

Number 76 – July/August 2001

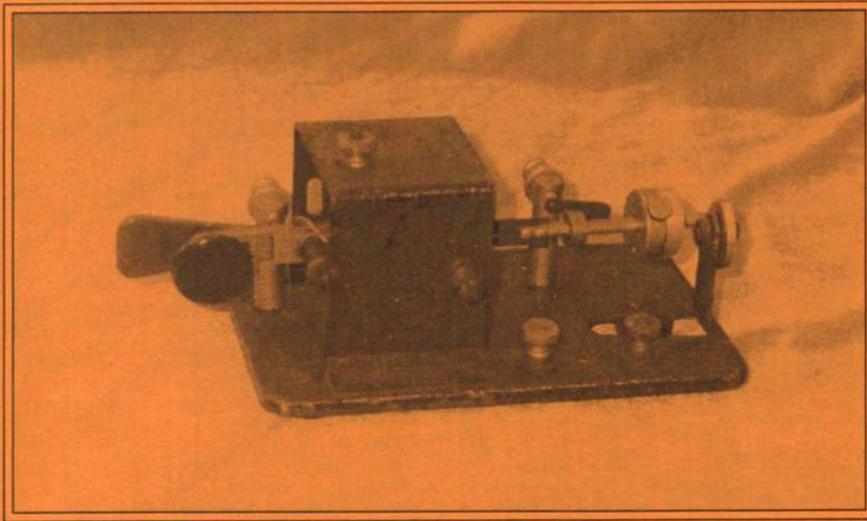
Flying
the flag
for
Morse

Morsum Magnificat

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The Morse Magazine



The McElroy Junior Bug Key



The International Journal of Morse Telegraphy

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MORSUM MAGNIFICAT was first published as a quarterly magazine in Holland, in 1983, by the late Rinus Hellemons PA0BFN. It has been produced four, then six times a year in Britain since 1986, and up to January 1999 was published and edited by Tony Smith, G4FAI and Geoff Arnold, G3GSR. It aims to provide international coverage of all aspects of Morse telegraphy, past present and future. *MORSUM MAGNIFICAT* is for all Morse enthusiasts, amateur or professional, active or retired. It brings together material which would otherwise be lost to posterity, providing an invaluable source of interest, reference and record relating to the traditions and practice of Morse.

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FRONT COVER

The very rare McElroy Junior bug key. A low cost economy model made of pressed steel. Apparently very few were sold.

Photo/Collection: George Robbins, G3LNG

Comment

It is always a little difficult in selecting the articles for any issue. The aim is to provide for the spread of interests of MM readers and I hope the balance is right. New articles are always very welcome.

Included in this issue is a report on the first Ferdinand Braun Day by Sylvester Föcking, translated by Thomas Roth. Braun made a major contributions to the development of wireless telegraphy and, in 1909, was awarded the Nobel Prize for Physics jointly with Marconi for this work.

It seems that the Dayton Hamfest was an exciting experience this year for key collectors, in more ways than one. This issue includes an abridged report by Tom Perera on some of the interesting keys discovered.

Of special interest to some readers is a report by Tony Smith on Morse on the Internet, where operators can send CQ and hold live QSOs on the cyber-waves. No doubt we will hear much more of this in the future. It is an interesting thought that internet sites can be set up that are effectively, CW only.

My sincere thanks to all MM contributors, whether or not your articles, photos, information etc. have appeared yet. Without your enthusiasm to produce them and the passion of everyone to read them, MM would be nothing.

Zyg Nilski, G3OKD

Correction

In MM75, page 38 the bottom photograph was incorrectly described as a Redifon marine key. It should have read "McElroy Chrome Stream Key". Also page 39, top photograph, John Elwood's old callsign is given. It should read "WW7P". My apologies for these errors - Ed.

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News

Heliographs Alive & Well

There is an active heliograph re-enactor group organised by Jim Riddle in Prescott, Arizona. He says, "Although there are quite a few interested in the 'Hg' (quick as Mercury), few, including hams, seem very excited about the extra effort needed to become reasonably competent with the Hg and visual code. Yes, CW is a dying language — it's really sad. It may not be essential for radio, but I haven't figured out any way around it for the heliograph! I got it all backwards - the only reason I am a ham was my interest in learning CW for the Hg."

Jim runs 'Hg' web pages and an e-mail list. Anyone can get on this list by contacting him at: 123 Briar St, Prescott, AZ 86305-5036, USA. e-mail: kd7aoi@arrl.net, Tel: +1-520-445-4245. Web pages are at <http://homestead.juno.com/kd7aoi/heliograph.html>

Kachina 505DSP Discontinued

Effective 24th May, 2001, Kachina Communications, Inc. will discontinue production of all HF radio products, including the 505DSP and its related accessories. As you may know, many of

the top management of Kachina are hams, so this has not been an easy decision to make. However, given the reduced worldwide demand for amateur radio in general, and HF radio in particular, it seems the only sensible choice for us to make.

From discussions with some of the top contacts in our industry over the last several years, it has become obvious that most companies manufacturing amateur radio products these days (including the top Japanese brands) do so out of a labor of love, supporting the losses from other more-profitable ventures. Unfortunately, we do not have the resources of a Kenwood or Yaesu, and simply cannot afford to support an unprofitable product line indefinitely.

Kachina Communications, Inc. will remain in business in Arizona, as we have done for the past 25 years. In future we will concentrate on our Swift Wireless line of broadband wireless Internet products and services... We will continue to provide service and spares for all Kachina HF radio products for the foreseeable future, and will honor all factory warranties through the duration of the warranty period.

The amateur radio products remaining in our inventory will be made available through our web site at clearance prices, so if you are looking for a bargain, check there (<http://kachina-az.com>) beginning May 25th.

I would like to thank all of those who purchased the 505DSP over the last several years. I am sorry that we could not continue to manufacture the 505DSP, but we will do our best to continue to provide service to you in the future... Thanks and best regards,
Cameron Earnshaw , Vice President,
Kachina Communications, Inc.
(Extract from a message posted on the Kachina reflector at www.qth.net on May 16, 2001. There was a review of the Kachina 505DSP in MM68, p.9)

Vote for MM

Internet users – next time you visit the MM web site please vote for MM using the 'DXZone' box.

Implications if Morse Test is Dropped at WRC2003 Immediate Large Influx of HF Stations Forecast

Several administrations are planning to propose at WRC-2003 the deletion of the existing international regulatory requirement that amateur operators must demonstrate Morse code proficiency before being licensed to operate below 30 MHz.

It is anticipated that this proposal will be adopted. This will have an immediate and dramatic effect upon the occupancy of the HF amateur bands, including the 7-MHz band. Hundreds of thousands of presently licensed amateurs

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who are now restricted to frequencies above 30 MHz will be able to use the HF bands.

In addition, a large influx of new licensees will enter the amateur service once the Morse code is no longer required for HF operation. These effects could easily double the occupancy of the 7-MHz band by 2005. Crowding in the amateur service allocation will become even more severe as the variety of emission modes continues to expand... This will cause an immediate and dramatic increase in band occupancy.

To maintain communications in the face of increased interference, amateurs will be required to increase transmitter power levels and antenna gain. Those who are unable to do so will be unable to communicate....

Amateurs who find the 7-MHz band too crowded will be forced to operate in the next lower amateur band at 3.5 MHz... Communication often is not possible at the lower frequency owing to reduced signal-to-noise ratios. Even if communication is possible at 3.5 MHz over the paths for which 7 MHz is the optimum frequency, significantly higher transmitter power is required – which consumes batteries and generator fuel at a faster rate.

(Extract from an *Information Paper* by the *International Amateur Radio Union* which describes the current attempt by the IARU to obtain an exclusive worldwide amateur service allocation of no less than 300 kHz in the vicinity of 7-MHz. The full paper can be found on the internet at <http://www.iaru.org>)

(Report: Tony Smith)

Third Revised Edition of The Art and Skill of Radio- Telegraphy

William G. Pierpont's "The Art and Skill of Radio-Telegraphy", new Third Revised Edition, edited by Fred Adsit, NY2V, has just been released in Microsoft Word and Adobe Acrobat pdf form via the download site, <http://www.qsl.net/n9bor/n0hff.htm>. This edition contains miscellaneous corrections to the previous version, and most significantly, adds a High-Speed Appendix, with fascinating interviews and stories of what can be done, and how to do it. This is truly the definitive book on the subject of radio-telegraphy.

As Bill points out in the document, "The art and skill of telegraphy is unique. Psychologists who have seriously studied those who have developed this skill have been fascinated and challenged to try to understand it. Isn't the very idea of being able to communicate your thoughts to another by means of intermittent tones something intriguing in itself?" And, he also says, "It is my hope that you, as the reader, will find it both interesting and useful. I make no claim that it is complete, perfect or final, or that it contains everything of possible value or interest. I have had to leave out some interesting items, especially of history. Perhaps some of these, plus anything you, as reader, may wish to contribute, could be added in further editions. This book may be freely reproduced and published, but only on a no-profit basis in order to make it as widely available as possible to those who

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need it..." The book will be made available in many forms in the days to come.

The decision has been made to make the book easily downloadable so it can be read off-line, as well as printed, by the computer user. This obviates the need for an HTML edition as was previously available. A French translation is available from the web site of Maurice Colombani-Gailleur, F6IIE at http://f6iie.free.fr/titre_web.htm (*Fred Adsit, NY2V.*)

Titanic Wireless Commemorative Group Special Event

In association with the Godalming Museum a Special Event Amateur Radio Station will operate in memory of Jack Phillips, Chief Wireless Operator of the Titanic. His sacrifice saved so many lives and for the 90th Anniversary of the Sinking of the Titanic the special event callsign GB90MGY will be active from Saturday 13th to Monday 15th April 2002. (MGY was the callsign of the Titanic on her maiden voyage)

The station will be located at the Wilfred Noyce Centre, Godalming, Surrey, England, the home-town of Jack Phillips and operate CW only on the 3.5MHz to 28MHz amateur bands, including WARC bands.

(Information: Brian Grist, G3GJX, Chair of the TWCG

e-mail: brian.grist@lineone.net)

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Porthcurno Museum of Submarine Telegraphy Radio Week

From Sunday 12th to Saturday 18th August, Porthcurno Museum of Submarine Telegraphy will be holding a special 'RADIO WEEK' to enable visitors to find out more about radio, its history and how it works. It is being organised to mark the centenary of Marconi's first radio signal across the Atlantic.

A temporary radio station, call sign 'GB2PK', will be in operation in the pavilion where there will also be an exhibition describing the history of radio at Porthcurno and in the area.

During the week there will also be a kite flying day. Marconi used kites to raise his early radio aerials as high as possible and in 1910 he achieved the world record for a wireless transmission of 3,500 miles from the steamship *Principessa Mafalda* using a kite produced by Brookite Ltd. During 'radio week' a modern replica of this kite will be used to hoist a wireless aerial for live transmissions.

There will also be talks on radio, and visitors will be able to view the radio-related displays in the museum itself, including the working reconstruction of the S.S. Titanic radio room.

Porthcurno's involvement with radio goes back to 1902 when the Eastern Telegraph Company, which operated out of Porthcurno, began spying on Marconi's activities on the Lizard using their own radio mast and hut at 'wireless point'. They were concerned about the potential

threat of this new technology to their international cable communications business. Eventually in 1929, the Eastern Telegraph Company found itself merged with Marconi's wireless network, forming the company that is today known as Cable & Wireless.

Cyfeillion Marconi Annual Lecture

This Association "Cyfeillion Marconi", friends of the old transmitting station known to Guglielmo Marconi as the Carnarvon Station will hold its third Annual Public Lecture on Friday the 5th October 2001 at 7.30 pm. The venue will be the community hall Y Ganolfan, in the village of Waunfawr, North Wales quite near to the site of the old station. Everyone is welcome to attend.

The talk will be given by Mr Hari Williams C.Eng, MIEE, entitled "Marconi and his Welsh Connections". Mr Williams is the author of the recent book *Marconi and his Wireless Stations in Wales*.

The association consisting of members of local community organisations, radio amateurs and the general public aims to provide a permanent commemorative stone once space has been acquired at the station site and to set up an exhibition locally in cooperation with the heritage museum run by Antur Waunfawr. Further details are available from Dewi E. Roberts, GWØABL, 23 Lon Hedydd, Llanfairpwll, Ynys Mon, Wales LL61 5JY. Tel: 01248 713647.

The First Ferdinand Braun Day

by Sylvester Föcking, DH4PB

Translated into English by Thomas Roth, DL1CQ

Force 10 gales and a storm warning. The right kind of weather for the ex-ROs who were getting ready for the first Ferdinand-Braun-Day at Cape Hoorn in Cuxhaven, Germany in order to commemorate the life and work of this great physicist - inventor of the cathode-ray tube and one of the early pioneers of radiotelegraphy.

On June 2nd and 3rd 2001, twenty radio hams had responded to an appeal from Juergen Gerpott, DL8HCI (Deutscher Wetterdienst, Hamburg) to commemorate the work of Professor Ferdinand Braun who was Joint Nobel Prize Laureate with Guglielmo Marconi in 1909 for developments in wireless telegraphy. Prof. Braun conducted his telegraphy experiments at Cuxhaven.

Through good connections with the authorities and the tireless work of Juergen, DL8HCI and Uwe, DK1KQ, four locations for special event ham stations were obtained using a commemorative callsign DLØPFB. Different modes of operation were demonstrated at each location, and copies of Prof. Braun's historic telegram were sold, the proceeds of which went to the Society for the upkeep of the Lightship Elbe 1.

During the briefing on Friday night, Juergen, who is a brilliant orator, motivated all present and everyone was

looking forward to the next day. No particular duty-schedules were established and each team could operate and rotate their operators as they wished. Only the use of specific frequencies were scheduled.

The Seebaederbruecke/Yachthafen CW station

Operators were former Radio Officers Sylvester/DH4PB, Rolf/DL9CM, Hans-Joerg/DL7DAN plus Eddi/DK3UZ and Rik/ON4CW. They were joined on Saturday by Thomas/DL1CQ as guest operator. From this station Juergen/DL8HCI (initiator of the event and himself a former RO) transmitted the words on 14MHz: "I declare the first Ferdinand-Braun-Day open".

The Naval School Cuxhaven SSB-QRP and VHF station

This station was operated by Ingo/DK1RB, former Radio Officer and now with coastal radio station DP07, and his crew from Buxtehude: Dieter/DL4HO, Klaus/DL1HBL, Andreas/DF5FD and guest operator Peter/DL8BEL from Stade. They were running 10 watts on shortwave and also took care of VHF FM repeater connections.

Activities at Fort Kugelbake

Radio operators are the last to

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The Operators of DLØPFB, standing from left to right: Andreas Kohlhaas/DF5FD, Walter Rauhut/DF9YG, Ingo Weber/DK1RB, Dieter Krannig/DL4HO, Claus Lorenzen/DL1HBL, Helmut Stegemann (Elbe1), Eddi Ramm/DK3UZ, Uwe Wensauer/DK1KQ, Klaus Kuhnt/DF3GU, Dr. Martin Rohde SWL. Sitting from left to right: Rolf Marschner/DL9CM, Thomas Schmitt/DH5PW, Sylvester Föcking/DH4PB, Juergen Gerpott/DL8HCI. Not on the photo: Hans-Jürgen Bartels/DL1YFF, Burkhard Berenbrig/DF8XC, Erik Verbeeck/ON4CW, Thomas Roth/DL1CQ, Hans-Jörg Pust/DL7DAN.

leave the ship. That's the impression you got in the old fort that has defended Cuxhaven from many attacks. Klaus/DF3GU and Thomas/DH5PW had set up a modern station. It was here that Klaus gave regular 20 minute slide-shows and talks on the life and work of Prof. Braun after which he transmitted SSTV pictures to the world. Thomas demonstrated PSK QSOs to the more technologically inclined visitors whilst Juergen/DL8HCI in his smart RO's uniform, with SWL Martin, demonstrated historical telegraph equipment which was borrowed from a Cuxhaven school.

Komet - Scientific Survey Ship SSB Station

The operators on board the Komet, Burkhard/DF8XC, Hans-Juergen/DL1YFF and Walter/DF9YG from Bielefeld, certainly had the fanciest

location. Among the hi-tech equipment on the ships bridge, they set up their transceiver with a Heath SB-220 amplifier, running 300-400 watts into their antennas, which were easily erected on the ships masts. They worked 575 stations and all QSLs will bear the ships stamp.

Special QSL card

Every contact with DLØPFB will be

verified with a special QSL card, sponsored by Eddi/DK3UZ. On Sunday evening Juergen/DL8HCI once again operated the CW station and declared the Ferdinand-Braun-Day closed.

Finale

Later on Sunday night, after a wet and stormy weekend full of radio activity, the operators and accompanying XYLs met in the posh Steubenhoeft Restaurant (the Ellies Island of Cuxhaven). Juergen/DL8HCI echoed everyone's opinion that it had been a very successful event and everyone enthusiastically drank a toast to that, and also to Sylvester/DH4PB's 60th birthday. Considering the fun that was had by all and the many friends that came together to make the event possible, it seems very likely that planning for a second Ferdinand-Braun-Day will commence soon. **MM**

Telegraph Keys At The 2001 Dayton Hamfest

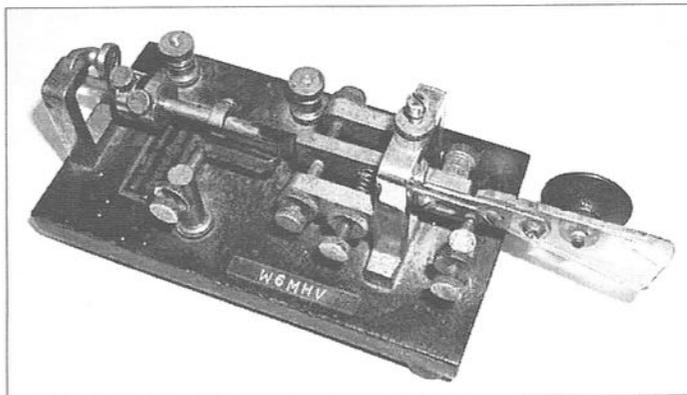
by Tom Perera - W1TP

The Dayton Hamfest is the largest and best attended hamfest in the world. It is always exciting and has gradually evolved into not only a productive place to hunt for keys, but also a social gathering place for key collectors. Dayton, however, is right in 'Tornado Alley' and the ferocity of the storms that pass through is impressive. I arrived in the rain at 9 am on Thursday to begin setting up my tents and found a large group of collectors already scouring the flea market in search of goodies.

It became obvious that we were in for a very serious thunderstorm and the leading-edge roll cloud hit with unbelievable gusts of wind. The entire 40-foot tent system moved about 10-feet down wind breaking ropes and dragging my trailer after it. Dozens of tents could be seen flying through the air and the sounds of breaking glass filled the air. The tops were torn off two of my three

tents but the keys and all of the people who helped keep the tents on the ground survived. On Friday, the security people came running through the parking lot yelling THIS IS !!! NOT !!! A THUNDERSTORM THAT IS COMING !! IT IS A 'RED-CELL' WE ADVISE EVERYONE TO GET INSIDE THE MAIN BUILDING...NOW !! Lightning began striking the light poles and it was pretty scary standing under the metal tent frame holding the tent down and 'hopefully' waiting for the storm to pass...

Young Rob Tiller was the first to find a major key. It bore a superficial resemblance to a Vibroplex but carried a nameplate that listed Shanghai as its place



The Shanghai bug key.

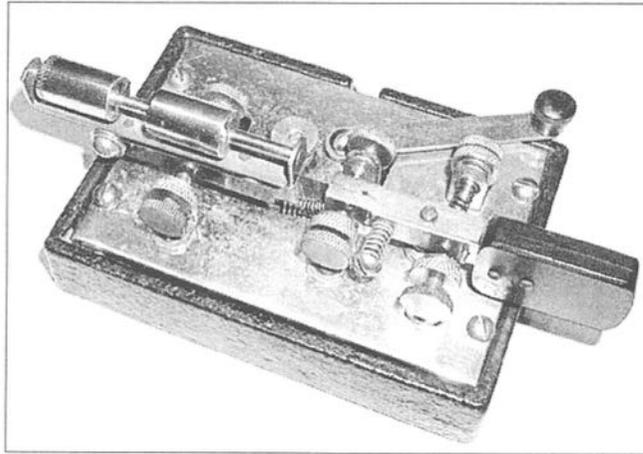
Photo: Tom Perera, W1TP

of origin. Rob brought it over to show to the collectors gathered around my tables and was roundly congratulated for his rare and unusual find. He and his brother Matt spend a great deal of time reading about the history of the various keys and developing their own collections in friendly competition with their father, long-time collector Bob Tiller. On Friday, Rob and Bob found a nice Mac-Key and, as often happens, when they asked if the seller had any other keys, out came a Vibroplex Model-X which was missing a few relatively minor parts...

Collector Doug Palmer showed up with a magnificent and extremely early Caton-lever key... The lever was absolutely fantastic and clearly showed the name of the maker...but, unfortunately, the rest of the key must have been lost somewhere because the beautiful lever was mounted in a standard oval Triumph style base.. Nevertheless, it was certainly one of the best early landline finds of the show.

David Vest, K8DV, the owner of the wonderful Vibroplex Midget (12KB) which he showed me last year, and which had appeared on Ebay recently, stopped by. Within a few hours, it had found a new home as did his super-clean Codetrol bug . Unfortunately, there don't seem to be many of them around and, according

to Gil Schlehman, the number may be as few as 4-6. A rare Peerless bug and an unusual Spark Key with a captive round ball contact also changed hands during the afternoon but most collectors were



Although rare, this second Peerless bug key turned up.

disappointed that only a few common keys were showing up due to the rain that kept most (tentless) sellers from putting out items for sale.

Tony Rogozinski found a number of interesting keys including an Eastern Precision Spark key. He also brought along a tiny working Triumph-style brass key which was no larger than a thumbnail for show-and-tell... A French Vibro-mors bug quickly found a new owner. These bugs are not super-rare in Europe but it is unusual to see them in America.

Many hundreds of friends and collectors stopped by to say hello and to show off their finds. A surprising number of people are building their own keys and using very unusual design strategies and they came by to show off their latest

Photo: Tom Perera, W1TP

models. Richard Meiss, WB9LPU certainly took the prize for having the most original and functional bug designs, using magnetic repulsion which have an unbelievably light touch. This and his other paddles can be seen in his personal pages on my website (www.w1tp.com).

Throughout the day on Friday, Saturday, and Sunday, I was showing German and Swiss Enigma Cipher machines and a collector who is an expert on the history of these machines and the history of the codebreaking process was giving hourly lectures and hands-on demonstrations. Only at Dayton could you hope to find Enigma machines, Norden bombsights, and historic telegraph keys on display. I think that it is this amazing variety of toys that keeps

the Enigma demonstrations.

A super-nice Signal Electric Co. Leg Key and original box showed up and was immediately purchased by collector Joyce Medlen, N7UG, who is building a very fine collection of military keys and wanted a representative landline key for her shelves. Joyce also found a J-6 WWI Aircraft key, a nice old Blue Racer, a French Military Key, a British Aircraft light signalling key, and several other goodies to add to her collection.

Sunday is usually a slow day so I was able to go out key hunting. The first key I found was a lovely Dinger Bug which the seller told me had come from an antique shop less than 30-miles from Dayton. It had obviously been stored in a wet basement but the rust under the base

was superficial and it worked fine. The Dinger was made by the D & K Manufacturing Company in Cleveland and carries a patent date of 1906. This one also carries a 'Patent Applied For' stamp on the frame. Although the Dinger is not considered extremely rare, it was the first one that I had ever found and I really

Photo: Tom Perera, W1TP

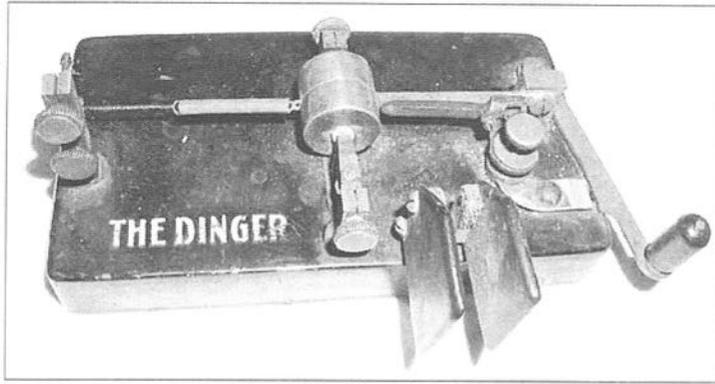


Hourly demonstrations of an Enigma machine.

people coming back year after year and braving the infamous "Dayton weather". At one time a crowd of about 50 people stood in a teeming downpour listening to

like the action and the mechanism. It is fun to watch that silly weight bouncing back and forth on the string and the feel is surprisingly light and precise. I think it

Photo: Tom Perera, W1TP



The Dinger bug key.

will be one of my favorites on the operating table.

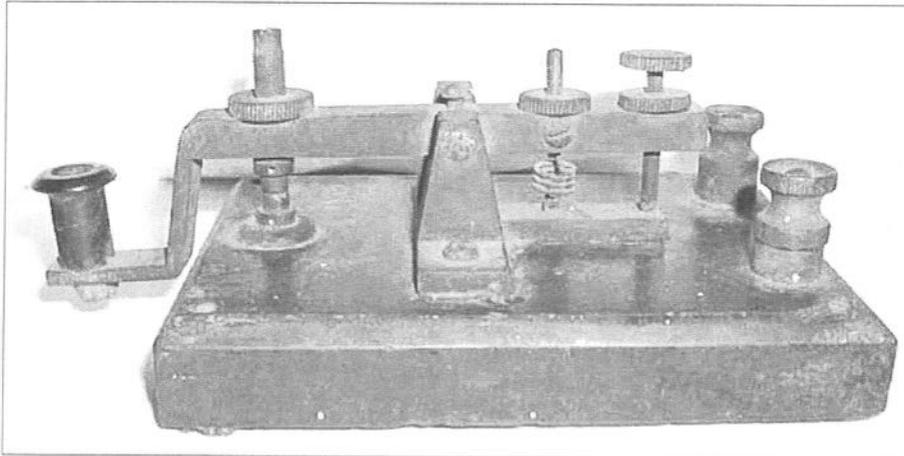
As I was walking around and looking at the various dealers' tables in the Main Building I noticed a dirty old thing sitting next to a beat-up Heath VFO, a pile of wire, and some other stuff. When I got closer, my heart started going into serious palpitations because I could see that it was a very large and very old spark key. 30,000 hams had passed this item

for 4-days and nobody had bought it. I have since received emails from Pete Malvasi and Doug Palmer informing me that it is a Canadian Marconi Spark Key.)

Finding that nice spark key made the 10-hour drive back home in... yes... you guessed it... Thunderstorms and heavy rain almost bearable and I am certainly looking forward to next year. It's really fun to be there after all of the serious collectors have given up and gone home...

(Edited and abridged for MM from the original report on Tom Perera's web site at www.w1tp.com) **MM**

Photo: Tom Perera, W1TP



A rare find - Canadian Marconi spark key.

TO MY GREAT DELIGHT, Peter, ZL4GU, responded to my plea for the schematic of the original W9TO vacuum tube keyer I made in my last column (*see MM73 - Ed.*). Peter had, and sent me, a faded but legible hand-drawn copy of the circuit, saying "I have had this circuit for about 35 years. I built it up in 1966 when I was VK3OP and used it as my station keyer for about 15 years, when I built the Curtis keyer. At the moment I am using another recommendation of yours, the CMOS SuperKeyer II."

"The W9TO keyer worked well, and the ability to change the weighting was an advantage (as it is in the SuperKeyer.) It really needs high quality capacitors to make the timing consistent, and towards the end of its life the timing was variable, to say the least."

I now know that this circuit was never formally published at the time. In fact I can't find mention of its publication anywhere. Jim, W9TO, just passed around copies of his hand-drawn schematic to those who asked for it. I suspect that Peter's copy is one of these. It appears now in print probably for the first time. An historic occasion!

W9TO Circuit Operation

I re-drew the logic part of the circuit from Peter's faded copy. This is shown in figure 1. I've omitted the power supply and audio monitor, which were fairly standard for the time. The logic here, however, was completely new. For

The Original W9TO Keyer Comments from a Practice Session and Negative Polarity Keying

by Dr Gary Bold ZL1AN

the first time, a divide-by-two circuit was used to form a dash from three dots, thus eliminating the "ratio" adjustment necessary with previous keyers, and guaranteeing that the dot/dash ratio was always correct, irrespective of speed.

Logic of the Original W9TO keyer

It used four dual-triodes, designated as type 5963, but I know that other tubes such as the 12AU7A were also used. The missing half-tube in the schematic is used for a simple relaxation audio oscillator using a neon tube.

Later variants of Jim's circuit show three logic stages, while this circuit has only two. This is because Jim used a cross coupled multivibrator having a nominally 1:1 mark/space ratio as a combined clock and dot generator - this is formed by the two upper tubes at left. But later transistor

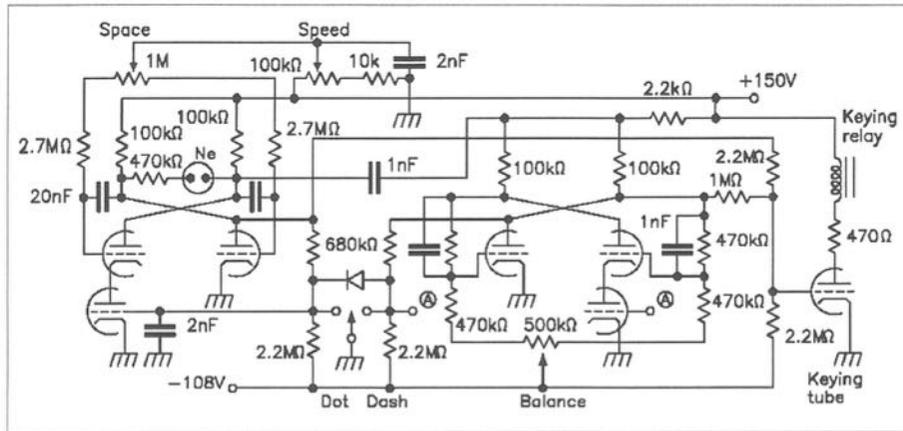


Figure 1 - W9TO keyer circuit

and logic-chip versions used a pulse generator as the clock, which required another stage to convert the short clock pulses to square dot pulses. The dot generator is enabled by the lower tube at left, which turns hard on when either the dot or dash contacts are closed - the dash turn-on initiated via the diode, an idea I also used in the *Zeekey*. I surmise that the neon tube between the anodes (labelled "Ne") breaks down at a pre-determined voltage (like a zener diode operating for both polarities) to square up the waveform.

If the dot paddle is closed, the square wave from the multivibrator enables the keying tube at far right, and the clock is held on by a feedback path until its cycle is complete. Contacts of the keying relay in the anode circuit key the transmitter.

If the dash paddle is closed, the right-hand tube pair is also enabled by the bottom right triode. These form a bi-stable flip-flop, which "fills in the space" between two dots to form a 3-element length dash, using a "wired OR"

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connection to the keying stage. Again, the dot generator is held on until this, and the following dot-space, is complete.

Speed is varied by the top left-hand pot, which changes the time-constant of the dot generator. The "space" potentiometer enables the time-constants of each tube in the dot generator to be varied differentially, changing the mark/space ratio of the square wave generated, and hence the weighting. The "balance" potentiometer at centre bottom adjusts the symmetry of the second flip-flop. Probably this would be set up initially and need only periodic adjustment.

Thanks to Peter, from all of us, for passing on this historical circuit. It marked a major step in the evolution of keyers!

Comments from a Practice Session

Last August, Ron ZL1AJP decided to run an on-air session for learners, on the local 720 repeater, at 9 pm every week-night. He emailed me for advice. Years ago, Richard ZL1BOK and I surmised that listening to *much faster* morse than you can comfortably copy

L3

helped to rev up the brain. Hence, we started our practice session by sending at 25 wpm, dropping back *down* to 12 and then 6. This did help some people, who said that "after that, 12 wpm sounded quite pedestrian", even though they couldn't copy it all. I asked Ron to try this.

After the first session, Ron emailed me:

"The blokes seem to like the fast CW to start. I have been starting at 30wpm and creeping it down, then pausing and sending the old "QUICK BROWN FOX....." and the numbers 1 - 0 immediately afterwards. That seems to be quite popular. They know what is coming and I am getting them to write it down as it comes (not before it comes!)

"I am then sending about three lines of text. I had a complaint that it was hard to tell when a comma was put in, so I am sending a space between both sides of a comma for a while until it is recognised. I also pause at the end of the text, and send two V's to get them ready for 5 sets of five numbers.

"I then read that lot back before going on. I am starting at 6wpm and running up to only 8wpm mostly at present, but will probably include 10wpm from next week. I am using a Farnsworth speed of 15. I did have one chap mention he thought the tone at 750hz was a bit low, so last night I raised it to 800hz - then tonight at the club got the complaint it was too high for one of the blokes...you can't win!"

People do get used to copying at one frequency, although the need to do this fades with proficiency. Others may have diminished high-frequency hearing

or even notches in their frequency response - hence (in the NZART Morse test), the candidate can select the frequency for the formal test.

Later, after a couple more sessions, Ron said:

"The general consensus was that the higher speed start didn't seem to do anything for them. They did however see the old "Quick brown fox" session with numbers 1 - 0 after, as good and the suggestion was made to run it at three different speeds at the start of the session.

"Tonight I tried that, running it at 6, 9, and 12wpm, then running the text and number sessions starting at 6wpm, again using a Farnsworth speed of 15. The comments afterwards were very positive, so I guess we carry on with that method.

"Even in three weeks there are definite signs of progress. One chap starting off from absolute scratch (and I had a job getting him to have a go), has kept each night's results, and is amazed at what he is getting now! He is even picking up odd small words at 10wpm. His numbers have gone from not knowing them at all to getting about 80% at 6wpm and 30% or so at 8 wpm and about 20% at 10 wpm. He is even talking about getting a CW filter for his TS-50!

"One other bloke who has been using your program and was struggling at 6wpm when we started is getting 100% text at 6wpm now, about 90% of the 8wpm and nearly the same at 10wpm."

Ah, well, looks like the "high-speed start" isn't as helpful as I'd hoped. However, it is very useful to get such feedback, and I re-print it hoping that Ron's comments will help others.

Negative Polarity Keying

Several people have recently asked me how to convert modern positive logic electronic keyers for driving older tube rigs with negative logic keying. Explanation: Solid-state output stages are invariably keyed by pulling a logic-level keying line sitting at 3 - 5 volts down to ground.

Tube-rigs were usually keyed by pulling a line sitting at -40 to -60 volts up to ground. This was because tube rigs normally employed grid-block keying,

and the quiescent negative voltage keyed was used to bias the driver or output stages *off* on key-up.

These two systems require different keyer output stages. Figure 2(a) shows a simple single pnp transistor addition to the output stage of an existing keyer, which will almost certainly be a single npn common-emitter transistor which pulls the output low on key-down. On key-up, the 10k resistor cuts the additional pnp transistor off. On key-down, the keyer turns this transistor on,

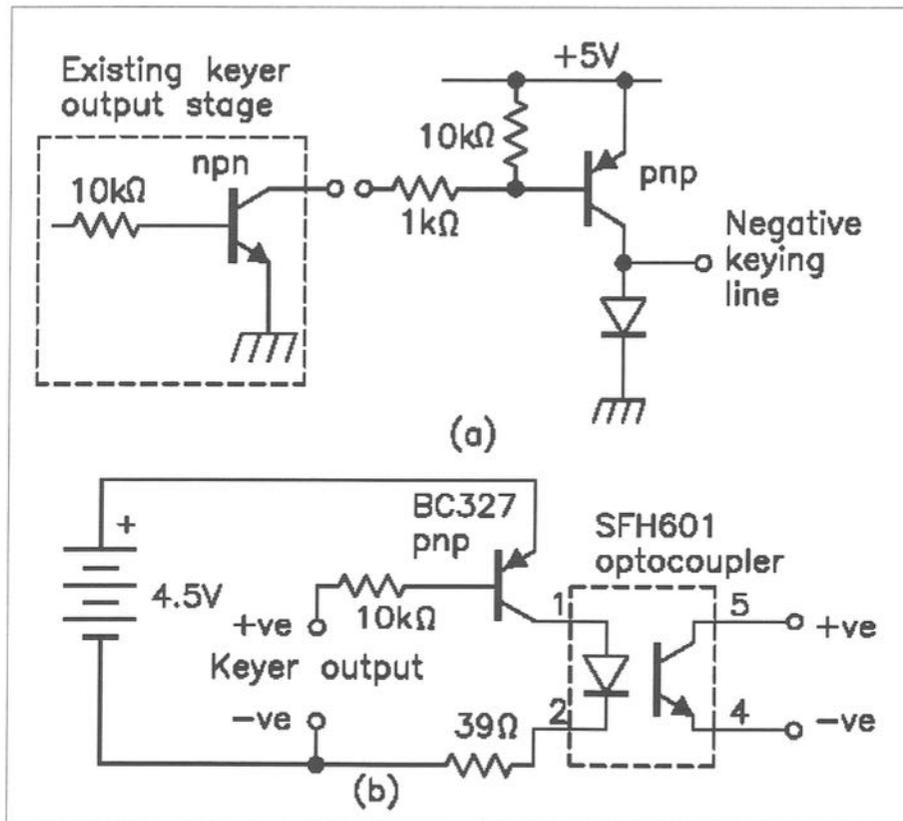


Fig.2a) and Fig. 2b) Negative polarity keyers

pulling the keying line up. The diode prevents the keying line from rising more than one diode drop above ground, in case the transmitter does not like this.

The maximum permissible collector-emitter voltage of the pnp transistor should be greater than the keying line's quiescent negative voltage, which you can measure with a multimeter. A number of transistors are suitable. Both keyer and add-on circuit must have the same ground as the transmitter, and you'll have to get 5 volts from somewhere. Try using the keyer's voltage rail.

Optocoupler

Figure 2(b) is a modification of a circuit I originally published in the September 1994 "Morseman" column. The SFH601 optocoupler has a higher collector-emitter breakdown voltage than more common types. Everything is battery-powered (three penlight cells work fine) and the output terminals are isolated from ground, so work with either positive or negative keying.

For negative keying, connect the positive output of the optocoupler (pin 5) to ground and vice-versa for positive

keying. It does not matter whether the keyer itself is grounded or not, and the optocoupler gives additional protection from rf feeding back into the keyer, or computer, if you're using one (I use a similar circuit for computer keying).

My original version used only a single 1.5 volt cell. This worked fine for me, but apparently didn't have enough oomph to key some transmitters. This version drives about 10 mA through the optical diode and should be more reliable. This drive current can be changed by varying the value of the 39 ohm resistor.

The most bomb-proof method of all is simply to key a common-emitter transistor stage driving a small relay, which can then key anything. I have found that reed relays easily follow keying up to 35 wpm. However relays are more power hungry, and the clicking annoys some people.

There are even circuits which work for either positive *or* negative keying automatically, but these will have to wait for another day.

(Adapted and edited for MM from Gary Bold's The Morseman column in Break-In, journal of NZART, September/October 2000.)

MM

The Radio Officers Association

Membership is open primarily to former MN radio officers but is also open to anyone who has had an association with maritime communications or is interested in the subject. Members receive the quarterly newsletter QSO and its associated amateur component QRZ. There is an annual reunion and AGM. 2001 sees the meeting taking place in Bristol. For further details and information please contact the Membership Secretary - John Russell, 21 Landcross Drive, Northampton, NN3 3LR.

The G3GJX Automatic Keyer

by David Barlow, G3PLE

IN MM74 THERE WAS A REPORT on the centenary celebrations and the reopening of the Lizard Wireless Station. The station, in addition to the 1901 display, has a separate radio room from which licensed amateurs can operate by arrangement, either using their own call sign /P or the permanent call sign GB2LD.

For the duration of the centenary celebrations the equipment was kindly loaned to the station by Kenwood, however more permanent equipment was needed. Richard Walker G6QI came to the rescue and donated a Uniden 2020 transceiver. It is a 30 year old valve set and is in perfect working order, tried and tested, CW contacts having been made world wide. The only problem was that some people like to use a paddle key and the keying line carries -35v which would damage a modern keyer's circuitry, so the keyer has to be isolated from the transceiver using a high speed relay.

Richard came up with the answer. He delved into his "discard" drawer and came out with a keyer he had built himself which was 25 years old and had never been used in anger. Richard has always enjoyed "building things" and read an article in September 1974 'Radio Communication', written by E B Grist, G3GJX entitled "A Fourth Generation CW Keyer Using CMOS ICs".

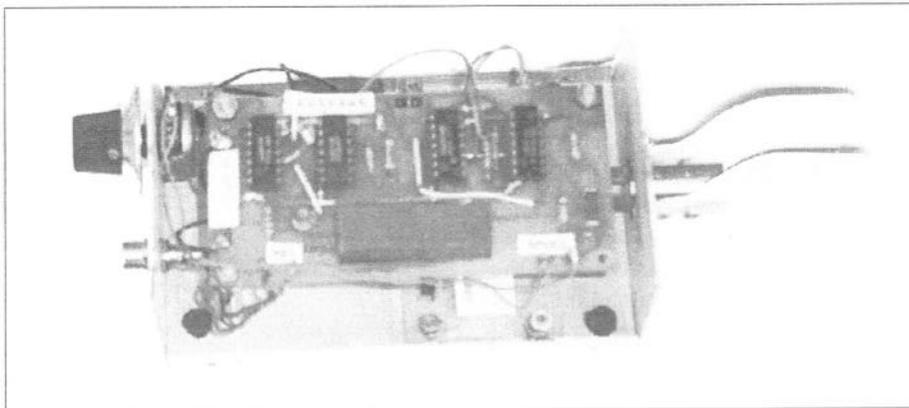
To quote from the article: "The author's experience of building automatic keyers goes back to the original OZ7BO

"el-bug" circuit, using valves, which was highly successful until superseded many years later by transistorised designs using discrete components and followed by integrated circuits used in various ways."

The very early keyers had one very severe disadvantage - they would "eat" batteries and one either had to use a mains power pack (bulky and expensive in those days) or save batteries by switching off between transmissions!

The G3GJX key had four main advantages:- The stand-by current is less than 1uA and 'key down' consumption of less than 10mA. It was easy to build (even though you had to etch your own circuit board). The cost of the four ICs in those days was less than £1 and, excluding the case and paddle components, the total cost was less than £5.

Richard decided to build the keyer, he assembled the components, etched the board and mounted them using a box supplied by RS Components. He persuaded his good friend Ken McCardle, G4CRI to make the metalwork. Those who know Richard will not be surprised to know that he put one or two of his own modifications into the circuitry. All this was not easy as the circuit diagram and

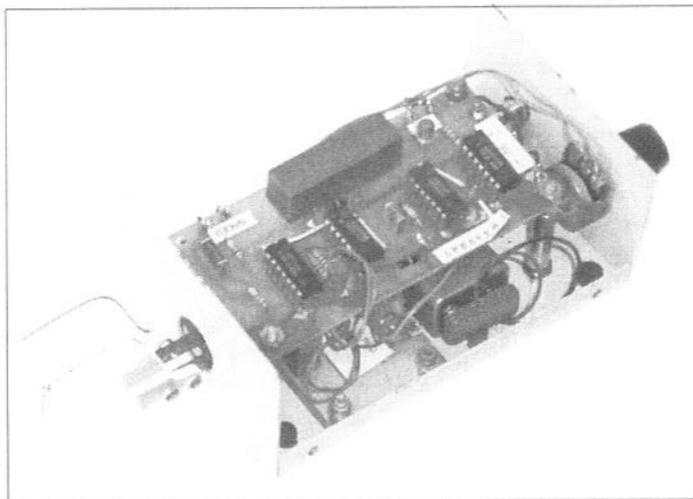


Top view of the G3GJX Keyer.

the list of components did not conform one to the other.

This home made keyer was relegated to the 'bits' box for the next 25 years until he was told that a relay operated

in poor health was galvanised into action, he found the keyer. It was in its case but had not been fully mounted, in fact it had been floating about in the case and he was surprised it had not been damaged. He



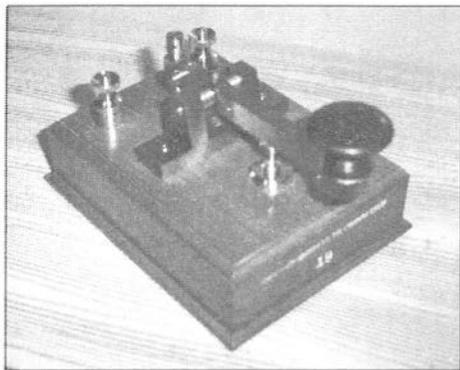
View of the G3GJX Keyer from the paddles.

mounted the board, got out a soldering iron and completed the job. He inserted a crystal microphone as a side tone monitor, put a knob on the speed adjustment spindle, tested it and it worked.

A final problem remained – there was only one paddle for a double paddle keying unit! It seems that Ken

keyer was required for the Uniden 2020 transceiver at the Lizard that he had also so kindly donated. Richard at age 92 and

had got the type a bit wrong as the perfectly made paddle would not work. Mike Soars G4TCI was to come to the



Replica of the Marconi key used at the Lizard station.

rescue and made two new paddles using the original as a template.

The key was tested on air and worked perfectly. Operators used to modern automatic keyers have to be a little more positive as the relay does not react as fast as modern chips. But using the keyer is a pleasure.

The result of all this is that the Lizard Wireless Station now has a fully working amateur radio station complete with W3DZZ aerial, with mast adjacent to the old Marconi base, and a keyer built a quarter of a century ago. The true spirit of the early radio pioneers is reflected in the amateur equipment being used today.

The Lizard Wireless Station has been very fortunate in the donations it

has received. Some years ago Arthur Freeman G4TKX wished to learn the Morse code and happened to go into Morse House, Penywern Road, Earl's Court, and was told that the London Telegraph Training College (as it was called in 1938) was closing down. Arthur was offered a choice of keys for £5 each. He selected one that had been well used but appears to be circa 1930, probably a Post Office single current key since it is stamped with the usual "Pat. 1036.A" on the front and the key arm has "WE 8208" in the casting.

As a postscript, MM readers may like to know that the Marconi Company donated a hand built replica early Marconi key to the station at the Lizard when it was re-opened in January. There are only 20 of these keys in existence and they are not available on the open market.

References:

1. "The G3IAS transistorised electronic keyer" by G F Gearing, RSGB Bulletin, Dec. 1964.
2. "A New Keyer Using Digital ICs" by John Crawley, Radio Communications, Aug. 1969.
3. "Microcircuit electronic key" by Marvin Jahn, QST September 1969.
4. "The 'yet another' keyer" by R G Wheathead, Radio Communication May 1973.

MM

FISTS CW Club – The International Morse Preservation Society



FISTS exists to promote amateur CW activity. It welcomes members with all levels of Morse proficiency, and especially newcomers to the key.

The club has awards, nets (including a beginners' net), dial-a-sked for beginners, straight key activities, QSL bureau, newsletter, and discounts from traders.

Further information can be obtained from **Geo. Longden G3ZQS, 119 Cemetery Road, Darwen, Lancs BB3 2LZ**. Send an s.a.e. or two IRCs.

From 'Knock and Slap' to Telex

by Ron McMullen

I HAVE READ OVER TIME the various methods of learning Morse code and this one is perhaps the most unique of all. At 9 years of age my father was sent to South Broken Hill, New South Wales as Postmaster. South Broken Hill is a suburb of Broken Hill, which at that time (1940) was a large Lead and Zinc mining town.

The official residence was attached to the Post Office and I could constantly hear the click clack of Morse and soon became intrigued by it. My sister and I had adjoining bedrooms with an intervening brick wall and we soon agreed that a dot should be a 'knock' on the wall and a dash should be a 'slap' on the wall. We soon became quite proficient with knock and slap, transmitting messages to each other through the wall. The hallway of the residence had a door leading into the Post Office and I would sit on the floor with pencil and paper and try to work out the dots and dashes.

South Broken Hill (call sign JO) worked Morse with Broken Hill (call sign FX) and of course these were frequently heard letters. I asked my father what they meant and with a wondering look he told me. It wasn't long before I was 'sprung' by my father for sitting at the door and listening and he soon produced a practice set comprising key, sounder and battery. With a bit of expert tuition from him I soon got through the door to the office and would sit at a side

table and write down as much as I could. Before long I was sending 'live' messages to FX and then in quiet periods the FX operators would 'go slow' so that I could catch as much as I could with my father seated at his desk also taking it all down to make sure of things.

I was so intrigued by Post Office workings that I was allowed to deliver telegrams after school, clear street letter receivers, date stamp and sort mail, serve the occasional customer and even ride my bicycle through old disused mines to bring the mail from Broken Hill to South Broken Hill during school holidays, etc.

Before leaving school I passed the Post Office entrance exam and went straight into the Post Office as a Telegraph Messenger. I quickly qualified in the various Morse exams becoming qualified to work lines and was sent out at the tender age of 16 to country Post Offices on relief duties. I had also learnt Telephone switchboard operating which led to all night long

telephone operating in various exchanges.

I then decided to concentrate on the Telegraph side of the Post Office and entered the Telegraphist-in-Training School in 1950, being only required to qualify in machine-telegraphy as I was already qualified in Morse. On completion of the School I worked as a Telegraphist in the Chief Telegraph Office, Sydney and many regional offices on relief duties. Within two years I had passed the Telegraphists Barrier Examination, which meant I could progress to a higher salary level and qualified as a Telegraph Supervisor. I was a Supervisor in both Sydney and NSW provincial centres until I saw the

writing on the wall for Morse code and returned to the Postal side of the PMG Department. However the telegraph 'bug' soon bit me again and I returned to the Telegraphist Training School as an Instructor to pass on my knowledge to other aspiring Telegraphists.

The 'knock' and 'slap' therefore led me through a complete, although rather short Telegraph career, along the way working all types of Morse circuits - simplex, duplex, and open circuit order wires, Murray multiplex, Teleprinters, Teletypes, Telex, Tress, Picturegram and private newspaper circuits, plus horse racing meetings, cricket matches etc. when results of these activities were always transmitted by Morse or printer.

Morse by Internet

Report by Tony Smith, G4FAI

Thanks to MorseMail, a free program written by Harry AB7TB, it is now possible to send and receive recorded messages by Morse over the Internet. They can be sent by e-mail between stations using the same program, or via a repeater through which stations may work each other almost instantaneously in "transceive" mode.

The author says "I've been practising the Morse code art for close to 40 years now. It has given me so much pleasure I'm hoping to find a way to foster its use in this new 'digital age' so the art can be preserved through future generations.

"The MorseMail program is

simple and stand-alone. There is no fancy installation required. Just download it as a .zip or .exe file from <http://www.seanet.com/~harrypy/MorseMail/>, put it in some handy directory, make a shortcut and you are ready to go. MorseMail requires a Windows 95, 98, 2000, or XP machine and a 16-bit sound card to operate properly. But it takes up only a quarter megabyte of disk space and runs with modest CPU and RAM resources."

The mouse buttons can be used for keying Morse, as a straight key or as an iambic keyer and, during playback, speed, tone frequency, and background

noise can be adjusted as required. You can even reverse the keying buttons if desired. For most people, a proper key will be preferable to using the mouse, so details are provided on how to wire a mouse to enable an external key to be used. If a jack socket is used, the mouse can be used for its normal function when MorseMail is not in use, and the key can be plugged in when required.

Harry says: "In a future version, I plan to add the ability to feed an audio source (like a code practice oscillator or ham radio rig) into the sound board and it will envelope detect the tones and record the mark/space times. You will even be able to record well filtered CW from a receiver and then send it as an email in the compact MorseMail timing format.

"My dream all along ... was to provide a 'new ham band' facility where we could use the Internet for Morse code QSOs. MorseMail using e-mail was a partial step in that direction and still a good option when synchronicity is not possible.

"The MorseMail repeater function operates through a specialized form of a HTTP server. I operate one at "brasspounder.com" but the program, *MorseServe*, is available for download and can easily be set up by anyone with a fixed public IP address.

"This is just a beginning for the transceiver feature. Being a ham radio project, it will take a while for this to evolve into something more polished. However, please send any feedback you can to AB7TB@msn.com to help me improve it as I have time. I'm looking forward to some MorseMail QSOs!"

More information, including

operating instructions and a copy of *MorseMail*, can be obtained from <http://www.seanet.com/~harrypy/MorseMail/>

If any readers decide to try this new style of Morse communication, which makes possible fully readable QRM/QSB free QSOs with any part of the world at any time, MM will welcome their reactions and comments. We will be happy to pass such comments on to AB7TB if they wish. **MM**

SILENT KEYS

It is with regret to have to report the passing on of the following MM readers:

Douglas Coe	G4PZQ
Ian Mant	G4WWX
John Ward	

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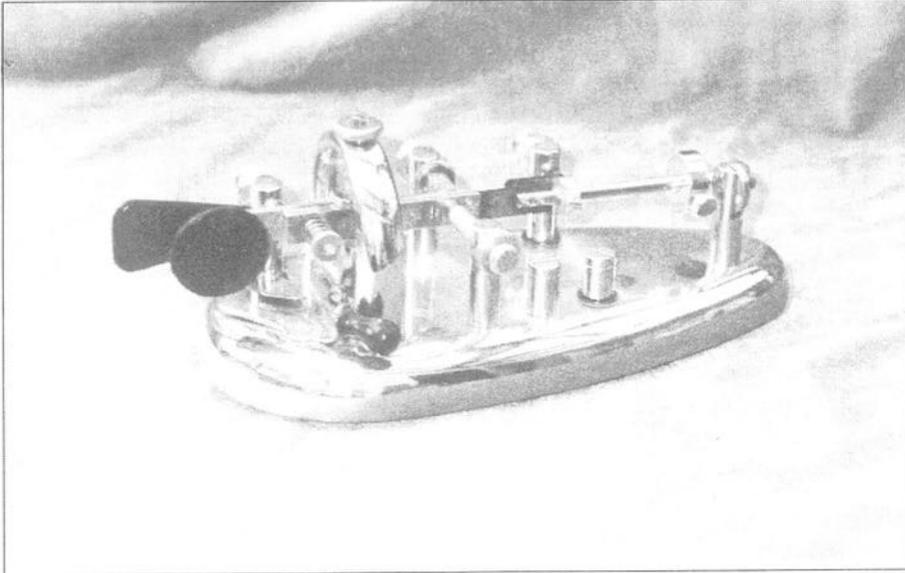
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Showcase

Readers are invited to contribute any additional information and stories, no matter how minor, to the Editor, Morsum Magnificat. There have been thousands of designs of keys & telegraphy instruments. Information will be lost unless it is compiled in one place and shared with other readers.

Photo/Collection: George Robbins, G3LNG



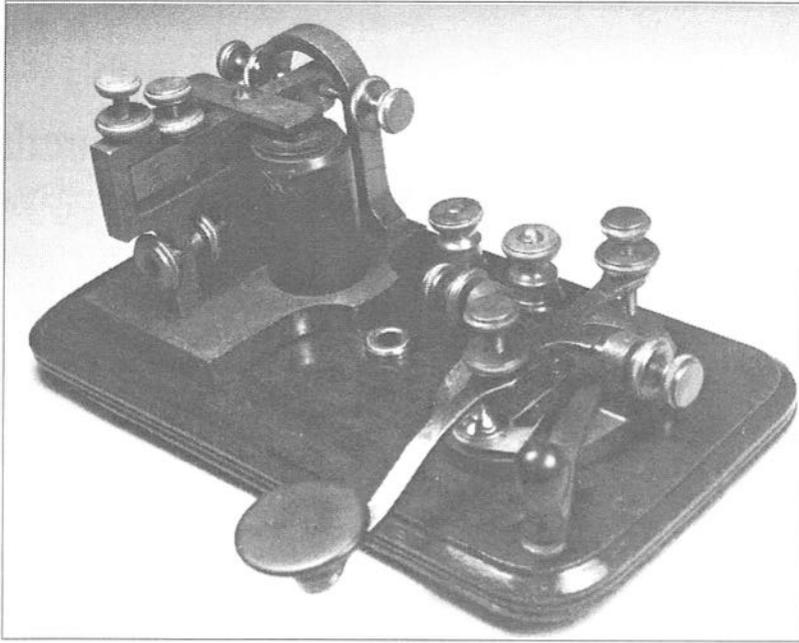
A beautiful example of the McElroy S600 Super Stream Key

Photo/Collection: Malcolm Brass, G4YMB

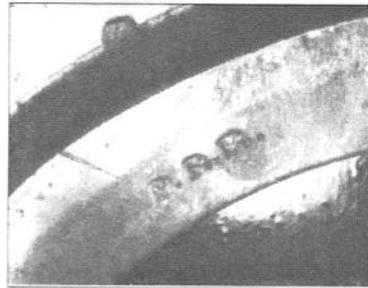
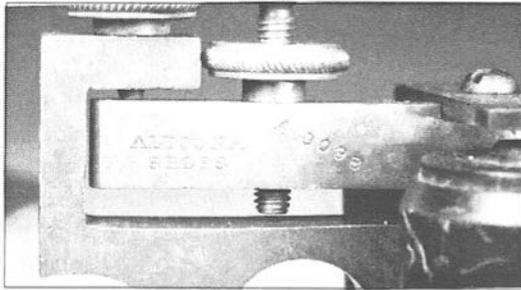


A fine example of a 1930's Gamages' training set with key and buzzer in a mahogany case. These were used by a number of organisations including the Scouts. The batteries were in the base and the unit was used for point-to-point training.

Photo/Collection: Dave Penne, WA3LKN



The Pennsylvania Railroad (PRR) was the only railroad that made its own telegraph equipment. The PRR manufactured the equipment in their Altoona, Pennsylvania manufacturing facility ("Altoona Shop"). It's known that the PRR made sounders, relays, KOBs and camelback keys but since they didn't sell the items to others, there are no catalogues available, and relatively little is known about Altoona equipment. The camelback keys are identical in every regard to Tillotson keys and either are very good copies or else they bought those from Tillotson and put their own marks on them. PRR Altoona Shops equipment is exceedingly high quality, and displays a high degree of workmanship and careful design. This KOB is was once lacquered brass, now largely gone, and has a design that facilitates removal of the coils by simply unscrewing two screws on the underside for servicing, unlike other KOBs that were much more difficult to service. Notice the detailed routed edge of the wooden board. For a strictly working class commercial instrument, a great deal of pride went into the manufacture of this item. (MM-42 had on its cover a key attributed to Altoona but it is now known that is a Western Electric item from a Box-relay KOB.) – Dave Pennes, WA3LKN.



Morse in the Australian Antarctic Part 6 - Early 1960's

by Allan Moore, VK1AL

I PSO SCIENTIST STEVE Grimsley who served at Wilkes in 1961 and 1963, tells the story of Radio Kold: *In February 1961 I found a 1573 kHz crystal in the ionosonde junk box. As a former 3UZ radio engineer in Melbourne, certain possibilities occurred to me and I discussed these with two Americans sharing the science hut with me. After formal clearance with the Officer in Charge, we decided to give birth to the first broadcast station in Antarctica - Radio KOLD.*

A small transmitter was constructed using amateur radio spares, plus some obtained by dismantling a portable record player I had taken south. A metal cabinet was recovered from the rubbish tip. After panel beating and a coat of grey spray enamel you couldn't pick it out from a new one. The rig consisted of a 6V6 oscillator valve/tube, followed by a screen modulated 807 final amplifier tube, running about 10 watts input.

The primary programme source was a reel-to-reel tape player and a stack of programme tapes supplied by WLEE, a radio station in Richmond, Virginia, USA. As each tape ran for an hour the only time it took to run this little station

was about a minute, when the fire watchman, each hour on his rounds, would turn the tape over.

We located the transmitter in the corner of the tiny chapel next door to the science block. For an aerial, a random length of wire was threaded through a

hole in the wall. When KOLD took the air on Monday February 20, 1961 reception was adequate throughout the camp. Later on we turned that corner of the chapel into a studio, complete with a microphone and turntable. Between 5 and 6 in the evening various members of

Despite its gradual decline, Morse was still performing a valuable service. ANARE (the Australian National Antarctic Research Expeditions) was honoured by the Australian Post Office with an issue of eleven stamps showing various expedition activities, including one depicting a radio operator transmitting Morse traffic.

the party would act as disc jockeys.

KOLD became so successful that the aerial system was improved so that field parties could tune in, and they did so as far out as 300 miles. The Russians used KOLD as a LF homing beacon when they flew over to visit Wilkes in March 1963. The station was still on the

air when I left Wilkes in January 1964.

Doug Twigg continues the story: *The facility was an immediate success and became popular with all parties. It soon became recognised that it could be used for more than an entertainment on-the-job service, but also as a pager to locate individuals when required. This was years before VHF hand-held radios came to ANARE. Later, the equipment was moved into the Met./Radio building where a more elaborate 'studio' was set up.*

This location had more manpower available over long hours by shift workers, to attend to the ever hungry turntables and tape machines. It wasn't long before other ANARE stations heard about Radio KOLD and began their own broadcast stations. Mawson built Radio BLIZ and Davis built Radio ICY. Radio KOLD was moved from Wilkes to Casey in 1969 and has had several upgrades since. All these stations operate to this day, although they have migrated to the FM band. It is now customary for the duty 'slushy' to provide the music for the time they are working in the kitchen and mess.

Antarctica's Smallest Field Transmitter?

Steve Grimsley, creator of Radio KOLD, designed and made another mini-transmitter which he used at Wilkes during 1961 and 1963. Concerned about the heavy, one hundred pounds in weight, ANGRC-9 ("Angry-9") transceiver used for one-day sledge journeys, he spoke to the radio officers who agreed that a receiver was not really necessary in the

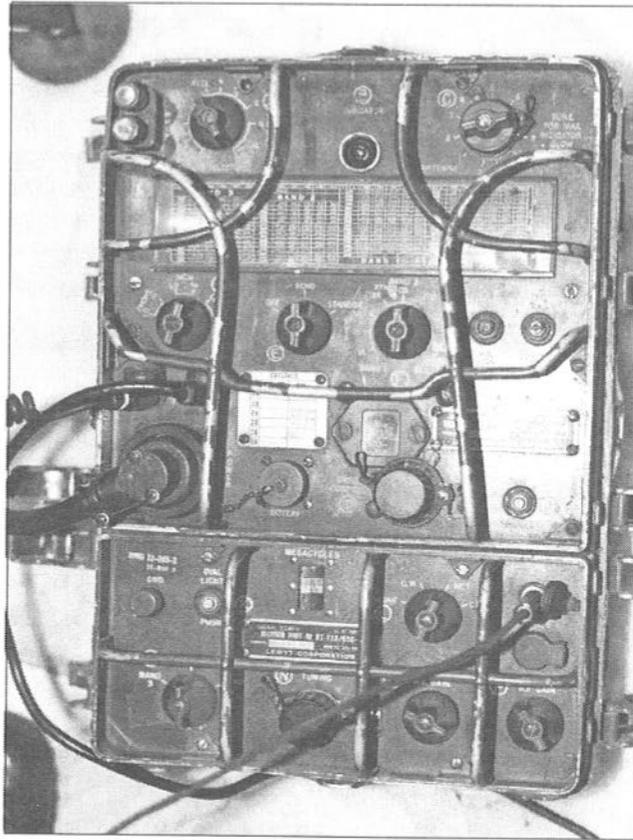


Photo: J. Gillies

ANGRC-9 ("Angry-9") field transceiver. US made, of Korean war vintage. With about 15 watts output, CW and voice, covering 2-12 MHz, these units were the main portable sets used by ANARE throughout the 1960's, for both dog and mechanised travel.

field in these circumstances. All he needed was a reliable low power, crystal controlled, transmitter for which they could keep watch using a spare receiver at the station. Steve said this was a type of 'insurance' communication system.

A radio amateur enthusiast since 1946, Steve built a two transistor transmitter measuring only 107 x 82 x 34 mm, and weighing only 220 grams - less than 8 ounces. It could be carried in his windproof chest pocket. The crystal frequency was at the lower end of the amateur 40 metre band (7008 kHz), but with an input power of only 20 mw this was not a problem. The power supply was a 6 volt lantern battery, and the aerial was a small roll of hook-up wire rolled out on the snow.

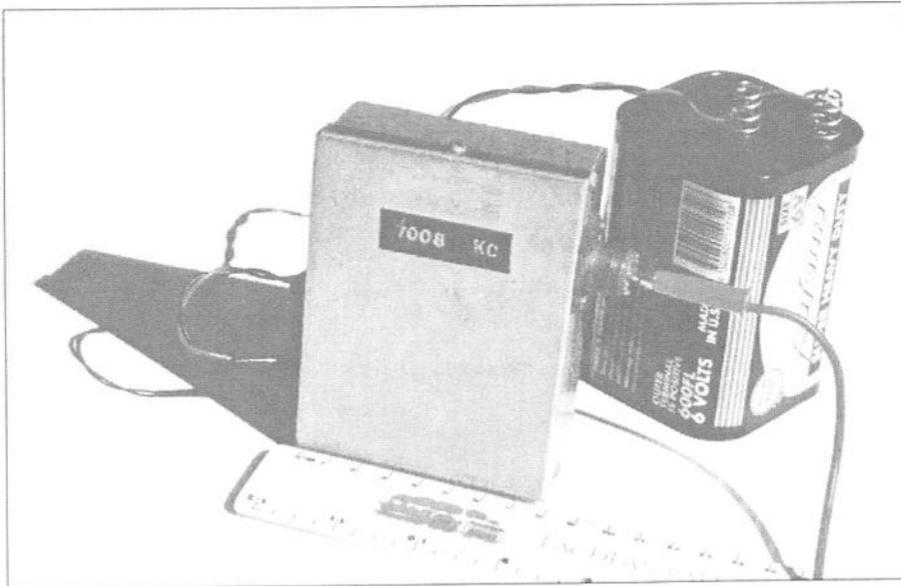
There was no receiver, and one simply sent the message twice at moderate

speed in Morse code. Steve said each time he was preparing to leave camp he would go to the radio room, press his Morse key, tune in on a spare receiver, turn up the volume and leave. The radio operators never missed a scheduled message (on the hour), or his one emergency call.

Steve quotes from his diary: "On 19 July 1961 at 7 a.m. we loaded the sled, harnessed in the dogs and with Ray Torckler at the helm, riders George Hemphill and self, we went like hell out of camp. We made fast time to the vicinity of the cone moraine where we struck either a rock or hard sastrugi and one of the runners broke in two. I put in a call on my pocket transmitter and Bill Burch appeared in less than an hour. Made it home in snow storm at noon."

Steve said the radio operator on

Photo: S. Grimsley



Antarctica's smallest transmitter, built by Steve Grimsley at Wilkes in 1961.

duty had copied his message consisting of the words 'broken runner' and their position, which was about 15 kms from the station. Bill Burch promptly packed a saddle bag with materials for an emergency repair and set out on his two-stroke BSA trail bike.

1964/65

Morse Declining

Laurie Turnbull, supervising technician, produced some interesting statistics for the 1965 Mawson midwinter magazine, *High Lassitude*. The station by this time boasted a large antenna 'farm' of some 25 steel masts, rising to 70 feet, with an array of rhombics, vees, and other antennas for transmitting and receiving.

The radio station still functioned 20 hours or more each day, seven days a week. Laurie calculated that 22 percent of all normal traffic was handled by Morse code, with the balance by RTT. (The overall annual Morse component will have been higher, taking into account meteorological reports sent to Russian aircraft in flight in the spring and summer months, and communications with various polar vessels.

Despite the decline in its use, Morse was still performing a valuable service. For example, having been evacuated in 1961, Roi Baudouin station at Breid Bay, call sign ORV, was reopened by a party of ten Belgians and four Dutchmen in mid-January 1964, shortly afterwards being again included in Mawson's network of Morse outstations. (It is believed this was the first time the Netherlands had participated in Antarctic activities.)

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Contact with the French station at Amsterdam Island was still being made using CW, and Morse operators at all French stations in the region were competent and fast. The French station of Dumont d'Urville in Adelie Land remained in regular contact with Wilkes by CW from the first days of IGY. The French also worked Mirny in the early days, and communications were made via CW until the 1970s.

Molodezhnaya was not part of the Mawson network unless aircraft were involved. One morning, immediately following the first pre-dawn schedule between Mawson and another Morse station, Oleg Brok in Molodezhnaya called unexpectedly using the foreign station's frequency. He had been unable to raise Mirny as propagation was poor. His signal strength was faint but readable through light drift static. Oleg was anxious for his weather message, which was presumed to relate to imminent flying operations, to be passed to Mirny at the first opportunity. His unexpected and resourceful call was welcome, and the message was relayed soon after.

Closure of Davis

Davis station was formally closed on 25 January 1965 due to reasons of economy associated with the rebuilding of the replacement station for Wilkes. The station was carefully 'mothballed'. Aerial wires were lowered to the ground and stored at the station, ready to raise and use again in the future. The masts and poles were left standing with all guy wires secure and correctly tensioned. In the radio office, an AR7 and a TR-10 receiver were installed in lieu of the

existing two Collins 51J-4 receivers which were returned to Australia, and the two AT20 transmitters and the ART-13 radio beacon were left in their installed state.

The station was then ready to withstand the onslaught of many savage blizzards in the years to come. If by chance some marooned expeditioners or flyers found themselves at Davis, it would not take long for a generator and the radio equipment to be pressed back into service.

1966

Reopening of Syowa Station

Syowa, call sign JOV, reopened on 31 December 1965, having been closed since February 1962. Syowa was again included in Mawson's network of Morse stations. A year or two later its call was changed and is currently JGX.

Doug Twigg reminded us of Syowa's earlier forced closure in February 1958, when he and others were at Mawson operating Radio VLV that year. The group worked Syowa several times daily to exchange the usual scientific and meteorological data. One day they were informed by the Japanese operator that the station was to be closed, and all personnel evacuated by helicopter as their relief ship was unable to reach them due to heavy ice conditions.

On their final schedule, the Syowa operator sounded most upset when bidding his farewell. He informed Doug's group that their huskies could not be evacuated and were being left at the station - chained to their dog lines. In signalling their own farewell, Mawson expressed deep concern about this decision, and then radio contact ceased. All at Mawson

were shocked at this news and some were quite incensed at this inhumane action.

Doug said that when a new Japanese expedition returned to Syowa a year later they found that many of the dogs had slipped their collars and escaped - to where, no one knew. However, two of the dogs had stayed in the station area and were found to be fit and well after a year of living and foraging for themselves in the harsh environment.

Many will have seen the Japanese film relating to this event, entitled *Antarctica*, of which English dubbed versions are available. The story of the two little canine heroes, *Taro* and *Jiro*, is well known to millions of adults and children around the world.

Antarctic Postage Stamps

In September 1966 the Australian Antarctic Territory was honoured by the Australian Post Office, which issued a set of eleven stamps showing various ANARE activities in the region. The 25 cent stamp depicts a radio operator transmitting a message by Morse in front of equipment bearing the station's call sign VLV.

The identity of the 'model' has long intrigued us and the Philatelic Group of Australia Post has recently unravelled part of the mystery. According to an unpublished manuscript, written by the head of the PMG Philatelic Branch in the 1950s/60s, the radio operator depicted is Alan Hawker who was our pioneer radio supervisor at Davis in 1957.

The artist's excellent, lifelike, stamp design is based on a photograph provided by ANARE. It is very similar to one taken of Alan Hawker at Davis. In the

original the station call sign VLZ is clearly displayed so we are unable to explain why Mawson station's call was used instead. Richard Breckton of Australia Post's Philatelic Group says the change of the call sign was deliberate, but he cannot say why it happened. He suggests that perhaps the artist (John Mason) decided to feature Mawson because it is the oldest mainland station. The stamp was prepared in consultation with Mr Mason and Antarctic Division officers.

Nevertheless we know now that both Davis and Mawson are well represented in this unusual way.

VLF Transmissions

In the fledgling years of radio, VLF, or Very Low Frequency, transmissions were used as the principal means of communicating. This was because HF was not widely understood or sufficiently tested at the time. Whereas HF is dependent on the ionosphere to bounce signals between stations, VLF transmissions produce a ground wave and follow the general curvature of the earth. Unlike HF, VLF systems are not necessarily confined to particular times of day or night, or need to be 'matched' to changing seasons or have to cope with an unstable ionosphere. ANARE did however use HF for almost forty years on their long distance circuits with great success.

The use of VLF by ANARE was always an option, but the system required high masts and great lengths of aerial



One of the eleven stamps issued by the Australian Post Office in 1966 depicting various aspects of the work of ANARE. See text.

wire to radiate or receive effectively. Land-based VLF transmitters are usually many times more powerful than HF transmitters, particularly those used by the Royal Australian Navy (RAN). It should be pointed out that the Navy ships were equipped with VLF receivers but not VLF transmitters.

In Antarctica the Americans, like ANARE, routinely used HF systems for years and were obviously considering ways to improve or increase reliability within their own communications systems. In 1964/65, about 13 miles from the US Byrd station, a VLF antenna system 21 miles long, with wire laid on top of ice 2 km thick, was tested and enlarged. A permanent facility was built on the site of the antenna and all countries were invited to propose experiments for this VLF antenna, the longest in the world.

Doug Twigg undertook some

experiments of his own using VLF, several years before the US built their system at Byrd. Doug monitored VLF transmissions from Canberra/Belconnen RAN station, call sign VHB, in the early 1960s with great success. Using a low frequency receiver belonging to one of the Dan ships, he copied messages broadcast from VHB. While signals were strong, he noted that they tended to quickly attenuate or dissipate not far from

the edge of the polar ice-cap.

(Extracted/summarised from *Fifty Years of Australian Radio Communications in the Antarctic, 1947-1997*, a series of articles written by Allan Moore to celebrate the Jubilee Year of ANARE (the Australian National Antarctic Research Expeditions) for *Aurora*, Club Journal of ANARE.) *MM*
To be continued...

Plane Language

by John Worthington, GW3COI

As far as I know, in WWII all Morse learners were taught how to send and receive cipher groups made up of five or more symbols per group. Each group could be mixed letters and figures, groups of letters only or groups of figures only. Operators were also taught to receive and send plain language but in practice they very seldom had the chance to use it, for security reasons.

One stormy night in 1942 the Signals Officer in charge of the evening watch alerted the senior operator to tune a certain frequency on his receiver and be prepared to work a civilian flying-boat which had been diverted to their landing

water because of foul weather.

The aircraft in question was one of the famous Yankee Clippers flying from the USA and was due to come on the air at any minute. It was winter, and a gale with driving snow was the sort weather no pilot wants especially when he is aiming for a strange destination.

Suddenly, the sweating RAF operator sat upright and grabbed the audio volume knob as a very strong signal smote his ears. It was audible to most of the other operators who were tuning other frequencies and immediately the whole of the signal cabin staff were twitching at the flood of plain language Morse issuing from their headphones at a great speed. It

was evident that the operator sending it was not going to lose time using ciphers. He wanted information, and fast.

The receiving senior operator had collected his wits and was scribbling what he could of the message on the logbook, but it was a sorry mess of missed letters. He hadn't really taken plain language since he left Morse classes a long time ago! He desperately asked for a repeat and, as it came back, at least three other operators nearby pitched in and wrote down what they could. There followed a quick conference between them all to assemble the message. The aircraft wanted to know on which part of the Lough to land and how to recognise the flare path. There was a delay whilst this information was obtained from the operations room via a landline. This took some seconds and in the meantime the aircraft came up again and repeated his request.

Looking back, it is surprising that

no one requested the sender to slow down - but our operator was matching his sending speed so the sender probably assumed that his CW was being copied.

No sooner had the information been sent when the aircraft came back to say that the flare path could not be found and that they had landed but would take off again and have another look. They were now searching for the three small boats that marked the path. The second time he was successful and the operation was over.

We never found out what the American operator thought about British operators but the next day he visited the signals cabin and left a full carton of Camel cigarettes as a token of appreciation. We discovered later that he used a bug key. We had never seen one and in my case it was not until 1948 that I managed to obtain one (and 'junk' my straight key for ever).

I should mention that I was not on

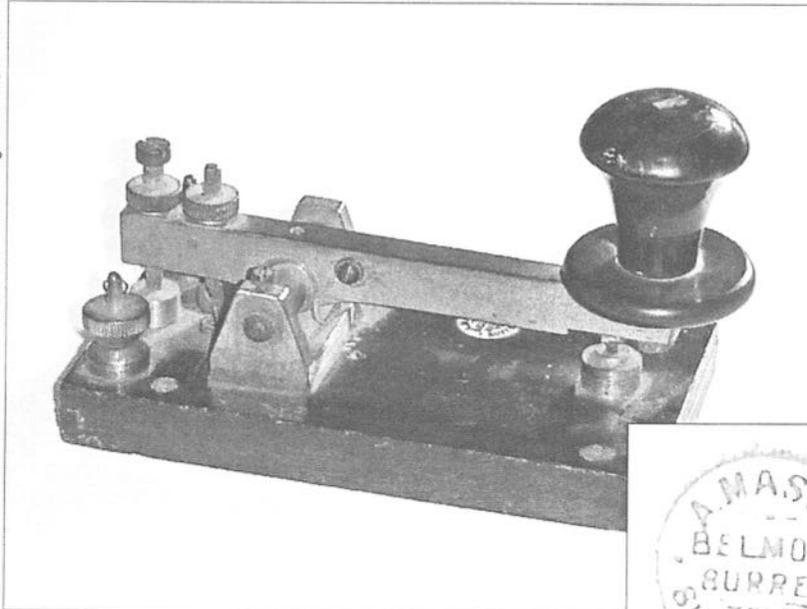
duty that night but heard from my pals, who had been there on the night, all about the mass of 'clangers' that were dropped. They were swamped by plain language Morse during a daring double landing by a Yankee Clipper, one of the biggest flying boats then in operation. *MM*



Info Please!

Readers are invited to contribute any additional information and stories, no matter how minor, to the Editor, *Morsum Magnificat*. There have been thousands of designs of keys & telegraphy instruments. Information will be lost unless it is compiled in one place and shared with other readers.

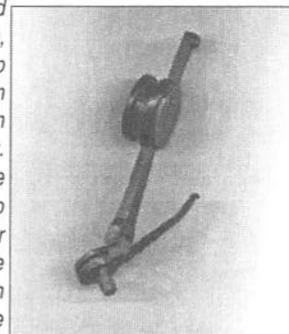
Photo/Collection: Greg Ulsamer, DL1BFE



This British key in the collection of Gregor Ulsamer, DL1BFE, is made by A. MASON. Does anyone have any information on this key or the manufacturer.



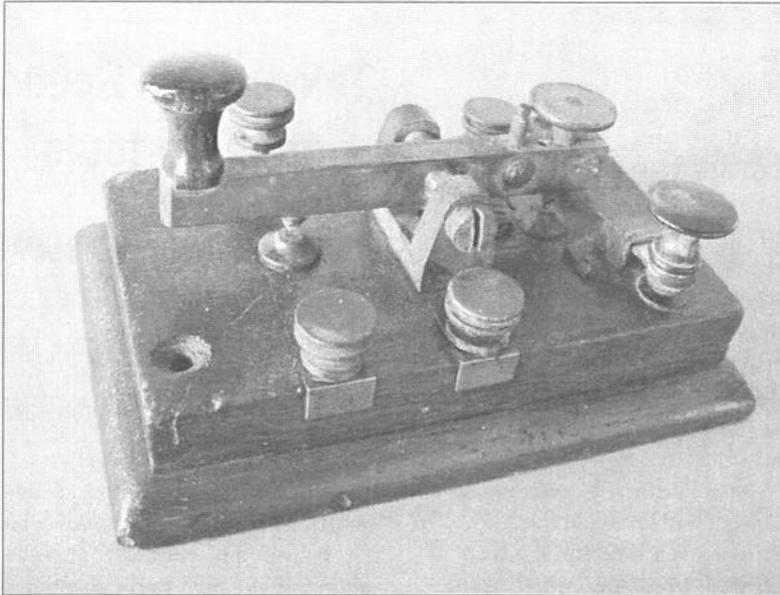
This 'key' was purchased on E-bay by John Alcorn, VK2JWA. It was just a cheap 'punt' out of curiosity. From the pictures it would seem to be only a part of a key. The top part seems that the knurled-screw fixes the top part onto some other assembly which would be the base and bottom



contact. This would seem to be only the lever & spring etc. with the contact way out in front of the knob?? Is it a Morse key at all?

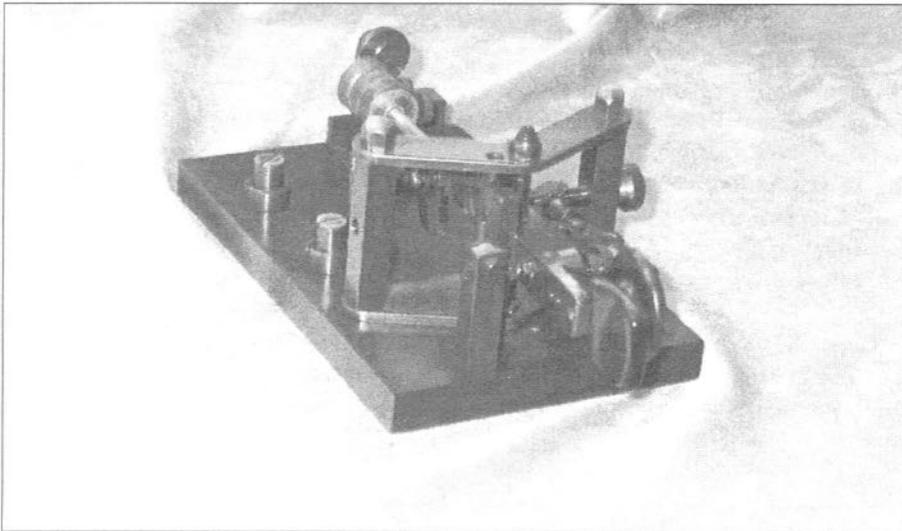
Photo/Collection: John Alcorn, VK2JWA

Photo/Collection: Fons Vanden Berghen-Halle-Belgium



This Bréguet key, in the collection of Fons Vanden Berghen-Halle-Belgium, is 100% original. Remarkable is that it has a second, smaller, key on the base. It has been suggested that this was used to ring a bell at the receiving end, but this could also be done with the regular key unless a second circuit were connected utilising an additional wire. Does anybody have any information on this interesting feature.

Photo/Collection: George Robbins, G3LNG



This interesting bug key was acquired by George Robbins at the National Vintage Communications Fair, Birmingham, UK in April 2001. It is made to a professional standard – has anyone any info please.

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THE SEMI-AUTOMATIC KEY (or 'bug') and the typewriter around the turn of the century made the movement of traffic by the American Morse Telegraph Code considerably faster than the old method of sending with a straight key and copying by handwriting. The urge was always present to 'move copy faster' - especially in the Press field.

Walter Phillips, a crack operator for the Associated Press, devised a set of abbreviations even before the advent of the 'bug' and typewriter which went a long way in accomplishing this. He published his 'Phillips Code' as early as 1879 and it became the standard abbreviation code in the USA and Canada on press message transmission.

Typed in Full

'AB' stood for 'about'. 'BC' stood for 'because' and 'CCN' for 'conclusion'. 'WIT' meant 'witness', 'RKZ' recognize, and so on. Skilled receiving operators using a typewriter could easily type out the abbreviated word in full and 'keep up' with the sender as fast as he could go.

'POX' was the code for 'police'. A news dispatch once referred to a breakout of smallpox somewhere. One absent minded operator copied this as 'a breakout of small police'!

Modified Morse code

While many operators became familiar with his abbreviation code, few

Telegraphic Speed and Shortcuts

*by Don deNeuf, WA1SPM
(SK)*

knew that in 1914 Phillips designed a modified Morse telegraph code which he felt would not violate the prevailing sentiment attached to the existing code. At the same time he felt this would dispose of the drawbacks of the 'spaced-dots' used in the letters C, O, R, Y, and Z, and the extra long dash signifying the letter L. His proposed code is shown in Figure 1. (old codes in brackets):

Not Adopted

Despite occasional errors caused by careless senders using the original code ('seen' for 'son', 'sheep' for 'shop', 'tease' for 'lease', etc), Phillips' proposal never caught on - habit is difficult to change and some operators felt strongly that the spaced dot letters provided somewhat faster transmission than would the proposed code.

If Phillips had been able to present his proposed code somewhat earlier it might have been the one eventually adopted internationally to replace Morse's original code which was not satisfactory to many European countries

A	--		N	--
B	----		O	---- (- -)
C	----- (- - -)		P	-----
D	----		Q	-----
E	.		R	----- (- - -)
F	----		S	---
G	----		T	-
H	-----		U	----
I	..		V	-----
J	-----		W	----
K	----		X	-----
L	----- (- - -)		Y	----- (- - -)
M	--		Z	----- (- - -)

Figure 1 - Phillips' proposed modified Morse with old code in brackets

for two reasons. The spaced dots were not practical on sluggish 'swinging needle' type circuits and submarine telegraphy. The other reason was that the code made no provision for diacritical letters as used in European languages.

Original Code Survival

Because of these problems an International Telegraph Conference held in Berlin in 1851 devised and adopted the present day 'International' code which utilized some of Morse's original signals, eliminated the spaced dots and the long

L, and provided for the accented letters.

Morse's original code remained the standard for landline telegraphy in North America, despite the use of International code on overseas cable and radio circuits and in maritime wireless communications, until the 1930's when it began to phase out with the introduction of teleprinters which replaced manual Morse telegraphy.

(There is a detailed description of the Phillips Code in MM61, p.34. A facsimile reprint of the 1923 version is obtainable from the MM Bookshelf. Ed.) **MM**



G-QRP Club
 The G-QRP Club promotes and encourages low-power operating on the amateur bands with activity periods, awards and trophies. Facilities include a quarterly magazine, Morse training tapes, kits, traders' discounts and a QSL bureau. Novices and SWLs welcome.
 Enquiries to **Rev. George Dobbs G3RJV, St Aidan's Vicarage, 498 Manchester Road, Rochdale, Lancs OL11 3HE.** Send a large s.a.e. or two IRCs

BY THE LATE 1840's, single line railways were incorporating W. F. Cooke's recommendations and were using the telegraph as a means of traffic control. The already established major lines, however, continued to control their trains by the 'time interval' system. Theoretically, the system was sound enough, but in practice it was disastrous.

Trains were dispatched at set intervals which had to be maintained along the line. The driver was in sole and complete control of his train and had to ensure not only the speed/time factor but also keep a sharp look-out for obstacles or damage to the track. The system took no account of engine failure or other hazards and with slow, stopping-trains being dispatched ahead of expresses, chaos soon emerged.

To add to the general confusion, a nationwide network of railways was developing. Junctions with other lines - all running independently and to their own set times - produced accidents and delays... A little like Heathrow Airport operating without Air Traffic Control!

Bell Codes

As the railways expanded, the situation deteriorated, with areas in and around London being the most hazard-

The Talking Machine and the Railways

Part 2 – Order Out of Chaos

by Peter Brankin

Part 2 of Peter Brankin's article on the part played by the railways in Britain in the development of communications.

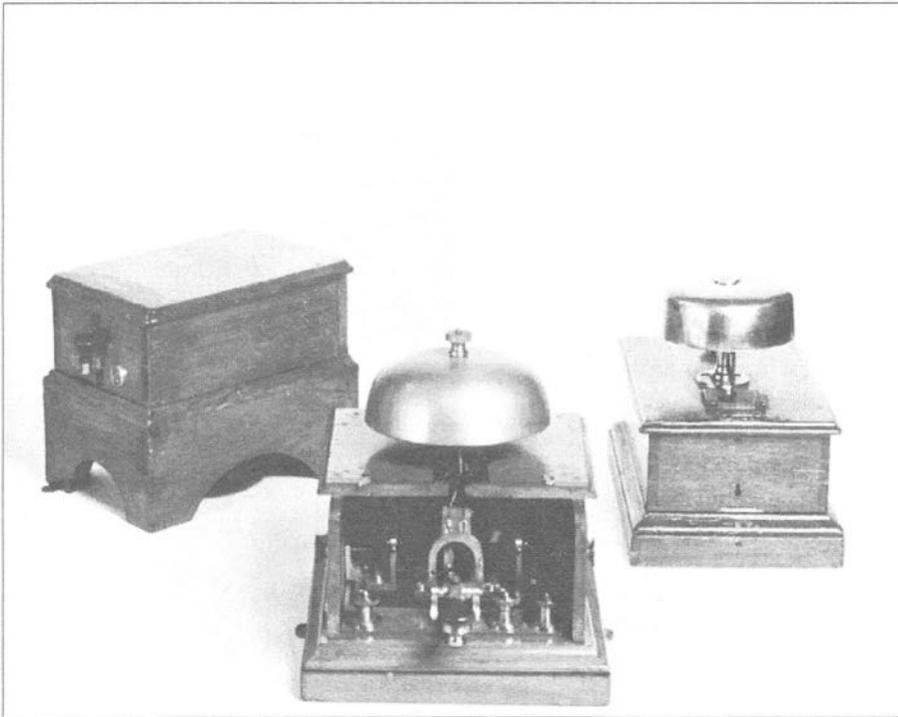
First published in 'Transmitting' - The Newsletter of the Museum of Communication Foundation, Bo'ness, Scotland.

ous and erratic. Action was eventually taken in 1851 by C.V.Walker, Telegraph Engineer on the South Eastern Railway (SER). Half a mile outside London Bridge station, the London & Greenwich, Lon-

don Brighton & South Coast and the South Eastern railways converged. The signalman's only sure means of identifying the train was by the configuration of lights on the front of the engine. By the time these were visible - and with Lon-

don's fogs they frequently weren't - the train was already in the station!

Walker's idea was simple and effective. He installed a bell telegraph between the station and the junction at Spa Road, half a mile away. Signalmen were posted at the two positions and by a simple code of bells - 1 ring for Croydon, 2 for Brighton and 3 for the SER - the safe



Two block bells with taper

and correct destination of the train was ensured.

Walker refined this system to provide a simple block telegraph for use on the SER. Bell codes were passed between adjacent signalmen (by now housed in rudimentary 'boxes') to control the passage of trains: Signalman *A* sent 1 ring of the bell to ask Signalman *B* if he could accept the passage of a train. *B* replied with 1 ring for 'yes' (no reply for 'no'). On the arrival of the train, *B* sent 3 rings to *A* to announce the arrival, to which *A* replied with a further 3 rings in acknowledgement. The process was then repeated all along the line, with the

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signalmen entering all signals and times in a day book. The bell telegraph system was subsequently used by the London Chatham & Dover and North Eastern railways.

Bell and Needle Telegraphs

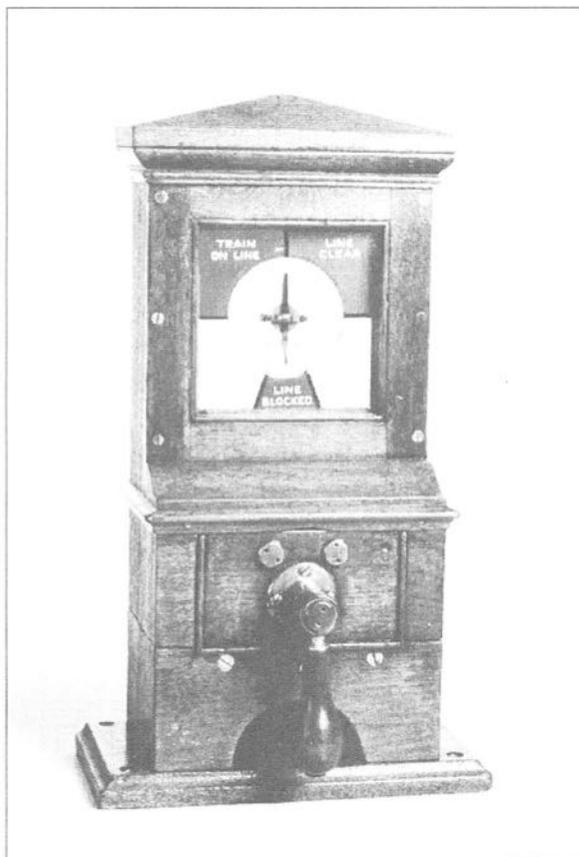
Throughout this period, businessman Edward Tyer was developing a system which incorporated bell signals and needle telegraph. This, the forerunner of today's system, was first installed on some of the busiest sections of the SER and later on the North London, Great North of Scotland and Furness Railways. Separate 2-position needle instruments, denoting 'Line Clear'/'Train on Line', were

used for the Up and Down lines and coloured red and black respectively. Their purpose was to provide a visual indication of the state of the line and this information was re-inforced with a sound signal; a bell for one line and a gong for the other. When a train left Signalman *A*, he sent 2 rings to Signalman *B*, who manually changed his needle instrument to read 'Train on line'. This indication was electrically repeated on *A*'s instrument, creating a 'block' which *A* could not remove. *B* altered his needle to read 'line Clear' when the train reached him; this restored *A*'s needle to the 'Line Clear' position and he acknowledged this with 1 ring.

Tyer's was only one of several methods of train control developed during the mid-1850's to early 60's. The main drawback was that, unless otherwise indicated, the line was considered to be clear; on several occasions this proved to be a dangerous assumption!

The introduction of a 3-position needle improved the safety factor considerably. The new instrument indicated 'Line Clear'/'Train On Line'/'Line Blocked'. Signalman *A* therefore could not dispatch a train to Signalman *B* until *B* had given 'Line Clear'.

In 1863, the Board of Trade laid down certain principles to ensure



Block bell needle telegraph

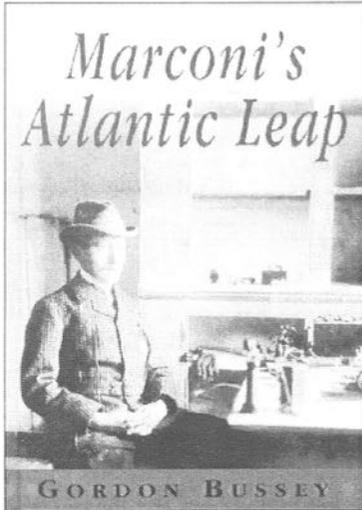
uniformity of signalling methods and equipment. Needle instruments were to be clearly labelled and apply to only one line. 'Speaking Instruments' (Cooke & Wheatstone's Electric Telegraph and Morse code) were to be installed to enable signalmen to communicate effectively, without relying on the cumbersome system of bells and signals. Needles were to be kept in the 'Blocked Over' position and only activated if something was out of order.

To be continued...

MM

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	UK	EU	WORLD
Railroad Telegrapher's Handbook by Tom French Old-time telegraphy on the American railroads	£8.00	£8.30	£9.00
Bunnell's Last Catalogue with notes by Tom French Illustrates and describes the company's many telegraph instruments	£5.50	£5.70	£6.00
History, Theory & Practice of the Electric Telegraph (facsimile reprint of 1866 edition) by George B. Prescott	£13.95	£14.95	£17.50
Watchers of the Waves by Brian Faulkner A history of maritime coast stations in Britain	£15.00	£15.50	£17.10
Keys, Keys, Keys by Dave Ingram A visual celebration of the Morse key	£8.50	£8.90	£9.80
Marconi's Battle for Radio (children's book) by Birch & Corfield Illustrated story book. A present for the grandchildren	£5.85	£6.00	£6.80
Radiotelegraph & Radiotelephone codes - Prowords & Abbreviations by John Alcorn	£12.85	£13.70	£15.50
A History of the GPO Mark 1, 2 and 3 Morse Telegraph Keys by Dennis Goacher(MM65)	£6.00	£6.50	£7.20
The Phillips Code - a facsimile reprint by Ken Miller(MM61) Telegraph codes for press reports	£10.00	£10.20	£10.50



*Marconi's
Atlantic Leap*

GORDON BUSSEY

Marconi's Atlantic Leap by Gordon Bussey

Published by Marconi Communications, this is a hardback high quality book of 96 pages and describes the endeavours of the 27 year old Marconi to prove that trans-Atlantic wireless transmission was possible against the views of many distinguished scientists.

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Your Letters

Readers' letters on any Morse subject are always welcome, but may be edited when space is limited. When more than one subject is covered, letters may be divided into single subjects in order to bring comments on various matters together for easy reference. Please note that the views in readers letters are not necessarily those of MM.

Provenance on US Naval KOBs

For years I've been looking for hard evidence that Naval ships in port were connected to landlines to conduct their business. I have a WWI Navy application for Radioman 1st class. One of the requirements is proficiency in American Morse code. I have evidence that Naval shore stations used American Morse on trunk lines. Now I have evidence that the Navy did indeed use landline Morse instruments on board ship when in dock.

For several years I have been researching the Navy FOX circuit. I recently found an old-timer who was intimately familiar with FOX and has provided me with information that I've never found before. As a side benefit, he gets side tracked into telling other stories while a radioman from 1939 to 1945.

"When in port at Pearl Harbor, all capital ships were connected by landline where we used regular telegraph sounders but used the regular radio type Morse code."

So now we know why we find KOBs with Navy markings. What we did not know was that International Morse was used! I suspect that between the two

wars, landline code migrated from American Morse to International Morse. Needless say I have lots more questions for this old-timer.

Neal McEwen, K5RW
"The Telegraph Office"
nmcewen@metronet.com
http://www.metronet.com/~nmcewen/tel_off.html

Eddystone Bug Serial Numbers

In the letter in MM75 from M. Watson, G3JME, concerning his Eddystone Bug Key, he quotes the serial number as EZ0660.

Readers may be interested to know that all Eddystone Serial Numbers incorporate the date of manufacture in a simple alphabetic code.

In this case 'E' indicates the month, May, and 'Z' indicates the year, 1948. 0660 shows the key to be the 660th manufactured. The numbers continue to run through all the period of production and are true quantities.

Readers may extrapolate this code backwards from 'Z', and also forwards from 'A'=1949. In the latter case the

year is scheduled to come first, but occasionally this is reversed. It seems that the newest apprentice was given the job of punching the plates. He sometimes wasn't sure which way round to do it and didn't like to ask!

Fortunately the correct answer is usually found by inspection.

Graeme Wormald, G3GGL

Eddystone User Group

Worcestershire, UK

(Graeme's letter refers to the 660th key made. Mine is serial AG1906. This kills the myth that only 500 were made! – Ed)

Öller – Ericsson Keys

It was nice to see my short story about Öller and his keys in MM 74. I would like to clarify any misunderstanding about the brass blocks on these keys, used for switching between the batteries. The brass blocks at the far end of the base were only on the longer model; it was made longer to accommodate them. There was a shorting plug to put into the holes between

the blocks to connect the smaller battery (LB) for the local lines or to a bigger battery (SB) for the longer lines, to compensate for losses. A plug in the block can be seen in the photograph.

In my younger days I had a complete Ericsson key, the longer model, complete with plug, but threw it away as it was no use to me at the time.

Gunnar Eriksson, SM4GL

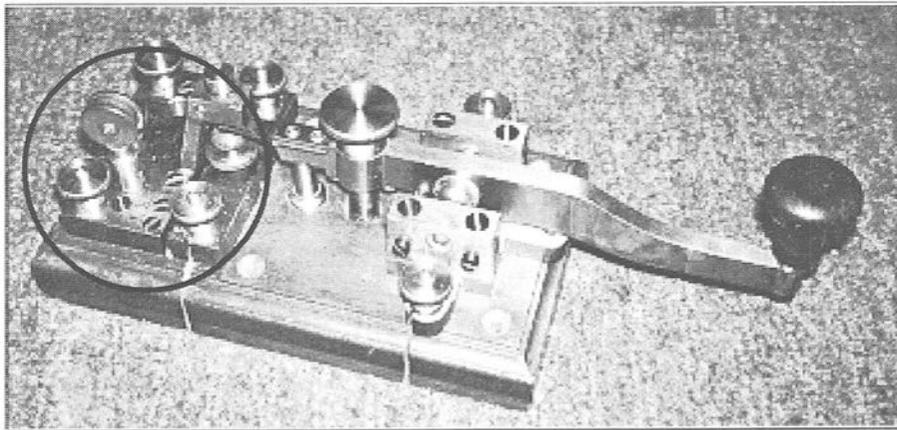
Svärdsjö, Sweden

RAF Survival Heliograph

With reference to the RAF Survival Heliograph advert sent by John Elwood, WW7P. I have been the proud possessor of one of these since 1948, when I bought it in Bradford market for a shilling (5p in modern money but worth about the price of 5 cigarettes then).

The operating instructions are printed on the back of the stainless steel mirror, together with a sketch of the operation, similar to that shown in your reproduced advert but without the cheesy grin.

Photo/Collection: Tom Perera, W1TP



There is no other marking on the back of the mirror, and the spelling of the word 'centralizes' would indicate an American origin. However the foresight has stamped into it the RAF Stores Reference 27H/21 07; a broad arrow (the logo of the British War Department); and an unknown device. This takes the form of a violin in a circle, with two or three indistinct numbers or letters also within the circle. Does this ring bells with any of our North American cousins?

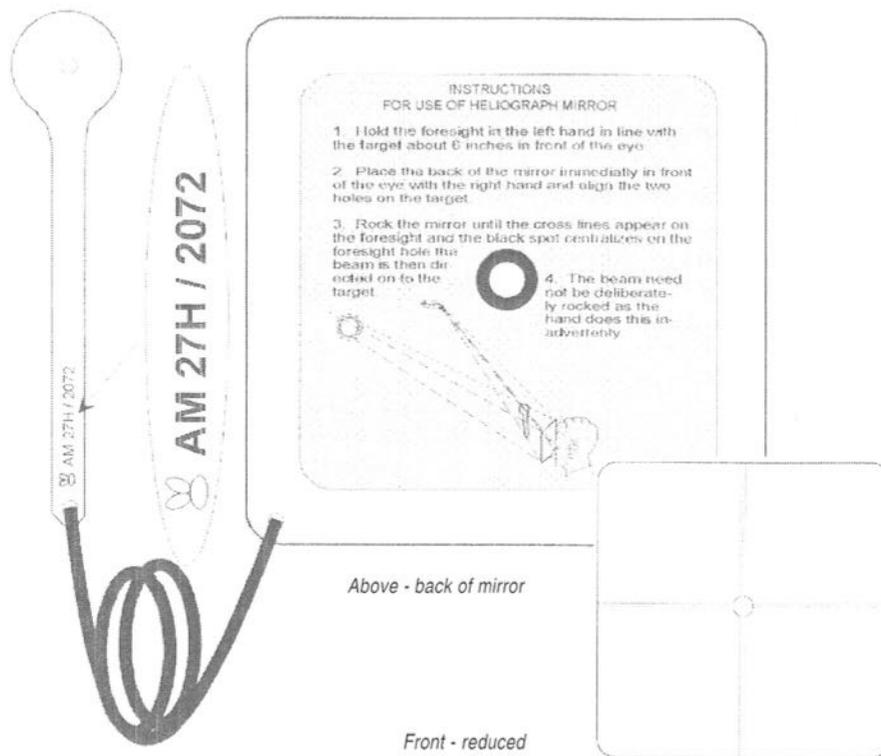
Graeme Wormald, G3GGL
Worcestershire, UK

I had the opportunity, just after receiving MM75, to find the heliograph pictured on page 44 at a militaria flea market. I scanned it and made a true original drawing, with all the details. The foresight and the stainless steel mirror are kept together by a leather lace.

The cross impressed on the polished side is reflected onto the foresight when the beam is correctly aligned.

The whole system works very nicely (in sunny weather!). Some of my neighbours can verify this...!

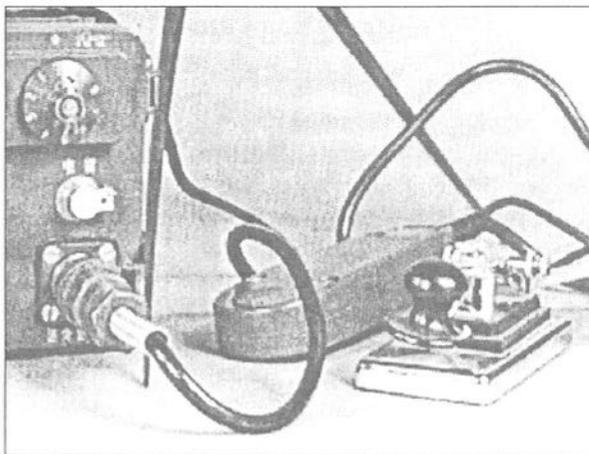
Jacob Henri, F6GTC
Hoenheim, France



Angled Chinese Key

I came across information on this modern military transceiver manufactured in China. An interesting feature is the Morse key which is angled for ease of operation. Is there a left-handed version?

*Alan Williams, G3KSU
Somerset, UK*



Thanks to BT Archives

I must thank British Telecom Archives for the cooperation and assistance they have given me. I have been researching Telegraph and Radio Procedures etc. since 1997 and have had occasions to request information from them.

I congratulate them for their service. The help and information provided has been far beyond their service obligation. The tone and nature of their correspondence has been most friendly.

Their research capability is limited but the archives are available for researchers by appointment.

Contact them and ask for the "User's Guide to the BT Archives". Their e-mail address is archives@bt.com

To search the archives visit their web pages at <http://www.bt.com/>

<http://www.pro.gov.uk/finding/default.htm> Thanks BT Archives!

*John Alcorn
NSW, Australia*

ADGIL Bug Keys

I came across this advertisement in the October, 1937 edition of the RSGB "T. & R. Bulletin". Has anyone owned or seen an ADGIL bug or have any MM readers further information please.

*George Robbins, G3LNG
Liverpool, UK*

GETTING A BUG?

Then you should remember that the ADGIL BUG is unbeatable both in quality and price and is the only All-British Bug Key.

BUY AN ADGIL BUG

PRICE 21/- (By post
9d. extra)

THE ADGIL INSTRUMENT CO.
35, Manor View, Finchley, London, N.3.

Letters - continued

Morse Trainer MM74 P38

There is an advertisement on the web site of Army Radio Sales Co at www.armyradio.co.uk which describes this unit as "British Army Morse Key Trainer

Made by Irwin Desman Ltd. in England, NSN 6940-99-219-2848. These keys were used by the MOD in the training of new radio operators. The unit uses 2 standard 9 Volt "PP3" Batteries. Built in sounder with external speaker jack. Has Tone and Volume adjustment controls. Morse key is fully adjustable and is of sturdy metal construction."

Editor

THE MORSE ENTHUSIASTS GROUP SCOTLAND



MEGS was formed in 1991 to encourage the use of Morse, especially by newcomers. Regular skeds are held using our callsign 'GMORSE' each Monday and Thursday from 7 until 9 p.m. (local time) around 3.530MHz. Among other services, we offer Morse practice tapes free of charge, other than postage. This offer is now also available to *MM* readers. Membership is open worldwide, the 'Scotland' in our title simply shows place of origin. Lifetime membership £1.00.

**Details from Secretary: G.M. Allan
GM4HYF, 22 Tynwald Avenue,
Rutherglen, Glasgow G73 4RN,
Scotland.**

MM76 - July/August 2001

Readers Ads

Readers advertisements are free to *MM* subscribers. The number of insertions should be specified, otherwise it will be assumed that it is required in the next issue only. Non-subscribers are welcome to advertise in the Classified Ads section. Please contact *MM* for styles available and rates.

New - Ads can include one photo free of charge

FOR SALE

HUGE 11 YEAR Telegraph Surplus to be whittled away. Wireless, landline, code books, & other books/paper, learning machines, U.S., foreign, military, parts, etc. - Specific enquiries invited - can send e-mail, pics etc.. Dr. Joe Jacobs, 5 Yorktown Place, Northport NY 11768, U.S.A. Fone: +1-631-261-1576. Fax: +1-631-754-4616. E-mail: joekey@aol.com

THE MM Q & Z CODEBOOK, a comprehensive 82-page list of the Q-codes and Z-codes, including a one-page list of the original Q-codes of 1912. Available from Dick Kraayveld PA3ALM, Merellaan 209, 3145 EH Maassluis, Holland. Price £5 UK, or US\$10.00 outside UK, including postage in both cases. Payment accepted in cash only.

EXCHANGE & WANTED

WANTED: Marconi 365A or B key with roller bearings. Will pay going price and it will end up as property of Radio Officers Association as an addition to the equipment held. Contact David Barlow, G3PLE, Pine, Churchtown, Cury, Nr Helston, Cornwall, TR12 7BW, UK. Tel: +44 (0) 1326 240738, e-mail: dbarlow@lizardwireless.org

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Readers Ads

WANTED TO BUY: Back issues of MMnos. 1 to 7 and 11 to 18 incl., also late model Jones twin paddle with red base. Tel: 01202 475048, e-mail: chris@g3rcu.fsnet.co.uk.

WANTED TO BUY: Old large commercial Morse key such as H. White 1918, or GPO double-current type keys, with or without the metal/metal-glass cover. Would consider exchanging my old Air Ministry Morse Key Type B1, Ref: 10F/7839 in as new condition. Letters to: D. Johnson W5FZ, 15514 Ensenada Drive, Houston, TX 77083-5008, Texas, USA. Or Email: fullerphone@yahoo.com

I AM A KEY COLLECTOR with over 300 different keys from 20 countries and have 50 keys available for swapping. Write to Henri Heraud, F6AUO, 9 Avenue de Bellevue, 91130 RIS ORANGIS, FRANCE.

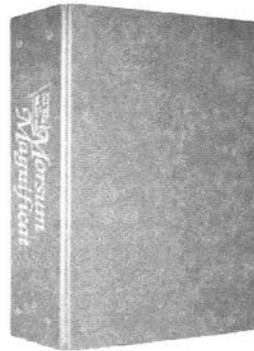
WANTED: TELEGRAPHY ITEMS (esp. land-line). I am looking for somewhat special telegraphy apparatus: Single and Double Needle, Wheatstone etc. Buy or swap. I can swap for early electricity (e.g. tubes from Crookes, Röntgen and Geissler; Ruhmkorff; Wimshurst...), very old radiovalves, some telephony and of course telegraphy. Who else collects telegraphy ?? All letters answered. Fons Vanden Berghen; Lenniksesteenweg 462/22; B-1500 Halle, Belgium.

Tel. +32.2.356 05 56 (home: after 8 pm my local time) or office: +32.16.38 27 21 or e-mail: fovabe@telindus.be

WANTED TO BUY: Telegraphic Code Books, as used to reduce the costs of telegrams by replacing common phrases with codewords. Would be interested in both originals of photocopies. I am a hobbyist in Cryptography and am fascinated in different ways data is and has been represented for different purposes (e.g. speed, economy, confidentiality etc.) Also interested in related items. Letters to Mark Darling, 132 Knowlands, Highworth, SN6 7NE, United Kingdom or e-mail: darling@patrol.i-way.co.uk

WANTED: Early paddles such as the Nikey, Autronic, Ham-key HK1 & HK2. Ray Bullock, 40 Little Harlescott Lane, Shrewsbury SY1 3PY, England. Tel: +44 (0) 1743 245896.

MM Binders



£7.90.....UK
£8.50.....Europe
£9.80.....Rest of the World (Air Mail)

Historic QSL Cards

Historic Cards from the collection of Tony Ricicki, W2VRK

C. HAUMONT — Ave. Albert, 187, Brussels, Belgium

Radio Belgian B7 to *2BGI*
 Your sto. wrkd. hr: *10-11-24* at *1310* G. M. T.
 QRR: *act* QRM: QRN: *gld* QSS: QRH: *41*
 Receiver used:
 Transmitter used: Circuit:
 R/ valve (s). Type: *500* L. T.: *6* Amp.
 H. T.: *1500* milliamps *Adc* C. W.
 Aerial current: *0.1* amp. on W. L. *44.5* metres
 Best two way wrkd:
 Pse when replying quote reference: *105426/387 log 9/2/29 B*
 Remarks: *1st QSO in wireless history of Belgium*
Other QSOs

Many tks & 73's from b-57 op. *C. Haumont's PRIGG*

b-B7 - A strange pioneer call held by C. Haumont of Brussels, Belgium in 1926. It confirms a 40 meter QSO with U-2BGI in New Jersey, USA.

GISBORNE, NEW ZEALAND, *5 June* 192*5*

Radio *2BGI* ur. Sigs., Wkd. *27 April* Hr., QSA, QNK, on *27 April*
 N.Z.T. *10.5* QRH: QRM: QRN: QSS:
RECEIVER:—Low Loss Tuner.
TRANSMITTER:—Coupled 3 Coil Series Hartley 50 Watt Tube, 1,000
 volt 300 watt Esco. Genr. Antenna current *1.5* Amps. on *30* Mtrs.
AERIAL:—5 inch cage, 790ft. overall, 75ft. high.
COUNTERPOISE:—6 wire, 40ft. by 25ft., 7ft high.
DX:—Worked:—New Zealand, Australia, Cape Horn, Argentine,
 Uruguay, Chile, England, Canada, Hawaii, U.S.A. (all Diats), Mexico, Indo
 China, Turkey, Porto Rico, *Japan, Sumatra, Brazil*
REMARKS: *Italy, France, to Ess on 40*
73's

Operating hours from 7 to 12 GMT. **IVAN H. O'MEARA,**
 ARRL—OWLS

Z-2AC - Operator Ivan O'Meara was part of a QSO that set a DX record of 6400 miles when he answered CBB of Argentina in July, 1924 on 121 meters. Their QSO lasted over 2 hours. This card confirms a contact with 2BGI, a New Jersey USA station, in June 1925 on 40 meters.

WIRED LOVE :
A Romance of Dots and Dashes.

By ELLA CHEEVER THAYER.

An exceedingly interesting, amusing, and popular work, and the first telegraphic novel published. Every telegrapher should read it.

256 PAGES. CLOTH. PRICE, 75 CENTS.

CONTENTS: Sounds from a Distant "C"—At the Hotel Norman—Visible and Invisible Friends—Neighborly Calls—Quimby Burs's For his Eloquence—Collapse of the Romance—"Good-Bye"—The Feast—Unexpected Visitors—The Broken Circuit Re-united—Miss Kling Telegraphically Baffled—Crosses on the Line—The Wrong Woman—Quimby Accepts the Situation—One Summer Day—O. K.

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*The first telegraphic novel published? Advertisement from the
Journal of the Telegraph, November 20, 1887*