": the transformers are useless and works fine also with a simple "4 pole Y Splitter Stereo Audio Cable" without any extra hardware. "iRig" interface was also reported working fine.

For the iPad it's also possible to connect an external USB sound card (max 100mA) via the "Lightning to USB photo camera adapter" or the old "USB Camera Connection Kit". Worked fine with a cheap "C-Media" and the "Behringer UCA202": if you already have a USB sound card, try it!

In the next page you will find some examples from which you can take inspiration.

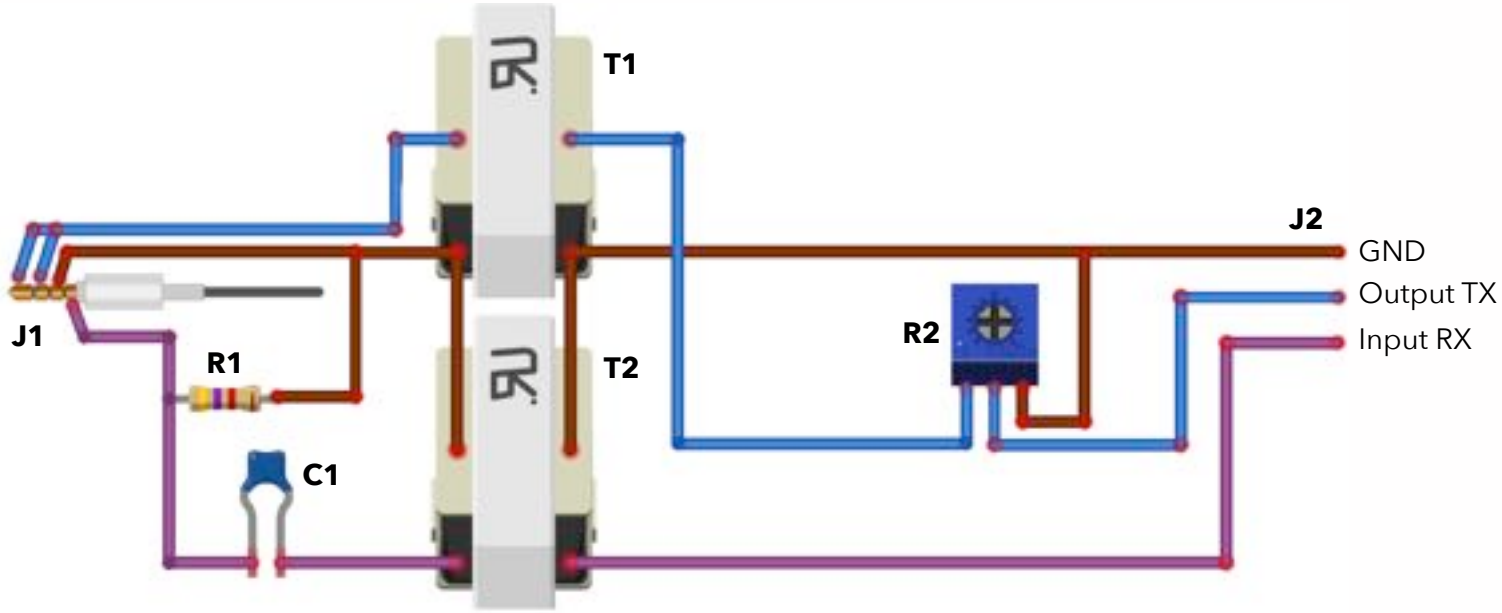
Simplest example



⬅ iPhone - Radio ➡

R1	4.7 KΩ
C1	10 µF
J1	Audio Connector 3,5mm 4 Contacts
J2	Connector to radio, check your manual

Example for Radio with VOX

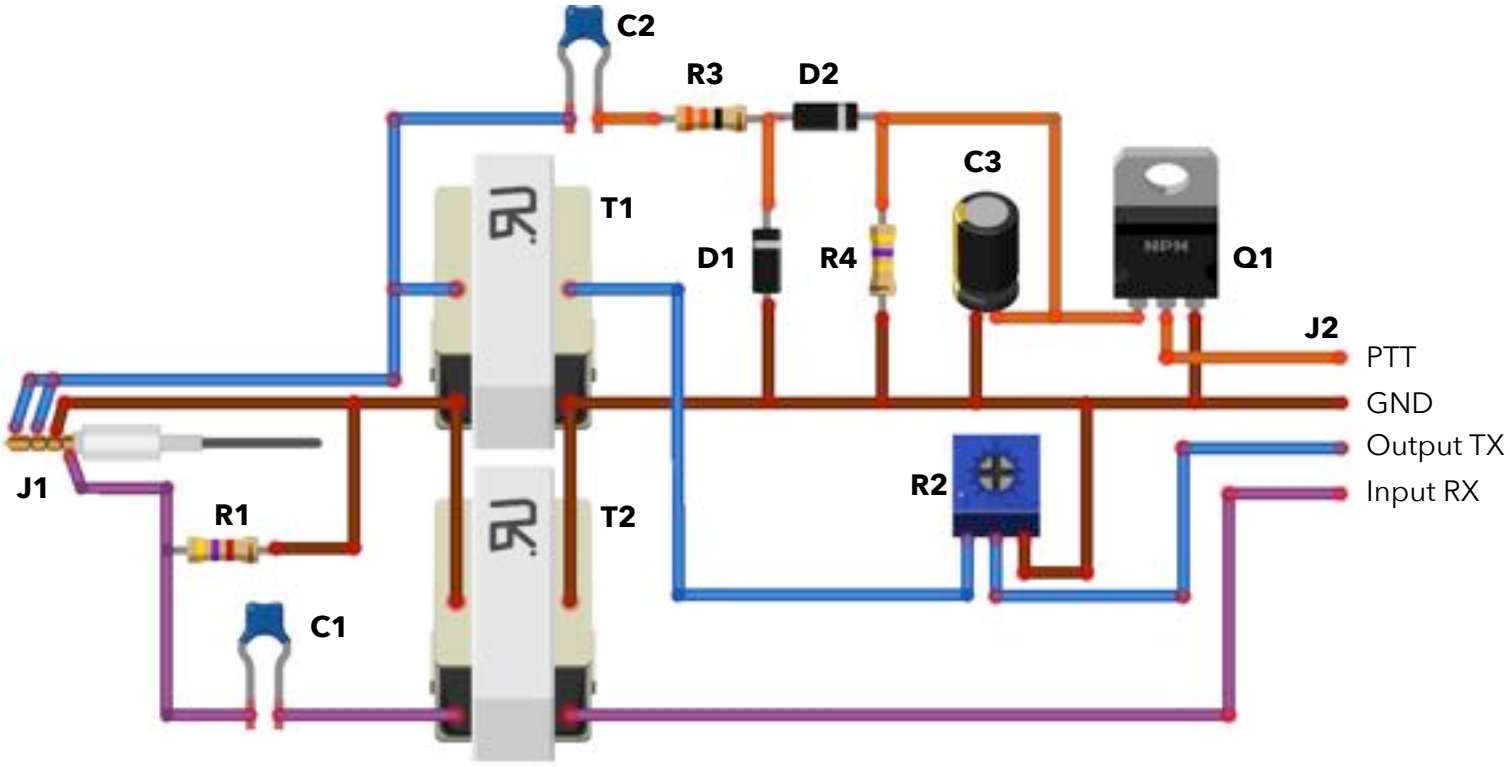


⬅ iPhone - Radio ➡

T1, T2	Audio Transformer 600:600 Ω
R1	4.7 KΩ
R2	Pot 1 KΩ
C1	10 µF
J1	Audio Connector 3,5mm 4 Contacts
J2	Connector to radio, check your manual

Highly Recommended!
Put a small Ferrite Core just before J1 and J2.

Example for Radio with PTT



⬅ iPhone - Radio ➡

Highly Recommended!
Put a small Ferrite Core just before J1 and J2.

T1, T2	Audio Transformer 600:600 Ω	**C1**	10 uF
R1	4.7 KΩ	**C2**	0,33 µF
R2	Pot 1 KΩ	**C3**	5 µF
R3	33 Ω	**D1**	BAY72
R4	470 KΩ	**D2**	BAY72
Q1	IRF540 or other N-Channel mosfet	**J1**	Audio Connector 3,5mm 4 Contacts
		J2	Connector to radio, check your manual

Note

The first schematic is the simplest. You can start form this and the grow up to one of the two others, as your radio need. For Q1, any N-channel mosfet should work: if you have one in your box try it.

Keep in mind that the first schematic is not isolated: pay the maximum attention on what you are doing. The possibility to make permanent damage to your devices it's really low, but still present: better be careful that complain later! 😉

If you need help or assistance you can contact us on:
www.subdimensions.com - info@subdimensions.com

Have fun!
73 IW2MVI - IZ2XCV - IW2NVW