

# RADIOWAVES



## MARCI Newsletter

**FROM THE PRESIDENT:** I appreciate your reading my contribution to RADIOWAVES for April 2022 as I have some important topics to discuss with you. Both are serious and the first one will require some homework on all our part. It should come as no surprise that our hobby is enjoyed more by 'seniors' than any other age group. I'm not talking about kids in the 12<sup>th</sup> grade or high school. But in most cases by OLDER, MATURE, (let's call us what we are) GEEZERS. With this comes the reality that we are closer to the 'end' than to the 'beginning' if you get my drift. Sorry to be a 'Debbie Downer' but we're older Americans folks. Being a senior and despite your current health good or bad we have **certain responsibilities**. When you sit down and think about it there are a number of items that could or SHOULD be contained on our list of **certain responsibilities**. At the top of the list should be a responsibility to our families. So, a concept comes to mind. All of us involved in this hobby and moreover, OTHER hobbies be it GUNS, TRAINS, CARS, WATCHES, HAM RADIO, COMIC BOOKS, or BUTTERFLIES, we most likely have a collection. Some have very large collections while some quite modest. Should the day come when you pass away and can no longer enjoy this or any of the hobbies you enjoy, who is going to decide what to do with your COLLECTION(S)? It is something to think about isn't it? Your loved ones will have a lot to do. But based on some recent goings on in my circle I am suggesting that you/we all of us sit down and begin the process of making a list of items, a VALUE list based **on the date the list was comprised**, and on that list the name or names of someone you trust to help with the disposal or distribution of those items should your immediate family need help to move on from what you have left. Help the family out, and be well prepared. We all have life insurance as an aid to our loved ones left behind when we gone. My wish is that you leave this other 'insurance' for you and your family, in that your treasurers are handled with care by someone you trust for the good of all. There is work being done on an outline that you may want to follow in getting started with what I called 'the homework'.

I am open to YOUR suggestions on how to move forward with this. I think you will all agree it is something that will require a plan. So, let's formulate a plan to help our families, ourselves, and perhaps our fellow members. We'll have more on this in future meetings and in RADIOWAVES.

Recently we've been talking about the upcoming MAY election of the MARCI Board of Directors. This election of course takes place every year in MAY for all the executive positions of MARCI. The positions are president, vice president, secretary, treasurer, and so forth. Five officers are to be elected. MARCI currently has an interim treasurer after the departure of David Flail W3IK. We'd like our interim treasurer (Jack Ham, WB9Z) to stay on but he must be elected as would any officer. Our current secretary will not be returning, therefore we need at a minimum two members to come on board and assist with the operations of MARCI. **Please consider helping out.** As we have done the past two years, a nominating committee consisting of three MARCI members not associated with the BOD will be accepting names of those who would like to be considered. Their contact information will be sent out to all members very soon. The committee will compile a list of candidates. Should you be interested in **ANY** of the positions I mentioned, let the committee know your preference. You may run for any position you like. As I mentioned we already know we have vacancies which will need to be filled. Please consider helping to manage the MARCI Club.

Lastly but certainly not least, Geoff Haines N1GY, a longtime MARCI member and the editor of RADIOWAVES our monthly newsletter, has also expressed his desire to be replaced as editor. Geoff has other interests which need more of his time. I encourage anyone with an interest in helping out as the new EDITOR OF RADIOWAVES to discuss this job with Geoff. You would certainly have Geoff's help and the help of the rest of Board of Directors along the way. Make it your own...make it FUN!

VERY IMPORTANT! Please watch your email for information about the MARCI Nominating Committee. I look forward to seeing you all on ZOOM on Tuesday night April 5<sup>th</sup> at 7:00pm during our General Membership Meeting. Until then have a good week and PLEASE tell someone you love them.

'73 – Mike Ryan, K4CVL

## **FROM THE EDITOR:**

For those of you who missed the last couple of Club Nets on Sunday nights at 7 PM, and shame on you if you did, your humble editor is looking to be replaced by someone with more energy than yours truly. I first will point out that this will not be a sudden transition. I will still be providing the monthly puzzle and any articles of mine that the new editor wishes to publish. I will also be available to answer any questions that crop up. It is really not all that time consuming a task. I generally spend only a few hours a month on the newsletter. Our president writes his column and sends it to the editor. The editor decides what article would be most appropriate for the month and I will still be providing the puzzles and the articles unless the new editor wants to run an article from somewhere else. The want ad section kind of writes itself and the last page info only changes the dates.

Another aspect of ham radio life in Florida kind of hit home recently. A ham friend of mine who has been a member of MARCI for many years recently had an extended stay in the hospital. Now that he is home he is severely limited in his ability to get around. He also needs a power supply to power his radios. I offered him a medium sized battery and charger which would meet his needs for the present time but my own infirmities prevent me from delivering said equipment to him. We need someone to step up and deliver the gear from my house to his. Our president, as I remember, formed a helper group to assist with things like antenna raisings and other such big tasks, maybe we need to expand the scope of such a group to include these smaller tasks which in their own way are just as important.

We are entering the month of April. Not only is this notable for people like the IRS but it also means that Field Day and HURRICANE SEASON are getting closer every day. Is your equipment ready to operate off the grid and away from home? Do you have some form of antenna that can be set up in a few minutes? Do you have the necessary stuff to operate and survive under less than ideal conditions for say 72 hours? If the answer to any of these questions is no or maybe, then the next couple of months have a to do list as long as your arm. As the current editor, I will publish articles from the past that will provide guidance in these areas. 73 for now.

An Emergency Radio Package  
Or  
The Radio in a Box II  
By  
Geoff Haines, N1GY

Several years ago, I constructed a "Radio in a Box" for use while engaged in ARES deployments and also for use when I just want to go do a little Ham Radio at the beach. I chose an Icom 706 Mk II G as the transceiver and added an LDG automatic antenna tuner and an MFJ 4125 switching power supply. These were mounted on a pallet made of ABS sheet and aluminum. The whole thing was packaged in a suitcase like container that also had space for the HF antenna, the coax and all the little parts that complete any ham radio station, including a laptop computer. I still use it frequently, but lately I began to see a need for something a little more suited to the kinds of ARES deployments we see more often here in the southern US.

I wanted to have, in one package, a dual band VHF/UHF radio, battery power, and the paperwork that is necessary for most deployments. I also wanted to include the antenna, but as it turned out that would have to be a second, although relatively small package. I also wanted to build it as inexpensively as possible, using materials and equipment I already had on hand. This sounds, at first glance, like a tall order, but it turned out to be relatively easy.

The first order was to select the radio. I already had a Yaesu FT-7800R that was underutilized in my radio room. It also was dual-band and had plenty of memory. The second task was the power source. As luck would have it, I happened to have a pair of 12 volt, 7 AH gel cell batteries on hand. By using both in parallel, I would have 14 AH of suitable power for the FT-7800R. I also had on hand a 1 Amp wall wart that was rated at 13.5 Volts DC and specifically designed for charging and maintaining gel cell batteries. This would make charging the batteries easy. As the batteries approach 13.5 volts charge, the current flowing from the wall wart's transformer switches to a "float" mode to keep the batteries topped up. The next item on my list was a way to monitor the battery voltage. I decided that a simple 0 to 15 volt DC voltmeter would suffice. Indeed, the FT-7800 I used for the project displays the input voltage on initial start-up, so the voltage meter is in some ways "just because I had one to put in".

Now that I had the major components, the next thing was to find a container to put it all in. I searched the workshop cabinets and found an unused tool box about 9" x 18" x 9". It even was bright "Home Depot" orange, a good color for emergency gear. Called a "Tough Box", I think they are still available. I have had mine for several years.

OK, I have all of the major components and I still haven't spent penny one. Just by looking around my house and shop, I found I already had most of the materials to build the project. (See Figure 1)

By trying various layouts of the radio, power and meter, I came up with a design that makes the package easy to set up and use. The batteries were placed at the opposite ends of the box and secured with simple aluminum straps that bolt through the sides and back of the box. One end of each strap is secured with a wing nut to make changing out the gel cells relatively easy when the time comes.

The main body of the radio was secured to the bottom of the box by sandwiching the mounting bracket between the box bottom and a scrap of ABS sheet that was then bolted to the box bottom. My reason for doing it this way was that otherwise the radio would have to be removed from the bracket to bolt the bracket in place directly. Once the bracket was secured, it would then be difficult to re-install the radio in the bracket because of the limited space available on either side of the bracket. The control head was screwed to the top panel and connected to the main body by a home-made remote cable. Actually, the cable was not home-made. I just used a 6-conductor cable with RJ-12 connectors at both ends. It turned out to have the perfect configuration for the FT-7800R and needed no modifications at all.

The top panel was constructed from a scrap piece of the same ABS plastic sheet.(See Figure 2.) This stuff is fantastic. It comes in sheets up to 4 feet by 8 feet and is about 1/8" thick. The normal users of this stuff are sign makers. Check with your local signage shops and they probably will sell you some leftovers quite cheaply. By the way, when I say signage shops, I am not talking about the kind that can print stick-on or magnetic signs with a computer. I mean the people who make the big signs that stand outside a restaurant or a hotel. Check your local industrial park for these companies.

I cut the top panel to size and rounded the corners slightly to fit the interior of the tool box. I cut and drilled a suitable sized hole to mount a speaker. The speaker was wired through a 1/8" mono jack that will automatically route the receive audio to the earphones if they are plugged in, otherwise the audio goes to the speaker. A mounting bracket for the FT-7800R's control head was screwed to the top panel and a switch to control the DC power to the radio was also installed. Finally a pass-through UHF connector was mounted to the top panel and a short coax jumper was connected from it to the main body of the radio. This brings the connection point for the coax to the antenna out to the top panel, making it easier to set up. (See Figure 3.)

Having mounted all of the major components, it was then time to wire them all together. The two batteries were wired in parallel with a DPST switch that removes the batteries from the circuit if the radio is being run on external power. Overcharging of the batteries is thus avoided. The wiring then runs through the on-off switch to the radio. Another pair of wires were run to the top panel to allow the wall wart to be connected for recharging the batteries. This pair of wires was eventually run through the side wall of the box to allow recharging without having to open the box. Another pair of wires was run to the meter to allow monitoring of the battery voltage. Since these wires are connected to the circuit after the on/off switch for the radio, the meter only monitors the voltage while the radio is in use. Finally, a single wire was run from the case of the radio through the top panel. This allows for the grounding of the transceiver when in use. All of the necessary connections where any component might have to be removed or replaced were made with "Power Pole" connectors using the standard ARES format. The grounding connection uses a single "Power Pole" connector with a green housing. The others use the standard red and black housing colors and all use 30 Amp rated connectors. (See Fig.4)

In order to mount the top panel to the tool box, I purchased some aluminum angle stock at the local home improvement store, along with some "Pop Rivets" and some stainless steel bolts, nuts and screws. By cutting the aluminum angle to appropriate lengths, a narrow shelf was installed about where a tool tray used to fit inside the box. The angle stock was secured with the "Pop-Rivets" and the top panel was placed onto this shelf and secured using self tapping sheet

metal screws. These can be removed easily with a suitable nut-driver to gain access to the interior of the box. Insetting the top panel like this not only protects the radio control head and speaker but allows for the storage of the antenna coax and paperwork in the lid of the box. (see fig.3)

I should point out that the term "top panel" may be a little confusing. When the box is stored, it is indeed on "top", however, when in use the box is usually laid over so the panel is now on the "front" of the box, just as the radio would normally be used at home or in the car. This way the radio display will be easier to read and adjust. Another point is that the radio is set up with a hand mic and an external speaker for normal use. In a high-noise environment, a headset can be used in place of the hand mic, or earphones can be used to keep the receive audio intelligible. The various components that are mounted on the top panel were identified with small labels as to their function and/or the proper setting for the desired function.

With the project almost complete, attention turned to the material that would be stored with the radio. These include the operator manual for the radio, shelter and frequency lists, and several copies of the message forms that we use in our local ARES group. Your list may be different, and I suspect that all our lists of paperwork will evolve and change with time and the particular needs of the organization. Also stored in the lid is a 75 foot run of RG-8X coax. This should allow optimum placement of the antenna high enough and far away enough from the operator. The charger wall wart was also placed inside the lid along with a ground wire that can be clamped to a pipe or ground rod or plugged into any convenient electrical outlet. The plug for this function has had the neutral and "hot" blades removed, leaving only the safety ground prong to be plugged into the outlet. A flexible handle was secured to the plug to facilitate unplugging when desired. Also connected to the wire in a "Y" configuration with the plug, is a medium size clamp, kind of like a super-sized alligator clip to attach the wire to a pipe or ground rod.

Once the package was constructed and tested, there was one last thing to do. Since this package is likely to be loaned out to other operators when needed, it was important to make sure that it came back to its owner when the mission was completed. To ensure this, I painted the lid of the box with my name, call sign, and both my home phone number and my cellular number. I also lettered the lid with "VHF/UHF" to indicate the bands covered by the radio. (See Fig. 5)

This setup has everything included in the box except the antenna and some kind of antenna support. If one were to use a roll-up twin lead J-Pole type antenna, it could be carried in the box as well. Since tall trees are less common in my area, I chose to go with a portable antenna and support that while collapsible and portable, would not fit inside the box. For the antenna itself, I modified the design of the Off-center Fed Sleeve Dipole, about which I have written before, to allow the upper element to be removed for storage. This makes the antenna a two-piece package about 26" long.(See Figure 6) For the antenna support mast I used an aluminum telescopic mast made up of 24" sections left over from an earlier mast project. The sections vary from 3/4" diameter up to 1 1/2" diameter in 1/8" increments. They are clamped to each other with hose clamps. Fully extended, the mast is over ten feet tall. The antenna is designed to slip over the top section when deployed making the total length of the antenna and support almost 15 feet. The bottom of the mast can easily be secured to almost anything, a chair,

a tripod, or even simply poked into the soil at the site. (See Figure 7) I Built two bases. The one for pavement is an "H" frame that will support the mast and antenna with a weight on top of the legs of the "H". (See figure 8) The one for soft ground is a kind of "Lawn Dart" cobbled up from some surplus pipe fittings. It will be simply driven into the ground and the antenna mast slipped over it. (See figure 9) As with the "radio in a box", the cost of the antenna and mast was \$0, since I had all of the parts and materials on hand already.

I thoroughly enjoyed building this emergency radio package and the cost was amazingly low, primarily because I used components I already had on hand. If one had to purchase all of the components for this project, it could get a bit pricey, but by making use of components already in the house, the cost gets much more favorable. This is one of the reasons, as the Technical Coordinator for my section; I counsel my fellow hams in our section never throw any aluminum tubing away. Even if the old antenna is totally shot, the aluminum tubes that make up the antenna are very useful when building other projects. The same goes for those scraps of PVC pipe left over from the last plumbing repair. The result is a handy package for deployment in or after a disaster. I keep the "radio box" in my vehicle, along with the mast and antenna, easily available when the local ARES Emergency Coordinator calls our group out to support the community after some form of disaster or special event.



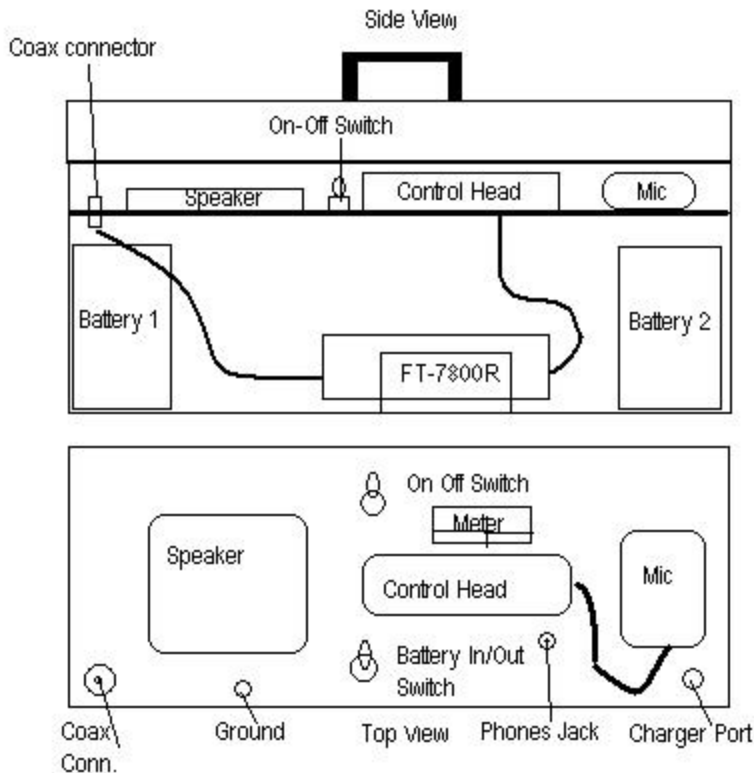




The pictures on the previous page show the radio, a dual band VHF/UHF rig with battery power under the front panel along side the main body of the radio closed, open and ready for use. The 4<sup>th</sup> picture shows a couple of different ways of providing an antenna mount. The white H shaped structure would be used if one was setting up on pavement such as a parking lot and sand bags could be draped over the legs to keep the wind at bay. The brass device is a spike that can be driven into a grassy area and then an aluminum telescoping mast can be slipped over the thick portion above ground.

The coax used to connect the radio to the antenna is stored in the lid of the radio box. The box itself is a cheap tool box from Home Depot or any convenient source.

The diagram below demonstrates how the box is set up but most of the wiring is left out for clarity.





# QST APRIL 22

F H G Q L F V C L N S S M B T L V  
Q J R E T A E P E R I R D L N D P  
P X A W A R D D N T G E Q W R H M  
K R G L R D K E M R N N M M A O K  
Z J G N D N V O M L M U T L C N K  
R E W O P A C R L L A T F I K H F  
V F X K W E H L E J N W X X R I O  
H F M E G P T E R M A D K N E S S  
L J M D F A Y V X V O T N L D R C  
F I I B C S N R E B G T D M O O I  
T R Y Q H T E A O L E D E T O T L  
B C N C K T T I L T A A H F W A L  
N Y K Z J X Z P L Y C G M T N T A  
C M T C H G Y K K P Z E W G E O T  
R A N T E N N A N P P E R R K R O  
Y C N E I C I F O R P U R I L N R  
P Q V A L F A R A D I O S L D R J

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ALFARADIO

HALFWAVE

REMOTE

ANALYZER

HEXBEAM

REPEATER

ANTENNA

ICOM

ROTATORS

AWARD

KENWOOD

SIGNMAN

BRIDGECOM

OSCILLATOR

SUPPLIES

DIRECTORY

POWER

TIMEWAVE

FIELD DAY

PROFICIENCY

TUNERS

There is no RadioShack of the Month this month as I did not receive any photos and the ones I have have already been featured. Try for May.

## **FOR SALE:**

**Icom IC-211** 2 meter all mode base station \$150.00

Kings Type RF connectors for RG-8U, RG-213 \$5.00 each or 5 for \$20

MFJ Voice Keyer \$100

MFJ 906 Tuner (300 watt) \$40.00

Very rare EL-KEY lever CW keyer (only 400-600 made in the late 50's \$100

Alinco DJ-196 VHF HT with brand new battery Has original box and Manuals \$65.00

Drake MS-4 Speaker and Power supply \$200

These Items can be viewed on Bradenton-Sarasota Craigslist under Electronics  
Key word HAM RADIO.

Please call or text (941) 580-8696

Quantity 1. Mosley TA-33 3 Element Tri -Band Beam Antenna. 10-15-20 Meter.

When original, the cost for one was \$ 780. Manatee County ARES has 1 of these antennas. They were used until 3 years ago and worked well. When assembled, the beam is 14' long and the length of the elements are 27' long. ARES no longer needs them and would like to find a good home for these antennas They would look nice on your tower. They are **FREE**, unless you would like to give a volunteer donation to ARES. We may be able to haul a few miles to your location if needed

Contact Jack Ham WB9KVD at 941-567-6716 or [jham58@tampabay.rr.com](mailto:jham58@tampabay.rr.com) Please note, Jack has a new call sign but as I am old and doddering I did not write it down. The phone number should be the same.

Offer to build: Custom extension cables for any remote-able radio such as the Yaesu FTM-300, 350 etc.

PowerPole Power Distribution Blocks in 4+1, 6+1, and 8+1 sizes \$10, \$15, \$20 each respectively Can custom build to suit.

IN ADDITION: I have more parts and components than I will ever use, so if you need something, a transistor, a plug, a jack, etc etc. call me first, I will give you a great price (as in no charge).

Call Geoff at 941-447-8579 (cell) or 941-752-3696 (home)

FOR SALE

## Yaesu FT-101ZD

Technician went over the transceiver about 3 years ago and it was in No. 1 Shape. Radio has not been operated since. Complete with 2 manuals including schematics. Has digital display. Complete with microphone and 110VAC power cable. Jack WB9KVD 941-567-6716 A good buy at \$350.00 Contact Jack – WB9KVD at 941-567-6716 or [jham58@tampabay.rr.com](mailto:jham58@tampabay.rr.com)

**CLUB MEETING:** This will be a Zoom Meeting on April 5, 2022 Our meetings will be on Zoon until further notice

**Monthly Board Meeting** TBA (may be replaced with a teleconference)

**Monthly ARES Meeting** TBA (may be replaced with a teleconference)

### Club and Other Nets:

MARCI Info Net	Sunday 7:00 PM	146.820 – 100 Hz.
ARES Net	Monday 7:00PM	146.820 - 100 Hz.
MARCI Traders Net	Wednesday 8:00 PM	146.820 –100 Hz
Manatee Skywarn Net	Thursday 8:00 PM	146.820 - 100 Hz.
WCF Eagle Net (Local NTS Net)	Nightly 8:30PM	145.43 – 100Hz or 442.95+ 100Hz
WCF Technical Net (tech assist.)	Thurs 9:00PM	145.43 – 100Hz or 442.95+ 100Hz

**PLEASE PARTICIPATE IN ALL THE NETS ANY TIME YOU CAN.** The nets on Monday (146.820) and Thursday (146.820) are logged for the Manatee County Emergency Management and create “bill-able” hours of Volunteer Participation which often results in County provided equipment for ARES. And DON'T FORGET about the Regional Nets on NI4CE on 145.430 and 442.950. The Eagle Net, the NTS Traffic Net is on every night at 8:30 PM. The regional Skywarn Net is on Tuesday at 9 PM, The Technical Net is on Every Thursday at 9 PM or immediately after the end of the Eagle Net should that net run a little over.

Our Club Net on Sunday night is recently very poorly attended. Our club has over 60 members. Surely at least 15 Or 20 of you can take 20 minutes out of your Sunday evening to check into your own club net! The most common complaint I hear about repeaters of all sorts, local and regional, is that **“there’s no one on”**. The old saying about **“if you don’t use it you will lose it”** was never truer than now.