Electronic TUBE

Ham News

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TRICKS & TOPICS

This entire issue is devoted to one of the popular Ham News *departments—Tricks and Topics. Here you have the pet ideas of twenty-six different amateurs from the United States and Canada. I hope that you will be able to use some of them to save time or money in your amateur radio work.*

— Lighthouse Larry

Contents

300-ohm Twin-lead Connector

It is quite simple to make a chassis socket for 300 ohm transmission line from a regular female connector. The sketch, Fig. 1, gives the details. First, drill and tap the female connector for one or two machine screws so that it may be mounted on the underside of the chassis. Next, file a slot in the chassis so that the female connector just protrudes slightly. If desired, you may drill two oversize holes for the two pins rather than filing a slot, although the slot makes a neater job.

Geo. Tracy, W2EFU

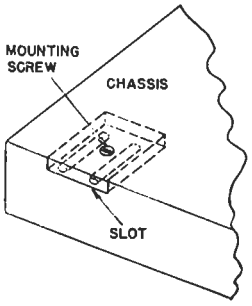

Figure 1

Repainting Panels

I have been interested in reading how various amateurs refinish their crackle-paint panels, and I have yet to see anyone mention my favorite method, which I think is extremely simple. For years I've solved the problem by simply dipping a cloth into one of the usual jars of crackle paint you buy at a jobbers, and rubbing well into the seedy old panel (after cleaning, of course!)

No heat is applied, and when the paint is spread thin it dries quickly with that new sparkle. Of course there are no brush marks and no brushes to buy or clean. Being the same sort of paint as the original, it blends well, and if you miss a spot it isn't noticed. No spray gun, no mess—well, almost none, just your fingers!

Chas. E. Spitz, LJ2Z (W7JHS/W5QML)

Inexpensive Shielded Plug-in Coil

Recently while working on a mobile rig I decided to use plug-in coils. I needed quite a few coils, and decided that buying the shielded plug-in units was too expensive, so, I came up with this idea.

Use the aluminum film containers that are sold with 35 mm. film. The top can be punched with a $1\frac{1}{16}$-inch punch, and a standard octal base from a metal tube will fit in snugly. This octal base can be removed from any defunct metal tube. After the octal base is inserted, the aluminum can be pressed with a screwdriver into the four slots on the base, to prevent the base from rotating in the metal.

Some of the 35 mm. film cans have no threads, and in this case you will find that the can itself is a snug fit on the metal shell of a GT type base. When this type of can is used, it is unnecessary to drill a hole in the top cap, and the cap is discarded.

Edson B. Snow, W2BZN

Neutralizing Condenser for Tetrodes

Here's my solution to a pair of adjustable rods for neutralizing the beam-power tetrodes in my final amplifier. See Fig. 2.

The ordinary open-circuit jacks are mounted on a piece of insulating material, such as mycalex or poly, and installed so the rods are about three-fourths of an inch from the tubes. The rod is a piece of one-fourth inch brass or aluminum or any metal. The tip connector of the jack gives fine spring tension and holds the rod in any pre-adjusted position. The body and tip connection on the jack is wired to the grid of the opposite tube.

Cliff Dow, W6ZB

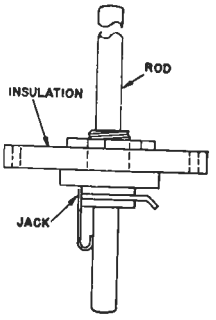

Figure 2

Waterproofing Mobile Antenna Coils

To the mobile-minded hams that want a waterproof housing for the loading inductance in a vertical antenna—such as the Mastermount or similar types—here is my solution. Even when the antenna is furnished with a metal housing, many hams discard this so that they can get at the coil readily for tests.

Look around at your favorite five and ten cent store and you will locate plastic glasses. These come in various sizes, and you can pick the size that suits your particular loading coil. Be sure you get the type that has a close-fitting cover. You can use one glass, or, if your loading coil is large, you will have to use two glasses.

If one glass is all that you need, mount in this manner. Cut a hole in the bottom of the glass large enough to accommodate the portion of the loading coil that screws into the bottom portion of the antenna. Remove the loading coil and cut a small hole in the cover, and slip the cover on the upper portion of the antenna. Now, place the glass in position, fasten the loading coil in place, and slip the plastic cover down on the glass. The fit is usually good enough between cover and glass that no waterproofing is needed at this point. After all, the plastic glasses are made so that liquids may be carried in them even when the glass is upside down. However, use clear cement where the antenna goes through the cover, and also at the point where the loading coil fastens on the bottom of the glass.

If you use two glasses, you can cut them to length so that they just cover the loading coil, and are fastened at each end of the loading coil by means of the loading coil hardware. In this case, the two glasses face each other with their mouths touching, and holes are drilled through the bottom of each glass, one hole being at the bottom of the loading

coil and the other hole being at the top of the loading coil. Use both covers, and where they meet apply clear cement liberally. Also, cement the top and bottom joints.

If you desire to tap the coil, place the taps on first, then run the wires through the sides of the plastic glasses before cementing.

You can get various color glasses to match your car, and the whole antenna loading coil assembly will be quite attractive.

George W. Pilgram, WϕDWF

Mounting Filter Condensers — No. 1

Now and then an amateur will acquire some of the metal-can filter condensers that are perfect in every respect except that the mounting clamps are missing. I solved this problem and at the same time ended with a rather neat-looking assembly (see Fig. 3).

Holes are drilled in the chassis through which the condenser feed-through insulators are placed. A piece of thin insulating material, such as bakelite or fiber is cut to size and drilled and then fastened to the condenser by the nuts on the feed-through terminals. Finally, the insulating piece is fastened to the chassis and the job is complete.

Sid Sheard, VE3BCL

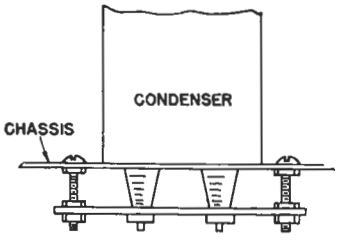

Figure 3

Mounting Filter Condensers — No. 2

After I purchased some rectangular-can filter condensers I was troubled because no mounting straps were available. However, I overcame this problem in the following manner.

Take two small bolts and remove the heads with a hacksaw. Place these in position on the sides of the condenser and solder them in place. It is wise to tin the bolts before soldering. Arrange the bolts so that they extend over the bottom of the condenser far enough to go through the chassis. The bolts may be placed on either the top or bottom of the condenser, depending on whether you mount the condenser right-side-up or up-side-down.

It is surprising how easily bolts may be soldered to these condensers. I have used this idea for many years now and have never had a bolt come loose.

George C. Gallaher, W4PJC

QSL Card on Your Car

I have one of those new-fangled cars with the license plate space built into the bumper, and nary a place to hang one of those nice cast aluminum call-letter plates. This concerned me on a trip to Florida, even more so when we went along and I saw mobile ham jobs on the highway.

In Miami I determined to do something about the situation. I made a trip to the local 5 and 10 and bought a plastic book cover—such as used by people to protect their new books—and a roll of transparent tape. Total cost, thirty-five cents. Using a pair of scissors I cut a rectangular piece of plastic slightly larger than my QSL card. With the tape I attached the whole job to the car (see Fig. 4).

This is not a permanent job, of course, but when I came home after two weeks of tropical rain, really hot sun, some snow, and a good car wash, my call sign was as bright and colorful as ever.

A sign of this sort really gets results. The first day I had it on a filling station man directed me to the home of W4IL, where my wife and I had a nice visit—including some grapefruit and avocado right off the tree.

Phil Boardman, W3KEW

Figure 4

Multiple-Connection Terminal Strip

Here is an idea for an unusual type of terminal "strip" I concocted recently for use in an already crowded receiver chassis. See Fig. 5.

This stack requires a single mounting hole, which, in many cases, can also be a tube socket mounting hole. The screw is a 6–32 machine screw which is cut to the desired length, depending on the thickness of the fiber washers and the number of terminal points desired. This screw is covered with a piece of tight-fitting spaghetti, then the washers and soldering lugs are alternately piled on the screw.

Many variations of the basic idea are possible as regards length, number of separate tie points, radial arrangement and spacing.

Elmer J. Bauer, W9ECX

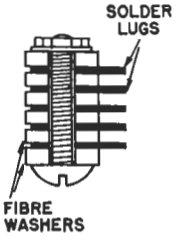

Figure 5

Color Code Memory Rhyme

Here is a trick which I have found to save me much time and freedom from exasperation. There are many occasions when a ham needs one particular resistor or condenser and he has a boxful on hand, but, no color code chart handy. He may vaguely recall the colors, and with this information he tries to pick the proper resistance. Maybe it's the right value and maybe it isn't. To clear away those doubts, here is a simple rhyme to help you remember the condenser-resistor color code:

0	1	2	3	4	5	6	7	8	9
Better	Be	Right	Or	Your	Great	Big	Venture	Goes	Wrong
L	R	E	R	E	R	L	I	R	H
A	O	D	A	L	E	U	O	A	I
C	W		N	L	E	E	L	Y	T
K	N		G	O	N		E		E
			E	W			T		

Joseph A. Butkiewicz, W8EHC

Tricks with a Soldering Gun

If you happen to use one of the so-called soldering guns, you may be interested in several handy tricks. The first concerns demagnetizing. If you have any tools that are magnetized, they can be easily demagnetized in this way. Turn on the gun and insert the tool into the space between the heavy supports to the soldering element. Leave the tool in a few seconds, then with the gun still "on" draw the tool out of the gap and away from the gun at right angles until it is held at arm's length. Turn off the gun. The a.c. field which the tool has been exposed to will destroy the residual magnetism in the tool if the tool was not too strongly magnetized.

This same method can be used to demagnetize a watch. My watch is subjected to magnetic fields which affect its operation and at times cause it to stop completely. I tried the soldering gun for this purpose and it does the job nicely.

A tool may be magnetized with a soldering gun also. Hold it in the gap between the secondary terminals, as before, and sharply trigger the gun. After each triggering check the tool for magnetism. Several attempts may be necessary, and, results are not as satisfactory as using a permanent magnet to magnetize the tool.

The field of the transformer of the soldering gun may also be used as an aid in trouble-shooting. When held near a transformer of the type which is not shielded against external magnetic fields, the gun may be triggered and will induce a signal into the circuit through coupling effects. For example, the gun may be held near an audio interstage transformer or audio output transformer to induce a signal which may be heard in the loudspeaker, providing the circuit is functioning normally.

H. Paul Bohlander, W3VVS

Harmoniker Improvement

A very useful improvement can be made to a Harmoniker (G-E *Ham News* Vol. 4 No. 6) if a standing wave indicator is added. The sketch (see Fig. 6) shows how three neon bulbs are placed in the circuit and wired across each junction of the network. When all three neon bulbs glow with equal brilliancy the mismatch is nil. Any difference in glow between the bulbs indicates that a mismatch is present.

Mechanically, the bulbs must be placed inside the Harmoniker box so that the box remains completely shielded. I accomplished this by using small screened holes through which the neon bulbs could be observed. The series resistors indicated in the circuit diagram are of a value which will allow the neon bulbs to light normally and not burn out, and this value depends upon the type of Harmoniker used and the power of the transmitter used.

F. L. Taylor, W8AW

(Editor's Note: There are six types of neon lamps that will operate in this sort of circuit. Two of them—NE-2 and NE-51—are 1/25-watt lamps. Four of them—NE-17, NE-45, NE-48 and NE-57—are quarter-watt lamps. The following list gives the correct value of resistance to use with each of these lamps, depending on the voltage in the Harmoniker:

Lamps NE-2 and NE-51—750,000 ohms for 250–300 volts; 1.0 megohm for 300–375 volts; 1.2 megohm for 375–450 volts; 1.6 megohm for 450–600 volts.

Lamps NE-45 and NE-57—82,000 ohms for 250–300 volts; 120,000 ohms for 300–375 volts; 150,000 ohms for 375–450 volts; 200,000 ohms for 450–600 volts.

Lamps—NE-17 and NE-48—110,000 ohms for 250–300 volts; 150,000 ohms for 300–375 volts; 180,000 ohms for 375–450 volts; 240,000 ohms for 450–600 volts.

Each resistor should have a wattage rating approximately three times the wattage rating of the lamp with which it is used.

The voltage in the Harmoniker can be computed from the formula given on page 6 of Vol. 4 No. 6 *Ham News*. Because these neon bulbs will not light when too low a voltage is placed on them, this whole idea is restricted to Harmonikers used with transmitters of several hundred watts output.—*Lighthouse Larry.*)

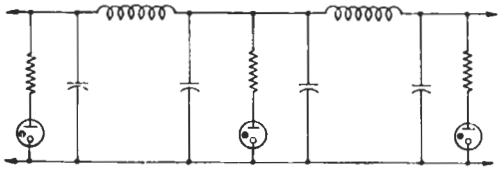

Figure 6

Drilling Window Glass

Ever try to bring an antenna lead-in through a window? I was puzzled as to how to get the holes in the glass, when I hit upon the idea of using a BB gun. I took careful aim, and "drilled" two holes, an inch apart, in the window.

The holes placed by this method have a diameter of about one-eighth inch. I needed holes one-fourth inch in diamater, but I solved this problem by reaming the holes with a one-half inch taper reamer.

I am pretty sure that you won't find a quicker way than this for putting holes in glass. If you are doubtful, try it first on a piece of scrap glass.

Donald Valentine

Removing Miniductor Turns

When using the Barker & Williamson Miniductor coils removing turns sometimes is a problem, especially when you want to prune the coil to the correct inductance and only need to remove one or two turns. I have found it is extremely simple to do in this manner. Merely place a hot soldering iron on the wire near the plastic support piece. As the wire becomes warm, it will pull out of the plastic piece easily. Repeat this process for each quarter-turn to remove as much wire as desired.

Jos. J. Cobry, VE6DR

TV Herringbone Pattern

If you or one of your neighbors are having trouble with television interference that you are unable to find, check around and see if there are any lamp bulbs with carbon filaments in use, either in the immediate vicinity or in some of the nearby houses. When these lamps are faulty they radiate broad bands of r.f. energy. The pattern on the TV screen caused by these lamps will usually be horizontal bands, sometimes in the herringbone style and other times just broad dark bands.

The solution is to replace the carbon filament lamp with a modern lamp, and make sure that the old lamp bulb gets destroyed.

C. D. Birkhahn, W2PKN

(Editor's Note: A photograph of this effect, from the files of the General Electric Lamp Division, is shown in Fig. 7. Television channels 2, 3, 4 and 5 are the channels most affected by this sort of radiation, with channel 4 seeming to receive the largest part of it.—*Lighthouse Larry.*)

Figure 7

Ceramic Coil Form Terminals

Many types of slug-tuned ceramic coil forms have been available in the past few years on the surplus market. Some of these have no terminals on them, that is, no place to connect the wire on each end after a coil has been wound. It is rather difficult to do a neat winding job if you are unable to anchor the ends of the wire; so faced with this problem, I came up with the following solution.

Procure some $\frac{1}{16}$ inch thick bakelite, poly or fiber, and cut round or square pieces which can be drilled with a hole slightly smaller than the diameter of the ceramic form. Also drill two small holes to serve as a tie point for the wire. Next, cut a slot in the material with a hacksaw. You will find that the pieces will now slide on the ceramic form and make a tight fit. The advantage of this method is that the terminals may be adjusted to any position on the form, so as to be close to the end of the coil winding, regardless of the length of the winding. After the coil is complete, the terminal pieces may be cemented to the ceramic form.

The sketch gives the details on the terminal pieces. See Fig. 8.

Moe Joffee, W2BNY

Figure 8

Drilling Panel Holes

The amateur constructor who has to bore a number of holes for toggle switches, potentiometers, miniature tube sockets and other holes of the same approximate diameter will find this trick of value in saving time and skinned knuckles.

Purchase several sizes of round "rat-tail" files. These should cover the range of size from one-quarter inch up to the largest size hole you wish to drill. The half-inch size, for example, is ideal for toggle-switch holes. When these files are placed in a brace and rotated backwards the file bores a smooth round hole in a short length of time. By testing the diameter with calipers and then marking the desired point on the file with chalk or string, the hole can be made a size desired without removing the file and measuring the hole from time to time. A quarter-inch hole can be drilled first with a hand-drill or an electric drill to serve as a pilot hole for the file.

S. L. Peppin, VE1BN

Mounting Trimmer Condensers

Small compression-mica trimmer condensers are sometimes difficult to mount so that they can easily be adjusted from the top of the chassis. To solve this problem neatly, I solder the condenser terminals to the terminals of an octal socket, in such a way that the adjusting screw on the condenser is aligned with the hole in the socket. The socket is then mounted on the chassis in the usual way. Or, if you desire, the socket can be mounted under the chassis and a hole of the proper size to take the shaft of the screwdriver can be drilled in the chassis directly over the socket. This is an extremely rigid support and is far superior to any other method of mounting with such ease of accessibility.

Richard E. Carrier

R.F. Ammeter Switch

It is possible to employ only one r.f. ammeter to measure the antenna current in both sides of the transmission line if care is taken to maintain a balanced and symmetrical line. My solution to this problem is as follows:

Use a triple-pole double-throw ceramic wafer switch. See Fig. 9. A switch of this sort, when not switched under load, is capable of handling 5 amperes with no difficulty. If a greater current capacity is required, use two wafers in parallel.

Note that the wire from A-1 to C-3 and the wire from B-3 to C-1 run along with the metering wire from B-1 to C-2. Regardless of where the meter is placed, these two wires should parallel the metering wire. By running the wires in this manner the transmission line impedance can be approximated and thus prevent an impedance "bump" in the line.

C. Ray Wagner, W2FEN

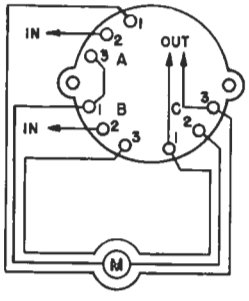

Figure 9

Tube Carton Source

A few years after getting his license the average amateur has a collection of radio tubes which are a chore to store properly. Receiving tubes generally end up in a cardboard box, usually without the protection of the original tube carton. I had this problem myself until I found this solution.

Procure several of the corrugated cardboard containers that hold fluorescent lamps. These are the same length as the fluorescent lamp and just large enough to be a snug fit. Cut these cartons into lengths which will accommodate your receiver tubes. Leave enough length so that a flap can be cut on each end and folded over. Seal this flap with a label on which you have written the tube type number.

These fluorescent lamp cartons come in different sizes, depending on the size of the lamp, and these different sizes will hold practically any size receiving tube, from the miniatures up through the large glass types.

James F. Glennon, W2RRR

Relay For A.C. or D.C. Use

The readers of the G-E *Ham News* are well aware of the current problems involved in providing suitable emergency communications, whether fixed or mobile, for the many types of jobs that amateurs are doing. Many groups of amateurs agree that the solution to the equipment problem involves the design and construction of good low-power equipment which can be used with a variety of power supplies, whether they be a.c. or 6-volt powered.

The weak spot in many units appears to be in providing a good relay switching system for push-to-talk operation, which is a practical necessity for almost any emergency communication gear. Most of us think in terms of low-voltage relays—6 volts or so. Using relays of this type the situation becomes awkward. If you use a 6-volt a.c. relay it will tend to overheat and burn up on d.c. and if you use a 6-volt d.c. relay you must provide a rectifier system when running from an a.c. source.

A simple solution to this problem is to use a d.c. relay which has a high-voltage operating coil. For example, one well-known relay manufacturer makes relays which operate on either 120 or 240 volts d.c. at a power consumption of two watts. Thus the 120-volt relay requires 17 mils current and the 240-volt relay requires 8 mils operating current. If the latter relay is used it may be powered directly from the high voltage supply. Most equipment installations can spare 8 mils for this purpose. In the case of the 120-volt relay, a dropping resistor can be used to supply the 120 volts directly from the high-voltage supply. At any rate, whenever the transmitter is powered, a source of high-voltage must be turned on, whether the primary source be 120 volts a.c. or 6 volts d.c., and this high-voltage source can very easily supply operating current to a high-voltage d.c. relay.

S. G. Reque, W2FZW

Making Meter Shunts

Many amateurs, from time to time, want to make higher-range milliammeters from lower-range units. These low-range meters may have basic movements anywhere from 0–1 to 0–5 mils and by appropriate shunt resistors these can be adapted to read almost any current.

The calculations of resistance value for a shunt to make a given meter read 0–300 mils, for example, are not too difficult. However, the answer usually comes out to be a fraction of an ohm. Everything is just dandy, except that the average ham has no way of accurately measuring such small resistance.

After much scratching of his head, he gets a bright idea. Look in a wire table and there, in plain print, it says that No. 30 wire has a resistance of 0.1052 ohms per foot. With a ruler and some arithmetic the problem should be solved.

I've been through all this many times, and in my hands, the problem is solved—but only approximately. Upon comparison with a good meter, my shunts are usually off by two to a dozen scale divisions. This may be due to methods of fastening the shunt to lugs or binding posts on the meter, or the size or composition of the wire may be non-uniform, or maybe it's just part of the general cussedness of things.

Now, I think I've got the problem licked by this device: I cut my shunt a little too long so that the error is always on the side of the meter reading too high (which means the wire is longer than is necessary). Then, with a good meter in series with mine and also in series with a dry-cell and a resistor that will give about mid-scale reading, I run a little solder from the lug out on the shunt wire itself, thus lowering the shunt resistance. This process is repeated until the two meters give equal readings. Before you try this stunt, make sure that the shunt is mounted permanently on the meter, as you won't want to change anything after you get the shunt exactly the right resistance.

Milton I. Schwalbe, W4VP

SWEEPING *the* SPECTRUM

It has been a difficult job picking the winning entries for this issue of the *Ham News*. Each of the Tricks and Topics entries that I get is the pet stunt of some clever amateur, and most of the entries deserve publication. So, my job has been to select the "excellent" from among the "very good."

Unfortunately, I believe that there are no really new ideas, so some of you may find tricks that are old to you. If this is the case, congratulate yourself, because you were clever enough to have thought of the idea first. On the other hand, maybe you shouldn't feel proud, as you might have sent the idea to me and received that ten dollars worth of tubes yourself.

Speaking of money, I still need lots of good ideas for future Tricks and Topics columns. How did you solve that last problem that almost stumped you? Whether the idea is about tubes, antennas, or circuits—as long as it concerns amateur radio—I would like to hear about it. For each "trick" published you will receive a certificate entitling you to $10 worth of G-E tubes.

Mark your letter "Entry for Tricks and Topics" and send it to Lighthouse Larry, Bldg. 267, General Electric Co., Schenectady 5, New York. (In Canada send it to Canadian General Electric Co., Ltd., Toronto, Ontario.)

* * *

I have been utterly amazed by your response to the G.E. *Ham News* bound volume. It seems that everyone wants one! As you may recall, when I originally proposed the idea in this column of the *Ham News*, I was not at all sure that the idea would go over with the *Ham News* readers, with the result that we were cautious about the matter, and prepared only a small number of books. These were sold in the first few weeks.

Since then, we have had trouble keeping up with the demand. Many of you who sent money in have had to wait almost two months to get your book. I am extremely sorry for this delay, but this wait was occasioned by trouble at the bindery.

When this column appears in print the bound volume situation should be well in hand, and I will be happy to receive more orders. The bound volume under discussion contains all copies of the G.E. *Ham News* from Vol. 1 No. 1 through Vol. 5 No. 6 and sells for $2.00 postpaid. Orders may be addressed to Lighthouse Larry, Bldg. 267, General Electric Company, Schenectady 5, New York. Please make remittance payable to General Electric Co.

* * *

On September 13 the General Electric Company sponsored a Civil Defense Conference at Electronics Park in Syracuse. Present were more than 300 people, representing 3 countries, 30 states and 70 cities. Many of those present were either city mayors or local civil defense heads. The purpose of the conference was to give municipal government heads the opportunity to get the latest information on civil defense from speakers prominent in government, industrial and amateur circles.

Col. W. M. Talbot, Director, Attack Warning and Communications, Federal Civil Defense Administration, gave a very stirring talk on Federal Planning and State Systems. Brig. General Jacob E. Smart, Vice Commander, Eastern Air Defense Command, told of the part that the civilian must take in aiding the military in civil defense.

A very interesting comment came from Major General Kirke B. Lawton, Deputy Chief Signal Officer, Dept. of the Army. He said the bane of civil defense is the "nice" person who refuses to do anything for civil defense. I'll bet every radio club has one or more of these people in its ranks. I wish that you might have been there. I believe you would have been convinced of the seriousness of the threat now posed to this country. As General Lawton said, complacency on the part of the American citizen is one of Russia's secret weapons.

The new General Electric movie on civil defense entitled *And a Voice Shall Be Heard*, prepared by The March of Time for G.E., had its preview at the conference. This movie tells the story of civil defense in Onondaga County, New York. The opening shot shows an amateur working on his antenna. While the film is not primarily concerned with amateur communication work, nevertheless the part the amateur is capable of taking in this work is accurately presented.

Copies of this film are available on loan to organizations wishing to borrow it. The running time is approximately 20 minutes, and the film is 16 mm. sound. Address any requests for this film to your nearest General Electric office.

* * *

A report issued recently by the Bureau of the Census states that approximately 95 per cent of all homes have radio sets, and about 12 per cent of all homes have television. Looks like radio is here to stay and television is increasing in popularity. How's your TVI?

— Lighthouse Larry

That Old Nut and Bolt Trick

As you *Ham News* readers may recall, I started something a year or so ago when I mentioned a favorite trick of mine for starting machine nuts on bolts that were in out-of-the-way places, and ever since then I have had other amateurs sending in their pet ideas on the same subject. The latest group of letters included these four ideas.

— Lighthouse Larry

After reading in *Ham News* about how the boys put a nut on the end of an inaccessible screw, I would like to tell you how I do it. I use a pencil without any lead, and screw the nut on the pointed end, so that it just holds. Then I place the nut over the end of the screw and push the nut off onto the screw with a scriber. The pencil is held against the screw until the scriber is used to start the nut on the screw threads.

Charles Affleck, W7MAN

I thought surely that my pet idea for holding and placing nuts would be published by now, but as long as it hasn't been, here it is. Instead of using solder, as W6AKQ does, I use a screwdriver. Lay the nut on the bench and force the bit of the screwdriver straight down through the first thread. (An ordinary knob screwdriver fits No. 6 nuts to a "T.") As you force the bit in you will hear a slight snap as the bit goes through the first thread. Use the screwdriver as a wrench, and as you screw the nut on, the screw will come through the nut and force the screwdriver out the rear. It's worked for me for years.

Jack Watt, W8HYQ/W8GGT

Why use any of the ideas in the March-April 1951 *Ham News* for mounting screws? Why not make yourself a tool for that very purpose? Here is how I made one. Get a small alligator-type spring clip and bend the nose into a V and an inverted V so that the nose will fit on a machine nut. Next get a length of flexible spring and solder it to the rear of the clip. Finally, take a screwdriver which has outlived its usefulness and solder the spring on the blade end of the screwdriver. The screwdriver will now serve as the handle for your tool. Clip the nut into the jaws of the alligator clip, and push the nut to any corner of the chassis you desire.

Q. E. McDuffie, W9JSY

My favorite method of starting a nut on a screw which I can't reach with my fingers involves the use of a pencil. Remember the penny pencil with the tapered eraser? That's the type I use. The nut can be twisted on the eraser end, and then placed right on the screw. In most cases the eraser will not come completely through the nut, so that the screw can be started while the nut is still on the eraser.

Dave Blosser, W8MDL

PARASITICS

This is more of a clarification than a correction, and it pertains to the circuit diagram on page 2 of the September-October 1951 *Ham News*. The connection from the top of S_3 does connect to pin 2 of the 6AL5, despite the fact that no dot is shown at the connection point.

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