

K9YA Telegraph



K9YA Telegraph

Robert F. Heytow Memorial Radio Club

Volume 7, Issue 12, December 2010



K8IQY Magic Box

More Than a Bag of Tricks

Philip Cala-Lazar, K9PL

Before building the K8IQY Magic Box my favorite magic box was the 1952 British film, *The Magic Box*, a semi-biographical account of English cinema pioneer and inventor William Friese-Greene. In a pivotal scene, Laurence Olivier

as the local London bobby is recruited off his beat to view Friese-Greene's (Robert Donat) first (1889) successful moving picture. Olivier's reaction to the filmed Hyde Park vignette is that of disbelief and stunned amazement followed by the comment, "You must be a very happy man." You will be a very happy ham after completing this Magic Box.

Designed by Jim Kortge, K8IQY, the Magic Box comes courtesy of the 4SQRP Group also responsible for the previously reviewed Test Set (December 2009, *K9YA Telegraph*) and EZ Keyer (April 2010, *K9YA Telegraph*).

So what is the K8IQY Magic Box and what feats of prestidigitation does it perform?

Specifications and design features from the 4SQRP Web site

- Creates transceiver operation using a separate receiver and transmitter.
- Completely automatic operation.
- Greater than 80dB isolation between the transmitter and receiver during transmit.
- All solid-state MOSFET switching.
- Negligible receive or transmit signal loss through the switch.
- Sequenced switching—the receiver is off first and on last compared to the transmitter.

- Receiver audio is also switched to provide complete audio muting during transmit.
- Smooth 700Hz Sine Wave Sidetone
- Fully automatic Full QSK up to 50-wpm. Semi-QSK can be jumper selected.
- Tested at 10 watts and probably will safely go higher.
- Covers all HF ham bands, 160-10 meters.

Now that's a lot of features—to paraphrase Homer Simpson, "The Magic Box, what can't it do?"

*"The Magic Box,
what can't it do?"*

This isn't your father's (or your) Dow-Key antenna relay. Like all 4SQRP kits I've built this one comprises high quality components, a flawless PCB and clear, easy to understand, construction manual. Despite its high parts count, thanks to its relatively large PCB, this is an easy kit to build, but it did take me every bit of the eight hours (and a bit more) noted

by the club to complete. To run certain of the smoke tests requires a transmitter and a receiver; I have QRP transceivers aplenty, but no separates (because in pre-Magic Box times I considered it too much of a hassle). Therefore, I designated the PFR-3 as receiver and the NorCal 40A as transmitter; together we swimmingly passed all smoke tests.

CONTINUED - MAGIC BOX ON PAGE 8

Inside This Issue...

<i>K8IQY Magic Box</i>	<i>Page 1</i>
<i>NG9D on YouTube</i>	<i>Page 2</i>
<i>I Remember John</i>	<i>Page 4</i>
<i>The Elmer Letters - Part II</i>	<i>Page 6</i>
<i>Ham Quips</i>	<i>Page 7</i>

Philip Cala-Lazar, K9PL
Editor

Mike Dinelli, N9BOR
Layout

Dick Sylvan, W9CBT
Staff Cartoonist

Rod Newkirk, VA3ZBB
Contributing Editor



Robert F. Heytow
Memorial Radio Club

www.k9ya.org
telegraph@k9ya.org

NG9D on YouTube

Lynn Hagar, NG9D



20-meter Station in Roll-Top Desk; 750 mW

First, please let me express my thanks to Philip, K9PL, and Mike, N9BOR, for inviting me to write an article for the *K9YA Telegraph* regarding the ham radio videos I have posted on the Internet Web site "YouTube." I enjoy reading the *Telegraph* very much, especially accounts of on-air activities.

There are probably hundreds, or more, ham operators posting amateur radio videos on YouTube. Some of those are really fantastic! If you search

YouTube using some ham radio-related keywords you will see what I mean! (Steve, the "Goathiker," WGØAT, creates great, entertaining ham radio videos.) Here is how I started.

A few years ago I found a bit more time to devote to ham radio. A single QSO with an east coast station using a 750 mW, 20m CW transmitter and an attic dipole was all it took to recharge my interest in ham radio.

Yes, that is a Radio Shack DX-390 receiver and a Ramsey 20m QRP transmitter/keyer. That was the set-up that got me into QRP operation. I ordered a 40m QRP transceiver kit from Ten-Tec, was delighted with it and ordered more of them.

These inexpensive little radio kits reminded me (in some vague, yet comforting way) of a Heathkit HW-101 I made long ago. I was happy to learn there are still enough hams buying a kit once in a while to keep our manufacturers in business.

The QRP CW contacts were fun. I built a couple of QRP transmitters in the past, but never did much QRP operation. I liked trying different wire antenna configurations and found the combination of QRP and antenna experimentation a rewarding way to learn about RF radiation and propagation. I found special enjoyment when someone took the time to email me an audio file (or mail me a CD) of my on-the-air signal. I got a real nice recording of my 300 mW 40m transmitter from Rob, KØRU, (then W8YRB).



40-meter XMTR; 300 mW



Ten Tec Kits

Then it occurred to me I could share recordings of other stations via YouTube. Of course, the recordings would also have video, and they could be shared with the general ham radio community. After posting a few videos of stations I had recorded, I received some very nice feedback from them. Others happened to see the videos and liked them too.



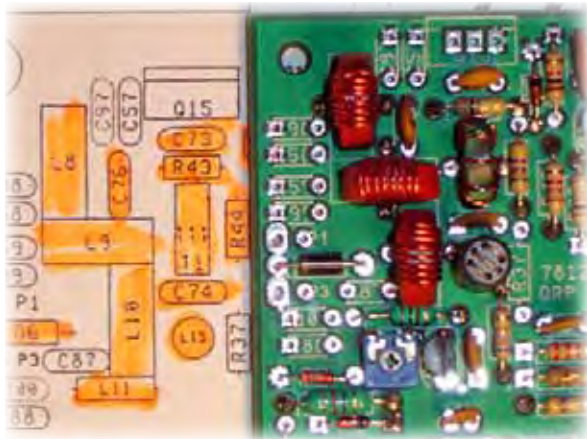
Robert F. Heytow
Memorial Radio Club

www.k9ya.org
telegraph@k9ya.org

K9YA Telegraph

YouTube allows folks to “broadcast” themselves to the whole world. The potential audience is a large part of the entire human population of planet earth! (Well, maybe not China and a few other countries.) That humbling thought made me wish I had something a bit more profound to say! Sorry, I’m still working on that. Anyway, in the meantime, I just post ham radio videos for the amusement of fellow radio operators, and maybe for a few other technically inclined individuals who might be interested in knowing more about this wonderful hobby of amateur radio.

Ham radio has many interesting aspects to explore. Right now I am having fun building simple CW transmitters and receivers, and communicating via Morse code using homemade antennas. So that is what I show on my YouTube “Channel.” <http://www.youtube.com/user/NG9D>



40-meter CW Receiver

Viewers from the United Kingdom currently watch about 50 or 60 times per day, German viewers watch about 30 times per day. Canadian, Japanese and Italian viewers each watch about 20 times per day. Australian and Russian viewers watch about 10 times per day, more-or-less. Of these 180,000 views, an Ethiopian viewer has watched twice.

Videos of ham radio kits and my “Hula-Loop” antenna seem to be popular. Ninety-five percent of my viewers are male. The age demographics histogram is skewed a bit, with most viewers being let’s say, “middle-aged” like me.

By the way, the age histogram for viewer demographics is not the same for every country—some countries have a higher percentage of younger viewers and I wonder if their ham radio population is younger too, but I digress.

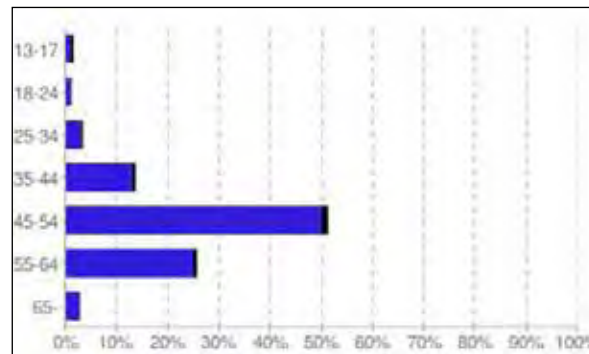


It would probably be too much to ask for little videos like this to popularize our wonderful hobby in such a way as to result in more licensed hams operators or more CW operators! But if my videos have caused at least one person to become interested in amateur radio, learn (or use) Morse code, or build a radio kit—then I would be satisfied.

YouTube provides statistics for its users. In the year-and-a-half since I posted my first video, they have been viewed 180,000 times. Currently, my videos are watched over 700 times per day.



YouTube Channel NG9D Views Per Day



YouTube Channel NG9D Age Demographics

Almost 90% of my viewers are in the United States and Europe:

World Region	Approx. Views
USA	47%
Europe	40%
Asia	7%
South America	4%
Middle East	1%
Africa	1%

I have gotten some feedback from non-hams learning Morse code or building radios, so maybe there is something to this theory. But, basically, I just hope my radio videos are enjoyable to watch and possibly educational or motivational for new or potential future amateur radio operators, kit builders and Morse code operators.

I’ve been a ham radio operator since 1972 and work as a structural engineer in the Chicago area. My past call signs were WNØHZK, WBØHZK, NØCUZ, KDØDZ and ZS6LAH. See you on-air! ■



Robert F. Heytow Memorial Radio Club

www.k9ya.org
telegraph@k9ya.org

I Remember John

Scott B. Laughlin, N7NET



As the owner/operator of a large diesel rig, John hauled logs from Oregon's Coast Range Mountains to the Willamette Valley sawmills. Most of his time was spent outside the footprint of a mighty mountaintop amateur radio repeater many of us monitored. Therefore, his stories of June snowstorms or spinning out on muddy grades were horror stories I enjoyed hearing. He was full of them. The best one, however, concerned George,

another trucker.

On his return to the log landing for the last load of the day, George encountered a cow elk bedded down in the middle of the road. She refused to move.

Unpredictable as they are, coupled with their size and strength, one must keep a safe distance. George knew that. He'd tooted his air horn, waved his arms, and shouted at the top of his lungs. Nothing worked. To make matters worse, when a movement caught his eye he noticed that John had just rolled up behind him, waiting and watching. George got out of his truck again and hurled a sharp rock at the old girl. It struck her right behind the left eye and she dropped over dead as a horseshoe. George regretted having killed her but even more, he hated the fact that John had witnessed it. He knew when John got within range of the repeater he'd have a new story to tell.

"Elk season isn't far off, folks," John announced over the radio as he motored into town. "Forget the guns. Forget the ammo. Take George, instead." And then he proceeded with the details.

I retired the following spring. John was not far behind and anxious for him and Sue to spend the summer in Yellowstone. His eagerness had no influence on Mother Nature, and winter was slow to depart the high Rocky Mountain country of Wyoming. However,

the delay afforded him time to study the radio manual and upgrade to Extra Class. Armed with a new call, K7HY, he and Sue lost no time in their departure after park management sent word that the roads were clear.

Barb and I entertained the same notion, but thirty years of cold, dreary winters had left its mark on us. We headed south. After a couple of weeks of wandering we were sunning ourselves near Ajo, Arizona (pronounced Ah-hoe). Life was quiet. Haste was a foreign word. Folks with their sights set on a jug of whiskey, a bag of spuds, or even a loaf of bread never had to leave town. But those in need of a pair of socks, a necktie, or ham radio stuff are obligated to trek the 135 miles across the Sonoran Desert to Phoenix.

Barb and I were returning from a Phoenix radio store with a new G5RV antenna when Mona, the park manager, flagged us down. She had a message from Yellowstone. WE NEED TO DO SOME CW. CALL ME, the note said.

What a surprise! CW was not easy for John, and though he didn't admit it, he was never overly anxious to use it. I called John and we set a schedule to meet on the Maritime Net.

The following day we made contact and then moved off the net frequency and found a quiet place on the 20-meter band. For the remainder of the summer we chatted during his lunch hour every

Monday, Wednesday, and Friday.

Time passed too quickly, it seemed, and I was surprised when John announced that the park was closing the following week. He and Sue were heading back to Oregon. A month later they planned to drive to Tennessee to visit their eldest son. In spite of the added mileage, Ajo was a waypoint in the journey, and we were pleased.

On the morning of their scheduled arrival I was monitoring 2-meters, prepared to talk them in to our hideaway, when two hams on their way to Mexico came into radio range.

"How do you pronounce A-J-O?" one of them asked.

"I don't know. A-Joe? It's sure easier to spell than that place up in New Mexico."

*"Elk season isn't
far off, folks..."*



Robert F. Heytow
Memorial Radio Club

www.k9ya.org
telegraph@k9ya.org

“What place?”

“You know, Alba-Q-Q.”

A minute longer and their signals began breaking up. Then they were gone. John and Sue arrived a quarter-hour later. The four of us had become extended family and it was a grand reunion.

The following morning he mentioned that he needed a new belt. “Where’d you get yours?” he asked.

“Mexico.”

“Let’s go down there and get one for me.”

“Okay, but Mexico is strict about guns. Even a single cartridge rolling around on the floor mat will land us in jail. Let’s take my Thumper.”

“That old motorcycle?”

“Sure. It’s safer. There’s no place to hide anything on it.”

I hadn’t been in Mexico for more than a year and I got us lost. Before long we found ourselves on Highway 2, headed for Santa Ana. After turning back toward Sonoita we encountered a truckload of fellows in ragged blue jeans bearing flashlights and machine guns. They blocked the highway and motioned us on to the shoulder.

My limited Spanish was a match for their English. After a few exchanges I understood they were claiming to be Mexico Customs agents looking for guns and drugs. First they patted us both down, then each agent took his turn inspecting the old dirt bike. After a time, when it was obvious we weren’t going to fork over a fistful of cash, the spokesman pointed toward the border.

“Go,” he said.

We didn’t shop for a belt.

*“That old
motorcycle?”*

The following autumn, the last time I saw John, the four of us arranged to meet at Crater Lake National Park. Arriving there, we scoured the campground, but they were nowhere to be found. I located a pay phone and dialed his cell number. They’d been delayed and were, at that very moment, leaving Yellowstone. They weren’t sure where they would spend their first night, but the second night they planned to be at a RV park in Burns, Oregon. Since Barb and I were headed for Idaho we altered our plans to meet there. The following morning, after breakfast, we raced across 400 miles of high desert.

The sun was low when we swung into the park John had mentioned. Their motor home was nowhere in sight. Before I could find a telephone booth the radio came to life. It was John. He was too far out for solid copy, but I knew he was close. Fifteen minutes later they were in the drive. We were pleased to learn that they’d brought refreshments.

In borrowed chairs, we sat around a smokeless campfire sipping black rum and reiterating the summer’s highlights. Barb and I thought we had pretty good stories, but none of ours measured up to John sticking his tongue out at an overwrought buffalo.

“How was I to know it was a mating gesture?” he asked.

Too soon the black rum was gone. It was late and it was time to turn in.

I wish we could do it again. ■

Copyright 2010 © Scott B. Laughlin. All rights reserved.



A Special Thank You to Our 2010 Reader/Authors

Bob Ballantine, W8SU

Bob Cashdollar, NR8U

Anthony Catalano, WW2W

Cliff Cheng, Ph.D., AC6C

Charlie Cotterman, KA8OQF

Bob Dillon, WB9LTN

Erwin R. Gaines, W5OTP

Rich Glassner, NØEAX

Chuck Guenther, NIØC

Lynn Hagar, NG9D

Rick Hiller, W5RH

Chuck Hurley, K1LTI

Chris Johnson, WA2ZDY/4

John Kirk, VK4TJ

Hank Kohl, K8DD

Scott Laughlin, N7NET

Hal Mandel, W4HBM

Joe Medsker, K8LKC

Paul W. Ross, W3FIS

Paul Signorelli, WØRW

Steve, N9WAT

James Wades, WB8SIW

Clifford R. Williams, W2CRW

Norman Wilson, N6JV



Robert F. Heytow
Memorial Radio Club

www.k9ya.org
telegraph@k9ya.org

The Elmer Letters

The Elmering Relationship of a Mid-1950s Novice: Part II

Cliff Cheng, Ph.D., AC6C



The problem in recent decades is not just dumbed-down licensing requirements. Frankly, it is also the ego that gets in the way of developing new talent to revitalize ham radio. Kids were the lifeblood of ham radio. It was not just their age and, hopefully, longevity as a lifelong ham, but their relatively more modest egos. Kids are more teachable. Few kids get into ham radio today. What interferes with teachability is not only the

ego but motives other than an interest in ham radio as a hobby. We are more likely to get someone in their 50s or older who took a C.E.R.T. (Community Emergency Response Team) class or who wants to use ham radio for a non-radio hobby purpose, e.g., off-road vehicle club, than we are someone interested in radio electronics. *Today, without the would-be ham's teach-ability an elmer is more like a tech support technician reduced to helping an appliance operator program their HT.*

Dick weekly rode his bike to Howard's shack after school for several months. Sometimes, his father, Travis Morgan, would drive him there after dinner. Howard and Dick spent about an hour or so together each time. During these sessions, Howard answered Dick's questions arising from his study of the license manual. Howard sent code practice to Dick with an oscillator and checked his copy. During the week Dick practiced code on his own and learned quickly. Note: Dick had initiative. He was willing to work on his own. He had to learn radio-electronics to pass his exam and stay on the air.

Howard gave Dick his Novice exam, which he passed in early February 1956. Dick's Novice license, KN6RAH (which will be posted with his Novice story on www.Novicehistory.org) was dated March 7, 1956.

John Dilks, K2TQN, *QST's* vintage radio columnist, said in response to my posting:

With youths, the Elmer needs to counsel the parents so they realize the importance of purchasing good gear and antennas. And, the importance of the youth to continue getting, hopefully, good grades in school. Also point out the potential scholarships that are available. With youths, the Elmering might continue for years, into adulthood. Be prepared to take the time.

Of course, some elmers helped Novices build their own equipment.

In Dick's case, his father, Travis was very supportive of Dick's interest in ham radio. Adding to this, Travis became friends with Howard. Howard's letters often contained greetings for Travis. While Dick earned money gardening to pay for his Novice rig, Travis made up the difference. Travis also helped Dick put up his antenna.

In early September 1956, Dick's family moved to Whittier in Los Angeles County, California and started a correspondence with Howard. In the first postcard, dated September 28, 1956, Howard and Dick re-establish contact.



Click Here to View September 28, 1956 Postcard

Howard mentions he misses Dick and Travis. Howard did not hear Dick on the air; in that era, skedding a QSO was often hit or miss.

In the following correspondence, Howard tells Dick he is proud of him passing his General. In the traditional elmering relationship, the elmer took parental pride in the achievements of his/her student.

Click Here to View December 17, 1956 letter, page 1

In this particular traditional elmering relationship the student's father was the elmer's friend. This



Robert F. Heytow
Memorial Radio Club

www.k9ya.org
telegraph@k9ya.org

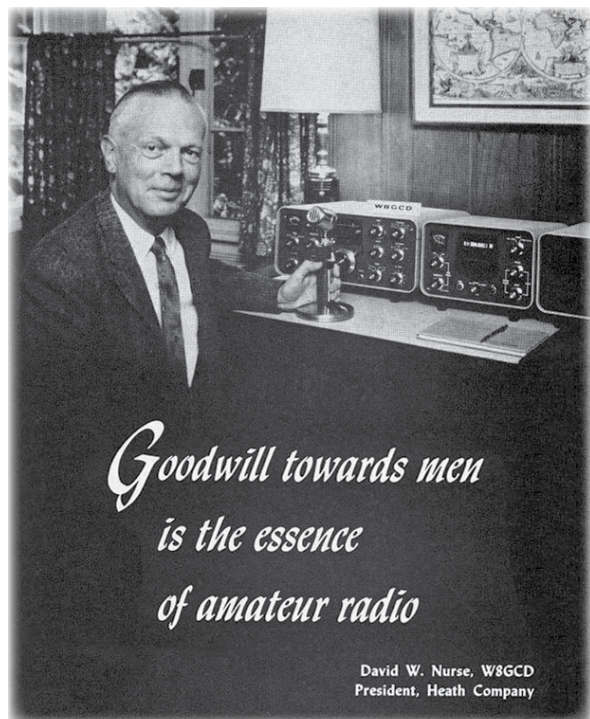
K9YA Telegraph

relationship negated any cause for envy; Travis' support of Dick's elmer was a good example for other elmering relationships!

Howard notes in his December 17, 1956 letter to Dick that passing the General is a "big day" in Dick's life. Dick passed his General in December 1956 and got his license with an effective date of January 31, 1957. Before published question pools in the early 1980s, the code-free Tech, one-day hams and other moves to reduce the standards of amateur radio, it was a major life achievement to earn an amateur radio license. It has been observed by many longtime hams that newer hams often do not appreciate ham radio. If you can get a ham radio license with as little effort as it takes today, it is not surprising there is not as much appreciation for ham radio. It is a crying shame with as much as ham radio has to offer; it too often goes to waste on those whom ham radio means little in their lives.



[Click Here to View December 17, 1956 letter, page 2](#)



To celebrate Dick earning his General, Howard gave him a microphone, a gift most appropriate to Dick's new phone privileges. Used to be earning phone privileges was a goal requiring much effort and dedication. More recently it is given away through dumbed-down exams with a passage rate in the high 90th percentile. The gift of a microphone from elmer to student acknowledged that they had made an important achievement in their life.

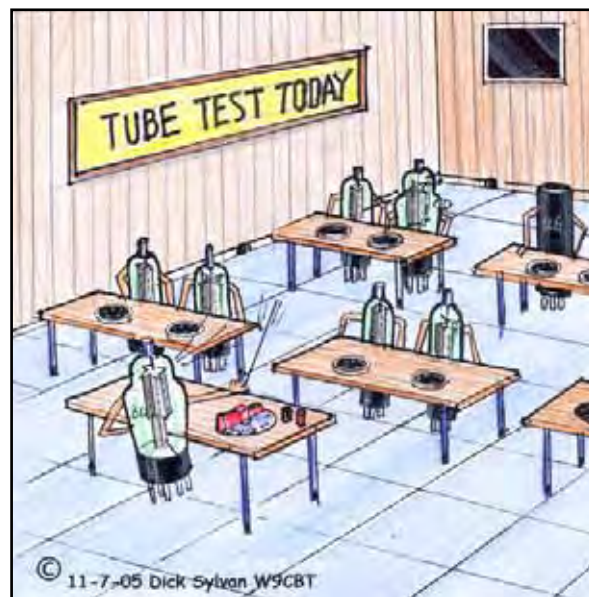
When he was studying for his Novice, Dick watched Howard make phone contacts. Howard would put Dick on the mike to say "Hi." Dick credits these very brief occasions as a third party as helping him overcome mike fright once he passed his General.



Howard stated, as an elmer, now that Dick passed his General, his duties were complete. In traditional elmering relationships, there is an implicit and sometimes an explicit expectation that elmers would not only help students earn the Novice, but the General as well. John Dilks, K2TQN, said, "Ham Clubs and many Elmers walk away once the test is passed and license received. A true Elmer will stick it out for some time and help them select the gear, get on the air and use the gear." ■

Copyright © 2010, Cliff Cheng, Ph.D., AC6C. All Rights Reserved.

Ham Quips DICK SYLVAN, W9CBT



AT THE SOUND OF THE BELL, PLUG-IN



Robert F. Heytow
Memorial Radio Club

www.k9ya.org
telegraph@k9ya.org



Robert F. Heytow
Memorial Radio Club

www.k9ya.org
telegraph@k9ya.org

K9YA Telegraph

About The Cover



Yes, that's Dash the Dog-Faced Ham snoozing on this month's cover. No doubt he is sleeping the good sleep and dreaming the happy dreams that can only be induced by simultaneously copying a CW QSO while paging through an absorbing amateur radio magazine and settled in a comfy chair. No sugar plum fairies for this operator; it's a desk groaning with shack-warming gear, an antenna braving the frigid gales of winter and a benevolent Kennelly-Heavyside layer that brings a smile to his muzzle.

Thanks to Jeff Murray, K1NSS, his creator, we are extremely pleased and honored to feature Dash on this year's holiday cover. There is much, much more to know about Jeff and Dash. Please visit these sites that are sure to bring a smile to *your* muzzle.

P.S. Don't miss his ham radio *manga*.

<http://www.dashtoons.com/>

<http://www.dashtoons.com/Buzz.html>

<http://stores.lulu.com/6sj7comics>

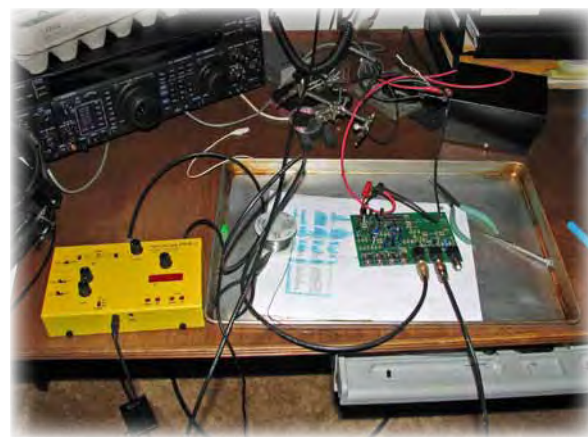
Reviews of Jeff's books in the *K9YA Telegraph*

lid, kid, space cadet, July 2009, p. 4

Sky BUDDIES, August 2010, p. 1

CONTINUED - MAGIC BOX FROM PAGE 1

The final smoke test was A-OK and time to move on to getting the PCB into its recommended enclosure, the one it was specifically designed to fit, the Ten Tec TP-41. I used the drill/punching template cum front label at <http://www.wa0itp.com/mbholetemplates.pdf> to lay-out the front and rear panels. Two labels were printed: one to do the layout dirty work of being center-punched, drilled and chassis punched. The second label was laminated with an Avery® self-adhesive laminating sheet, adhered to the front panel with 3M Photo Mount™ and the holes reopened with an Xacto® knife.



To complete the kit as desired I opted to add: SPST toggle switch for power; pushbutton, momentary-on switch to select tune; green LED (power); red LED (tune); and LED mounts for that "finished" look.

It's tough not to overdo the superlatives when discussing the Magic Box; everything goes through the control console—you key the Magic Box and it keys the transmitter, generates a side tone, provides tune and zero-beat functions, switches the antenna, mutes the receiver, supplies receiver audio; a very practical accessory, it works *super* nice. It offers a 700 Hz, output level adjustable sidetone; click-free QSK; and selectable, one-second delay semi-QSK. Bonus: the transmit LED flashes in synch with keying; a free light show. Furthermore, it's provided the incentive I needed to look seriously at receiver and transmitter kits. It will be *magic* to put them on the air hassle-free.

Again, my thanks to all in the 4SQRP Group for continuing to provide amateur radio operators with ingenious, quality, effective and value-priced kits. Big nods to Terry, WAØITP, and Paul, NØNBD, for their way above and beyond help in fulfilling my kit order.

This is getting to be a very good habit.

<http://www.k8iqy.com/miscellaneous/MagicBox/MagicBox.htm> ■