

Enhancing CW Operation of My S-Lines

By Dick Weber, K5IU

About sixteen years ago I bought an S-Line from a ham I knew at work. After hooking it up temporarily for a few CW QSOs on 20 meters, I put it on the top shelf of a clothes closet in our master bedroom with the idea that I would soon make room for it in my shack and begin using it. Soon turned into fourteen years. With the help of Bud, K7RMT, my 75S3A and 32S3 were finally put into full time use on CW. Although I was very happy with the overall performance of the pair, I was not happy with the sidetone.

I didn't like the pitch of the sidetone. It was higher than I liked. Second, I could not adjust the level of the sidetone as the 75S3A volume control was varied or set at different levels. And lastly, the sidetone was not a pleasant tone. The leading edge of the tone when making a dit or dah sounded like a heavy "thump." Another aspect of my CW operation was that the keyer I was using with the S-Line was one I built about 1975. It is a bare bones keyer that is very unforgiving. As a result, I needed a better

keyer and to resolve my problems with the 32S3's sidetone.

After looking at inexpensive keyers that were able to do grid block keying, the solution to my sidetone and keyer problems turned out to be quite simple. I bought an MFJ-401D Econo Keyer II and made some simple modifications to it. The stock keyer can be set up for grid block keying and has a small built-in speaker for the internal sidetone audio generator. There are controls accessible through access holes to vary the dot/dash ratio and to set the pitch of the sidetone. There is a speed control, a sidetone volume control, an on-off switch, and a switch to change between keyer and bug operation on the front panel as shown in **Figure 1**. Power can be supplied by either an internally mounted 9-volt battery or by an external 12 VDC source.



Figure #1 – Front Panel of MFJ-401D

The MFJ-401D was easily set up for grid block keying by following the instructions. The next step was to make use of the side tone generated by the keyer.

The first step was to install a chassis mount RCA phono jack on the rear

panel of the keyer. This was done by drilling a .250 (1/4) inch diameter hole near the upper left hand corner of the rear panel of the keyer. The jack was installed with a grounding lug under the nut used to secure the jack. The RCA phono jack I used came from Radio Shack, pn 274-346. It came with a grounding lug, a split washer, and a nut. This jack is used to connect the sidetone output of the keyer to the sidetone input on the 75S3A. **Figure 2** shows the rear of the keyer after the jack was installed.



Figure 2 – Keyer Rear with Newly Installed RCA Phono Jack in Upper Left Corner

The next step was to install a Radio Shack audio impedance matching transformer (pn 273-1380) and a 180k Ohm, 1/8-Watt resistor inside the keyer. These components are required to match the low impedance audio output of the keyer's sidetone generator to the high impedance sidetone input of the 75S3A. The transformer is very small and is easily mounted on the inside surface of the rear wall using epoxy adhesive as shown in **Figure 3**. There is ample room on the rear wall. The transformer was oriented so the high impedance output wires (blue and green)

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came out near the RCA phono jack.

The two leads from the keyer's PC board going to the speaker were unsoldered from the speaker and soldered to the low impedance leads (red and white) of the transformer using shrink tubing to cover the solder joints. Next, one of the high impedance leads (blue or green) was soldered to the ground lug under the nut that secures the just installed jack. The last step is to solder one lead of the 180k Ohm resistor to the center conductor lug of the RCA phono jack and solder the other lead of the resis-

inadvertently plugged into the "output" jack on the rear of the keyer, which is where you plug in the keying line to the transmitter. After the keyer is hooked up, you can set the frequency of the sidetone and dot/dash ration to your liking using the instructions that come with the keyer. After this, you're ready to go.

I mentioned earlier that there is a switch on the front panel of the MFJ-401D to switch between the keyer and bug operation.

MFJ makes a series of keyers that could be similarly modified. One is the MFJ-407D. It is advertised as a deluxe version of the one I used. In my case, using a modified MFJ-401D has greatly improved my enjoyment when operating my S-Line. To date I've modified two keyers. I plan to modify a third one to key a Viking Valiant that I will use with my 75A4. Here the value of one of these modified keyers comes into play. I can have an inexpensive keyer that will do grid block keying that also gives me a sidetone, whose tone and volume can be controlled. Getting my Valiant and 75A4 going is a future project, though I hope it doesn't take fourteen years.

Since the time I got my S-Line that had been stored for fourteen years on the air, another S-Line has somehow, quite mysteriously made its way into my station - thus the need for the second modified keyer. My first S-Line is a winged emblem 75S3A/32S3 pair. My second S-Line is a round emblem 75S3C/32S3A combination. Needless to say, the Collins bug has infected me. I have further proof.

I use two Vibroplex Vibrokeyers, which were older units that had some very faded, dingy beige paint with glued-on nameplates, although one was missing leaving an outline of the glue used to secure it. These looked out of place next to my pristine S-Lines.

I took the Vibrokeyers apart and painted the bases with paint that matches S-Line front panels. On one base, I mounted a Collins winged emblem and, on the other, I mounted a Collins round emblem. I also put on black paddles that I bought from Vibroplex in place of the red ones the Vibrokeyers came with. You can see how the winged emblem Vibrokeyer turned out in the photos in **Figure 4**.

I realize that for the purest these may not be works of Art.

But I like them.

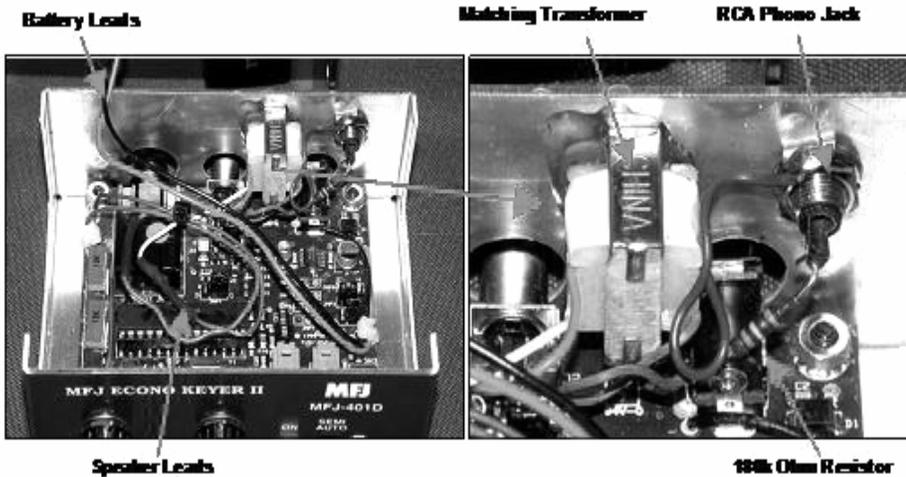


Figure 3 – Matching Transformer Installed on the Rear Wall Held With Epoxy

With these modifications, the MFJ keyer is almost ready. The line that normally goes to the sidetone jack of the 32S3 is now plugged into the newly installed RCA phono jack on the rear of the keyer. You'll have to be sure the sidetone line is not

When I want to have a continuously keyed signal, I put the keyer into the bug mode and hold the paddle to the dash side. I had originally planned to add a "key down" toggle switch to the keyer, but found that using the bug mode works just fine.

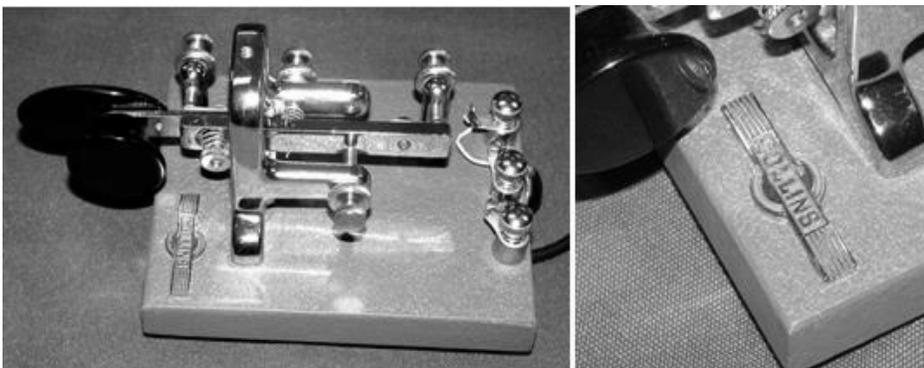


Figure 4 - "Winged Emblem" Vibrokeyer

CCA Web Site Redesign

By Brian Sokol KA9SRK

Today, the Collins Collectors Association web site is a great site in its own right. It is very informative and was definitely ahead of its time.

As technology moves forward, new features are available in the creation of web sites, and we are exploring new horizons for the CCA site. In doing so, we will also give the "look and feel" of the site an overhaul to bring it in line with current site designs.

Some of the features we are currently planning on include:

- A Member's Only Section
- Message Boards or Forums with:
 - A General or Public Section
 - A Member's Only Section
 - A Net Control Operator's Section
 - A Board of Director's Section
- Auto-Archived News, BoD Members, and other areas
- Net Alerts – this is a feature you can already see on the current home page
- Feedback/Suggestions Area

While this is not an all inclusive nor a restrictive list, these are just some of the features we are looking to implement.

Some features are nice to have items, such as the auto archival of news information on the home page. Other features will offer enhanced communication abilities.

An example is the Net Control Operator section of the Forums. Instead of the NCO's attempting to use email where emails can get crossed, someone doesn't click "Reply To All", etc., every one of the NCO's will be able to see all of the communications regarding who is covering a particular net on any given day.

Currently, the launch date with the first round of features is during the month of July, 2007.

First and foremost, the site is all about YOU, the CCA members. We're look-

ing to make the experience better and easier to use for you. Any and all suggestions are most welcome and all will be considered for implementation. Some may be "tested" and a survey may be issued on the forums.

As always, please feel free to ask questions, give me suggestions or feedback.

73,
Brian Sokol
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Screenshot of new Web site.



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Join Us on the Air!



- Sunday 14.263 mHz at 2000Z
- Tuesday 3805 kHz at 8pm CST
- Thursday 3805 kHz at 8pm CST
- Friday (West Coast) 3895 kHz at 10pm CST
- Sunday 10m AM 29.050 mHz at Noon CST
- 1st Wednesday AM 3880 kHz at 8pm CST

Sunday for Technical, Buy, Sell & Swap
Tues., Thurs., Fri., & Sunday for Ragchew

Call for Operators

Band conditions have not been the greatest, but the CCA Nets are still alive and well. No reservations are required. If you have a technical issue or some Collins related experience that you would like to share, please join us. Anyone that would like to volunteer as an NCO for any of our scheduled nets, please contact our CCA NET Manager Lloyd Rafalsky K4HWB.

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From the President

By Jack Mory KE3WV CCA President

As most of you have heard, I am now the CCA President. As stated in my message on our Web site, I have three main goals for the CCA. They are to provide and share knowledge of Collins equipment, fellowship, and for all to have FUN with our common hobby. On the 75M net the other night I heard John Bess say that what makes the Net most enjoyable for him is the check-ins that pose questions about their Collins gear. For others it is the chance to communicate with friends and swap equipment stories. Whatever you are looking for, it is our goal (the present Board) to help make your participation more enjoyable. We are in the process of making some exciting changes to our publication and Web site. I would encourage all to let me know your thoughts of our changes as well as any ideas to enhance our organization. I would also welcome anyone who want to share their technical evaluations, refurbishments, or any other Collins equipment related topic. Many have asked for more content in our quarterly Signal publication, we need your inputs to accomplish this. Contributions can be as simple as a photo of your shack to detailed technical articles.

73's

Jack Mory KE3WV
CCA President
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Pictures from Dayton 2007

By Jack Mory KE3WV

I would like to thank all who were at Dayton and supported our CCA. The banquet, with an excellent program by Jim Stitzinger, was a hit along with many folks stopping at our booth. Special thanks to Rich Sperling WB3JLK, our 2007 Dayton Chairman. See you at Dayton 2008!



Pictures thanks to Torrey Mitchell N9PY



From the Treasurer—James M. Green

For some time your board has been encouraging me to bring the affairs of CCA into the 21st century and start having the advantages PayPal available to the membership. For many months this was resisted but finally rational thinking prevailed. There were many of our foreign members who have difficulty sending funds or the conversion costs are prohibitive. Many stateside members were also prodding us along to make the plunge.

On February 10th of this year the first payment was received and since that time 46 new members have joined using PayPal compared to 13 using traditional methods. Additionally at least 30 members have renewed their membership using the service.

The Dayton CCA banquet was another event where the convenience of using the computer in lieu of the checkbook appealed to many attendees.

You do not have to be PayPal account holder to use the system. Just access our collinsradio.org web site and fill out the appropriate form which will direct the user to the PayPal site where a standard charge card may be used to forward the necessary funds.

The inclusion of this CCA service is in the interest of serving our members and responding to suggestions.

James M. Green, WB3DJU Treasurer