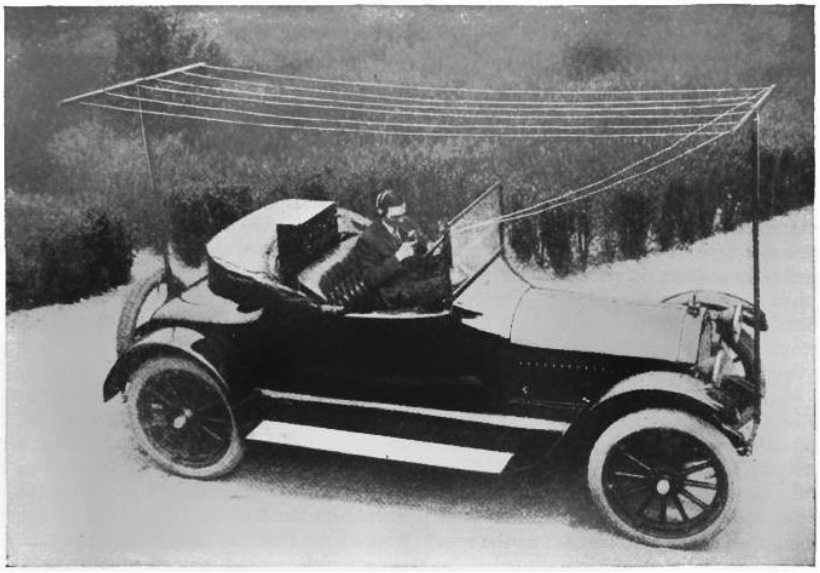
# Microvolt

*Monthly newsletter of the Utah Amateur Radio Club*

**October 2026**



# Mobile Operation

From the earliest days of amateur radio, operators have sought to place our equipment in vehicles, the goal typically to enable powered radio operation while the vehicle is in motion, or *mobile operation*. More than two years ago we explored the opportunities afforded by *going portable*, which at first sounds related, but technically identifies the fixed destination (park, campsite, mountain peak), rather than the non-stationary operation itself. That opens the discussion to vehicle types, such as aircraft, a boat, train, an RV, or even a scooter. Any others?

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# *Cover – Mobile operation*

The fact is, operating mobile can be achieved on any conceivable vehicle, especially with the portability of today's HTs (handheld transceivers). Even spacecraft such as the ISS employ amateur radio stations aboard their lofty transports. Then again, operators simply walking their dogs or taking a leisurely stroll need no mechanized vehicle of transportation at all while they casually check into a net, for example.

## Convenience

An obvious reason for mobile operation is convenience. Along with fast food, drive-through banking, and outpatient surgery, ***convenience*** has become paramount to the support of today's lifestyle. Our phones have increased our ability to compress more work into a smaller time period, forcing surrounding life tasks to become more efficient, and propelling convenience to the level of necessity.

To accommodate that convenience, amateur radio gear, especially transceivers, have become smaller, lighter, and packed with more functionality now than ever. Many HT models brag of features such as USB-C charging, Bluetooth programming, APRS and digital mode support, GPS, Air Band, tri-band, color screen, waterfall, upgradable firmware, FM broadcast radio, higher output power, proximity group connection, self-identification, water intrusion protection, TNC integration, flashlight, and more, often for a very low price.

## Portability

Another form of convenience, the fact that an operator can easily and quickly transport amateur radio equipment between locations defines its ***portability***, yet another advantage of mobile operation. The difference between a portable station and a mobile station is that portability tends to imply the transportation of a station to a destination, while mobility tends to imply the continued operation of the station, even during transportation.

For a transceiver to be considered portable, it should probably be light-weight enough to carry easily. HTs are very portable in that regard, and mobile radios, which are discussed in this month's Editorial, are made for that very purpose. Because of the demand for portability, some HF rigs have been designed and manufactured for the same portable purpose.

Also, many hams have installed ham radio gear in portable cases and ***bug-out kits*** to carry and house their equipment. They often mount radios inside to convert ordinary ham radio gear into portable stations, some more elaborate than others.

## Multi-tasking

One of the great benefits of mobile operation is the ability to multi-task; that is, perform multiple jobs at the same time. When your long-lost sister calls two seconds before the oven timer alarm sounds is a moment when multi-tasking can come in handy. If the Field Day camp wants to inform you of a location change while you're driving outside phone range, it might be good to catch that ham radio call before losing the signal while ascending the canyon. You can possibly pull over to take the call if you're in your truck, but if you're in a plane, that same luxury might be out of your reach.

Just like with your phone, operating a radio while driving, rowing, or flying can become distracting. Please be aware that attempting to multi-task between your vehicle controls and working a microphone, for example, can potentially lead to a less-than-pleasant outcome.

*Microvolt editorial staff*

# *Editorial – Mobile radios*

Except for the very newest hams, it seems that nearly all licensed amateurs own a mobile radio. While pretty much any transceiver can be *mobile* in the sense that it can be operated from a vehicle in motion, let's focus on a specific radio type, labeled such because it's ***designed to operate from a moving vehicle***.

The typical charging voltage of today's running vehicle gasoline engine is 13.8 VDC (volts direct current) to sufficiently charge a 12-volt lead-acid battery to 12.6 VDC, its nominal sitting voltage. In light of the fact that many hams attempt to use or install their ham radios in vehicles, the voltage requirement for most mobile rigs today is 13.8 VDC, perfectly adapted for such a vehicle electrical power system. Most amateur radio manufacturers attempt to accommodate a mobile installation, so even many base or fixed station units also specify a 13.8 VDC supply.

## Mobile features

Today's mobile ham radios sport many features, some of which might or might not be important to you. Among them are bands (HF, VHF, UHF), digital (DMR, D-STAR, YSF/C4FM, AllStar) capability, location (GPS, APRS) determination, display (meter, waterfall, color), and detachability (for installing the main body in one location while mounting the display where you can see and manipulate the controls).

***The discontinued Yaesu FT-857D, once coveted and considered the ultimate mobile rig, capable of 100 W HF, 50 W VHF, 20 W UHF, and all modes, plus detachable control head, DSP, built-in spectrum scope and SWR meter, built-in keyer, under 5 lbs, remains a hot item on the used markets.***

## Mobile considerations

Before purchasing a mobile radio, you might want to consider just how much you plan to use it, whether your use can justify its cost. Another is the power requirement, to ensure your vehicle can supply sufficient current to it for the times (POTA, Field Day, camping) you anticipate using it. If you anticipate using your mobile radio in rugged environments, its immunity to extended vibration, shock, and dust can be important durability factors to think about.

## Mobile installation

Many of today's mobile radios have a ***separation kit*** option, which typically consists of a set of long cables and a mounting bracket to allow remote installation of your rig. This kit often accompanies mobile radios that feature a detachable control head / face plate, as mentioned previously, and conveniently takes up little space on your vehicle front console.

One of the most important mobile radio installation considerations is that for your antenna. While drilling a hole in your metal vehicle body creates a near-perfect ground plane for a VHF mobile antenna, a ***hole-mount*** antenna is impractical for many hams. Alternatives include ***mag-mount*** (magnetically attached to your roof), ***glass-mount*** (adhered to your window glass), ***lip-mount*** (bolted to your hood or trunk lid), ***bracket-mount*** (bolted to your fender or mirror), and ***stake-hole*** (mounted to the stake hole of your truck bed) antennas.

Finally, always ensure that your mobile radio is installed in a location that provides adequate ventilation for the rig. Enclosing your radio in a compartment can make it look tidy, but if no air can circulate around it, overheating can become a problem.

*Anything to add? Email* ***editor@utaharc.org***

# *Letters to the editor*

Dear Editor:

I'm not sure how to ask this, but I'm looking for a poor-man's version of a Yagi beam to put on my roof. I've always read how well one works, but when I Google for them, their prices (along with the tower, rotator, bucket, excavation, and concrete pour) are way out of my reach, and I'm not able to dig a huge hole in my yard to install a 60-foot tower anyway. So, is it possible for me to get a Yagi beam for my station that doesn't require a crane operator?

Nick in Bountiful

Dear Nick:

A gain antenna such as a Yagi beam is coveted by numerous hams because of its relatively low angle of radiation, high signal-to-noise ratio, and its appearance as a legitimate ham radio antenna. It turns out that a person can purchase such an antenna system without the expense of the full tower, concrete base, and the associated labor:

- Mosley 33-Mini-AW (10, 12, 15, 17, 20) = $956
- Yaesu G-800DXA rotator system = $660
- Carlson 45HD 4-foot roof tower = $580

$2200 is still a chunk of change, but the cost you'd be saving by installing it yourself is huge. If you can afford to get the antenna even higher and away from ductwork and flashing, that would be optimal. Mount and anchor the tower as instructed, then the rotator and its wiring, then the beam, along with appropriate coax and grounding through an arrester on a ground rod below, and you'll be DXing before you know it.

Dear Editor:

Is it important for a ham radio power supply to be supplied with a pure sine wave?

Blaine in Salt Lake City

Dear Blaine:

On one hand, most modern power supplies are very tolerant of the AC (alternating current) voltage waveform presented to them. While a pure sine wave source is ideal, your power supply might react differently (overheat, produce DC spikes, hum) to a modified sine wave or one exhibiting significant voltage transients, depending on design quality. It's best to check your power supply's specifications to be sure.

On the other hand, there are other reasons to use a pure sine wave for your supply's input, especially if the electrical power is being provided by an inverter. For amateur radio applications, a non-sinusoidal waveform can potentially emit harmonics and other artifacts resulting from the nonlinearities in the supplied waveform. These extraneous signals are often manifest as periodic noise in the receiver, and can be transmitted to other appliances, such as your Wi-Fi router, television, or phone.

Dear Editor:

I have an Icom IC-7300, and I need to get an external speaker for it because the rig is in an alcove on my computer desk, and it's difficult to hear the little built-in speaker. When I looked around and found some (SP-38, SP-41, etc.) that were "matched" to the IC-7300, I couldn't find any that were going for less than $100. Does the rig need to be matched to a name-brand speaker, or could I use something that goes for way less, and still sound good?

Norm in Salt Lake City

Dear Norm:

Like for most of today's amateur radio transceivers, you can use an off-the-shelf external speaker that is not necessarily designed for your particular rig. Aftermarket and off-brand speakers are completely acceptable, provided they present the correct impedance (8 ohms for the IC-7300) and plug (1/8″ mono for the IC-7300). Furthermore, brand-named speakers typically feature amplification, so purchasing an aftermarket amplified speaker might compensate for the brand name, and at a fraction of the price.

*Send your questions to* ***editor@utaharc.org***

# Club news

September 2026 was another time to get together for a potluck dinner instead of a formal club meeting. We gathered at the Salt Lake County Facilities Management Cafeteria once again, and had a great time mingling and talking about everything except ham radio. Photos on page 8.

*BTW, you can view many past club meeting presentations on our YouTube channel.*

To the right is a throwback to the 2019 Homebrew Night, featuring Clint's *Linear of Death*, to get you thinking about what you can come up with for next month's meeting at the Warnock Building.

# 2026 UARC Homebrew Night

The annual UARC Homebrew Night will take place this year ***Thursday 08 October 2026*** at the University of Utah Warnock Building. It's a chance for you to show off your project, your latest purchase, or something else you've been cooking up during the year.

# 2026 UARC Christmas Dinner

You and your family are invited to the annual UARC Christmas Dinner ***6:30 pm Thursday 10 December 2026*** at the Golden Corral, 665 E 7200 S, in Midvale. More posted on our website. We'll hold our annual elections that night, plus have announcements and door prizes, but no presentations or long speeches.

# 2027 Winter Field Day : we need your help!

As summer temperatures start to dip below 100°F, we need to start thinking about Winter Field Day. If all goes as planned, we'll hold Winter Field Day at **a yet undisclosed location** from noon Saturday 23 January through noon Sunday 24 January. We're asking for three volunteers to set up their RVs at the park starting about 8 am Saturday morning. If you're willing to contribute your RV for one night, please contact James KK7AVS (***kk7avs@gmail.com***) or Noji KNØJI (***nojiratz@hotmail.com***).

# 2027 UARC Spring Potluck

You and your family are invited to a potluck dinner 6:30 pm Thursday 11 March 2027 at the Salt Lake County Facilities Management Cafeteria, 2001 S State St, room S1-100. Details are posted on our website.

# *For your information*

## Save that date

Homebrew Night : 7:30 pm 08 October 2026

Christmas Dinner : 6:30 pm 10 December 2026

Winter Field Day : noon 23 January through noon 24 January 2027

Spring Potluck Dinner : 6:30 pm 11 March 2027

ARRL Field Day : noon 26 June through noon 27 June 2027

## License courses

*Salt Lake:*

**Technician** : Tuesdays

**General** : Tuesdays 7:00 pm to 9:00 pm

147.160+ MHz (127.3 Hz tone)

*Orem:*

**Technician** : Saturday 17 Oct, 8:00 to 2:00 pm

Email **nv7vham@gmail.com** to register ($0)

**Provo Fire Station #2**

**Technician** : Tuesdays 19, 26 Jan, 2, 9 Feb, 6:00 to 8:00 pm

Visit **psclass.orem.org** to register ($10)

**Orem City EOC**, 56 N State St, 2nd Floor

**HamStudy.org** account required

*This course will not be live-streamed*

Email **nojiratz@hotmail.com** for info

*Eagle Mountain:*

**Technician** : 5 Wednesdays, 7 to 9 pm

07 Oct, 14 Oct, 21 Oct, 28 Oct, 11 Nov

Email **ki6oss6365@gmail.com** to register ($0)

**Eagle Mountain City Hall**

## Exam sessions

*Salt Lake County:*

- Email Garth Wiscombe W7PS **w7ps@arrl.net**

  28 Sep, 26 Oct, 30 Nov, 25 Jan, 22 Feb

*Utah County:*

- Sat 26 Sep 10:00 am : **Spanish Fork** : **signup**
- Sat 17 Oct 2:30 pm : **Provo** : **signup**
- Wed 21 Oct 7:00 pm : **Provo** : **signup**
- Wed 18 Nov 7:00 pm : **Provo** : **signup**
- Wed 11 Nov 4:00 pm : **Primary CH** : **signup**
- Sat 21 Nov 2:30 pm : **Provo** : **signup**

## Club repeaters

**Farnsworth Peak** : 146.620– MHz (no tone)

**Scott Hill** : 146.620– MHz (no tone)

**Lake Mountain** : 146.760– MHz (no tone)

## SDRs and beacons

Northern Utah WebSDR : **sdrutah.org**

KK7AVS SDR : **k7xrd.club**

N7RIX SDR : **sdr.n7rix.com**

K7JL beacon 28.2493 MHz

## HF remote and club transceiver stations

If you'd like to learn how to get started using the remote stations, visit the **HF Remotes link** on **the club website**:

**https://user.xmission.com/~uarc/HFRemote.html**

## How you can help!

Email **uarc@xmission.com** to reach the club leadership. Email **editor@utaharc.org** to suggest content.

# *Spotlight – Carl Cowley KØWLY*

Hi, I'm Carl, and I'm a hobbyist (said like at a Hobbyist Anonymous Meeting — H.A.M.)

When we were living in South Carolina, several friends had encouraged me to get involved with amateur radio over the years, due to my lifetime of electronics involvement, but it never appealed to me. Then, in the first part of January 2023, our stake leadership asked members to consider getting their amateur radio license and to be a part of the stake's emergency network. It seemed like a good idea, as we had witnessed a few natural disasters in our area, and our ward alone was 20 miles wide, so you couldn't just run around the block to check on your fellow members.

Following an introductory training class my stake provided, I bought my first Baofeng UV-5R and started studying. I found a club that was offering tests remotely, proctoring via a desk cam. I passed the Technician exam on January 2023, the General the following week, and the Amateur Extra the week after that. One of our members gave me a copper J-pole, to make it easier for me to reach the repeater and call in to the stake net. Shortly after, I got an inexpensive 25-watt mobile unit to use as my base station, since even with the J-pole the 5-watt handheld wasn't reaching the distance to the repeater very well.

Within a few months of getting my license I got a job offer in Utah and we moved from SC. I wasn't sure I wanted to get involved with local nets, because in South Carolina, at least the ones I was on, was regimented, no discussion or even training, as I recall, just check-ins. So, I wasn't eager to get back into it. After installing an inexpensive "Slim-Jim" antenna in my attic, I immediately noticed a difference in the nets here in Utah, however. The people were more relaxed about radio protocol (so, I wasn't as concerned about making a mistake) and there was some training and/or discussion that took place, all of which renewed my interest in the hobby. I started participating in as many nets as I could, joined a few clubs (UARC, UVARC, and 76ers) and UCARES, and began attending club meetings and other activities, a great way to make some new friends.

Because of its low power output (20 watts) of a Xiegu G90 I purchased, I got interested in FT8 communications and have been having a lot of fun with it. I began experimenting with different antennas and antenna locations to see how they affected my propagation, which has been an enjoyable challenge. As of today, I have made contact with someone in every state and 38 countries, the farthest being about 5785 miles.

I have a lot of varied interests, so the idea of a net for people who enjoy making items for their shack came to mind. I put together a proposal for the net and provided it to Noji for him and the UVARC board to consider. They approved it, and the *UVARC Maker Net* was born! Acting as net controller has been a new experience for me There is a lot of talent, creativity, and experience in the group!

By nature, I am more of a reserved person and observer in group settings, but on the other hand I really enjoy meeting new people and having a good discussion. I have been rewarded with enjoyable conversations and new insights! I hope to talk with you soon!

*– 73, Matt KØWLY*

# UARC Fall 2026 Potluck Dinner

# *Tech Corner – 40-meter CW transmitter*

First, you've probably been looking for an actual radio that you can build. Second, you've probably been looking for a kit that's easy to build in a reasonably short time, yet will work during an emergency. Third, you want something compact, that doesn't weigh a lot, or take up too much room. If so, this might be your next project.

To work this little radio, you'll need to supply the 9V battery, a Morse code (straight) key (with a mono 1/8" plug), 40-meter antenna (with BNC-M connector), and a good ground connection. For transparency, and to make sure you aren't blindsided, this transmitter has the following caveats, which might be important to you:

- Unable to receive, only transmit
- Transmits only one frequency (7.030 MHz)
- Maximum transmit power is 300 mW (QRP)
- Has very little filtering
- Requires Morse code to use it
- Accepts only a straight key (not paddle)

To be clear, this device is not a ***transceiver***, because it possesses no receiver, leaving the receiving function to some other device, such as a shortwave radio or the WebSDR. The Optional parts are for installing the circuit board in a nice, little enclosure, if you want, including external connectors.

## Parts list

One 2″ x 2″ prototype circuit board

One 9V battery connector

One SPST rocker switch

One 7.030 MHz crystal

One 2N3904 transistor

2 feet 22 AWG hookup wire

Two 1 MΩ ¼ W resistors

One 10 kΩ ¼ W resistor

One 100 nF capacitor

One 22 pF capacitor

## Optional parts

One 83 mm x 58 mm x 33 mm enclosure

Four each M3 pan head screws and nuts

One 3.5 mm (1/8") mono jack

One BNC-F panel-mount connector

Four 3.1 mm x 6 mm x 6 mm standoffs

## The construction

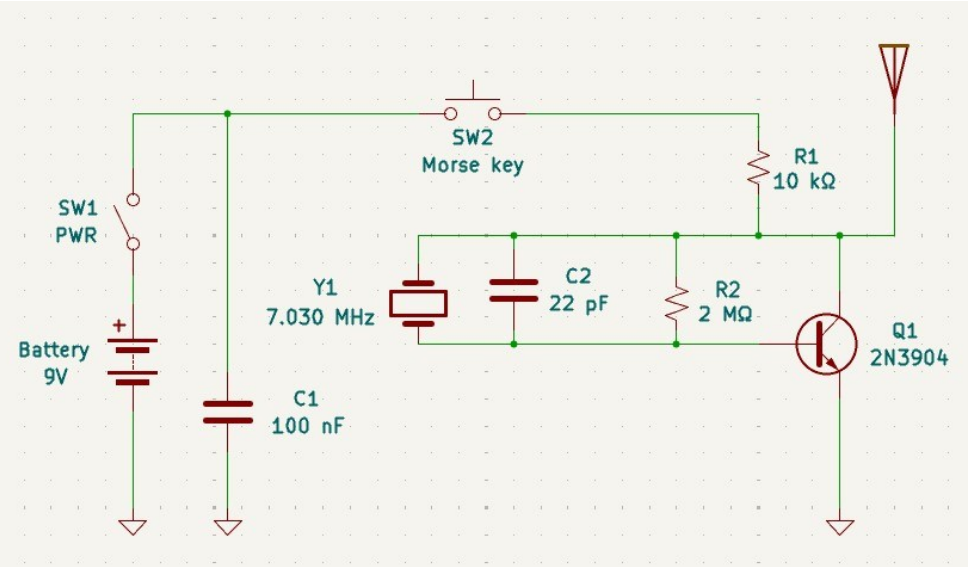
Wire the components together according to the schematic on the next page. 2 MΩ resistors are not nearly as common as 1 MΩ values, so just wire two 1 MΩ resistors in series. None of the components are very static-sensitive, so a wrist strap is not necessary for this project. If you're unsure about your soldering skills, it might help to wire up this circuit on a breadboard before committing it to a PCB (printed circuit board). If you have trouble following the schematic, or have questions about anything in the circuitry, please feel free to reach out and ask.

Obvious to the casual observer, this "transmitter" is actually nothing more than a crude oscillator, crude because I'm trying to keep it really simple. I mean, it's about the simplest transmitter you can make, but it does work (transmits) as designed.

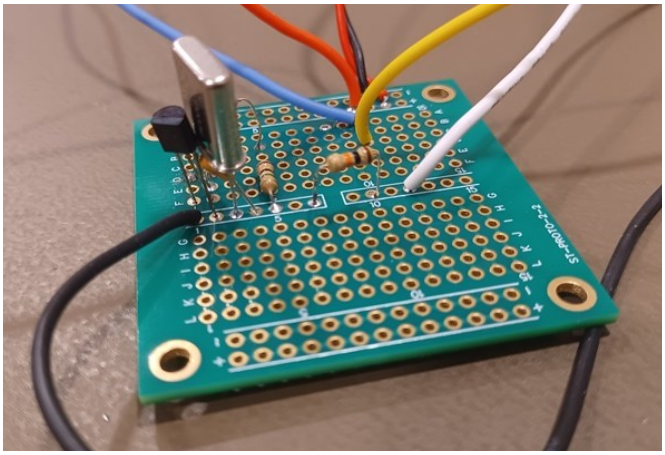
## Optional construction

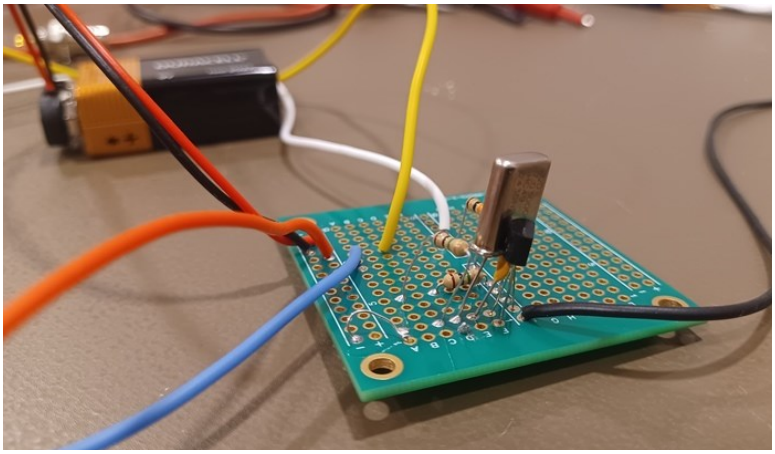
If you want to package this little transmitter in a nice-looking box, drill appropriately sized holes for the BNC connector and mono jack in convenient places on the enclosure. Drill holes on the bottom for the screws. Connect the collector of the transistor to the center conductor of the BNC connector and the circuit signal

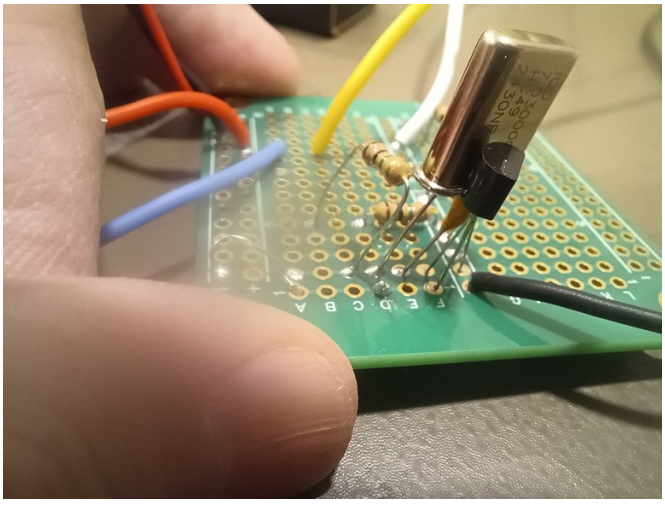
# *40-meter CW transmitter, cont'd*




ground to the outer conductor of the BNC connector. Connect the mono jack in place of the Morse key, then install a mono plug onto your straight key.







The rocker switch is also optional, since the straight key turns on the power to the circuit with each key-up. Ok, that's not exactly superior engineering, but it does minimally work. So, the transmitter circuit doesn't actually produce any signal until you key up, because the straight key enables power to the oscillator in series with the power switch. To install the rocker switch, cut a 19 mm x 12.5 mm x 11 mm rectangular hole in the enclosure.

## Testing the transmitter

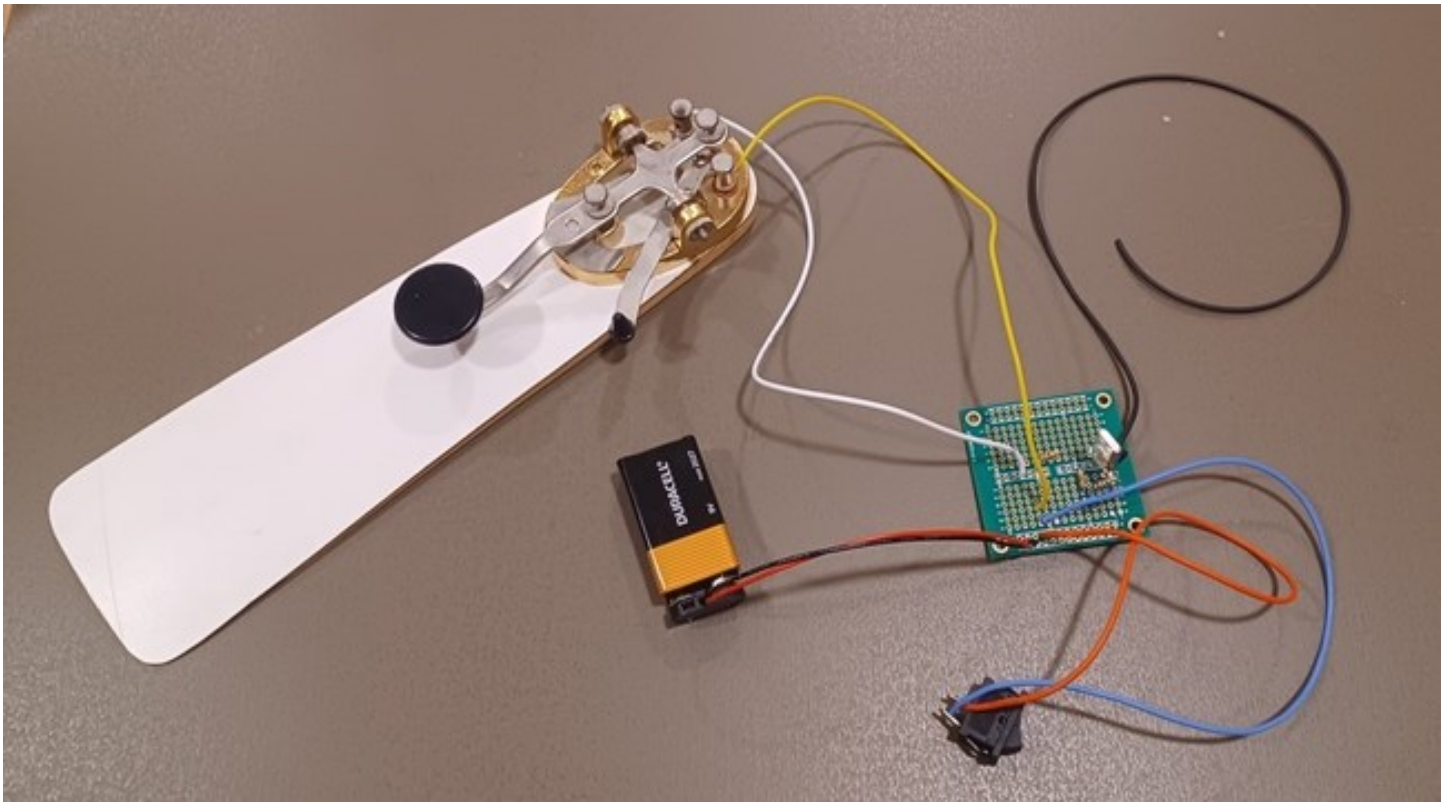
Using my trusty Yaesu FT-100D as my receiver, I powered it with an SLA (sealed lead-acid) battery, turned on the rig, and tuned to 7.030 MHz. Using CW as the mode, and no filtering, I monitored as I flipped on the power switch to my oscillator circuit. And when I keyed up, I heard CW loud and clear from my HF rig, so the transmitter worked.

Then, I dialed around to see how wide my signal was, and it turned out that my Yaesu received the signal clearly from 7.0273 MHz through 7.0305 MHz, a 3.2 kHz bandwidth, which is both encouraging and a little

# *40-meter CW transmitter, cont'd*

concerning. The lower Technician portion for CW of the 40-meter band spans 7.025 MHz to 7.075 MHz, so both the carrier (7.030 MHz) and the entire bandwidth of my transmitter falls safely within that range, allowing Technician class licensees to use this transmitter. Typically, a CW signal does not need to take up more than 400 Hz to 500 Hz, while my signal takes up 3200 Hz. That's not a clear FCC violation, since there is not bandwidth limit for CW, but the rules (Part 97.307.a) do state that we shouldn't occupy more bandwidth than is necessary for the communication. So, a gray area.

I didn't take the time and trouble to pull out my spectrum analyzer or wattmeter to measure the power output, but I'm pretty sure this transmitter output falls well within the 200-watt limit for this portion of the 40-meter band.




## Finally

This simple transmitter project has a few shortcomings, but it also has a lot of potential. If you're concerned that you aren't able to enjoy this device because it can only transmit CW, then it might just be time for you to learn Morse code. This little guy is missing two major sections that could make it into a more robust transmitter: an output PA (power amplifier) and a LPF (low-pass filter), simple schematics for both of which could easily be found by an online search. A PA (made only from a biased 2N2222A transistor) would help boost the signal to 600 mW or more, and the LPF would confine the bandwidth better and prevent spurs (spurious emissions) on harmonics. I leave the enclosure work to you, for cosmetic appeal.

*Noji Ratzlaff KNØJI*

P.S. This article is dedicated to "Crab" Mike Chambers KN6KRB.

# *Strays – Mobile antennas*

Today it seems simple to toss a transceiver into your vehicle and call it "mobile radio" as you drive down the highway. But, what's mobile operation without a mobile radio antenna? Mobile antennas can differ because of band and vehicle type, yet it's probably worth addressing their common setup challenges by discussing their orientation, placement, grounding, and other considerations.

## Antenna orientation

For a VHF/UHF radio setup, you'll ideally want to install a vertical antenna, because it creates electric fields that are vertically polarized, matching mountaintop repeaters and most other mobile configurations. While HF signals can be vertically, horizontally, and even circularly polarized, installing a vertically oriented antenna for their mobile operations is also preferred because of the fact that it's mounted on a car, truck, or small boat, which typically do not possess the length to practically mount a wire antenna.

Aircraft typically also use vertical antennas for VHF/UHF operation, but often use horizontal antennas for HF work. Wire antennas on aircraft function well because many planes are large enough to accommodate the needed real-estate (working area), and wire antennas produce little wind drag.

## Antenna placement

Where you install the antenna on your vehicle can matter a lot or a little, depending on vehicle type. Often, it's ideal to install your vertical antenna on the center of your roof, but you might not be able to get your vehicle into the garage afterwards. To work around that problem, you can either install a fold-over antenna or mount it elsewhere.

Purists point out that mounting a vertical antenna anywhere on your vehicle away from the center of the roof can severely compromise its signal strength or antenna patterns. Experience, however, demonstrates that installing a vertical antenna on your trunk lid, hood, fender, truck bed, or even your bumper ***does not tend to degrade your signal*** beyond usability. Then again, installing one behind your truck cabin can severely dimmish both your transmitted and received signals, primarily due to proximity coupling with your metal cabin body. You can often compensate for other non-ideal locations by securing your antenna to a good ground.

## Antenna grounding

An antenna mounted on a moving vehicle doesn't have the luxury of being installed against a stationary "Earth" ground, so the vehicle body or frame will have to suffice, because the body can act as a ground plane. The grounding consideration for a mobile antenna should be geared more for performance (signal strength, pattern, impedance, noise) than safety (lightning, static, shock).

Those who install antennas on the bumper, truck bed, or other locations far from the mobile rig often remedy the need for a ground by connecting the antenna base to the vehicle frame by braided wire. In most cases, the metal of your vehicle frame, body, bumper, hood, and mirror are all electrically connected, at least by DC (direct current). Because RF (radio frequency) is involved, however, thought must be given to the distances between the antenna, the rig, and the conducting body between them, given the expected signal frequency. The connection between them can be rendered ineffective if the distance per the conductor velocity factor is a multiple of half-wavelengths.

## Finally

If you encounter problems with your mobile antenna, remove it and start over, ensuring connections and mounts are secure, and the coax isn't pinched.

If you're installing a mobile antenna with an NMO mount, and found that it stops working once you tighten the antenna base onto the mount, chances are, the metal housing surrounding the little pin sticking out from the antenna base is shorting against the pin contact plate. You can often remedy that by placing a nylon washer on the pin contact plate before applying the antenna base.

# *Using CEPT while visiting Europe*

The US participates as a non-member in CEPT (European Conference of Postal and Telecommunications Administrations), meaning that hams with a US ***Extra license*** can temporarily operate in a long list of CEPT countries implementing CEPT T/R 61-01 (T/R stands for *Trained/Recommandation* in French, meaning Recommendation / Report). Just bring your US authorization, and prepend the corresponding national prefix to your call sign. An Extra licensee with call sign W1XQJ, for example, would operate in the Czech republic as OK/W1XQJ.

**US Extra**

Spain, for example, and the US both implement CEPT T/R 61-01. Extra licensees can just come and prepend the prefix EAn/ to their call sign, where n is the district number used for licenses in Spain: an Extra ham with call sign W1XQJ, for example, would operate in Malaga (district 7, Andalusia) as EA7/W1XQJ.

**US Technician and General**

The good news is that the Spanish regulations offer a very interesting opportunity for Technician and General licensees to operate temporarily in Spain through a "creative interpretation" of article 15 of Order IET/1311/2013, which states that a ham from a non-member country like the US can operate for up to 90 days.

Applying to the Spanish administration is free, for example, but since the application has to be filed following rather intricate administrative paths in Spain, and it must be written in Spanish, associations such as FEDI-EA are offering the service in exchange for becoming a member (10 euros per year).

For those brave enough to try on their own, I've prepared detailed instructions, which you can download. I cannot guarantee this will get you the temporary permit, so feel free to keep me posted. If you're planning to travel to Europe, but don't hold a US Extra license, this might give you the opportunity to operate there while visiting.

**Countries implementing the CEPT Novice license**

A number of CEPT countries implement the CEPT Novice license equivalence ECC/REC/(05)06, and allow US ***General licensees*** (assimilated to CEPT Novices) to operate with a prefix, under the privileges granted in that country to Novice licensees.

**Other countries offering temporary licensing**

There are some non-CEPT countries where you can apply for a temporary license. In South Korea, for a fee of KRW 50,000 (about USD 40), you can apply for permission to operate up to one month with an HLn/ prefix, where n is the district number in Korea. No inspection of equipment is needed, but it has to be described in the application. For a longer stay, your equipment must be inspected.

**Long-term licensing**

Some countries allow foreigners to operate in their territory using a long-term license from that country. The Czech Republic, which allows holders of some foreign licenses to operate in their territory using a Czech call sign with the prefix OK8 and a two- or three- letter suffix of your choice. Requesting help from a Czech colleague could prove helpful.

**Bilateral reciprocal agreements**

The ARRL maintains a detailed list of reciprocal agreements with other countries. Check carefully which kinds of US licenses are honored; non-Extra may be acceptable, but in most of them operation is not automatic; you'll need to apply in advance.

**Give it a try**

People setting up DX expeditions often know a lot about getting authorization to operate from foreign countries, and they might be able to help. Even if there is no reciprocal agreement, there might be a similar method for Spain, so be prepared to do a little research.

*— Mikel Forcada EA5IYL / N7EES*

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**We encourage you to submit** original pictures (highest resolution), articles, software and hardware descriptions, appropriate humor, and responses to editorials. Email the content, pictures attached, to the editor at **editor@utaharc.org**

The **Utah Amateur Radio Club** was organized under its present name in 1927, with its beginnings dating back as early as 1909, then becoming affiliated with the American Radio Relay League in 1928. UARC is a 501(c)(3) non-profit organization and holds a club station license with the call sign ***W7SP***, a memorial to Leonard "Zim" Zimmerman, amateur radio pioneer in the Salt Lake City area.

**The club meets each month** except July and August. The meetings are usually held on the second Thursday of the month at 7:30 PM in the University of Utah Warnock Engineering Building, Room 2230, unless otherwise posted.

**Club membership** is open to anybody interested in amateur radio; a current license is not required. Dues are $20 per year. Send dues to club secretary James Bennett, 4960 W 5400 S, Kearns, Utah 84118. Send address changes to **kk7avs@gmail.com**

**Tax-deductible monetary contributions** are gladly accepted. Send directly to club treasurer Shawn Evans, 1338 S Foothill Dr, #265, Salt Lake City, Utah 84108-2321. For in-kind contributions, please contact **uarc@xmission.com** to make arrangements.

**UARC maintains** the 146.620– and 146.760– repeaters, which are administered by the UARC Repeater Committee. Direct comments and questions to any committee member. The 146.760– repeater is on IRLP node 3352.

Call the **UARC Ham Hotline** at **801-583-3002** for amateur radio information, including club, testing, meeting, and membership information. Leave a message, and we'll make an effort to return your call.

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**For-late breaking news** listen to the UARC Information Net, Sundays at 8:30 pm on 146.620– or visit the announcement page.

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