

K9YA Telegraph

Robert F. Heytow Memorial Radio Club

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In the Zone

Tune-In, Space Out

Philip Cala-Lazar, K9PL

A gentleman ham correspondent recently suggested the subject of this article. He wrote, “How about a story on ‘copying behind?’” I figured, pretty good idea. There’s been much written on this topic by experts like William G. Pierpont, NØHFF, (see: *K9YA Telegraph*, March 2006, pg. 1) and in authoritative military training manuals.

To wit, Pierpont in his classic book, *The Art & Skill of Radio-Telegraphy* (Fourth Revised Edition, 2003), says:

The first step to making copying easy is to learn to copy behind. That means training the mind to act as a buffer, or short-term memory, between hearing the incoming signals and what we are writing down.

Several characters or words are automatically held in mind after hearing them and before writing them down, meanwhile continuing to listen to the next ones coming along. This helps smooth out the uneven rate at which characters are received as compared to writing them down, and relieves the mental strain of copying. It serves as a cushion. In this way we can also make much better looking copy and can even capitalize proper nouns as we hear them.

The U.S. Navy publication, *Radioman 3 & 2*, Chapter 4, Bureau of Naval Personnel Navy Training Course NAVPERS 10228-E, 5th Edition, 1967, proffers this description of copying behind:

Learn to copy behind. If you are recording B as D, S as I, J as W, and so on, you are copying too close. The farther behind the better. At first, listen to one character while setting down the previous one. Try to fall back one letter

more. Listen for the character while carrying one in your head and setting down the one before that. Once you have the knack, you will find copying behind is easier, faster, and more accurate. The faster the code, the farther, you must stay behind. Watch an oldtimer copy press at 35 or 40 wpm. You will find he is carrying anywhere from 5 words to a sentence in his head.

I don’t have much to add to the above statements; like most Morse skills copying behind is simple to describe, but requires attentiveness, patience and practice to master.

A Transparent Ability

As I thought about how frequently I practice copying behind, I realized it is yet another of Morse’s “transparent” abilities, i.e., once achieved it is not something the practitioner consciously employs—it’s there when you need it.

A few years back, the term, “in the zone” achieved cliché status, mostly in reference to sports, sportsmen and athletes. Today, it is not so much used as other phrases and words engage the media while enjoying their own 15 minutes of fame. “In the zone,” was often spotted in sports pages and voiced by commentators to describe seemingly effortless,

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“...attentiveness,
patience and
practice...”

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What Would You Do?

Mitch Gill, YI9TU/K7TUT



Khalid, one of my Iraqi friends, and me. On this day we had Iraqis crossing the wire into the base in my location, but it was just young teenagers looking for things to steal and sell.

In all my years as a ham radio operator I never ever had the wildest dream I would be operating from a DX location, let alone Iraq. Today, I could imagine, the Bahamas or somewhere in the Caribbean, with sandy beaches, a cool ocean breeze, crystal clear blue water, an umbrella drink in one hand and my wife at my side. I can look back behind me at the tower attached to the bungalow just a few feet away. I am tapping away on the J-38 and my 817

as I smile at my wife and she smiles back. Now that's a DXpedition I could go for!

Here in my location, I do have a lot of sand, but no beach, no ocean, no cool breeze, no drink (alcohol is against General Order #1 and punishable under the UCMJ), no wife (it's a war zone) and no tower (for obvious reasons). My bungalow is a hooch rooming with another guy who snores and scratches his head when I talk about ham radio.

Rumblings

My antenna is two slinkys in an inverted-V up about 15 feet running to a 706 at 5 watts through a LDG-100 tuner. I have worked 70 countries and over 1,000 contacts as of this writing. I operate an hour or so in the evening before bed, and on Sundays I usually have the morning to operate. But it's no DXpedition.

Just sit back and imagine for a moment that you are trying for the VU7LD Lakshadweep DXpedition.



Station. In my hooch here at Tallil



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You are in that zone. You know what I mean, when you are following the stations being answered and tuning right to the zero beat of the last station they answered. I am hitting it perfectly and know that, in time, they will hear me. As the pileup rumbles through the radio I concentrate, listen, zero beat and transmit. Over and over again: concentrate, listen, zero beat and transmit. I can feel it. It's going to happen any time now and Boom! Boom! Boom!

Maelstrom

The rockets slammed into the ground a few hundred yards away shaking the building. The alarms start going and I now have the ultimate decision to make. Do I stay or do I go to the bunker a few yards from my front door? It is one of those decisions you make in a split second. It is ingrained in me as I have thought of this possibility over and over in my mind since arriving in Iraq last April. I have been through many rocket and mortar attacks. I have had to run to bunkers, suited up in full armor, slid under beds, hugged concrete walls and jumped on the gravel with my hands over my head to protect myself the best way I could.

I did what I had to do: concentrate, listen, zero beat and transmit. Now don't go judging me as a crazy man. If you were in my shoes you might do the same thing. The rockets are either going to hit my building or not. I can't tell where they will land and besides that, how many times do you get a chance at one of the rarest of DX? How many people can say they worked a rare DX station during a rocket attack? A handful at most, but that's not why I did it. I did it because after a while you get used to the infrequent barrage that ends as quickly as it begins and besides: I was in the zone! I knew I would snag the VU7, I just knew it.

As the alarms continued to scream outside my hooch I could barely hear them as my keyer finger was itching to send my call again. I reached down deep inside myself as I



Slinky Dipole for
6 - 40 meters.

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Wild Dogs. When the Italian Army left our area they left their animals as well. These dogs now roam in a pack and this is one of the only friendly ones left.



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D-104 Paddle

A "Cross-Mode" Special

Doug Fabian, N8EPE



High-Fidelity Morse

I received a surprise e-mail from Mike, N9BOR, asking me to write a construction article about my somewhat unique junk box D-104 paddle. Needless to say, I was caught off guard and very surprised by Mike's request. Most of my junk box creations are returned to the junk box (or the garbage can), just in another form.

A ham who was retiring to Florida, and didn't want to move his junk box goodies with him, gave me a D-104 mic. This D-104 had seen better days. The element had holes in it where someone poked a paperclip. The threaded collar that tightens the head to the neck was stripped and the male pins at the base of the head were wobbly. "Tom loves Sharon" was scratched into the chrome ring around the grille. On the back of the head, another "Tom loves Sharon" was scratched into the chrome, but here Sharon was scratched out. I have no idea who Tom is, but if by some chance Tom reads this article, I hope you and Sharon have patched things up.

Next, I needed a method to attach the FT-243 case to the D-104 head. I drilled a hole in the bottom of the case between the two small holes where the original crystal's pins were located. Then I enlarged one of the crystal's pin holes enough to allow the two 22-ga. wires to pass through the bottom of the case, and through the D-104 head. It's harder to describe than do. It's just two holes in the bottom of the FT-243 case, and two matching holes in the side

Cross-Modding the D-104

This is the second tour of duty for the D-104 head as a paddle base. I originally filled the empty head with BB's, and had one of those Bulldog paper clip paddles mounted on the side. When I ran across WA1JOS's Touch Paddle circuit board kit for \$18, I thought it might be just the ticket for my D-104 paddle base.

The D-104 paddle base is just an empty D-104 head with the connector removed. I used a Dremel to grind down the inner flange until I could remove the connector neck, and discarded it. I added a grommet to the hole and used it for the cable that connects the paddles to the radio or keyer.

While I waited for the circuit board kit to arrive, I tried to come up with an original scheme for the touch contacts. I wanted to design something that would go

with the "vintage" look of the D-104 head. Being a scrounger first, and fabricator second, I started searching for boat anchor era parts that might fill the bill.

I ran across a couple of FT-243 crystals, one with a broken pin, and one with a cracked case. I disassembled both, and took stock of what I had to work with. I kept one empty, intact Bakelite case, the two steel data plates, and the six tiny screws that held the plates to the cases. Old timers will know exactly what I am talking about.

The steel data plates were to be mounted, one on each side, of the empty FT-243 case. I was able to solder a piece of 22-ga. wire to each of the steel data plates. These wires would connect the plates, or right and left contacts, to the Touch Keyer circuit board—one for dits and one for dahs. One side of the FT-243 case is an open cavity, using a Dremel, I ground out a hole on the back of the case for the solder blob to clear so the plate would sit flush.

"Tom loves Sharon"

Next, I needed a method to attach the FT-243 case to the D-104 head. I drilled a hole in the bottom of the case between the two small holes where the original crystal's pins were located. Then I enlarged one of the crystal's pin holes enough to allow the two 22-ga. wires to pass through the bottom of the case, and through the D-104 head. It's harder to describe than do. It's just two holes in the bottom of the FT-243 case, and two matching holes in the side



Doug, N8EPE, and his D-104 Paddle



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of the D-104 head. One hole for a screw and nut and the other hole for the left and right contact wires. The next step was mounting the FT-243 case to the D-104 head with the small screw and nut.

The contact plates are actually glued to each side of the FT-243 case. I used my favorite adhesive, *Shoo Goo* or *Goop*; I believe they call it now. I fed the two wires through the hole in the case and the matching hole in the D-104 head and ran a bead of adhesive around the edge of the FT-243 case, front and back. I lined up the two plates, and used a clothespin to hold them in place overnight, until the adhesive dried.

It would have been nice to use the original FT-243 screws and nuts to hold the plates on each side, but it wasn't possible. I still wanted the look of a real FT-243, so I faked it. I cut the heads off the original Phillips screws and used a dab of adhesive to glue them in place on the plates. They don't actually serve any function, other than looks.

Enter the WA1JOS Touch Keyer

Now that I had the case and touch contacts assembled, I was ready for the Touch Keyer circuit board, 9v battery and an on-off switch. The Touch Keyer board went together easily. There were no surprises and it worked perfectly during the post-building test. The instructions for assembly and testing are clear and easy to follow.

Stuffing the circuit board, battery and switch into the D-104 case, I used some pink foam to isolate the circuit board from everything else. I then tucked the 9v battery in and the on-off switch last. It's "ugly" construction, to be sure, but it's a one of a kind, as far as I know. I may do some more modifications in the future. The spacing of the touch contact plates is just a bit narrow for my liking, but I'm starting to get used to them.

I plan on building another one that's a bit more suitable for portable radio fun. With no moving parts to go out of adjustment, I'll be able to toss it in a pack or case and not worry about it. WA1JOS's Touch Paddle circuit board just screams, "Get creative! Use anything you wish!"

In operation, the feel is really growing on me—I like them more and more, every time I use them. My own "evolution" over the years has been one of tighter and tighter contact spacing in all my keying devices.

My Novice station was a Knight T-50 and an el-cheapo J-38 knock off. The spacing of the contacts on my

straight key was slightly closer than the spacing on a walnut cracker. Well, maybe not quite that bad, but you get the idea. As I progressed, I narrowed the contact spacing further and further.

When I graduated to a transceiver, low-end paddles and an external keyer, I went through the same process. I started with wider spacing and slowly tightened it up as I got the feel of them. Then I got some Bencher paddles, which were more refined, and closer tolerance, and once again, I was adjusting them tighter and tighter.

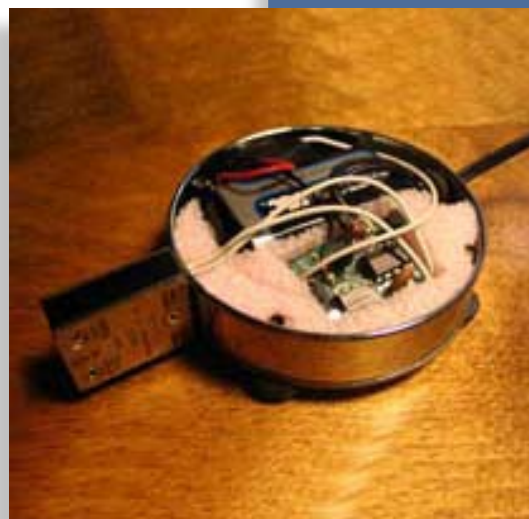
Researching paddles, I soon discovered yet more precision put me at a new, higher price level.

That's when I ran across the Touch Paddles. I could try the ultimate in close contact spacing, NO contact spacing. I read the reviews and comments on the Touch Paddle Web site and figured for \$18 and a few hours at the workbench, it was worth a try.

I really didn't know what to expect, as far as "feel" goes. It was hard to imagine what it would be like to key the rig with a simple touch. Would there be some sort of delay, or lag, in the circuit? How long would it take the circuit to sense the change in capacitance? I didn't know how high to get my hopes for \$18.

I'm happy to say the Touch Paddles exceeded all my expectations. There is no delay or lag. You touch, and it keys. Smooth as silk. You have to really try and fool this thing, with your most gentle touch, and not have it sensed by the circuit. At the other end of the spectrum, it doesn't care how heavy-handed you are. You could put a contact on each side of a two-by-four, bolt it to your desk, and proceed to pound away to your heart's content. A touch is a touch, to this nifty little circuit.

Yes, there is a slight learning curve as you get the feel of sending with no contact spacing. It sure didn't take me long to get the hang of it. I couldn't help grinning, and saying, "This thing is cool!" every time I used it.



Under the Hood

*"Shoo Goo
or Goop"*

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Little Hamshack on the Prairie

Hernando's Hideaway or a Crack in Time?

Rod Newkirk, VA3ZBB/W9BRD



One of the hazards of growing older is the loss of departed fellow radio addicts. I'll surely miss Forrest "Bart" Bartlett, W6OWP, a recent Silent Key. Best known to hams as the "west coast W1AW" with HF code practice and bulletins for half a century, Bart enjoyed a colorful communications career.

W6OWP and I traded war stories after WWII and discovered that our paths had nearly intersected in the Philippines during 1949. His duties with Press Wireless included connecting installations on Luzon by landwire, an adventurous task. At the same time, not far away, my outfit had joined other units for amphibious landings along the coast.

Bart's arduous operation was more productive than mine. Our target, after convoying up from Leyte, was a broad beach on Lingayen Gulf. Wartime meteorology was an iffy thing. A typhoon in the China Sea far to the west was generating mountainous swells along the gulf. The huge waves were quartering, forcing our puny flat-bottomed LCTs to approach the shore in oblique stagers, Seasick? Even the Navy crews were upchucking.

Intelligence

Military field intelligence was just as vague. When we finally flopped off the boats, splashed through the brine and crawled onto the sand, some curious natives, puzzled by our antics, told us that the Japanese "all go 'way, all go 'way" days ago. That was fine by us. Our stomachs were inside out and we gladly hugged the empty beach. I

hope nobody filmed a photo-documentary of that valiant assault. Hollywood's old-time Keystone Kops would have envied our futility.

Probably in greater disarray than we were, the enemy had left the place undefended and were off into the hills. That made W6OWP's overland project more hazardous than ever. His field crew did make out okay in the end, though, and Bart was left with a much more memorable tale to tell. Here's the enigmatic story the way I remember his account.

Surprise

While laboriously unreeling and posting landwire in the oppressive and almost impenetrable jungle of west central Luzon, W6OWP and his team suddenly emerged into a beautiful clearing. There, all by itself in the sunshine, far from habitation, stood a tidy little one-room building. Its neat bamboo construction, in the local style, was sturdily stilted for the rainy seasons.

Closer inspection revealed no sign of recent occupation. There were, however, indications that the hut had housed radio equipment. Interviews

with inhabitants of the area threw no light on the matter. After four rough years of enemy domination, one would think that such a facility had no business being so intact and shining brightly in the middle of nowhere.

Diamond in the Rough

W6OWP's subsequent contact with revitalized PARA, the Philippines national amateur radio society, and other avenues of inquiry, elicited no explanation or information about that curious QTH. What particularly mystified Bart to the end of his 92 years was the bizarre presence of a large ARRL diamond meticulously painted on the cozy little shack's door. ■

"all go 'way..."



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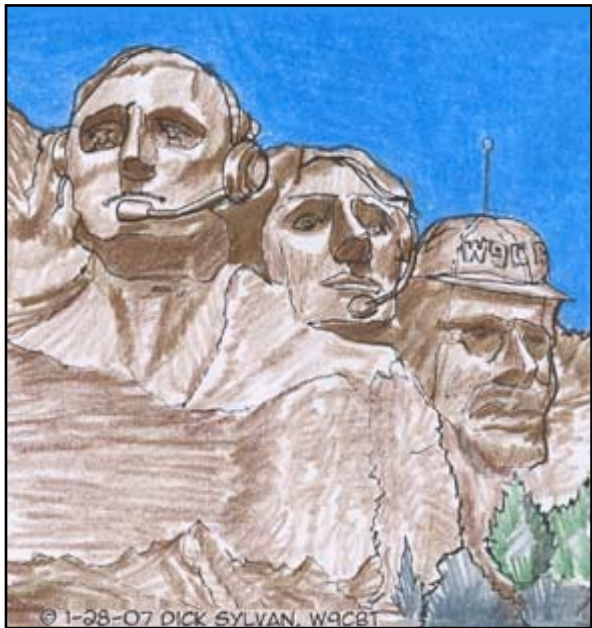
set the key to 35-wpm and transmitted my call again and waited. Concentrate. Listen. Zero beat. Transmit. This time, after two hours, I heard my call and report and I got 'em! I was drained and exhausted. I lay down on my cot and thought about the QSL card I would receive and then it struck me. What an idiot! I could have been killed for that stupid little piece of paper. I must have been completely out of my mind! I ran to the bunker, but not before disconnecting the rig and taking it with me. Of course, I was smiling all the way there! ■

YI9TU/K7TUT, Mitch, has been in Iraq since April 2006 and is expected to return home in August 2007. He has served in Tikrit, Mosul, Samarra, Balad, and now in Tallil where he will finish his tour of duty. During his time in Iraq he has so far been awarded the Iraqi Campaign Medal, Good Conduct Medal, Army Commendation Medal, Army Achievement Medal, Overseas Service Ribbon, Armed Forces Reserve Medal with M device, Global War on Terrorism Service Medal and Combat Patches from the 101st Airborne, 555 Combat Engineers and 34th Brigade Combat Team.

Mitch's home is in Ravensdale, Washington where he lives with his wife, Jan; son, Tyler (KD7MJO); five German shepherds; two cats; and a horse.

In the States he works full time in the National Guard in Anti-Terrorism and Force Protection.

Ham Quips DICK SYLVAN, W9CBT



**HAMS ARE EVERYWHERE—
EVEN ON MT. RUSHMORE**

almost superhuman, nearly paranormal exploits of incredible physical and mental acumen. The last time I heard “in the zone” it issued from an instructor at a motorcycle rider safety course I attended. He defined the term by example: “How many times have you arrived at a destination after driving many miles and find yourself unable to recall much of that journey?” This automatic form of driving was *verboten*; motorcycle riding, even more than driving a car, is a skill requiring superior awareness and an astute appreciation of conditions.

That is eminently true for two-wheeled endeavors, but when we are safely ensconced in our shacks copying code we can certainly permit ourselves to move to a higher plane of consciousness that inhibits all external stimuli but the desired CW signal. This exclusionary ability is elegantly described by the legendary Bill Windle, G8VG, in a QSL card dated 11 October 1977: “The standard of a good operator may be measured by the filter between his ears.”

On a Higher Plane

Try this technique when copying code a bit faster than your usual top speed. Put down the pencil, close your eyes, purge your mind of all other thoughts and simply let the sound flow. A tip offered by some sources is to picture the copy as lighted letters and words scrolling across a display. As each letter is copied it pops onto the display, forming whole words, and finally, the entire message. This technique works best starting at higher speeds, say 25-wpm and better. Below 20-wpm the lack of character contiguity makes this method impractical; thus the reason operators maintain it is easier to copy high-speed code than slow. Higher speeds permit attaining the “Zone.”

For any “in the zone” sports traditionalists reading this, think *World Radiosport*, that enterprise is pretty competitive. ■

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Take a look at the Touch Paddle Web site: <http://www.cwtouchkeyer.com/>. Check out the mounting and packaging schemes other operators have come up with. They come in different versions, already wired, in a nice enclosure; as a kit; or you can get just the circuit board kit and come up with your own, crazy packaging scheme, like I did.

It's probably the best \$18 I've invested in the hobby in quite a while. It's got a front row seat, in front of the rig, and the Bencher is getting a bit dusty. ■

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