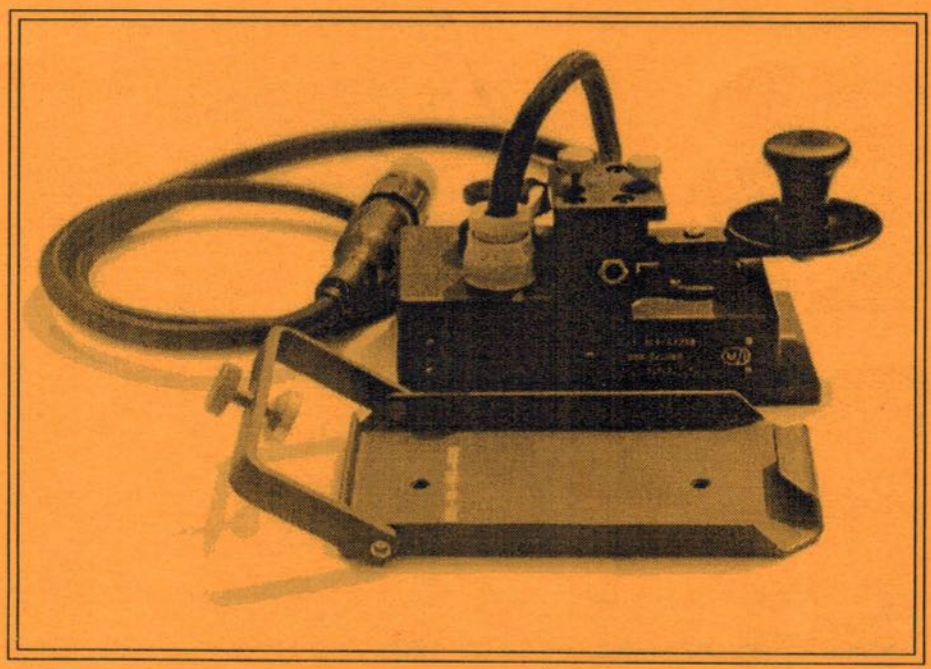
Flying the flag for Morse

Number 31 – Christmas 1993

Morsum Magnificat

The Morse Magazine



Key for British Army 'Clansman' HF transceivers

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Morsum Magnificat

the Morse Magazine

MORSUM MAGNIFICAT was first published as a quarterly magazine in Holland, in 1983, by the late Rinus Hellemons PA0BFN. Now published six times a year in Britain, 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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ON OUR FRONT COVER

KEY TELEGRAPH MANUAL, 5805-99-652-6572 for VRC-321 & VRC-322 British Army HF transceivers in the CLANSMAN range which came into service c.1979. The VRC-321 is a 40W PEP vehicle station covering 1.5–30MHz, and the VRC-322 is a point-to-point 300W PEP station, comprising the VRC-321 plus an RF amplifier. Modes available are SSB, DSB, CW and RTTY. CW power: VRC-321, high – 25W, low – 5W; VRC-322, high – 250W, low – 25W. Key made by the Royal Ordnance Factory, Blackburn.

Collection/Photo: Wyn Davies

Comment

I DON'T KNOW how much it's down to your efforts, but thank you to all the *MM* readers who wrote to their MPs and the Prime Minister, adding their voices to the protest at the suggestion that VAT should charged on books and magazines in the UK. Sense prevailed – for now at least!

Ever since my days at radio school, when a fair proportion of our Morse receiving practice came from paper tapes running on a 'Creed' machine, I have always derived great pleasure from listening to well-sent Morse, regardless of whether it is being sent by man or machine. In time, we students naturally became familiar with the content of some of the tapes, and we were then encouraged to 'send along' with the machine, trying to maintain synchronism with it. I found it an excellent way of developing good sending rhythm.

In a more modern context, there is no more salutary lesson to be learned about the quality of your keying than to send a test passage to a computer-based Morse reader. Your friends on a CW net may be able and willing to decipher your possibly less-than-perfect sending, but Morse-decoding programs are very unforgiving. As I found some years back, when playing around with an early Tono Theta keyboard/reader, it is very demoralising to be faced with a screenful of gibberish, the result of the computer's efforts to cope with your 'swing' or other bad sending habits. As with a critical 'test report' in any other activity, it is a real spur to 'pull your socks up'.

If you've never tried sending to a Morse decoder, I heartily recommend giving it a try should you get the opportunity.

G3GSR

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News

RSGB Abstains from Morse Vote

AS WE REPORTED BRIEFLY in the last issue of *MM*, the IARU Region 1 Conference in Belgium, in September, discussed the following multi-part motion from OVSV (Austria):

'**1.** The Conference should maintain its present position concerning the necessity of a Morse code test without technical aids as part of the licence requirements for amateur radio operators under 30MHz as long as the present Radio Regulations have not been changed in this respect.

The testing procedures should be left to the discretion of the national communications authorities, with a minimum requirement of 12 wpm to be maintained.

'**2.** Should the Radio Regulations be amended to the effect that no Morse code is required any longer, OVSV maintains the position that the respective highest national licensing class should at least include the requirement to receive Morse code without technical aids at a minimum speed of 12 wpm. In such a case, OVSV supports a change of the delineation between "code" and no-code" licences from 30MHz to 28MHz.

'**3.** In any case, the use of Morse code should be bound to a respective licence class that includes a code test. Limited use of Morse code for training purposes, however, should be encouraged on frequencies above 144MHz in preparation for the 12 wpm requirement.'

This motion was duly discussed at the conference, and the minutes of the proceedings (Committee C4) read as follows: 'There was no controversy over the first part of OVSV's proposal, but some considerable discussion took place over the remainder of the paper. A number of societies favoured a code-free licence on 28MHz, and there was a fair amount of support for the idea of allowing "on-air training", i.e., the use of Morse code for training purposes, by those who had not yet taken a Morse test. OVSV felt that a 12 wpm minimum requirement should be maintained for the highest licence class.

'RSGB reported on a survey carried out among their members which revealed an overwhelming majority in favour of maintaining a Morse code requirement. However, as the matter had not yet been discussed by their Council they felt unable to vote on it. *(See page 4 for the results of the survey. – Ed.)*

'After some further discussion, the following motion was carried with 38 votes in favour, none against and abstentions from REF (France), AGRA (by proxy held by REF), URE (Spain), RSGB, and ROARS (Oman):

' "The Conference maintains its present position concerning the necessity of a Morse code test without technical aids as part of the licence requirements for radio operators under 30MHz".'

Alex Vilensky 4X1MH reports that when the Chairman of the HF Committee announced the results of the votes on

the above motion 'the Conference delegates applauded for a long time. There was no applause following the announcement of votes on any other issue.'

MM has received a number of letters from readers expressing concern that the RSGB delegation did not have a mandate to vote on this issue.

(Information from John Allaway G3FKM, Secretary, IARU Region 1, and Alex Vilensky 4X1MH, IARC delegate.)

REF Position

FOLLOWING THE ABOVE DISCUSSION and subsequent voting result, REF (France) circulated an information sheet explaining its reasons for abstaining from voting. It fully supported item 1 as proposed, but did not agree with the deletion of half of it in the final motion.

It also supported items 2 and 3, and did not agree with their deletion from the final motion. Accordingly it did not vote in favour of the final text, and abstained.

REF then set out its position on licence requirements relating to the Morse code as follows:

1. It wished to keep Morse code at 12 wpm, also the CW sub-bands, 'for the full privilege or highest licence class, CEPT 1 or Class E in France'.

2. It wished to promote Morse code and CW traffic by creating or maintaining a Novice class on the HF bands with a 5 wpm Morse requirement.

3. It wished to promote that objective through amateur radio societies, IARU Region 1, IARU, and ITU, in order to modify the Radio Regulations.

4. It sought promotion and development of amateur radio by allowing licensees without a Morse qualification to have access to the sub-band 28.400 to 29.700MHz.

Bandplan Changes

THE AMATEUR HF BAND PLANS were changed at the IARU Region 1 conference to allow more space for digital modes, now designated 'Digimode'.

The revised frequencies are mainly shared with CW including, in some cases, international QRP frequencies and UK Novice frequencies; also in some sections with 'phone and the International Beacon Project.

The new 'Digimode' sub-bands are 1.838–1.842; 3.580–3.620; 7.035–7.045; 10.140–10.150; 14.070–14.112; 18.101–18.109; 21.080–21.120; 24.920–24.929; and 28.050–28.150MHz.

A typographical error in *Radio Communication*, journal of the Radio Society of Great Britain, indicating that in the 80m band the digimode section began at 3.560MHz (an international QRP frequency), caused great concern among many QRP operators and UK Novice operators. In the latter case the whole of the 80m UK Novice band (3.560–3.585MHz) would have been shared with digimodes.

MM has confirmed with the Secretary of IARU Region 1 that the correct lower frequency is, in fact, 3.580 and not 3.560, but there is still concern among CW operators about the extension of the digimodes in other HF bands to share frequencies previously allocated for CW, including further QRP and Novice frequencies.

The revised band plans in full are to be found in the RSGB 1994 *Call Book*,

the printing of which was held back until the conference decisions were known.

RSGB Survey Results

THE RESULTS OF the Radio Society of Great Britain's consultation exercise, on behalf of the Radiocommunications Agency (Britain's licensing authority), on the subject of a code-free licence for amateur operation below 30MHz, were reported in a 3-page article in the December 1993 issue of *Radio Communication*.

A total of 1413 replies were received from the UK, and 86 from overseas, with 67.5 per cent voting 'no' to a code-free licence, and 32.5 per cent voting 'yes'. The report comments 'No doubt this topic should be reviewed by the RSGB Council from time to time to see if opinion changes.'

The report, prepared by the RSGB's HF Committee, stresses that the views expressed in the survey do not represent RSGB policy regarding a code-free HF licence. It goes on to say 'It is of interest that at the recent Region 1 IARU Conference in September the Conference was in favour of retaining the Morse requirement. Council's current opinion is in agreement with the Region 1 decision but recognises that the situation may change in the next 5–10 years.'

NZ Amateurs Support Morse

A RECENT SURVEY by the New Zealand Amateur Radio Transmitters (NZART), which questioned attitudes to the Morse code among members, showed healthy support for competency in the code as a prerequisite for full licence privileges.

According to a report on the survey results in the July 1993 issue of *Break-In*, NZART's journal, an average 32 per cent considered it essential, 44 per cent considered it desirable, and an average 22 per cent believed Morse competency to be unnecessary. The results were heavily qualified, though.

Members did not support a foreshadowed NZART Council move on approaching their licensing authority for a non-Morse HF licence. Some 64 per cent of members believed New Zealand should never have a no-code HF licence.

(Reported in Amateur Radio, *August 1993, journal of the Wireless Institute of Australia.)*

902MHz CW Record

CQ MAGAZINE's 'VHF Plus' column, November 1993, reports a new record two-way CW contact on 902MHz between California and Hawaii, a distance of 2469 miles, on 23 August 1993.

Chip Angle N6CA was located 360ft a.s.l. on the Palos Verdes peninsula, and Paul Lieb, KH6HME, was 8200ft up on the Mauna Loa volcano. Both stations used 902 to 28MHz transverters with 0.6dB noise figure front ends, with each station running 12 watts output into 12ft loop Yagis.

500kHz & GMDSS Not Compatible

IN A LETTER to the *World Wireless Beacon*, November 1993, Richard Monjure, describing himself as a 'shipboard radiotelegraph operator now', draws attention to a bill (S.786) in the US Senate which, if passed, would add a paragraph to the Communications Act exempting US Flag vessels equipped

with GMDSS from carrying radiotelegraph equipment.

He comments that while GMDSS (the Global Marine Distress and Safety System) is to be phased in between 1992 and 1999 it is not until 1999 that ship radiotelegraph stations are due to be removed. This is because the world's ships do not have to comply with all of the elements of GMDSS until 1999.

He points out that until that time a large number of ships are expected to be sailing with radiotelegraphy and it is not easy for a GMDSS-equipped ship and a radiotelegraph ship to communicate with each other. Therefore, he says, the radiotelegraph distress system must be maintained on US ships until the GMDSS is fully phased in. He urges all interested parties to contact their Senators to express their opinion concerning bill S.786.

A report in the same issue, by Ben Russell N6SL, Radio-Electronics Officer aboard the 20 000 ton chemical tanker *Sea Venture/WJMV*, demonstrates this incompatibility. He reports on the rescue of all 24 crew members when the M/V *Marine Sky/3EBT5* sank on 3 August 1993, based on notes in his log.

This was the first SOS in the Gulf of Mexico in the transition from the well-established procedures on 500kHz CW to the new GMDSS 'which began to be phased in August 1, 1993, the same date the US Coast Guard quit operating on 500kHz.'

The *Marine Sky* put out an initial distress call on VHF-FM Channel 16 and also sent out automatic CW distress signals on 500kHz, namely 'SOS SOS SOS DE 3EBT5 3EBT5 3EBT5' (followed by two 15-second dashes, on which WJMV was able to take radio direction-finding bearings, confirming that the position received on VHF was correct), and the crew were rescued by a US warship within four hours. During the rescue period, WJMV relayed available information to the Coast Guard on HF SSB, while numerous ships called 3EBT5 on 500kHz CW asking for his position, without reply. No manual keying was heard from the ship, and the automatic SOS signals continued on 500kHz for at least twelve hours, causing confusion and QRM after the crew had abandoned ship.

There is no suggestion that on this occasion the rescue activities did not work well, but for the future Ben suggests the need for a nominated Coast Guard SSB distress co-ordination frequency. The apparent absence of a Radio Officer on the *Marine Sky*, and its consequent inability to communicate with the ships calling it on 500kHz, also underlines the point made by Richard Monjure above.

(Contributed by Wyn Davies, Brymbo, Wales)

Australian Anniversary

ON 3 MARCH 1854, just 9 years after the opening of the first Morse telegraph line in North America, the city of Melbourne was connected by the first Morse telegraph line in Australia to Williamstown in Victoria. The official opening of the line for public telegraph traffic took place on 7 April 1854.

A vast network of lines eventually covered Australia and the system remained in use in its original form until about 1964. Today, many telegraphists

and postal clerks who formed part of the old Post Master General's Department, until its dismantling almost 20 years ago, are members of the Morsecodians Fraternity.

Although the 150th anniversary of the opening of the first Australian telegraph line will be an obvious milestone to celebrate in 2004, the ranks of the Morsecodians having the old skills will undoubtedly be more slender than they are at present. With this in mind, the Morsecodians, based in Sydney, but with members all over Australia, propose to celebrate the 140th anniversary on 7–8 April 1994, together with former telegraphists and postal clerks wishing to participate.

The Fraternity hopes to obtain support from a number of organisations such as Telecom Australia, Australia Post, historical societies, and newspapers. The National Science & Technology Centre in Canberra, which has supported the Morsecodians for several years in their various activities *(as previously reported in* MM. *– Ed.)*, has indicated its willingness to participate and will provide a venue and assistance with publicity in Canberra.

The plan is to establish a physical Morse link between Melbourne and Williamstown, with the Science Centre linked to both terminals so that messages may be exchanged between the three centres. Members of the public will be able to send brief telegrams to relatives or friends without charge, and official messages could be exchanged between the Lord Mayor of Melbourne and the Mayor of Williamstown. Perhaps telegrams from the Prime Minister and the Minister for Communications to both dignitaries to celebrate the occasion may also be forthcoming. Authentic and well restored telegraph equipment of the time will be provided through the Morsecodians Society and its membership.

The Morsecodians have sent information about the proposed event to a number of prominent organisations and individuals in Australia in the expectation that it is sufficiently significant and interesting to obtain their support. A number of Morsecodians have already volunteered their services to man the telegraph lines at the three venues.

(Extracted from an Information Bulletin issued by Gordon Hill, President of the Morsecodians Fraternity, September 1993.)

150th Anniversary of first Morse Message

TO MARK the 150TH ANNIVERSARY of Samuel F.B. Morse's 'What Hath God Wrought!' of 24 May 1844 (see MM19, p.24.), we understand that various celebrations are planned in North America for 1994.

Would any readers involved in these celebrations please send us reports afterwards so that we may report them in MM*? – Ed.*

All Thanks to Morse!

A ROMANTIC STORY was reported in the *Isle of Wight County Press* of October 22. This described how Tony Elvers, assistant keeper at St Catherine's lighthouse, originally wooed his wife Alison by flashing 'I love you' messages to her by Aldis lamp across the Solent from The Needles lighthouse.

At first she didn't understand what they meant, but after she started learning the Morse code their relationship blossomed. 'At the time, I just hoped and prayed that no fishermen were receiving the messages!' said Tony.

Married almost two years ago, their first child, Catherine, just born, has been named after St Catherine's lighthouse, 'because she is the light of my life.'

(Original cutting contributed by Alan Williams G3KSU, Isle of Wight.)

Museums of Interest

DENMARK: The Museum of Danish Resistance 1940–1945 (The Danish Freedom Fighter Museum)

THE MAIN THEME of this museum is the development of the resistance movement; printing of illegal leaflets; sabotage; dropping of equipment by British planes; rescue of Jewish citizens from persecution; popular protests; German concentration camps.

Of special interest to readers of *MM* is amateur radio station OZ5MAY, which commemorates the Danish Liberation date of 5 May 1945, operated at the museum by volunteers from the Copenhagen Division of E.D.R. (Experimental Danish Radioamateurs). Associated with this station are small displays relating to the radio service of the resistance.

The station operates, with CW only, around noon (Danish local time) on most weekdays and some weekends. It uses an RCA AR-88 receiver, with a transmitter running 20 watts input, with a 40-metre Zepp antenna fed via 400Ω open wire feeder.

Regular frequencies are 14.038, 14.043, and 14.046MHz, with operation additionally in other parts of the 14MHz band (at times also in the 10MHz band). Depending on conditions, coverage extends to most of Europe, with occasional DX contacts.

MM readers are invited to call OZ5MAY if they hear it on the air, and those operating B2 'spy' sets will be particularly welcome. However, they are asked to be patient when calling, as sometimes the operators are talking to visitors at the museum.

For the benefit of other amateurs 'The Danish Underground Radio Award' is offered as follows: European stations – contact OZ5MAY on two different bands; or on the same band on two different days. Only one contact is necessary for amateurs visiting the museum and signing the visitors book at the radio station. DX stations – Only one contact with OZ5MAY is required. Applications for the award (with log extracts) should be sent, with 6 IRCs or 25DKR, to Allis Andersen OZ1ACB, Kagsaavej 34, DK-2730 Herlev, Denmark.

Entrance to the museum is free. It is open Tuesday – Sunday all year round, but times vary slightly summer/winter. All exhibits have texts in English. Free guided tours in English at 2 p.m. on certain days. Guided tours in English at other times bookable in advance, 300 DKR. Refreshments available May 1 to Sept. 15. Car park, 4 DKR per hour. Address: Churchillparken, DK-1263 Copenhagen K, Denmark. Tel: (010 45) 33 13 77 14.

(Information from Torben Dahl OZ5ABN, who is one of the operators of OZ5MAY)

AUSTRALIA: Wireless Hill Telecommunications Museum

THIS MUSEUM was opened by the City of Melville in 1979 as a contribution to the 150th anniversary of the settlement of Western Australia. The building was built in 1912 and was originally the 'Applecross Wireless Station', the second wireless station to be established in Australia, and is now surrounded by a large public park of natural bushland.

The collection of telecommunications equipment and displays includes, amongst other things: Radio and shipping, Amateur radio, Royal Flying Doctor Service, Telegraph & telephone, Broadcasting, Radio and war, Radio and aviation.

Of particular interest to readers of this magazine is a recent donation to the museum by *MM* reader David Couch, VK6WT, of some 200 Morse keys from his collection which will be put on display once suitable shelving has been erected.

The museum is located in the City of Melville, near Perth. It is open on Saturdays and Sundays from 2–5 p.m. and special arrangements for organised groups to visit during the week can be made by telephoning 364 7067 or 364 1558.

(Information from David Couch, VK6WT, Wembley, Western Australia.)

Aviation Museum of Western Australia

RUN BY the Royal Australian Air Force Association, this museum claims to have the finest collection of civilian and military aircraft in Australia, as well as many aero engines, uniforms, relics, models, documents, photos, memorabilia, etc. Famous aircraft on display include the Lancaster, Dakota, Spitfire, Tiger Moth, Canberra, and more.

Again, of interest to *MM* readers, David Couch has recently donated all of the RAF and RAAF Morse keys in his collection to this museum.

The museum is located at Bullcreek Drive, Bullcreek, near Perth, and is open from 11–4 daily except Christmas Day and Good Friday. For enquiries, telephone 332 4444.

(Information from David Couch, VK6WT, Wembley, Western Australia.)

New World-wide CW QRP Event

A NEW ANNUAL WORLD-WIDE QRP activity, open to all amateur QRP (low-power) operators, is to be run jointly by the OK and G-QRP Clubs.

CZEBRIT 94 will be held from 1600 GMT, 25 February 1994 until 2359 GMT, 27 February 1994, with separate sections for OK/OM stations (Czech and Slovak Republics), United Kingdom stations, other European stations, and stations outside Europe.

Frequencies: 3.560, 7.030, 14.060, 21.060 and 28.060MHz, all ±5kHz.

Power/mode: not exceeding 5W RF output, CW only. Stations unable to measure RF output, use half their DC input.

Scoring: Contacts with own country do not count (for example UK x UK, F x F, EA x EA). European stations contacting a Czech/Slovak or UK station on each band = 2 points, contacts with other European stations = 1 point, and contacts outside Europe = 3 points. For stations outside Europe, contacts with

UK, Czech or Slovak stations = 5 points, and other European contacts = 3 points.

Multipliers: Stations in Europe contacting 5 or more DXCC countries multiply their points score by two. Stations outside Europe contacting 2 or more countries in Europe multiply their points score by two. The points score is the total number of points scored for contacts made on all bands used. Stations may only be worked once on each band.

Exchanges: RST, serial number starting at 001, oblique stroke, and power; e.g., 559012/3. Milliwatt stations use 01 for 100mW, and so on.

Logs: Separate sheets for each band. Log date, time, callsign, contest exchanges (as above), and points claimed. Contacts claimed as multipliers to be underlined. A cover sheet showing name address and callsign (please write legibly), claimed score per band, total score, and brief station details, must be included. Logs must reach the appropriate address, as follows, by 15 April 1994.

Addresses: Entries from all of Europe, except the UK and Ireland, must go to OK-QRP-C, c/o P. Doudera OK1CZ, ul baterie 1, 16200 Praha 6, Czech Republic. Entries from the UK, Ireland, and all stations outside Europe must go to G-QRP-C, c/o A.D. Taylor G8PG, 37 Pickerill Road, Greasby, Merseyside L49 3ND, England.

Awards: The leader in each of the sections will receive one year's G-QRP Club free membership, and a certificate. Second and third places in each section will receive certificates.

Disputes: In any dispute the decision of the organisers will be final.

Footnote: It is suggested that transatlantic working might be possible on the 3.5MHz band, 0500–0700 GMT.

(Information from Gus Taylor G8PG, Communications Manager, G-QRP Club.)

MM Mini-Meet

Lee Grant (left) and Colin Waters at the Great Wormley Rally

Photo: Jim Lycett

MM READERS Lee Grant G3XNG, Colin Waters G3TSS and Jim Lycett G0MSZ met at the Great Wormley Radio Rally in October, where they discussed and exchanged views on Lee's camel-back key, a recent addition to his collection.

Single Lever Combo

IN RESPONSE to popular demand, G4ZPY Paddle Keys International are introducing what they believe to be the first commercially made Single Lever Combo – a key mounted on a base containing an electronic keyer.

This new combo has one little extra – if you get tired of using the single lever, and would like to change over to a twin lever, there is a jack socket which

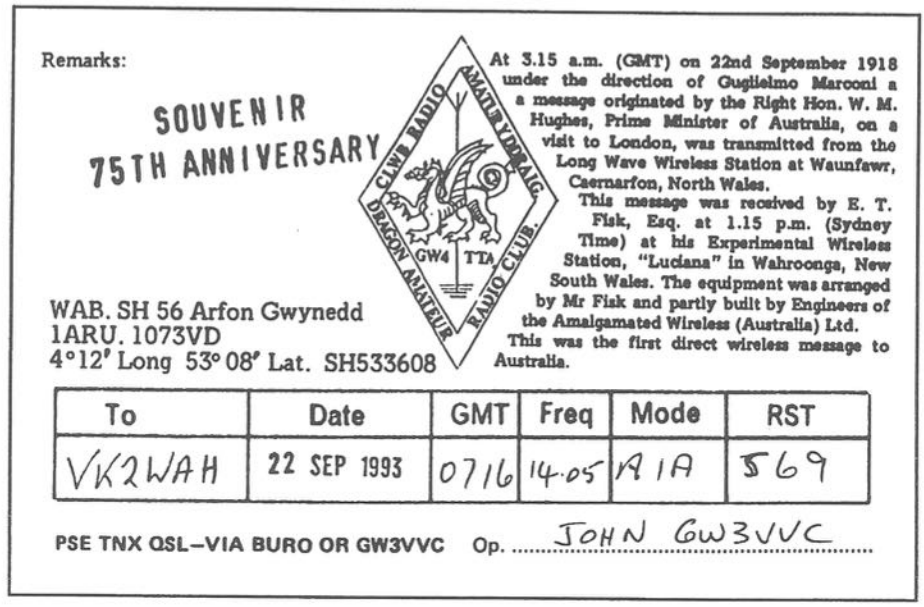
allows another key to use the same iambic keyer.

The new Combo is available in five different finishes, at prices beginning at £130, and all have 'key down' switches.

The month of February 1994 also sees the addition of further 17 keys to the G4ZPY stock-list, which will then offer 50 different models.

After the good news, the bad. With regret, prices of the G4ZPY range will be increased in February.

Details of the new combo can be obtained by sending a SASE (UK) or 2 IRCs to G4ZPY Paddle Keys International, 41 Mill Dam Lane, Burscough, Ormskirk, Lancs L40 7TG. In the USA, contact K4TWJ, QTHR.



GB2VK 75th Anniversary

Despite very poor propagation conditions, a contact was made at 0716 on 22 September 1993 between GB2VK in Waunfawr, Caernarfon, North Wales and VK2WAH, the station of the Wahroonga Amateur Historical Radio Association. At 0805, an SSB contact was made with VK5MS in Southern Australia.

Both the CW and SSB stations operated throughout the 24 hours of September 22 and for almost as long on the 25th. In total, over 300 contacts were made.

The special event attracted considerable media attention from papers, radio and TV both in advance and on the day, and it is hoped that the event will be repeated on 22 September 1994 and annually thereafter.

A Visit to VIT

by Gary Bold ZL1AN

TOWNSVILLE RADIO/VIT, a coastal radio station in Queensland, keeps watch 24 hours a day on the shipping frequencies. Gavin, VK4ZZ, is an operator there, and he took me out to view the facilities.

The station is near the sea, on flat land some miles north of Townsville. The antenna farm is amazing, and appears to cover about 10 acres. Mostly wire antennas, very high, very securely anchored. Cyclones can come by here on occasion.

The equipment inside the air-conditioned, modern, operating building is also impressive, immaculately serviced, with an enormous back-up diesel generator which fires up if the mains go away. Some of the modern gear is computer-controlled – this includes the SEAPHONE equipment, which interfaces two-way radiotelephone calls to the TELECOM network. The older gear goes back 30 years, and I saw several beautiful Collins transmitters and receivers which took me back to my student days.

Many of you will be surprised to know that a LOT of the commercial traffic still passes by Morse – about half of it, during the time I was there. I'm told the fraction is well over 60 per cent at some stations. So all the front-line staff have to be excellent CW operators. And by excellent, I mean able to accurately read and transcribe what, by Ham standards, can be very strange Morse indeed, and keep an eye on several other things while they're doing it.

Foreign ships almost invariably communicate in Morse, but, I was told, are employing cheaper, poorly trained operators. Imaginative reading is sometimes called for. This is not fast Morse, it rarely goes above 18 wpm. But I had trouble decoding a lot of it, and a new Ham would have been totally perplexed.

Everything I heard was coming in from hand keys, and everything was being sent back on a hand key. They have faster machines there, including a Morse keyboard emulator running on an MSDOS computer, but apparently rarely use them. I watched the duty operator receive a telegram, entering the text directly onto a teleprinter and talking to me at the same time. These guys were good.

It was clear that commercial Morse, despite what many would have us believe, is still with us in a big way, or at least it is in this part of the world. Food for thought.

(Extracted and adapted for MM *from Gary Bold's 'The Morseman' column in* Break-In, *journal of NZART, January/February 1993.)*

We understand that coast stations in Australia and New Zealand have since begun a close-down programme of MF W/T services. Watch this space! – Ed.

Acquiring the Radiotelegraph Code

Part 1

by Wm. G Pierpont N0HFF

THE ULTIMATE GOAL in learning the telegraph code is to reach the point where one is as unconscious of the dits and dahs and letters (and even words) as one is of the letters and individual sounds in conversing or reading. Only when there is a distraction – such as a foreign 'accent', speech defect or the like, or for telegraphy poor quality sending, or interference from static or other stations – do these features come to attention. The purpose of telegraphy is to communicate.

Telegraphy is a learned skill, like tennis, golf or writing shorthand. These all begin with conscious effort to develop the details of action, then with repetitious practice they gradually become automatic and become progressively easier. A new set of habits has been formed, and one's conscious attention is transferred from the details to the overall purpose, the larger aspects.

In telegraphy there are stages of achievement along the line, and as each is reached there is a sense of new freedom and enjoyment in its use. One comes to 'love to communicate in code'.

Two major stages stand out. The first is basic and essential: when each 'letter' (including numbers, punctuation marks and other signals as needed) is instantly recognised as soon as it has been heard as being the 'letter' itself without any hesitation or conscious effort at all. For example, when the ear hears 'di-dah' the mind thinks 'A', and if one is writing it down, writes 'A' immediately, like an automatic printer. The second stage is but an extension of the first, and may start before stage one is achieved: it is the ability to send and receive words as words, not as strings of letters. Obviously, this stage is a growing one, beginning with the short, common words. Here there is no longer any consciousness of spelling, any more than good readers spell out words. The code is becoming 'natural', a sort of second nature, and there is freedom to listen and express oneself freely.

Carried to its ultimate, the expert telegrapher, like the skilled typist or stenographer, can be busily writing incoming messages while he is thinking about something else, and may be quite surprised to see what he has written. Few of us would care to go that far.

As the details no longer demand attention, the code becomes more and more a 'language' with its own inherent beauty for communication and expression. This begins to be felt as stage one is reached.

First Impressions Most Lasting

Since learning the code is establishing a new set of habits, it doesn't make sense to begin in such a way that later

efforts are impeded. First impressions are always strongest and most long lasting. A false step here may become a long time obstacle. Radio telegraphy is sound, heard through the ears. It should be approached this way from the very first exposure: there is no real reason ever to see the code in a written form – why add such an unnecessary and useless step? Years ago it used to be taught that way from charts or tables, but experience has shown that this costs from 50 to 100 per cent more time to reach the same proficiency. So to start out right: code is SOUND.

Through the years various ingenious schemes have been devised to present the code in visual form. Some of them can be learned very quickly, and may be adequate for those who need the barest working knowledge at very low speeds. But for most people these 'short-cuts' become hindrances.

Each code letter should be thought of as a UNIT of sound, even though it is built up of bits and pieces (dits and dahs). Each letter has its own peculiar pattern, rhythm or swing. Its sound is not to be thought of in isolation, but from the very first in association with the printed letter it corresponds to. For example, 'di-dah' is 'A'. It doesn't 'stand for' 'A' to have to be translated, but is to be thought of as **being** 'A'. To promote the sense of UNITY of sound, most instructors have the letters sent at a character rate ranging from 13 to 20 wpm, with wide spaces between. The instructions given are: when you hear 'di-dah', think 'A' and write 'A'. The particular rhythm of each letter (how it sounds) gives it away – you recognise it for what it is.

Keep Proper Proportions

The essence of code is TIMING. A dah is three times as long as a dit. Proper spacing between letters and between words is important to maintain. Within letters the space between dits and dahs is one dit. When any of these time intervals are violated the transmission becomes more or less unintelligible. Habit formation is expedited and confusion of mind avoided by using only well-sent code for practising. Keeping proper proportions makes learning much easier. Later, at times, you will probably have to deal with badly sent code, but don't burden the learning process with it.

Practice is the ongoing ingredient of mastery until that point is reached. Short periods of not over thirty minutes have proved best – shorter if one tires before that. Not much progress is made when one is tired.

Telegraphy is a skill almost anybody can learn. Some will learn faster than others – this is natural. Age, etc., is no deterrent. Many beginners doubt that they can learn it. Some express no real interest in learning and think they will never use it – yet some of these find they actually prefer it above other means of communication, once they get into it.

All learning is expedited when the subject is viewed as easy and one takes a 'can do' attitude. This is especially important in skill subjects. The learner can actually speed up his learning by telling himself 'Code is easy for me'. This was one of the strong points of the famous Candler System training. He recommended that students tell themselves this between practices.

Since the first stage to be achieved

is the INSTANT ASSOCIATION OF THE CODE SIGNAL WITH ITS CORRESPONDING LETTER, how can this be accomplished most efficiently? There are 26 letters, ten numbers and a half-dozen or so other signals to be differentiated. How should this be organised to facilitate learning? Should similar-sounding letters be learned together, and/or should contrasting letters be learned together, or some other arrangement be used?

Since our final goal is the instant association of a code signal with its letter, there cannot be a time for mental decisions, comparing or contrasting in order to identify it. At the end point each code character must stand on its own feet, so to speak, in isolation from all others. Some people may find that initially, or somewhere along the learning process, such comparisons or groupings may be helpful. But psychologically it may be best for most people to learn unrelated, uncontrasted letters together in a given study period, insofar as this is possible. In this way each letter stands on its own feet.

Variety of Schemes

In what follows we shall present a number of schemes devised to facilitate achieving stage one proficiency. Most of them require some kind of 'instructor', whether personal or by proxy, and at least one requires a home computer.

The Morse University system is for self-instruction together with a Commodore computer to accept and operate its module. Many format alternates in speed and composition are selectable by the student to suit his own needs. Recommendations are for the learning of one new character in each 20 to 30 minute practice session. It is presented repeatedly alone and/or in groups of two to five until it is immediately recognised. Then it is intermixed (in ratios selected by the student) with letters previously learned, and practised until it is firmly fixed in the mind. It is recommended that the characters be sent at a 20 wpm individual rate, with a three second interval at first for identification. This interval is gradually reduced. Constant speed or increasing speed runs are programmable readily. The average student is said to achieve about 20 wpm after about four weeks of study consisting of two 20–30 minute daily practice periods, or a total of some 20–30 hours study. This system has much to commend it. (Letters are introduced in an unrelated, uncontrasted sequence.)

The Koch System

Koch in Germany in the early 1930s developed an effective procedure as follows: At first two letters with distinctly differing patterns were introduced, each presented to the student individually, then presented to him for recognition and writing down as sent in random order. Signals were sent at 12 wpm with normal spacing (i.e., no lengthened spaces between them), his theory being that 12 wpm would allow the signals to be heard as units, and normal spacing would discourage any attempt to analyse them. When 90 per cent or more correct identification was reached, a new letter would be added, and so on until the entirety of the 'alphabet' (including numbers, etc.) was completed. At the end of about 14

hours of instruction the average student could receive at 12 wpm. That is a phenomenal accomplishment. (New letters seem to have been unrelated.)

The 'whole' method, also termed the 'reinforcement' method was tried by some psychologists. At the first session all 36 'letters' were taught, and then the instructor immediately began a series of 'reinforcement' runs of 100 characters each. Each character was sent and the student was given three seconds to write down his identification, then the instructor identified it. If the student erred (writing a wrong letter or none at all) he was to write just below its correct identification. One second later the next character was sent, and so on to the 100th. (Characters were sent at 18–20 wpm.) At this point the student tabulated the missed letters and had a short rest period before taking a second similar run. Letters were sent at random and the entire 36 were covered.

Four of these 100-character runs were done the first day. (Overall rate was about ten characters per minute at this stage.) Each day this practice continued, but as proficiency improved, up to five or more letters were sent before they were identified. On the average it took about nine hours to reach 95 per cent correctness (less than four hours for the best and over 20 for the slowest). After this speeds were increased, and it took about 18 hours to reach 5 wpm, 36 hours to achieve 10 wpm, and 50 hours for 12 wpm on the average (some reached 20 wpm by this point). Nothing was gained – it took about the same instructional time as for other common sound methods.

Sound or Rhythm Pictures

During WWII psychological studies on the order of learning the letters were made, and it appeared that with the ordinary sound teaching approaches it made little difference in overall learning time. Build-up groups, such as E I S H 5, or E A R L seemed to differ little from random or other groupings.

A number of attempts have been made through the years to devise a way to quickly reduce the 'hesitation' time between hearing and recognition. Shying away from the visual approach, suggestions have been presented to provide a sound or rhythm picture, such as one suggestion 'pay day today' as the rhythm for Q. But in no way does this suggest Q itself. One of the earliest published attempts was by the prestigious Wireless Press in 1921. During WWII three psychologists tested a system of mnemonics using key words whose initial letter, rhythm, inner grouping, accent, length and hierarchy would sound like the code signal and suggest the letter, to reduce confusion in learning. That they only partially succeeded can be seen from their list shown on the following page.

When tested against the usual sound approach most people gained little or nothing. No doubt a number of such schemes have been devised. One currently on the market is 'Code Quick' which appears to include the 'Dog did it' mnemonic from the aforementioned list.

For many years the 'Dodge Radio Shortcut' was advertised widely. This system presented the code visually with a different sort of mnemonic, (shown at the foot of page 16 without the printed

Around	**J**apan sand man	**S**icily
Beat Germany	**K**angaroo	**T**oot
Casa Blanca	**L**iberia	**U**nafraid
Dog did it	**M**a-Ma	**V**ictory now
Eek	**N**azi	**W**ithout arms
Federation	**O**h-oh-oh	E**x**cellent work
Gamewarden	**P**olice station	**Y**ankee rampart
Hilly-billy	**Q**uadruplicate	**Z**ulu did it
Itchy	**R**evolver	

code symbols (simply dots and dashes) because of its apparent wide use).

Just how much 'pencil tapping, head scratching, whispering to self', etc., hesitation time such schemes help is by no means clear. People have used them. One of the older 'standard' code teaching manuals stated that learning times in the 1930–40 period were:

WPM	5	8	10	14	20	25
DAYS	(average) at 1 hour per day					
	12	24	40	75	160	210

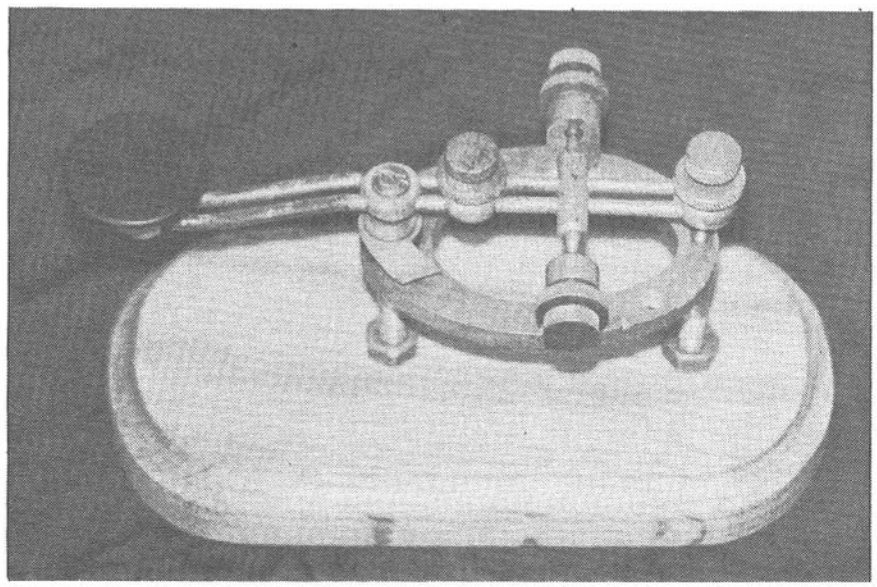
Individual investigators have shown 13 wpm in 30–40 hours (Taylor) and 25 wpm in 160 hours (gestalt method – wholeness or unity of signals). It is clear that a well-planned approach is time saving.

***The second and final part of Bill Pierpont's article will be in the next issue of* MM**

Eat	dit	**T**here's	dah
Another	di-dah	**N**o	dah-dit
Raw	di-dah-dit	**K**ick	dah-di-dah
Lemon	di-dah-di-dit	**Y**ou	dah-di-dah-dah
With	di-dah-dah	**D**on't	dah-di-dit
Perfect	di-dah-dah-dit	e**X**pect	dah-di-di-dah
Joy	di-dah-dah-dah	**B**ut	dah-di-di-dit
Imagine	di-dit	**M**ay	dah-dah
Uncle	di-di-dah	**G**et	dah-dah-dit
Feels	di-di-dah-dit	**Q**uick	dah-dah-di-dah
So	di-di-dit	**O**h	dah-dah-dah
Very	di-di-di-dah	**C**ome	dah-di-dah-dit
Hungry	di-di-di-dit	**Z**eno	dah-dah-di-dit

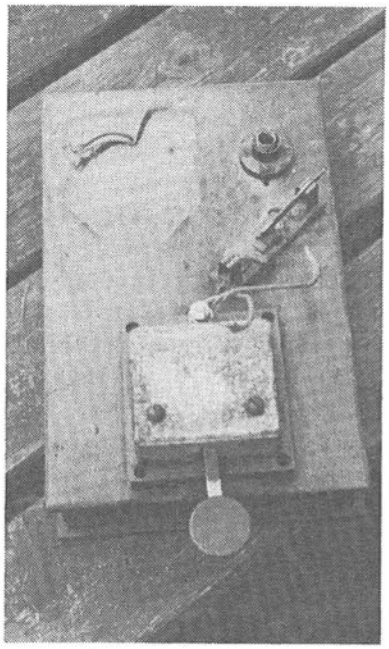
Info Please!

Readers require further information on the following keys, etc.
Please write to Tony Smith, c/o the Editorial Office (see inside front cover), if you can help.
All useful information received will be published in MM *in a later issue*

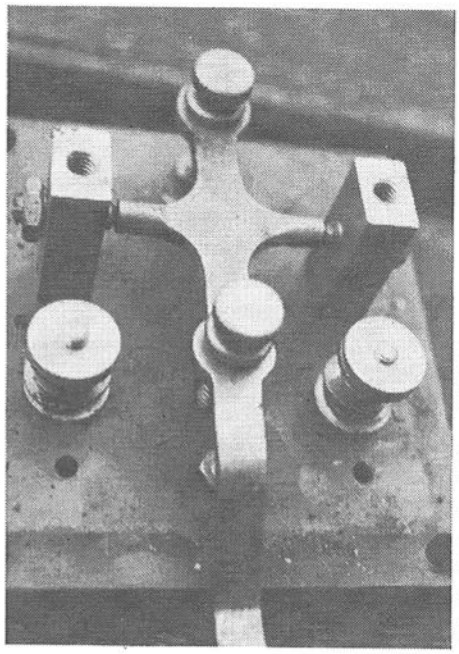


Photo/Collection: Richard L. Thomas KB7BAD

Unknown leg key, inscribed 'Pat. Applied For' across the horizontal pivot bar. No other markings. It came from the Southern Pacific Railroad depot at Maricopa, Arizona, south of Phoenix. The circuit closing lever is missing. Contact points are quite small, about the size of a pin head. The key was not mounted on the telegraph desk but was attached to a triangular piece of wood that may have been attached to a wall. Can anyone shed light on its origin?



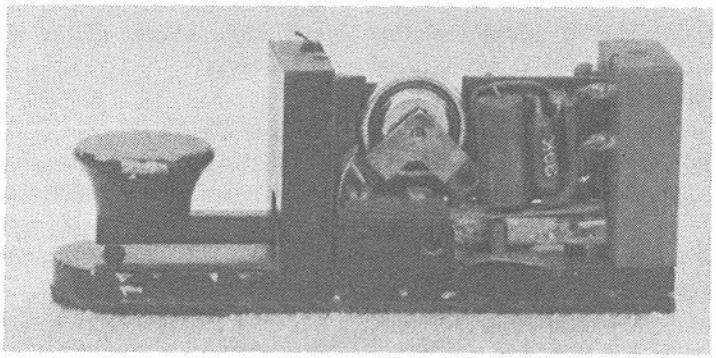
Key on practice board



Construction of key

Collection/Photo: Derek Sheen G4CCW

Unknown key. Apparently originally part of a practice set. Although it resembles an American key, it has BA (British Association) screw threads. Any information welcome



Collection/Photo: Dennis Goacher G3LLZ

Unknown key, very small, total size ¾"W x 2½"D x 1¼"H, with tone oscillator and button cell. Finished in black, no markings. Very well made and apparently designed to plug into a unit as a complete sub-assembly via a 5-pin socket arrangement at the rear. Any information welcome

The Telegraph

A Book Review

by Tony Smith G4FAI

SUB-TITLED 'A History of Morse's Invention and Its Predecessors in the United States', this wide-ranging book would be a useful addition to the bookshelf of anyone interested in the history of the Morse telegraph. Author Lewis Coe, a former Postal Telegraph operator, says in his prologue, 'The great network of telegraph wires that once enfolded the nation like a cobweb has vanished...'.

He describes how that network came into existence, its amazingly varied uses, and its eventual decline. 'This is not a work of fiction', he says, 'The truth is far more interesting than any product of the imagination.'

He refers to the earliest attempts to communicate by means of electricity, including the work of pioneers in other countries, but this book is really about Samuel Morse's invention and what it developed into. It describes what is not only an important part of the history of America, but of the world as well.

Coast to Coast

After its first official demonstration in 1844, the telegraph was enthusiastically taken up by different companies, many of which eventually formed part of the giant Western Union. By 1861, the telegraph had spanned America coast to coast, ahead of the railroad.

The book describes how that line was constructed and includes many fascinating details of the difficulties experienced and how they were overcome. These ranged from buffaloes in the treeless plains discovering the delights of rubbing themselves against the newly erected telegraph poles, pushing over whole sections of the line in the process, to Indian attacks, lightning strikes, high winds, blizzards and floods.

This is one of the great attractions of the book. While it describes the great enterprises that used or arose from the telegraph, such as the Military Telegraph, the Telegraph companies, the laying of the transatlantic cable, press services, railroad telegraphy and specialist business services, it also looks at the day to day experiences and achievements of the telegraphers themselves.

Back to Basics

It describes how the early telegraphers learned their trade, in telegraph schools, or by self-study; and how they lived when sufficiently skilled to earn their living on the key.

In (relatively) more recent times, in the 1930s, successful domestic radio systems competed with the domestic wire companies for traffic. While American Morse continued to be used on the wires, competing radio messages were

in International Morse, using punched tape for sending and siphon recorders for receiving on paper tape, that had to decoded by the operators. In a sense this was a reversion to the original 19th century Morse recording system, except that speeds of up to 200 wpm were possible.

Archival Material

For the historian or researcher, Lewis Coe lists the contents of the archival material held by the National Museum of American History, transferred from the Western Union Museum, now closed. Contained in 112 boxes, this material occupies approximately 60 lineal feet of shelf space. Apparatus and equipment, also transferred from the WU Museum, is held in the Museum of American History's Division of Electricity and Modern Physics.

He also describes how, until the mid-1950s, cast-off telegraph instruments were not considered to have any special value, were sometimes sold for scrap, or were carelessly dismantled by mindless tinkering. Only a few astute collectors realised at the time that the era of the Morse telegraph was at an end, making all telegraph artefacts eminently collectible.

Collectors' Bonanza

Early collectors had a bonanza of material to choose from. City offices were usually disposed of by calling in a dealer who would bid for the whole lot, often getting it for scrap-metal value and holding the items for later resale to collectors. The prices realised were many times the scrap value but were still nominal compared with today's values.

The numbers of Morse instruments were such that for years they frequently turned up at flea markets, estate auctions and surplus shops. By the 1970s, however, collector interest was growing, and this was reflected by a gradual decrease in the number of instruments offered for sale and by corresponding price increases.

Knowing collectors acquired most of the nineteenth century instruments available before the general appreciation of telegraph collectibles took place. Fortunately, says Coe, Morse instruments still turn up often enough to enable beginners to start a basic collection.

A Lot of Ground

There are a number of appendices, including the 1843 Bill passed by Congress authorising the sum of $30 000 to be paid to Samuel F.B. Morse to construct the first telegraph line in the United States; the text of the 1860 Telegraph Act, authorising advertisements for sealed proposals to construct a telegraph line between the Atlantic and Pacific States; a chronology of the Telegraph; a Glossary of Telegraph Terms; biographical sketches of a number of Men of the Telegraph; a bibliography and more.

I was a little unhappy about some of the references to the early English telegraphs in the first part of this book, but can appreciate how a few misunderstandings arose from a distance. However, in terms of the American Telegraph the author is on home territory. He has written an authoritative, highly readable book which covers a lot of ground and

continued on page 23

Morse in Great Houses

by E.F. Jones G3EUE

IN 1884 A SERIES OF VOLUMES, edited by the unidentified author of the magazine *Every Man His Own Mechanic*, were published by Ward Lock & Co. under the title *Amateur Work*. These bound volumes appear to be collected material which would have appeared first in the weekly publication, covering a wide range of practical subjects of interest to experimenters generally – anything from the construction of musical instruments to brass founding!

One article outlined the practical use to which electric bells could be put, suggesting that such signals could be used to direct staff. It was submitted that the Morse Telegraph Code could easily be adopted for use with electric bells of the vibrating or trembler type.

To add to the task of learning the alphabet and figures, the author also suggested learning a number of punctuation signals and 'barred' letters including Ä (AE) ·–·–, Ö(OE) –––·, Ü(UE) ··––, and CH ––––.

It was strongly recommended that bell signals should be sent with a degree of regularity, similar to that adopted when playing the piano. Dots should be represented by one, dashes by two, and spaces by three units of time. To make the instructions quite clear the example shown in the panel on the facing page was given.

The coachman replies with a single long ring to signify that he understands. The author also felt that it would be convenient to have an answering signal from the receiving end for each word received and understood, which would be sent in the pause period between words.

The letter E would be sent when the word was understood or the letter I when not. A negative reply would consist of N and an affirmative A. Other abbreviations could be devised and used as desired. Having committed the Morse code to memory, signals could then be sent in cypher to ensure confidentiality, or the bell muffled under a cloak so that only the intended recipient listened to the message!

It is difficult to believe that in an age when domestic service was a way of life for a high proportion of the working population, any major household or stately home would ever have contemplated introducing such a complex system into the establishment.

Volume 2 of *Amateur Work*, from which this information was taken, has a large number of 'Letters to the Editor', commenting on previous articles or correspondence, on a question-and-answer basis. Regrettably, I have not been able to find a single reference relating to the above signalling system which might indicate that someone, somewhere, had

The mistress of the house signals to her coachman:

G	E	T		T	H	E	
--.	.	-		-	....	.	
221	1	2	3	2	1111	1	3

C	A	R	R	I	A	G	E		R	E	A	D	Y
-.-.	.-	.-.	.-.	..	.-	--.	.		.-.	.	.-	-..	-.--
2121	12	121	121	11	12	221	1	3	121	1	12	211	2122

The coachman replies:

R	E	A	D	Y
.-.	.	.-	-..	-.--
121	1	12	211	2122

When the mistress is ready she signals:

B	R	I	N	G		T	H	E	
-...	.-.	..	-.	--.		-	....	.	
2111	121	11	21	221	3	2	1111	1	3

C	A	R	R	I	A	G	E
-.-.	.-	.-.	.-.	..	.-	--.	.
2121	12	121	121	11	12	221	1

actually introduced it into a household as a substitution for a simple message by a servant.

Perhaps, after all, it was just the germ of an idea on the part of the author, quite properly based on a recognised use of a bell for signalling purposes, which rather got out of hand! ***MM***

THE TELEGRAPH – a review

continued from page 21

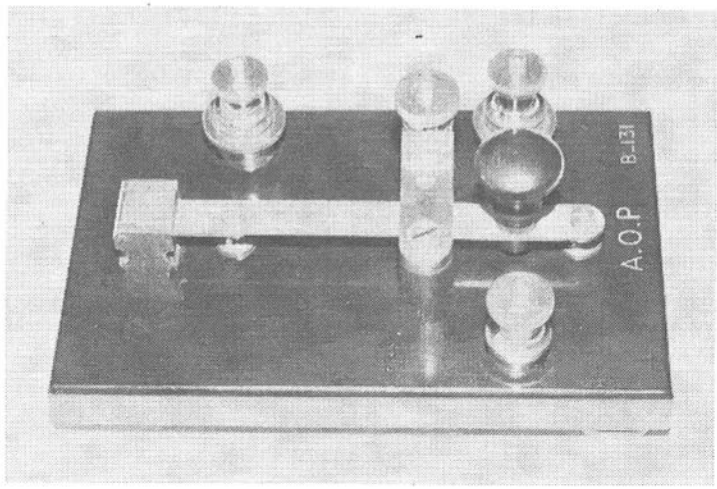
provides some very useful references. The illustrations are excellent and include some interesting and atmospheric early photographs of telegraph activities.

Highly Recommended

The Telegraph, A History of Morse's Invention and Its Predecessors in the United States, by Lewis Coe, ISBN 0-89950-736-0, pub. March 1993 by McFarland & Company Inc., Box 611, Jefferson, North Carolina 28640, USA. Hardback, 184 pages, price $25.95 ($27.95 post-paid, USA). ***MM***

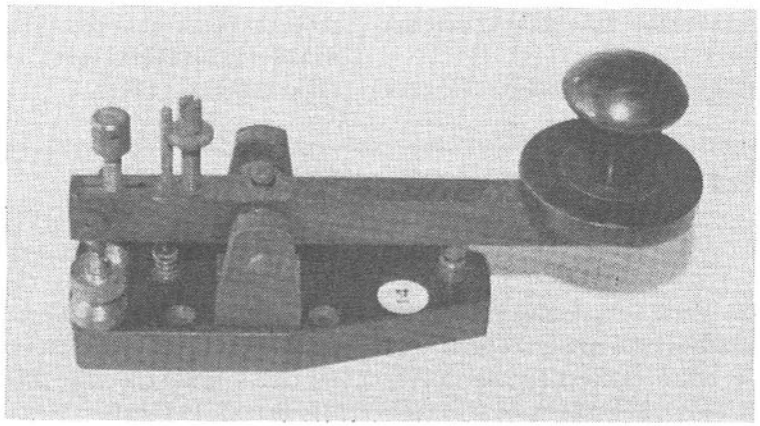
Showcase

Featuring keys and other collectors' items of telegraphic interest.
If anyone can add to the information given please contact TS



Photo/collection: Jean le Galudec

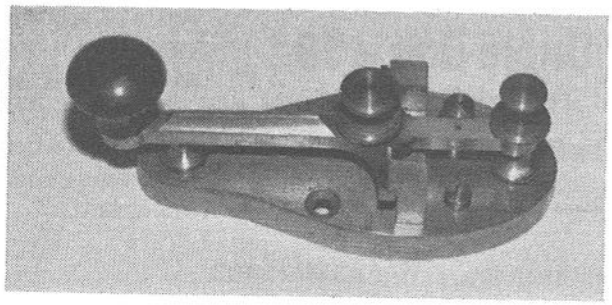
French A.O.P. key, type B-131, polished brass on ebonite base, 1910(?)



L.S. Brach, Newark, NJ, USA. Type 262. Black finished brass on ebonite base

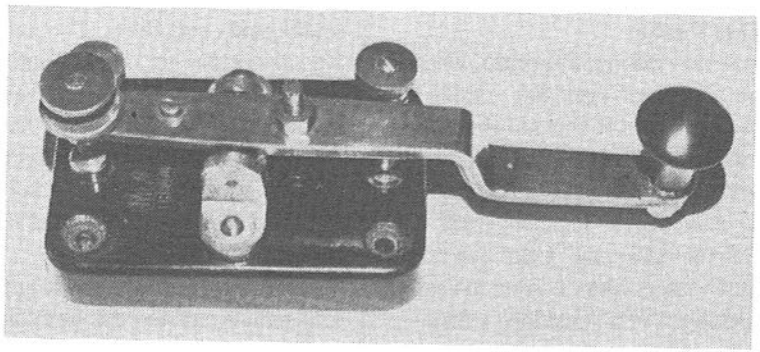
Photo: Lew Bower

Hi-Mound Palm Keyer, model PK-1, used by Lew Bower G4HKY with his HF field man-pack rig. Lew says 'It reminds me how we used to "chat" via the switch on the hand set of our field telephones so the officers didn't know we were talking!'



Photo/collection: Jean le Galudec

L. Gerard & Co., Liege, 1913. Type C.D.C No3613, serial No 91. All polished brass, including base. Used by Belgian P&T



Photo/collection: Jean le Galudec

French key. M.A.E.S. (Trevoux-Ain), 1920(?). Cast brass on ebonite base

Reflections from Uncle Bas – 18

I Knew What I Wanted

by Bastian van Es PA0RTW

THE SEA – THERE WAS MY FUTURE! As a twelve-year old boy I was already dreaming of a career as a ship's officer, of long voyages in big beautiful cargo vessels, of exotic meals and striking white and dark blue uniforms.

The quarter of Rotterdam where I was born was adjacent to the general cargo docks where, from the beginning of the century until about 1970, dozens of enormous cargo ships were always loading and discharging products from all over the world.

The seamen who went ashore for a drink and a 'good time' passed in front of our house on their way to the centre of the city. My early impressions of those big, muscular, sailors often wearing smart uniforms with gold stripes on collar and sleeve still remain in my memory.

Only One Career

I was very young, therefore, when it became clear that only one career lay ahead of me – and it was not that of my father who was counting rows of figures from early morning until late at night in a dusty dark office. That his work was essential for 'shipping' I did not know until much later, when I came to realise the importance of a stevedore's firm.

I had never understood why Dad gave up a seaman's life to work in an office. He had been a captain in the merchant navy, and after many years at sea had been offered a job on the staff of a stevedore company. This was not going to happen to me – ever! Eventually, then, after passing various school exams I finally went to a College for Radio Officers in Rotterdam where I obtained my certificate as a radio operator.

However, to sign on and go to sea, one needed a passport. I had never been abroad, not even for a holiday, so I didn't have one. Apart from that, I had to have a seaman's book and, naturally, a uniform. Dad was well acquainted with all this paraphernalia and still knew all the addresses where everything could be obtained.

Why Khaki Pants?

Getting a uniform and cap was easy. Dad insisted, however, on me buying khaki pants and shirts. The use of these was not clear to me, I could not see myself in the radio room of a seagoing vessel in 'working clothes.' The seamen passing my home in Rotterdam were always perfectly dressed, and it never occurred to me that they had to work to earn their wages!

Fortunately there was a small problem which enabled me to avoid getting those khaki pants. In the store, Dad

This advertisement from the 1938 Handbook for Wireless Operators *shows the range of uniform being offered to British Radio Officers in the pre-war era – not greatly different to the post-war days*

insisted they had to have the then 'new-fangled' zipper fly fastener. On his last trip he had seen them in America and now tried to explain the benefits and advantages to the salesman.

The old man had a very authoritative manner and the man in the shop who wanted to tell a long story about the technical disadvantages of the zip-fastener gave up when Dad pulled out his wallet and started counting out bills. The salesman then agreed with him completely and we left the shop with an enormous pile of clothing, but no khaki pants. I was overjoyed at this but Dad just grinned and said 'You're going to be sorry boy'.

No-one Else in Uniform

On my first trip I soon realised I needed working clothes as soon as possible. Apart from the captain, nobody was in uniform, and his was old and worn. When I entered the mess in my brand new uniform to sit down among the mates and engineers, all in everyday shirts and trousers, they couldn't resist asking me 'Are you going to a party with the Queen?'

After three weeks at sea, we entered our first port of call, Martinique in the West Indies. Everything in the shops was very French orientated and I did not dare enter them to enquire about khaki trousers with an American zipper.

Another problem was my French. My many years of study proved useless as nobody understood what I was saying. Curiously enough, though, my order at a bar was grasped perfectly by the bartender and in no time a cool glass of beer stood in front of me.

Khaki Pants Found

The next port was Baltimore, in the United States. Near the pier where we docked was a Naval shipyard. In the street were dozens of sailors, nearly all of whom wore the khaki pants with zippers which Pa had been so delirious about.

A store selling them was quickly found, however the salesman looked puzzled when I asked 'Do you have khaki pants with a zipper?' When he asked for more details and said 'What colour do you want sir?', I managed to whisper 'Sandish of course'.

The poor fellow still didn't know what I wanted, but as the store was loaded with those pants I just pointed at them. Then I realised there is an enormous difference between American lingo and the King's English. The salesman laughed and said 'Oh, I see, you want chinopants.' ***MM***

(For the benefit of our non-US readers, 'chino' is described by my dictionary as 'strong khaki-like twilled cotton' or in plural form as 'trousers made of it'. You learn something new every day in this game! – Ed.)

Up, Up and Away!

Early Tests of a Weather Reporting System

IN THE 1870's the Signal Service of the United States Army maintained telegraph stations at principal lakes, seaports, and river cities, providing weather reports, river reports, warnings of danger to seafarers, reports of earthquakes and other disasters, and so on.

In 1872, an experiment was carried out to see if it was practicable to take meteorological observations from a balloon for subsequent transmission through the telegraph system. The following is extracted from the official report of the officer conducting this experiment.

ROCHESTER, NEW YORK, September 5, 1872.

GENERAL: In accordance with Special Order No. 103, dated Office of the Chief Signal-Officer of the Army, August 16, 1872, and written instructions previously received from you, I proceeded to Rochester, New York, to make such observations as you had directed, in the balloon *Aurora*, which was expected to ascend from Falls Field, Rochester, on Thursday, the 29th day of August, at 3 p.m...

Professor Samuel A. King, the aeronaut, had selected his balloon *Aurora* for this ascension. This balloon and the car belonging to it were made in France, and have been used by Professor King in various ascensions during the past two or three years, the capacity being about 20 000 cubic feet...

(Following delays due to bad weather) I proceeded to Falls Field Tuesday, the 3rd of September, and having fixed the instruments in position in the car of the balloon, made continuous observations from 2h. 53m. 15s p.m. until 4h. 30m. 10s. p.m. when the car was attached to the balloon preparatory to starting. The inflation proceeded slowly until shortly before 5 p.m., when the hose was cast off, and the aeronaut and myself got into the car.

After testing the lifting power of the balloon and getting the car properly ballasted, the last rope was cast off, and we started our aerial voyage at 5.03 p.m., Washington time...

I took readings from Green's aneroid barometer, and the dry and wet bulb thermometers of Glaisher's hygrometer... Tiffany's aneroid barometer was also read from the time of starting until 5.10 p.m. when it ceased to register... I made, on an average, two observations a minute – sometimes getting three and at others only one a minute.

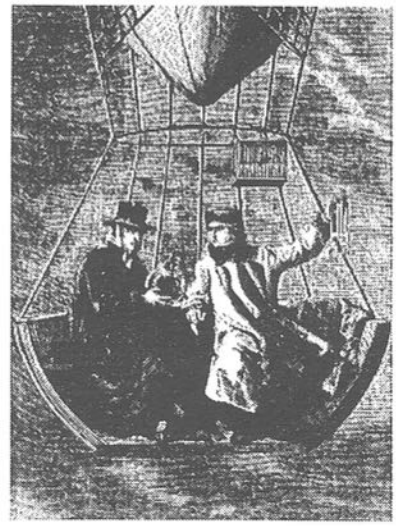
As the object of this voyage was to ascertain how many observations could be taken in a given space of time, and to see if it was practicable to use the balloon for making meteorological observations with any degree of accuracy and safety, I devoted my attention entirely to this duty, and did not take any time to observe the view of the country over which the balloon was passing, excepting an occa-

sional glance when attention was especially called to anything by the aeronaut.

I made one hundred and fifty six observations while in the balloon. The following day I made forty seven observations, at the house of Mr. Timothy Buell, a few rods from where we descended... A detailed description of the voyage in narrative form is embodied in my report, as of general interest, and, also, adding to the value of the data obtained.

We left the earth amid the shouts of the thousands of spectators and ascended quite rapidly, moving a little south of east. The temperature decreased considerably as we arose above the earth, falling 20 degrees in ten minutes.

The sky was perfectly cloudless, and a light north-west wind prevailed. The aeronaut estimated our speed at about 30 miles an hour...



Another investigation by balloon. French philosophers Lussac and Biot check the effects on electrical and magnetic phenomena of distance from the earth's surface

From Harper's New Monthly Magazine, *July 1869*

The noise of the crowd below was soon hushed, and for a while the only sound perceptible was the rumbling of the railroad trains. This soon ceased, and perfect stillness reigned supreme for a short time, broken only by the voice of the aeronaut remarking upon the magnificent view spread out before us...

The aeronaut called my attention to a small lake which, from its position, I judged to be Lake Canandaigua. At our greatest elevation the air was quite chilly, the breath being perceptible as in winter, although I did not feel at all inconvenienced by the change, being provided with warm clothing...

After reaching our greatest elevation, and descending again, we moved along at a height sufficiently near the earth to enable us to converse with men at work in the fields. They were apparently much surprised at our appearance above them, and inquired facetiously where we came from, and what we were doing up there, and where we intended going; which interrogatories were answered to their entire satisfaction by Professor King... We were unable to plot our course to any degree of certainty, owing to our ignorance of the country passed over.

Upon my return to Rochester, I obtained a copy of a telegraphic dispatch to the editor of the Union, dated Lima, Livingston County, at 6.20 p.m., New York Central Railroad time – about twelve minutes faster than Washington time – sent by the telegraph-operator, giving, at that moment, 6h.8m. p.m. of my time, our distance from Lima at about six miles

east of there, descending slowly in a south-easterly direction.

This coincides with our position so far as I could ascertain, and can be used as a check in plotting our course. This dispatch was received by the observer at Rochester at 6.30 p.m., when he discontinued his special observations...

Professor King finally decided to descend, as it was getting toward nightfall. He requested a man in the field below us to take hold of the guide-rope. The man was then directed to take a turn around the fence with the rope. We were then gradually lowered until the car rested on the ground, touching the earth without any jar to the instruments whatever. While the car was held down by willing hands, I took my last observation at 6h. 21m. p.m....

The field proved to be on the farm, within a few rods of the house, of Mr. Timothy Buell, being about two miles east of East Bloomfield railroad-station, which is a little east of the village of that name, about six miles west of Canandaigua and some twenty-four miles from Rochester.

After taking one more observation and putting the instruments in a safe position, I drove down to the Western Union telegraph-office, at East Bloomfield, and advised you at once of my arrival on the earth again, and the success of this the first Signal-Office balloon ascension for meteorological purposes.

I would mention here the courtesy of Mr Cheney, the manager of the Western Union Telegraph Company at Rochester, in putting under my orders one of his messengers, with blanks, &c., so that I could inform you at once of our departure from Falls Field, and also in forwarding my messages to you with all possible dispatch...

It would seem from this experiment that there is a reasonable degree of assurance that, with the same amount of care exercised in this ascension, the balloon can be used for making more elaborate meteorological observations without risk to the instruments.

Very respectfully,
your obedient servant,
GEORGE C. SCHAEFFER, JR.,
Observer, Signal-Service,
United States Army.
Brig. General ALBERT J. MYER,
Chief Signal-Officer of the Army,
Washington City, D.C.

(Source: Report of the Chief Signal-Officer for 1872)

MM Update

East Bloomfield today is the home of the Museum of the Antique Wireless Association, which we hope to report on in a later issue. Bruce Kelley, W2ICEAN, Curator of the Museum, tells us, 'I know exactly where the farm is located, about two miles from the AWA museum. East Bloomfield hasn't changed much in the past 100 years... and fortunately the urban movement from nearby Rochester hasn't affected us much...'

Furthermore, Timothy Buell, grandson of the Timothy Buell of 1872, still lives on the Buell Farm, on the same road that Bruce himself lives on. In fact, as at April 1990, when Bruce gave *MM* this information, Mr Buell's father (son of the original Timothy) was still alive, 'a very elderly gentlemen, but living now in a nursing home.' *MM*

Computers and Morse

by Gary Bold ZL1AN

IF YOU EVER GET the chance to look at machine-decoded Morse, you'll be surprised at how many Hams send Farnsworth spaced code above 30 wpm, at least some of the time. That is, the characters within words will often appear separated by spaces because the sender has paused too long between them.

The senders are using keyers, and are able to form fast characters. But they need a little extra time between characters to get the mind programmed for the next one. Humans aren't usually aware of this, but computers can tell.

You'll also see (but computers won't be able to decode) slower hams sending 'inverse Farnsworth' Morse, where the spacing between characters is less than standard. These are often hand-key senders who are trying to send faster than they really can by simply (and subconsciously) reducing the spacing.

Sometimes a word will come out as just one long character. People with whom they've been talking for 40 years will decode this mystifying sequence with complete accuracy, and send equally mystifying stuff back. After long experience, one can mentally parse the element string into its most likely character composition. But don't expect to do this if you're a beginner.

I've said it before, and I'll say it again. Of all the woes experienced by beginners who write to me after attempting to copy real Ham Morse, by far the greatest numbers are discouraged by hearing bad spacing. If you're talking to a new Ham, consciously increase your spacing!

Is a New Q-Signal Required?

Tom Derden writes that, although licensed 42 years ago and holding a PMG 25 wpm ticket, the phosphorous supplies in his thinking apparatus have become depleted with the passing years. Hence, although happy to send at 25 wpm, he much prefers to receive at 12 wpm.

There is a universal convention that 'if I send at 25 wpm, he'll send back at 25 wpm', but Tom wishes there was some abbreviation that means 'I'm happy to send fast but would you please send slowly?' 'If you say "PSE QRS 12", but then send at 25, the other station will come back at 25 despite the request.'

This is doubtless true – it's puzzling to receive a request to slow down, and then find the other operator doesn't. Do others have this problem?

Good Convention

Of course, as Tom agrees, the 'equal speed' convention is usually a good one – it stops people getting out of their

league before they're ready. But I have some sympathy with Tom's request. Occasionally I have worked confirmed 'SSB only' hams who have just decided to try out their new computer on CW. While their receiving is rusty they can often type quite fast.

I have found it helpful to say 'You can send as fast as you like. I'll send back at 12' – which I can set up quite easily on the computer. Then I can fill my buffer (typing at 40 wpm) to empty out at 12 while I fish around my files for some useful bit of information which maybe this person wants. Thus the conversation rattles along at a better rate and hopefully my contact is enthused to continue with CW and raise his receiving speed also.

It's interesting that most hams, hearing I'm sending CW with a computer, assume it's copying for me too. I NEVER use the computer for copying. Computers simply can't decode well enough in bad conditions.

Has anybody any useful contribution for Tom?

Reading Morse with Computers

Why can't computers decode Morse as well as humans? Here's the first reason: The interface between the receiver and the computer has (with current technology) to work predominantly in the time domain. But the human decoder incorporates background information from the frequency domain as well.

Example: A human can tell the difference between a symbol (which goes 'peep') and a static burst (which goes 'crash'). The crash has a spectrum as wide as the receiver audio bandwidth (all frequencies are present at once) while the peep is a single frequency tone burst.

The mind automatically rejects the crash by using spectral information. The simplest Morse decoding interface is a rectifier feeding a threshold detector which changes a logic level when the peak value of the incoming audio exceeds a threshold value. This will trigger on noise as well.

Experiment

We improve things by adding bandpass filtering in from the receiver, because this will reduce the noise amplitude by rejecting high and low frequency components. But all noise crashes still have some energy at the incoming signal frequency and on low level signals they'll still cause false detection. To see that this is true do the following experiment:

Look at the audio signal of your receiver on an oscilloscope while listening to the Morse. I'll guarantee that even with the CW filter in you'll still be able to read low signal level Morse with your ears in deep fades even when there's little perceptible difference to the eye on the 'scope screen. And you'll see the frequent higher amplitude noise pulses, easily rejected by the brain, which will be falsely interpreted by the interface as 'signal'; also the surprisingly large fading variations which make it impossible to accurately set threshold levels for the audio-to-digital Morse converter.

Some Way Off

Even a phase locked loop interface, which ostensibly does work in the

frequency domain, can't cope. Firstly, it will still respond to signals anywhere in the lock range, including noise components, and in addition PLLs are non-linear devices with locking and unlocking behaviour that becomes erratic on low level or noisy signals.

I know how to fix this. If I had an array processor on my computer, and could do about 100 audio power spectral estimates per second, each of 64 points, and process these fast enough, I could implement an algorithm to replicate the brain's frequency domain performance.

But I'd need about 100 times the raw performance of the C-64 system I run, and we're talking about $100 000. So Morse-reading computers that emulate humans are some way off for most of us. Its nice to beat them at something!

(Adapted for MM *from 'The Morseman' column by Gary Bold in* Break-In, *journal of NZART, September 1988 and January/February 1992).*

COMING SOON!
In response to your requests and suggestions, a reprint in booklet form of that popular series from early issues of MM,
'The Story of the Key'
by Louise Ramsey Moreau W3WRE

Short Breaks

Testing and Context

Under normal situations, unless the text is coded, the receiving operator expects it to make sense. The expert operator will normally correct minor spelling errors, etc., as he goes. Sometimes in testing for code proficiency the tester resorts to purposeful miss-spellings, etc.

A serious question is in order here; is this a legitimate test? The less skilled are likely to be 'thrown' by the irregularity, while the skilled will overlook it; so if the tester is using it as a criterion of proficiency he may be making a serious mistake. If he wants to check accuracy of character identification a far superior way is to send mixed text.

Wm G. Pierpont N0HFF

Novice News of the Month

We have a wireless telegraphy apparatus in our Boy Scouts and there is no doubt about its popularity. This is not a toy set but a real complete station with a range of 10 miles... Every Scout has to know 'Morse' well before he is admitted to the wireless patrol...

Stockwell Troop (BP Scouts),
Captain Masterman's Own.

(From Wireless World, *Vol 1, No 1, April 1913. Contributed by Bill Guest)*

IN THE NEXT ISSUE:
Progress by Mr Marconi - 1909
Airship Over the Pole
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plus all the regulars!

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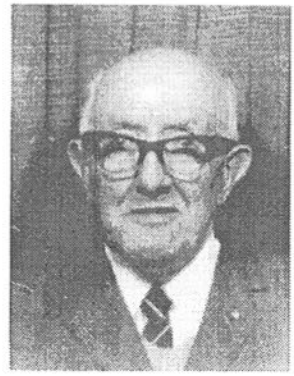
The Reprieve



by John Lingard Sykes G3SRK

ONCE UPON A TIME in the long long ago, or more precisely in the month of January 1920, I found myself in Constantinople (now called Istanbul). I was just eighteen years of age and had been a ship's radio officer for just over a year. The tramp steamer on which I was serving had brought four thousand tons of Welsh coal to this the most exciting city I could hope to visit.

A month earlier immediately upon learning of our destination I had spent many eager hours in Cardiff city library reading all I could find regarding the city founded by Constantine the Great in the year 330AD, conquered by the forces of Islam, recaptured and held for a space by the Crusaders and finally taken by Mahommed II on the 29th of May 1453 to become the capital of the Turkish Empire. The Dardanelles, the Bosporus, the Golden Horn, mosques, minarets, concubines, Turkish delight! Oh, what a time I was going to have!

But alas, it was not to be. The weather turned very cold and I developed a severe cough. I thought little of it until I happened to spit onto the snow-covered deck where my spittle made a RED spot! Dear God! This was the moment I had been dreading for most of my short life.

My mother, who had died before my second birthday, died from what was then called 'galloping consumption'. The fear, nay the belief, that I was destined to go the same way had been with me since my childhood, but still the shock when it came was overwhelming. My lungs were breaking up and it was only a question of time, a very short time.

I coughed and spat fifty times a day and the size of the red spots on the snow were the measure of my speed to the grave; walk, trot, canter, gallop. Worst of all there was no-one in whom I could confide. If the captain should learn of my illness he would almost certainly send me to hospital and the thought of dying in a Muhammadan hospital attended by janissaries, eunuchs, concubines and houris (whatever they were) filled me with horror. Better be buried at sea by my own shipmates who might well remember me all the way back to Cardiff.

Time speeded on and still I lived. The port was congested and we continued to wait for a berth to discharge our cargo. But all thoughts of exploring the city were forgotten and my sole trip ashore was spent searching for cod-liver oil and Owbridges Lung Tonic. I found neither.

My agony continued for a full month and then one morning at my wash basin came revelation and my heart almost burst with joy; my GUMS were bleeding, not my LUNGS. I sank to my knees and thanked God for my pink toothbrush.

More than fifty years later I was to comfort my young granddaughter with this true story after finding her sobbing her heart out over her own stained toothbrush.

Circumstances truly alter cases. ***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

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

Readers' ADs

WANTED

Reels of perforated tape (as shown on back cover of MM29) for use in Morse sender. Maurice Small G0HJC, 8 Cherry Tree Road, Chinnor, Oxfordshire OX9 4QY. Tel: 0844-351694.

Copy of MM Issue No 23. Neil Fisher GM0EFQ, 1 Parsonage Cottages, Millhill Lane, Musselburgh, Midlothian EH21 7RD, 'phone 031-665 1631.

EXCHANGE

Bulgarian key collector with various duplicate keys wishes to arrange swaps for western keys. Please write with details of what you have and what you want to: Minko Lubmirov LZ1XL, PO Box 6, Sofia 1373, Bulgaria.

Readers' ADs are free! Why not use MM to advertise your Morse items for sale or exchange or to seek specific requirements. Send your ADs to Tony Smith, c/o MM Editorial Office.

Beginners Corner

QUS?

A Capricious Contemplation of the Q-code

by Rinus Hellemons PAOBFN (SK)

THAT OLD-ESTABLISHED INSTITUTION, the Q-code, is tottering on its pedestal!

The apparently meaningless three-letter groups, so carefully put together by former generations – which professionals shook out of their sleeves at will, and which were used by official services around the world – have been devalued.

It was foreseeable, of course. Even the most ardent Morse enthusiast can't deny that this invention, after serving mankind for so long, is in its last years – dragged down by the inevitable decline of another invention, that of the well-known artist and sculptor. The Q-code is specifically and inextricably linked with his code – the Morse code!

Of course, some Q-codes lead a languishing professional existence in telex, TOR, and affiliated printing techniques, and even microphone-push-button experts let out the occasional Q-belch. But the true purpose of the code is to improve efficiency in Morse telegraphy. Why was it called the Q-code? Obviously because all the groups began with a 'Q'. Big surprise!

But Why the 'Q'?

It was to create as little confusion as possible with other three-letter words, since in most languages there is little use of the letter 'Q'.

The military experienced this problem when they adopted the Z-code. The possibility of making jokes or rude words beginning with Z was a welcome distraction for military telegraphers!

So it had to be Q!

A comprehensive Q-code book has at least 250 codes, methodically arranged in sections for army, navy, airforce, meteorological use, etc. Obviously it is not possible to know them all by heart, but a professional knows the specific codes for his job plus the general traffic codes used by all telegraphers.

The inevitable decline in professional Morse telegraphy will, however, see the end of the good old trustworthy Q-code, which will become an odd peculiarity practised by the few, finally disappearing into the mists of history.

The Last Bulwark

There is, however, one last bulwark, against which the storms of time have beaten in vain – Amateur Radio! But salvation for the Q-code doesn't really lie here either. Amateurs use just 15 codes at the most, and with little left of their original meanings!

I'm not talking about the QN codes (second letter N) created specifically for amateur use, but about the original

Q-codes. What is left of those?

This is not a crusade against the prospective loss of the Q-code. There is no sense in weeping over the inevitable. In some books you can read about its former universal character; how it facilitated communication in all languages of the world. And how nice it is to read this: 'One world, one language = Morse (Q) code!'

Truly an attractive concept, but it reminds me too much of a slogan from about 50 years ago which also never came to fruition.

There's not a great deal to be gained today by the dedicated Morse-amateur in telling his Japanese brother his magnetic course to reach you with no wind (QDM); or that a doctor is aboard (QSQ); or that he is airborne (QTO) – Not really!

Ex-sparks excluded, repeat to yourself the Q-codes you use regularly! Do you know the difference between QSA and QRK? Congratulations!

You sometimes hear on telephony, 'QSA5, strength 9'!; or 'thanks for the pleasant QSL'. Admittedly they are phone-boys, but do you know, for example, the meaning of QRI?

QSO? QSV? QTR? QSG? QRH? QSM? Do you know that 'QRA-locator' doesn't make sense? Look it up!

Communicating

Q-signals are for 'communicating' and are not intended for exclusive use in specific areas of activity. Every Morse communicator should have a good knowledge of them in the interest of those better CW-QSOs we all like to have.

I know I can't bring back the original meaning of QTH to the ham-world, and that the mis-use of QRZ? is virtually legalised in contests. But I am still irritated when I hear 'QRL?' immediately before CQ CQ CQ, and when German TV (again incorrectly) uses QAM for its weather report.

It doesn't seem right either, when a Morse enthusiast obviously doesn't know the proper codes. However, when in QSO, he says he has to answer the call of nature and uses QAU it's a humorous situation. It shows that he is cut from the right wood and probably knows most of his other codes.

It is refreshing, also, to listen to a contact between a /MM station and an ex-sparks ashore. Q-codes abound and the true significance and value of the code becomes apparent.

It's true that amateurs have plenty of time and have no urgent need to abbreviate signals, but the loss is still theirs! It is the loss of a precious gift from the professionals. The loss of that mysterious atmosphere which used to characterise Morse – an atmosphere some of us still can't forget! ***MM***

Just Remember!

Seen on the wall of a freight-handler's office. 'When it goes in a rail car, it's a shipment; when it goes in a ship, it's cargo'.

Contributed by Charles P. Krause N7ESJ

... but when a loco goes on a ship ... ?

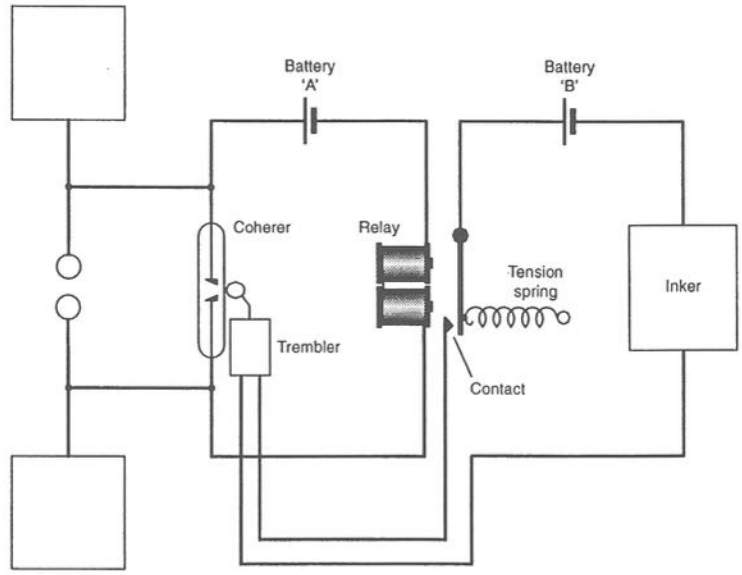
A CW Readout Printer for the Nineties

by Richard Q. Marris G2BZQ

AT THIS QTH the writer is a simple soul, and uses only CW for reception and transmission. After all, CW is a language of its own. Time-honoured techniques are used such as a pair of headphones, a pencil and large pad, and a first class 'straight' key. In spite of this, there have, over the years, been short forays to try other techniques, always returning in due course to the headphones, pencil, pad, and straight key. Nevertheless, a beady eye is kept on the latest techniques and equipment always being promulgated.

So it was most interesting to come across a simple nineties CW design for receiving and printing out Morse code. In the nineties (to be more precise – 1894!) Sir Oliver Lodge made what was reputed to be the first printed recording of Morse reception using point-to-point wireless transmission over a distance of several hundred yards.

The transmitter was a Hertz oscillator with a Spark Coil and battery, keyed with a Morse key. It is interesting to note that if the key was held down the spark coil produced around 20 sparks in each second of time.



The circuit shows the novel receiver used. In operation, each transmitted spark produced arrived at the coherer and reduced its resistance so that battery 'A' sent an enlarged current to the electro-magnet of the relay and closed the relay contact. The closing of this contact applied battery 'B' to the Inker which made a mark as the current flowed through it.

Simultaneously current flowed through the trembler so that its hammer hit the coherer to restore its high resistance. Thus current was reduced through the relay, its contact opened and the Inker was withdrawn from the paper. This operation was repeated every time the transmitter Morse key was closed. Hopefully, dear reader, you are still with this sequence of events!

Of course, as the spark transmitter produced around 20 sparks each second, every time the key was depressed for a 'dot' or 'dash' several sparks were produced. This apparently did not matter as the relay/inker/trembler combination could not respond to this high speed.

If a keyed 'dot' was made it produced perhaps 4 sparks but only one short mark (a 'dot') was made on the paper. A keyed 'dash' produced maybe 12 sparks and a longer printed mark (a 'dash') on the paper. This apparently started the wireless telegraphy transmission era.

It was all very simple and technically sound. What a pity Spark transmission is now illegal – it all sounds like a lot of fun! ***MM***

(See also 'The First Radio Telegraph Transmission', by Rowland F. Pocock, MM14, p1.)

The Postal Telegraph Company

by Donald K. deNeuf WA1SPM (SK)

ACCORDING TO Webster the word POSTAL is shown as 'having to do with mail or post office'. How come an electromagnetic telegraph system acquired such a name?

Back in the late 1860s, several bills were introduced in Congress proposing that the US Government construct and operate telegraph wire lines for the public – from Washington to New York and Boston as an example. Another bill proposed the simple purchase of all existing lines in the country and that the Government operated system should fall under the direction of the Postmaster General Cresswell and should be named the POSTAL TELEGRAPH COMPANY. At this time there was great resentment against the Western Union Telegraph Company. Cresswell quoted the president of the WUTCo as reporting to his directors 'The time is not far distant when the WUTCo will be without a single substantial competitor in the conduct of a business which, not withstanding the enormous growth of the last seven years, is still in its infancy.' (WUTCo had been buying up dozens of small regional telegraph companies.)

The bills did not pass in Congress, but, to make a long story short, an entrepreneur, Clarence W. Mackay had forged in 1894 a few domestic telegraph lines into a system to begin competition with the WUTCo. He named it the POSTAL TELEGRAPH COMPANY – presumably to make it psychologically easier for acquisition by the Postmaster General if the earlier bills should be passed, and especially if he found he could not compete with WUTCo. But his system grew rapidly and successfully as an effective competitor, and by 1929 embraced some 386 000 miles of wire lines, with connections to the Canadian Pacific Railroad telegraph system, overseas submarine cable circuits, and the Mackay Radio System.

In 1946, however, the Postal system phased out and became part of the domestic Western Union Telegraph Company except for its Mackay Radio and its overseas cable systems. ***MM***

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

Media CW

Further to my letter about QAM on ARD (MM25, p.43) I am sorry to report that although ARD (1st channel German public TV-network) is now available via TV-satellite Astra 1C, and can be seen in at least the south of England, 'QAM' is no more!

This CW-tone signal had been broadcast with weather bulletins for more than a quarter of a century and Germany's post-war generations grew up with it. Sadly, from the date of the new satellite transmissions, 27.8.93, ARD abandoned QAM and with it a great tradition!

I'm wondering if any German hams, or even DARC, protested about this and if, as a result, there's any hope of getting our 'good old QAM' back!

Monika Pouw-Arnold PA3FBF
Mijdrecht, Holland

Military Miscellany

I have been browsing through *Jane's Military Communications* and I notice that virtually all military HF gear includes a CW facility. When discussing the current British 'Clansman' equipment, it says: 'A narrow-band Morse facility, which has been found very useful for long-range patrol work, is also built into the HF sets.'

The list of ancillary equipment for Clansman includes: Key telegraph manual, NATO stock No. 5965-99-653-4274. the photo is too small to identify it, but it appears to be about the same size as the Key WT 8 Amp.

Other snippets from *Jane's* include: The Chinese are apparently still using two manpack/vehicle sets that are CW only! The Italian SRT-112/B HF SSB set is issued with a J-38 key mounted on a rectangular base.

Racal supply the MA.2238 microprocessor based Morse Training Unit to the UK and other armed forces.

More unusual is the French TSM5152A&B Transmitter/Receiver for Underwater Telephony which includes a Morse facility and is issued with a key having a rounded cover with a protruding adjuster.

Stan Barr G0CLV
Wirral, Merseyside

*(*MM *will welcome other Morse snippets, military or otherwise, including further information expanding on any of the above, if known. – Ed.)*

Abbreviations and Procedures

I agree with W4FOK (MM28, p.44) that we need an exclamation mark, and that − − · · − − is still used for the purpose by some operators. Regarding the suggested use of − − − · this is in current use for the German O-umlaut and the Scandinavian barred O (ref. Tg1,

Division B of the ITU Maritime Mobile Manual).

Maybe amateurs could use – – · · – – · · – – (an extension similar to the growth of 'Hi' to 'Hi Hi') which preserves the traditional symbol but avoids confusion with the comma. Of course, if amateurs ever become the only people still using Morse we can just dump the comma!

Bob Eldridge VE7BS
Pemberton, BC, Canada

With regard to Jim Farrior's letter (MM29, p.39), I don't have a pre-WWII list of Z-signals, but it is of interest to compare those he mentioned with their meanings given in the January 1949 *Joint Communications Instructions*; and the April 1986 *Communications Instructions, Operating Signals*.

ZMA (pre-WWII, per Jim) I have a message; (1949 – ZMA barred) What was bearing of unknown station (or station using callsign ...) at ... (time) (on ... kcs (or mcs); (1980) as 1949, but frequencies in kHz and MHz.

ZOT (pre-WWII) Go ahead; (1949) not listed; (1980) Transmit or handle this message at the lower precedence to the station or address designator(s) which follow(s).

ZFD (pre-WWII) Send Vs; (1949) This message is a suspected duplicate; (1980) as 1949.

In the same issue (p.40) Reg Prosser felt the need for some procedure to indicate capital letters. I never used it in the Air Force, but the signal to indicate that 'the following word is a proper noun, etc. – and should be capitalised' is IMA barred, · · – – · –, meaning capital letter OR underline.

Two other signals that are not used very often are:

AU barred, · – · · – = fraction coming up; and

VU barred, · · · – · · – = dollar sign ($).

John N. Elwood WW7P
Phoenix, Arizona, USA

Left-handed Bugs

In reply to Boris Real (MM29, p.43), Vibroplex for many years (and perhaps even now) offered left-handed versions of their bugs. They still show up at ham radio conventions in the USA on occasion, but are decidedly scarce.

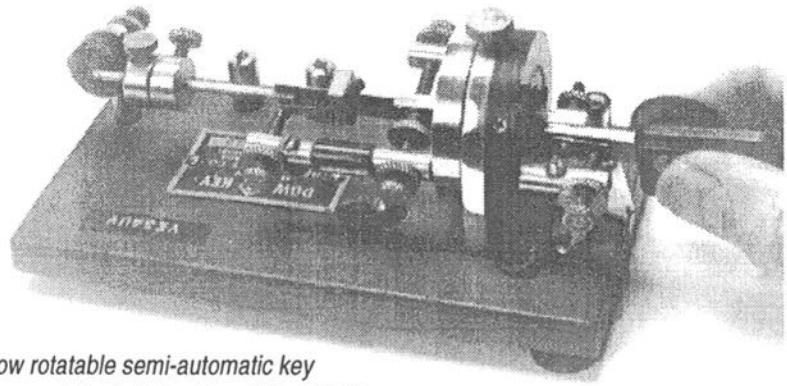
In addition, the Dow Corporation of Winnipeg, and Warren, Minnesota, made their unique 'rotatable' Dow semi-automatics so that the pendulum could be used at any angle, including 180° for left-handed use *(see photograph, right)*; and the famous Melehan Valiant, a fully automatic mechanical keyer, came in a left-handed version.

David R. Pennes, MD, WA3LKN
Indianapolis, Indiana, USA

Adelaide & Other Museums Closed

Since Richard L. Thomas wrote his story 'Telegraph Highlights in the Adelaide Museum' (MM27, p.18), Telecom Australia has seen fit to close down all its museums, of which Adelaide was by far the best as far as Telegraphy is concerned.

However, all is not lost, an enterprising chap in Adelaide, who has just taken retirement from Telecom as a technician, has obtained some space in the rear of a suburban telephone exchange and I understand he plans to re-establish



Dow rotatable semi-automatic key
Collection/photo: Murray Willer VE3FRX

some sort of working display with an emphasis on Telegraphy.

Also, the old Ashfield Post Office, a suburban post office about seven miles west of the Sydney GPO, has been handed over to some more enterprising types and they have set up a good display of equipment, again with the emphasis on Telegraphy.

It usually opens Wednesdays, however special arrangements were made to open it on a Friday evening recently, the night before the annual general meeting of the Sydney Morsecodians Fraternity. Incidentally, at the AGM, held on September 23, we had a record attendance of 173, plus a further 34 at an outposted meeting at Ballina which we linked up with by dial-up Morse.

John Houlder
Charnwood, ACT, Australia

Morse at the Movies

I recall a German-made TV mini-series broadcast by ARD in 1971 called *Die rote Kapelle*, dealing with the famous group of spies in WWII. Naturally, there was a lot of Morse operating seen and heard in each episode, with the German army tracking down CW-broadcasts in Holland.

I recorded the introduction and ending which had several CW stations fading in and out, sending groups of numbers at around 25 wpm, plus QRM, and accompanied by numerous background violins (both harmonic and dissonant pitch), with the whole exciting to listen to!

Unfortunately I can't remember details of the stars, etc., of this good series which, surprisingly, has only been re-broadcast once (1973/5) since then. Has anyone seen the series in other countries?

Monika Pouw-Arnold PA3FBF
Mijdrecht, Holland

The operator of 'F for Freddy' in the WWII movie *Target for Tonight* sends some unauthentic Morse when in trouble on the way home from a raid. I saw the movie when at RAF Lubeck, and in the audience were several wireless ops familiar with the daily broadcasts from the Air Ministry.

When the Morse started coming through they were surprised to hear the familiar daily 'idling' callsign, and after hearing 'GFA/2/3' they all completed it by chanting 'dah-dah-dit di-di-dah-dit dah-dit di-di-di-dah-dah, and broke into laughter.

Bob Eldridge VE7BS
Pemberton, BC, Canada

Semi-Automatics at Sea

Having recently read my initial copy of *MM*, Nr 29 (congratulations by the way!), and the letters therein, especially those about semi-automatic keys, I am reminded of a couple of instances during my seafaring days.

Officially, we Marconi operators were not supposed to use anything but the standard operational gear fitted and supplied. For many years, however, I had my own semi-automatic key strapped across the terminals of my standard fitted straight key. It was, I believe, an Eddystone, now long gone having been mislaid in transit during my travels. It was an excellent device and sent nigh on perfect Morse.

On one occasion, I visited my opposite number on an American vessel. He had a straight key supplied and fitted to his desk. In conversation he revealed that he had a Vibroplex bug which had been officially supplied by his employer. He had never used this, not being conversant with its operation.

On request, he produced this key, brand new and sparkling in its box, and said I could have it! I then made the foolish mistake of demonstrating its proficiency on the dummy aerial and he immediately changed his mind and took it back!! I presume he also became a perfectionist!

On one extended voyage I passed a short time constructing a bug key, the pendulum and paddle being a hacksaw blade. Despite its 'Heath Robinson' appearance, it worked quite well.

John Beech
Whitby, Yorks.

In my seagoing days, I too used bug keys, connected across the 'standard-issue' Marconi 365A. At first, I also had an Eddystone, but later changed to a 1950s Japanese model which I bought during a visit to Kobe (and still own).

I found that the main problem in using a bug at sea was positioning it so as to reduce the effects of the motion of the ship. Otherwise, when the ship rolled one way, the key would send a string of dots all by itself, as the trembler arm came off the damper; but when it rolled the other way, you could send no dots at all, for the trembler was held fast against the damper by gravity! – Ed.

Russian Collection

I am proud to be a reader of *MM*. I am 54 years old, I have been taking part in radio sports for 36 years and have been a radio amateur for 23 years. I obtained an American licence (N7PLX) at the Good-Will Games in Seattle in 1990, and I am a member of EHSC, SHSC, and U-QRQ-C.

I have a collection of 53 keys, and apart from many well-known keys, this includes a speed key made in Moscow by the 'Electropribor' factory before WWII. I am wondering if other readers have seen or heard about this 'bug'? I also have a railway key of 1922 and

The smallest key in the world?

others, military, naval, spy, training and so on.

I enclose a photograph of the smallest key in my collection. It is posed in the same manner as the one on page 7 of MM24. Mine is clearly smaller and I think must be smallest key in the world, even smaller than the Lilliput key on page 5 of MM29!

I was very interested in the Lorenz key shown inside the back cover of MM20, which came from a German bomber shot down in Holland in 1940. My own Lorenz key has the following numbers: On top cover LN26906, on bottom of key LN26907, on plug assembly LN26908.

The one shown in MM20 has the number LN 26907 on its top cover. Is it possible that the bottom of my key belongs to the top of the key from Holland?

Valery Pakhomov UA3AO
Moscow, Russia

(Please send us more information on your miniature key, Valery, especially its dimensions. Does anyone else know about the 'Electropribor' speed key? Also, can anyone explain the numbering system on the Lorenz keys? – Ed.)

Aircraft Identification Switchbox

I have only recently become a subscriber to *MM*, although I operate on CW quite a lot and have been collecting keys for quite a while.

Concerning the article by Tony Smith, (MM30, p.18), these devices, in various constructions, all very similar, were certainly fitted to the following aircraft: Tempest V – fitted to starboard cockpit wall. Spitfires IIA, IIB, VII, VIII, IX, XI, XVI – fitted to starboard cockpit wall, and were probably fitted in all marks. Oxfords I and II – fitted to port cockpit wall. Lysander III and IIIA – fitted to starboard cockpit wall. Lancasters.

On some Spitfires, a lever controlled colour filters of red, green and amber on the downward I.D. lamp. A check on the RNARS 'Firebrand' torpedo fighter bomber shows a totally different arrangement and device, and appears to have two keys, mounted on the starboard cockpit wall.

Gerry Farrance G3KPT
Birmingham

V for Victory

I found the article 'Aircraft Identification Switchbox' by Tony Smith (MM30, p.18) very interesting. During WWII, when in the Royal Navy (Fleet Air Arm) I clearly remember looking up on numerous occasions at night when RAF Bombers flying overhead flashed the letter 'V' downwards. This must have been from early 1945 onwards.

The newspapers reported that the bombers were following the same practice as they flew over France – but I saw it for myself over West London! Seeing

the letter 'V' being flashed like this must have gone a long way towards boosting morale in France.

After reading the *MM* article, I wonder whether those same switchboxes were used for sending the 'V's? Does anyone know if, perhaps, more powerful lights were used for these signals?

Dick Johnson G2FFO
Burnley, Lancs

(We would like to hear from anyone who can answer Dick's questions. Perhaps some of our readers actually sent some of those 'V's? – Ed.)

London Calling Overseas

Reader J. Brunton of Holywell, Clwyd, has sent *MM* a copy of a BBC advertisement he found in a book *H.M. Corvette* by Nicholas Monsarrat, published in 1942.

The advertisement describes the wartime overseas broadcasts of the BBC from London which, it says, 'men, women, and even children' risked imprisonment and death to hear. It also says 'Full details of all the programmes in English are broadcast from

London in Morse every Sunday... a week in advance'.

Does any reader remember hearing these Morse transmissions? Can anyone provide any other information on them? Please contact MM *if you can help. – Ed.*

Other Applications for Morse Code

While reading the magazine *PC Format*, I came across a letter from someone whose computer seems to emit a B in Morse when it comes across a 'non-fatal VRAM error'.

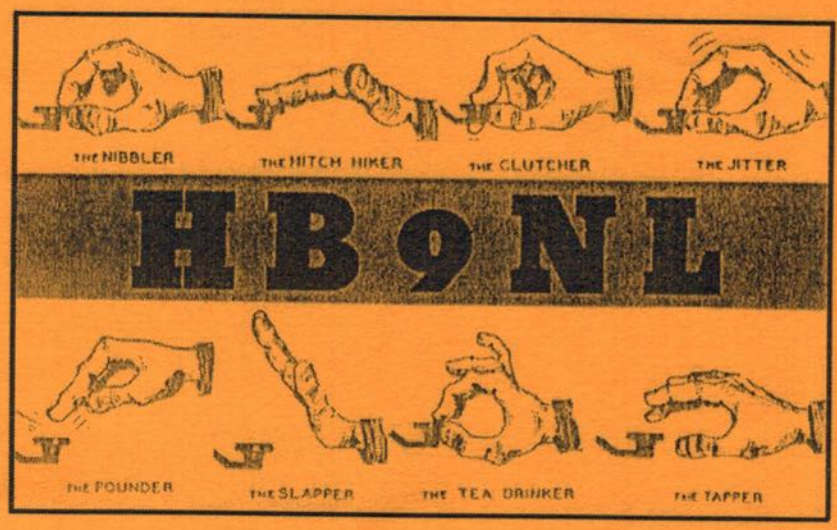
Whether this is the computer's or the VGA card's BIOS I don't know. His card is a Diamond Viper.

Reynir H. Stefansson
Reydarfjordur, Iceland

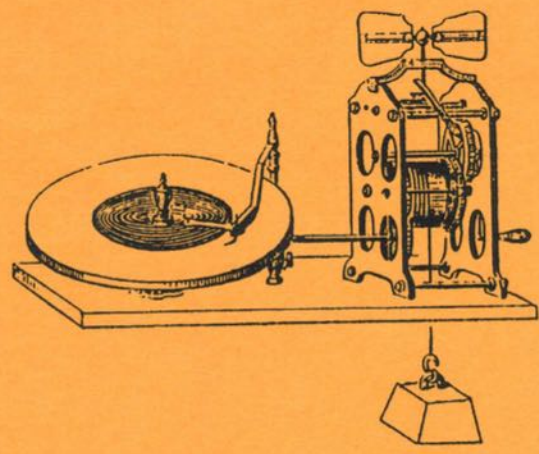
Please send your News items and Readers' Letters to Tony Smith G4FAI care of the Editorial Office at the address shown on the inside front cover

Morse QSLs

A series of reproductions of QSL cards with a Morse theme



PORTHCURNO TELEGRAPH MUSEUM



BAINS CHEMICAL TELEGRAPH - MORSE VERSION

Bain's Chemical Telegraph.

BAINS CHEMICAL TELEGRAPH - FACSIMILE VERSION - 1842