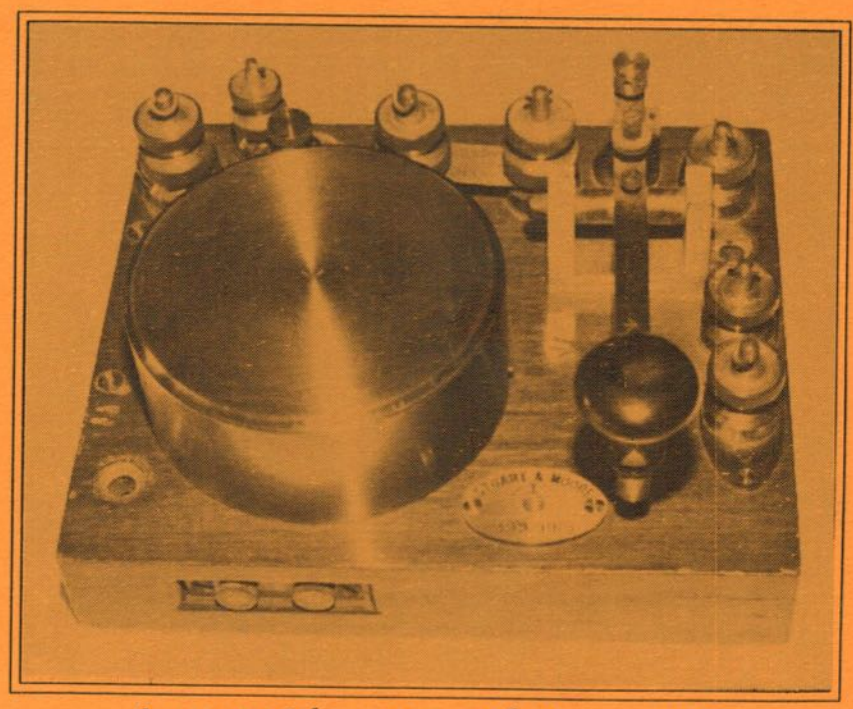
Number 29 – August 1993

Flying the flag for Morse

Morsum Magnificat

The Morse Magazine



Stuart & Moore Key with Buzzer, 1915

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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

From the collection of Jean le Galudec, a Stuart & Moore Key with Buzzer, made in 1915 of brass on a varnished wood base.
With War Department broad arrow marking
Photo by Jean le Galudec

Comment

I SUPPOSE that we all become outspoken about our personal views and prejudices at times, but I am amazed at the sheer venom which some people apply to the subject of Morse code communications.

Gary Bold, in his 'Letters to the Morseman' in this issue, mentions some of his own experiences in this regard. I recently read an article saying that Morse was archaic, obsolete and finished as far as commercial use was concerned, and therefore for every other application, too! It was so vitriolic, not just expressing the opinion that Morse was dead and buried, but virtually dancing on its grave as well – that by the time I'd finished reading the article I felt quite sick.

My faith in humankind and balanced argument was restored, however, by another article, in the Spring 1993 issue of the US journal *Communications Quarterly*. This acknowledges that the communication art is changing, and that Morse code's usefulness in radio is less than it once was, but goes on to explore the many other uses to which Morse can be put, in emergency situations or by the handicapped. We hope to reprint this latter article in *MM* shortly – I don't think that I could bring myself to give further exposure to the first one I mentioned!

I am a great believer in the sentiment expressed by the old saying 'horses for courses' – in other words, select the means best suited to each job you have to tackle. It rather appeals to my warped sense of humour that *Morsum Magnificat* and its sister magazine *Radio Bygones*, two publications dealing with subjects which some condemn as archaic, are both produced on computer, using the most modern electronic publishing equipment available.

Geoff Arnold

G3GSR

Contents

We are sorry that the promised article 'Key Design' has had to be held over, and will appear in the next issue of *MM*

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News

Morsecodians at Alice '93

MEMBERS OF THE SYDNEY MORSECODIANS FRATERNITY participated again this year in the Alice Springs Heritage Week, opening up the Historic Telegraph Station for their annual hook-up with the National Science and Technology Centre in Canberra – an old-time 'direct' telegraph line halfway across the continent, utilising modern technology, courtesy Telecom Australia.

The crew this year was John Houlder, Fred Ryan, Reg (Curly) Moger (all readers of *MM*!), and Ray Langtip. The circuit was open from Saturday, April 24 until Sunday, May 2. Once again visitors were offered free telegraph messages and a total of 1479 messages were transmitted, an almost 50 per cent increase on the figures for 1992, with many people taking the opportunity to send Mother's Day greetings messages.

There was a large increase in tourists from Germany this year, and a number of messages were transmitted in the German language.

At the end of week, Fred and Ray travelled 300 miles north to Tennant Creek where the circuit was extended for the weekend, May 2–3, as part of the fund-raising activity for restoration of the old repeater station buildings there, while John manned a combiner unit at Alice Springs, jointing the two voice-frequency telegraph circuits together.

The Morsecodians had acquired a complete set of telegraph equipment, including key, sounder, resonator box, galvo and simplex relay, which they had restored prior to handing it over to the Friends of the Telegraph Association at Tennant Creek.

A worrying development in terms of future activities is the policy of the NSTC to change their exhibits every one or two years. The telegraph installation has actually been there for over 5 years, since the NSTC opened in fact, and they have indicated that it may have to find another home.

It is hoped that a compromise may result in leaving the channel *in situ*, with the Morsecodians re-installing the equipment each year prior to the Alice Springs event, but this is by no means certain yet.

(John Houlder continued on a touring holiday in the Northern Territory after the Alice Springs Heritage Week and sent MM *this report direct from 'Crocodile Dundee Country'. He tells us that he and his wife have done a lot of swimming in the National Parks 'in crystal clear pools and tumbling waterfalls, but swimming areas have to be chosen carefully as the waterways up this way are full of man (and female) eating crocodiles'!).*

Fake Distress Calls

A FAIRFAX (VIRGINIA) amateur radio operator, whose phoney 'Maydays' created a wild-goose chase in the West Indies last summer, has agreed to reimburse the US Coast Guard $50 000, and dispose of his ham equipment, as part of a plea bargain.

Jorge Mestre NS3K, age 50, pleaded guilty and was sentenced on May 12 to 60 days home confinement with work release privileges and one year's probation. In addition he was ordered to perform 200 hours of community service, pay a $50 special assessment and permanently surrender his Amateur Extra Class ham ticket. He could have received up to six years imprisonment and a fine of $250 000.

Over a period of time he is suspected of having put out a number of false distress signals, and on 7 August 1992, he falsely reported a sinking vessel in the British West Indies. He transmitted in both SSB and CW, including the use of 'SOS' in CW.

The Coast Guard immediately began a major search and rescue operation which cost more than $100 000; the government of the Turks and Caicos Islands launched their patrol craft, and merchant ships in the area were advised of a vessel in distress.

The FCC recorded the false transmissions. Using direction-finding data, subsequent detailed technical analysis of the tape recordings, and information provided by other ham operators, they were able to later identify Mestre's amateur radio station as the source of the false distress messages.

The FCC used basically the same method of analysing radio signals that they developed in the famous 'Captain Midnight' and 'Playboy' satellite jamming cases. There are certain parameters of a signal that are peculiar to a specific radio transmitter. One of these is the 'turn-on' time until a rig gets to full power on a specific frequency. When Mestre used CW on August 7 this was essentially the same as turning the transmitter off and on. The FCC simply measured and carefully analysed the signal rise-time with an oscilloscope.

By examining the radio signal 'signature', the FCC was able to identify two 'turn-on' characteristics that, when matched with those qualities contained on another recording from the same transmitter, clearly identified it as having sent the false CW distress messages.

The two identified characteristics were transmitter instantaneous frequency and transmitter power. In theory a transmitter should turn on instantly with full power on the frequency it is set to. In practice, it cannot do that.

Two different transmitters adjusted to the same level in frequency will differ in their measured 'turn-on' characteristics. A study of their instantaneous frequency and magnitude of output power during the first one hundred milliseconds or less after 'turn-on' conclusively reveals different and distinctive characteristics, even between different transmitters of the same manufacturer and model.

(Condensed from the W5YI Report, *1 June 1993)*

Europe for QRP Weekend 1993

ALL LICENSED RADIO AMATEURS are invited to take part in this contest organised jointly by the G-QRP Club and the OK-QRP Club.

Dates and times: From 1600 UTC on October 1 to 2359 UTC on October 3.

Mode and frequencies: CW only on 3.560, 7.030, 14.060, 21.060 and 28.060MHz, all ±10kHz.

Power: Not to exceed 5 watts RF output. Stations unable to measure output, take

half DC input. (10W input = 5W output, and so on).

Call when seeking contacts: CQ EU QRP.

Exchanges: RST, Power Output, Name of Operator. All to be logged for a valid contact.

Scoring: Contacts with own country do not score. EU stations score 1 point for each EU contact and 3 points for each contact outside Europe. Stations outside Europe score 5 points for each contact with Europe. The final score is the sum of the points scored on each band used.

Logs: Separate log sheets required for each band, showing contact date, time, call, RST, name, and power, received and sent. A summary sheet should show call, name and address, claimed score for each band, total claimed score, and brief details of the equipment used. Send logs to: P. Doudera OK1CZ, U1 baterie 1, 16200 Praha 6, Czech Republic, by 15 November 1993.

Awards: Merit certificates will be awarded to the three leading stations from each continent. The judges' decision is final in the case of dispute.

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

W5YI Group now a COLEM

THE W5YI GROUP, which administers 35 per cent of all amateur radio operator licence testing in the USA was the first of nine organisations to be chosen by the FCC as a COLEM (Commercial Operator Licensing Examination Manager) to manage the newly privatised commercial examination program which was described in MM27, p.6.

The W5YI Group Inc. established a commercial operator testing division known as National Radio Examiners, and proposed to the FCC that its Registered Examiners would be both currently licensed Commercial and Extra Class radio operators. It is now in the process of approving examiners, with priority for Chief Examiner status given to holders of the General Radiotelephone and Commercial Radiotelegraph Operator licences.

It will not be necessary, however, for approved Amateur Extra Class level examiners to hold a commercial radio license to conduct commercial radio operator testing. Amateur and Commercial Radio Operators interested in participating as examiners or in establishing a Commercial Operator Testing Center are urged to contact: The W5YI Group Inc., National Radio Examiners, PO Box 565206, Dallas, Texas 75356. Telephone (817) 461-6443.

Concern About US Code Exemptions

VOLUNTEER EXAMINER COORDINATORS representing more than 98 per cent of all amateur radio license examinations conducted in the Amateur Service met on June 17–18 in Gettysburg, PA, for their annual conference. Also in attendance were representatives from the American Radio Relay League, the National Amateur Radio Association, various amateur radio training and publishing groups, and many senior FCC officials, including FCC Chief-of-Staff Brian Fontes.

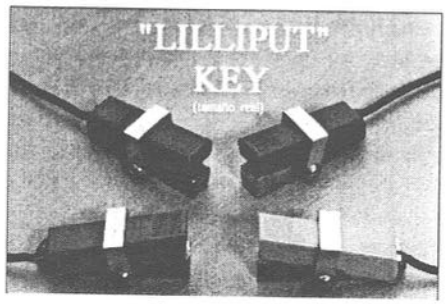
He addressed the conference on the budgetary difficulties of the FCC and how private sector programs such as the VEC System and privatised Commercial Radio testing assists in this area. During this discussion, Ralph Haller, Private Radio

Bureau Chief announced the selection of Fred Maia and the W5YI Group as one of the nine new COLEMs, as reported above.

In the discussion on the Morse code examination process, Jim Georgias W9JUG, who heads the Great Lakes VEC, pointed out that Morse code examination applicants are sometimes improperly passing the 5 wpm telegraphy examination and then going to their doctor to obtain a falsely claimed exemption for the 13 and 20 wpm telegraphy requirement.

It was recommended that the FCC follow up every telegraphy exemption request to verify that the doctor agrees that handicap code credit is justified.

The second day of the meeting was mainly devoted to presentations and discussions with the FCC, and during one session, Carol Fox-Foelak, of the FCC's Compliance Department, discussed preventing unqualified licensees. The handicap telegraphy exemption program, she said, was being abused. To reduce misuse, the new rewritten Form 610 will contain a more complete doctor's information and certification section. FCC Gettysburg has been asking doctors to confirm medical conditions and many telegraphy exemptions have been denied.



The 'Lilliput Key'

If at all possible, compliance problems should be prevented before they reach the FCC level. VECs should intercept irregularities and invalidate questionable test sessions to avoid lengthy and expensive FCC involvement.

New Morse Test Standard

FOR THE FIRST TIME, the VECs adopted a telegraphy examination standard which must be used on all code exams administered in the VEC system. Only one minute solid copy, answering seven out of ten questions or multiple-choice code exams may be used to prove telegraphy knowledge.

If the multiple choice answer format is used, then there must be ten questions, with seven correct passing. A minimum of four choices (answer/distractors) must be included on all multiple choice questions.

No True/False code exams or transcriptions of the telegraphy text with ten missing words will be permitted. The new standard must be put into effect as soon as possible but no later than 1 January 1994.

If seven-out-of-ten questions or multiple-choice telegraphy answer formats are used, then the VE team must also submit the applicant's answer sheet to their VEC showing what the applicant actually wrote down. VE teams and VECs should review the code transcribed by the examinee to determine that he/she was able to answer the examination questions from the copied text.

(From the W5YI Report, *1 July 1993)*

'Lilliput Key'

AN INGENIOUS MINIATURE KEY from Spain, 'The Lilliput', is made from a 'Bambina' staple gun. Constructed around

a piece of solid brass, 50 x 10 x 10mm, and weighing 50 grams, it has an adjustable aluminium bridge which allows the contact gap to be varied. Limited tension adjustment is possible by dismantling the key and bending the spring steel tension strip in a machine vice. Held on the operating table by a small piece of Blu-Tack (provided), this tiny key was found by *MM* (TS) to have a surprisingly 'solid' feel in use.

The key is designed and constructed by *MM* reader Jero Orellana Ramirez EA3DOS, who wonders if it is the smallest known key in the world? Useful for miniaturised stations, camping or holiday operation, where space or weight is at a premium, or of interest as a collector's item, the key can be obtained from Jero at: Av. Roma 10, 08015 Barcelona, Spain, price £10 sterling (he suggests sending a £10 note 'well-protected'), and the key will be sent by return by registered post.

(Does anyone know of a smaller practical working key? – Ed.)

Museums of Interest

FRANCE: La Muse d'Histoire des PTT

THIS MUSEUM has a wide range of exhibits dating from about 1830, including apparatus by Steinheil and Meyeron, right up to today's modern technology.

Of particular interest are the contributions of a local medical-man, docteur Dujardin. These are labelled 'les tranges machines du docteur Dujardin' and are dated 1845 *(alphabet de l'appareil Dujardin)*, and 1851 *(Emetteur a Frotteur du docteur Dujardin)*. This latter seems to be a very early, and not necessarily primitive, form of semi-automatic hand-operated Morse-type code generator.

For anyone visiting eastern France this museum, located in the small town of Riquewihr, 10km NNW of Colmar, is well worth a detour; and there are also excellent museums in Mulhouse for motor-car and railway enthusiasts.

(Contributed by Ken Quigg GI4CRQ, Belfast, Northern Ireland. Ken has sent MM *some photos of the inventions of docteur Dujardin, and is trying to obtain more information about them which we hope to publish later. Further reports from readers on museums containing material of interest to Morse enthusiasts will be welcome. Please write to Tony Smith, at the address given inside our front cover.)*

News from France

NO-CODE REFERENDUM: Anticipating that discussions on the subject would be held at the IARU Region 1 Conference in Belgium, in September, the April 1993 issue of *Radio-REF*, journal of the French national radio society, REF, announced the referendum mentioned in MM28, p.3.

The question to be answered was: 'Do you want radio amateurs to have access to 28MHz (observing the IARU bandplan) without having to pass a Morse code examination? "Yes" or "No"? ' The June issue of *Radio-REF* reported the result of this referendum, with 71 per cent saying 'Yes'. Commenting on this result in an editorial in the magazine, Jean-Marie Gaucheron F3YP, President of REF, said, 'Another step has been taken in the right direction'.

F5ZF MORSE PROGRAM: This popular program, distributed to eight countries and referred to in MM28 (p.3), is called 'UFT' and has three parts, one to learn Morse, one to perfect your code, and one to

simulate the Morse test. F5TFS reports that the program works very well.

CALLSIGNS CHANGED: Some French callsigns have been changed. Prefixes FD1 or FE1/F1 are now F5. Other prefixes are not affected.

(Contributed by Boris Real F5TFS (ex FD1TFS), Solesmes, France. For comment on the no-code referendum, see 'Your Letters' in this issue. – Ed.)

A Worthy Cause

QTI IS A TAPE MAGAZINE produced for visually impaired radio enthusiasts by QTI Tape Magazine Association.

Each issue of *QTI* is a compilation of technical articles selected from current radio magazines *(including* MM *and* RB. *– Ed.)* and recorded on tape by a team of readers from all parts of the UK. *QTI* is recorded on two C90 cassettes and is sent out to more than 160 members every month. Most of these are in the UK, but there are also members in Norway, Germany, Eire, India, Canada and Australia. The cassettes are returned for erasure followed by recording of the next issue.

The service is available to all handicapped persons for an annual subscription of £5.00. In order not to deter those with financial hardship the subscription is voluntary. There is a 'Sponsor a Member' scheme to help such members. Cassettes are sent post-free to blind or partially-sighted persons under the Articles for the Blind service of the Post Office.

As a registered charity (Reg. No. 326454), QTI Tape Magazine Association is always in need of funds to cover running costs and to purchase materials and equipment, and so donations, large or small, are always gratefully received. Covenanted donations are worth one third as much again, because QTI can recover the income tax already paid by the donor. The Association is run by volunteers: there are no salaries or perks to fund.

For further information please contact Harry Longley, QTI Tape Magazine Association, Towers Cottage, Towers Lane, Cockermouth, Cumbria CA13 9ED, telephone 0900 823044 (note new address and 'phone number).

Chalk Pits Museum Wireless Day

PREPARATIONS ARE PROCEEDING for Wireless Day on Sunday, 12 September 1993, with something for all the family. Events and attractions so far organised include:

Working wireless sets from crystal to radiograms.

Personal collections on display.

Working telephones and telegraphs.

British Vintage Wireless Society (BVWS) display.

Working vintage 405-line television, with displays by Bill Journeaux and Andy Emmerson.

Meet the vintage wireless press, including Geoff Arnold from *RB/MM* and Ron Ham, author of the *Practical Wireless* 'Valves and Vintage' series.

Amateur radio clubs.

A working replica 30-line mechanical TV system.

Plus all the usual museum attractions, including the new 'Electricity Hall' which houses Seeboard's Milne Collection of domestic appliances, and electricity generation and distribution items.

Amberley Chalk Pits Museum is 3 miles north of Arundel, West Sussex, on

the B2139, immediately beside Amberley Station (BR). Follow road signs marked 'Industrial Museum'. There is a car and coach park adjacent, and all exhibits and the toilets are accessible by wheelchair. Opening hours are 10am to 6pm, with Museum admission being £4.20 for adults, £3.30 for over-60s and students, and £2.00 for children 5–16 years. There is also a £10.50 family ticket covering two adults and up to three children.

Further information can be obtained from the Museum on 0798 831370, or from Wireless Day organiser David Rudram on 0903 240367 (evenings).

For Your Diary

One of the most frequent questions we receive from readers who have only recently become interested in the history of telegraphy is: 'Where can I find keys and other items to build my collection?'

With the growth of interest in vintage radio and telegraph equipment of all varieties, there are often items of vintage equipment, components and books to be found at rallies and other shows staged primarily for radio amateurs. Keep an eye on your local papers, which often carry announcements about such events.

Morsum Magnificat/Radio Bygones is scheduled to attend all the following events during 1993, with the full range of publications from our Bookshelf, so come along and say hello!

The **Chalk Pits Museum Wireless Day**, *(see above)*.

The **Wincanton Radio Rally**, organised by the Somerset and Dorset Telecomms Group, will be held at Wincanton Race Course on **Sunday, October 3**.

On the following weekend, the Kidderminster & District Amateur Radio Society has its **Electronics Fayre & Rally** at Stourport High School, Stouport-on-Severn, Worcs., on **Sunday, October 10**. Doors will open at 10 am.

The 1993 **Leicester Amateur Radio Show** is scheduled for **Friday and Saturday, 29/30 October**, at its usual venue of the Granby Halls in Leicester.

The 7th **North Wales Radio and Electronics Show** takes place at the Aberconwy Conference and Exhibition Centre, on the seafront at Llandudno, on **Saturday and Sunday, November 6/7**.

AMATEUR MORSE TESTS in the Netherlands (PA) are very different to those in Britain. They are held just twice a year, at one venue only, and a computer sends to, and takes the signals from, up to 24 candidates at a time. PA3FBF remembers the day of her own test.

PA-CW-test

by Monika Pouw-Arnold PA3FBF

It was 1988, when if you asked a ham 'when do you go to Utrecht?' he automatically replied with the date of his next exam. The technical exams were held in the 'Jaarbeurs', the big trade-fair exhibition halls and the Morse tests were held, appropriately, in the PTT headquarters, a 15-storey building with fine views overlooking the entire neighbourhood.

My turn to go to Utrecht for my Morse test was on May 18 of that year, an overcast but dry day. I had time off from work and Piet, my OM (who prefers gardening!) also had the day off. The time of my test was 15.00 hrs but my CW-elmer for the last six months, another Piet, PA3DWS, came to my home at 11.30 joking about nervousness in general and the life-changing event of becoming a PA3 in particular.

Ninety minutes before 'the hour of truth', we enter the PTT building and go by lift to the 11th floor to the telecom canteen. PA3DWS has ruled 'WE are going to enjoy a nice cup of coffee and some cake while the other candidates down on the 9th floor are stirring each other up waiting for the test.'

Even in this lion's cage, the coffee is normal and capable of passing down a severely constricted throat, and I gaze out at the view from the 11th floor windows across the red roof tiles of Utrecht. PA3DWS misses nothing. 'Remember that beautiful view. You will never see it again!' Witty fellow. I understand what he is trying to say!

Ten Minutes to Go

Still half-paralysed, I am aware of my surroundings as if through a small passband audio/visual filter. Internally, I talk to myself. To pass this test has been my cherished wish for a long time. I have looked forward to this event so very much. An event which can result in permission for me to work into every hidden corner of

the world on short-waves! This ritual has kept me going all day until now.

The three of us go down to the 9th floor, to a crowded corridor outside the examination room. The other candidates are there, sitting on the floor, backs to the wall, talking, grinning, all nerves of course. The doors of the room are still closed, the test starts in 10 minutes. I light a cigarette. I am hoping this is my last one as PE1MHL.

We go in. The dedicated test room has rows of chairs and desks, with the necessary test equipment; windows from floor to ceiling; and wall-to-wall thick, sound-absorbing, carpet. From the provision of this professional set-up I sense a certain respect from the PTT for us radio-amateurs. A respect which I further sensed when the PTT's letter INVITED me to take the examination!

My psychological paralysis begins to ease off. Looking round, I count 19 other candidates. All have found their seats; are reading the two pages of instructions; adjusting their keys; or are having a last chat among themselves.

Warming-up Music

The door closes. We will be cut off from the outside world for the next 45 minutes. During this time we will experience a great change in our lives. From PE1s we will turn into PA3s. Looking at the clock above the door, the second hand has not moved.

The chief invigilator, Mr Den Ridder, welcomes us and introduces the other examiners. Photographs on our passports or driving licences are checked to make sure there is no cheating. Mr Den Ridder explains why Morse tests were held in previous times and why they are still necessary. He explains how the test will be administered and asks if there are any questions. Just a few. What about the Dutch 'ij'? Are we to take and send a 'y' in place of this as in the past? We will not make any error if we take down or send precisely the text we hear or read. Also we need not take down the '+'s preceding and ending the receiving test, nor send them in the sending test.

I begin to feel better. I smile at the 'warming-up' music heard softly in the background since we entered the room. Smash hits from the past, trying to disperse our nervous tension. The music stops. We fill in our forms, put on our headphones, the exam begins.

Only Five Left

The first text, 5 minutes at 12 wpm, I write down easily, also the second text, with no mental blocks. Is this because I am a CW addict, with 99 per cent of my listening time on CW? During the small break between tests the music comes back, 'Isn't this a lovely day?'. I shall always remember this day, even if it's only for the PTT's efforts to relax the tensed up candidates!

Now there is a longer break and tension rises again. Those who failed both receiving tests leave the room. This humiliating ritual tends to mar today's harmonic relationship with officialdom. I do not look round when hearing empty chairs being put back behind deserted desks.

I am halfway through. Somehow I am not a common 'PE1' any more. I have the impression of looking down on myself from above. Everything looks different yet

remains the same. I finally do look around and cannot believe my eyes. Out of 19, only 5 candidates are left and the only YL candidate is still there! Later, when we wondered why so few had passed, the consensus of opinion among the examiners and instructors was that an obscure 'let's simply have a try' virus had infected PA on this occasion. Too many candidates with insufficient experience had come to the exam. A pity about their £20 fee going down the drain...

Sending Test

The door closes again. There is a last chance to adjust and practice on the Junker keys provided. The texts to be sent are distributed. We are to send these simultaneously into the famous, but not visible, CW-computer. The text is something about navigation, QRGs and UTC.

As there are only five of us, we can sit near the front of the room if we wish. We all do, each convinced that optimum power for our last big effort, in the face of possible failure, will be better attained sitting as close to each other as possible.

We read the text in advance and are asked to send the first 6 letters of our surname 'into the computer' to link each candidate with his text and to 'trigger' the computer to our personal speeds. The first of the two 5-minute sending tests is about to begin.

'You may begin now... I make myself more comfortable. A dangerous action but I can't remember the last time my concentration reached such a high level. No shaking in my key hand, which was what I feared the most. I am engrossed in sending this maritime text, alternating figures with letters. Soon I have finished. Five minutes must have passed.

During a short break a noisy rattle is heard behind a wooden sliding door at the back of the hall. Old-fashioned printers are churning out our first tests for judging. From my experience with PA3DWS I know that he would have found perhaps 3 errors, but not the 8 allowed in this test. But perhaps the computer here judges more harshly than Piet's Tono...

Concentration Gone

Halfway through the second sending test, my concentration deserts me. I have difficulty in following the text. I even have to remind myself that I am expected to send it down the line. My stomach turns, stars dance before my eyes, cold sweat runs down my back, tingling in my arms and legs, my shaking hand almost refuses to send any further code. Was that really ME who was so confident with that first text?

I try to hide my distress. I don't want to make things worse for my neighbours who may be in the same state. Making the best of a bad job, I pound out the rest of the text. The computer will surely find more than 8 errors this time.

The texts are collected up. What a pity we cannot keep them as souvenirs of this fatal day. For the last time the printers rattle out our results while we chat and nervously grin at each other.

There is no more happy background music. The exam is over. The OM in front of me has failed. Listening to his tape produces no better result. Each candidate's sending is recorded on audio tape as well as by computer in case a marginal failure can be reversed to the advantage of the candidate. I learn this by catching

parts of the muffled conversation between him and one of the examiners.

Congratulations!

Another examiner appears at my side. 'Congratulations on achieving your A-licence'. On receiving I had no faults, and on sending 1 fault. We shake hands and I sign a form agreeing with the examination committee's assessment. It is rather sad, though, that a candidate who fails has to give his consent to his own failure!

I am a real PA3 at last... The room is full of sunlight, which is odd as the sun is still hidden behind the grey clouds. I chat with my neighbour. The door opens and my Piet-men drag me out. They say I have been talking too long. I want to examine the computer-like instrument beside the door, resembling a terminal at PCH *(the Netherlands maritime coast radio station, Scheveningen Radio. – Ed.)*, but my resistance is low, burnt out.

Sunshine in the End

I am torn two ways. On one side there is the delight of now being officially acknowledged as a member of the world-wide HF ham fraternity, and on the other a perverse disappointment that my very first Morse test has also been my last – it had been an enjoyable experience in the end!

In the corridor, PA3DWS awards me an 'Oscar' for my success (although that success was a result of HIS work with me for many months, seven evenings a week). He gives me a pigeon's feather which he found this morning when walking Sheba, his Rottweiler dog.

On the way home, to finish my Morse-test day in style, and this story too, the sun comes out to shine from behind the clouds. That pigeon's feather still shines too, on the power supply of my HF rig.

(Monika tells us that as from 1992 a new computer is in use and the tests are now held in a gymnasium at Nieuwegein, near Utrecht. – Ed.) ***MM***

Readers' ADs

WANTED

Marconi Key, Type 971, or W.H.Y? Wyn Davies, Pen-y-Maes, Halcog, Brymbo, Wrexham, Clwyd LL11 5DR, Wales, 'phone 0978 756330.

Back issues of *MM*. All issues before Nr19, also Nrs 22, 23, 25. Boris Real F5TFS, Box 49, F-59730 Solesmes, France.

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Keys offered for exchange: Czech Army keys (2 off), RAF bathtub keys (2 off), Key & Plug Assembly No8 fitted with WT 8 amp key, Unit Operator No1 fitted with WT 8 Amp keys (2 off). What offers please? Wyn Davies, Pen-y-Maes, Halcog, Brymbo, Wrexham, Clwyd LL11 5DR, Wales, 'phone 0978 756330.

Readers' ADs are free! Why not use *MM* to advertise your Morse items for sale or exchange or to seek your specific requirements. Send your ADs to Tony Smith, address facing page 1.

Who was at the Key?

Part 2

by Louise Ramsey Moreau W3WRE

MANY ACCOUNTS OF GREAT EVENTS OF THE PAST came not from a reporter who happened to be around at the time, but from some unknown communications man who sat at the key and pounded out in a few hurried sentences that something was happening which would thunder into newspaper headlines.

31 May 1889:
Johnstown Flood

'The South Fork Dam is liable to break. Notify the people of Johnstown to prepare for the worst.' This was the warning sent by Emma Ehrenfeld on the Pennsylvania Rail Road's wire, using a KOB (key-on-base) set, at 1.00 pm, from South Fork, Pennsylvania.

Sentiment, or maybe a touch of romanticism, gives Hettie Ogle, Western Union office manager in Johnstown, credit for getting out the first news. But she died in the office wreckage around 4.00 pm and her wires had been out before the flood hit the city.

We have also been told that an Associated Press reporter, Claude Wetmore, talked a railroad lineman into cutting into the wire he was repairing, to use his test set to send the first news. But Wetmore came up from Pittsburgh with other newsmen at about 7.00 am on June 1, almost 24 hours after the first word was received. It was then he tackled that repairman, to send a news item about the bodies and wreckage he saw along the riverbank.

The first authentic information came in the form of a dispatch to the Pittsburgh *Courier-Gazette*, from Robert Pitcairn, Superintendent of the Mountain Division of the PRR and himself a former telegrapher. On receiving the original warning from South Fork, Pitcairn started on a special train to Johnstown.

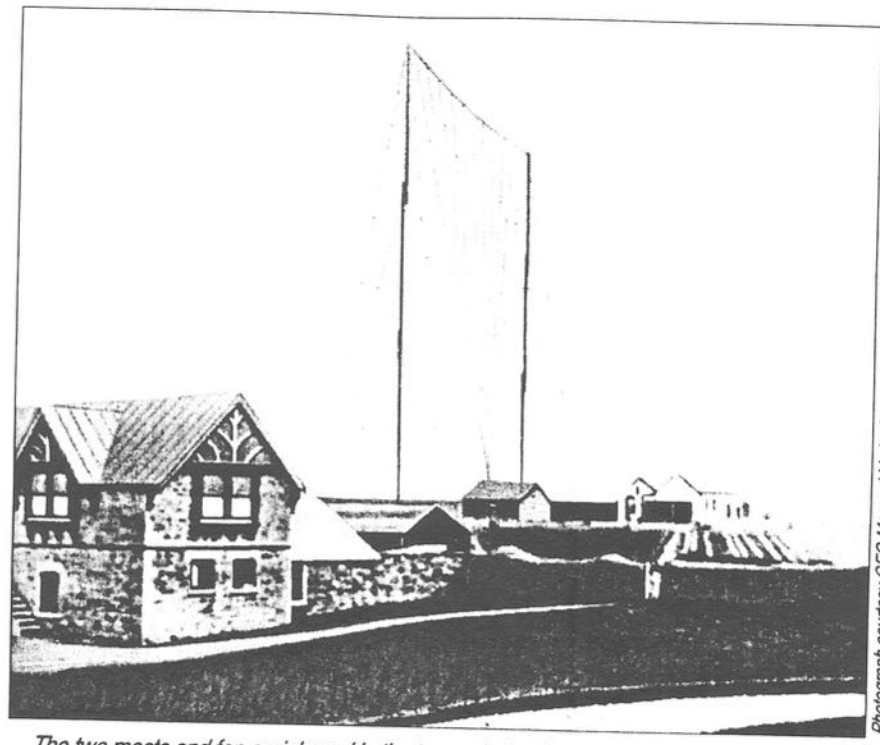
He arrived just below the town, saw the wreckage at the Stone Bridge, as well as bodies and debris, and sent the following message on the PRR wire from New Florence, at 5.00 pm, just 45 minutes after the town had been destroyed.

'Johnstown annihilated. Thousands of lives lost. Urge that the Mayor of Pittsburgh call a meeting at once to organise relief measures.'

12 December 1901:
Transatlantic Wireless

It began as a full star-studded production on both sides of the Atlantic, with $150 000.00 invested in the experiment. The huge antenna systems at Poldhu in Cornwall, and Cape Cod, Massachusetts, consisted of twenty 200-foot masts in a circle with an inverted cone of 400 wires leading down into the buildings.

The Poldhu transmitter used two 20kW transformers in parallel to step up the voltage to 20 000 volts. This was to be the proof that it was possible to operate by wireless across the Atlantic. In November, disaster struck, with gale



Photograph courtesy GEC-Marconi Limited

The two masts and fan aerial used in the transmission from Poldhu, 12 December 1901

force winds wrecking the Cape Cod station and destroying the Poldhu antennas at almost the same time.

Marconi decided not to wait to install a new antenna system, or to rebuild the Cape Cod station. Instead, they strung up a 150 foot fan antenna at Poldhu, changed the receiving station to the nearest land-fall in North America, St. John's, Newfoundland, and brought two kites and several small balloons to raise the antenna at St. John's.

At St. John's, Marconi and his two assistants, Mr Paget and Mr Kemp, set up their instruments in the unused barracks hospital, 600 feet above the harbour, on Signal Hill. Gales blew away the balloons and one of the kites, but they managed to get one kite in the air on December 12, despite the weather.

Who sent that famous letter 'S' from Poldhu that was picked up at St. John's? Well, Marconi chose that particular character because, and I am quoting, 'The switching arrangements at Poldhu were not constructed to withstand long periods of operation, especially if letters containing dashes were sent, without wear and tear.' So an automatic sender was used that just tapped out three dots... pause... three dots for three hours a day during the tests.

So what's new about using a keyer? It went into operation back in 1901 with the birth-cry of DX. The huge station at Poldhu is long gone but a monument

marks the site where Marconi's dream was realised. Less tangibly, it is also a reminder that radio and keyers made their entrance together!

18 April 1906: San Francisco

At 5.12 am, San Franciscans were literally shaken out of their beds by one of the worst earthquakes in the nation's history, and the need for communications became vital.

There was just one wire still working from the Postal Telegraph office and at 5:25 am the first bulletin about the 'quake was sent by the Chief Operator, Mr Swayne, to Chicago and from there across the country. That single wire was kept working, sometimes feebly, by Swayne with the help of WU and AP operators until the office had to be abandoned at 2.00 pm.

More communications were needed, but the 'quake had wrecked buildings, buckled streets, and interrupted service on the railroad wires. It is our good fortune to have the following personal account of what followed by Mr Ed Stevens, who writes:

'Alfred F. Peters (Chief Electrician on the USS *Chicago*, anchored at San Francisco) and I were on watch at the time. We received a call from Point Loma reporting the earthquake to our admiral. Wires were down in San Francisco and the train telegraphic circuits could not be used. So we used our Slaby-Arco set to relay.

Probably for the first time radio history was made when either Goat Island or Mare Island communicated all the Southern Pacific traffic, sending the train orders to sea, via Farralone Island Radio, relaying to Port Arguello, which placed the orders into SURF, where the SURF operator put them back onto the railroad wires.'

AP had routed its earliest bulletin via the Pacific Cable. We don't know anything about the operator there apart from the fact that he routed the message to Honolulu, and from there it went round the world to New York.

Swayne sent a final dispatch from the Postal Telegraph office as all communications operators moved across the bay to Oakland where service had been partly restored. His dispatch sums up everything that had happened during those nine terrible hours:

'The city practically ruined by fire. It's within half a block of us in the same block. The Coll building is burned out entirely and the Examiner just fell in a heap. Fire all around in every direction and way out in the residence district. Destruction by earthquake something frightful.

'The City Hall dome is stripped and only the framework standing. St Ignatius Church and College burned to the ground. The Emporium is gone. Entire building. Also Flood Building. Lots of new buildings just finished completely destroyed. They are blowing up the standing buildings that are in the path of the flames with dynamite.

No water. Its terrible. There are no communications anywhere and entire phone system is busted. I want to get out of here or be blown up.' Signed Swayne, Chief Operator, Postal Telegraph Office, San Francisco, California. 2.20 pm.

14 April 1912: The Titanic

On April 14, we in communications remember the *Titanic*, greatest of all the sea dramas, and the answer to 'Who was

at the Key' is well recorded. There was Jack Phillips, Chief Operator, Marconi man, whose 'Its CQD OM' sends chills up our backs. But there were more names than that.

There was W.J. Gray, Operator in Charge at Cape Race, who caught that CQD on a lucky fluke. He had shut down for the night but was checking the equipment before he went to bed when he heard the call. From then on he and his assistant, Herbert Harvey, worked 96 hours contacting the rescue ships, then relaying the survivor lists as the people in the lifeboats arrived aboard the *Carpathia*.

Further operators of those huge spark keys of 1912 include Harold Cottam, operator on the *Carpathia*. To me, he is one of the unsung heroes of the drama. He stayed in contact with the *Titanic* to the end, and then began sending survivor lists as soon as they became available. He collapsed from sheer exhaustion after three days at the key, to be relieved by another hero, Harold Bride, who had survived the sinking.

Despite the fact that his feet were frozen and he could neither stand nor walk, Bride could sit and operate. He continued the transmissions of official traffic and survivor lists, and was still operating when the *Carpathia* arrived in New York.

No, he was not at the key, but as the Right Honourable Postmaster General stated four days after the disaster, 'Those who had been saved had been saved through one man – Mr Marconi.'

And Many More

If we want to go on, we might remember Jack Irwin and Wellman's airship *America*. That's an incredible story.

Ray Meyers, sending the SOS from Sir Hubert Wilkins' submarine *Nautilus*, and sending it for 24 hours before anyone heard it.

Jack Binns and the *Republic*. There are plenty more.

And there are the nameless ones. Who was the operator in the cable office in Havana who sent 'There has been a big explosion in the harbor. The *Maine* has blown up and hundreds of sailors have been killed.'?

I wonder from where, and from whom, we first heard that Chicago was burning in 1871?

And who was the operator who sent that very first distress call 'Help' from the Goodwin Lightship in 1899?

The Answer

The answer to our question, 'Who was at the Key?' – who first told us that history was being made? – is the man who just happened to be the town telegrapher; the ship's operator; the communications man on duty as the event occurred, who hurriedly sent a brief sentence or two that flamed into sensational headlines around the world.

(Adapted for MM *from a paper presented by Louise Moreau to a meeting of the Antique Wireless Association in 1977.)*

References

Louise has provided a list of references (2 pages x A4) used to research her paper, which unfortunately is too long to reproduce here. For those interested, copies of the list are available from Tony Smith (see inside our front cover for address) on receipt of an SAE or 2 x IRCs to cover the cost of postage. ***MM***

Everything You Ever Wanted to Know About Morse Code

But Were Afraid to Ask!

This article by Frederick O. Maia W5YI, first appeared in 'Washington Readout' in **CQ Magazine**, *February 1993, and is excerpted with permission of the author and CQ Magazine, 76 North Broadway, Hicksville, NY 11801, USA*

THERE CAN BE NO DOUBT that the subject of Morse code is the single most prevalent topic on which we get mail. Readers are for it or against it, and want to know why telegraphy knowledge is necessary, how the tests are administered, etc., etc. This month, let's talk about 'the code'. We have saved up a stack of your letters and will try to address all of your concerns.

International Amateur Radio Law

The Amateur Service is an internationally recognised radio communications hobby. In the United States amateur radio exists for purposes such as providing a means by which radio enthusiasts may provide voluntary communications for themselves and others, especially public-service and emergency communications.

Since radio waves know no boundaries, the various nations of the world periodically agree on the broad guidelines for accessing the radio spectrum. This is primarily accomplished at meetings called World Administrative Radio Conferences (WARCs), which are scheduled by the Geneva-based International Telecommunication Union, a specialised agency of the United Nations. Once ratified by Congress, these international agreements have the force of law and provide the framework under which our Federal Communications Commission must operate.

There are not many international laws which apply to amateur radio. From a technical standpoint, all nations must verify that their amateur operators are qualified to operate their equipment and that they can manually send and receive Morse code if the operation takes place below 30MHz.

Current international amateur service communications are limited to technical or unimportant personal matters. And the amateur bands must not be used to transmit international third-party messages unless agreed by the countries involved. The International Radio Regulations also state that amateur stations shall transmit their callsigns at short intervals. There are no other international limitations.

International regulations requiring telegraphy proficiency in the amateur service have existed from at least 1938. Article 8, Section 197 (Cairo WARC 1938) required '...any person operating amateur

and private experimental station apparatus, either on his own account or for another, must have proved his ability to transmit passages in the Morse code and to read in telegraphy reception by ear, passages thus transmitted. He may be replaced only by authorised persons possessing the same qualifications.'

In 1947 (Atlantic City WARC), the regulations (Article 42, Section 1003.3) included for the first time a frequency limit above which a test in Morse code may be waived, and set this limit at 1000Mc/s.

In 1959 (Geneva WARC), this frequency limit was dropped to 144MHz and in 1979 (another Geneva WARC) to its current 30MHz.

This cut-off point has been lowered at every general WARC since 1947, and it is wondered what will happen at the next general WARC, which should take place around the end of the century. Many believe that the amateur radio Morse code requirement will be totally eliminated.

Creative Interpretation

While code-free amateur radio operation isn't supposed to take place on the short-wave HF bands under 30MHz, Japan allows it by creatively interpreting the rules.

They maintain that any radio operation is legally permitted under the International Radio Regulations provided it does not cause interference to others.

No country has complained to the ITU about the code-free operation of the Japanese 'voice class' license, and Japan has over one million of these licensees using 10 watts on the HF amateur bands without Morse code proficiency.

Morse Code Standards

There are no international Morse code speed standards. Theoretically, just recognising the Morse sounds and being able to hand send the characters meets all international requirements. It is our FCC that provides for the three different levels of telegraphy proficiency – 5, 13, and 20 words per minute.

On 22 June 1982, the FCC published a Public Notice detailing the specifications used by them for amateur radio Morse code test tapes. This has more or less become the *de facto* standard used in Morse code testing in the USA. Here is the text of that Bulletin:

'The international standards for the relative duration of elements and spacing employed in the Morse code are defined in CCITT Recommendation R.140 as adopted by the VIIth Plenary Assembly in November 1980. The 13 and 20 word per minute amateur radio test tapes conform to these standards.

'The 5 word per minute amateur radio test tapes are constructed using Morse letters sent at 13 words per minute, but with additional spacing between characters and words to provide an effective rate of 5 words per minute. This method, commonly referred to as the Farnsworth system, is favored for slow telegraph speeds because it is believed to facilitate the attainment of higher speed.

Specifications

For the 5 words per minute tapes, the modulation rate and duration of unit interval are calculated using 13 words per minute as the desired code speed.

Duration of code elements

Dot – 1 unit interval

Dash – 3 unit intervals.

Duration of spacing for 13 and 20 words per minute

Space between elements – 1 unit interval
Space between characters – 3 unit intervals
Space between words – 7 unit intervals.

Duration of spacing for 5 words per minute

Space between elements – 1 unit interval
Space between characters – 15 unit intervals
Space between words – 39 unit intervals.

Accuracy

Notwithstanding accuracy implied by the above formulas, the timing accuracy of actual test tapes may vary ±2%.

Audio frequency range (pitch of CW note)

The audio frequency used is no lower than 700 hertz and no higher than 1000 hertz.

Message duration

All tapes run for at least 5 minutes but no longer than 6 minutes.

Message content

The test messages transmitted simulate one side of a typical amateur radio conversation using code (CW QSO). Common telegraphy abbreviations, Q-signals, and amateur conventions (such as RST signal reporting system) are used.'

Taking the Morse Code Test

All W5YI-VEC *(see later. – Ed.)* prepared telegraphy examinations match these FCC standards. The American Radio Relay League telegraphy examinations are slightly different. While their 20 wpm examination conforms to the FCC standard, the ARRL's 5 and 13 wpm code examinations are transmitted at 18 wpm character speed with the spaces between the characters and words spaced out to yield 5 and 13.

It is a matter of opinion as to which Farnsworth spacing is best. The ARRL uses 18 wpm because they believe it makes it easier to attain the 20 wpm Extra Class level if you learn at a faster character speed to begin with.

Volunteer examiners (VEs) are allowed to prepare their own telegraphy examinations. In actual practice, any spacing may be used as long as the overall speed conforms to the telegraphy standards specified by the FCC. Some VEs who use a computer to generate the code test will even let you decide which Farnsworth spacing you want.

The rules require knowledge of 43 different characters: all letters of the alphabet, numerals 0–9, four punctuation marks (period, comma, question mark and slant bar) and the prosigns $\overline{AR}$, $\overline{BT}$, and $\overline{SK}$. Since numerals, prosigns and punctuation marks contain more character elements than letters of the alphabet, they count as two characters in the test.

A telegraphy examination must consist of a message sent at no less than the prescribed speed for a minimum of five minutes. Every examination message must contain at least one of the 43 required characters, and no message known to the examinee may be administered in a telegraphy examination. Neither may the same telegraphy examination be readministered to an examinee.

The rules simply state that an applicant must prove to the examiners that he or she is able to copy the International Morse code by ear. Some VEs give the applicant two chances to pass the test by asking questions about the text if the applicant fails to copy 25 characters in a row.

The tests may be taken in reverse order if desired – that is, 20 wpm before 13 wpm. If the 20 wpm is failed, then the applicant may try the 13 wpm. As a general rule, Morse hand sending examinations are not administered, since the FCC has taken the position 'Passing a telegraphy receiving examination is adequate proof of an examinee's ability to both send and receive telegraphy.' The administering VEs, however, may also include a sending segment if they feel it important. *(A new telegraphy testing standard, to be adopted by all VECs not later than 1 January 1994, is reported in the News pages of this issue of* MM. *– Ed.)*

Is the Morse Code Necessary?

Technology has progressed to the point where the reasons for retaining the code as a prerequisite for amateur radio operation are becoming outdated. Newer digital communications modes now can do what code traffic handled by humans cannot – that is, assure accurate delivery of important traffic.

Automatic message correction through electronic 'handshaking' circuitry has made the last stronghold of hand sent/received telegraphy, the Maritime Radio Service, unnecessary. Large ocean-going vessels are in the process of being tied into digital networks relayed by satellites. Simply stated, ship-to-shore short-wave communication is fast becoming part of the romantic past history of ships at sea.

In 1988, the International Maritime Organisation made a decision to end Morse code on the high seas. The IMO is the United Nations agency dedicated to the safety of ocean shipping. They represent some 97 per cent of the world's ocean-going vessels. This ruling basically signals the demise of radio operators and manual telegraphy aboard ocean-going vessels.

Maritime radio first used Morse code to enhance the safety of life at sea. Now, a new automated satellite based Global Maritime Distress and Safety System will allow the crew to send a distress signal simply by pushing a button. Ships will also carry a radio beacon which would give the ship's position via GMDSS if it were to sink suddenly. Morse code, which has been the foundation of maritime distress and safety messages since the turn of the century, now becomes obsolete.

Telegraphy can, however, be an interesting and fun way to communicate. It allows more amateurs to use the bands at one time due to its efficient use of spectrum. CW is also an international language understood by most amateurs of the world...

*(*MM *footnote: The FCC no longer administers amateur radio operator tests of any type and all testing is carried out by teams of three volunteer examiners, linked to the FCC through Volunteer-Examiner Co-ordinators (VECs).*

The W5YI-VEC, of which Fred Maia is the Co-ordinator, last year examined more than 35 000 applicants for the six US amateur radio licence levels, and authorised 20 000 licences. This organisation comprises over 13 000 registered VEs, holding senior level amateur operator licences. It is organised into nearly 900 volunteer examiner teams and administered nearly 60 000 examination elements (separate examination parts – Ed.) in 1992. The average test session

contained approximately 10 examinees and the W5YI group averaged more than 300 exam sessions a month during the year.

The W5YI-VEC is the second largest volunteer-examiner co-ordinator in the USA, the ARRL-VEC (American Radio Relay League) being the largest. Together W5YI (35%) and ARRL (50%) account for more than 85% of all amateur radio operator licence testing.

An additional activity by Fred Maia is the publication of the W5YI Report. This is a fortnightly newsletter providing up-to-the-minute news from the world of amateur radio, personal computing and emerging electronics which often enables MM *to report on the latest news of interest from the USA and elsewhere. As reported in the News pages in this issue, the W5YI Group has now been appointed as a COLEM (Commercial Operator Licensing Examination Manager) to manage the newly privatised commercial examination program).*

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

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If anyone can add to the information given please contact TS

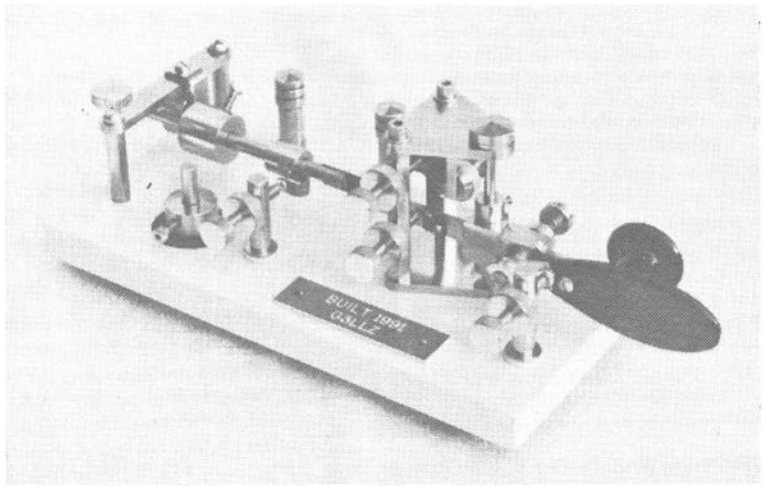
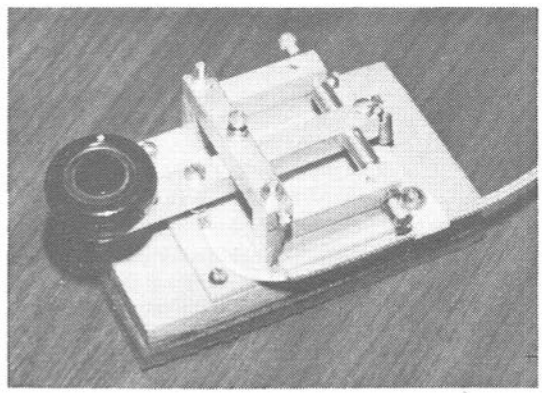


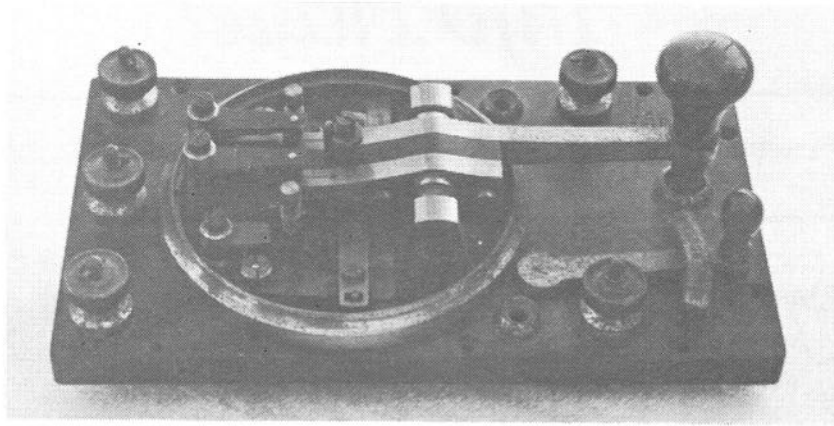
Photo: Dennis Goacher

Vibroplex type semi-automatic key made by Dennis Goacher G3LLZ. This key comprises 93 separate components, mostly brass, with a few silver steel parts and a ½in mild steel base. The finger paddle is teak and the finger button aluminium. An extra weight can be added to the pendulum for very slow keying, and the damper bridge hinges back to expose the end of the pendulum, hence the large knurled nut



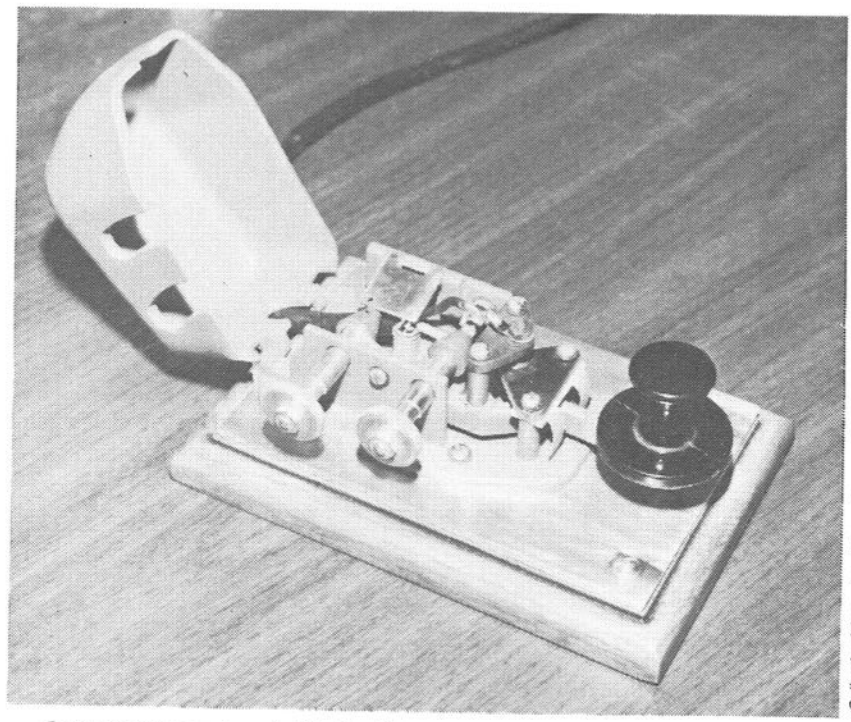
Collection/photo: Dominique Bourcart F1OEB

'BC939' key made by F6EQC from aluminium square bar. So-called because the knob is from a BC939 (tuning unit for SCR 399)



Collection/photo: Dennis Goacher G3LLZ

Double current key without cover.
Mk I has a glass top to its cover. MkII has an all brass cover

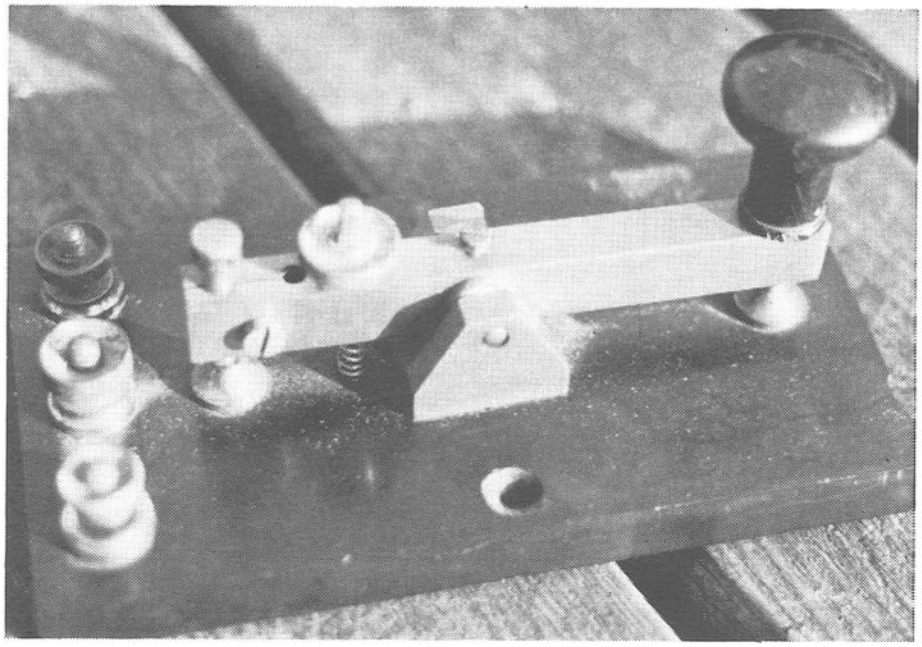


Collection/photo: Dominique Bourcart F1OEB

Saram key (France) used with aircraft transmitter-receiver type 3-11 and 3-12 c.1950.
Soft keying due to triangular bakelite contact support. Wood and tin base not original.
This type of key is still easy to find today

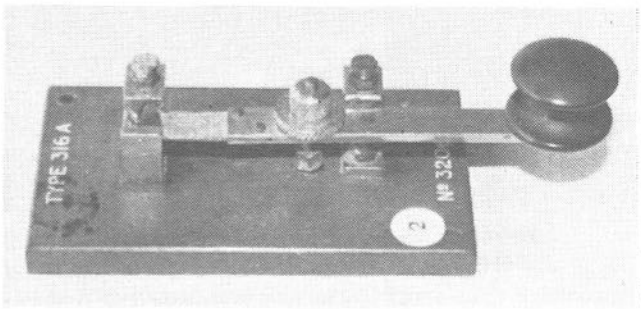
Info Please!

Readers require further information on the following keys, etc.
Please write to Tony Smith, 1 Tash Place, London N11 1PA, England, if you can help.
All useful information received will be published in MM *in a later issue*



Collection/Photo: Derek Sheen G4CCW

Unknown key. Information required



Collection/photo: Jean le Galudec

Unknown key, type 316A, No. 3206, on brown Bakelite base. Information wanted

Reflections from Uncle Bas – 17

A Short Voyage

by Bastian van Es PA0RTW

THE BRITISH FREIGHTER SS *EUDOXIA*, in which I served as a radio officer for a very short period, stands out in my memory for a number of reasons.

All the labour contracts on the foreign ships in which I sailed lasted exactly two years unless the vessel visited a northern European port. In that case, one could leave the ship if one wished. I usually ended up on vessels of the 'Never-Come-Back Line' and eventually signed off in some far distant place, having been on the ship for several years, bored with the ship and with the people.

When I got home again after such a long time at sea, my parents were extremely happy to see me and cuddled me and fed me as if I were a puppy. Of course, after a few weeks of this I would ask myself 'What am I doing here? I'd rather be back at sea!'

The Green Shed

In those days, in the fifties, there was, in Rotterdam, a little office known as the 'Green Shed' which arranged jobs for sailors on foreign ships. Evidently this was not a very profitable enterprise because I remember vividly the poor aspect of the wooden building with the interior matching the poverty-stricken appearance of its exterior.

Its purpose, though, was to get sailors a job and it did that magnificently. Even foreign sailors, wherever they were in the world, knew about the green shed and how its staff found and arranged jobs in a fast and simple manner. I never sailed on a Dutch ship so how Dutch sailors got a job on those I don't know. Perhaps through the services of an official labour exchange office.

To get on the 'joblist' of the Green Shed you had to pay a small fee after showing your papers and official certificates. After a time, usually very quickly, you were signed on.

It was always very hectic in and around the Green Shed, and when one of the staff started to read out a list of vacancies the sailors waiting pushed and struggled to get to the front.

More Sophisticated

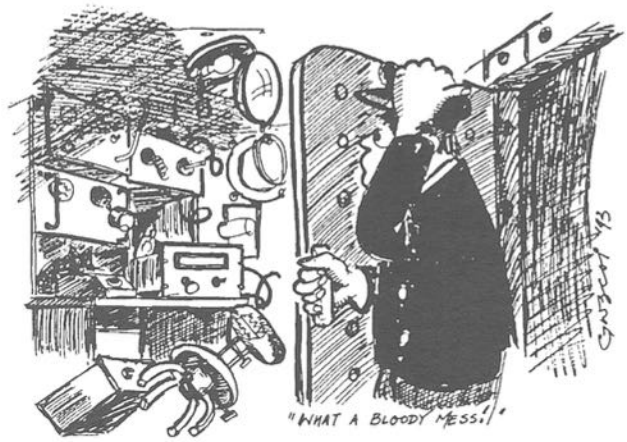
For captains, mates, engineers and the like, the methods were more sophisticated. They were ushered into a small room and treated quite differently. You will no doubt agree that there is a difference between an AB and a captain apart from the wages!

One night, when it was already past midnight, the bell rang at the door of my parents' house. It was a staff member from the Green Shed who told me there was an urgent request for a radio officer.

Without pausing for breath, he went on, 'Please get your suitcase and coat

because a British freighter is ready to leave port and the captain doesn't want to take the risk of sailing without a Sparks.'

After hastily saying 'goodbye' to Mom and Dad, we jumped into a taxi which was waiting in the street; the official shouted to the cabby 'Coaltip Frans Swarttouw, Waalhaven', and the taxi shrieked away into the night.



Radio Op Disappeared

In the cab, the man told me we were going to a British freighter of some 8000 tons from which the radio operator had disappeared. There had been no time to trace him in a big port like Rotterdam; and because I had been on the 'available' list I had been selected, although it was against company rules to hire foreign crew members.

There was no mention of wages or labour conditions and he told me to arrange these myself with the captain. The immediate priority, however, was to get the ship to sea. As far as he knew, she was a regular trader between Rotterdam, Antwerp and Leningrad.

What a Mess!

I was transferred from the pier to the ship in a small motor launch. The night was pitch-black and the big freighter could not be seen until the launch bumped against the steel plating of its hull. I climbed a rope-ladder on board. I could see very little and almost tripped over a hawser lying on the deck.

The mate, who was waiting, used a flashlight and guided me to my cabin which had the radio cabin next to it. No sooner had I shut the door and taken my coat off when I heard the captain shouting to the tugs and the propeller revolutions increasing.

I looked round the radio cabin and its equipment, and my first impression was 'What a bloody mess!'

No Sign of Life

This proved to be a correct assumption, since when I tried the main receiver, and then the transmitter, neither gave any sign of life. My first impulse was to check the fuse box which, being in completely unknown territory, took some time to find, only to discover the fuses were in a perfectly healthy condition. I then had to look elsewhere for the trouble.

Being thus very busy, I had not noticed the passage of time, and we were now at sea, having left the Hook of Holland. The captain entered the cabin. We shook hands and he gave me a bundle of telegrams for the owners in London and several for the Agent in Antwerp.

When I mentioned the condition of the radio equipment, he shrugged his shoulders and said 'Repairs and maintenance are part of the job and I expect you to fix it as soon as possible.' These remarks left me in great despair, but as he left he did advise me to borrow a soldering iron and measuring equipment from the electrician.

He was a shrewd man and was not the slightest bit surprised that I spoke his language, even though I was a foreigner.

Morse from the Speaker

So there I was, by myself, in the middle of the night on the North Sea; with a handful of cables and no radio.

I kept working on it until ten o'clock in the morning. Apart from the short-wave transmitter, for which I could find no spare parts, everything else was working and Morse signals were crackling from the loudspeaker.

To send the cables to London, I chose the more expensive way, i.e., via Antwerp Radio on medium wave. I couldn't contact any UK stations and said to myself, 'What the hell!'.

After this, I fell in my bunk and slept till noon. I woke up when someone, probably the mess-boy, shook my arm and shouted 'Dinner in the mess at 12.00'.

Different Food

The food was not what I had been used to on board other ships. There were dishes with pale, very salty meat, shiny boiled potatoes and white cabbage, with the lot covered in pinkish gravy.

What a contrast! In my last ship, an American bulk carrier, juicy steaks, French fried potatoes and litres of vanilla ice cream were on the menu almost every day. In fact, one could choose whatever one liked.

Although the *Eudoxia* was by this time moored in Antwerp, I feigned seasickness and hardly touched the food.

No Thanks!

When dinner was over, the captain asked me to follow him to his cabin. He did not ask for my certificate or other documents but said, quite casually, 'Mr Sparks, how about a little trip to Russia and back?'

He told me the previous radio officer had not made a good impression and, after a shouting match, had departed, never to be seen again. 'Probably gone back to his mother', said the captain.

By this time, my impression of the ship and the food was rather on the negative side so I declined his offer in a diplomatic way.

He took it like a gentleman, saying 'Fair enough', wrote me out a nice cheque for services rendered and wished me a good voyage home. ***MM***

Letters to the Morseman

Like *MM*, Dr Gary Bold ZL1AN in New Zealand, is 'Flying the Flag for Morse'. He receives many interesting letters addressed to his monthly column, 'The Morseman', in *Break-In*, journal of NZART, and the selection here is from some of the correspondence he has reported in his column over the last year or so, kicking off with a letter on early 'break-in' keying methods

ROBIN, ZL1IC, sent me one of the earliest articles on break-in keying, from *QST*, September 1926. This is so common in modern transceivers that we take it for granted. But even back in the 1960s, it was usually necessary to throw several switches in home-brew rigs to change from transmit to receive (switch the antenna over, de-mute the receiver, apply power to the finals...) and I remember the thrill I got when I finally implemented, with an assortment of Post-Office relays, a system that allowed 'oneswitch' change-over.

Later, I even evolved (with an 6SN7 Schmitt trigger) a set-up that switched automatically whenever I hit the Morse key, and changed back after a couple of seconds of Morselessness! Now, all transceivers can do that. But at the time, it was impressive.

I digress. The problems of implementing break-in in 1926 were enormous. Even standard keying methods sound somewhat primitive, and rather daunting:

'The ideal method of keying a self-rectified transmitter, or one employing chemical rectifiers is in the primary of the plate transformer. The inductance of the transformer allows the keying current to reach the tube gradually, instead of with a terrific bang, as occurs for grid keying, or keying the high voltage lead. But from the break-in standpoint, it is not always possible to stop the tube oscillating even when the key is wide open.'

I understand that a 'self-rectified transmitter' had raw AC applied to the plate, and made its own DC. The simplest break-in method described is to use separate antennas. But the receiving antenna may pick up enough of the transmitter's voltage to cause rather disastrous sparking in the mesh of the detector tube, and grid leaks and condensers will be burned open'.

There's more. We are told that it helps to have the transmitter and receiver widely separated. Some operators kept the transmitter in the back garden in a sort of dog kennel. We've come a long way.

Morse at the Ballgame

Laurie, ZL2RL, sent me a clipping and photograph from the *Albuquerque Journal*. The photo caption says 'Discreet Morse Code adorns the scoreboard at Boston's Fenway Park, spelling out the initials of the late Red Sox Owner Thomas A. Yawkey and his widow, Jean R. Yawkey. The romance of code, more than its utility, keeps it alive.'

Sure enough, down the scoreboard in two vertical lines, run 'TAW' and 'JRW'. Why did Yawkey choose to set his stamp on the park in this interesting way? Do any of our US readers know? *(Write to* MM *please. – Ed.)*

The red neon tower atop the 37-storey Grant building in downtown Pittsburgh continually flashes the City's name in Morse, every night! If it malfunctions, people often call to complain about mis-spellings.

And another thing I didn't know. The article says that David Sarnoff, the founder of RCA and its Chief for decades, initially gained fame as a wireless operator who reported the sinking of the *Titanic*, in Morse, in 1912.

IARU Band Plans

The place of Morse in the scheme of things has been debated since the time of Shakespeare, when Hamlet pondered 'To key, or not to key, that is the question'. Clearly, the hero's very name is a cunning device employed by the playwright indicating to the initiated his status as a minor, or new Ham, perhaps the holder of a Novice Licence.

Unhappily, his callsign is lost in the mists of time, but I have recently concluded that the whole play is allegorical, and that Hamlet's feigned madness and subsequent irrational behaviour stem completely from his inability to resolve the Morse debate to his satisfaction. The outcome of the play, the horrible and sad ends of the major characters, the way in which they meet their ends, are all grim warnings to us.

More recently, the debate has filled the pages of Ham journals with fire and fury since at least the 1930s. Now it rages, periodically, across our computer screens on packet. Much of it seems to the uninvolved to be, in the words of Macbeth, fire and fury, signifying nothing'.

But the reality of the tension is evident on the HF bands. Here the guerrillas of both persuasions skirmish on the uneasy border, set by the IARU Bandplans. Theoretical revolutionaries, who have never ventured into the front lines, would do well to ponder this.

Max, ZL1VV, writes as follows: 'The band plans have worked very well, even during contests. I have held a licence for 39 years in various parts of the world and it has always impressed me that a world-wide hobby can show such self discipline.

'Sadly this discipline seems to be breaking down in all sorts of ways. Many stations no longer enquire "is this frequency in use" and do not seem to understand that because the frequency appears to be clear, a near neighbour may in fact be having a QSO with a station they cannot hear.

'Tuning up on the band over extended periods is becoming a big nuisance. My usual response is to tell the unknown station politely that his transmitter is working very well but his receiver seems to be at fault. But my big gripe is the spread of the new data modes outside the recommended frequency allocations.

'For example the 20m band plan is as follows:

14 000/14 070 CW only
14 070/14 099.5 Narrow bands such as AMTOR/RTTY.

The accepted division of this section has been:

14 070/14 080 AMTOR

14 080/14 099.5, RTTY
14 100 World-wide HF beacon chain
14 100.5/14 112 New modes such as HF packet.

'What has happened to this plan that has worked very well for years? Well, HF packet has moved down to at least 14 090 and I have even heard packet on 14 063. RTTY is still keeping to 14 080 and above but seems to be avoiding the intrusion of packet by keeping below approximately 14 090. However AMTOR stations, in the main keeping below 14080 (although today I heard a German station on 14 083) are causing a really big problem.

'I have identified 34 APLINK stations below 14 070 (I admit to being an AMTOR/RTTY user!). These are unattended stations providing a bulletin board, message service and a link to the local VHF/UHF packet network. Their frequencies are published via bulletins obtained from VK2AGE who runs an excellent APLINK station on 14 075/14 077.

'I contacted Craig, the system operator at WA8DRZ, and his comments are interesting: "Max, band sharing is a concern, especially on 20 meters because it is so popular. With the growth of the digital modes (Packet, RTTY and AMTOR) the users of those modes naturally spread out as the initial area becomes crowded and spill over into adjacent parts of the band. If these areas are less crowded, operation continues and the new mode takes over. The 'dividing line' between the parts of the band used by various modes is not a fixed line, but a moving target that evolves over time. Craig."

Craig's message is very clear: USE IT OR LOSE IT!

The operation of these stations is of course attracting other AMTOR stations and the incident that really got me going took place on 20m during June this year *(i.e., 1992. – Ed.)*.

I have in memory a polite message which I transmit in AMTOR MODE B when I encounter QRM from an AMTOR QSO whilst I am operating CW. The message requests the station to QSY above 14 070 pointing out the frequency is in the exclusive part of the band.

I was clobbered by a very strong AMTOR station whilst in the midst of a CW QSO on 14 065. I identified the station as KC7OJ in QSO with NJ7D. I sent my AMTOR message requesting them to QSY, etc. KC7OJ did not acknowledge my transmission, he said to NJ7D 'What a jerk, doesn't that guy know CW is dead'.

You may or may not agree with the first part of his message, but he is dreaming if he thinks CW, the original data mode, is dead. The human brain, with the help of very narrow filters can handle QRM but can you imagine the antics those dumb computers get up to as they try and maintain an ARQ link?

There are already signs of a 'mode war' starting on this part of 20m and I admit I am doing my best to make sure there is plenty of CW activity! However this sort of behaviour is not good for the image of Ham Radio and I wonder if it is a reflection of the continual erosion of the requirements to hold a licence.

In conclusion, there are two points I would like to stress:

• **Use it or lose it!** HF amateur radio makes the world a village and our actions are felt around the globe. So come on you 'Morseman readers', fill up the CW parts of the

band and do your bit to re-establish the IARU band plan.

• **Write to your IARU Director** and let him know your views.

Postscript

As I was finishing this note at my operating desk (0504 UTC/July 20) an example of the change in operating standards happened. I heard a station calling CQ, manual Morse, on 14069. The station did not give any identification but judging by the signal strength it was probably a VK.

To my utter amazement a station came up on CW and said 'piss off de ZL4**'. I immediately sent to ZL4** that that sort of language was unacceptable. I did not get a response!

ZL4** runs an APLINK station on 14 069. This type of behaviour is to be deplored, and does not project a good image for ZL amateurs to be heard around the world. All very sad, and another example why we must resolve this issue quickly. I hope this is not the end of the Amateur Radio I have known. Come on Bill, you also use 4 other frequencies above 14 070, so why not set a good example and stop using 14 069?

After reading the latest APLINK directory, the good news is that SU1ER has stopped using 14066. VK2DDA and KA2RD are now no longer operational. The bad news is that seven, yes SEVEN new ones have appeared between 14 066 and 14 069. AA5AU and KC7OJ appear to be running a personal mailbox on 14 065.'

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

IN THE NEXT ISSUE:

- Key Design
- Aircraft Ident Switch
- When Morse Reigned Supreme

Morsum Magnificat

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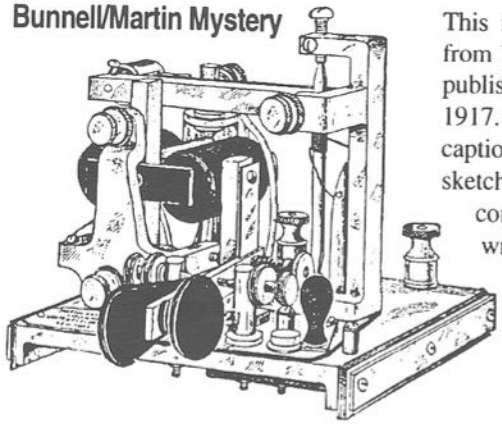
Bunnell/Martin Mystery



This illustration of an Autoplex key comes from Volume 8 of *Hawkins Electrical Guide* published by Audel in New York, and dated 1917. The key is attributed to 'Bunnell' in the caption, but it is clearly marked 'Martin' in the sketch. Can anyone explain where Bunnell comes into the picture? Or is it simply a wrong caption? *(Horace Martin received his patent for the Autoplex in 1903. See 'The story of the Key – 3, MM8, p.1. – Ed.)*

Illustration contributed by Len Newnham G6NZ

The Eavesdroppers

A Book Review

by Ted Jones G3EUE

UNTIL 1991, NO ACCOUNT had been published concerning Australian participation in Signals Intelligence (Sigint) in the war against Japan. It was only as a result of comparatively recent relaxation of the restrictions placed on references to Sigint activities during WWII that a small number of books and articles, dealing with 'Ultra' in the European theatre and 'Magic' in the Pacific, have appeared. Even so, there have been virtually no references to Australian involvement in signal intelligence operations. This book, therefore, was written to set the record straight.

The first Royal Australian Air Force group set up to deal with special intelligence began training in 1941 – five months before Pearl Harbour. All seven RAAF operators (plus two Army personnel) were fully qualified CW operators who had the initial task of learning the intricate Japanese version of the Morse code.

Kana Code

The Japanese authorities had devised their own form of code, known as the kana code, for their naval and military operational messages. Kana Morse signals are based on the 46 basic phonetic sounds, plus 25 other sound 'changes' of the Japanese language using the katakana syllabary. This was chosen because its set of characters could be used to write and pronounce, phonetically, traditional Japanese and foreign words (including place names) borrowed from the Western World and was thus best suited for their military requirements.

The daunting task of the intercept operators was to learn the 71 kana Morse symbols; ignore the normal International code and then cope with the high speed of the Japanese operators for whom, according to the book, speeds of 40–50 words per minute were commonplace.

Concentrated Training

To overcome the speed problem a form of shorthand was devised, and how they trained is described thus. 'The training of a kana operator could only begin after a Morse code operator could "receive" international Morse at at least 25 words per minute. This first stage usually encompassed three months of concentrated effort. It then required a further two months at least to become proficient at interpreting kana to the speed and absolute accuracy demanded.'

The author of *The Eavesdroppers*, Jack Bleakley, joined the RAAF in 1942, served with No. 1 Wireless Unit at Townsville (Queensland), and later in New Guinea and elsewhere, until he joined No. 5 WU in the Philippines in 1945. Several civilian houses were taken over in Townsville and the title 'No. 1 Wireless Unit' was a deliberate misnomer to cloak the true purpose of the intercept unit.

The chart shown on the opposite page

The Katakana Chart: A - KANA C PHONETIC
B - MORSE D SHORTHAND

COLUMN / LINE	A	I	U	E	O
SINGLE VOWEL A B C D	ア A(Ñ)	イ I(A)	ウ U	エ E(Ñ)	オ O(S)
K	カ KA(L)	キ KI(T")	ク KU(V)	ケ KE(Y)	コ KO(—)
S	サ SA(Z)	シ SHI(V)	ス SU(O)	セ SE(>)	ソ SO(Ō)
T	タ TA(N)	チ CHI(F)	ツ TSU(P)	テ TE(A)	ト TO(E)
N	ナ NA(R)	ニ NI(C)	ヌ NU(H)	ネ NE(Q)	ノ NO(U)
H	ハ HA(B)	ヒ HI(Z)	フ HU(Z)	ヘ HE(E)	ホ HO(D)
M	マ MA(X)	ミ MI(U)	ム MU(T)	メ ME(=)	モ MO(/)
Y	ヤ YA(W)		ユ YU(X)		ヨ YO(M)
R	ラ RA(S)	リ RI(G)	ル RU(L)	レ RE(O)	ロ RO(Ā)
W	ワ WA(K)	ン N (+)			ヲ WO(J)

Part of the katakana Morse code used by the Japanese military

Chart compiled by Jack Bleakley and reproduced from The Eavesdroppers *by kind permission of the author*

illustrates part of the kana code used by the Japanese military and was compiled by Jack Bleakley.

Ill-advised Signal

The Eavesdroppers is a fascinating historical reminder of the development of

the war in the Pacific from September 1941 to September 1945. Each chapter is well illustrated with maps of the campaigns and numerous supporting photographs, and there is a comprehensive 8-page index. A large number of Japanese messages are reproduced, including the ill-advised signal made by the Japanese Commander, South Eastern Air Fleet, at Rabaul, which disclosed Admiral Yamamoto's itinerary of visits to operational bases. His aircraft was intercepted by US Navy fighters and shot down.

A further example vividly illustrates just how much detail the interceptors were able to pick up apart from day-to-day operational data. Among the first messages after the Nagasaki bomb were directives to outlying bases to immediately place all prisoners-of-war on rations at least to the scale of Japanese troops and release all Red Cross parcels to them. All officers were to report the present conditions of prisoners ... 'as it is anticipated that England and US will conduct strict investigation of their treatment and will require details of prisoners who have died ... the burning of this dispatch is directed.'

Central Bureau

Detailed information is given about the part played by the RAAF WUs which worked in close co-operation with American forces. They operated 'in the field' as forward elements of the clandestine Allied sigint organisation known as 'Central Bureau'. Their primary role was to provide actual intercepts of enemy signal traffic from which vital intelligence was derived. The undoubted importance of that role prompted a comment after the war by General C.A. Willoughby, MacArthur's G.2 (Intelligence) Chief, that 'signal intelligence chopped two years off the war in the Pacific'.

The book is an excellent record of the whole operation, with a particular added interest for those who know what CW is all about. In relation to that specific area, however, it would be of greater reference value if it contained more information about 'how it was done' with detail in depth on the equipment used by both sides. Comments on Japanese operating procedures and the views of the interceptors on the skill of the Japanese operators would also have made fascinating reading. The mere thought of kana code at 50 wpm made me feel quite ill!

Availability

The Eavesdroppers, by Jack Bleakley, pub. AGPS 1991, reprinted April 1992, is available from The Commonwealth Information Service, Mail Order Section, Australian Government Publishing Service, GPO Box 84, Canberra, ACT 2601, Australia. Price (paperback), including surface mail to the UK, Aus$12.95, or plus Aus$26.00 for airmail delivery. Payment must be made by bank draft in Australian currency. ***MM***

(For early (1924) background information on the Japanese code, and some further examples of the WWII interceptors' interpreting code, see 'The Japanese Operators' Difficulties', MM15, p.42. – Ed.)

If you enjoy *Morsum Magnificat*, please tell your friends about us

Beginners Corner

Morse Rhythm

by Tom Mansfield G3ESH

PROBABLY THE MOST DIFFICULT aspect of teaching Morse code is to get the learner to recognise and adopt the correct timing and spacing within a consistent rhythm at whatever speed he chooses to send. One has only to listen on the HF bands to recognise those who failed to do so.

A great deal of mythology about timing and spacing still continues to surface as each new batch of learners takes to the key, and it is passed on from one generation to another without any real attempt to check its authenticity. Sometimes the effects of the mythology can be so damaging to the learner that it is necessary to stop him sending and take him back to first principles to straighten out his problems.

In his regular on-air Morse workshops, Bob, G4ZIK, a blind operator and ex-drummer, uses a technique with learners which has proved so successful that the local Morse examiners say they can recognise Bob's students as soon as they start sending.

The learner is first required to practice the drummers' routine of:

– – – . . . – – – . . . – – – . . . – – – . . . .

etc., (unbroken by spaces) at a comfortable keying speed while saying 'one, two, three, four, one, two, ... etc., until his concentration wanes. Intoning the numbers is an essential part of the exercise and must be done during the early stages although it may later be replaced by foot tapping.

When the correct ratio of dots to dashes and their spacing is achieved, the keying speed is steadily increased to 12 words per minute. The accuracy of the timing at 12 wpm is determined on-air with a metronome or an accurately calibrated electronic keyer producing 300 unweighted audible dots, or 150 dashes per minute. The learner is discouraged from sending Morse code characters until the drummers' routine becomes second nature and gains the tutor's approval.

The next stage is to extend the rhythm routine to:

– – – . . . . . – – – . . . . .

etc., at 12 wpm keying speed. Once this pattern has been mastered, the learner will feel confident that there is no symbol in Morse code he or she cannot master, including the eight-dot error signal required by the RSGB Morse test, and that the accurate rhythm developed will be carried forward as speed ability increases.

MM

Surprise

A dotty American scared of anonymity has had his name tattooed on his legs – in more than 100 languages. These include Gaelic and Sanskrit and, perhaps most surprisingly, Morse code.

From the Daily Express, *31 January 1943.*

(Contributed by Wyn Davies, Brymbo, Clwyd.)

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.

Trade Union Morse

When Australian public broadcasting really got going in mid-1924 it was, for the most part, controlled by entrepreneurs, big business and newspapers. However, in October 1925, the trade union movement obtained a licence to establish a broadcast station in New South Wales with the callsign 2KY.

They built their own transmitter, using union labour, and broadcast music, political talks, etc., as well as announcing horse race meetings which they felt would be of particular interest to the workers and unionists.

One day, the local Radio Inspector made an inspection of the station and had a fit when he saw a Morse key connected to the 1500 watt transmitter! It transpired that the NSW Labor Council (i.e., the trade union co-ordinating body) intended to communicate by Morse with union officials throughout the state, after normal broadcast hours, to disseminate union information and keep tabs on unionists in other areas.

This was of course 'verboten' in terms of the licence and caused quite a stir, leading to claims that the Labor Council was plotting anarchy and could organise strikes, etc., using wireless for rapid communications (telephones were scarce and unreliable in 1925).

Luckily, there was a Labor Party Government in office at the time so it was all smoothed over. The key was removed and the Labor Council was given a slap on the wrist. 2KY is still in operation today and is still owned by the Labor Council of NSW on behalf of its member unions.

Colin MacKinnon VK2DYM
Glenhaven, NSW, Australia

(More details of the setting-up of 2KY, and of other early developments in radio broadcasting in Australia, are contained in a new title which will shortly be available from the MM Bookshelf, The Dawn of Australia's Radio Broadcasting, *by Philip Geeves.*

MM *will welcome other out-of-the-ordinary stories about the use of Morse, either as letters or articles. – Ed.)*

Abbreviations and Procedures

When I was a point-to-point telegraph operator before WWII, working as a civilian for the US Signal Corps, we used Z-signals. I still remember some of them, e.g., ZMA meant 'I have a message'; ZOT, 'Go ahead'; ZFD, 'Send Vs'. I have seen a list of Z-signals in recent years, but they were not the same.

ZZA meant 'Stand By'. On one occasion our signal officer noticed an operator who was neither sending nor receiving. The officer didn't know much about radio operating, but could tell that the operator was inactive.

He asked the operator to get busy. 'I'm ZZAing', was the reply. The signal officer looked at him and ordered, 'Well, don't just sit there, ZZA!'

Later, during WWII, I was on radio location with the RAF at Scarlet Point, Isle of Man. We sent our plots by voice cable to Preston on the mainland, but when the cable was down we used a radio circuit; and of course the plots were coded for security.

It wasn't my job, but I sometimes stood in for the radio operator and I remember we used signals consisting of three numerals beginning with the number 5. We called them '5 signals' but for the life of me I can't remember any of them now.

Jim Farrior W4FOK
Fernandina Beach, Florida, USA

(Can anyone provide a list of the Z-signals mentioned by Jim please? And does anyone remember the '5 signals' and their meanings? – Ed.)

When I was an Operator Wireless & Line, B1, in the Royal Signals in WWII, pink-cheeked subalterns would peer over my shoulder as I copied plain-language Morse in long-hand and berate me for my illiteracy.

'My God, man!' they would accuse me. 'Don't you know that "British" is spelt with a capital "B"? ', and so on with similar 'proper noun' occasions.

It was little use me trying to explain that you just can't anticipate where and when a proper noun would occur within a message received in Morse. Grammatical sensibilities had been offended. Best act the idiot Tommy Atkins!

Since those days, and in thirty years spent as a ship's radio officer, I have often felt the need of some procedure signal to indicate that 'the following word is a proper noun and its initial letter should be capitalised'. Some ships were equipped with 'telegraphic' typewriters, with both upper and lower case capitalised, so there was no problem there. When no such typewriter was supplied, I would use my own, always copying in upper case.

Reg Prosser GW4BUS
Caernarfon, Gwynedd, Wales

Other Applications for Morse Code

Further to the letter from Dennis Goacher (MM26, p.39), some IBM computers send a 'D' to mean one of several different things, like 'no display adaptor present', 'adaptor defective', 'adaptor wrongly configured'. But sometimes it sends a 'B' for these defects, especially if it is a VGA or EGA adaptor. An 'I' means a variety of things, depending on what is being checked.

The AMI (American Megatrends) set-up program uses strings of dots (four for 'timer not operational', five for 'processor error', etc.). It would be stretching the imagination to call this a 'Morse code error signal', but 'D' for 'display' or 'drive' seems quite credible.

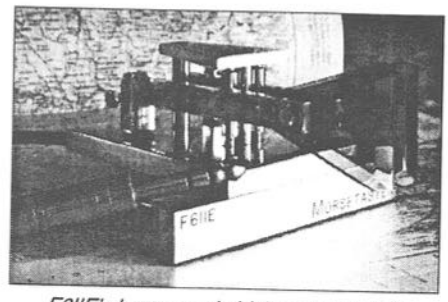
Bob Eldridge VE7BS
Pemberton, BC, Canada

Golden Section Key Great!

Having seen Jim Lycett's Golden Section Key, and finding that it handled like a dream, I just had to have one. Earlier this year Jim sent me the plans and I started work immediately. It took just over three months but it was well worth it. Not only does it look good but it handles good, proving to me that the design is just right.

My key is made from polished mild steel as brass was not available at the time. To call it home-made would be slightly inaccurate as it was made with proper workshop facilities. I mention this as side-by-side there is nothing to choose between my key and Jim's. But if you consider that he only used the most basic of hand tools, his must stand out as the greater achievement.

Recently, I went to see Jim and show him my key. I went with some trepidation as I wasn't really sure I had done 100 per cent justice to his design. There were a few heart-stopping moments as he examined it from every angle and then looked again. I was sure he had found something wrong, but no, he was most complimentary – a great relief!



F6IIE's home-made high-speed paddle

We sat a while, drank some tea, and talked about Morse and Morse keys. He took some photos of my key as I want to incorporate it in a new QSL card I am designing. It was a very enjoyable evening.

In conclusion, I can say without reservation that anyone undertaking the manufacture of the Golden Section Key will be well pleased with the end result. As Jim has proved, it can be completed using only basic hand tools, so I say, 'go on, give it a go!'

George Ford G0MHC
Hartlepool, Cleveland

(George sent us a photo of his key and he has clearly made a superb job of it. Jim Lycett's Golden Section Key was described in MM27, p.12, and photocopies of his engineering drawings and full parts list are still available for £1.25 inclusive. Please make your cheques payable to G C Arnold Partners. – Ed.)

Home-made High Speed Paddle

I enclose a photo of my iambic paddle which is completely hand made. It is a copy, but not an exact one, as I made several modifications to the original design which came from the famous Schurr company in Germany. At the time I made it, the only paddle available from Schurr was the one with the black-painted steel base.

Being very active on CW and wishing to operate at very high speed, I decided to make my own using the good ideas from Schurr together with my own ideas.

It is all brass and all hand made except the two small pivots supporting the paddle bars. I used just a saw and various files, plus a bench drill for accurate drilling of all holes.

Instead of two needles supporting each lever bar, I used two small ball bearings located one in a small hole in the upper plate and the other in an adjustable screw at the bottom. These can be seen in the picture.

It took me a couple of months to make. I spent a lot of time on it because it was hand made. For those having access to workshop equipment it should be a lot easier and quicker!

Strangely enough, the most difficult part for me was making the Plexiglas paddles. To cut and highly polish them without any trace of file marks, and drill them without breaking, was not easy. In fact, I broke them twice!

I am very proud of this paddle. I have only made a few pieces of equipment in my amateur radio life, and this is my favourite. I use it every day to key my rig at speeds exceeding 60 wpm. Yes, it is possible. Hi!

Maurice Colombani-Gailleur F6IIE
Toulon, France

Paying for the Super Keyer II

In MM27 (p.44), Jack Burgess commented on the high bank charge of £10 to send an international cheque to Idiom Press for his Super Keyer II. Readers may therefore be interested in a cheaper way to send their money, which involves only a traveller's cheque commission.

On a $50.00 American Express traveller's cheque there is a centre line – 'Pay this cheque to the Order of ...' Enter 'Idiom Press' here, add your second signature underneath and send it off with your order. I did this recently and eighteen days later the kit arrived safe and sound!

Eric Langton G2HKK
Burntwood, Staffs

(The least expensive way of making many overseas payments at present is by credit card, where some companies charge no fee at all. Unfortunately, Idiom Press are unable to accept credit card payments. – Ed.)

Aids to Good Keying

Until my 50th birthday I was always a straight key man. Then my wife treated me to a Vibroplex 'Original' bug key and I've been addicted to bugs, el-bugs and squeeze keyers ever since. What a pity these sophisticated aids to good Morse weren't around in CW's hey-day of high volume traffic during WWII.

Yes, Vibroplex was around then, but where would your humble average signalman obtain this product of American know-how, and how could he afford it if one came to hand? Nowadays, when there's a vast range of such aids, the honest Morse code has become obsolescent except for we aficionados. So viva *Morsum Magnificat*!

However, on a sour note, let me complain that even with all these good aids to keying available there are still pestilential symptoms of poor technique to be heard on all bands, and keyed by some very senior callsigns too, e.g., 'nag' for 'name', 'pll' for 'well', '6e' for 'the'. On the other hand, superb fists are there too – better than I ever heard in thirty years on 500kHz.

I claim old age as my licence to quibble. At 69, one's patience is as sparse as the hair on one's head!

Reg Prosser GW4BUS
Caernarfon, Gwynedd, Wales

Check Your Speed

If you want to check your sending speed, send the text shown in the box above, which includes all numbers and the letters of the alphabet twice. Sent in 2 minutes this equals 17 words per minute. This is based on the PARIS standard of 50 units per word. Do not send the figures in brackets; these are the unit counts for each word or group, totalling 1700.

For other speeds, note the time taken to send the text; multiply the time by 50,

VYCKJUMBEFGOLDSPHINXQWARTZ (296) TWICE (46) IN (18) 60 (40) SECONDS (70) JIGS (46) DOWN (48) HANDKEY (72) 164 (52) TIMES (38) USING (48) 592 (54) UNITS (42) . (24) DIVIDING (74) BY (32) 50 (38) WILL (46) SCORE (54) 11.84 (96) WPM (40) FOR (40) QUICK (62) EXERCIZE (74) REVIEW (52) STOP (46) BEST (34) 73s (44)

e.g., 2.75 mins x 50 = 137.5; divide 1700 by the result, i.e., 1700/137.5 = 12.36 wpm. The text itself describes an even shorter test!

Make your own practice text using the following values for letters plus letter space of 3 units ('dit' equivalents). The values in brackets are for letters plus word-space of 7 units and apply to the last symbol of each word or group.
E = 4 (8), I T = 6 (10), A N S = 8 (12), D H M R U = 10 (14), B F G K L V W 5 = 12 (16), C O P X Z 4 6 = 14 (18), J Q Y 3 7 = / = 16 (20), 2 8 " - ? = 18 (22), 1 9 . ; : = 20 (24), 0 , (' = 22 (26).

Gaspard Lizee VE2ZK
Laprairie, Quebec, Canada

Left-handed Operator

I would like to know if others have the same problem that I have. I am left-handed, so with an electronic paddle keyer I simply reverse the wiring of the plug to send dashes with my left-hand forefinger, and dits with my left-hand thumb.

With a straight key there are no problems of this kind, but to use one of my semi-automatic bug keys I have had to learn to send with my right hand. Sometimes I play a little game which involves sending dashes with my left hand on a straight key, and dits with my right hand on a bug. A genuine case of key-ambidexterity!!

I would like to know, however, if there is in existence a bug specially made for use by left-handed operators? Does anyone know please?

Boris Real F5TFS, Solesmes, France

(Many left-handed operators simply learn to use a standard bug with their left hand, reversing the conventional use of their fingers.

Others adapt their bugs to stand upside down, as described by Murray Willer in MM12, p.38; and at least one bug, RCAF Ref. 10F/7390, made by Wilson Mfg Co. of Toronto in 1940–42, was made to be used either way up (or on its side as a straight key!). Does anyone know of any other purpose-made left-handed bugs? – Ed.)

No-code Arguments in France

This year has been rather hectic in our country as far as ham radio is concerned, especially with the no-code arguments. Early in the year, the staff of REF, our equivalent of the RSGB, told us about the IARU Region 1 Conference in September. They said that REF needed to decide its policy concerning the possibility of access to the HF bands without code knowledge.

They then held a referendum among

all members of the society, asking the question:

'Do you want amateurs in our country to have access to the 28MHz band (following the IARU bandplan) without a code examination?'

The possible answers were 'yes' or 'no', and the closing date was May 15. The results did not surprise me: out of 2835 votes received, 1872 said 'yes', 764 'no', and 199 'nil' *(spoiled? – Ed.)*.

My own opinion is that if you offer an Austin Mini owner the free use of a top of the range Bentley or Rolls Royce, he would be mad to say 'no'! The vote was secret, but I'm sure that a critical analysis, showing how each class of licence voted would be very revealing!

Following this referendum result, our society will be proposing at the next IARU Region 1 Conference that access be given to ten metres without a code requirement.

This, of course, will have to be approved by the other members of the IARU, and eventually by the French licensing authority. Before this, as we say in France, water will have to travel far away from under the bridge...!

It is interesting that even some of the older members of UFT think that opening ten metres to B licensees would be a good opportunity for them to try HF. Others (like me!) still think this is not a good way into ham radio, even though I have been called an 'Ayatollah' because of my criticism of lazy people!

The strange thing is that criticism of the (past) president of REF (F5FOD) came from both the 'yes' and 'no' sides! Kilometres (yes, kilometres!) of FAX were received at the headquarters of the society. Some were very polite, some were insulting, alternating continuously!

In conclusion, my own view is that we are, in our country, a lazy bunch (only 15 000 radio amateurs!), always trying to get things 'free' without giving anything in exchange, especially when learning Morse is involved!

Maurice Colombani-Gailleur F6IIE,
Toulon, France
Vice-President, Union Française des Télégraphistes

The Most Important

The following extract from *Long Range Desert Group* by W.B. Kennedy-Shaw, originally published by Collins in 1945, says it all concerning the skills of an operational signaller. Fifty years on, we can still admire their great achievements.

'Most men in LRDG were specialists in something and of all these experts the signalmen were probably the most important, though the navigators ran them close. For what was primarily a reconnaissance unit good signals were essential. Without them a patrol, three or four hundred miles away from its base, could neither send back vital information nor receive fresh orders. If signals failed the best thing to do was to come home.

'And looking back now I realise how seldom they did fail. We were far too often unkind to the signalmen. We cursed them for having to halt at given times to "come up" for Group HQ; we disliked their poles and aerials which might advertise to the enemy the presence of a patrol; we scoffed at their atmospherics, skip distances and interferences; we blamed them when they could no "get through" and when ciphers would not come

out; we were impatient of their "check and repeats", forgetting the regularity with which they kept communication.'

C. Richards G0SDP
Wereham, Norfolk

Morse Training by Computer

I have been a licensed amateur since February 1991 and have reached a code speed of about 20 wpm. I can send faster, with an electronic keyer, but making further progress in receiving is getting tough.

I know that there are many computer programs available to help Morse operators improve their performance in various ways, and my suggestion is that *MM* should run a column to enable users to exchange experiences of computer-aided code practice for the benefit of those, like me, who have not yet tried this form of training.

A listing of available programs and their features would be very helpful. It might even be possible to swap disks or distribute software via *MM*.

Heinz Schnait OE5EEP
Unterach, Austria

*(*MM *already distributes Gary Bold's freeware Morse programs, as described in MM25, p.4, and unfortunately is unable to distribute more at this time. We will, however, be pleased to receive letters describing the facilities available in various Morse improvement programs, and the computers they are suitable for, together with opinions of users on their value, and information on where they can be obtained. – Ed.)*

Morsum Magnificat

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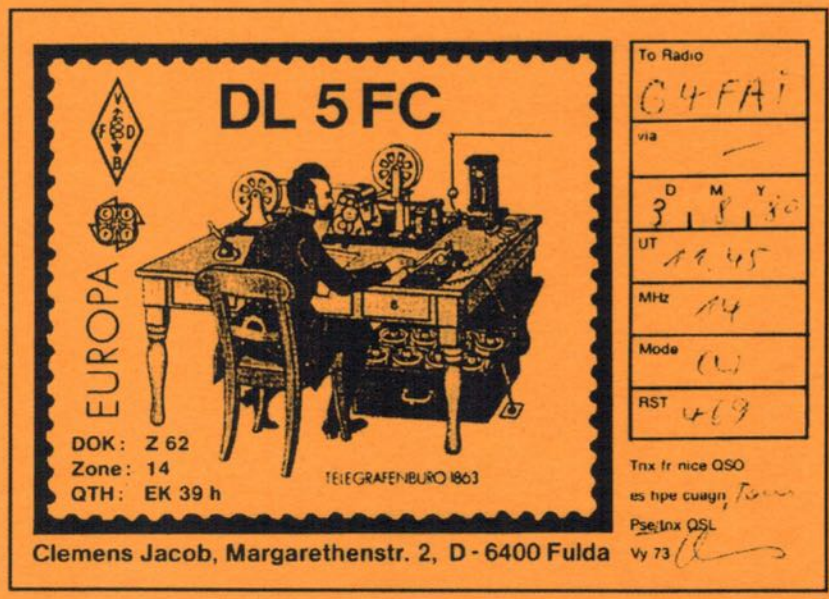
Autumn 1992 to June 1993

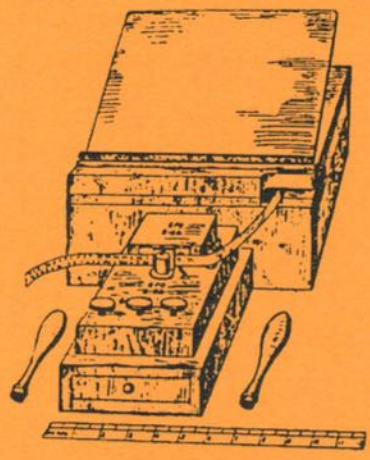
For information on the current availability of back issues, please see the latest issue of Morsum Magnificat

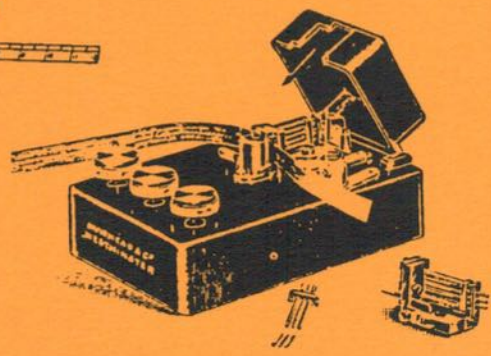
Morse QSLs

A series of reproductions of QSL cards with a Morse theme



PORTHCURNO TELEGRAPH MUSEUM.





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