TARA NEWS

"Home of the FULL SERVICE Repeaters"
147.27/R and 444.225/R

Volume IV NO. 1 *PUBLISHED MONTHLY BY THE TROY AMATEUR RADIO ASSOCIATION* *JANUARY 1994*

HAPPY NEW YEAR 1994

For those still using 1993 on their checks, welcome to 1994! I can say that because for the last 10 days every piece of correspondence I have written has had the wrong date.

It's hard to believe a year has passed since I first started as editor of the TARA NEWS. As with every job, it takes many people behind the scenes to produce a final product.

I would be kidding myself if I ever thought this would be a one person job! I would like to thank Mr. Bill, NY2U, who does most of the typing for the articles you finally see in print; Bob, N2LUD,who takes care of the massive job of reproduction and collating the approximately 75 copies every month; and Tom, N2TTA, who has made many trips to the Post Office for stamps and has filled in for copying duty when needed.

This is probably a little known fact and it won't be found in the by-laws under duties of the Board, but thanks to all who have folded, stapled, stamped, labeled and mailed the newsletter after most monthly Board meetings.

On the back of the newsletter you will find an assistant editor listed with no callsign adjacent to the name. You may wonder what is the job of an assistant editor but Bill and I both know that nothing reaches the final print until the stamp of EPMC says "Approved".

Needless to say, Ellen is the proof reader/writer for the TARA NEWS and many a page in rough draft shows more red ink than black. This is especially true in punctuation, right Bill?

I would also like to thank the members that came forward to write an article for the newsletter and would like to encourage more articles from our members. Remember it is YOUR Newsletter! It really isn't as hard as you may think and with our crack staff of journalists you will never look bad in print so don't be bashful and write us a story or article.

I would also like to thank most especially my family that puts up with everything that happens here the week before we go to print and the times I have to use the TARAphone when my teenage daughter is waiting.

de N2LBZ

Jack

Inside This Issue:

President's Report *de* NY2U, Mr.Bill

I hope all of you are surviving the recent Arctic blast that hit the Capitol Region. Now word has it that we're in for about 12" to 15" of that lousy white stuff. What a way to start off the new year.

With plans of a pending snow storm blanketing the Capital District, both repeaters were put in weather standby mode on Monday afternoon (Jan.3rd) about 1:30 PM. Throughout this period we had Skip, KE2XF, Rudy, N2JZK, Kenny, KB2KFV, Dennis, N2USN, Joe, N2SGU, Ken, N2RXO, Chrissy, N2WUB and some others that I missed, standing by to assist anyone in need. For those I failed to acknowledge please forgive me, and thanks to everyone for pulling together. Now if it would only warm up!

While still talking about the weather it might be a good time to announce that the repeater gurus have plans to add a weather link to the 145.17/R sometime soon. After it is installed amateurs throughout the Capital District will be able to monitor National Weather during inclement weather via the TARA repeaters. If all goes right individuals well be able to get up-to-date weather info at the touch of a few DTMF buttons. With the capability of weather alert, members will be able to get weather bulletins on the repeater system while they're mobile or on the river boating. Look for this new feature soon.

Let me personally thank June, KA2VEK, and Betty, N2POS, for helping with food preparation and planning for this year's Holiday Bash. At last count there were 55 in attendance.

Recently I heard one of our famous truckers speaking of a brilliant idea for those of you that are into driving through mud puddles. It seems the idea of using pontoons on your vehicle will help you float across those treacherous mud puddles. If you like this idea, call BR549. Ask for Jim.

It seems one of our members that resides in Stillwater has added a little punch to his station lately with a new *Alpha 89A*. When confronted about this, he quickly said, "Who, me?" However I still don't think he convinced Glenn, WB2FOB, who had to replace his s-meter on his Kenwood TS 940.

Clayton, KB2LSQ, is trying to convince Stan, KB2LNI, from the weather service to hire his boss since he is always right about the weather.

As a public service warning I must remind all women to please keep your distance from Dennis, N2USA - A.K.A. SWEET LIPS. It recently became public knowledge that Dennis has these uncontrollable urges where he chases women while smearing his lips with chocolate. Really!

On a serious note, I hope as many of you as possible will try and make our annual pizza party with our friends from the *"generic club."*

Treasurer's Report *de* N2TTA,Tom

We still have a few members with outstanding dues. If you have not paid the adjustment amount to put you on the July to June dues year, we have inserted a dues notice in your Newsletter. Also, it appears that some people still owe last year's dues. I want to say again that we have researched the dues to the best of our ability, but we may have made some mistakes. If you get a notice that you think is wrong, please correct the notice and return it to me so we can fix the records. Thanks.

I hope to have a detailed report for calendar year 1993 at the February meeting. I am working on the application for tax exempt status to be filed with the IRS. Hopefully we will have an answer on that before Field Day!!! Best wishes for a new year!!!

P.S. Rumor has it that the informal DX net picked up N1 stations coming in on 146.91 and that there were some "weak signal" stations on 147.21.

Federal Communication Commission

Amateur Radio Call Signs

Issued as of December 1, 1993

Radio District	Group"A" Extra	Group"B" Advanced	Group"C" Tech/Gen	Group "D" Novice
0	AA0PO	KG0KD	N0ZLM	KB0LMX
1	AA1IB	KD1SQ	N1QWR	KB1BEQ
2	**AA2QQ**	**KF2SX**	**N2XFU**	**KB2QQJ**
3	AA3GP	KE3LH	N3QZL	KB3AZK
4	AD4NS	KR4IY		KE4BYT
5	AB5RK	KJ5TG		KC5EIK
6	AB6YW	KN6VX		KE6DOF
7	AB7AI	KI7TW		KB7ZRB
8	AA8NJ	KG8FM		KB8QOW
9	AA9JM	KF9SP	N9VPC	KB9IWA
N.Mariana Is.	AH0W	AH0AO	KH0CG	WH0AAY
Guam	NH2Z	AH2CU	KH2IL	WH2ANI
Johnston Is.	AH3D	AH3AD	KH3AG	WH3AAG
Midway Is.		AH4AA	KH4AG	WH4AAH
Hawaii		AH6NE	WH6QL	WH6CRB
Kure Is.			KH7AA	
Amer.Samoa	AH8H	AH8AF	KH8BA	WH8ABB
WakeW.Peale	AH9C	AH9AD	KH9AE	WH9AAI
Alaska		AL7PL	WL7OW	WL7CHJ
Virgin Is.	WP2D	KP2CC	NP2GU	WP2AHU
Puerto Rico		KP4VZ		WP4MLZ

Want to buy a first class DX location?

Cooper Enterprises of Albany, NY makes offer

If a local amateur gets his way he'll be the new owner of this dream come true.

The Voice of America has announced that it will solicit offers for the purchase of its broadcasting facility in Belize, Central America! The station will go QRT no later than March 31, 1994. The station is equipped with two 100 kW AM transmitters, two directional antenna arrays, an on-site diesel power plant, satellite links and control/monitoring equipment. Interested? Call the VOA at (202) 619-2538.

Recent rumors heard on the bands say that Glenn, WB2FOB, has made his first offer on this station. It seems Glenn wants a *"First Class"* station to compete against Ben, KF2LW, on the DX bands. Glenn also is looking towards his first contact (on the air) with his long time mentor, Tim, WB1HLR. Maybe he'll even have his own P&M Net!

Welcome New Members

TARA is proud to announce it's newest members: Denise Smith, N2WSW, and Tom Christman, KB2NAV. Both were at the Holiday Bash and Tom was the same person that won the Turkey Hunt. Hope to see you at many more meetings.

Holiday Bash Huge Success

Smorgasbord of Food and Hospitality

Our annual Holiday Bash this year was by far the largest ever. Even with the threat of a major storm hitting the Capital District, members filled the Green Island Municipal Center until it was nearly packed. By night's end there were better than 55 in attendance.

The club owes thanks to our Refreshment Committee, June, KA2VEK, and Betty, N2POS, for the outstanding variety of food we had on hand. Behind the scenes are a few that also deserve thanks for their help at making this a perfect evening. Those individuals are: Tom, N2TTA, Kenny, KB2KFV, Bob, N2LUD, Bruce, KA2HRM, Rudy, N2JZK, and John, KA2VBI.

Once again the Head Turkey, Steve, N2PZP, had things well under control for our Turkey Hunt which Tom, KB2NAV, easily won. Tom was awarded a gift certificate for $10.00 from Price Choppers Super Markets where he can buy his own bird. Congratulations.

The entertainment arrangements for this party were provided by The Skip Wilson Orchestra playing Guy Lombardo's Greatest Hits. Just remember if you ever have a party, Skip has music for all occasions.

This party also served as our yearly information night when Bruce, KA2HRM, and Rudy, N2JZK, supplies the club with around 10 tons of literature and booklets from various suppliers of amateur equipment and supplies.

Ten Ways To Sound Like a LID

Part II by: Rusty Bumpers, N4LID

I've noticed a recent tendency among users of two-meters to try really hard to sound like a LID (a poor operator). You, too, can be more stylish, by following this handy guide I assembled from what I heard on the air.

Trx ARNS Dec.'93 and RATS May '93

- See just how much mobile flutter you can generate by operating at low power far from the repeater. Engage people in conversations when you know they copy half of what you say. When they tell you they can't copy, continue anyway. See if you can get them to sign off in disgust and frustration.
- Give out wacky radio advice. When a newcomer's signal is weak, tell him he needs to adjust his volume and squelch knobs. Or tell some guy he's full quieting except for all the noise on his signal.
- Use radio jargon. You'll feel important using words normal people don't know. Try to sound like you just fell off the citizen's band. Say "Roger on that," "10-4," "I'm on my side," "You're making the trip," "Negatory," and "Wall to wall and tree top tall."
- Use so much microphone gain others can hear bugs crawling on your floor. If mobile, your wind noise should be louder than your words.
- Start every transmission with the word "Roger" or "QSL." This gives the other guy solace every few seconds that his transmissions are "making the trip."
- When you want a contact on a repeater, say you're "listening" or "monitoring." Repeat this type of ID every 15 seconds. Those who don't want to talk to you will eventually call anyway, hoping you'll go away after you have finally made a contact.
- Your club's repeater has courtesy tones to tell everyone when you have unkeyed, but say "over," "back to you," or "go ahead" anyway.
- Make frivolous calls on the repeater patch. When entering your own neighborhood, for instance, call home to say you'll be there in two minutes. Or call your spouse to complain about your bad day at work. Remember, your club's "measured rate" service means it must pay for each autopatch call. If you don't make enough patches each year, you aren't getting your money's worth for your club dues.
- Invent bizarre ways to tie up the repeater. Your goal is to entertain the scanner listeners out there, so do something original, like humming PL tones.
- When you hear someone on the repeater giving directions to a visiting amateur, break in with an "alternate but better route" version--even if the original directions were direct and clearly given. This is most effective when several LID trainees join in, each suggesting a different route. By the time the visitor unscrambles all the street names, he or she will be out of repeater range. You won't have to help the person leave town later, either.

Albany / Troy Volunteer Examiner Team

Next Exam Date: February 12, 1994
Starting Time: 9:00 AM

On February 12, 1994 the Albany/Troy VE Team will be administering F.C.C. exams to all candidates Novice through Extra.This exam will be given in the C.I.I. Building (Center for Industrial Innovations), Room 3051, on the Campus of RPI in Troy. The doors will open at 8:20 AM and exams start at 9:00 A.M.. NOBODY will be admitted into the exam room after the 9:00 AM starting time. No pre- registration is required for these exam dates or any of the Albany/Troy exams. A test fee of $5.75 (new fee for 1994) either *cash* or *check* is required for those taking any elements above Element -2 or Element -1A. Make sure you bring two proofs of identification, with one being a picture I.D. Also bring your original documents (current license, C.S.C.E.s...etc.) along with photocopies, calculator, pens and pencils to the exam. Our VE Team will provide all FCC 610 forms. Anyone needing special handicap arrangements are asked to call in advance. Look elsewhere in this newsletter for the complete ATVET exam schedule for 1994.

- **Team Liaison:Bill Eddy, NY2U (518) 273-9248**
- **Team Contact:Bud Hovey, WF2B (518) 283-2337**

What is MARS ?

How you can join this exciting challenge, by: Bruce, KA2HRM

The Military Affiliate Radio System (*MARS*) is an organization of FCC licensed amateur radio operators working with military stations who are interested in military communications and electronics. MARS creates interest and furnishes a means of training members in military communications procedures. It provides a potential reserve of trained radio communications personnel to provide auxiliary communications for military, civil, and /or disaster officials during periods of emergency. It also provides Department of Defense sponsored emergency communications on a local, national, and international basis as an adjunct to normal communications. MARS provides a volunteer manned communications system for handling MARS administrative traffic, morale and quasi official record and voice communications traffic for U.S. Armed Forces and authorized U.S. government civilian personnel stationed throughout the world. Finally, it offers training designed to stimulate interest in military communications and electronics career fields.

There is a lot of traffic handling with MARS. When you become part of the group you will be part of a group of hams who love to handle traffic . After a while you may notice many of these people only operate on the MARS bands. Locally I am involved with ARMY MARS which operates a packet BBS and digipeater, and a VHF Repeater. They are located at Lake Nancy in southern Saratoga County. Every day at 1 PM local time there is a traffic net on 7.317 LSB. Nightly there are nets on at 7 PM local on 4.035 USB.

To become licensed in MARS you must first be a licensed amateur radio operator. You have to have a minimum of 12 hours participation every quarter (3 months). Also you must have a radio(s) that is capable of operating in the MARS bands. Most of these are just outside of the ham bands and most newer rigs can operate here with little or no modifications. You may also be licensed while you are a Novice or No-Code tech. There are certain restrictions that apply here. Also there are three VHF nets weekly. You may listen to them on 143.990MHz (repeater output). They are at 9 PM locally Monday and Thursday nights and 8 PM on Tuesday night. Also there are training nets on Saturday and Sunday Mornings at 9 AM on 4.035 USB. If you're interested please tune in and listen to some of the nets. The nightly nets are basic training, command, technical net, and Emergency Service Training Nets. They are kind of like HBO as most training is repeated on a different nights, on different nets. This allows you to be able to participate.

If anyone is interested in joining they may contact Zone 3 coordinator Bob Beach, WB2WRX, (AAR2GO) at (518) 355-3834 or Bruce Roberts, KA2HRM, (AAR2NQT) at (518) 756-8996. We will be glad to answer any questions. *TN*

Board of Directors Approve Expenditures

At the last Board of Directors meeting held on December 14, 1993 approval was granted to purchase several items needed by the club. First the directors approved spending $119.00 to purchase the new ARRL video course. These are 3 video tapes with five hours of invaluable instructions, covering everything needed to pass the Novice and Technician Class written exams. Also included in this package is the computerized exam review program which allows the students to choose questions by subject or take them all.

Second, the directors approved purchasing two crystal radio kits @ $29.95ea.. These kits, when completed, would allow those members that do NOT have HF radio capabilities a chance to listen in on W1AW CW Bulletins from Newington, CT. These kits are to be built and used by club members only.

Next, the board approved purchasing two foot lockers @ $20.00ea. for use of storing club owned equipment. Last year after Field Day we had several boxes of new equipment, supplies.etc. that still needs to be stored. These new foot lockers will be used to protect them better during storage and transportation.

Finally, approval was given to purchase a gift for Jack McGivern from the Green Island Water Treatment Plant. Jack makes sure everything is ready for our monthly meetings and that the doors are opened.

News Via the "*Green Keys*"

At press time logs are still pouring in from last years TARA RTTY Sprint Contest, with the cut off date being January 17,1994. Even though there were not that many DX stations worked by state side ops, there were a very good number of DX stations participating this year. While reading the comments attached to these logs it's exciting to see how RTTY ops worldwide appreciate the efforts of TARA. Let's hope our club can continue throughout 1994 and the years to come as both a leader and strong supporter of the digital modes.

Hopefully many of you enjoyed working the 1993 ARRL RTTY Roundup on the second full weekend in January. I know there was some discrepancies about the actual contest dates listed in some magazines but we're sure you got the right date. Those of you who like to chase awards are reminded to check your logs and confirm those QSOs for credit toward your RTTY WAS Award.

February
EA WW RTTY Contest

CONTEST PERIOD: Second full weekend in February, from 1600Z Saturday to 1600Z Sunday (24 hours, no rest period).

BANDS: 80, 40, 20, 15, and 10 Meters

CLASSES: A.) Single op, all bands C.) Multi-op, all bands
B.) Single op, single band D.) SWL

EXCHANGE: EA stations: send RST + province prefix
All other stations: send RST + CQ Zone

MULTIPLIERS: Each EA province and DXCC country on each band. (There are 52 EA provinces)

NOTES:

- All Mults count once per band. (Band Multipliers)
- First QSO with each EA station on each band counts as an additional multiplier, along with province
- CQ Zones do NOT count as multipliers
- QSOs with stations in your country are valid for multiplier credit but have ZERO QSO point value

QSO POINTS: On 20, 15, and 10 Meters: Count 1 point for each QSO on your own continent, and 2 points for the rest. On 80 and 40 Meters: Count 3 points for each QSO on your own continent, and 6 points for the rest.

FINAL SCORE: = Total QSO points x total mults.

COMMENTS: This is a 24 hour Dx contest. CQ Zones do NOT count as mults. Check 7035 kHz for point bonuses on low bands. Count 1 DXCC mult for QSO with your own country on each band, but the QSO has zero QSO point value.

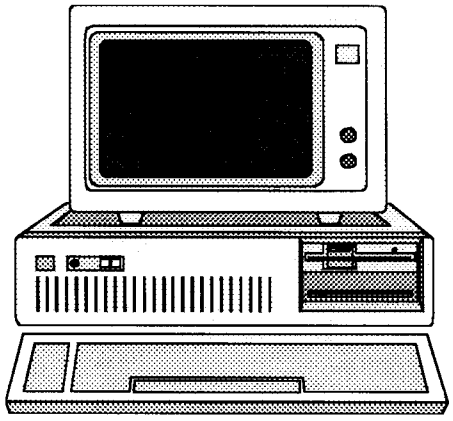
RTTY Contester's Guide

The RTTY Journal™ Contest Guide contains 40 pages of rules, log forms, and dupe sheets for all current world-wide RTTY/AMTOR contests. If you enjoy contesting, you will find this guide an invaluable assest to your shack. No longer will you need to send away for forms or rules as they are all included. If you are new to RTTY contesting, the guide also includes an introduction to digital contesting written by famous contester Hal Blagen, WA7EGA. This guide costs you just $9.50 plus S/H. You can order it from the following address:

RTTY Digital Journal
1904 Carolton Lane
Fallbrook, CA 92028-4614

Tip of the Month

When using RTTY on the low bands, make sure that your *RF* and *AF* controls are set properly. Your "S" meter along with the threshold indicator on your TNC will work just fine to help you adjust these levels. First set the *RF* gain so that very little static crashes move the meter upward. Next you have to adjust the *AF* control on your TNC so that the demodulator indicator barely lights on the residual background noise. This should provide you with a good signal-to-noise ratio. *TN*



Computer Tips

TARA Computer Consultant: Tom, N2TTA

GETTING THE BIG PICTURE IN WINDOWS

Would you like to see more of your word processing documents on the window than you see now? If you have poor eyesight, stop reading now. The default screen resolution for Windows in VGA mode is 640 by 480. You can see more by changing to 800 by 600 mode. Most VGA cards and monitors sold in the last year can handle this resolution. If you want to try it, have your Windows disks handy. Exit windows, and switch to the drive and directory where Windows is installed (e.g. C:\WINDOWS). Now type **SETUP** and hit enter. Windows setup will run and it will show your existing settings. Be sure to write down your existing setting for your monitor. Use the up arrow to highlight monitor and hit enter. A list of options will appear. Use the arrow keys to locate Super VGA (800 x 600, 16 colors). Hit enter to select this then follow the instructions on the screen. Windows will search for the new video driver on your hard disk. If it doesn't find it, you will be asked to insert one of the Windows diskettes. This will copy the new driver to your Windows subdirectory.

Now, to try it out, start Windows. If it doesn't start, or if the screen is all messed up, you can't use 800 by 600 resolution. If this is the case, re-boot your computer, repeat the steps above and select your old driver. Windows may ask if you want to use the "currently installed driver" or load a new one. Select the currently installed driver. This will get you back to what you had before. NOTE: Once you've installed the 800 by 600, you can switch back and forth by using the above procedures; just select "currently installed driver" and you won't need any diskettes.

For the faint of heart, this whole process changes the files WIN.COM, WIN.INI and SYSTEM.INI. You may want to make copies of these files BEFORE you do anything. *TN*

Ancient Modulation News

Look for a new AM - 6 meter repeater in Western CT. on the frequency of 50.400MHz input and 50.500Mhz output, running 85 watts.

Are you looking to buy yourself an old time radio but just don't know where to look? Well we have news for you. Each Thursday evening the gang gets on 3.885KHz AM for the AM'er Trader Net, starting at 7:00 PM. Try it out, you just might enjoy listening to all the gear being sold or traded from yesteryear. Remember "Slop Buckets" or "Rice Boxes" not welcomed but TOLERATED!

ATVET Announces '94 Exam Schedule

Volunteers from ATVET (Albany/Troy Volunteer Examiner Team) proudly announce their new exam schedule for the new year.

This also marks an impressive 10th year for Albany ARA sponsoring exams for Capital District amateurs. Some members of TARA have been jointly participating since 1988, with TARA officially joining forces in 1991.

The following exam schedule (Dated: Jan. 4, 1994) will be held on the Campus of RPI in Troy, NY. All Saturday sessions will start at 9:00 AM, with the doors opening at 8:20 AM and Wednesday sessions start at 7:00 PM, with doors opening at 6:15 PM.

Cancellations will be announced on both the Capital District Repeater Net (Nightly on 146.94MHz at 6:30 PM) or WGY - 810 on your AM dial.

February 12	**May 14**	**August 31**
March 12	**June 22**	**October 8**
April 16	**July 27**	**November 12**

•Serving the Capital District Since 1984•

Getting Your Packet Station on the Air

Part II *de* **Steve, N7LOD**

Last time, we talked about "*What is Packet?*." Let's now talk about actually setting up your packet station, and we'll keep it simple for those simple minded folks like myself!

There are three basic components to a packet station. Most of you already have the first component, and that is a VHF transceiver. While any VHF radio will work, remember that the more watts you can put out and the better the antenna you have, the better your operation. As a side note, I've been operating my packet on a 5 watt HT into an outside ground plane antenna without any problem.

The second component required is a terminal device, and many of you probably already have a personal computer at home.

Which leaves the all important third component, the Terminal Node Controller or TNC. This is were it can get interesting. There is a multitude of TNC and multi-mode controllers, which work other digital modes as well as packet, on the market. There is a wide range in the level of functionality and "bells and whistles" on the market. There are even TNCs that will plug into a computer as an expansion board. Once you have made your choice, you will need to connect these components together. The TNC and the computer are usually connected by a standard RS-232 serial cable with either 9-pin or 25-pin connectors, depending on the computer and TNC. Connecting the radio to the TNC is usually a little more involved, though. Radios by different manufacturers almost always have their microphone connections wired differently, and the pinouts on various TNCs are not always uniform either. This means you will probably have to make up your own cable for your specific radio and TNC. But not to worry, most TNCs usually use a standard connection, such as a 5-pin DIN or DB9, and may even come with spare connectors. The only difficult part will be sitting down with the manuals for your radio and TNC and figuring out what pin on which goes where, then firing up the old soldering iron.

Now there is one final item we need to cover, and that is the communication program that is going to make every thing work. Since your TNC is connected through the serial port, almost any communication program that works with a modem will work with your TNC. All you need is software that will send commands over the serial port to the TNC and display the incoming data from the TNC to your screen. If you already have a phone modem, the software you have now will probably work fine. If not, there are shareware programs like Procomm™ readily available. Then when you get really serious, there are any number of specialty programs designed for packet that will greatly enhance and simplify your operation.

Well, you have every thing connected and your software up and running, so what now? The first thing you need to do is tell your TNC who you are so it can identify you to the other TNCs out there. You do this by typing MYCALL followed by your callsign at the CMD: prompt, i.e. **MYCALL N7LOD**. This stores your callsign in the TNC's memory.

Now, let's find some action. Most packet activity takes place on the odd numbered frequencies between 144.91 and 145.09 MHz. The best method to get on is to simply pick a frequency and monitor it for a while, making sure you set **MONITOR ON** and **MALL ON** at the CMD: prompt. This will allow you to see the packet traffic and callsigns on the frequency. In this area, good frequencies to monitor are: 145.09, where several nodes and PBBS's are located as well as some local ragchewing; 144.95, where the main PBBS for the area, WA2UMX, can be found; and 144.97 and 145.05, where several nodes connecting to various networks are found.

When you're ready to take the plunge, try typing **CMD: C callsign**, (C is short for CONNECT) to someone you would like to connect to. When the connection between the TNCs is complete, you will see "*****CONNECTED TO callsign**" displayed on your screen. You are now connected and in converse mode. This means that whatever you type on your keyboard will be displayed on the other stations screen. When done with your QSO, type a Control-C to return to CMD: mode and type a D (for disconnect). You have just completed your first packet QSO!

Now to finish up, two items of etiquette; first, it's good practice to send BTU, K, or some such other to signify that you've completed your side of the conversation. This lets the receiving station know you are done. If you are going to send a long text stream, break it into shorter segments ended by "...", and send by pressing return. This will let the receiving station know that more follows. These conventions are not hard and fast, and will vary from region to region. If you're looking for that first contact, I can be reached at N7LOD or N7LOD-4 on 145.09 either direct or via the WA2GYY-1 digipeater (**N7LOD V WA2GYY-1**) most evenings and weekends. 73 and good packeteering! *TN*

Building Your Own Station Accessories

By Jeff Gold, AC4HF, 1751 Dry Creek Rd, Cookeville, TN 38501

Sure, you can buy your own accessories, but why not build them instead? There are plenty of easy kits available.

I was drawn into Amateur Radio by an overwhelming desire to build my own equipment. There is something magical about the idea of talking to another ham with a radio you assemble yourself. That was my goal and ham radio offered the perfect opportunity. Once I received my license, I pursued this dream until it became a reality. I have since built many radios and each one has given me a great deal of excitement and pleasure.

Every once in a while I wonder if I really need to own more than eight radios. (Can you have too much of a good thing?) Building is great therapy, though. It's also a lot cheaper than seeing a psychologist. After a tense day at work, I come home, change out of my work clothes and fire up the soldering iron. It's relaxing to sit down in the ham shack and solder. The private joy of tinkering is extremely soothing and still hasn't been declared illegal in most states!

When things aren't too hectic at work I enjoy challenging projects such as QRP transceivers. But no one cares to challenge themselves on a regular basis. Maybe I don't feel up to a big project, or I'm a little short on cash. During these times I enjoy building useful (and needed!) station accessories such as SWR/power meters, keyers, tuners and audio filters.

Special Tnx ARRL & QST Magazine

SWR/Power Meters

Built from kits, by you!

When I first began building transceivers I didn't own alignment equipment. Instead, I was forced to use my general-coverage receiver as a piece of test gear. Believe me, hamming is a lot easier when you have a few pieces of test equipment in the shack. Test equipment is relatively easy to build and, in many cases, inexpensive. A good place to start is with one of the most useful tools any ham will ever own: an SWR/power meter.

An SWR/power meter comes in handy when tuning up a new transceiver kit. It can also be used to measure the ratio of forward to reflected power in your antenna system. (You want the ratio to be as close to 1:1 as you can manage.) An accurate meter is useful for keeping a daily eye on the power output of your transceiver, too.

If you like to dabble with low-power (QRP) operating, Oak Hills Research sells a nice QRP wattmeter kit. This is a complete kit that's easy to build and adjust. It sells for $79.95. The only tool needed to align it is a digital dc voltmeter. The meter reads forward and reflected power at QRP levels. There are three meter scales: 10w, 1W or 100 mW. I have found it accurate down to 1 mW. The meter is large (2 inches across) which makes it easy to read. It's powered by a 9-volt battery that mounts internally. The meter draws little current and seems to run a long time on one battery. I've left mine on for weeks at a time and, after a year of use, I've yet to replace the battery.

The parts for the kit are good quality and the instructions are first rate. The board is plated through and silk screened, so it is easy to solder.

Townsend Electronics imports C. M. Howes Communications kits. Howe is one of the largest kit producers in the United Kingdom. They have a large line of kits ranging from station accessories to QRP transceivers. I've built several of their station accessory kits. The SWB-30 is a SWR/power meter that covers all bands from 160 to 2 meters. The signal is fed through a power attenuator to a resistive bridge circuit. This protects your rig from high SWRs while tuning your antenna or antenna tuner. The attenuator also reduces QRM during tune ups. The unit serves as a dummy load and has a relative-power indicator. It can be used with radios that produce one to 100 watts. You can only use the SWR mode, however, when running 30 watts or less.

The kit contains an excellent printed circuit board and good-quality parts. You will need to provide a 2- pole, 3-way switch for mode selection as well as a suitable enclosure. The meter works well, although I found the power scale to be a bit too small and difficult to read. The meter only reads down to 1 watt. The kit came with clear instructions and a minimum number of parts. It sells for $24.95.

1. Townsend Electronics (C.M. Howes) PO Box 415 Pierceton, IN 46562 tel: 219-839-5203 fax: 219-594-5580
2. Oak Hills Research, 20879 Madison St , Big Rapids, MI 49307. Orders: (800) 842-3748

Continued on next page

Keyers

Fun Project for Beginner's

One of my first projects as an Amateur Radio operator was an iambic keyer. I started with a straight key, but found that my arm became tired after long periods of sending. You can really boost your speed and send with almost no physical effort with a good set of paddles and an iambic keyer.

The job of the keyer is to send perfectly spaced dots and dashes, and to allow you to interrupt the dashes with a dot (the iambic feature). Keyer circuits handle this in different ways. The better the circuitry, the easier it is to send and the better your sending will sound!

My first (and still best) keyer appeared in the November 1990 QST. It's the CMOS Super Keyer II. This keyer is great for anything from practicing to serious contesting. It has a built-in feature that allows you to use it as a stand alone practice oscillator. It was designed by someone who understood serious CW contesting and includes just about every feature you can ask for. The keyer is forgiving. It makes anyone's sending sound better!

I ordered the circuit board and parts kit from Idiom Press for about $50. All the circuit board parts are present, but you need to provide an enclosure along with four push-button switches, a small speaker and a battery holder. The keyer runs off three AA batteries. I purchased an inexpensive plastic case and four large push-button switches from Radio Shack.

The board is small and I must admit that I made a few mistakes when I put the kit together. I had a number of solder bridges on the keyer chip. It turned out I was using the wrong type of soldering iron. My Elmer, Rick Cashion, WD4GZW, fixed my errors and the keyer worked the first time we turned it on.

There are no step-by-step instructions, only a board layout showing where to place the parts. There are few parts, so installing the parts is an easy task. If you are not used to reading a schematic, you will need to find some assistance to wire up the switches. It isn't hard at all and it's a fine introduction to the art of reading schematic diagrams.

The Curtis Corporation makes an IC chip that handles most of the functions of an iambic keyer. You'll find many types of keyer designs based on this chip. They work well and exhibit good timing and weighting. Many of the circuits built around this chip allow you to adjust the weighting of dots and dashes, as well as the selection of the iambic A or B mode. Most also offer dot and dash memory, jam proof keying, self-completing dots, dashes and spaces, and key debounce circuitry.

Oak Hills Research sells a Curtis Keyer kit for $34.95. The kit includes all components, a 2- * 1 3/4-inch screened PC board, and an onboard trim pot for weight adjustment. There is also a panel-mount pot for speed adjustment. It was designed for use with QRP transceivers and will key up to 30V at 50 mA. The kit is easy to put together and comes with clear instructions.

The Oak Hills keyer is small and can fit into most existing rigs. It doesn't have memories for contesting, but it works quite well for all other purposes. You can install the circuitry in an enclosure and use it with more than one rig. I put mine in a small cabinet with an adapter for the keyer output plug. Now I can use it with every QRP rig in my shack.

Tejas RF Technology also offers a Curtis mini-keyer kit in two forms. The first is a complete kit with a small enclosure for $59.95. (There is enough room for a battery.) The PC board measures 1 7/8 * 2 1/8 inches and the enclosure is 1 * 3 * 3 inches. Some step-by-step instructions are provided with the kit. The part count is low and even a beginner shouldn't have too much trouble building this project. The board is not plated through, but the quality is good. (A board without plated-through holes is an advantage for beginners. If you put a part in the wrong place, you can easily remove it.)

The kit is available without the enclosure for $39.95. The board is small enough to fit it in almost about any rig, or you can put it in your own enclosure. Mine worked great the first time and I presently use it with my mobile setup.

If you're simply looking for a way to practice code, Townsend imports the Howes ST2 which can be used either as a side-tone oscillator for a home-made rig, or for Morse code practice. The unit has a nice sounding sine-wave note and provides up to 1 watt of audio output to drive a speaker or headphones. It requires 11-15 volts dc power. The kit comes with easy-to-follow instructions, all components, and a screened printed circuit. You will need to provide your own enclosure. The kit sells for $15.95.

1. Tejas RF Technology, PO Box 720331 Houston, TX 77272-0331 tel: 713-879-9300
2. Oak Hills Research, 20879 Madison St , Big Rapids, MI 49307, Orders: (800) 842-3748

Next Month

Part II Build Your Own Equipment

- **Frequency Counter**
- **Audio Filters**
- **Antenna Tuners**

National Weather Service Report

Winter Weather Preparedness *de* Stan Levine, KB2LNI

The winter season has arrived in New York and New England. The National Weather Service 90 day outlook issued at the end of November predicted that this season (December through March) would be warmer and a bit drier than normal. So far, that prediction is turning out to be a pretty good one. The average temperature of 27.4 degrees measured at the Albany County Airport for the month of December was just under one degree above the normal temperature of 26.5 degrees. Liquid equivalent precipitation for last month was 3.08 inches which was near the normal of 2.93 inches. However, the actual snowfall for the month (6.1 inches) was well below the December normal snowfall of 15.1 inches.

Winter Safety Awareness Week was held from November 29th through December 3rd. Governor Mario Cuomo signed an official proclamation, and the National Weather Service in Albany responded by sending out over 300 information packets to schools, local government agencies, the Red Cross, and the media. Articles on winter weather preparedness appeared in local newspapers, and a television interview was on the evening news on one of the local stations. The theme of Winter Safety Awareness Week was that the season can be very beautiful and enjoyable, however we must use common sense to ensure that it be safe as well. Little things like winterizing your car, dressing properly, and driving carefully can pay big dividends when the weather becomes harsh. The National Weather Service works hard to keep you informed of the weather during the winter months.

A Winter Storm Watch is issued when there's at least a 50 percent chance of hazardous winter weather expected to occur within the next 12 to 48 hours. A "watch" means there's a potential for heavy snow (6 inches or more within a 12 hour period), freezing rain, sleet, strong winds, or a combination of the elements. When it becomes certain that severe winter weather is about to occur within the next 12 hours, Winter Storm Watches are upgraded to Winter Storm, Heavy Snow, Blizzard, or Ice Storm Warnings depending on the weather elements expected to occur. Winter Weather Advisories are issued for weather elements considered to be less severe, however they can also be hazardous if caution isn't exercised. Advisories can be issued for snow (normally 3-5 inches), light freezing rain or drizzle, dense fog, or blowing snow.

When the weather becomes active, the Weather Service relies very heavily on the amateur radio community to help serve and protect the public. Trained SKYWARN spotters accurately report the type of winter weather occurring (snowfall totals, for instance) from several locations while other hams collect the information for relay to the Weather Service Office. Emergency weather nets are sometimes activated, and radio operators occasionally come down to the Weather Service Office to serve as net control, or to collect reports arriving on various frequencies. Believe me, things can get pretty hectic at the office, and we really appreciate your help! Even if there aren't any nets active, SKYWARN spotters can call the National Weather Service directly using the toll free telephone number.

National Weather Service Packet Weather Board

•Daily Weather Reports •145.09 MHz •N2AIG-4

Editor's Note: We're very excited to have Stan, KB2LNI, joining the *TARA News* with regular articles of interest for our readers. In addition Stan will post these articles on the NWS Packet Weather Board (145.09 MHz N2AIG-4) so that other amateurs may read and use them as they see fit.

This is just another example of the fine job Stan, KB2LNI, and others from the weather service are doing to make the SKYWARN system work.

Local Bulletin Service Starts New Year

"This Week In Amateur Radio" returns on 1/1/94

Community Video Associates, Inc., has announced that the weekly amateur radio news magazine/audio bulletin service *"This Week in Amateur Radio"* will return to the air on Saturday, January 1st, 1994, at 7:30 PM (EST). Negotiations with the new Omega Radio Network were completed December 22nd. Omega will carry *"This Week in Amateur Radio"* as part of their regular programming on the Galaxy III commercial communications satellite, transponder 17 (9H), 5.8 MHz wideband audio (4.040 GHz). Galaxy III is a Hughes HS 376 satellite located in geosynchronous orbit at 93.5 degrees west longitude.

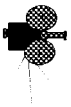
"This Week in Amateur Radio" is retransmitted "live" or by tape delay on HF amateur radio nets and VHF/UHF repeaters throughout North America. Community Video Associates, Inc., a nonprofit charitable tax-exempt foundation based in Albany, New York, produces the program.

The service was curtailed November 27th due to loss of satellite facilities. CVA began producing the program last March. CVA President George Bowen, N2LQS, announced that, after airing 39 weekly programs, the program will pick up right where it left off with edition #40. *"This Week in Amateur Radio"* is hosted by Stephan Anderman, WA3RKB, who is also "TWIAR" Executive Producer. Some of the features carried each week are "The RAIN Dial-up", "DX Window" with John Yodis, K2VV, "The Gateway 160 Meter Net Report" with Vern Jackson, WA0RCR, "YL Spotlight" with Carli Drake, WB1BTJ, "EZSATS" with Dave Mullenix, N9LTD, and "Amateur Radio Newsline". Adrian Sebborn, N1JWO, presents summaries of DXpeditions, DX activities, and special event stations. N2LQS provides the weekly propagation forecast and serves as the program's Technical Director. *"This Week in Amateur Radio"* also carries the latest ARRL, RAC, and AMSAT news bulletins with special emphasis on operating news, technological advancement, and national and international regulatory activities.

"TWIAR" is amateur radio's most comprehensive and up-to-date bulletin service. It's the only satellite-delivered bulletin service suitable for retransmission on amateur frequencies and serving as the activity's weekly "Evening News" or "60 Minutes".

As in the past, satellite facilities on the Omega Radio Network will continue to be donated, at no cost, as a service to the amateur radio community. Expenses incurred by CVA in the production of the show continue to be offset by donations from individual amateurs, clubs, and repeater groups.

Weekly program summaries will continue to be circulated on amateur packet bulletin boards, FidoNet, GEnie, USenet, and Internet. If you have further questions, please contact Adrian Sebborn, N1JWO, George Bowen, N2LQS, or Stephan Anderman, WA3RKB via packet @ WA2UMX.#ENY.NY.USA, George Bowen via FidoNet node 1:267/103 or on the "ham" echo, or the *"This Week in Amateur Radio"* area in the Radio and Electronics Hobby area on GEnie (category 8, topic 11). By landline, contact WA3RKB at (518) 877-7374, N2LQS at (518) 283-3665, or Adrian Sebborn, N1JWO, at (413) 458-8219. Here in the Capital District the program will continue to be heard on the Poestenkill repeater, N2JXO/R, on 145.37 MHz, Saturdays at 7:30 PM. A replay of program highlights can be heard Mondays at 8:15 PM, immediately following the CDARC Bulletins.



TWIAR

This Week In Amateur Radio

A production of Community Video Associates, Inc.

Advertisements Needed for Newsletter

Next month the *TARA News* will begin accepting new advertisements for 1994. The advertisements in the rear of this newsletter have greatly helped offset the expenses occurred in publishing this newsletter. So far we've been extremely fortunate to have first class reproductions of the letter done at NO cost to our club. There have been other expenses that we have been lucky to get donated but still there is the monthly cost of postage.

If anyone knows of a business that would like to advertise on the pages of the *TARA News* please contact our Editor Jack Culliton, N2LBZ, at (518) 271-6763 evenings please. New ad rates will be posted next month. ***TN***

Revised CDARC Bulletin Schedule

de **WA3RKB, Stephan Anderman**

Effective Monday, 20-Dec-93, the CDARC Bulletins can be heard at the following times and frequencies:

	Monday (7:00)	*Thursday* (5:00)
◆ **145.17, 145.19, and 444.225 ***		
◆ **146.82 and 224.42 * (see below)**	**(7:15)**	**(5:15)**
◆ **147.00, 147.06, and 448.225 ***	**(7:30)**	**(5:30)**
◆ **146.91/MA and 147.12**	**(7:45)**	**(5:45)**
◆ **145.37 and 147.18 (see below)**	**(8:00)**	**(6:00)**
*** incorporates linking systems.**	**(PM PREVAILING LOCAL TIME)**	

Some links may not always be operable. The 7:15/5:15 schedules also include the IBARC repeaters on 224.14, 444.0, 444.05/VT, 921.1/MA, and 921.2 MHz. The system input frequency is temporarily inaccessible due to the distance of WA3RKB's new QTH. A UHF antenna system upgrade to facilitate access to this system should be completed shortly. Both the 146.76 and 442.20 repeaters were formerly included in the 8:00/6:00 schedules. The 442.20MHz hub repeater is currently off-line for maintenance. For further information, contact WA3RKB @ WA2UMX.NY or connect to WA3RKB-4 on 144.95 MHz or call 518/877-7374 weeknights after 8:30.

Thank You TARA

At our Holiday Bash Jack McGivern from the Green Island Water Pumping Station was given a very handsome coffee mug with a check for $20.00 stuffed inside. Jack was very appreciative of this gift and had just the place to spend his money. It seems that Jack had a portrait taken of his pet dog and was going to use the money to pick up this picture before Christmas.

Jack would like to extend his sincere THANKS to the membership of our club for his gift.

Club Donation

Remember the old quote *"ask and you shall receive"*? Well recently this was the case when our club asked if there was anyone who had a camera they weren't using. In a matter of minutes June, KA2VEK, and Skip, KE2XF, donated a brand new PhotoFlex, 35mm camera to our club. This camera will be used to gather photos for both the newsletter and the club archive. Donations like this are always welcome.

ARRL Publications Available Through TARA

Our club can assist you with all your favorite ARRL publications right here in the Capital District. You no longer have to worry about the hassles of long distance phone calls to the league or making tracks for the local book store just to take possession of that ARRL publication. TARA can take your order for any publication they offer and in return you can help our club make a few bucks for the treasury. Since 1991 TARA has been a Dealer/Instructor in the ARRL book program.

Whether you're looking for the all new *Now You're Talking* study manual for a friend, or the *Antenna Handbook* for your Spring antenna project, TARA has just the books for you. After you get that first ticket TARA can provide you with the complete line of study manuals from Novice right up through Extra. If your interest is in the digital modes you might want to select *Your Packet Companion*, by Steve Ford, WB8IMY or *Your Gateway to Packet Radio*, by Stan Horzepa, WA1LOU, which will help you with all your packet needs.

So the next time you need any publication please keep us in mind. To find out more about this program or to make your order, please contact Ken, KB2KFV, at (518) 272-0112, evenings please.

TARA Bookstore
ARRL PUBLICATIONS

OFFICERS

President: Bill Eddy, NY2U 273-9248

Vice President: Jack Culliton, N2LBZ 271-6763

Secretary: June Smith, KA2VEK 664-4521

Treasurer: Tom Remmert, N2TTA 456-6191

Sergeant at Arms: Skip Wilson, KE2XF 664-4521

DIRECTORS

Rudy Ault, N2JZK 271-7282
Ken Davis, KB2KFV 272-0112
Bud Hovey, WF2B 283-2337
Jerry Jackson, N2QIP 272-3255
Steve Watson, N2PZP 272-7470

Repeater Manager: Bob Isby, N2LUD
Repeater Technical Advisors:
Dave Edwards, WA2GBO
John Pritt, WA1YXQ

Membership Committee: Bruce Roberts, KA2HRM
Refreshment Committee: June Smith, KA2VEK

Equipment Manager: Matt Masterson, N2LGZ
RDF Chairman: Steve Watson, N2PZP

Newsletter: Editor-in-Chief Perry White
Editor: Jack Culliton, N2LBZ 271-6763
Assistant Editor : Bill Eddy, NY2U
Assistant Editor : Ellen Culliton
Copier: Bob Isby, N2LUD

Please send all correspondence to Editor-TARA at 3 Oxford Circle,Troy, NY 12180 or via packet at WA2UMX-5 144.950

NOTICE: THE EDITOR OF THIS NEWSLETTER ASSUMES NO RESPONSIBILITY FOR THE CONTENTS,ACCURACY OR READABILITY OF THIS PUBLICATION, HOWEVER, BY READING THIS NOTICE IT BECOMES THE RESPONSIBILITY OF THE READER TO HELP IMPROVE THE OPERATING PROCEDURES FOUND ON THE AIRWAYS.

HF Contest Chairpeople: Walt Legowski , WA1KKM
Sue Rothschild , N2LBR

Events Committee:Ken Davis, KB2KFV
UHF/VHF Contest Coordinator:: Art Ceas, KB2JZJ
Chris Linck, N2NEH

VE Team Contact Bud Hovey, WF2B

Field Day Committee Chairpeople :
Jerry Jackson, N2QIP
John Tutein, WM2Y
Ken Collis, N2RXO

Troy Amateur Radio Association
PO Box 584
Latham, NY 12110

place

label
here
Bill

NEXT MEETING: January 16,1994
Four Brothers Pizza Parlor
Valatie, N.Y.
Sunday 6:15 PM