The SKCC Centurion

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Making Plastic Knobs

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Knobs can be very useful things. They provide torque multiplication, for easier turning. They can also be indexed, to provide some idea of how much impact your turning will produce. Sometimes, though, we just cannot find a knob to suit our needs. Or, perhaps, the knobs we can find are not available in small quantities, or will take too long for us to patiently wait for. We may need a bigger knob, for slower going, or a smaller knob for a more comfortable fit in the hand. We might want a smooth knob, or one with small ridges, or perhaps we want a different colored knob! If we can make the knob ourselves, perhaps we can have a knob that fits our desires.

So, how do the big boys make plastic knobs? Well, mostly, they use a process called Injection Molding. For the small batches we might require for homebrewing, plastic casting might be more desirable. It is relatively easy to do, and the materials are few and easily obtained.

To get started making knobs, you will need some casting resin (polyurethane), a hardening catalyst, a mold, and some stirring sticks. The first two can be obtained at a local crafts store. I have successfully used "Castin'Craft Clear Polyester Casting Resin,"

which I get at my local "Michael's" craft store. "Michael's" has the catalyst, too. A 16oz can of resin should be under $20, and the catalyst should be under $5. Molds are best if made, or scrounged, so their price will vary (free or inexpensive). Polyethylene molds tend to perform best, so look for plastic marked as #2 (HDPE) or #4 (LDPE).

I have found that Polypropylene (#5, PP) also works well. Beyond plastic molds, the can be made out of silicone, aluminum foil, steel, or various other things. Molds always tend to work better if you use a mold release agent, but if you can deal with cutting the mold away (one time use mold), a release agent might not be necessary. Tooth picks or popsicle sticks seem to work well as stirring sticks, as they're cheap, and you probably already have them around the house.

Use something disposable, unless you want to dedicate a stick permanently to stirring resin... if so, you'll need to let your stick cure too, once you're done stirring.

Molds are either free, or cheap, depending on what you want out of one. I needed an indexed knob for a jig I was making to hold my Dremel, to make Manhattan style SMT IC pads. I wanted a knob with a threaded rod coming out of the back, and an indexed face so I knew how far it was being turned. So, rummaging through my recycling bin I found an empty Del Monte single serving fruit cup. It's a little plastic cup, with a few ribs (maybe 20?) that go down towards the bottom of the cup, and a nice curved side. It is marked as #7 plastic (OTHER). Perfect! The curved sides would let the molded knob fall out more easily, and the ribs would serve well as index marks!

So, how did I turn a fruit cup, a bolt, and a can of polyester resin into a knob? Pretty easily, actually. First, I rinsed out the recycled cup with some water, and dried it. Then, I poured a bit of casting resin out of my can, into the fruit cup. I filled the fruit cup about 3/8" deep with resin, then put in a few drops of the catalyst. The back of the can has a guide on how much catalyst to use, as it will vary depending on the size of your casting. After adding catalyst, I stirred with a toothpick for about 30 seconds, then let the cup set for a few minutes. It will take about 24 hours for the knob to cure, but it should start to thicken in a few minutes.

Once slightly thickened, I pressed the head of my bolt into the resin, trying to keep it centered, and at a right angle to the surface of the resin. Then, I left the whole fruit cup alone for a few days. 24 hours is all that is needed for most castings to set up, but it shouldn't matter if you leave it in the mold longer. Since I have a seemingly endless supply of fruit cups, I cut the cup down the sides, and peeled it off of my knob, once cured. This is where a mold release agent, and/or different mold type (2 piece silicone) could help, if you want to use your mold again. Maybe we will do a bit on more advanced mold making in a future article.

There are a few things to watch out for when casting plastic. First, is safety. This stuff needs to be used in a well ventilated area, as it is kind of smelly. I will refer you to the can for full safety warnings. Aside from safety, you may pull something out of a mold and find that it feels a bit sticky or tacky. This is an indication that the part has not fully cured, and final curing can usually be done by leaving the part out of the mold to set

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for a few hours. Usually this stickiness is not enough to leave any product on your hands, only enough to create a tacky feeling when you touch it. If your part is more sticky (enough that bits are left stuck to your fingers), then it really is not cured. Perhaps you needed a bit more catalyst, or a bit more curing time? This tends to be more of a problem when using Silicone molds, because of the heat transfer in silicone.

"But This gave me a clear knob, and I want my knob to be colored!"

Okay, go back to your crafts store, and look on the shelf next to where you picked up the resin. There will probably be a package of dyes right there. When I looked at the dyes last, the price seemed a little high to me, so I decided to try food coloring instead. This did not work so well, but was not terrible either. Since the food coloring is water based, it does not dissolve in the resin, but rather creates a bunch of tiny droplets inside of the plastic. This is why my knob is clear, with flecks of blue scattered throughout. It was certainly cheaper than the real dye! If you want solid colored knobs, casting resins are available in solid colors, but you may not have as much luck finding it at a local crafts store.

So go get some molds, and make some knobs, and finish off that project you were working on last year!

Editor's Note: This technique is excellent for making custom knobs for keys, too. This site, http://www.info-central.org/construction_moldmaking.shtml , has an excellent how-to on mold making for casting parts.

New Faces In Key Positions

Webmaster

Sam, our SKCC webmaster has decided to step down. We are very sorry to see him go. Sam has done a great job with our website but finds the need to spend more time with Family and on the air. Great job Sam! We will miss you as our webmaster but hope to catch you on the air. Bill NT9K has agreed to step up and take over Sam's job as Webmaster. Effective immediately, Bill is our new Webmaster for the SKCC. Please welcome him as such!

SKCC Sprint Manager

We have a new WeekDay Sprint manager. John AI4RE is our New WeekDay Sprint Manager. He along with the help from Bill, NT9K, will be setting up the site in the next few days. Once it is up, one of us will announce where to access it off the skccgroup.com page. Please join me in Welcoming John to The role of WeekDay Sprint administrator!

Centurion Award Manager

Gordon, NT9K, our SKCC Centurion awards manager has decided to give another member the opportunity to administer the Centurion award. Gordon has done an excellent job in this capacity. Larry, W2LJ (Makos327@worldnet.att.net), has agreed to take a turn at managing the Centurion awards. Thank you for volunteering!

It is the work of volunteers that keep SKCC running. With out them, SKCC would cease to exist. Thank you for all you do.

How To Gracefully End A QSO

It's no big deal, many hams will just send, "TNX FOR QSO 73" or "GOTTA GO TNX 73" and sign off. Think about ways to leave a bit more politely, such as, "DINNER HR 73", "I GOT A PHONE CALL, CUL", "TIME HR TO QSY TO BED", "MY XYL IS YELLING, TURN OFF THAT RADIO AND DO SOMETHING USEFUL", or "SRI ED MCMAHN IS AT MY DOOR WITH 10 MILLION DOLLARS 73".

There will be times when, after several exchanges, you realize that you just don't want to talk to this person anymore. You could, as some hams do, just disappear. But having a few tactful excuses for leaving to choose from is a good idea.

It is not uncommon that QRM will grow to the point that it is impossible to copy the other station you are in QSO with. Some hams in this case will just give up and stop transmitting. In this case, at least send a 73 and sign off properly. Don't leave the other ham wondering what happened to you. On your end you may not hear anything except QRM, but perhaps the other ham you were talking with still copies you fine. Maybe the QRM is one way, skipping over his location. If the QRM or QRN or QSB just destroys a QSO you are involved in, send something like, "SRI DAVE NO COPY NO COPY QRM QRM 73 73 N1HAM de K1HAM."

Occasionally during a QSO, the station simply disappears. Maybe they have rig problems, an important phone call, or the irresistible call of nature. Try not to simply disappear. If another ham vanishes during a contact, first send a friendly, "DAVE?", and if no answer, then send, "N1HAM de K1HAM K" once or twice before giving up. Even then, leave your VFO on the same frequency a few minutes while you fill out your logbook and the QSL card, in case the ham reappears.

Tennessee Amateur Finds Innovative Way To Promote Amateur Radio

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About three years ago, Cliff Segar, KD4GT, and his wife Kati were looking for another place to live. They were then living in the Atlanta, Georgia area, and Segar's job territory reached from Bristol, Tennessee to the Atlanta area. Since Kati had a home-based business, they were looking to move anywhere in between the end points of Segar's territory. After months of looking, they found their dream house in Rockwood, Tennessee. There was just one problem -- it was right on Interstate 40.

The Tennessee Department of Transportation owned the fence on the south side of the property, which meant traffic noise.

"We returned one more time just to see how much this was going to bother us," Segar said. "After five minutes outside talking about the many beauties surrounding us, it dawned on us -- we had forgotten to listen for the traffic, and decided that it was not the issue we thought it might be. The swath of trees along the fence made a rather good attenuator, and mostly it's just the tire noise. We signed papers and went into debt."

Two billboards were located within the Segar's new property. "They don't provide much in the way of income; basically just paying the annual property taxes in 'rural' Tennessee. We are so rural, neither DSL nor cable comes close to the property, and the dial-up connection to the Internet averages 14.4 kb. Taxes are much lower this far out, and so is the price of land." Of the two billboards, Segar said the one "up front (from our house perspective)" is the prime space. It is larger and lighted and in use. The other billboard was not rented, and it was getting run down, with brush and trees overtaking its view from the Interstate.

The couple chose this location not only for Segar's work, but for its potential as future retirement property, its rural setting and maybe even having a horse or two. "It also had enough land for lots of wire above ground, unrestricted vertical storage of galvanized steel structures and few restrictions for line of sight propagation of electromagnetic fields," Segar said, proving that Amateur Radio is always forefront in his thoughts. "Since I also enjoy paying the local electrical power distribution facility to provide me with electrons just so I may radiate them into thin air and beyond, I also like to promote the Amateur Radio Service and support the ARRL that continues to fight for my privilege to distribute those magnetic fields to the moon and beyond," he said.

This year, the ground lease for the two billboards came up for renewal. Segar said that this was his opportunity to do something useful. "Basically, the new lease for the previously unused billboard stipulated that the billboard company had the obligation to keep the brush and vegetation clear and, 'when the sign is not sold, lessee will agree to provide and install a vinyl face advertising Amateur Radio activities.'" Segar said that the only way the billboard company would agree to this stipulation was if they provided the vinyl facing at their expense. "This was even better than I thought it would be. Since the sign had not been sold at any time in the prior 3 years, I expect to see the sign for quite a long time," Segar said.

With the new lease signed, Segar sent an e-mail to ARRL Media and Public Relations Manager Allen Pitts, W1AGP, to let him know of this exciting development. "In case anyone is wondering if anyone in Newington reads e-mail, they do -- and frequently. In about an hour, Allen called me to work out the details," Segar said. Within two days, the ARRL graphics department had created the design for the vinyl facing.

"The only thing I requested," Segar said, "was to have a couple of 2 meter repeater frequencies listed for use by those of you driving past. The one repeater was basically a must since the Roane County Amateur Radio Club, in a moment of collective weakness, elected me president for the year. The only problem is that KE4RX/r is behind anyone who sees the sign. We needed a repeater that would continue to work with them for the next 30-plus miles." After a few discussions with Paul Drothler, WO4U, in Crossville, Tennessee, W4NSA/r was deemed the flagship repeater for use westbound. According to Segar, it is the primary repeater used by ARES during severe weather or other emergency situations. "If you are ever on I-40 between Cookville and Knoxville, dial in 146.895, pl 118.8 or 147.015+ and give a call. We will try to be listening, but please don't report that you caused an emergency slowing down to look at the sign!"

Segar says this billboard is not about him -- it is about Amateur Radio and the ways hams can promote it: "With the constant pressure from commercial interests on the spectrum allocated to the Amateur Radio Service, we all need to do something to promote the public benefit of the Amateur Radio Service. We are to be more than a hobby. It is part of our licensing agreement. It is even part of our name. We are to be a Service. I strongly urge everyone to think seriously about how they can be a service to their community through Amateur Radio. ARES is a good primary start and one that is most visible to the leaders of your community. Providing communication at public service events is another. But there are many more. To use an overworked cliché, think outside the box. Become involved. Getting a DXCC or WAS award is great. A 5BDXCC shows even more dedication but it really doesn't help 'pay' for the spectrum we enjoy. Your city mayor or county supervisors really don't care that you managed to work Peter I Island on all five bands at the bottom of the sunspot cycle -- there's nothing in it for them. Each of us needs to show our elected and appointed officials that Amateur Radio really is a high quality and vital Service to them. The sooner that happens, the easier it will be to put up that new antenna you've been wanting."

He continued: "Be innovative. The great folks in Newington are ready, willing and able to help you. Join the ARRL and get

involved. Join a local club. Get active in ARES, RACES or a local CERT group. Spend a Saturday with a handheld radio at a parade. You and the thousands of other licensed operators in the Amateur Radio Service worldwide will continue to enjoy the challenges, joys and magic of Amateur Radio. This billboard is only part of my contribution. What's yours?"

Stealth Amateur Radio

Julian Moss, G4ILO http://www.g4ilo.com

In 2001 I moved to a new house (or *QTH* in ham talk). Like most hams, I had in my mind the dream of an isolated house with a large plot of land where I could put up a big antenna and run high power without upsetting any neighbors. However, after a lot of thought it became clear that this desire was not compatible with the type of house I wanted to live in. What I wanted was a brand new house, within walking distance of the centre of Cockermouth, the small town where I live. Like all new houses in England today, this meant accepting a tiny plot with barely enough room for a 20 metre dipole. In practice, it also meant accepting a house with a restricted covenant that permitted no ham radio antennas.

Though many hams might not agree, I accepted this restriction. One of my reasons was that not being prohibited from erecting an antenna doesn't necessarily mean you won't have problems if you do erect one. At my previous QTH I had erected a trapped vertical antenna in the garden. A few neighbors disliked it, and tried to get the council to make me apply for planning permission for it. The council accepted that it was small enough not to require permission. This was fine for me, but it didn't make me the most popular person in the road, and my life outside ham radio suffered a bit because of it.

One aspect that always seems to get overlooked in the arguments about hams having the right to put up antennas are the rights of non-hams to enjoy their environment without having to see ugly antennas. And antennas *are* an eyesore to most people. I can fully understand why non-hams in an attractive locality would prefer not to see large radio antennas in neighboring gardens, and I don't wish to be the person who inflicts these eyesores upon them.

Because of this, I accepted the restriction on having no visible antennas. Rather than feeling I would have to give up the hobby in order to live where I wanted, I viewed it as a challenge. And I felt that by meeting this challenge, I might become an example to others who would like to become hams but feel they can't because they are unable to put up a big antenna.

There must be many potential radio amateurs who are put off the hobby by the thought that they will need to erect a large antenna that will upset the neighbors. Even the family may object. I heard of one ham whose wife refused to allow an aluminium monstrosity to be erected in the garden. The challenge I set myself was to see if it was possible to operate a HF amateur radio station with worthwhile results, without my neighbors knowing anything about it: a **covert amateur radio station**.

Antenna choices

I spent many hours researching the types of antenna that could be used indoors, or in the loft. There are many possibilities, but obtaining information about how well they work isn't easy. I could find no reports of some of the antennas advertised as for "stealth" operation, such as the controversial **crossed field antennas**. Most of these very small antennas aren't cheap, and I wasn't prepared to spend a big sum of money on what might turn out to be an expensive dummy load.

The most useful article I found was the Compact HF Antenna Roundup published by the ARRL in QST, March 1998. (If you're an ARRL member, you can get this from the ARRL Members Only website.) The MFJ Magnetic Loop got a good write-up, so I bought one.

MFJ-1782 Magnetic Loop

I bought the MFJ magnetic loop before I moved to my new QTH, so I was able to compare it with my old vertical. I was extremely impressed. Even indoors, it outperformed the vertical by a few dB on 10 metres. It became less effective as the frequency dropped, so by 20 metres it was a few dB down on the vertical. Nevertheless, for such a small antenna this is still an excellent result.

The version I got was the 10MHz - 30MHz model with the manual control box. The so-called automatic control box is a lot more expensive, isn't all that automatic, and you're paying for SWR and power metering that already exists in most transceivers. I found that brush noise from the motor that drives the tuning capacitor provides an effective noise source when tuning the antenna, so it was possible to tune it to almost spot-on just by ear. I could then "tweak" it for best SWR using the metering on the radio. Some reviewers on eHam.net have complained that this is too much effort. They want to be able to push one button and have the antenna tune itself. I think some of today's hams are spoilt and lazy. It's still easier to tune the MFJ loop than to tune a long wire using a manual ATU, as many people still do. And I'd rather do that than pay a lot more for a computerized control unit.

The MFJ magnetic loop would be my first choice recommendation for anyone who wants or needs to set up a covert ham radio station. It works fine indoors, but for best results you should position it as far as possible from walls and other objects. If you can't manage a permanent installation, you could mount it on a stand and keep it in a wardrobe or cupboard, bringing it out

only when you want to use it. I know of no other antenna that is small enough to be used indoors and radiates such a potent signal.

The MFJ loop has two disadvantages, which nevertheless may not deter you given its good performance. It is such a high-Q antenna that you need to re-tune it even after changes of a few kHz in frequency. You need to tune it even if you only want to do some casual listening: the Q is so high that if the antenna isn't tuned close to the frequency of the receiver you won't hear anything. The other disadvantage is that the antenna is a solid, welded 3 foot hoop so you need a hole that big if you want to get it up in the loft. The access hatch to the loft in my new house is not that big, and would have required expensive carpentry work to make it large enough. Because of that, I used the MFJ loop for a few weeks inside my upstairs shack before deciding upon a different solution.

Quad Loop with remote autocoupler

Another approach that many hams claim to be effective is to use a horizontal loop of wire, broken at the middle of one side (or in a corner) and fed there. This is not a resonant antenna, so it will have a widely varying impedance at different frequencies. You should theoretically tune it using an ATU in the shack only if fed with open wire feeder. And you'll probably need something better than the auto-ATUs in most radios. If you want to keep things neat and tidy and feed it with 50 ohm co-ax you must place the matching unit at the antenna feedpoint. The easiest way to do this is using an autocoupler such as the SGC SG-239. This will also give you the benefit of instant tune-up, since the SGC autocoupler has a built-in computer.

I ran a heavy gauge wire (something like 6A rating) round the inside of the loft space using insulators at the four corners. The dimensions of the loop are about 4.8m x 5.5m. I placed the SGC autocoupler at the centre of one of the 4.8m sides, almost directly above the operating position. This is quite a small loop (modern English houses aren't big, unfortunately.) Comparing this with the MFJ magnetic loop, on the whole I think the MFJ loop was a slightly better performer. However, the ease of tune-up offered by the autocoupler, plus the fact that I was able to install the wire loop in the loft without surgery on the house tipped the balance in its favour.

Another benefit of the wire loop is that it isn't high-Q, so for general receiving it still works with the autocoupler switched out. This is very handy when you turn on the radio and want to have a quick listen around to see what activity is like. You only need to tune the loop if you want to transmit. The MFJ magnetic loop would need retuning every time you changed bands, even if you only wanted to listen.

The SGC-239 autocoupler tuned this loop on all amateur bands, right down to 160 metres. Again. this is an advantage over the MFJ magnetic loop, as that tunes down only to 30 metres. (MFJ makes a version that goes down to 40 metres, but you sacrifice 10 and 12 metres in order to do that.) Obviously, the wire loop is pretty inefficient on the lower frequencies, but so would be the magnetic loop. There just is no way to radiate a big signal on the low bands using a small antenna. I have never tried to make contacts on 80 or 160 metres. I've made only local contacts on 40 metres. But this small loop works incredibly well on 20 metres and up. I'm constantly amazed by how far my signal can get, considering that I'm running low power, to a small antenna, situated in the attic. Modeling the loop in EZNEC shows that it has some directivity, and even a bit of gain, on the higher bands.

Conventional wisdom says that it is better to mount a loop like this round the outside of the house, below the roof line. I didn't do this for a number of reasons. First, I don't have a ladder, so I can't get up there to do it. Second, the houses are so close together that you couldn't do this without it being visible to the neighbors, so it wouldn't meet my objectives. In fact, I'd have to ask one neighbor's permission to put the ladder on their land so as to reach one side of the house. Third, the shape of the roof isn't ideal to run a loop round it. And fourth, if I did this, the loop wire would be closer to the house structure than it is running inside the loft, which might de-tune it. Using an indoor antenna also allowed me to save money by using the non-weatherproof SG-239 autocoupler. The SWR does change a bit on wet days, so the wet roof probably affects efficiency a bit, but not enough to notice.

QRP Operation

Perhaps I'm being over-cautious, but I think that it's essential to use low power when using an indoor (or in-attic) antenna. I'm concerned about the physiological effects of radiation, but mostly I'm worried about EMC problems. I just don't believe that it's reasonable to expect phones, TVs, stereos and so on to have enough immunity to RF to remain interference-free when 100 watts is being radiated by an antenna inside the building. Even low power can cause problems. My transmissions blast through the computer speakers, and I found that even a couple of watts of RF on 15 metres interfered with the operation of the track-pad of one (now defunct) laptop. This resulted in a lost DX PSK31 QSO, the first time I discovered it! I solved both problems by using my desktop PC for ham radio data operation, which means that as the sound card is now dedicated to PSK use, the speakers are no longer connected anyway!

As far as on-air effectiveness is concerned, it's worth remembering that the difference between 100 watts and 5 watts is only two S-points, which is usually a lot less than the QSB at any given time. This means that the chances are if you can work someone using 100 watts you can work them using low power, but you may have to try a bit harder. My Elecraft K2 runs a good 10 watts plus on most bands, and it's highly effective speech processor means it's "talk power" is a lot closer to many 100 watt radios than you might think. There are times when I wished I had a kilowatt and a beam, but I've honestly never wished I had a 100 watts instead of just ten. It just doesn't make that much difference.

I think most of the difference between 10 and 100 watts is in the mind. To be content running low power to a small antenna you have to put yourself in the state of mind where you aren't concerned about the few contacts you can't make because you're just a bit too weak for the other hear you. Otherwise, you'll simply become frustrated. It's important, I think, to use a

radio that can only run low power, such as my K2. If you have a radio that can run 100 watts, you'll constantly be tempted to turn up the power. And if you do that in a "stealth" situation you may find that you've blown your cover.

Modes like CW and PSK31 certainly help you make the most of low power. It's amazing how little power you need to make contacts using PSK31. I always wonder why some stations insist on running 40 or 50 watts. I have had rag-chew contacts with Stateside stations on PSK using just 4 watts. Who needs QRO and tons of aluminium?

The results speak for themselves. I don't spend a lot of time on the air, and I go on the air when I can find the time which does not always coincide with the best conditions. Nevertheless I have worked North and South America, Antarctica, Japan, South Africa and the Philippines. The only continent I haven't yet worked is Australia. I think this demonstrates that it is possible to get enjoyment from the hobby running low power to an invisible, indoor antenna, and that ionospheric conditions play a bigger part in whether you can work anyone or not than any other factor.

Conclusion

My experience demonstrates that antenna restrictions are no reason for going off the air. You may never be a big signal working DX when conditions are poor, but there's a lot more to ham radio than working DX.

Contrary to popular opinion, you don't need high power and a big antenna to have fun on HF. It is possible to enjoy ham radio using low power and an indoor antenna. If you wanted to be a ham, but have been put off by the perceived need for unsightly antennas and worries about what the neighbors will think, my advice is to go for it. Get on the air using **covert amateur radio!**

New Members

3318, W8TT, Ray, Cleveland, OH
3319, K9HF, Pat, Madison, OH
3320, K8CZC, Glen, Manuta, OH
3321, AB8AV, Joe, Norton, OH
3322, KA8LEJ, Thad, Uniontown, OH
3323, W8KXR, Gene, Clinton, OH
3324, AB8CC, Carl, Canal Fulton, OH
3325, KD8PD, Herman, Wooster, OH
3326, KA8DSP, David, Seville, OH
3327, KA8MMN, Jules, Massillon, OH
3328, K8TBS, Tim, Canton, OH
3329, N8CHR, Tom, Massillon, OH
3330, K8SJS, Dave, Akron, OH
3331, AC6EA, Steve, Akron, OH
3332, K8KK, Keith, Independence, OH
3333, WB8OWM, Skip, Canton, OH
3334, N8YT, Jim, Akron, OH
3335, N8UDL, Dennis, Canton, OH
3336, WD8MLD, Donald, Lake City, TN
3337, W6HAG, John, Palm Desert, CA
3338, KC8HKI, Nick, Cumming, GA
3339, K8MP, Joe, Delaware, OH
3340, AC0CX, John, Minatare, NE
3341, K6TFC, Richard, Palm Desert, CA
3342, ZP9EH, Stephen, Loma Plata, Boqueron, Paraguay
3343, KA1ZQR, Richard, Stonington, CT
3344, AA2KC, Don, Celoron, NY
3345, K4QG, Rod, Ormond Beach, FL
3346, KD6ZBN, Floyd, Gilroy, CA
3347, KD5WQD, Don, Placitas, NM
3348, AJ1M, James, Petersburg, WV
3349, KG6KDJ, Allan, Davis, CA
3350, K4SPR, Jerry, Palmyra, VA
3351, ND5X, Roy, Colleyville, TX
3352, AA4HT, Rip, Lakeland, FL
3353, KF0GE, Earl, Prairie, Home, MO
3354, KM5HM, Rik, Magnolia, TX
3355, NI2V, Robert, Lithia Springs, GA
3356, WY4O, Jerry, Milton, FL
3357, W5CX, Will, Weatherford, TX
3358, N6EV, Paul, El Camino Village, CA
3359, KB8TT, Dave, Eastlake, OH
3360, NI7R, Phil, Maricopa, AZ
3361, K0LSW, Terry, Gower, MO
3362, K5ADA, John, Richmond, TX
3363, N0ZRF, Bob, Stillwater, MN
3364, K5BGB, Rod, Houston, TX
3365, W4RB, Stan, Troy, TN
3366, N0EK, Ed, Bergen, ND
3367, N1AFV, Gordon, Warren, ME
3368, KE7LKW, Stewart, White Salmon, WA
3369, N3TZJ, Matt, Jackson, MS
3370, N0IME, Al, Brookings, SD
3371, KC5LXD, Ty, Portland, TX
3372, K0RDF, Robert, Holt, MO
3373, NI3B, Brian, New Castle, DE
3374, KD8BZE, Paul, Pickerington, OH
3375, K2LAZ, Lazaro, Staten Island, NY
3376, VE3OZL, Ken, Scarborough, ON, CANADA
3377, KA2FIR, Mike, Green Brook, NJ
3378, F6GWB, Gerard, Paris, France
3379, W4DNN, Dennis, Port Charlotte, FL
3380, W5GZT, Rod, Kearney, MO
3381, WB4YYE, David, Chattanooga, TN
3382, K9BU, Jim, Sioux Falls, SD
3383, KE9V, Jeff, Muncie, IN
3384, N3BEV, Martin, Philadelphia, PA
3385, KD5QNU, Chris, Ruston, LA
3386, KI4YLF, Anthony, Deltona, FL
3387, KE4QIU, Gray, Garner, NC
3388, N1IIX, Chris, Rochester, NH
3389, N6IV, Mark, Mokelumne Hill, CA
3390, N2EXH, Jim, Basking Ridge, NJ
3391, KE5NWS, Arthur, Tulsa, OK
3392, KC2OGR, Hugh, Burlington, NJ
3393, AC0DX, Bob, Mankato, MN
3394, WA6IQY, Dennis, San Diego, CA
3395, G0VFV, Bob, Scarborough, N Yorkshire, UK
3396, WA1ZFY, Steve, Pembroke, NH
3397, KC2LYQ, Michael, Franklin Square, NY
3398, KF6C, Brian, San, Marcos, CA

3399, KS4ST, Reinhold, Port Charlotte, FL
3400, DG3YCC, Chris, Vlotho, Germany
3401, WA7YAZ, Steve, West Jordan, UT
3402, K0FNS, Frank, Westminster, CO
3403, VE3RRP, Karl, Minden, ON, Canada
3404, AD7MI, Scott, Hampton, VA
3405, AB9MX, Ron, Indianapolis, IN
3406, KK6PA, Jerry, Ridgecrest, CA
3407, KA3JOI, Paul, Levittown, PA
3403, VE3RRP, Karl, Minden, ON, Canada
3404, AD7MI, Scott, Hampton, VA
3405, AB9MX, Ron, Indianapolis, IN
3406, KK6PA, Jerry, Ridgecrest, CA
3407, KA3JOI, Paul, Levittown, PA
3408, YB3TD, Muhammad, Gresik, Indonesia
3409, NQ9A, Carolyn, Madison, WI
3410, NB1U, Mark, West Greenwich, RI
3411, W4UFP, Jim, Harbopr Island, SC
3412, W7TAX, Dave, Issaquah, WA
3413, WE8E, Jack, Lewisburg, OH
3414, N8MME, David, Davison, MI
3415, YC3RCJ, Rudi, Surabaya, Indonesia
3416, WA9EIC, Don, Danville, IL
3417, W6CAK, Dennis, Simi Valley, CA
3418, WA8QFE, Lee, Braymer, MO
3419, K9ZW, Steve, Manitowoc, WI
3420, WB4DAD, L.T., New Braunfels, TX
3421, KB3NYV, Caleb, Middleburg, PA
3422, 2I0JVI, Jonathan, Derry, Northern Ireland
3423, VO1GXG, Matthew, Pouch Cove, NL, Canada
3424, KB5RP, Rusty, Rockwall, TX
3425, GD0OUD, Stuart, Onchan Isle Of Man, British Isles

SKCC Awards

Centurion

107, K8BBM, Dave, 2882C, Selby, SD, 1 August 2007
108, AC0BQ, Johnny, 569C, Lebo, KS, 1 August 2007
109, N2JNZ, George, 2836C, Ogdensburg, NY, 1 August 2007
110, K9JP, Jeff, 3008C, Traverse City, MI, 9 August 2007
111, W9BRE, Brian, 2891C, Wonewoc,WI, 12 August 2007
112, AD5VK, Edgar, 2241C, Lewisville, TX, 12 August 2007
113, KC7YM, Dale, 387C, Green River, WY, 20 August 2007
114, AC4R, Fred, 3307C, Phenix City, AL, 25 August 2007
115, N0EK, Ed, 3366, Bergen, ND, 28 August 2007
116, XE1YJL, Jose, 2934C, Tlalnepantla, Mexico, 28 August 2007
117, W9TFC, John, 1391C, Mondovi, WI, 29 August 2007

Tribune

17, Bob , K3MQ, 3151T, Laurel, DE, 3 August 2007
18, Richard, K2RFP, 2099T, Miller Place, NY, 5 August 2007
19, John, AI4RE, 2308T, Rockledge, FL, 7 August 2007
20, Mark, KJ7BS, 2240T, Glendale, AZ, 10 August 2007
21, Tony, W4FOA, 641T, Chickamauga, GA, 13 August 2007
22, Dan, N4FI, 324T, Norfolk, VA, 13 August 2007
23, Gil, K8BTD, 728T, Quaker City, OH, 13 August 2007
24, Sonny, W8FHF, 753T, Norwich, OH, 13 August 2007
25, Joe, K8JP/V31JP, 3171T, Arcadia, IN, 14 August 2007
26, Jack, K4CNW, 2961T, Irmo, SC, 16 August 2007
27, Barry, WB8LSV, 2795T, Port Charlotte, FL, 17 August 2007
28, Don, NN8B, 36T, Hanoverton, OH, 24 August 2007
29, Gene, KL7GLL, 1098T, Reston, VA, 24 August 2007
30, Kurt, WU8V, 3044T, Shelby Township, MI, 24 August 2007

40 Meter Endorsement

Drew, AF2Z, 2082T, Collingswood, NJ
Barry, WB1EDI, 164C, Manchester, NH
Nels, W0TUP, 31, Minot ND
George, N2JNZ, 2836C, Ogdensburg, NY
Kurt, WU8V, 3044T, Shelby Township, MI

30 Meter Endorsement

David, W8III, 270T, Delton, MI

20 Meter Endorsement

Dick, K2RFP, 2099T, Miller Place NY

Member Roundtable

No round table entries submitted this month.

Shack Of The Month

No shack entries submitted this month.

Key Of The Month

This key is called "flame-proof" because the contacts are within the body of the key and would not ignite any explosive vapors in the immediate area of the key.

The SKCC Centurion

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Glendale, AZ 85304
Phone: 623-606-1976
kj7bs@arrl.net

With SKCC every day is Straight Key Night!

The Straight Key Century Club is the fastest growing CW club focusing on manual generation of Morse code. Founded in January 2006, SKCC has grown to over 2500 members in calendar 2006. Members enjoy a very active email list server, SKCC forums, monthly sprints, and a monthly 24 hour operating event. Information about the Straight Key Century Club can be found at http://www.skccgroup.com .

Operating Frequencies

These are the suggested frequencies (+or - Khz) for SKCC members to congregate and look for other SKCC members. These are suggestions only, nobody owns any frequency. Be courteous and find a clear spot.

1.820 MHz	3.550 MHz	3.530 MHz
7.120 MHz	7.055 MHz	10.120 MHz
14.050 MHz	18.080 MHz	21.050 MHz
24.910 MHz	28.050 MHz	50.090 MHz
	144.070 MHz	

Operating Events

SKCC Sprint: SKCC Sprints take place each month on the second Wednesday of the month from 0100z to 0300z (Tuesday evenings 2000 Eastern Time). Rules for participation can be found at http://www.skccgroup.com/sprint/sprint-rules.htm. For more information , contact SKCC Sprint Manager Kevin Kinderen at kkinderen@gmail.com or check the SKCC Yahoo group Calendar.

SKCC Weekend Sprint: Every 4th Sunday of each month beginning at 0000z UTC and ending 2359z UTC. This operating event is open to all licensed amateurs. Operate as much as you can and submit your best contiguous 4-hour window for score. Periodically themes will be announced for upcoming weekend sprints. See http://www.skccgroup.com/activities.htm for more information and rules.

SKCC Member Resources

SKCC website—Everything you need to know about the Straight Key Century Club. Check back frequently as this site changes, http://www.skccgroup.com.

SKCC Yahoo Groups Email List—http://groups.yahoo.com/groups/skcc/. A moderated email list for the exchange of ideas about SKCC.

SKCC QSL Bureau—Dan Rhodes, KA3CTQ manages this free service for SKCC members. Send and receive QSL cards for QSOs between SKCC members via this service. To receive your QSL cards, you need to have SASE (self addresses stamped envelopes) on file with the SKCC QSL Bureau. Dan also says non-members can send you QSL cards through the SKCC Bureau. For more information see http://www.skccgroup.com/qsl.htm.

Award Tracker—Don Kemp, NN8B (SKCC 0036) maintains an SKCC Award Tracker spreadsheet to assist members in keeping track of their current standings with SKCC awards. Don posts updates to this valuable tool in the files section of the SKCC Yahoo Groups http://groups.yahoo.com/group/skcc/files/.

The SKCC Centurion—The official newsletter of the Straight Key Century Club published monthly. The SKCC Centurion is posted on the SKCC site, in the files section of the SKCC Yahoo Groups site, and distributed via email to your email inbox. To join The SKCC Centurion email list, send an email to The_SKCC_Centurion-subscribe@yahoogroups.com with Subscribe in the subject.

Spotting Cluster—Phil, AI4OF (SKCC # 600) has launched a spotting cluster specifically for SKCC members. Use this spotting cluster to announce your operations or to find other SKCC members to work. Point your Telnet client to skcc.matrixlist.com:7300. Login using your callsign.

SKCC Sked Page—Andy, K3UK (SKCC # 1325) maintains an interactive web page where SKCC members can arrange a meeting with other members to work towards SKCC awards or just to rag chew. Check it out at http://www.obriensweb.com/skccsked/skccsked.php.