

PIXIE – 40 M CW Transceiver Project

March 2017 Build Night
Newport County Radio Club

Project Goals

- Build something simple but useful for Amateur Radio licensees in all classes
- Low cost (\$10) for greater participation
- One night build with test and troubleshooting help available
- Less than perfect design to allow investigating solutions in future meetings and events.
- Have lots of FUN!!
- POTA contest? - Pixie On The Air



Project Schedule

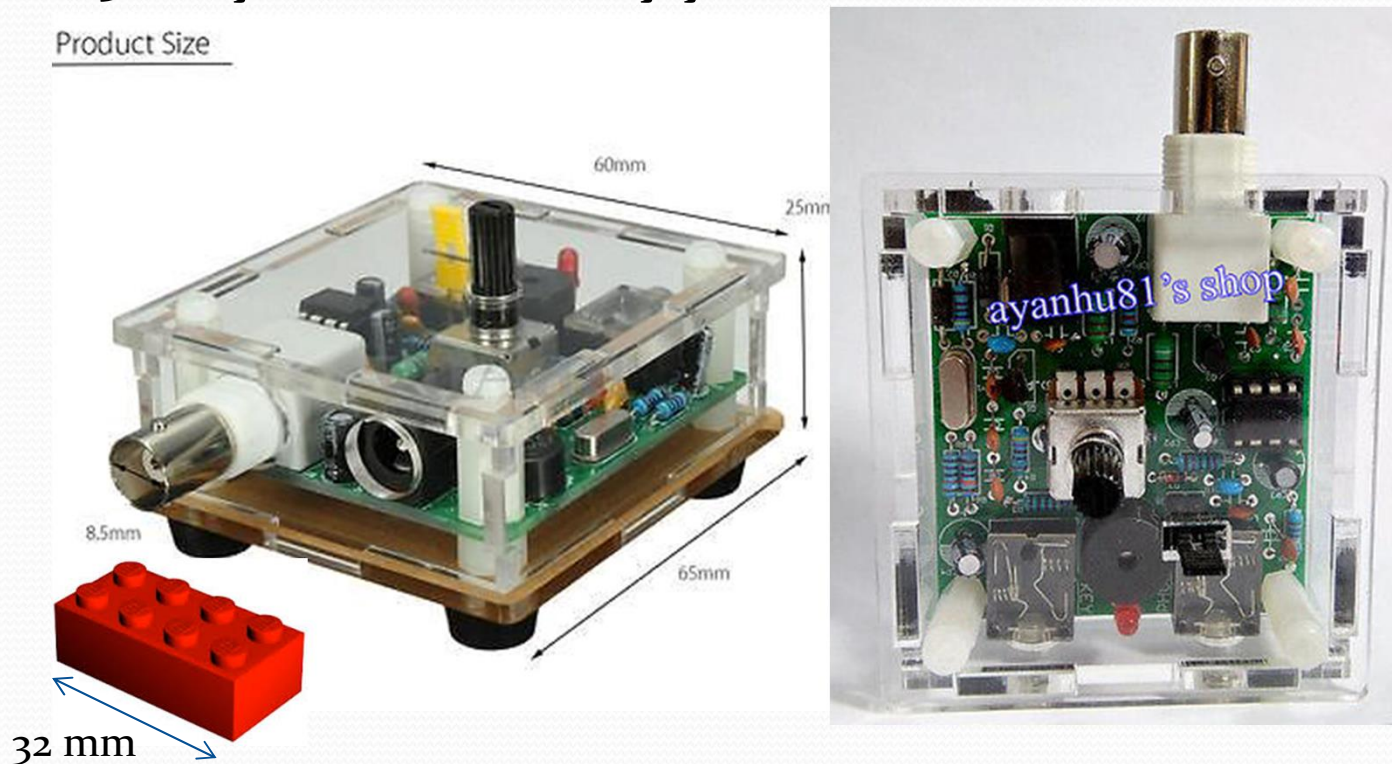
- Dec 2016. Investigate alternatives. Done.
- Jan 2017. Establish interest in the project. Take orders
- Feb 2017. Procure kits and set up test stations.
- March 2017 meeting .. Build night at KVH with club provided tools or bring your own
- Futures
 - 40 m CW net
 - Arduino projects - keyer and decoder
 - Circuit descriptions and improvements



PIXIE - a 40M CW transceiver

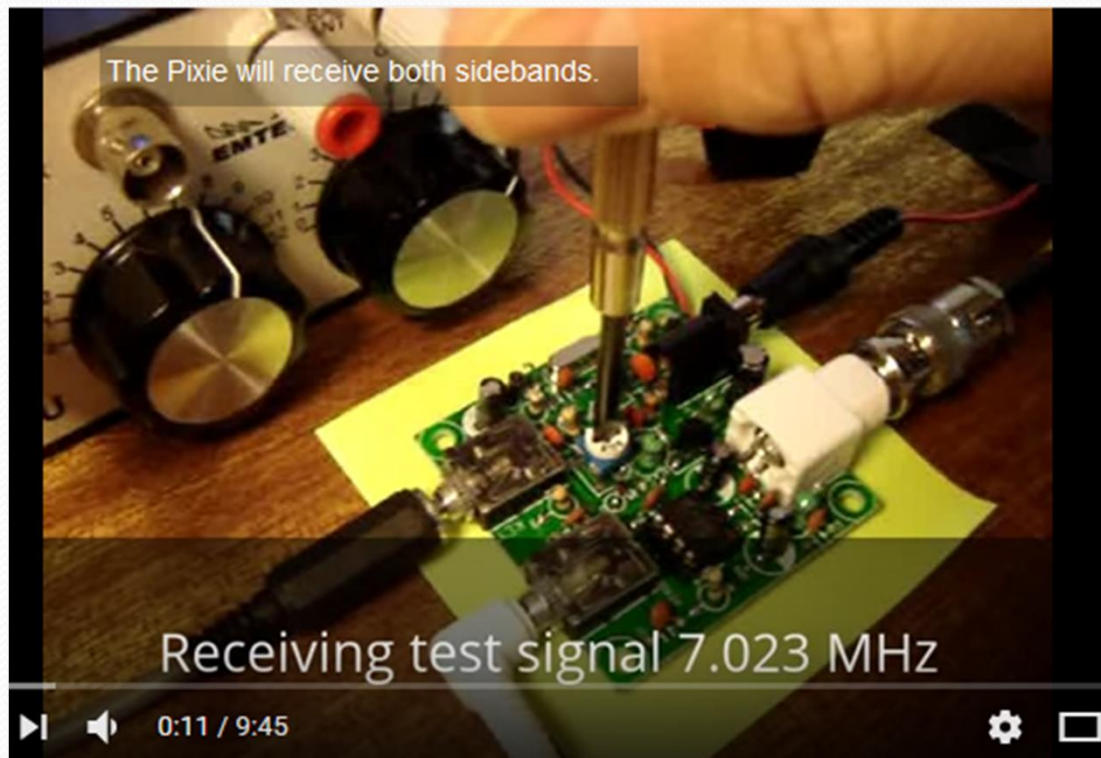
- The Pixie is a small, direct conversion CW QRPp transceiver using just a handful of common parts for \$10 (\$8.50 if you want to buy your own).

Product Size



Watch this for 1 min

<https://www.youtube.com/watch?v=IZDeMXy4WGc>

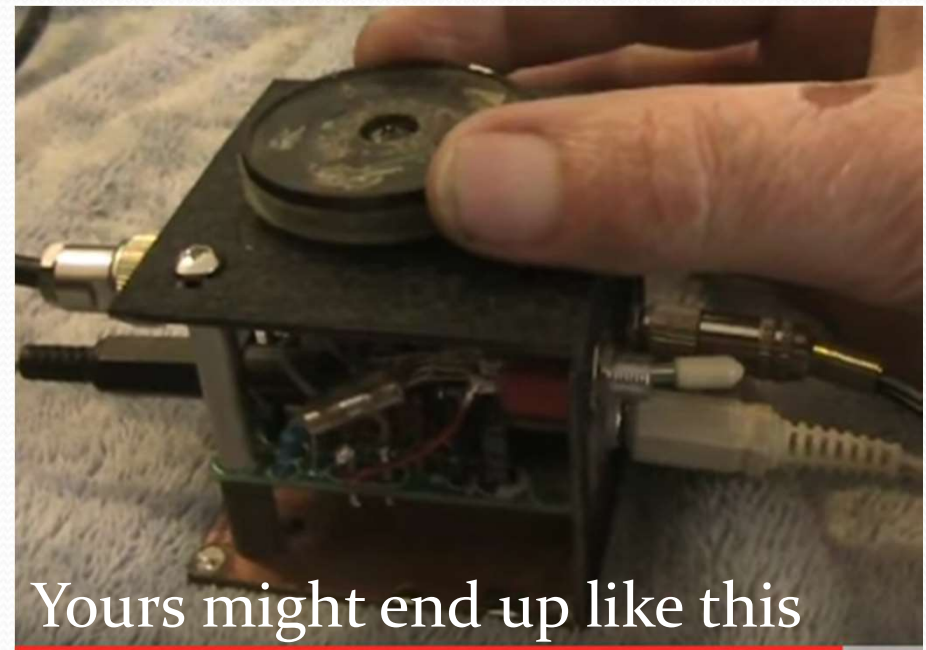


Or this: <https://www.youtube.com/watch?v=roAc4c1a-ao>

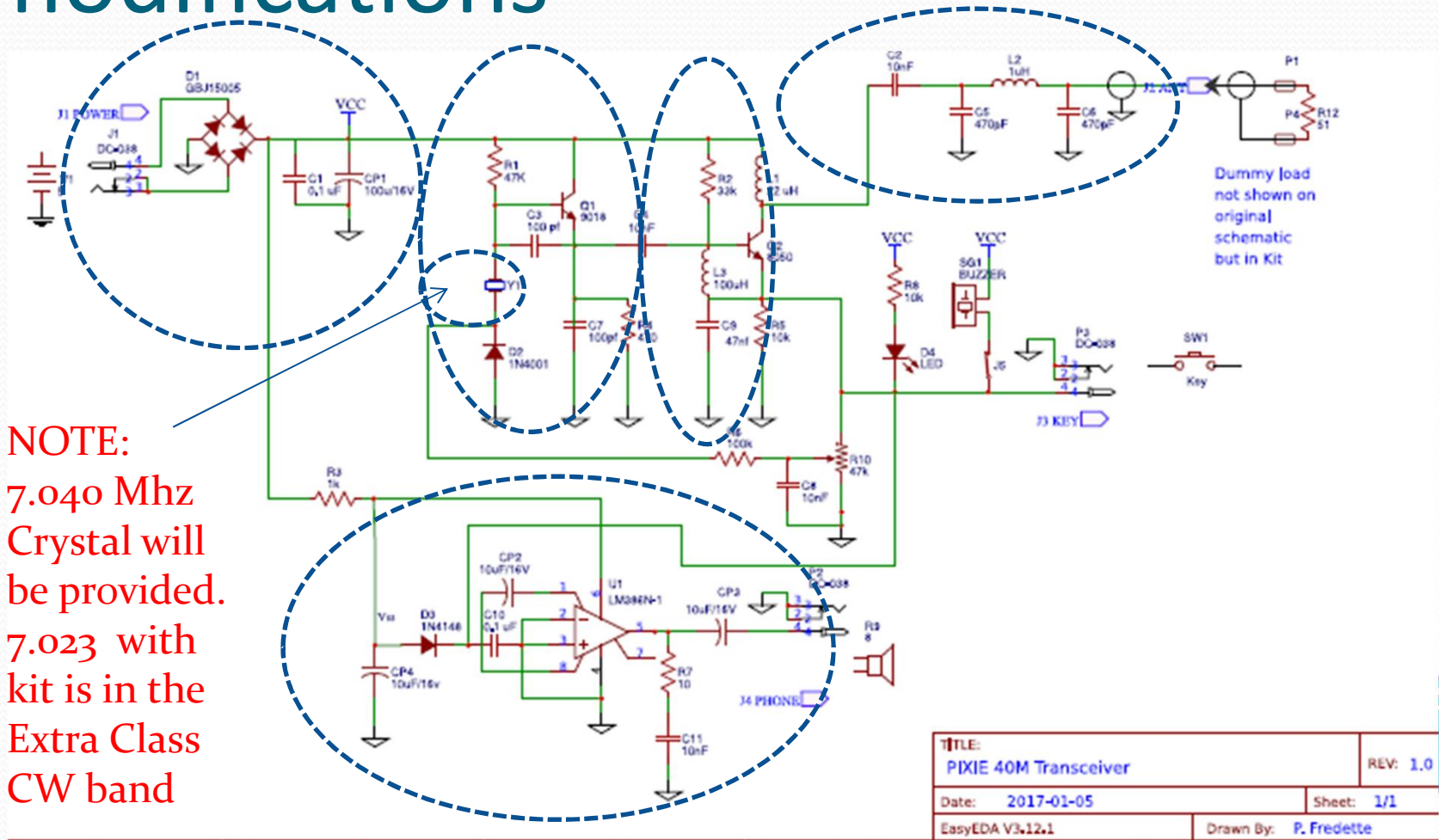


Learn or practice assembly and soldering techniques

- The base kit shown below (\$10)
- 7.040 crystal will be provided because 7.023 is in the Extra class band
- Spare parts will be available free



Plenty of opportunities for modifications



QSO with Pixie QRP Transceiver

- <https://www.youtube.com/watch?v=IZDeMXy4WGc>
 - Starts at 1:05 of video
 - Published on YouTube on Feb 13, 2016
 - 350 mile (560 km) QRP contact between NG9D,Lynn and Carl, WBoCFF at noon local time using 600 mW on 7.023 MHz.



Futures

- 40 m CW net 7.040
 - Club broadcast / CW practice / QRP contests
- Arduino/RaspberryPi projects
 - ID / Fox keyer (Jan 2017 QST) / CW decoder
- Measurement experience
 - Power /Frequency /Equipment
- Circuit descriptions and improvements
 - Impedance / Distortion / Matching/ Filtering
- Antenna design
 - Small and/or portable for field use.
- Suggestions are welcome



NCRC 2017 meeting plan

- Jan 2017 WFD plan, Pixie Project presentation. P Fredette
- Feb 2017
 - Pixie Theory of Operation(J King).
 - Soldering principles and practice (Paul Boudreau)
- March 2017 Pixie Build and Test night (KVH) - Mentors needed
- April 2017 Open (Arduino intro and keyer + Pixie testing)
- May 2017 Pixie CW exercise (Net simulation) Willy/John ?
- June 2017 Field Day coordination (Satellite tracker group status)
- July 2017 Open (Field Day roundup/Antennas Fundamentals)
- Aug 2017 Open (Fox exercise/ ARISS)
- Sept 2017 Pete Lawson's Northern Canada Coast Adventure
- Oct 2017 Open (Pixie improvements and experiences)
- Nov 2017 Open (Election – Drone demo)
- Dec 2017 Christmas Party

