Youth on the Air
Americas Camp 2025

Thornton (Denver), Colorado, USA

HANDBOOK

YOTA Americas Camp 2025 Handbook

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Youth on the Air (YOTA) Americas Camp Handbook 2025

Updated June 12, 2025

Camp Overview

Things to do before camp:

- ❏ Register for D-STAR
- ❏ Return all 6 forms completed with signatures
- ❏ Download and install the **Discord** messaging app and the **Google Drive** app to your phone, if you have one.
- ❏ If outside of the USA or Canada, bring your IARP or CEPT documentation if possible.
- ❏ Bring QSL cards/Local Club Swag/Small Food Items representing your area to share
- ❏ Check your email for updates at most 1 week before camp.

Who: Youth with a current amateur radio license ages 15-25 (under 26) who are residents of North, Central, and South America (geographic area same as ITU/IARU Region 2)

* Applicants within 1 year of the age range will be considered upon recommendation
Up to 50 campers
20 full week staff members (1:4 ratio of adults to campers or lower)

What: A week-long camp for young hams to meet other young hams, participate in unique experiences with radio related technologies that may not otherwise be viable, and build relationships with mentors and peers.

When: June 15-20, 2025 **Time Zone:** Mountain Daylight Time (GMT-6)

Where: Veterans of Foreign Wars (VFW) Post 7945, 10217 Quivas St, Thornton, CO 80260
Google Maps: https://maps.app.goo.gl/s1TYLDQXskesDtTJ9
APRS: WØY Grid: DM79LV91AQ Lat/Lon: 39°52'55.41" N 105°00'28.94"W (39.882107, -105.008106)

Talk-in Repeater: 449.350 -5MHz tone 100.0
YOTA Simplex Frequency: 147.550 tone 123.0
YOTA D-STAR/Digital Frequency: 147.500

Why: Our goal is to serve already licensed hams to enrich their amateur radio experience, add to and refine their skills, and to provide mentoring possibilities.

Cost: $100 USD per camper, plus transportation to and from Denver, CO, USA and related expenses (see "other expenses" below). If you can not afford the fee, you can apply for a scholarship to assist with the cost.

Transportation: Campers are responsible for their own transportation to and from Denver. (Airport code: DEN) Ground transportation (school bus) to/from the airport and the camp hotel will depart the airport at 2:00 pm and 4:00 pm MDT (2000 and 2200 UTC) on Sunday, June 15 and from camp at noon on Friday, June 15. The airport is about 30 minutes from the hotel. Bus pickup and dropoff will be in front of the hotel. Airport pickup will be at "Shared Ride Services", Island 5 outside doors 505 and 512.

For local public transportation, visit https://www.rtd-denver.com.

Everyone is expected to be at check in no later than 4:30 pm Mountain Daylight Time (2230 UTC) on Sunday.

Everyone is expected to stay at camp through the end of camp (Noon MDT/1800 UTC) on Friday. Any early arrival or late dismissal must be approved by the camp director at least one month before the camp unless it is an emergency.

Once you are at check in on Sunday, we will provide all transportation needs until Friday afternoon. Due to liability and insurance concerns, licensed transportation services (school bus) will be used to transport campers to and from locations designated on the camp schedule. Camp staff are not allowed to drive campers.

If you need assistance with travel, contact the camp director at director@youthontheair.org for information about fundraising ideas and possible support from donors. We do not want the travel expenses to be the only thing keeping you from attending.

Lodging: Housing will be at Doubletree Suites, 83 E 120th Ave, Thornton, CO 80233.

- Standard room: 2 campers & 2 queen beds per room, separated by gender and age group, unless staying with accompanying parent
- Single occupancy is available for an additional fee (add additional $450 USD)
- Guest rooms will include bedding, towels, and basic toiletries (shampoo/soap/toilet paper)
- Laundry facilities are available in the breezeway that connects to the ballroom. $3.50 for wash, $3.50 for dry per load. Cash only. Laundry soap is available at the front desk for $3.00 (or we will have laundry soap sheets available from the camp director for free as long as he doesn't forget to ship them :))

Pre-arranged rooming can not be canceled after May 1, 2025. Rooms may be added or traded until June 1, but will be subject to availability.

Extra nights (before and after camp due to travel) and parent rooms are at your own expense, and are payable *to the camp*. **See page 7 for more information reserving and paying for rooms and meals before and after camp and for parent rooms.**

Camp staff will typically share a room with another staff member, but a few will not share a room according to need. Camp staff will not be required to pay fees. Staff may receive financial assistance for travel if needed.

Campers under 18 years old will be assigned an adult chaperone. Chaperones will check the rooms each night, and place a security strip on the outside door. Doors should not be opened after that time unless there is an emergency. Strips will be checked and removed by the chaperones each morning. If you want to go to bed early or get up early, contact your chaperone to have the security strip removed. Chaperones are required to knock on the door, identify themselves, and ask the camper to open the door.

Meals: All meals from Sunday evening through Friday lunch will be provided. Participants with dietary restrictions or allergies must alert the staff in advance so that proper provisions can be made.

T-Shirt: All participants will receive several ham radio T-shirts, including an official camp T-shirt.

Other expenses: Meals, lodging, admission fees, and local transportation are provided by the camp. Souvenirs or any other purchases, outside of all meals and the provided snacks, will be the responsibility of the camper.

Alcohol: Alcohol is not allowed at camp functions.

Forms: Required forms will include code of conduct, emergency medical authorization, waiver of liability, photo/video consent, ARISS, and transportation consent. **ALL staff members and volunteers working with campers will also need a background check and Safeguarding Youth Training, which is provided by the camp.**

Planned Activities (subject to change):

Introduction to YOTA
Contesting
Computer Logging
Software Defined Radios (SDR)
D-STAR Workshop
Contact an Astronaut on the International Space Station
Kit/Antenna Building
Special Event Station WØY Operating
Buc-ee's On The Air Activation
Tracking Balloon Launch
Satellite Operations Workshop
Train the Trainer
WWV Tour

Planned Social Activities (subject to change):
Dinner & Shopping in Denver
Pizza & Pool Party
Board & Card Games on campus

License Testing: If you are interested in upgrading your USA amateur radio license - or reside outside of the USA and would like to get a USA license - Denver Radio Club will have a testing team available one evening so you can take the exam. Additionally, Ham Radio Prep has donated free preparation materials exclusively for YOTA campers. E-mail director@youthontheair.org for a free access code to this online license preparation program (good for all USA class licenses).

ARRL Membership: Free student membership signups for the American Radio Relay League will be available at the opening ceremony. Colorado ARRL Section Manager Amanda Alden, K1DDN will be on hand to sign you up in person! This no-cost, Associate membership option is available to full-time students aged 21 or younger. Applicants must be a resident of the US, its possessions, or Puerto Rico. Free Student Membership excludes access to the ARRL E-mail Forwarding Service, and Associate members may not vote in ARRL elections. Other restrictions and exclusions may apply.

Special Event Station: WØY will be the callsign of the official special event station. As many as 5 operating positions will be available for use throughout the week. The stations can be used between sessions, as well as a few dedicated times. Some stations will be available by remote. HF rigs will be the IC-7300 or IC-7610. Satellite stations will use IC-9700s. ICOM Dual Band D-STAR HTs and IC-705s will be available for campers to use for the week as well. The WØY callsign is only to be used when using camp provided equipment either in person or by remote. If you use your own radio or other remotes, please use your own callsign instead.

Sponsors: Youth on the Air Camp will be operated by Electronic Applications Radio Service, Inc. (EARS - W9EAR), a 501(c)(3) Indiana not-for-profit educational amateur radio organization. The camp is hosted by the Denver Radio Club.

Equipment Sponsors: All radio equipment for the camp will be provided by gracious donations from ICOM America, DX Engineering, Heil Sound, X-Tronic, and Begali Keys. ICOM will provide all HF, VHF, and UHF gear listed above. Heil Sound has donated Pro 7 headsets and Pro 3 headphones. X-Tronic has donated temperature controlled soldering stations.

Financial Sponsors: At the time of printing, major financial support to make this camp possible and affordable is coming from: Amateur Radio Digital Communications (ARDC), the World Wide Radio Operators Foundation (WWROF), the Yasme Foundation, Frankford Radio Club, Ham Radio Prep, and the Radio Club of America (RCA). The remainder of the funding is from hams across the world that believe in our cause.

Things you should bring: Comfortable clothes (NOTE: you will be getting several T-shirts to wear from the sponsors upon arrival!), running/walking shoes, toiletries (except soap/shampoo/toilet paper), light hiking shoes (if doing the SOTA option), necessary medications, sunscreen, a notebook, and writing utensils. Dress for all events, including the opening banquet, is casual. Campers should bring their own laptop computer or tablet if

possible, with access to Google Drive. Each camper will receive a drawstring backpack upon arrival. Also, bring a swimsuit if you would like to swim in the hotel pool.

All suites are provided with linens; bedding, towels, and toiletries (shampoo/soap/toilet paper).

We will have plenty of ham gear, but you may bring your own if you wish. If you are flying, keep in mind that customs and security agents may question your equipment. If you have your own HF setup, please keep in mind that the camp provided stations may receive co-site interference from your station. The WØY callsign should only be used when operating an official camp station.

Things you shouldn't bring: Firearms, illegal drugs, alcohol, weapons, bed sheets, and bad attitudes.

Communications During Camp: For transparency and safety, all communications between campers or between campers and staff should be conducted on the camp simplex frequency (**147.550 tone 123.0**) or the YOTA Camp Telegram channel. Digital communications should be on **147.500**.

YouTube Coverage: The opening and closing ceremonies and the space station contact will be streamed live on the Youth on the Air YouTube Channel**.** A short, recorded highlight video will be posted on YouTube each day. Impromptu live streams may also appear throughout the week. Family and friends are encouraged to watch these daily.

Link to playlist of 2025 videos Direct Link to live stream feed of ARISS contact

What is YOTA?: This camp is heavily modeled after the Youngsters on the Air camp that has been held since 2011 in IARU Region 1 (Europe/Middle East/Africa/Northern Asia). Two of our working group members, Sterling Mann, NØSSC and Sam Rose, KC2LRC, attended the Region 1 camp in Austria in 2016 with the intent to learn about the camp in an effort to replicate it in the US. We are working with the YOTA Region 1 organizers to coordinate our efforts, but also realize some changes are necessary due to cultural and legal differences.

Our working group has already arranged for the workshop leaders, most of whom are also campers or under the age of 30. We have both male and female chaperones for minors.

YouthOnTheAir.org is our official website, and we have social media accounts (yotaregion2) on Facebook, Twitter, Instagram, and YouTube. The "official" hashtag is #YOTAR2.

Questions? Contact Neil Rapp, WB9VPG at director@youthontheair.org.

YOTA Americas 2025 Camp Planning Working Group:

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Doubletree Suites Information and Additional Rooms & Meals

Doubletree Suites, 83 E 120th Ave, Thornton, CO 80233

Contact Information:
Phone: +1 (303) 920-8000

Hours of Operation: 24 hours

Reservations:
Camper rooms for Sunday through Friday & staff rooms for Saturday through Friday already have reservations. For additional nights and/or visitor rooms, do not contact the hotel directly. Contact the Camp Director Neil Rapp at director@youthontheair.org by May 1 to add additional rooms and/or meals.

The prices below are ONLY for visiting parents and campers who want to add on days before or after camp beyond the provided days. Campers do NOT pay for rooms & meals for Sunday evening through Friday afternoon. Staff and invited volunteers do NOT pay for rooms & meals for Saturday evening through Friday afternoon. These are paid by the camp.

Features:

- Indoor Pool
- Fitness Center

ALL ROOMS

- 300 thread count sheets
- Large screen HDTV
- Air conditioning
- Clock Radio w/ MP3 Connection
- Ergonomic Desk Chair
- Bathroom amenities
- Braille room numbers
- Coffee maker
- Hairdryer
- Free WiFi High Speed Internet
- Iron/ironing board
- Mini refrigerator
- PrinterOn Remote Printing
- Tea/Coffee Making Facilities
- Telephone-with Speaker phone
- Alarms - Visual Strobe
- Automatic Door Closer
- Safe

Two Queen Beds - $152 for 1 person, add $10 for each additional person (+tax)
One King Bed - $152 for 1 person, add $10 for each additional person (+tax)

Linens & Toiletries:
All rooms are provided with linens; bedding, towels, and basic toiletries (shampoo/soap/toilet paper). Laundry facilities are available in the breezeway that connects to the ballroom. $3.50 for wash, $3.50 for dry per load. Cash only. Laundry soap is available at the front desk for $3.00 (or we will have laundry soap sheets available from the camp director for free as long as he doesn't forget to ship them :))

Parking:
Parking is free.

Additional/Guest/Parent Meals:
Meals will vary depending on location and expense. Typically we budget $10 for breakfast, $12 for lunch, and $20 for dinner (payable to the camp)

Foreign license info

If your license is issued in:

Argentina, Bolivia, Brazil, Canada[1], Chile, El Salvador, Guatemala, Haiti, Mexico, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay, and Venezuela. (IARP)

Or

Participating for France: Corsica, Guadeloupe, French Guyana, Martinique, St. Bartholomew, St. Pierre and Miquelon, St. Martin, Reunion and its Dependencies, Mayotte, French Antarctica, French Polynesia and Clipperton, New Caledonia, and Wallis and Futuna (CEPT)

You can operate independently as WØ/yourcallsign while in the USA. No application is necessary. Just bring IARP or CEPT documentation with you.

If your license is issued in a country on this list:
http://www.arrl.org/reciprocal-permit

You can operate independently as WØ/yourcallsign while in the USA. No application is necessary. Just carry your license and proof of citizenship with you.

If your license is issued in a country not on either of the two above options, you will have to take a US license exam in order to operate independently. You can operate WØY with a control operator present.

http://www.arrl.org/foreign-licenses-operating-in-u-s

For all of the above, when using the WØY callsign, once an hour the station must be identified as WØY/WB9VPG.

Code of Conduct

Camp Faculty, Adult Staff, & Campers
Youth on the Air

The following guidelines are designed to make your experience at Youth on the Air Camp satisfying to you and to all others attending. The individual rights, safety and property of others must be respected.

1. Respect the rights and property of others.

- Do not touch other camper's belongings without checking first.
- Disrespectful and/or abusive language will not be a part of camp
- Do not damage or deface camp facilities or property.
- Rudeness, lack of courtesy, and disrespect for authority will not be tolerated.
- Fighting and threatening physical abuse is not acceptable behavior.
- Boys are not allowed in the girls' rooms; Girls are not allowed in the boys' rooms
- All clothing worn shall be within the bounds of decency.
- Do not take inappropriate pictures/video/audio of others or yourself
- Do not post inappropriate pictures/video/audio to social media

2. Be concerned for the safety of campers and staff.

- Campers under 18 cannot leave the directed areas on the camp schedule without an adult and must have the Camp Director's or staff's permission.
- Campers under 18 must have a chaperone, and should not be isolated 1 on 1 with camp staff at any time.
- Campers should be with at least one other camper at all activities - **EXCEPTION: If the camper has graduated from high school <u>and</u> is 18 or older** (noted on name badge)

3. YOTA Camp is a fun experience and everyone is to participate in the planned activities.

- Be on time and ready to participate.
- Don't spend excessive time on your phone unless part of the activity itself
- If ill, report to the camp staff.
- Be a positive team member for your group.
- "Lights Out" means quiet and in bed.
- Everyone must check in/out with the Camp Director or Staff if leaving or coming into camp is necessary.

4. The following items and activities are not allowed at the camp facilities: alcoholic beverages, knives, firearms, fireworks, illegal drugs, matches, and tobacco. Exception: adults may smoke in designated areas only.

Gambling or betting with money, over-display of affection between anyone, fighting, threatening/physical abuse, stealing, tampering with emergency equipment, and being under the influence of drugs are NOT allowed at camp. Those over drinking age are not to provide alcohol to minors in any case, and alcohol is not permitted at any and all camp functions due to liability concerns. Boys are not allowed in the girls' rooms; Girls are not allowed in the boys' rooms.

Campers, teen counselors and adult staff having or doing anything in section 4 will be sent home at the first infraction and at their own expense.

CONSEQUENCES: The following steps will be followed if a camper or adult staff member does not abide by the rules (except for section 4, which is immediate dismissal)

1st Infraction: Discuss the inappropriate behavior with an adult staff member and clarify the rule.

2nd Infraction: Camp Director or staff will discuss the inappropriate behavior and give a "time out" or appropriate consequence. Camper's appropriate attitude and/or behavior will be discussed.

3rd Infraction or Any Behavior Listed in Rule # 4: Camp Director or staff will request the parent to pick up the camper and take him/her home at their expense and camp fee will not be refunded. Adult Staff members will be asked to leave camp immediately. Additional consequences may include: releasing the individual to the nearest law enforcement agency, assessing the cost of damages and repairs in the event of destruction of property, and barring the individual from future YOTA activities. Parents will be notified of any action taken.

Morse Code Alphabet

A	•–	N	–•	0	–––––
B	–•••	O	–––	1	•––––
C	–•–•	P	•––•	2	••–––
D	–••	Q	––•–	3	•••––
E	•	R	•–•	4	••••–
F	••–•	S	•••	5	•••••
G	––•	T	–	6	–••••
H	••••	U	••–	7	––•••
I	••	V	•••–	8	–––••
J	•–––	W	•––	9	––––•
K	–•–	X	–••–	.	•–•–•–
L	•–••	Y	–•––	,	––••––
M	––	Z	––••	?	••––••

Super Simple Code Practice Oscillator

A Beginner's Electronics Kit

David Cripe NMØS

Four State QRP Group

As the name implies, this is a simple, easy-to assemble kit, intended for first time kit builders and young hobbyists. This kit is an ideal project for Boy Scouts as a requirement for the Electronics Merit Badge, or for STEM groups wishing an introduction to electronic construction.

Supplies Needed:

Phillips Screwdriver
Diagonal Cutters
Soldering Iron and Solder
Sandpaper or Emery Board
9 volt battery

Obtain all supplies before beginning. Open the bag of parts, and inventory the contents against the parts list at the end of the instruction manual. If you are short on any parts, contact your instructor.

Qty	Type	Description	Marking	√
2	Capacitor	0.1uF	104	
2	Resistor	15k	Brown-Green-Black-Red	
2	Resistor	470	Yellow-Violet-Brown	
2	Transistor	2N2222A	2N2222A	
2	Screw	6-32 x 3/8"		
4	Screw	6-32 x 1/4"		
1	Screw	8-82 x 3/8"		
6	Nut	6-32 hex		
1	Knob			
2	Spacer	#6 x 1/8"		
1	9v battery clip	male		
1	9v battery clip	female		
4	feet	adhesive rubber		
1	speaker	8 ohms, 0.5W		
1	PC board			

Once the kit has been inventoried, the assembly can begin.

⚪ First take the PC board, and snap off the section at the right side of the board. The section has been grooved, so it breaks off readily.

⚪ Next, take sandpaper or an emery board, and smooth off the rough edges where the boards were separated.

SPEAKER

⬜ The first Item to mount on the board is the speaker. Flip the board so that the component side is down. Take the four 6-32 x 1/4” screws and insert them through the component side of the board so that they face upward. Take the speaker, and place it against the board so that the two solder terminals are facing the front toward the two round solder pads on the board.

⬜ Attach the nuts to the screws, and finger-tighten the four nuts until they are contacting against the speaker. Using the Philips screwdriver, snug down the screws.

SOLDERING

Because of the simplicity of this kit, it will have appeal as a first project for beginning kit-builders. For those with little or no experience with soldering, there are a few things to keep in mind before starting.

It is recommended that a low wattage, 20 to 30 watt, pencil-tip soldering iron be used. Only rosin-core solder may be used, as acid core plumbers solder will corrode the board and components. Either lead free or tin-lead solder may be used, though the builder should be aware of the potential toxicity of lead based solders. It is important to wash hands after working with lead-based solder to avoid absorbing any into your body.

Soldering is not hard if the proper procedure is followed. The soldering iron is to be used to heat up the PC pad and component lead, and the solder applied to the pad, where it melts and flows into the hole.

Do not melt the solder onto the tip of the iron and then attempt to dab it onto the joint – a defective connection will result! After soldering, check the top (component side) of the board, to be sure the solder has filled the hole completely, and wicked up around the component lead. Re-heat and apply more solder if necessary.

BATTERY CLIPS

⬜ Plug in your soldering iron and let it reach working temperature.

⬜ Take your 9v battery, and hold it so that the terminals are to the left, and the smaller positive terminal is furthest from you. Snap on the battery clips, and insert the clips into the board. Be certain that the positive polarity clip is inserted into the position marked ‘+’.

⬜ Solder the battery clips into place, and then remove the battery. By soldering the clips into place while attached to the battery, we make sure that their spacing is correct.

⬜ Locate the two 15k resistors. Their color code is ‘brown-green-black-red’. Bend the leads at right angles to the body, and insert into their locations on the board. Turn the board over, and spread the leads slightly so that they don’t fall out of the board when it is flipped over.

⬜ Solder the resistors into place, and then clip the leads close to the board. Save two of the snipped off leads.

⬜ Repeat with the 470 ohm resistors (yellow-violet-brown).

⬜ Repeat with the 0.1uF capacitors (marked 104).

⬜ Locate the two metal can transistors, labeled 2N2222A. Notice there is a small tab on one side of the can. This must be lined up with the transistor outline printed on the board, and the transistor legs inserted through the holes. Position the transistors so that they are spaced up off the board approximately 1/16” of an inch. Spread the legs slightly on the bottom side of the board to hold them in place. Solder and clip their leads.

⬜ Find the 8-32 x 3/8” screw, which is a larger diameter than the rest of the screws. Pass it through the silvered side of the narrow strip of PCB, and tighten it into the knob.

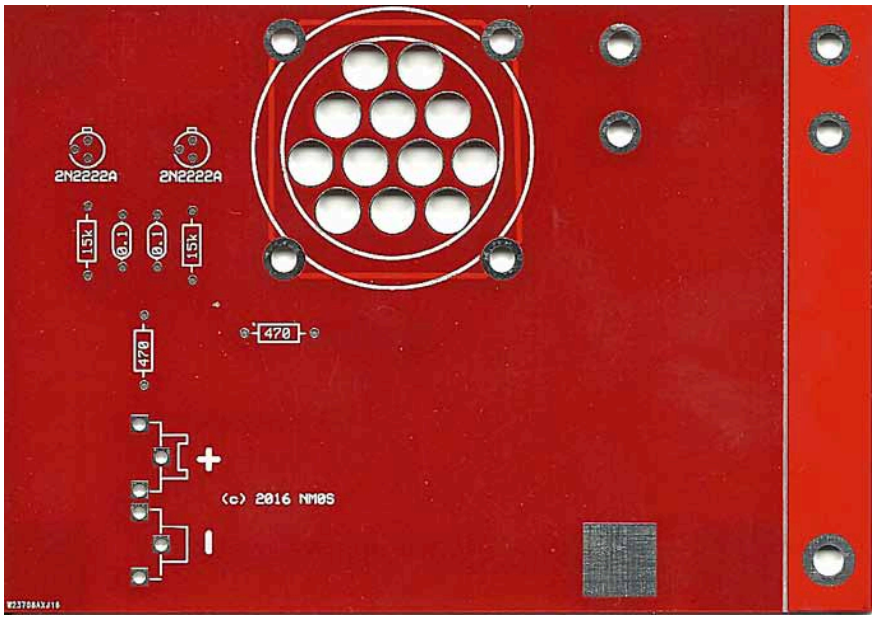
⬜ Find the two 6-32 x 3/8” screws, the aluminum spacers, and two nuts. Insert the screws through the red side of the narrow PCB strip, and slide the spacers over the other side. Insert the screws through the two holes at the upper right corner of the board, and tighten the nuts on the screws on the bottom side of the board.

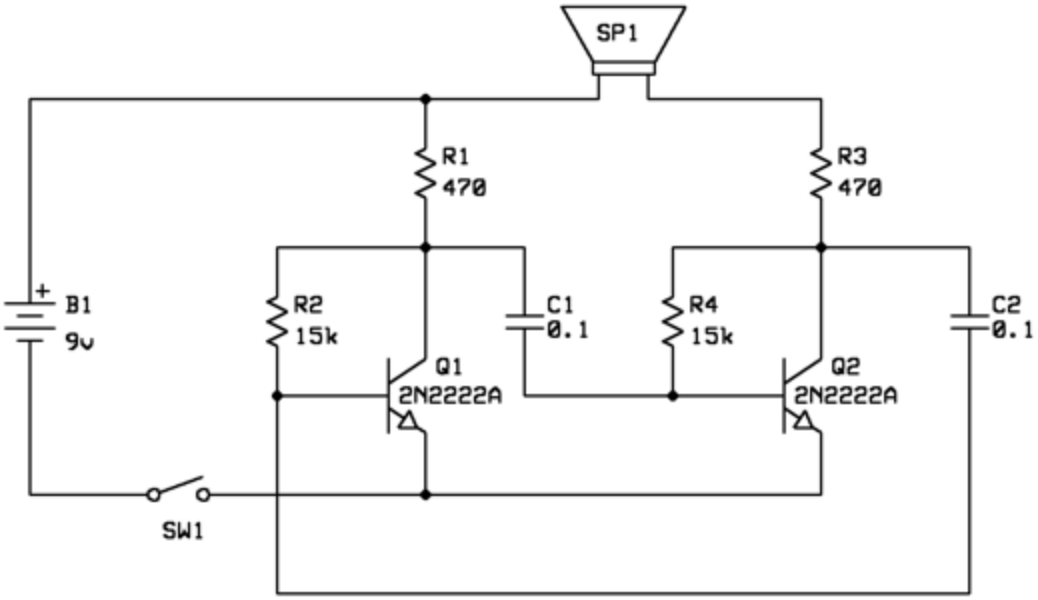
⬜ Take two of the clipped off resistor leads, and solder them to the speaker terminals. Clip the lengths to end at the midpoint of the solder pads. Solder them down to the solder pads.

⬜ Install the four adhesive rubber feet to the bottom corners of the board

⬜ Install the battery – you are finished!

If the screw for the knob contacts the main PCB, the tone will sound continuously. You can slightly bend the key lever PCB upward until it no longer contacts the board.





WN0BSA		
Code Practice Oscillator		
D. Cripe	Rev 1.0 10/23/2014	Page #1 of 1

Manual Morse Key

designed by LA4ZCA – Manual and kits by KØNEB

DESCRIPTION

This is a compact 3D-printed manual Morse key. The design offers precise movement with adjustable force and travel, in a very simple 3D-printed design. Compact and lightweight, the key is suitable for portable use such as POTA and SOTA.

ASSEMBLY

Materials:

- *Two 3D printed parts, base and arm – can be any color*
- *Five M3 screws, 1x 16mm, 2x 8mm and 2x 5mm length*
- *One M4 washer and spring*
- *Two solder lugs*
- *Audio cable with plug*

First, prepare the 3D-printed parts by removing any protruding edges and bumps by gently filing the surfaces only if needed. Be sure that the arm has a loose fit between the side walls of the base, and that the oversized hole in the middle of the arm, for the end stop screw, is fully open.

As illustrated in Figure 1, mount the arm onto the base with two 8mm screws as hinges. The screw holes should be tight enough that the screws self-thread into the plastic wall. Looking at Figure 1, the cable is routed through holes in the base forming a 90-degree bend, which acts as a strain relief: First, route the cable into the well underneath the knob by making a loose bend outside the "window" in the side wall, as shown in the picture above. Then compress the bend and pull out excess cable to make a sharp bend inside the base.

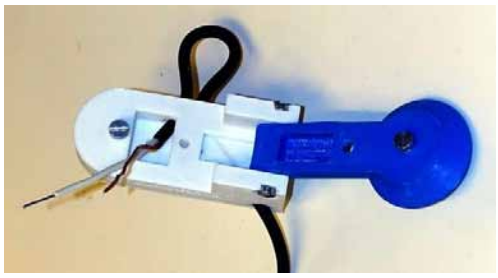


Figure 1

Carefully strip the outer jacket of the cable 1 3/8”, exposing the red and white wires and the bare wires that form the shield. Twist the bare wires together to form a single wire. Strip ¼” of insulation from the ends of the red and the white wires and twist the ends of the red and bare wires together. Solder one lug to the end of the red/bare wire pair and the other lug to the end of the white wire as shown in Figure 2.

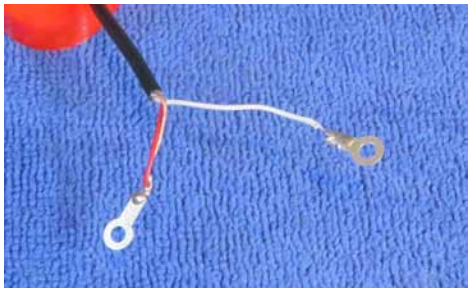


Figure 2

Use the 5mm screws to secure the lugs in the base and underneath the knob of the arm, as shown in Figure 3. Use the white wire for the top and the red/bare wires for the bottom.

Figure 3

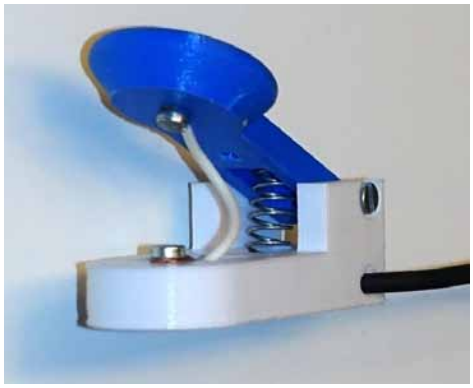


Figure 4

Referring to Figure 4, put the spring in place in the slot underneath the arm. If needed, the spring tension can be adjusted by moving it forward or backwards in the slot.

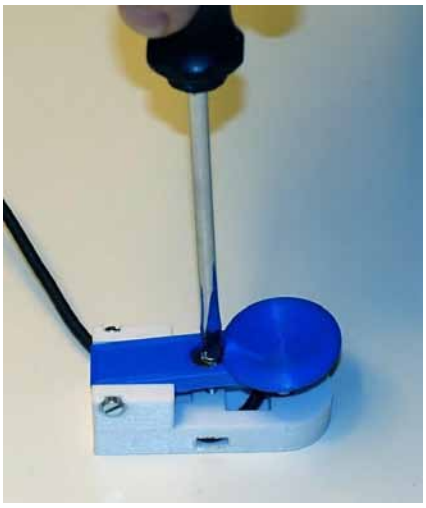
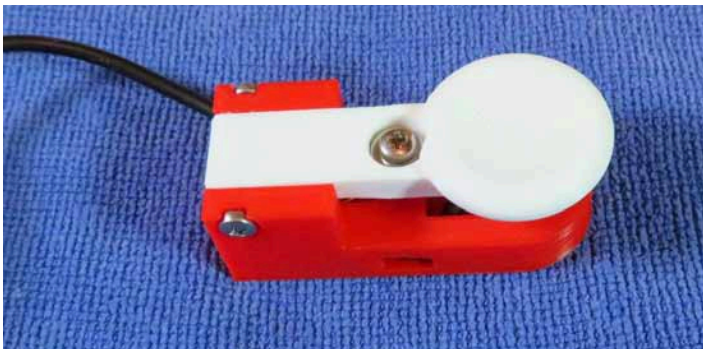


Figure 5

For the end stop and key contact gap adjustment, first place the M4 washer in the bottom of the recess on the top of the arm, then insert the 16mm screw from the top. See Figure 5. Hold the arm down enough to allow the screw to continue into the hole in the base. The arm should move freely without friction in the hinge, side walls or end stop screw. The contact gap is adjusted by turning the end stop screw from the top.

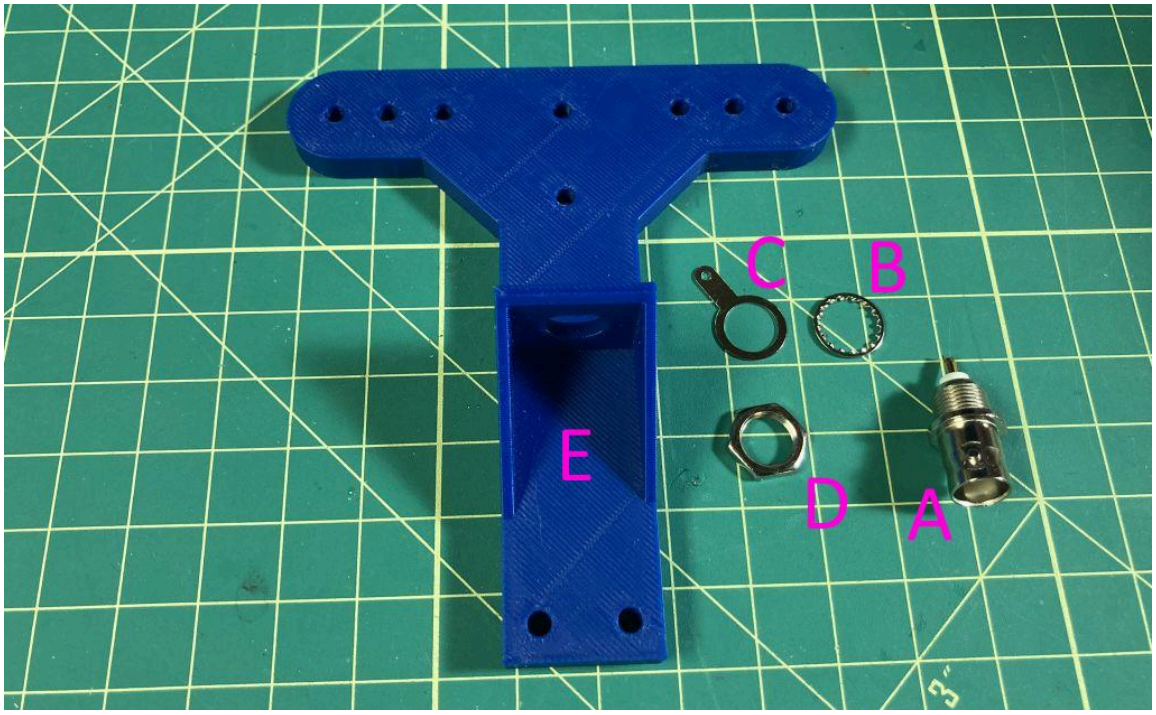


The key can be mounted to a heavier piece of wood or metal to make it more steady, if desired. Use screws through the two holes in the base, underneath the hinge and in the bottom of the wire well. Double sided adhesive tape can be used as well.

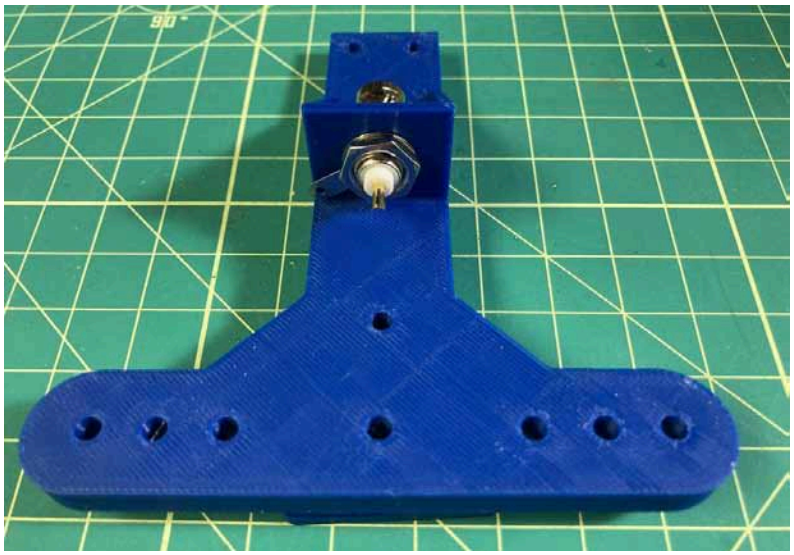
Have fun on the air! 73 de KØNEB

Dipole with 1:1 Balun Assembly Manual

1- Assembling the BNC Connector to the dipole frame.



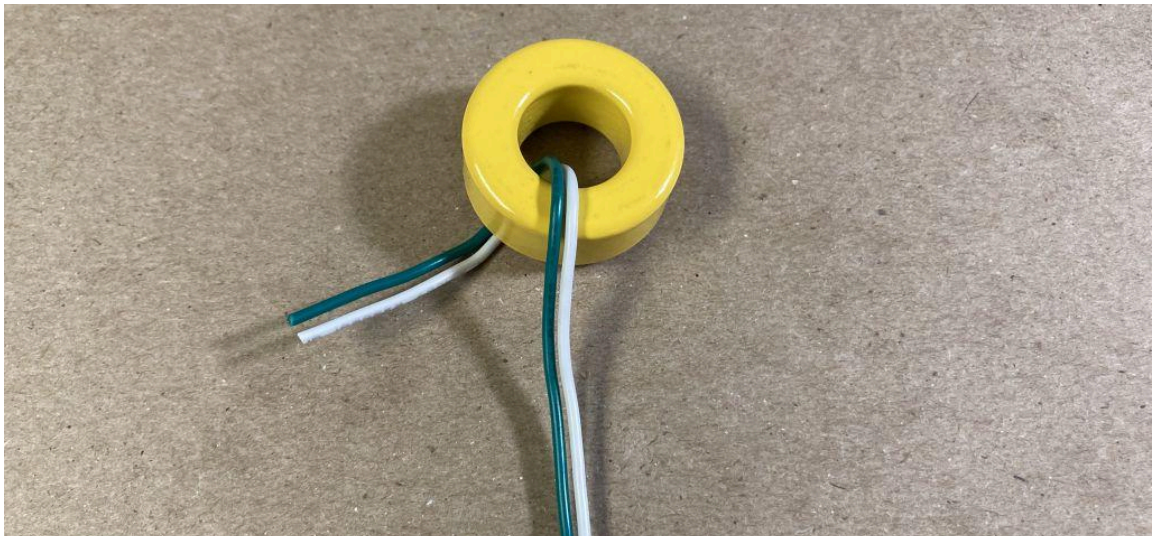
- Disassemble the BNC connector (A) by removing the nut (D), shield washer (C) and lock washer (B).
- Insert the BNC connector (A) into the dipole frame (E), the connection should be facing up and the BNC connector and insulator are keyed(flat part goes together).
- Add the lock washer (B), shield washer (C) and the nut (D) to secure the BNC connector to the dipole insulator.
- Make sure the shield Washer(C) tab is accessible since we will need to solder to it in a few steps.
- It should look like the picture below.

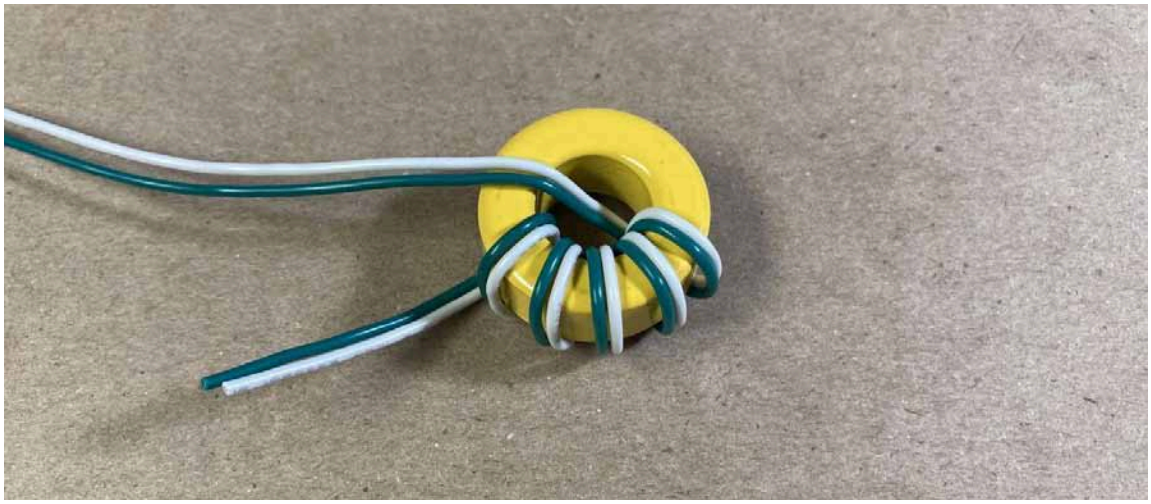


2- Making the Balun

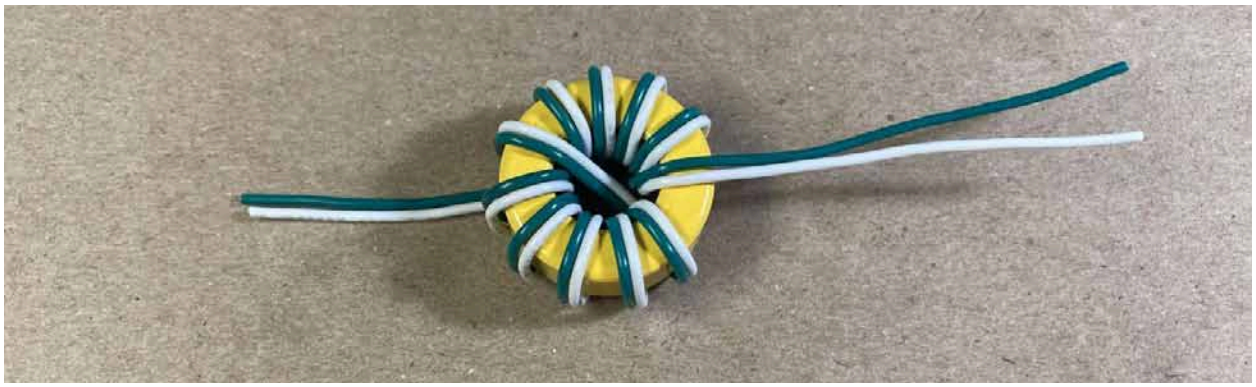
Time to wind the toroid to create our 1:1 Balun.

- Take the 24” inches of black/red wire and start wounding the Toroid as shown in the diagram/pictures(I used green/white wire instead). Leave about 1.5” inches out of the Toroid for the connection to the BNC connector.
- Each time you go through the Toroid it counts as a turn, we want 5 turns then crossover and then another 5 turns.





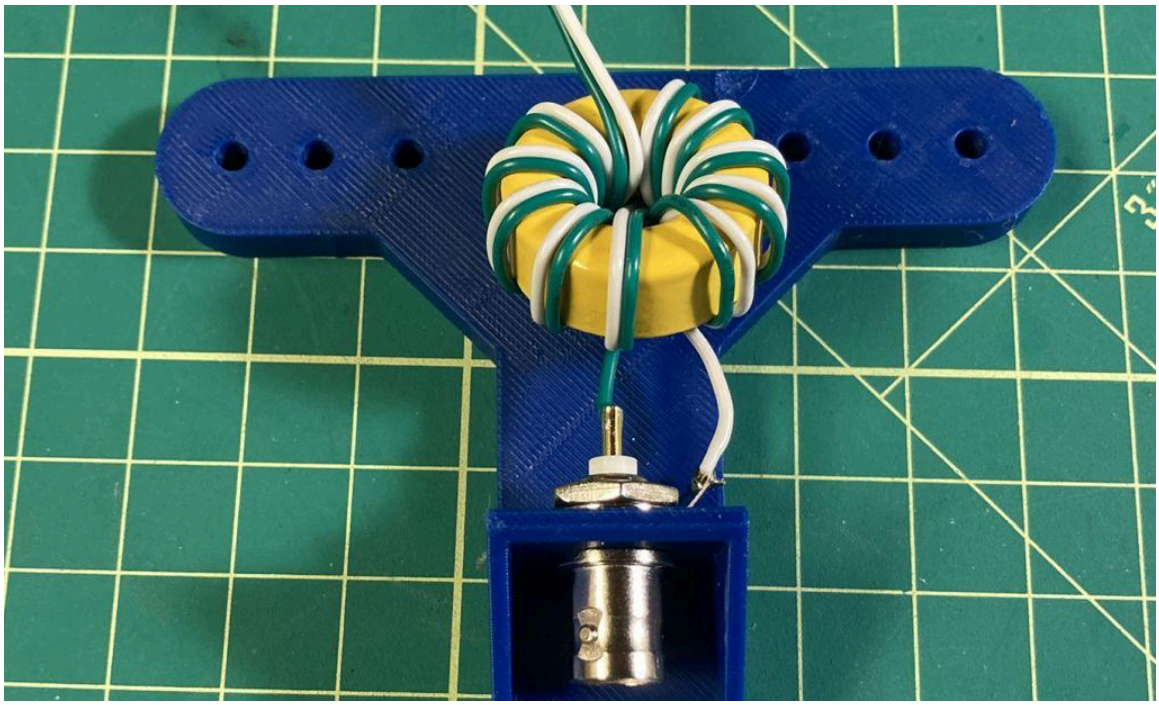
Showing: 5 turns done and the crossover to start wrapping in the other direction.



- Once the balun is wound you should have the wires at opposite ends of each other sticking out of the toroid.
- Place the balun on the insulator and make sure the pairs of wires are facing up and down, and have the longer wires pointing to the top.

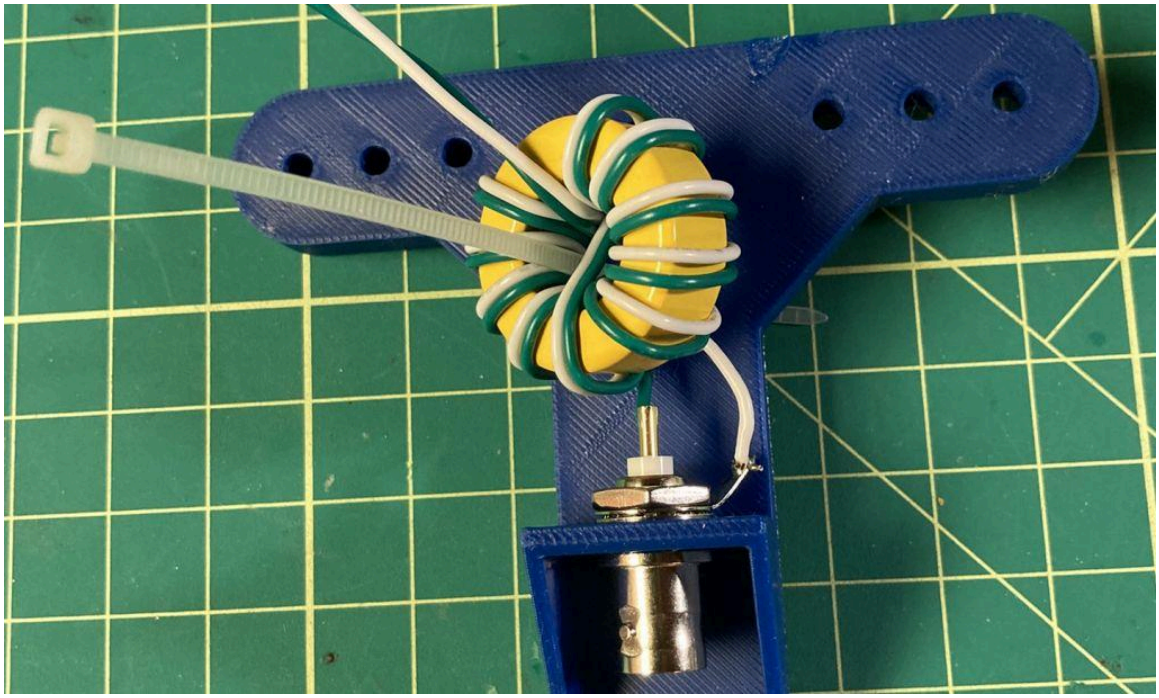
3- Solder the BNC Connector.

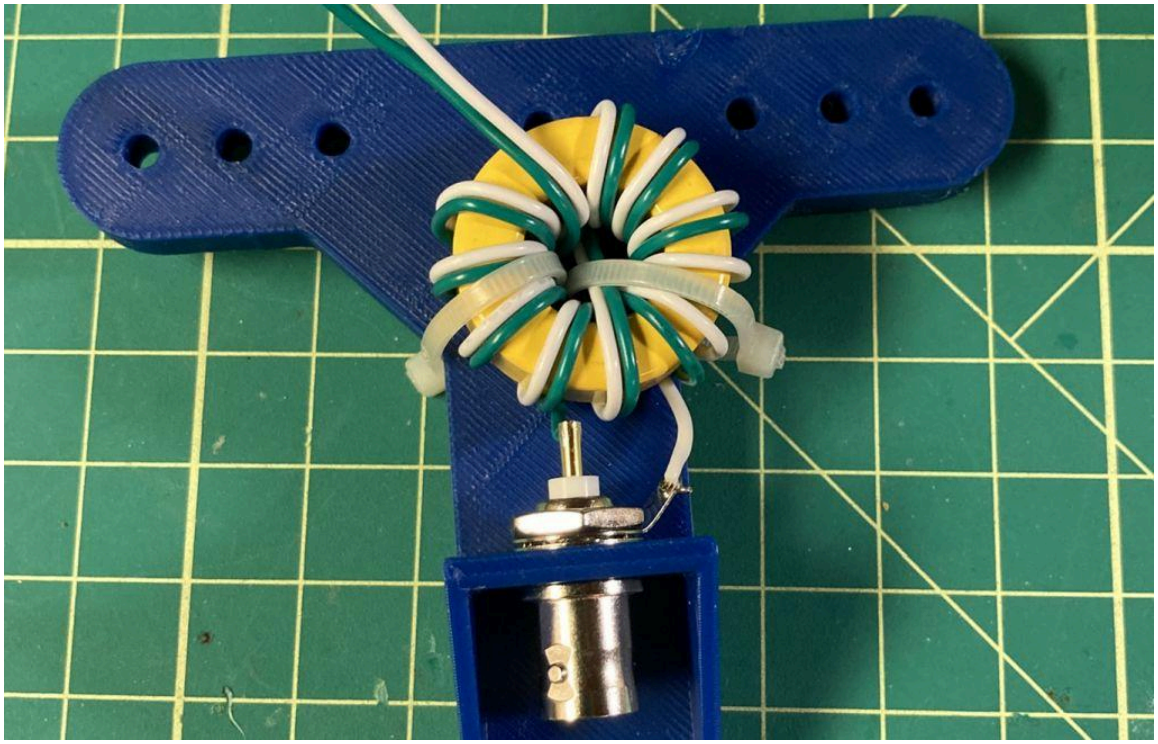
- Remove about ¼” inch of insulation from the bottom wires.
- Solder a wire to the center of the BNC center pin. (Since this is a simple 1:1 balun, polarization is not an issue).
- Take the other wire and run it through the little hole on the shield washer of the BNC connector for a good mechanical connection.
- Solder the wire to the ground washer.

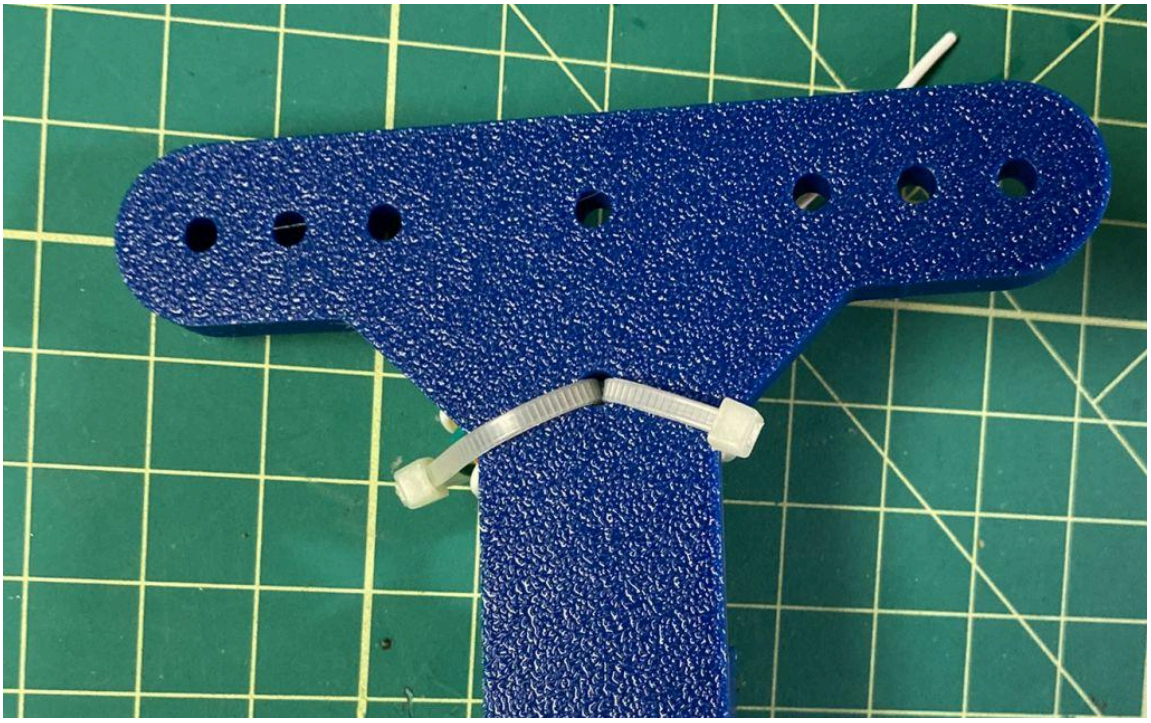


4- Secure the balun to the dipole frame

- You can secure the balun to the insulator using the two (2) zip ties.
- The zip ties both go through the hole just above the BNC Connector.
- The top row of holes should still be empty.

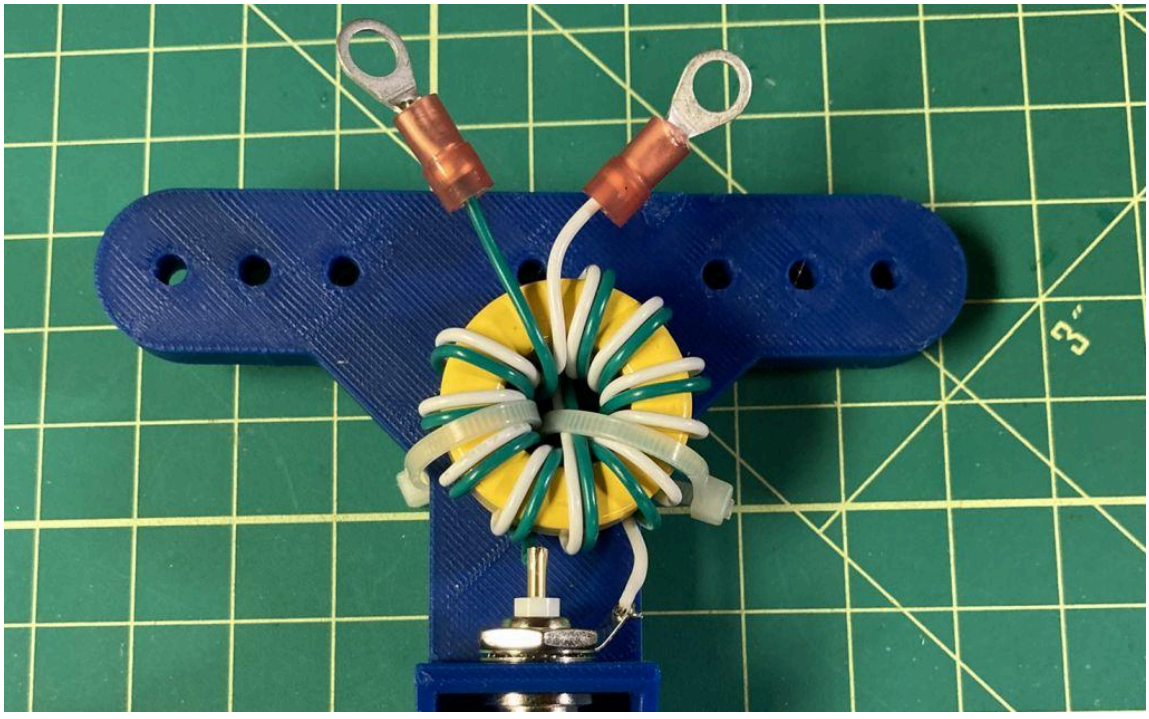






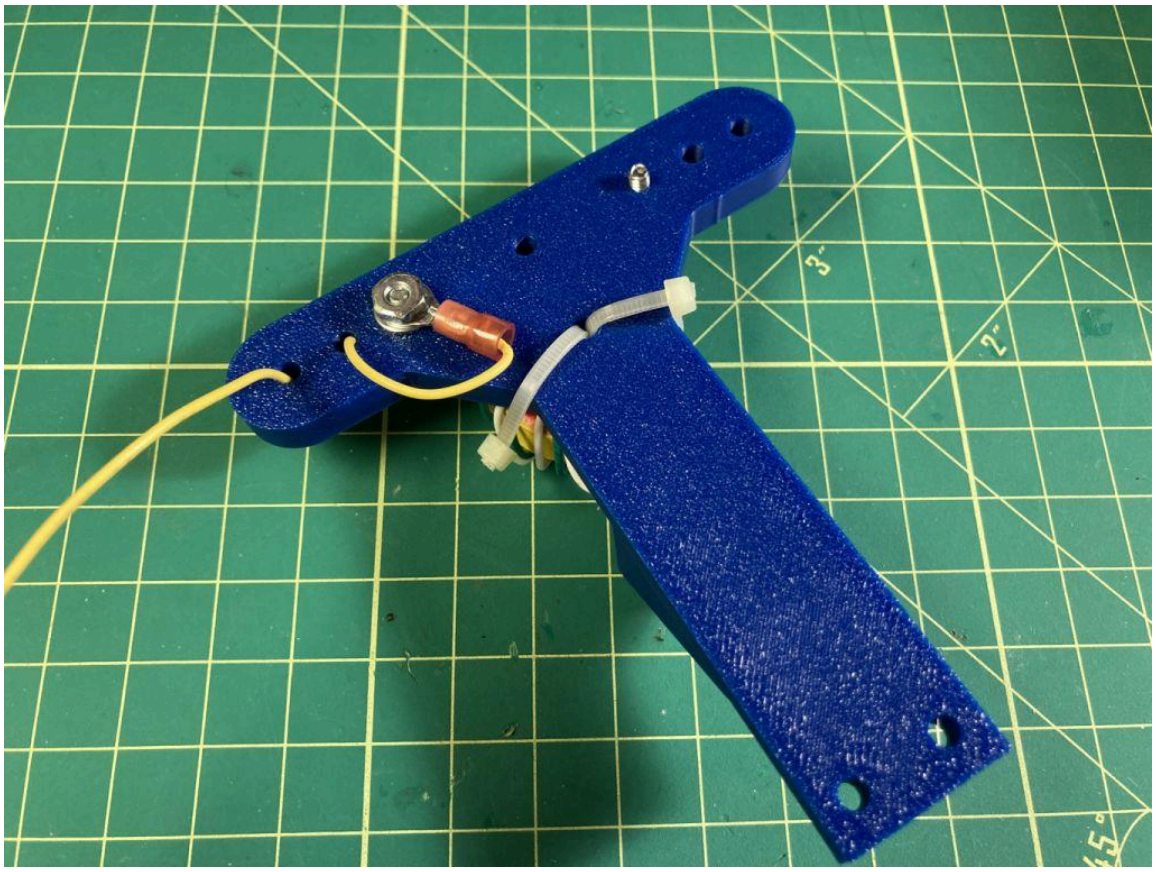
5- Balun Connections

- Remove about ½” inch of insulation from the top wires.
- Double back the exposed wire, basically fold it back on itself to make the wire look thicker.
- Insert the exposed wire in a ring terminal and crimp it on.
- Repeat for the other wire.



6- Antenna Connections

- Take one of the antenna wire and weave it through the two (2) holes that are furthest away from the center.
- Remove about ½” inch of insulation from the antenna wires.
- Double back the exposed wire, basically fold it back on itself to make the wire look thicker.
- Insert the exposed wire in a ring terminal and crimp it on. (Picture on the next page)
- Repeat for the other wire.



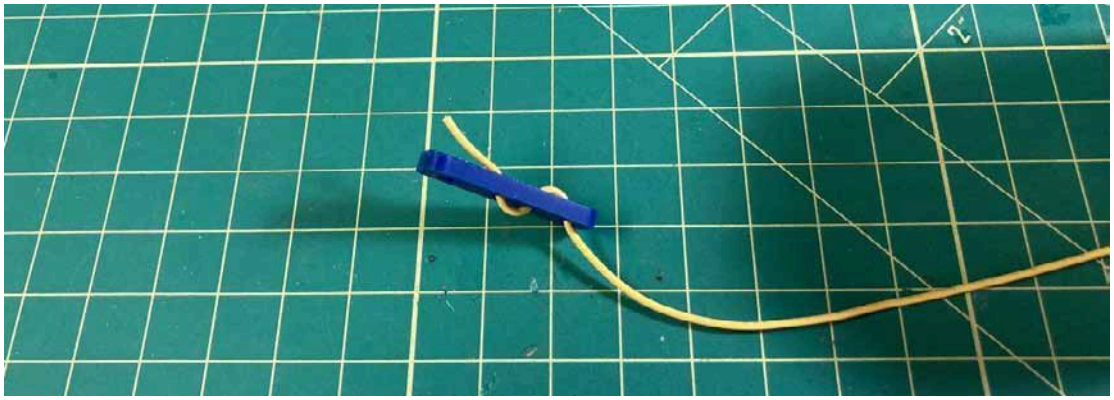
7- Making the connections

- From the top of the dipole frame.
    - Insert the machine screw into the balun ring terminal.
    - Put the screw through a flat washer
    - Put the screw through the dipole frame
- From the back side of the dipole frame
    - Put a washer on top of the protruding screw
    - Put the antenna ring terminal on the screw
    - Put another flat washer on the screw
    - Put the wing nut of top of the screw and tighten to secure everything
- Repeat for the other side/leg of the antenna.
- See Picture below. I used regular nuts instead of wing nuts.

Antenna connections from the back side

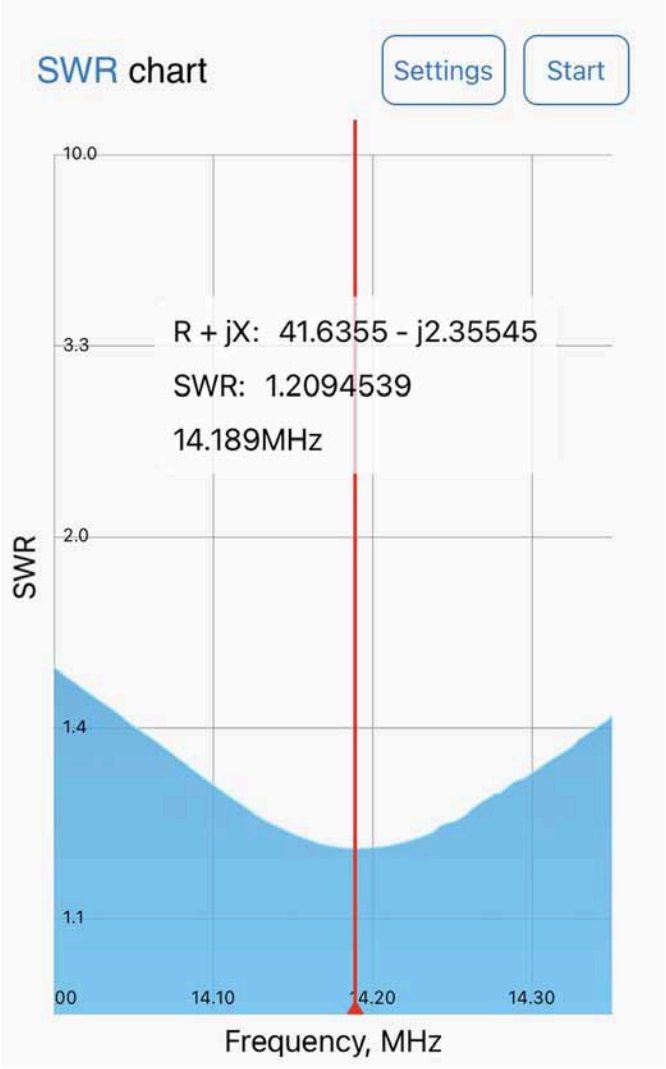
8- Adding the end insulators

- Weave the antenna wire through the three (3) small holes in the insulator as shown below.
- The bigger hole is used for the rope to hold the legs.
- Each leg is 16ft and rope is 12ft



9- SWR Chart

- The antenna was set up as an inverted V with the center being about 15ft above ground.



Cricket 20 Assembly Manual

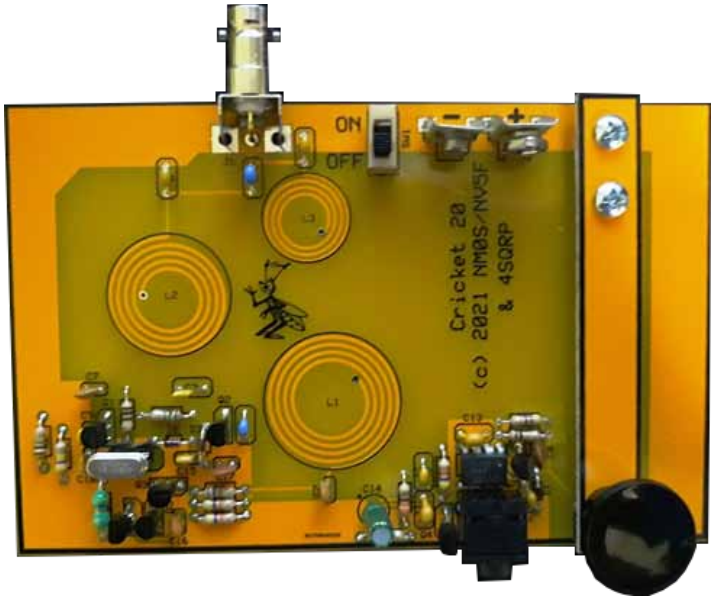
Introduction

Thank you for building a CRICKET 20 Transceiver. We hope you will enjoy building it and find it a fun addition to your QRP station. This kit was conceived to fill a need within the hobby for an inexpensive, easy to build transceiver with performance a step above anything else available in this price range.

High quality, double sided printed circuit board construction is used, with solder mask and silk-screened component reference designators. All components are through-hole for easy assembly. NO toroids are required. The CRICKET can be constructed by beginners as well as experienced builders. Construction time is approximately 1 - 3 hours, depending on experience level.

Specifications:

Voltage Input:	9v battery, clips mounted to board
Receive Current:	<75mA typical
Transmit Power:	0.75w, typical
Transmit Current:	<120 mA
Operating Frequency:	14.050 or 14.060 MHz, crystals included.
Antenna Connector:	BNC, on board
MDS:	-100 dBm, typical
Audio jack:	1/8” Stereo
Key Jack:	1/8”
T/R Offset:	750 Hz, typical
Sidetone:	Included!
Key:	Included!
Toroids:	None!
Wiring:	None!



First Steps

Before getting started with building the CRICKET 20, take some time to organize and familiarize yourself with the parts provided and check them against the Parts List. To prevent static damage, it is recommended that the ICs not be removed from their anti-static packaging until you are ready to install them.

It is helpful to acquire the necessary tools and supplies before beginning. These include:

*Soldering iron - 20 to 30W, preferably thermostatically controlled.
*Fine 60/40 rosin core solder
*Diagonal cutters
*Needle-nose pliers
*Fine file or emery board
*Flat blade and Phillips screwdrivers
*Clear nail polish

Schematic and Component Placement diagrams are provided as part of the documentation package. As you build, you can check off each construction step as you complete them in order.

When you think you are done, you can check the list to verify that all of the parts have been installed.

Important note — Due to supply issues, we had to order capacitors for C3,4,6,9 &18 (i80 pf) from different parts suppliers. One version has legs that are 3 cm long and spaced 2mm apart, the other with cm long and spaced 5mm apart. If you get five of the "squat" 180 pf caps, you will need to bend and push them into the holes for C9 & C18.

Step 1 - Key

⬜ Snap off the key strip and keying adapter, which are the 1/2” wide sections at the right-most side of the board. The board is scored with a V-groove so that they break free readily. Once separated, lightly sand the rough edges of the break until smooth. The keyer adapter also allows an external straight key or keyer output to be used instead of the built-in key.

⬜ Locate the knob and the 8-32 screw (this is the larger of the 3 screws provided). Assemble the knob onto the board by inserting the screw through the silver side of the key board, and tightening the knob onto it.

Step 2 - Battery Connectors

⬜ Locate the two battery clips. Obtain a 9v battery. We need to be sure that the spacing of the battery clips on the board is proper so that the battery will attach properly.

⬜ Hold the battery flat with the terminals pointing away from you and the positive (+) terminal on the right. Snap the battery clips onto the battery, mounting pins facing down, and insert the battery clips through the holes on the board. Be careful not to let the clips touch and short out the battery!

⬜ Double check that the positive terminal of the battery and the mating female battery clip is at the right. Flip the board over, holding the board down firmly on the battery, and solder the battery clips into place.

⬜ Remove the battery, and proceed.

Step 3 - Resistors and Inductor

Insert, solder, and check off each when completed.

	Ref	Value	Color Code
⬜	R1	100	Brown-Black-Brown
⬜	R9	10k	Brown-Black-Orange
⬜	R10	10k	Brown-Black-Orange
⬜	R2	1.0M	Brown-Black-Green
⬜	R3	1.0M	Brown-Black-Green
⬜	R6	1.0M	Brown-Black-Green
⬜	R4	330	Orange-Orange-Brown
⬜	R5	47k	Yellow-Violet-Orange
⬜	R7	47k	Yellow-Violet-Orange
⬜	R8	47k	Yellow-Violet-Orange
⬜	R12	470k	Yellow-Violet-Yellow
⬜	L4	4.7uH	Yellow-Violet

Solder the holes on the spiral wound inductor. This eliminates the possibility of failure if the board gets stressed during use and makes for a better connection on both sides, essential to a good stable inductor.

Step 4 - Semiconductors

Be certain that these components are inserted correctly, according to the silkscreen diagram. For the transistors (Q), match the flat side of the transistor with the long side of the shape printed on the board. For the diodes (D), be sure the stripe on the diode is on the same end as the stripe printed on the board.

⬜	Q7	SS8550
⬜	Q1	2N7000
⬜	Q2	2N7000
⬜	Q3	2N7000
⬜	Q4	2N7000
⬜	Q5	2N7000
⬜	Q6	2N7000

⬜	D1	1N914
⬜	D2	1N914
⬜	D3	1N914
⬜	U1	NJM2113 (The side with the dot goes on the side with the notch on the board.)

Step 5 - Capacitors

Be certain to insert C14 in the proper polarity orientation as labeled in the board. C3 is a 180p capacitor with a narrower lead spacing than the other four 180 p caps.

	Ref	Value	Type	Label	
⬜	C2	0.01	Monolithic	103	
⬜	C7	0.01	Monolithic	103	
⬜	C16	0.01	Monolithic	103	
⬜	C8	0.1	Ceramic Disk	104	
⬜	C17	0.1	Ceramic Disk	104	
⬜	C11	1.0	Monolithic	105	
⬜	C13	1.0	Monolithic	105	
⬜	C5	47p	Monolithic	47	This part has 0.2” lead spacing
⬜	C10	100p	Monolithic	101	
⬜	C15	100p	Monolithic	101	
⬜	C3	180p	Monolithic	181	This part has 0.1” lead spacing
⬜	C4	180p	Monolithic	181	
⬜	C6	180p	Monolithic	181	
⬜	C9	180p	Monolithic	181	
⬜	C18	180p	Monolithic	181	
⬜	C12	680p	Monolithic	681	
⬜	C1	12p	Monolithic	12	
⬜	C14	100u	Electrolytic	100u	

Step 6 - Final Assembly

⬜ Solder the BNC connector to the board in the J1 position. Be careful in getting the center conductor inserted through the board - this wire is somewhat brittle.

⬜ Solder the SPDT power switch onto the board in the position to the left of the battery contacts.

⬜ Solder the headphone jack to the board in the J2 position.

⬜ Locate the six pin DIP socket. Using diagonal cutters, snip it in half to make two, three pin sockets. Use the diagonal cutters to clean up the broken face of the halfsocket. Snip off the center lead of the socket flush to the black plastic body. Solder the socket onto the board in the X1/J4 position

⬜ Locate the 6-32 screws, aluminum spacers, and hex nuts. Assemble the key to the board by passing the screws through the top of the key assembly and using the spacers between the key and the PC board. Install the nuts on the bottom side of the board and tighten with the

screwdriver. If desired, add a tiny drop of clear fingernail polish to the screw threads at the nut to help keep the nut from working loose.

⬜ Add the four adhesive rubber feet to the bottom of the board in the four corners.

Step 7 - Keying Adapter Option

For those wanting to key the Cricket using an external keyer, a special adapter is provided. It installs instead of the hand key and includes a standard 1/8” jack to connect to a keyer circuit.

⬜ Install the 1/8” audio jack to the keying adapter board.
⬜ Install the knob to the board using the 8-32 screw with the two flat washers under the screwhead.
⬜ Install the keying adapter to the board using the screws and spacers from the hand key assembly. When assembled, the screw head should firmly contact the keying pad beneath it.

You are done!

The Cricket is a minimalist 20M CW transceiver designed to be a simple, easy-to-build project. It is comprised of 39 electrical components but maximizes features and performance of the parts it has.

The Cricket 40 - Cricket 20’s older brother - was designed for the Kit Building Workshop for Ozarkcon 2019. Selection of a build project for an event such as this is always a challenge, because there is always a good number of beginning hobbyists there for whom this might be their first soldering experience. It needs to be simple enough that it can be completed in an hour or two of allotted time for the event. Finally, it must be something useful and fun enough to be worth building.

The Cricket was designed to meet these requirements, as well as to be something *other* than the ubiquitous low power radio kit that everyone has already built. The starting point was the notorious 'Pixie' transceiver.... but from there, the resemblance ends!

For anyone who has actually built and operated one, the Pixie is a cheap and simple kit, but has serious performance deficiencies. It is underpowered (0.3W); its harmonic output does not meet FCC requirements; the receiver is a bit deaf and very prone to AM broadcast bleed through and 60 Hz hum pickup.

The Cricket starts its circuit with that section of the Pixie that works well - the crystal oscillator. It's a very conventional Colpitts circuit, using a MOSFET transistor as the active device.

The output of the oscillator is coupled to the gate of a 2N7000 MOSFET. This transistor is configured as a Class-E power amplifier, delivering 3/4W from a fresh 9v battery. The output network uses spiral PC traces to make up the inductors, and all harmonics are attenuated at

least 50 dB.

When the circuit is operating as a receiver, the key is open and there is no DC presented to the drain of the PA MOSFET, but the drive is present on the gate of the PA FET. RF signals entering from the antenna are mixed by the switching action of the PA FET and converted to audio. This circuit is much more linear in its action than the bipolar transistor used in the Pixie, and results in better immunity to AM broadcast interference and 60 Hz hum.

The detected audio signal is coupled to U1, an NJM2113, which is a low-noise headphone driver IC.

When the key is closed, a number of things happen. Nine volts are applied to the drain choke, and the PA begins to generate RF power to the antenna. Voltage is applied to the gate of Q4, which mutes the audio amplifier, and voltage is applied to the Q5-Q6 sidetone oscillator circuit, sending the sidetone to the headphone jack. Voltage is also applied to the gate of Q3, which switches out the frequency offset capacitor in series with the crystal, permitting the transmitter to operate directly on the crystal frequency.

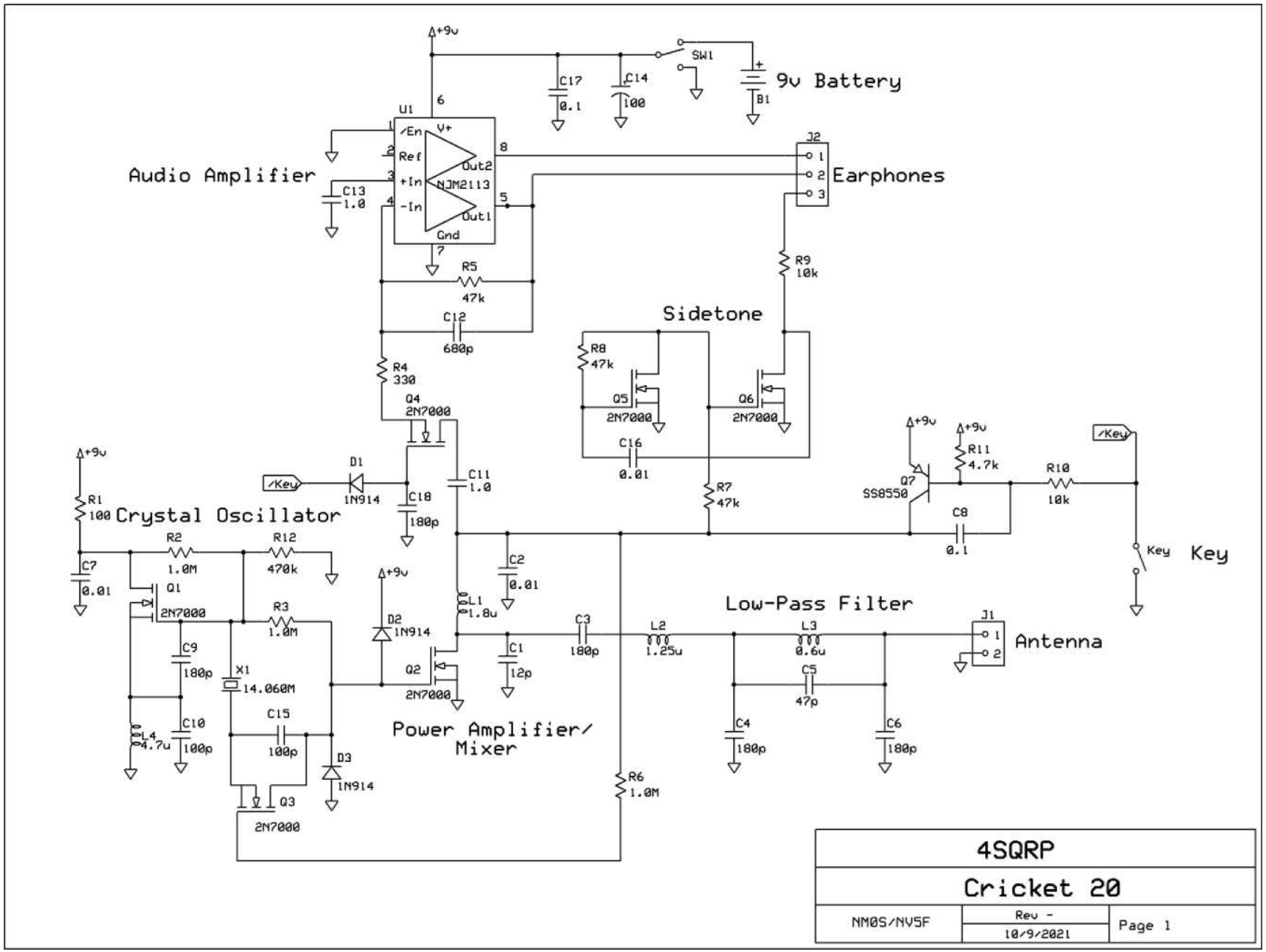
All this from 39 common electronic components!

The receiver is designed to drive a stereo output, either earbuds or speakers. If a mono speaker is plugged into the output jack, the receiver will still work, but the sidetone will no longer be audible.

73 Dave NMØS
Edited for Cricket 20 by Virginia NV5F

PARTS LIST

Value	Description	Parts	Qty	Label
0.01u	Ceramic Disk	C2, C7, C16	4	103
0.1u	Ceramic Disk	C8, C17	2	104
1.0u	Monolithic	C11, C13	2	105
100u	Electrolytic	C14	1	100u
47p	Monolithic	C5	1	47
180p	Monolithic	C3, C4, C6, C9, C18	5	181
100p	Monolithic	C15	1	101
100p	Monolithic	C10	1	101
12p	Monolithic	C1	1	12
1N914	glass diode	D1, D2, D3	3	
ANT	BNC	J1	1	
Phones, Key	1/8" Stereo	J2, J3	2	
Xtal Socket	SIP Socket	J4	1	
Battery +	9v +	J5	1	
Battery -	9v -	J6	1	
Switch	SPDT	SW1	1	
4.7u	Molded axial	L4	1	Yellow-Violet
2N7000	TO-92 transistor	Q1,Q2,Q3,Q4,Q5,Q6	6	2N7000
SS8550	TO-92 transistor	Q7	1	8550
10k	1/4w resistor	R9, R10	2	Brown-black-orange
1.0M	1/4w resistor	R2, R3, R6	3	Brown-black-green
330	1/4w resistor	R4	1	orange-orange-brown
100	1/4w resistor	R1	1	Brown-black-brown
4.7k	1/4w resistor	R11	1	Yellow-violet-red
470k	1/4w resistor	R12	1	Yellow-violet-yellow
47k	1/4w resistor	R5,R7,R8	3	yellow-violet-orange
NJM2113	DIP8 IC	U1	1	NJM2113
14.06	Crystal	X1	1	14.06
14.05	Crystal	X2	1	14.05
6-32 x 3/8	screw		2	
8-32 x 3/8	screw		1	
6-32 nut	nut		2	
6 - 1/8"	spacer		2	
#8	flat washer		2	
knob	knob		1	
rubber feet	rubber feet		4	
PCB	PCB		1	


+9v
SW1
9v Battery
B1
C17
0.1
C14
100
U1
/En
Ref
+In
-In
V+
Out2
NJM2113
Out1
Gnd
Audio Amplifier
C13
1.0
J2
Earphones
R5
47k
R9
10k
C12
680p
Sidetone
R8
47k
Q5
2N7000
Q6
2N7000
C16
0.01
R4
330
Q4
2N7000
/Key
D1
1N914
C11
1.0
C18
180p
R7
47k
Q7
SS8550
R11
4.7k
R10
10k
C8
0.1
Key
R1
100
Crystal Oscillator
R2
1.0M
R12
470k
C7
0.01
Q1
2N7000
R3
1.0M
C2
0.01
L1
1.8u
D2
1N914
Low-Pass Filter
C3
180p
L2
1.25u
L3
0.6u
J1
Antenna
C9
180p
X1
14.060M
Q2
2N7000
C1
12p
C5
47p
C10
100p
L4
4.7u
C15
100p
D3
1N914
Power Amplifier/
Mixer
C4
180p
C6
180p
Q3
2N7000
R6
1.0M
4SQRP
Cricket 20
NM0S/NV5F
Rev -
10/9/2021
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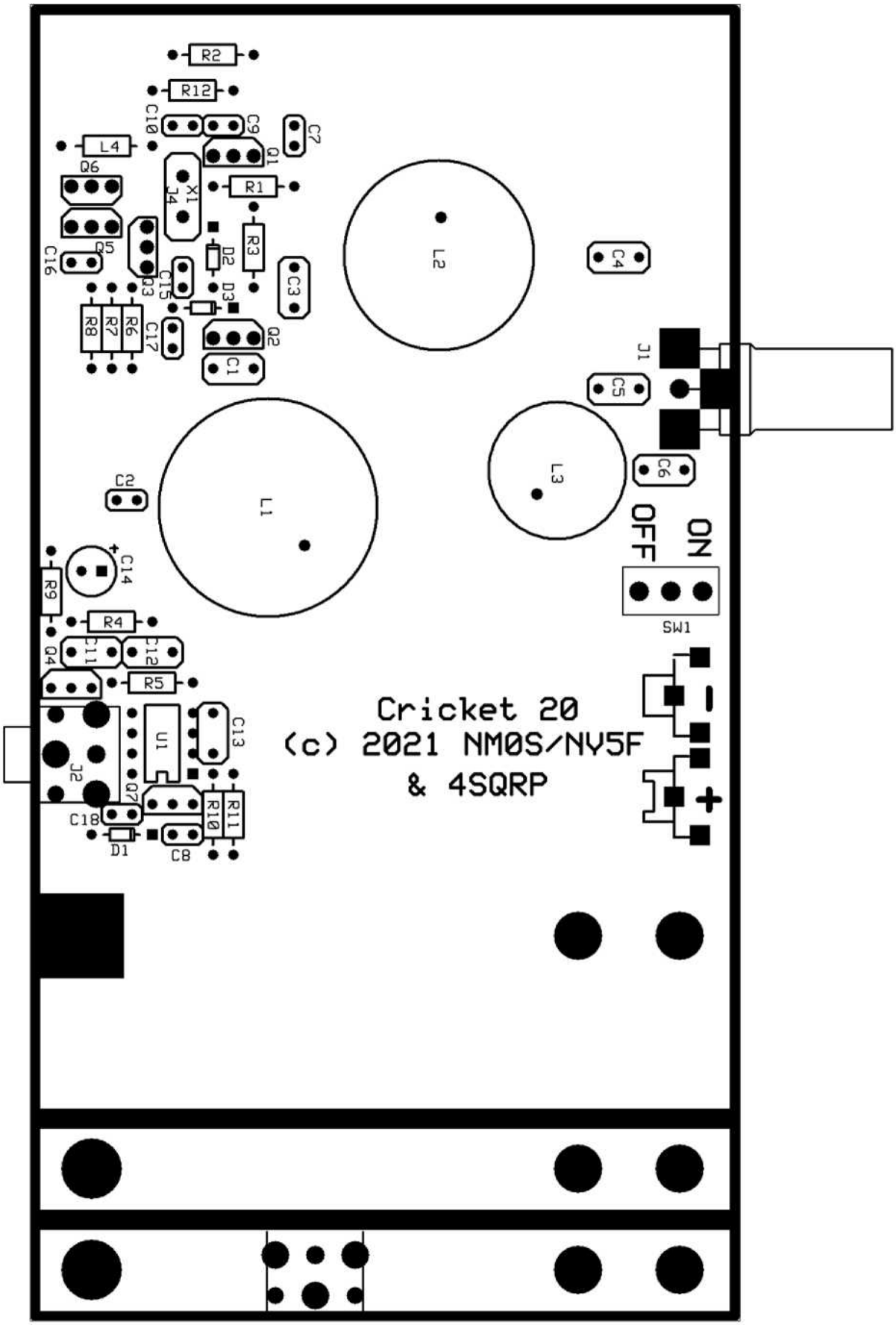
R2
R12
C10
C9
C7
L4
Q1
Q6
X1
J4
R1
D2
R3
C16
Q5
Q3
C15
D3
C3
L2
C4
R8
R7
R6
C17
Q2
C1
J1
C5
C2
L1
L3
C6
OFF
ON
C14
R9
R4
SW1
C11
C12
Q4
R5
Cricket 20
(c) 2021 NM0S/NY5F
& 4SQRP
U1
C13
J2
Q7
C18
R10
R11
D1
C8

Satellite Cheat Sheet

By Paul, KEØPBR - at ke0pbr.wordpress.com

SO-50	67 Hz	
Preset #3	Up (FM)	Down (FM)
AOS		436.805
2		436.800
Mid	145.850	436.795
4		436.790
LOS		436.785

AO-91	67 Hz	
Preset #2	Up (FM)	Down (FM)
AOS	435.240	
2	435.245	
Mid	435.250	145.960
4	435.255	
LOS	435.260	

PO-101	141.3	*Schedule*
	Up (FM)	Down (FM)
AOS	437.490	
2	437.495	
Mid	437.500	145.900
4	437.505	
LOS	437.510	

@Diwata2PH on Twitter

SO-124		
	Up (FM)	Down (FM)
AOS		436.895
2		436.890
Mid	145.925	436.885
4		436.880
LOS		436.875

LilacSat-2	No tone	Cas-3H
	Up (FM)	Down (FM)
AOS		437.210
2		437.205
Mid	144.350	437.200
4		437.195
LOS		437.190

ISS	67 Hz	
	Up (FM)	Down (FM)
AOS		437.810
2		437.805
Mid	145.990	437.800
4		437.795
LOS		437.790

*ISS SSTV 145.800

Tevel 2-8		
	Up (FM)	Down (FM)
AOS		436.410
2		436.405
Mid	145.970	436.400
4		436.395
LOS		436.390

SO-121		
	Up (FM)	Down (FM)
AOS		436.673
2		436.668
	145.875	436.663
4		436.658
LOS		436.653

<- Doppler is High to Low

AO-91 VHF Doppler Drops in pass.

Schedules

ALL TIMES ARE MOUNTAIN DAYLIGHT TIME (GMT-6)

When you arrive at DoubleTree, check into your room by visiting the front desk and giving the clerk your name and tell him/her that you are in the Youth On The Air room block. Once you receive your key, move your luggage into the room. Wait for the shuttle from the hotel to the VFW Hall. Then, proceed to the VFW Hall.

Sunday, June 15, 2025

Everyone should check into the camp at the YOTA registration table at the VFW Hall on Sunday afternoon between 1 and 5:00 pm. You will receive your name badge and bag of swag.

1:00 pm	Camp check in begins and continues until 5:00 pm Led By: Katie Campbell, KE8LQR
2:00 pm and 4:00 pm	Shuttle from DEN airport Led By: Orren, N7WDA & Rebecca, KI7TXO Squires
4:30 pm	Check in ends
4:45 pm	Meet in Hotel Lobby for shuttle to VFW

OPENING CEREMONY

5:00 pm (2300Z)	**Official Welcome** - VFW Hall Led By: Neil Rapp, WB9VPG, Camp Director (will be streamed on the Youth on the Air YouTube Channel) National Anthems Opening comments Welcome from Hosts, Meal instructions
5:20 pm	Meal begins
6:00 pm	**The Future of YOTA** - VFW Hall Led By: Neil Rapp, WB9VPG Camp Director Recognition of sponsors, staff, volunteers (Live Stream Resumes)
6:30 pm	**Keynote Speaker - Gregg Marco, W6IZT** - Youth in DXpeditions
7:00 pm	Break

Things to Bring

Pen or pencil
This book

7:15 pm **Rules of the Road** - Neil Rapp, WB9VPG, Camp Director
Code of Conduct, Shirt days & Camp Photo, Video & Photo Booth,
Ham Radio Safety

END OF OPENING CEREMONY

8:00 pm **Ice Breaker / Team Building** (Live Stream Ends)

8:30 pm **Shack Orientation, Logging Tutorial** & Operating Time
Led By: Taylor Laub, KE8KWZ (Shackmaster), Jules Benkemoun, F4IEY, Asst. Shackmaster, Jack Roberts, W9RFT (Logging), ICOM Rep, Local Host Team

10:00 pm Return to DoubleTree

11:00 pm Everyone Should Be in Assigned Room

11:30 pm Lights out

Monday, June 16, 2025 - ICOM T-Shirt Day

Things to Bring

ALL Camp T-Shirts (wear ICOM)
Pen or pencil
This book
Computer, if available
Radio for programming session, if desired
Stuff for intercultural exchange

8:00 am Everyone should be awake by now!
Breakfast in Doubletree Castle Event Center

8:45 am Shuttle leaves for VFW Hall

9:00 am Team Check In & Announcements - VFW Hall

9:05 am Official Camp Group Photos
Be sure to bring ALL your swag shirts

9:30 am *Session 1* - **Radio distribution & D-STAR demos** - ICOM America
Led By: ICOM Representative

11:00 am *Session 2* - Camper Choice
Option A - Contesting
Led by: Kees Van Oosbree, WØAAE & Katie Campbell, KE8LQR

Option B - Radio Programming
Led by: Will Jourdain, AA4WJ from RT Systems

12:00 pm Lunch at VFW

1:00 pm Team Check In & Announcements

1:05 pm *Session 3* - Camper Choice
Option A - High Altitude Ballooning
Led by: Jack McElroy, KM4ZIA & Edge of Space Sciences

Option B - Kit Build, Beginner Level
Kits: Super Simple Code Practice Oscillator, Simple 20m dipole
Led by: Tony Milluzzi, KD8RTT & Jocelyn Brault, KD8VRX & Sam Rose, KC2LRC

4:00 pm *Session 4* - Sharing Session
Campers will share information about youth programs, clubs, nets, and contests
Led By: Neil Rapp, WB9VPG & Sterling Mann, NØSSC

5:00 pm Dinner

6:00 pm Shack Operating Time / Social Time

7:00 pm	**Train the Trainer** (OPTIONAL) - for those interested in hosting future YOTA Events TODAY'S TOPIC: Interested in hosting a region-wide or subregional camp? We'll discuss what's involved and some things we have learned. Led by: Neil Rapp, WB9VPG - Camp Director
8:00 pm	Intercultural Exchange
9:00 pm	Take shuttle to DoubleTree Shack Closes except by remote
11:00 pm	Everyone should be in assigned room
11:30 pm	Lights out

Tuesday, June 17, 2025

Things to Bring

Your radio
Pen or pencil
This book
Shopping money?

8:00 am	Everyone should be awake by now! Breakfast in Doubletree Castle Event Center
8:45 am	Shuttle leaves for VFW Hall
9:00 am	Team Check In & Announcements - VFW Hall
9:05 am	*Session 5* - Satellite Operation Led By: Samantha Lytch, KM4NSF & Ruth Willet, KM4LAO
12:00 pm	Lunch at VFW (11:45 am if ARISS contact backup plan is in effect)
12:02 pm	(Backup plan for ARISS contact - 1:02 to 1:13 pm MDT / 1902Z to 1913Z)
1:00 pm	Team Check In & Announcements
1:05 pm	*Session 6* - Camper Choice (Delayed start at 1:30 pm if ARISS Contact Backup Time is Used) Option A: Pico Ballooning (for those who did Beginner Build yesterday) Led by: Jack McElroy, KM4ZIA & Edge of Space Sciences Option B: Kit Build, Intermediate Level (for those who did HAB yesterday) Kits: Cricket 20m, Simple 20m dipole Led by: Tony Milluzzi, KD8RTT & Jocelyn Brault, KD8VRX & Sam Rose, KC2LRC
4:00 pm	*Session 7* - BOTA/WWVOTA/POTA/SOTA Prep Led by: Anderson Ray, K4RAY & Alan Hauer, OE5LAE
5:15 pm	Take bus to dinner
5:30 pm	Social Outing - Dinner - Main Event, 580 E 144th Ave, Thornton, CO 80023 2 hours of bowling, laser tag, gravity ropes, etc.; 1 hour of video game play
9:00 pm	Remote operating / Social Time at DoubleTree
11:00 pm	Everyone should be in assigned room
11:30 pm	Lights out

Wednesday, June 18, 2025 - Official YOTA Camp Shirt Day

Things to Bring

Your radio
Small notebook
Pen or pencil
Sunscreen
Shopping money?
Wear camp shirt

8:00 am Everyone should be awake by now!
Breakfast in Doubletree Castle Event Center

9:00 am Team Check In & Announcements - DoubleTree Lobby

9:10 am Bus leaves DoubleTree for WWV

10:15 am *Session 8* - Tour of WWV - National Institute of Standards and Technology
5701 CO-1, Fort Collins, CO 80524
40.678431, -105.046066 / Grid DN70lq42

Group A - WWV Tour
Led by: Matt Deutsch, NØRGT, Lead Electrical Engineer, WWV and Dave Swartz, WØDAS, WWV Amateur Radio Club President

Group B - WWV Activation (WØY/WWV)
Led by: Anderson Ray, K4RAY & Kees VanOosbree, WØAAE

12:00 pm Lunch distribution

12:30 pm Groups Trade Locations
Group A - WWV Activation
Group B - WWV Tour

1:45 pm WWV Activation continues

3:30 pm Bus Leaves for Buc-ee's

4:00 pm Arrive at Buc-ee's
Begin station setups in/on vehicles (WØY/B)
40.333485, -104.983069 / Grid: DN70mi22aa
Operate Buc-ee's On The Air - only mobile, not portable per Buc-ee's admin!

5:00 pm Dinner at Buc-ee's

6:30 pm Bus leaves Buc-ee's for DoubleTree

9:00 pm Remote operating / Social Time at DoubleTree

11:00 pm Everyone should be in assigned room

11:30 pm Lights out

Thursday, June 19, 2025 - Heil Sound T-Shirt Day

Things to Bring

Your radio
Small notebook
Pen or pencil
Wear Heil shirt
Hiking Shoes (if you choose SOTA)

8:00 am	Everyone should be awake by now! Breakfast in Doubletree Castle Event Center
8:45 am	Shuttle leaves for VFW Hall
9:00 am	Team Check In & Announcements - VFW Hall
9:05 am	Satellite & Special Event Station Operating Time ARISS participants rehearsal time
10:25 am	*Session 9* - **Contact with the International Space Station** (Live Stream will start about 11:00 am (1700Z) on the Youth on the Air YouTube Channel) Led by: Asst. Camp Director Ruth Willet, KM4LAO, Lyle Strachan, KEØZNV & Samantha Lytch, KM4NSF
11:25 am	ISS Pass Begins (1725Z)
11:36 am	ISS Pass Ends (1736Z)
12:00 pm	Lunch
1:00 pm	*Session 10* - Camper Choice - Everyone on the same bus Option A - Summits on the Air (hiking required) (1:30 - 5:30) Genesee Mountain (WØC/FR-194), 1099 Genesee Mountain Rd, Golden, CO 80401 39.703010, -105.293643 / Grid DM79iq48SP Led by: Alan Hauer, OE5LAE & Tobias Zweimüller, OE5TWE Option B - Parks on the Air Activation (2:00 - 5:00) Two Ponds National Wildlife Refuge (US-0227) 9210 W 80th Ave, Arvada, CO 80005 39.8389, -105.106 / Grid DM79ku Led by: Anderson Ray, K4RAY & Lyle Strachan, KEØZNV
6:00 pm	Dinner
6:30 pm	Shack Operating Time / Social Time **USA License Exam Session** - be sure to complete apply for an FRN from the FCC or look up your FRN to use (https://www.arrl.org/what-to-bring-to-an-exam-session)

7:00 pm	**Train the Trainer** (OPTIONAL) TODAY'S TOPIC: How can we share ideas about activities for youth? Led by: Neil Rapp, WB9VPG - Camp Director
8:00 pm	Shuttle leaves VFW for Double Tree
8:15 pm	Pool Party / Remote operating / Social Time at DoubleTree
11:00 pm	Everyone should be in assigned room - start packing so you can leave on time tomorrow!
11:30 pm	Lights out

Friday, June 20, 2025

8:00 am	Everyone should be awake by now! Breakfast in Doubletree Castle Event Center Drop off your luggage in the Breckenridge room (unless you are checking out tomorrow).
8:45 am	Shuttle leaves for VFW Hall
9:00 am	Team Check In & Announcements - VFW Hall
9:05 am	Rig Return - ICOM Led By: ICOM Representative
	Finish Public Relations Team interviews / Meet Young Ham features Led By: Katie Campbell, KE8LQR & Jack Roberts, W9RFT
10:00 am	Closing Ceremony Led By: Neil Rapp, WB9VPG (will be streamed on the Youth on the Air YouTube Channel)
	December YOTA Month information Led By: Kees Van Oosbree, WØAAE & Blake Pearson, KN4VKY
	Prizes & Giveaways
	Post-Camp Survey
11:15 am	Move Out/Clean Up Bus Leaves for DoubleTree
11:45 am	Shuttle Bus Leaves for DEN Airport from DoubleTree Retrieve your luggage if you stored it in the Breckenridge Room Led By: Orren, N7WDA & Rebecca, KI7TXO Squires
12:00 pm	Camp Officially Ends
12:01 pm	Staff collapses from exhaustion
12:10 pm	Staff Clean Up and Pack Up

Things to Bring

Your radio (including all accessories)

Pen or pencil

HAVE A SAFE TRIP HOME!

Things To Do Before or After Camp

- See the official Denver Visitor Guide at https://online.publicationprinters.com/html5/reader/production/default.aspx?pubname=&edid=54fd4702-b81c-4b98-bade-5a3debc7f6f6

Camp Faculty, Staff, and Support Staff

THANK YOU to each and every one of you for volunteering your time, money, and talents to make this week a success!

STAFF & SUPPORT

ADMINISTRATION

- Neil Rapp, WB9VPG, Director
- Ruth Willet, KM4LAO, Asst. Director
- Abby Kimi Matsuyoshi, KK7CFJ, Asst. Director

AIRPORT WELCOMING TEAM

- Orren Squires, N7WDA
- Rebecca Squires, KI7TXO

BUILD TEAM

- Tony Milluzzi, KD8RTT, Lead
- Jocelyn Brault, KD8VRX
- Sterling Mann, NØSSC
- Andy Milluzzi, KK4LWR
- Sam Rose, KC2LRC

CHAPERONES

- Colleen Campbell, KB8VAQ
- Will Jourdain, AA4WJ
- Erik Kaarto, AI7TK
- Tony Millizzi, KD8RTT
- Orren Squires, N7WDA
- Rebecca Squires, KI7TXO

HOST TEAM

- Mark Strachan, KD6IQW, Host Lead
- Holly Strachan, XYL - KD6IQW, Host Lead Manager

MULTIMEDIA

- Brian Esche, WB9QVR
- Sterling Mann, NØSSC
- Sam Rose, KC2LRC
- Hope Lea, ND2L

SHACK

- Taylor Laub, KE8KWZ, Shackmaster
- Jules Benkemoun, F4IEY, Asst. Shackmaster
- ICOM Rep

CHECK IN

- Katie Campbell, KE8LQR

PUBLIC RELATIONS

- Katie Campbell, KE8LQR, Manager
- Emiliano Gutiérrez, LW6EGE, Latin American PR Specialist
- Taylor Laub, KE8KWZ, Asst. Manager
- Jack Roberts, W9RFT, Webmaster & PR Specialist

HUNTSVILLE 2026 HOST TEAM OBSERVER

- Daniel Sherfey, KQ4HWN

PARENT VOLUNTEERS

- Michelle Hay, Food & beverage setup help
- Erik Kaarto, AI7TK, Chaperone & General Purpose
- Drew Mortensen, AC3DS, SOTA

FACULTY

SESSION LEADERS

- ARISS Contact: Ruth Willet, KM4LAO & Samantha Lytch, KM4NSF
- Ballooning: Jack McElroy, KM4ZIA & Tom McElroy, W4SDR & Edge of Space Sciences
- Buc-ee's On The Air (BOTA) & Parks On The Air (POTA): Anderson Ray, K4RAY

- Contesting: Kees Van Oosbree, WØAAE & Katie Campbell, KE8LQR
- Rig Programming: Will Jourdain, AA4WJ
- Satellite: Samantha Lytch, KM4NSF & Ruth Willet, KM4LAO
- Summits On The Air (SOTA): Alan Hauer, OE5LAE & Tobias Zweimüller, OE5TWE
- TTT: Neil Rapp, WB9VPG

TEAM LEADERS

- Red: Hannah Mortensen, N3DOE
- Orange: Krys Altimas, KI5ZNS
- Yellow: Andrew Auster, KO4TZK
- Green: Lyle Strachan, KEØZNV
- Blue: Anderson Ray, K4RAY
- Purple: Kees Van Oosbree, WØAAE

Schedule Grid

	Sun 6/15/2025	Mon 6/16/2025	Tue 6/17/2025	Wed 6/18/2025	Thu 6/19/2025	Fri 6/20/2025
8am		**Breakfast**	**Breakfast**	**Breakfast**	**Breakfast**	**Breakfast**
9am		Camp Photos :30	Satellites	Travel	Operating Time/ARISS Rehearsal	Rig Return/Exit Interviews
10am		Rig Distribution D-STAR		WWV Tour & Activation Group 1	ARISS Prep	Closing Cermony / DYM
11am		Contesting or Rig Programming (Choice)			ARISS	Move Out Time / Shuttle 11:45
12pm		Lunch	Lunch/ARISS Backup	Lunch	Lunch	Box Lunch
1pm	Check In	High Alt. Balloon Launch OR Beginner Kit Build (Choice)	Pico Balloon Launch OR Intermediate Kit Build (Choice)	WWV Tour & Activation Group 2	YOTA SOTA OR YOTA POTA (Choice)	Tear Down
2pm	Airport Shuttle					
3pm	Check In			WWV Activation		
4pm	Airport Shuttle	Sharing Session	BOTA/POTA/SOTA/ WWVOTA Prep	Buc-ee's On The Air		
5pm	Opening Ceremony	Dinner	Dinner			
6pm	Dinner & Keynote	Station Time / Social Time	Social Outing (at Main Event)	Dinner	Pizza Party	
7pm	Rules	TTT (optional)		Travel	Station Time / Social Time /TTT	
8pm	Shack Orientation/Log	Station Time / Social Time		Station Time / Social Time	Pool Party / Station Time / Social Time	
9pm	Station Time / Social Time	Station Time / Social Time	Station Time / Social Time			
10pm	Station Time / Social Time					
11pm						

Activity at VFW	The shack and remotes are available during these times when you have completed the session.
Social/Flex	
Off Campus	
Meal at VFW	
Hotel	