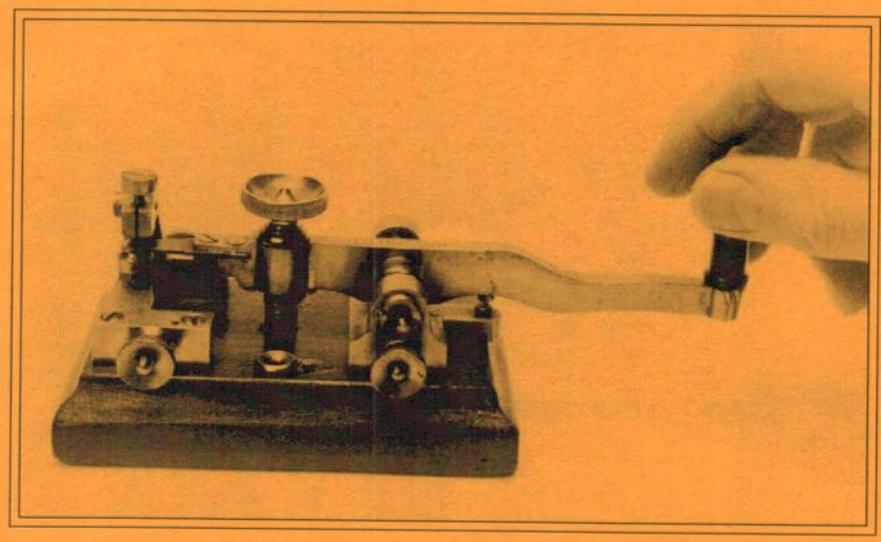
Flying the flag for Morse

Number 40 – June 1995

Morsum Magnificat

The Morse Magazine



Swedish Telegraph Key by Ericsson

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Morsum Magnificat

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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
Swedish telegraph key by Ericsson.
Photo/Collection: Murray Willer VE3FRX

Comment

AS WE ANNOUNCED on this page in MM39, the argument over the status of Morse in the Amateur Service in New Zealand seems to be hotting up. On page 8 of this issue, you will find an assessment of the situation by Gary Bold, ZL1AN.

After reading the statements of aims and position promulgated by the ORACLE group (see page 14), I am left wondering what exactly lies behind them. Do ORACLE truly wish to bring new blood into amateur radio, or is there some ulterior motive? Are they really interested in the cause they claim to support, or are they, like so many present-day, single-issue pressure groups, simply pursuing any anti-Establishment line that happens to present itself?

Why is it so necessary to have access to the HF bands to facilitate the ongoing development of packet radio and other digital technologies? Are the amateur HF bands seen simply as a cheap alternative means of accessing data networks in other countries; and in the process getting around some of the present and ever-growing congestion on the telephone-based 'information super-highway' systems?

Speaking as someone with a love of Morse communication and more-or-less zero interest in such things as packet radio, I suppose that I would be dismissed by ORACLE members as just another reactionary old fuddy-duddy. I am pleased to learn that at least they do not propose to have Morse banned from the amateur bands!

It is, I think, fairly obvious from the reluctance of ORACLE to give any indication of its current membership, that the number of amateurs who feel strongly about the Morse qualification, AND support ORACLE's methods, are so small as to be insignificant.

Inevitably, amateur radio technology and regulations will continue to evolve in the future, as they always have done; but any change should be evolutionary – not revolutionary. The only legitimate reason for a revolution is where a majority are being cruelly suppressed by a minority; certainly not a situation existing in the world-wide hobby of amateur radio!

Many readers will no doubt have heard of the growing shortage of paper, and the resulting astronomical rise in prices being experienced world-wide. On *Radio Bygones* we have had to increase subscription rates, but because of the different way in which *MM* is produced and costed, we are able to avoid an increase, at least for now.

Geoff Arnold

G3GSR

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Adverts

News

GB2IWM on VJ Day

Duxford Radio Society was unable to obtain authority to use the hoped for /VV /VJ suffixes for its special station to celebrate VE and VJ Day (reported in MM39, p2). Despite this disappointment, the Society decided to identify the station on-air by using VV and VJ immediately after its callsign and/or CQ transmissions during the respective events.

The VJ Day station will be on the air on August 15 from the Imperial War Museum's Duxford Airfield on 7.007MHz and 14.007MHz CW and 3.770MHz SSB. The object is to contact as many radio amateurs as possible who were in the Far East during the war with Japan.

Those interested should contact Norman Shires G3BTM, in advance of the event, to ensure that priority can be given to them on the day. Norman's address is Choice Hall, Duxford, Cambridgeshire CB2 4QG.

(Information from Duxford Radio Society)

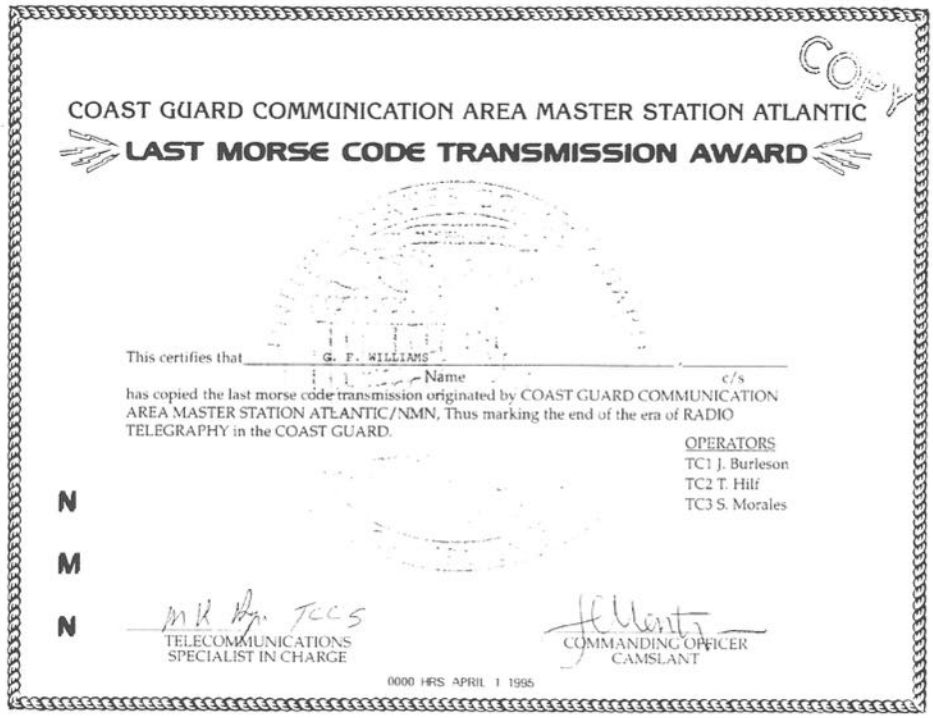
NMN Closing Ceremony

The cessation of Morse service by the United States Coast Guard, on April 1, was marked by a special ceremony at USCG Master Station Atlantic (CAMSLANT), NMN, at Chesapeake, Virginia, on 31 March 1995. The final transmissions were reported in detail in MM39, p.36.

In a striped tent set up on the lawn at NMN, a small audience assembled, comprising people who had used Morse code for many years. These included officers and NCOs with four and five rows of ribbons on their dress blues, USCG retirees with many years service pounding brass, an old-timer wearing a cap embroidered 'USS Idaho 1934-38' and a windbreaker with 'Pearl Harbor Survivor' on its back, and civilians 'who love the rhythmic sound of Morse's magical dots and dashes.'

When one speaker asked how any hams were present, about a quarter of the audience raised their hands. Four keynote speakers addressed the audience, recalling their own experiences as CW operators and the history of Morse in the Coast Guard. These were CPT Craig M. Nicholson K7VEW, Chief of the Information Systems Division, Atlantic Area; LCDR Robert F. Salmon, Chief of the USCG Communications System 2000 Staff; Dr Joseph Gardner K7CI, Senior Applications Specialist, EOSAT; and the commanding officer of CAMSLANT, CDR Freddy L. Montoya.

At precisely 7.00 pm EST, CDR Montoya gave the order to begin the final broadcast message from NMN, and



COPY

COAST GUARD COMMUNICATION AREA MASTER STATION ATLANTIC

LAST MORSE CODE TRANSMISSION AWARD

This certifies that G. F. WILLIAMS
Name c/s
has copied the last morse code transmission originated by COAST GUARD COMMUNICATION AREA MASTER STATION ATLANTIC/NMN, Thus marking the end of the era of RADIO TELEGRAPHY in the COAST GUARD.

OPERATORS
TC1 J. Burleson
TC2 T. Hilf
TC3 S. Morales

N
M
N

TELECOMMUNICATIONS SPECIALIST IN CHARGE

COMMANDING OFFICER CAMSLANT

0000 HRS APRIL 1 1995

Reduced facsimile of the certificate presented to listeners who correctly copied and reported reception of NMN's closing broadcast

Courtesy Geoff Williams, (see MM39, p36)

this was transmitted by TC3 Sergio Morales, KP4FFW, using an electronic keyer at a speed of about 35 wpm.

Halfway through the message, the circuit breaker for the electrical service to the tent opened, casting darkness in the tent. The operating position was powered separately, and Sergio continued sending without lapse as he shifted his attention from the hard copy in front of him to the CRT at his position where the message was also displayed. The traffic was thus handled expertly to the end.

Finally, the code keys from the three operating positions in the tent were formally placed by each operator in a small wooden box which was then carried away from the ceremony. It was an emotional moment and the end of an era.

(Information extracted from The ARRL Letter, *April 17, 1995, and adapted for* MM. *Thanks to John McGinty, G4GZQ, for drawing our attention to this report.)*

UK Test Fees Increase

The Radio Society of Great Britain has announced increases in radio amateur Morse test fees as from 1 July 1995. The 12 wpm test will be increased to £18.00 and the 5 wpm test to £13.00.

The Society points out that this is the first increase since 1990, and says that the new charges accurately reflect the current costs of running this service.

AGCW-DL QRP Summer Contest

Dates/times: 15–16 July 1995, 1500 UTC Saturday to 1500 UTC Sunday, including 9 hours compulsory rest time to be taken in one or two periods.

Participants: Single-ops in CW mode on 3.5, 7.00, 14.00, 21.00 and 28MHz bands. Only one TX and RX or transceiver may be operated at the same time. QSOs with stations outside the contest are valid for scoring.

Reception of RST only is sufficient for non-contest stations. Contest stations exchange RST + serial number/category. Observe IARU-recommended sub-bands for contest operation.

Categories: VLP – very low power, up to 1 watt output or 2 watts input. QRP - 'classic' QRP, up to 5 watts output or 10 watts input. MP – moderate power, up to 25 watts output or 50 watts input. QRO – above 25 watts output or 50 watts input.

Scoring: Every QSO with a station on the same continent = 1 point. DX stations = 2 points. The contest manager will calculate extra points for contacts with VLP, QRP and MP-stations having submitted logs.

Multipliers: Each DXCC country worked = 1 multiplier per band. The contest manager will calculate extra multipliers for DXCC countries worked for every QSO with a VLP, QRP or MP-station having submitted logs.

Final score: Total QSO points x total multiplier points. The final calculation will be made by the contest manager.

Logs: List QSOs separately for each band and mark your claimed multipliers. Give details of the obligatory rest time(s) taken and the outputs or inputs of all transmitters used. Other station information will be appreciated.

Include your full address and send an IRC if a results list is required. Other stations worked in the contest will only get full points for contacts with you if you send in your log! Logs to be sent (to arrive by September 15) to Dr Hartmut Weber DJ7ST, Schlesierweg 13, D-38228 Salzgitter, Germany.

AGCW-DL Marconi Memorial Month

In 1895, Guglielmo Marconi succeeded in transmitting wireless telegraphic signals. In memory of this achievement, and to help promote Morse telegraphy on today's amateur radio bands, the Activity Group CW Germany (AGCW-DL) has proclaimed September 1995 as the 'Marconi Memorial Month' (MMM).

The Group invites all radio amateurs using CW/A1A to join them by making one hundred (or more) CW/A1A QSOs during that month. All bands, SW and/or VHF/UHF, may be used. Contest QSOs will also be acceptable.

Special awards will be issued for 100 QSOs or more made; participants having at least 50 QSOs will receive commemorative cards.

To claim an award, send a log extract for the month of September 1995, to Otto A. Weisner DJ5QK, Feudenheimer Str.12, D-69123 Heidelberg, Germany. The log information should include date, time (UTC), band, call-

signs, and RST reports of both stations. The closing date is 31 October 1995.

The message from AGCW-DL is 'CU IN MMM 1995!'

(Information from AGCW-DL)

G4ZPY Paddle Keys Special Offer

From 1 September 1995, for a trial period of one year, G4ZPY Paddle Keys International are making their customers the following offer, which they say 'is too good to refuse!'

With the exception of keys sold in 'kit form', they will accept pump keys purchased from them within the previous twelve months in part exchange for a new paddle key. Subject to their inspection, they will give up to 40 per cent of the purchase price paid for the pump key.

This offer, they say, will enable them to offer refurbished pump keys at a lower price than new models. In particular, it is hoped this will assist Novices who may not be able to afford the full price of a new pump key when learning Morse.

(Information from G4ZPY Paddle Keys International, 41 Mill Dam Lane, Burscough, Ormskirk, Lancs, L40 7TG.)

Morse 2000 Outreach

The first newsletter of the Morse 2000 Outreach, titled 'MORSELS', has recently been published. The Outreach, promoting Morse code uses in Rehabilitation and Education, is a collaborative effort of the University of Wisconsin-Eau Claire, Trace Research & Development Center at UW-Madison, and the Johns Hopkins University Center for Technology in Education.

The first international Morse 2000 networking meeting was held in October 1994, at the Closing-the Gap Conference in Bloomington MN, with around 30 participants representing four nations and many allied professions. All agreed that the clinical potential for various Morse code applications is significant.

A Morse 2000 List Server has been brought on line via the Trace Research & Development Center at the University of Wisconsin-Madison. Its discussion topic is Morse code applications in rehabilitation and education.

The List Server is called 'morse2000' and may be subscribed to at no charge. Subscribers can send e-mail, join in on the morse2000 discussion, ask questions, or get information from others on the morse2000 list.

To subscribe, send an e-mail request to:

listproc@trace23.waisman.wisc.edu

leaving the subject field blank. In the body of the e-mail include the following:

subscribe morse2000
FirstName LastName

Turn off the 'signature' field in your e-mail program if it supports that option.

Once confirmation has been received the list server may accessed by sending e-mail to:

morse2000@trace23.waisman.wisc.edu

There are several current Morse research projects known to be under way. These are:

'Keyboard Emulation via Morse Code Entry: A Comparison of Configuration Parameters Across Four Systems'. By Vicki T. Blavat, CDIS grad student UWEC.

'Evaluation of Four Access Methods

to the RealVoice™ AAC Device: A Comparative Analysis of Rate, Accuracy and Error Types.' By Mary A. Peterson and Roxanne Kearney, CDIS grad students, UWEC.

Untitled project in Morse code applications in adult rehab (still being developed). By Donna McMahon, CDIS grad student, University of Kentucky, Lexington.

Information on other research projects in the same area is requested by the editor of the newsletter, Dr Thomas W. King SLP, Department of Communication Disorders, University of Wisconsin-Eau Claire, Eau Claire, WI 54702-4004, USA (e-mail KINGTW@UWEC.EDU).

Dr King can supply a copy of the Morse 2000 goals and the extensive supporting bibliography (they are also available on the Morse 2000 list server). Requests to be placed on the Morse 2000 mailing list should also be made to Dr King.

The Morse 2000 World Conference is planned for spring (late May?) of 1997. For further details, or to offer ideas, contact Debra R. King, M.Ed., Conference Coordinator, via e-mail at KINGDR@UWEC.EDU or at the Arts & Sciences Outreach Office, UWEC, Eau Claire, WI 54702-4004, USA. An early draft summary of the scope of the conference can be found in MM34, (p.7).

Morse Memorial Day in Holland

To commemorate the birthday of Samuel F.B. Morse, a meeting of about 50 Dutch radio amateurs was held at the SW/LW/ELF transmitting station Kootwijk, PCG/PCH, on April 20, arranged by PA3ARR (it was not possible to arrange the meeting for the actual day).

An employee of the station, PA0SLW, gave an interesting talk on the early days of Kootwijk, and there was a visit to see the station's antennas, including a SW log-periodic antenna belonging to KLM Airlines. There was also a visit to an atomic bunker 5m below ground with emergency transmitters, etc., and living accommodation for staff.

In the transmitting hall of the station there are still older style separate transmitters in use for CW, TOR and SSB, originally designed by the Dutch PTT. However, replacement modern Marconi transmitters are being installed which can be switched to any mode desired.

From a half-demolished PTT transmitter, the visitors were invited to fill their junk boxes. The solid coil I had my eye on must have weighed over 50 kg. It was too heavy even for two persons so I had to forget about it. It would have made a nice stool at home!

Late afternoon, PA0SLW was thanked by PA3ARR for acting as our guide, and was presented with a small gift on behalf of us all. I was able to renew my acquaintance with some operators that I hadn't seen for some years, but I couldn't get round to everyone I had met in contacts on the air. However, there's still 3.553* to make use of until the next MMD!

(Report from Monika Pouw-Arnold PA3FBF, Mijdrecht, Holland.)

*(*3.553MHz is the Morsum Magnificat "chat" frequency where* MM *readers, particularly those from Holland and*

nearby countries, identify each other by sending the MM *signal which appears on the front cover of every issue of the magazine.*

We frequently receive enquiries from new readers as to just what that signal is. It was the on-air 'signature' of the magazine's founder, Rinus Hellemons PA0BFN, and is actually two letter V's, the second sent more slowly and hesitantly than the first. – Ed.)

Surrender Announcement Rebroadcast to Australia

At 3 p.m. on Sunday, 7 May 1995 the historic message which announced the surrender of all German Forces in Europe in 1945 was re-transmitted in Morse from the UK to members of the Morsecodian Society of NSW.

The original message was sent by cable. The original route was no longer available, and arrangements were made with British Telecom's Portishead long range maritime radio station at Highbridge for the message to be sent by telephone line at 3 p.m. on May 7.

Two days before that, the Portishead staff decided that such an historic occasion should also be broadcast on frequencies of 8.5915 and 12.790MHz. It was a weekend, and frantic efforts were made to alert radio amateurs of the broadcast with little success. Five hours before the broadcast only the Dural, Sydney, transmitter had been contacted.

The originator of the idea, George Cochrane of Westleigh, New South Wales, reporting the proceedings in *Amateur Radio*, journal of the Wireless Institute of Australia, says 'The telephone rang. Our small party, listening to the signal and watching the Morsecodians write, felt mixed emotions. No message in history was preceded by more human misery or devastation, yet offered so much hope to the world.

'We lifted our gaze across the valley to the mast at Dural. Five minutes later the telephone rang. A chap 30 miles away across Sydney had heard the broadcast. Dural had announced the event and the message from half a world away had got through both by "cable" and wireless.'

He continues: 'Both BT, c/o RO Larry Bennett, BT Radio Station, Highbridge, Somerset, England, who will issue QSL cards, and myself, originator of the idea, would value correspondence from anyone who heard the broadcast. George Cochrane, 23 Western Crescent, Westleigh, NSW 2120, Australia.'

MM39 'Showcase' A Correction

The Novelty Morse Practice Set shown on p.24 of MM39 was wrongly captioned. The caption should read:

'Boy Scout practice strap key with buzzer and lamp. Made by M.M. Fleron & Son, Inc., Trenton, NJ'. The information was transposed in the original list supplied by John Elwood, WW7P.

John writes 'My most sincere apology for that, I'd hate to think the Boy Scouts would endorse a key with a cigarette lighter built in!'

New Zealand Seeks to Abolish Morse Test Rule

IN MM38 (p.22), we printed a statement by New Zealand's national radio society, NZART, indicating it had received an assurance from the Minister of Communications that there was no imminent proposal from New Zealand to change the regulations as they affect the amateur service.

In the following issue (MM39, p.1), we printed a STOP PRESS item reporting that the government of New Zealand had decided to seek the suppression of RR2735 in Article 32 of the Radio Regulations at the next World Radio Conference (WRC-95), to be held in October/November of this year. The effect of this would be to abolish the amateur Morse test requirement.

MM asked Gary Bold ZL1AN, who writes the 'Morseman' column in *Break-in*, official journal of NZART, to comment on this remarkable 'turnabout' and explain what has happened.

At the time of his writing, NZART did not wish to comment on the changed stance of the MOC as 'high level discussions' were still under way on this matter. Gary stresses, therefore, that what follows is his own interpretation of the situation. It does NOT represent the official views of NZART. Gary writes:

ORACLE

It may appear that this situation is due to the submissions of ORACLE (see MM38, p.12), since NZART is opposed to any change in RR2735. But while ORACLE's submissions were an input to the MOC's decision, I believe that this changed stance more accurately reflects a fundamental change in thinking at the highest level of MOC, which happens to coincide with ORACLE's philosophy. To understand this, it is necessary to be aware of the background.

Bob Vernall, ZL2CA, announced the formation of ORACLE (Organisation Requesting Alternatives by Code-Less Examinations) in a message uploaded to the New Zealand packet network on 9 March 1994.

Its stated objective was to lobby the NZ authorities directly for code-less licenses and associated alternative examinations. The initial membership target was 5000. ORACLE was formed because ZL2CA had been unable to get any support for his policies from within NZART.

NZART Council Contradictory Resolution

Prior to this, ZL2CA had served one term on NZART Council, in 1992. During this term, the December 1992 issue of *Break-in* published a letter which had been sent from Council to the MOC, stating that the Council had passed the following resolution (edited):

'That NZART commence negotiations with the MOC for the future introduction of a code-less general license.

'It is considered ... that there should be alternative ways to qualify for General Grade, and a choice should be offered from a selection of alternative skills or technical knowledge standards; in place of the present obligatory no-alternative Morse code test.

'It is not suggested that the Morse code requirement be eliminated, but rather that it remains as one of several alternatives from which a candidate for General Grade can make a selection.

'This is regarded as a realistic proposal in which NZART and the NZ Administration could take a lead.'

The MOC reply to this letter (also edited, written by a senior MOC Official) read: 'I am at something of a loss to understand this apparent major change in direction by the Council, in light of the decisions taken at your last Convention, where, I believe, remits to explore this concept were rejected by your membership.

'It would seem that the Executive Council is seeking to explore a means of circumventing the provisions of regulation 2735. This proposed course of action would not only impact on the treaty implications surrounding the radio regulations, but also on reciprocal agreements.

'The "code-less General" qualification, which the NZART suggests is a realistic proposal, is outside the scope of the current international, and national regulatory regimes, through which, suitably qualified amateur operators enjoy access to substantial amounts of a valuable resource.

'The matter of a "non-Morse General" amateur operators certificate, and license, is not one that the Communications Division would consider implementing while the current regulatory and reciprocal regime remains in place.

'However, a co-ordinated regional approach, such as an initiative from the Region 3 International Amateur Radio Union executive, or better still, from the IARU membership as a whole, to amend the provisions of No. 2735 at an appropriate opportunity, may clear the way for such a goal to be achieved.'

No Hidden Agenda

This letter, and its response, caused astonishment and heated reaction from many NZART members. For this letter was in clear disagreement with what was understood to be official NZART policy.

I now understand that the NZART's letter had been written at the primary insistence of ZL2CA. The majority of Council, who did NOT support its proposal, agreed to its submission simply because they were confident that the MOC's response would be exactly along the lines as it turned out to be.

By triggering, and publishing, this official MOC statement, Council hoped

that NZ hams would see exactly what the ramifications were in changing Morse code policy, and have a clear statement, in print, of the MOC position.

This exchange of letters, which became well known overseas, created a suspicion that the NZART Council had, and still has, a 'hidden agenda' in contradiction to its stated policy. Unfortunately, and incorrectly, this suspicion still persists. I can assure you that it is totally false.

Survey Held

As a result of this, and to be quite sure that NZART Council was correctly representing its members' views on Morse code policy, a survey was then undertaken to determine these views.

942 responses (out of a total membership of about 3000) were received, and a straightforward analysis of the results was published in *Break-in* in July 1993.

Introducing them, Terry ZL3QL (Past President of NZART) said 'From the comments made on the returns it is abundantly clear that members did not support Council's move in approaching the MOC for a non-Morse licence.

'Should such a move be adopted a sufficient number would move as necessary, including resignation and the probable formation of a rival society, to restore what they see as Amateur Radio. Such is the depth of feeling and commitment.'

Acting on the survey results, the NZART Executive adopted and published support for the following official policy.

1. The continuation of Morse code as an entry test for full amateur radio privileges,
2. The retention of the current standards of 12 wpm for full privileges and 6 wpm for Novices.
3. The seeking of a relaxed Morse examination environment that will encourage candidates and realistically test their ability.
4. Opposition to any move that would isolate our license from the standards set out in the ITU Radio Regulations and its acceptance for CEPT and reciprocity.
5. Ministry of Commerce retaining the Morse requirement until a change is made in the ITU International Regulations.
6. Giving serious consideration to support action if moves are made by the IARU to delete Morse as an entry point under the ITU regulations.

This is STILL NZART policy, and no formal opposition to it has been expressed by members. Note, however, that item 6 reflects NZART's willingness to reconsider its position should an IARU-initiated move be proposed to change the status quo. This policy was also communicated to The Minister of Communications, the Hon. Maurice Williamson.

ORACLE Dissent

In August 1993 ZL2CA uploaded to packet radio a series of bulletins giving his own reinterpretation of the NZART survey data, attempting to show that the 'official' conclusions were flawed, and that overall amateur opinion in ZL probably favoured precisely the opposite view.

ZL2CA sought re-election as a Councillor in 1993, on a platform which included the statement 'The appeal of Amateur Radio to newcomers would increase by having real-world qualifying requirements. A choice of suitable subjects, with Morse proficiency an option, would result in recruitment and upgrading becoming more interest driven, as a hobby should be.' He was unsuccessful.

New NZART Resolution

In the November 1994 *Break-in*, a letter to the Hon. Maurice Williamson from the NZART President, Jim ZL2BHF, was published. It summarised the proceedings of the IARU Region III Conference in Singapore, September 1994, and advised that the world-wide IARU Administrative Council had adopted a 'no change' policy on RR 2735.

Furthermore, it advised that the following resolution, proposed by NZART, had been adopted unanimously, and without any dissenting discussion:

'That this Conference confirms support for the continuation of the requirement contained in the ITU regulations for competency in Morse code to be first demonstrated before an operator in the amateur service is licensed to use the allocated HF bands.'

Jim also advised that the NZART's Morse code policy, above, had been again confirmed, without dissent, at the Association's 1994 AGM. He suggested that the New Zealand position at ITU Conferences should be:

1. To not actively SEEK any change to the current text of article 32 or to RR 2735 at this time.
2. To SUPPORT no change to these should the subjects arise.
3. To REVIEW this position at such time: when future technical developments can provide an alternative means for ensuring INTERCOMMUNICATION on the limited HF spectrum allocated to the Amateur Service, or when increased HF spectrum for the Amateur Service should become available.

Minister's Assurance

The reply from the Minister said in part: "... I am of the view that it would be unwise to adopt the three very precise positions which you postulate.

'I am advised, and believe, that the amateur service world-wide is a progressive body of enthusiasts, who look to the future for self-training, intercommunication and technical investigation.

"To adopt such a rigid stance on the matter of the value, or indeed, in the opinion of some, the low value of Morse code as a means of intercommunication is, in my opinion, contrary to the progressive nature of the hobby.

'Having said that, I can give you an assurance that New Zealand will not actively make proposals for changes to the International Radio Regulations, as they affect the Amateur service, until such time as there is evidence of significant opinion here in New Zealand, and/or overseas, to support modification of article 32.' This letter was signed by the Minister.

About Turn

However, in March 1995, the MOC issued the following policy statement. 'At the present time RR 2735

effectively requires all administrations to verify a competence in Morse Code before the issue of an amateur licence to operate in the frequency bands below 30MHz. The Ministry has now considered this provision quite carefully and has concluded that it is no longer appropriate as a Treaty obligation for Government.

'The licensing provisions of RR 2736 provide that "Administrations shall take such measures as they judge necessary to verify the operational and technical qualifications of any person wishing to operate the apparatus of an amateur station."

'There is clearly ample scope under this regulation for an administration to require competency in Morse or not as deemed appropriate. RR 2735 adds a specific obligation in regard to Morse Code, and in so doing limits national freedom but without providing any greater benefits.

'The Ministry has therefore formed a view that it is appropriate to propose the deletion of RR 2735 at the forthcoming WRC-95 and will now work to this end.

'Part of this work includes, as is usual, the prior discussion of draft proposals with other administrations and this will be undertaken in the first instance in conjunction with the Conference Preparatory Meeting in Geneva next week. *(The meeting took place in late March. – Ed.)*

'As such discussions continue over the next few months the Ministry will refine any New Zealand proposals prior to the formal agreement by Government of the delegation brief. Clearly interested parties will be kept informed of the overall process.

'Turning to what national licensing policies might be adopted, should the proposal to delete RR 2735 succeed, I can advise there is no intention to change our present licensing policies or Morse code requirement.

'It is considered important that the present reciprocal licence arrangements are not unduly disturbed and this dictates a national continuation of the Morse code requirement in the foreseeable future.

'However the deletion of RR 2735 will allow any future changes to be adopted by administrations as they see fit, and at an appropriate time, rather than awaiting for quite some years before the item is able to be placed on an ITU WRC conference agenda.

'The international regulations will thus be flexible to enable administrations to respond to the needs of their national circumstances, rather than having national requirements unnecessarily limited by the International regulations.'

Policy Not Supported by NZART and its Members

This represents a substantial, and abrupt, change in MOC policy. Specifically, the Minister had said in September 1994 that 'New Zealand will not make proposals for changes ... until there is evidence of significant opinion ... to support modification of article 32.' But MOC policy, as of March 1995, now DOES propose such a change.

Either, therefore, 'evidence of significant opinion' has now been found, or

a fundamental shift in MOC thinking has taken place.

The latter supposition is the only one possible. For, from the above summary, it is clear that this 'significant opinion' does not come from NZART or its members.

ORACLE Representations Can Have No Validity

ORACLE, however, has consistently, and energetically, lobbied the MOC to adopt such a position. From the volubility and frequency of ORACLE statements, it is easy to form the impression that this is a large organisation, with support both in New Zealand and overseas, rivalling NZART in numerical strength.

This is not so. In fact, it is very difficult to gather hard facts about ORACLE, other than:

- ORACLE is co-ordinated by six named Managers. It is registered as an incorporated society. Its membership list is secret.
- There is no membership fee, and all that is required to 'join' is return of a simple form letter, or packet message.
- It is NOT, apparently necessary to be a radio amateur, nor have any membership applications been refused.

Although ORACLE's initial target membership had been set at 5000, by November 1994 this had apparently been revised downwards to 500, and even this had not been achieved (these facts stated by ZL2BHE, an ORACLE Manager, in a packet radio message of 18 January 1995).

ORACLE has consistently refused to divulge the extent of its support, even when repeatedly requested to do so on packet radio. (However, the current membership of NZART is about 3500, and this is growing).

It is probable that few ZL amateurs, apart from those who actively read packet messages, even know of ORACLE's existence. It is almost certainly far better known overseas (through the publicity given it in the *W5YI Report*) than it is in New Zealand.

It is quite possible that ORACLE membership is less than 100, confined to a small group of mainly packet radio operators, as this is the medium it uses almost exclusively to promulgate its messages.

For these reasons, ORACLE must be considered as a 'Secret Society'. Until an authenticated membership count is available, and evidence is produced that more members do, indeed, support its stance than the documented support of NZART members, its representations can have no validity in any democratic decision-making process.

Conclusion

The MOC is not ignorant of these facts. It is therefore unlikely that MOC would consider ORACLE's representations as the 'evidence of significant opinion' required by the Minister's letter – and the MOC would be most unwise to so consider it.

I must conclude that the changed MOC stance is a direct result of changed, high-level thinking by the MOC, which happens to coincide with ORACLE's position.

Gary E.J. Bold, ZL1AN

ORACLE'S VIEW

(Extract from a packet message of 3 September 1994, uploaded by Bob Vernall, ZL2CA)

'I believe it to be desirable that the hobby of amateur radio is seen by the wider community to be near the forefront of radio technology experimentation and operations.

'It is not difficult to show that existing Morse testing regulation is a DELIBERATELY FORMULATED RESTRICTIVE PRACTICE, aimed at minimising the numbers of amateurs who are likely to access certain bands, while at the same time looking after the self-interests of those already qualified.

'However, this appears to be a difficult admission to make by some of the parties intent on sustaining Morse testing policies "for ever".

'Certain closed shop actions within NZART, coupled with inherently conservative processes, made it rather obvious that separate and independent action was a more effective means for lobbying to actually reach the target.

'National and international regulations are decided by politicians and governments, not by amateur societies, so in order to debate regulations, it is necessary to actually make contact with government officials.

'I can give a firm assurance that I will maintain an individual and collective campaign for regulatory change to Morse testing, nationally and internationally, for as long as it takes to achieve.

'I also give an assurance that this objective will be pursued as far as is practicable by using factual material, by targeting issues, by minimising personality clashes and being within the laws of New Zealand.

"However, while making it rather clear that Morse testing regulations are in for a rumble, and likely to yield, I can also honestly say that I am prepared to support the freedom of individuals who choose to learn and use CW.

'As well, Morse testing should also be maintained as one of the choices of alternative ways for qualifying. Regulations should be neutral with respect to modes of operation. I look forward to the time when most applicants are happy with having a choice of ways of qualifying for full privileges.'

(Extract from August 1993 ORACLE submission to NZ Ministry of Commerce)

'Age distribution information shows the average age of amateurs in New Zealand is around 60, and there is only a small minority of young amateurs ... In New Zealand, some 2 percent of all amateurs are aged 25 or less, yet the number of computer enthusiasts aged 25 or less is likely to exceed the total number of amateurs for all ages and by many times.

'Future recruitment is more likely to be linked to technology and computing interests than a natural interest using CW ... There is no intention to oppose use of CW in amateur bands. There is a future for CW in the amateur service, fostered by interest groups and without regulatory shelter.'

COMMENT

Having decided recently (as reported in MM38, p.14) that it would not at present support any change to the current amateur Morse test requirement, it must have come as something of a surprise to the International Amateur Radio Union and its member-societies to learn that the New Zealand Government is now proposing the abolition of the test at WRC-95.

Presumably IARU societies around the world will now seek to persuade their own government delegations to WRC-95 not to support the NZ proposal since it is in direct opposition to current IARU policy.

The question is, will they? There are some national societies who may welcome the New Zealand move, and it will be interesting to see what impact their response has on IARU solidarity.

The real point of issue, however, is that the Minister of Commerce specifically said that 'New Zealand will not make proposals for changes ... until there is evidence of significant opinion in New Zealand, and/or overseas, to support modification of article 32.'

Perhaps *MM* readers around the world would like to write to the Minister of Commerce personally. Perhaps they could ask him where the evidence of overwhelming support to abolish RR2735 has come from, in New Zealand and/or overseas, that he told NZART he required before he would propose any modification of Article 32?

It could be pointed out to him that the International Amateur Radio Union, its three Regional Organisations, and the vast majority of its member-societies around the world all support the retention of the amateur Morse test at the present time; as do many thousands of individual radio amateurs who still value the Morse code as a highly effective means of radio communication.

A really heavy mailbox would demonstrate to the Minister a worldwide strength of opinion, contrasting with the obviously one-sided and ill-informed advice he has received on this matter so far. His address is: The Hon. Maurice Williamson, Parliament Buildings, Wellington, New Zealand.

Perhaps readers could also ask their own societies what their attitude is to the NZ proposal? If you do, please let me know what reply you get so that it can be reported in *MM*.

Additionally, readers' own comments on this matter will be welcome for publication in our Letters pages.

Tony Smith

Speed Contests

by Wm.G. Pierpont N0HFF

Elsewhere in this issue there is an updated report on the HST World Championships. For the benefit of readers who may have no idea what it is like to attempt to copy high-speed Morse, we reproduce this graphic description, from a book by Bill Pierpont

SPEED CONTESTS – officially and unofficially – have been held over almost the whole history of telegraphy in America. Both the professionals and the amateurs have had a pride of accomplishment which begged competition to display and reward. Speed contests provided that competition.

After WWI speed contests among amateurs, but open to others also, began under the sponsorship of the ARRL, also of local hamfests and amateur clubs.

Ted McElroy, who was not an amateur, stood out as the world's speed champion for decades beginning in 1922. (In 1933 he lost out to Joseph W. Chaplin, but regained the title again in 1935.) There were others who demonstrated almost equal ability, and McElroy himself said on occasion that there were probably many others who were as good or better than he.

Several unofficial records have been established in this country, and lately the European clubs have reported some astounding high-speed champions.

At first, in the latter 1800s, contests seem to have been concerned only about sending ability. This implies that receiving ability exceeded their ability to send – which is borne out as we read history: operators were then limited only by their sending ability.

Only later, as 'speed keys' and then machine sending enabled truly high sending speeds to be achieved, do receiving contests seem to have become important. That means around the turn of the century.

McElroy Defeat

We have little detail about most of these receiving contests. However for the one conducted at the ARRL Convention in Chicago, in August, l933, where former World champion Ted R. McElroy was defeated by Joseph W. Chaplin, we have extensive information provided by Ivan S. Coggeshall, one of the four judges.

Mr. Coggeshall was a telegraph operator himself, and later a vice president of Western Union. He was the only non-amateur judge. (Sources: *QST* November 1933 p 3., personal correspondence

with Mr. Coggeshall and comments from McElroy, etc.) From these materials the contest may be described as follows:

It was an 'open' championship for the world's speed title and cup. More than 250 contestants showed up, both amateurs and professionals. Silver trophies were to be awarded in eight classes, beginning at 8 wpm. The contest was run in two sections, the first a preliminary classification test on August 4, eliminating most contestants, and the final run-off the next day.

The first section of test began at 8 wpm, then 10, and at 5 wpm increments up to 55 wpm. At each change of speed the contestants first listened to some familiar taped material, followed immediately by the fresh test tape.

In Plain English

The test tape material was in plain English taken from Chicago newspapers and carefully edited so as to contain no difficult or unusual words or figures, and only the simplest of punctuation. Each section of test tape ran for five minutes at each speed.

The set-up provided 200 pairs of headphones to listen to the 1000 cycle tone of the oscillator as it was controlled by a Wheatstone automatic keyer. The available test room was small and not many visitors could watch the proceedings. Because there were so many contestants the first test series had to be run in two heats.

Mr Coggeshall's personal reactions to the tests are interesting: 'At 8 wpm you sit back and twiddle your thumbs, you yawn ... At 15 you take up your pencil and leisurely jot the stuff down ... At 20 you see the first signs of life. For a minute or two you sit back and copy, and then, on second thought, you hitch your chair forward a bit and straighten the paper."

At 30 the Fun Begins

'At 25 you quit "laying behind"; you decide to close the gap until you read about a word behind the sender. Not so bad, now. At 30 the fun begins. You can read it all right, but the pencil seems to be getting a little sluggish – better make a grab for a "mill" (typewriter).

'At 35 you begin for the first time to think about errors: "How many am I allowed on a 5-minute test run of this?" At 40 it gets hotter and very suddenly, too. The last 5 wpm have more mustard on them, it seems, than the first 30. You are holding your own with many a crack commercial radio or telegraph operator now.

'You quit worrying about single wrong letters and start hoping you can put a typewritten line down without leaving a word out. At 45 the jig is up. You quit, but half a dozen of the champs go on ... '

Blurred and Jumbled

'At 50 wpm the dots and dashes get blurred and jumbled ... at 53 it is just a lot of static – no sense now in trying to hear anything. At 55 there is no change. Just as easy to read the QRN [static] ... '

As each group reached its limit, the contestants left the test room. Finally, eight passed the test thus far. Between this test section and the final run-off a WU cable operator, J. C. Smyth, copied 5-letter solid cipher code correctly at

45 wpm, making all the other contestants look like amateurs, and thus putting their attitudes on a more nearly equal footing for the speed grind to follow.

The test tape for the final run-off had been prepared and sealed in New York in the presence of Inspector Manning of the Federal Radio Commission, and was opened by Inspector Hayes of the Chicago office at the scene of the contest.

Final Run

The final run began at 40 wpm – then 45 – then 50, 53, 54.1, 57.3 and 61.6 wpm. (The machine apparently could not be accurately preset at these speeds, and speed was determined afterward by word count and time elapsed.)

The rules of the contest allowed a maximum of 1 per cent error for each 5-minute run. At 61.6 wpm all made more than 15 errors. At 57.3 (1432 characters or 286.5 x 5-letter words) Chaplin had 11 errors out of an allowable 14, while at 54.1 wpm he had but 5 errors, and McElroy made 8 at this lower speed.

Chaplin was declared the winner at 57.3, breaking McElroy's 11-year old record (1922) of 56.5 with one error on a 3-minute run. From this we can see that the 5-letter word had been standard for some time, and is in fact representative of regular English.

It is not difficult to compare this with the present 50-unit standard word (as in 'Paris') by using letter-frequency tables (such as are used in cryptanalysis – see next page). From these it can be shown that a word count based on standard written English may be expected to come within about one per cent of the present standard of 50 units per word.

Regarding speed contests in general, Lavon R. McDonald wrote in 1940: 'About the speed tests, government count is used, that is five units to the word. Only plain newspaper English is used, everything having clear meaning, no trick stuff.'

Amazing!

As for the well known 1939 speed contest, where McElroy was credited with winning at a speed of 75.2 wpm, McDonald wrote: 'In the Asheville tournament, the speed was practically the same for McElroy and myself. We both copied solid (press matter prepared by the FCC), but they sent some stuff at 77 wpm and I didn't get a good start on it. McElroy made something that looked like copy, but pretty ragged looking, so they gave him 75.2, I guess it was. If only first class copy had been counted, it would have ended a tie. McElroy and I have had about the same telegraph experience.'

At the present time the Europeans appear to have exceeded our recorded contest speeds. In the 1991 International Amateur Radio Union (Region 1) high speed telegraphic championship contest Oleg Bezzubov UA4FBP copied 530 figures (numbers) per minute with only one error: that is 106 wpm, 8.83 figures per second! Amazing! (See MM22, p.4)

However, the duration of these tests is stated to be one minute. This seems rather too short in itself or to be in any way directly comparable with the contests run in America. It seems doubtful that these speeds could be maintained for three to five minutes.

Letter Frequency Counts (International Morse)

The letter frequency counts (left-most column) are taken from one of the common books on cryptanalysis, based on number of occurrences per thousand of normal English text material. Each character is analysed ('structure') into units, 1 for minimum signal duration (one dit), 111 (three units duration) for a dah, and each equal unit of silence denoted by 0 (zero). The required three units of silence separating each character is added (000) to each one below.

Freq.	Letter	Structure	Units	Total
130	E	1000	4	520
92	T	111000	6	552
79	N	11101000	8	632
76	R	1011101000	10	760
75	O	11101110111000	14	1050
74	A	10111000	8	592
74	I	101000	6	444
61	S	10101000	8	488
42	D	1110101000	10	420
36	L	101110101000	12	432
34	H	1010101000	10	340
31	C	11101011101000	14	434
28	F	101011101000	12	336
27	P	10111011101000	14	378
26	U	1010111000	10	260
25	M	1110111000	10	250
19	Y	1110101110111000	16	304
16	G	111011101000	12	192
16	W	101110111000	12	192
15	V	101010111000	12	180
10	B	111010101000	12	120
5	X	11101010111000	14	70
3	Q	11101110101111000	16	48
3	K	111010111000	12	36
2	J	1011101110111000	16	32
1	Z	11101110101000	14	14
1000	Ave. Random length 11.23		Ave. 9.076	9076

From the table, if we take five times the above average letter length and add the space required for word spacing (seven total or 0000000) we arrive at the normal English word length as 5 x 9.076 + 4 = 49.38.

This is just a bit less than 1 per cent shorter than 50 units per standard word. (By contrast, a random five-letter group averages 60.15 units. This is 20.3 per cent longer than normal English word length.)

A similar analysis of numbers will show that the average length of a number is 17 units (minimum 12, maximum 22) or a group of five numbers takes about 1.78 times as long to transmit as a five letter word. Comparing these calculations will show some of the reasons why receiving speeds vary with the kind of material being sent.

Mr. Ivan Coggeshall made an analysis of American Morse comparatively, using the same normal dah lengths and word spacings one unit shorter, and arrived at an average letter (frequency) length of 7.978 (as compared with 9.076) and average number length of l4. American Morse timing is open to considerable variation.

(Reprinted and specially edited for MM *from Bill Pierpont's book* The Art and Skill of Radio-Telegraphy*).*

HST World Championships – an Update

by Tony Smith G4FAI

THE RADIO SOCIETY OF GREAT BRITAIN would like to hear from any member of the Society interested in serving on the IARU Region 1 High Speed Telegraphy Working Group. The Group meets once every two years, for up to two days, when the championships are taking place. Its function is to keep the rules under review and to decide on the venue for the next championships.

Accommodation, etc., for members of the Group is arranged by the championships organising society, and expenses are met by members' own national societies.

There are currently 11 members of the Working Group from different countries, plus the IARU Region 1 HST Co-ordinator, Klara Lendvai, HA5BA. The official language of the Group is English and *MM* understands that the Group would be particularly pleased to welcome a member from the United Kingdom.

A member of the Working Group does not have to be a high speed operator, but obviously he or she does need to have an interest in promoting this aspect of amateur radio.

The appointment of an RSGB representative would automatically create a focus of interest in the subject within the Society. Hopefully, he or she would then be instrumental in publicising and encouraging participation in competitive activities in the UK, leading eventually to a national team representing the UK at the international HST championships.

Hopefully, also, the appointment of a representative concerned with one specialised aspect of Morse, would represent a first step in the identification of a need within the RSGB to more actively promote Morse, as recommended by the IARU document 'The Morse Code and Amateur Radio – A Summary from the work of the IARU CW Ad Hoc Committee' (which was reported in detail in MM38, p.14).

(Incidentally, I understand there is a possibility that a summary of that document may appear in *Radio Communication* shortly.)

The next meeting of the High Speed Telegraphy Working Group will be at the HST championships in Hungary in October, so anyone interested in serving on the Group should contact the RSGB as soon as possible. Write to Peter Kirby

G0TWW, General Manager, Radio Society of Great Britain, Lambda House, Cranborne Road, Potters Bar, Herts EN6 3JE. It goes without saying that *MM* will be more than pleased to give every encouragement and support (and a few suggestions!) to anyone taking on this task.

Individual Championship Entries Still Welcome

As reported in *MM*, when a country does not enter a national team in the championships, the way is open for representatives of CW clubs, or individuals, to enter at their own expense. Several *MM* readers have done this in the past, but none from the UK!

As reported in MM39, one of the tests this year will be based on the RUFZ callsign receiving program devised by DL3DZZ. This requires competitors to make two attempts at receiving 50 callsigns, typing them onto a computer keyboard. The best attempt is taken for scoring.

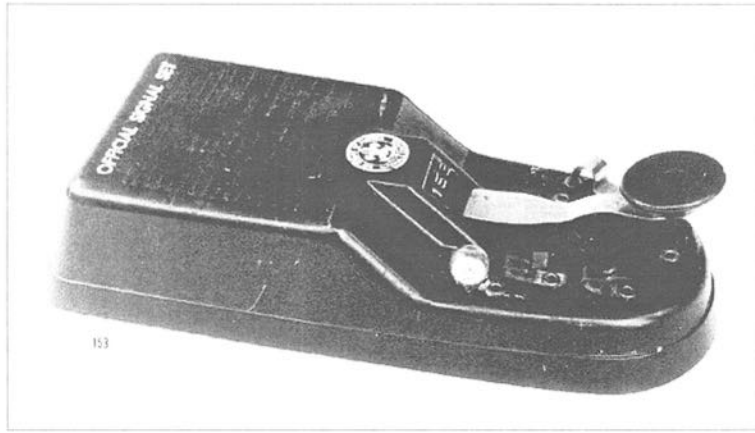
If anyone is interested in trying this program to see how they would fare, I can provide a copy on a 3.5in disk for use on an IBM-compatible computer. There are a few scores already on screen so you will be able to see what you would up against! Just send me a formatted disk, with a suitable stamped addressed envelope for its return, and I'll send it back straight away.

All you have to do is type in your callsign, press ENTER to begin, and again when you are ready to move on to the next callsign. If you get the call right the speed increases; if you don't the speed goes down. At the end, your score comes up on the list to compare with the others already there.

The on-screen instructions and the README file are in German. These are not really needed just to run the program but, if required, I can provide an English translation of these (thanks to Ken Quigg GI4CRQ). If the translation is required, please send 30p in stamps to cover the cost of photocopying (3 sheets x 10p). My address is given inside the front cover of this issue of *MM*.

Non-team entries for the championships can be made until 48 hours before the event begins. Such entries, however, require the approval of the competitor's national IARU member-society. In the case of the UK, which is not sending a team, all enquiries should be addressed to Peter Kirby, General Manager of the RSGB, address as above. ***MM***

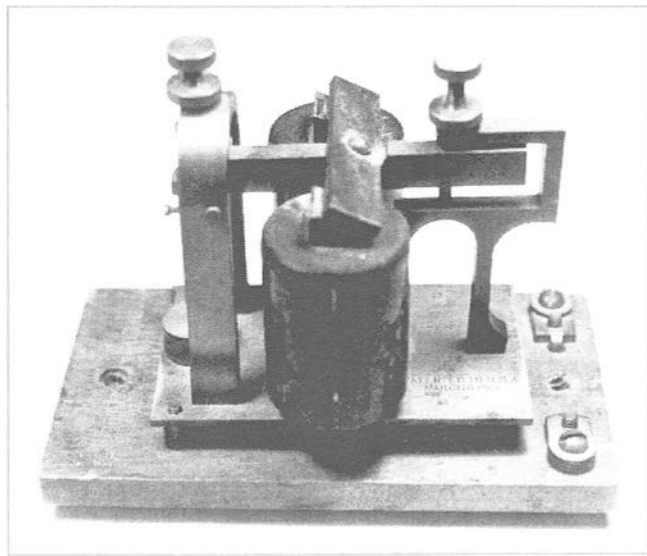
Showcase



Collection: John Elwood WW7P. Photo: Ray Nelligan

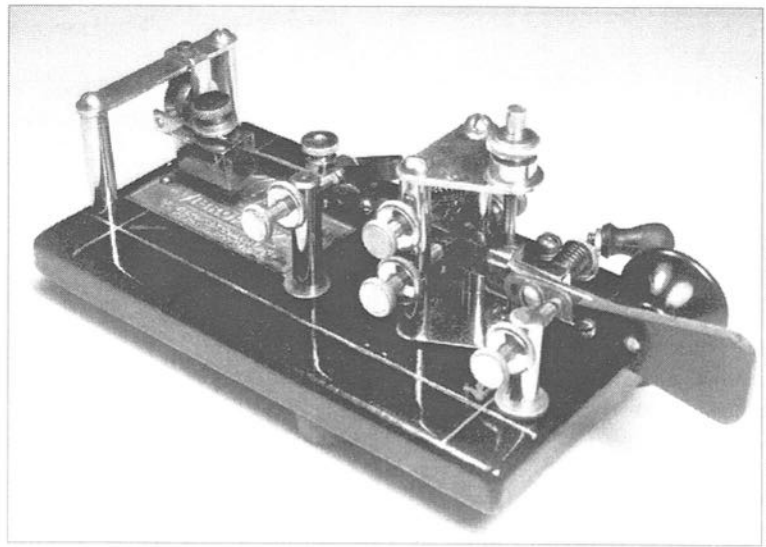
Boy Scouts of America Official Signal Set

See page 7 for a correction to MM39 'Showcase'



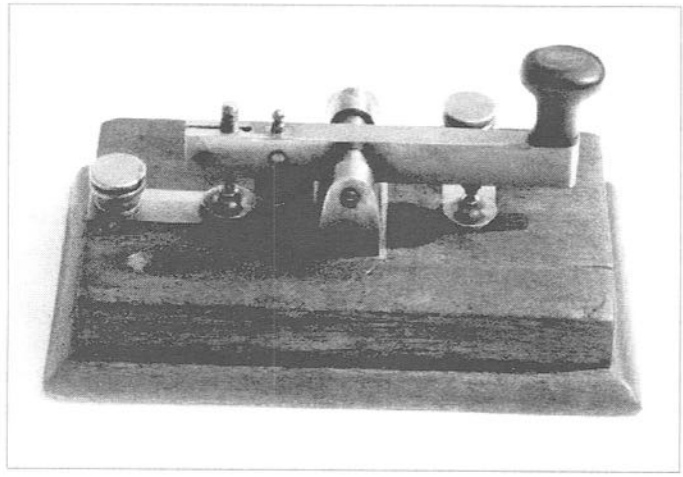
Photo/Collection: Dave Pennes WA3LKN

Foote-Pierson Sounder, 120 ohms. Patented March 6, 1917



Photo/Collection: Dave Pennes WA3LKN

Early Vibroplex #6, 'Lightning Bug', 1920's.
Black japanned base with detailed pinstriping



Photo/Collection: Wyn Davies

French P.O. key. 1919?

Featuring keys and other collectors' items of telegraphic interest.
If anyone can add to the information given please contact
Tony Smith, 13 Morley Road. Sheringham, Norfolk NR26 8JE

The American Telegrapher:

a social history 1860 – 1900

A Book Review

by Jim Haynes

I SEEM TO READ A LOT OF BOOKS which are at the same time both interesting and tedious. This is one such book. Written by an academic historian for reading by other academic historians, it is long on footnotes, theories, and statistics and short on flesh-and-blood storytelling; yet there is enough of the latter to entertain the casual reader.

Part I of this review is an attempt to convey the general message of the book. Part II is for fun: a selection of stories about the lives and times of telegraphers a century ago.

PART I
A New Kind of Business

There are five chapters: a history of the Great Strike of 1883 as an introduction to the world of the operators; a description of the telegraph industry and especially Western Union; a social portrait of the telegraphers; a study of women telegraphers; and a summary of the labour movement and politics of telegraphers.

An epilogue compares the situation of telegraphers in the 1880s with that of the air traffic controllers a hundred years later. Telegraph and railroad companies following the Civil War represented an entirely new kind of business, one in which the company's assets are strung out for hundreds or thousands of miles with offices and employees sprinkled along the lines.

There were other affinities between the two kinds of companies. Railroads used telegraphy to support their own operations. Railroad rights-of-way were ideal places to run telegraph lines, affording easy access for construction and maintenance at a time when there were few roads. Telegraph business was likely to be found in the same places the railroads served.

In many small towns the railroad station served as the public telegraph office, as there was not enough telegraph business to support an office for telegraph alone. Some railroads such as B & O operated their own public telegraph businesses. (cf. Southern Pacific a century later getting into the communications business.) Other railroads had contract arrangements with the telegraph companies, principally Western Union, for use of rights of

way, interconnection of circuits, and providing public telegraph service at the railroad stations.

Military Style Management

These new kinds of businesses needed a new kind of management. The military became their model. Many of the top managers were alumni of the Civil War military telegraph system. The companies had divisions, rule books, general orders and special orders, and chains of command. Management style was authoritarian. As is the case with some companies today, the telegraph and railroad companies then were headed by a mixture of people who knew the business and those who were primarily financial wizards.

Telegraph operators represented the beginning of a new social class, the lower-middle-class white-collar employees of large corporations. Many were the children of farmers or of city blue-collar workers. A great many were of Irish lineage.

For all of these telegraphy offered a step up the social ladder as well as an escape from hard physical labour and city slums or rural isolation. Telegraphy was an occupation open to women, although the majority of operators were male (and, like the women, young and unmarried).

The national economy was fairly flat or even deflationary during the period 1860–1890. Western Union profits rose handsomely throughout the period. The operators did not share in this prosperity. For one thing, there was an oversupply of them. First-class operators, who could send and receive thirty to forty words per minute for hours on end, were assigned to press and market reporting circuits. They could command pay two to three times as great as that of the second-class operators who made up the bulk of the force.

Training

Many operators learned the craft by hanging around small railroad and telegraph offices; others worked their way up from messenger and clerk jobs in larger offices; still others were trained at a number of schools that sprang up around the country.

Most of the latter seem to have been disreputable if not completely fraudulent, operating for profit and promising high pay and mobility to rural youth. They were the century-ago counterparts of the for-profit data processing schools of our own times, the kind that advertised on matchbook covers and turned out an oversupply of under-qualified graduates for high tuition fees.

Another financial problem for the telegraphers resulted from their new social class. Telegraphers' pay was on a par with that of skilled blue-collar workers; but their living expenses were greater. With the move to suits and ties and shined shoes they felt a need to live in middle-class housing, eat middle-class meals, and partake of middle-class entertainments.

A few of the operators' perceptions of mistreatment by the companies were more apparent than real. The 1840s through 1860s had been a period when telegraphy was just getting started. Job opportunities were abundant and promotions were rapid. As the industry

matured there were fewer spectacular success stories; telegraphy even seemed to be a dead-end job.

First Unions

Other complaints had a more solid foundation. Mergers of telegraph companies eliminated jobs. An economic downturn in the 1870s caused Western Union to institute across-the-board salary reductions, which were partially offset by monetary deflation. Operators tended to move around a lot, which allowed the company to hire cheaper replacements for those who left.

The first attempt of telegraph workers to organise was the National Telegraphic Union of 1863. This was more of a mutual benefit society than a labour union. It provided members with sickness and funeral benefits and aimed to elevate the character of the members and promote just and harmonious relations with employers.

With conditions for telegraphers growing worse after the Civil War the Telegraphers' Protective League was formed in 1868 as a very different kind of organisation. It was a secret organisation, because there was nothing at the time to protect its members from the unbridled power of their employers. Rather than relieving the sick and burying the dead it proposed to raise the members to a financial position in which they could take care of themselves.

Strikes

The TPL felt strong enough by January, 1870 to risk a strike against Western Union. It failed after about a week. There were just too many operators seeking work, especially in the winter season; the company was too strong; and the union was too poorly organised. The operators' situation continued to deteriorate through the 1870s as Western Union reduced wages, the number of would-be operators increased, and the company absorbed its competitors. An attempt to form another union in 1872 fizzled.

In 1881 Jay Gould took over Western Union, moving the company closer to being a true national monopoly. By the summer of 1882 a number of regional labour organisations put aside their differences to form the Brotherhood of Telegraphers of the United States and Canada under the aegis of the Knights of Labor. The Brotherhood, unlike its predecessors, accepted the female operators as members.

In July, 1883 the Brotherhood presented a list of grievances to Western Union and some other firms, hoping for at least a compromise settlement and at worst a short strike. When the company made no meaningful concessions the telegraphers walked out on July 19. At first things looked good for the Brotherhood. About three fourths of Western Union operators honoured the strike. Public opinion was much on the side of the telegraphers, at least to the extent that it was against the side of Jay Gould and the WU monopoly.

One competing telegraph company settled quickly with the union; and another (B & O) came close to, but never close enough. Union leaders worked hard to keep the public on their side, urging the strikers to be models of dignity and sobriety. The women were as valiant as

the men, if not more so, in upholding the strike.

Pledge of Loyalty

Still, public sympathy did not feed the hungry; and the strike dwindled until it was officially called off on August 17. Operators wishing to return to work had to sign a pledge of loyalty; those considered militant unionists were blacklisted by the company. Still, it appears the company was somewhat humbled by the power of the union and made a few concessions to the operators.

Failure of the strike led to some ill feeling in the larger labour movement. The telegraphers accused the Knights of insufficient support; the Knights' leadership felt the telegraphers had acted impulsively and without sufficient preparation. The Brotherhood soon withdrew from the Knights; and union activity reverted to local groups. Yet by 1885 there was a new organisation, the Telegraphers' Union of America, which rejoined the Knights in 1886. This seems to have faded away by the early 1890s along with the Knights.

Railroad telegraphers formed the Order of Railway Telegraphers in 1886. An Order of Commercial Telegraphers was formed in 1890 but never amounted to much, and allied itself with the railway telegraphers in 1897–98. The next attempt to form a union didn't happen until 1907, with the Commercial Telegraphers' Union of America, which also suffered disaster in a strike against Western Union.

Issues Still With Us

Gabler concludes with a discussion of a number of labour and political issues affecting telegraphers. One of the Brotherhood's demands had been equal pay for equal work, male and female. This seems to have been widely hailed as the Right Thing to do. I wonder whether the male telegraphers supported the demand because it was right; or if they supported it because they knew if the companies had to pay men and women the same they would hire only men.

Some wanted a craft union, with membership limited to telegraphers, with an apprenticeship program that would raise the quality of operators while reducing their numbers. There was some interest in government licensing of operators. Others favoured an industrial union, open to all Western Union employees.

Some objected to the secret fraternal rites that were a feature of the Knights of Labor; Catholic workers were forbidden to become members of secret organisations of any kind. The operators wanted to protect their new middle-class image by being models of respectability and sobriety; some of the linemen on the other hand had no scruples about cutting wires to increase pressure on the companies during a strike. Some felt that telegraphy should be a government monopoly, as was and still is the norm in Europe.

Some saw salvation in a worker-owned co-operative, if they could only convince the banks or the government to put up the money necessary to establish the system. Others sought to improve the status of the working classes through political action; quite a number

were attracted to the United Labor Party of Henry George. A hundred years later issues like these are still with us.

PART II

Extensive Material

Dr Gabler had access to a vast amount of material: census records, archives of the telegraph companies, contemporary newspaper accounts, magazines published for the edification and amusement of operators, and even novels in which telegraphers were used as characters. The footnotes and bibliography take up 48 pages. One page in the book is an illustration of advertisements in a telegraphers' magazine of 1883.

They include a book on shorthand, a book of money-making secrets, a book on the mysteries of love-making, a book on fortune telling, watch charms with microscopic pictures, a book of advice to the unmarried, a package of stationery, a book on politeness, a book of letters for all occasions, playing cards with marked backs, a book of magic tricks, a book on business, and a book on ballroom dancing. The theme is that these appealed to working-class young adults who felt a need to learn how to behave properly as members of the middle-class.

A number of telegraph operators rose to prominence. Thomas Edison and Andrew Carnegie are the best known; Theodore N. Vail was a founder of AT&T; others found success in business or politics; and almost all the upper management of Western Union was drawn from the ranks of operators. In 1885 there were five doctors and one dentist moonlighting as telegraph operators – maybe medicine and dentistry didn't pay all that well in those days.

Friendships Over the Wires

Thomas Edison, as a young telegrapher in the 1860s, would work a full day and then stay in the office at night, listening to a press circuit to get high speed code practice. Later he worked the Boston end of a New York circuit with an operator named Jerry Borst.

Operators formed friendships with their counterparts at the other end of the wires. The telegraph companies insisted that operators should work at whatever circuits they were assigned. Edison and Borst conspired to change three characters of the code, so that nobody else could copy their transmissions and they could always work together. Cockroaches were such a problem in the office that Edison devised a bug zapper to protect his lunch from the little beasties.

Friendships over the wires were nourished during lulls in traffic by exchanges of jokes and local news, and by checker games. Sometimes love and courtship blossomed too. At other times operators were rude to one another. On one occasion two operators got so angry at each other that they arranged to meet at a town halfway between their posts and settle the matter with fists at 1:00 AM. 'Salting' (sending too fast for the receiving operator) was a frequent source of irritation. Salting was also part of the common practice of hazing new operators.

No Vacations

Operators frequently got privileges, such as free passes to theatres and on trains. With the chronic oversupply it

was common for operators to travel back and forth across the country looking for work, or for better conditions. Operators didn't get vacations, paid or otherwise; but in the summer months telegraph offices would open in the resort towns where the rich took their vacations, and operators could find work there.

In 1883 Western Union employed 444 telegraphers in New York City, 96 in Boston, 88 in St Louis, and 83 in Chicago. This seems to support a conjecture of mine that WU was weakened all its life by over-attention to serving New York City and insufficient effort to develop the business in other parts of the country.

There was friction between the city operators and the rural operators. The city operators were proud of their skills, and wanted to move the traffic. They resented they way country operators would frequently interrupt transmissions. The country operators, usually working in railroad depots, countered that telegraphy was but a small part of their duties. They had to answer questions from the public, sell tickets, meet trains, tend switches and signals, handle freight, and keep the lamps burning. They commonly worked shifts as long as twelve or even sixteen hours.

Women Preferred

Development of duplex and then quadruplex operation greatly increased the pressure on operators, as the receiving operators could not interrupt the senders. Gender stereotyping held that only male operators had the stamina to handle these heavily-loaded circuits; yet the book cites a number of examples of women who worked these circuits. Women were consistently paid less than men.

The companies were well aware that women were a bargain compared with men, and continually tried to replace men with women. Nellie Welch had full charge of the telegraph office in Point Arena, California in 1886. She was eleven years old.

Western Union and the Cooper Union Institute in 1869 jointly started a free eight-month telegraphy course for women. It lasted through the early 1890s, turning out about 80 graduates a year. They would first take non-paying jobs assisting regular operators, and then be hired as operators on lightly loaded city circuits. This school was much despised by men for its contribution to the oversupply problem, though it probably hurt the opportunities for women more than those for men.

Beginner and less-skilled operators were called 'plugs' or 'hams.' (Note the endless controversy over the origin of the term 'ham' for amateur radio operators.) The schools that turned out these operators were called 'plug factories.' Craft magazines sought to shame operators who taught telegraphy. They were urged to pass on the secrets of Morse only to brothers, sisters, sons, and daughters. At least one railroad operator quit his job rather than co-operate with a student placed with him by the company.

The American Telegrapher: a social history 1860-1900, by Edwin Gabler, was published by Rutgers University Press in 1988. ISBN 0-8135-1284-0 (hardbound), 0-8135-1285-9 (paperback).

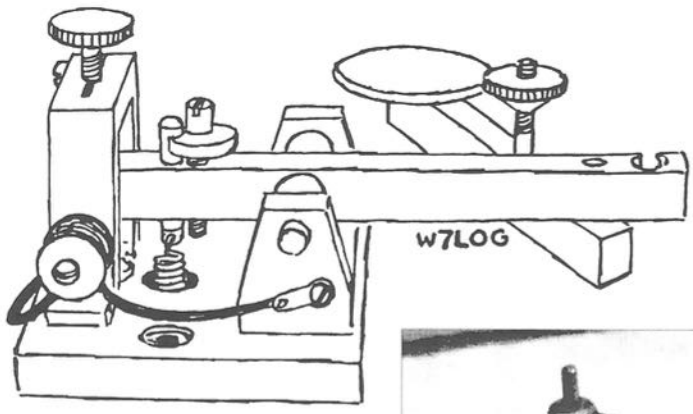
(Review from Usenet via CIX).

Info Please!

Readers require further information on the keys, etc., featured here.
Please write to Tony Smith, 13 Morley Road, Sheringham, Norfolk NR26 8JE
if you can help.
All useful information received will be published in MM *in a later issue*

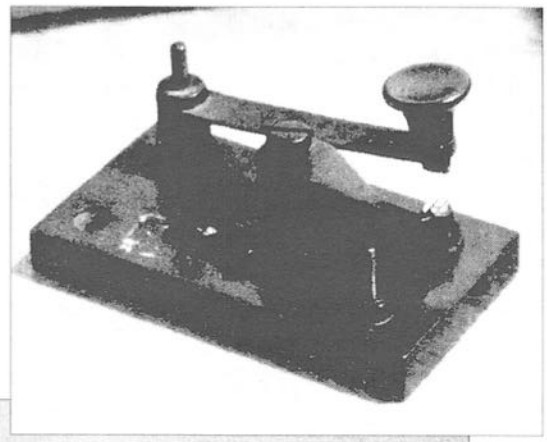
Collection/Photo: Douglas Byrne G3KPO

Mystery paper tape recorder



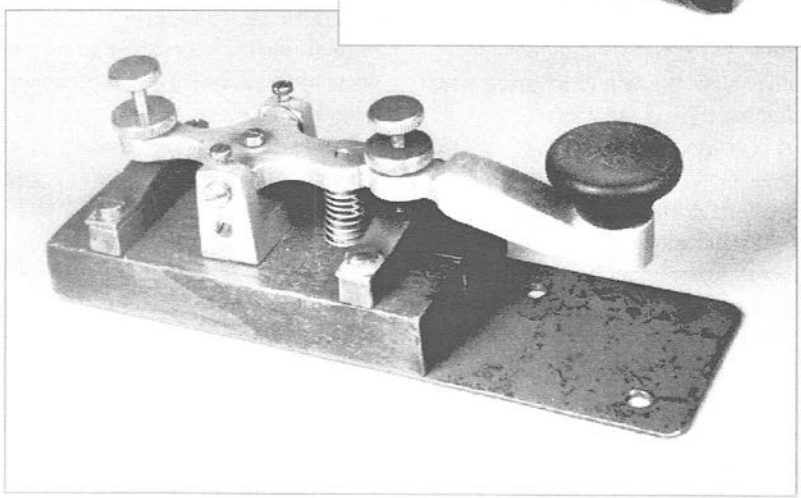
Unknown 'elbow' key, obtained in Canada. Any information welcomed

Collection: Lynn Burlingame N7CFO.
Drawing: W7LOG



Unknown Key.
Any information welcomed

Collection/photo: Mike Pavely G3GWD



Collection/Photo: David I. Combs W5VJW

Unknown key, believed to be Russian, c.1942. Wood base, aluminium construction with steel bearing pin. Contacts both front and back. 'Has a good feel; the aluminium lever seems to make it fast.' Any information welcomed, i.e., confirmation of country of origin, maker, approximate date, original use, etc.

News from UFT

A REPORT IN *LA PIOCHE*, journal of the Union Française des Télégraphistes, 1/95, reveals that membership Nr 734 has just been issued to newly licensed F5SAU 'who has caught the Morse bug and is selling his microphone!' More than 80 new members joined UFT in 1994.

Members are reminded that the role of UFT is to help newcomers to join in the traffic. They are urged 'let's be considerate, and above all patient.'

Ten Commandments

This issue contains 'The Ten Commandments for the XYL', as follows:

1. When you take a husband you marry the radio.
2. Don't speak the whole evening when your husband is on the air.
3. If it is to do with radio, you tolerate the mess.
4. If he is working someone you keep his dinner warm.
5. If the children are noisy, you put them outside.
6. If he wants to go on the air you forget about plans to go out.
7. Show interest in the technicalities, even if you don't understand a thing.
8. Even when it disturbs you, be sociable to visiting OMs.
9. When he wants to transmit /M, you drive the car.
10. Right until he dies, be patient, don't disturb him before then.

Missing Yacht Found

An interesting story from F6GPA tells how, using CW to communicate with FM5WH, he helped find a missing yacht in the Caribbean to ask its captain to telephone his family at home. Thanks to this initiative, the authorities in various ports kept a look-out for the missing vessel until it was sighted and the message passed on. The impressive thing about this story is that over a period of two weeks the two participants maintained daily communication on the 20-metre band, with FM5WH using only 1 watt output power.

Another article gives advice to French amateurs on non-French QSOs (contacts) in general, and specifically on QSOs with Russian stations. It includes imitated phonetic pronunciation of all the Russian words used.

Contest Advice

A report on the 1994 UFT contest records that conditions were not good on the higher frequency bands, so most QSOs took place on the 40 and 80 metre

bands. There was good participation by members 'with few band-limits exceeded', and 'only three OMs were caught by the bandwatch and penalised.'

The report advises members that 'Our little "family" contest is an excellent introduction before joining the "BIG BOYS", but for all that it is necessary for all operators to get it into their heads that rule number one is BREVITY.'

A good operator, it says, 'can work three or four QSOs a minute (more if they have a sought-after call and a station that commands respect); and that rules out all pointless transmission.'

A long text follows giving hints and tips on contesting which concludes with a summary (abbreviated by *MM*) as follows:

- Keep within CW sub-band limits.
- Ask if the frequency is in use BEFORE calling.
- If you have an automatic memory-keyer, use it to send just your call when replying to a CQ.
- Keep zero beat on frequency, RIT off, narrow filter in circuit.
- Between CQs listen for 2 or 3 seconds only.
- Always reply promptly.
- Avoid repeating RST, but when conditions are poor it is helpful to send twice the 'useful' part of the contest report, power, age, serial number, etc., depending on the contest.

Note well, says the report, when you are calling the occupier of a frequency, the frequency is his, not yours! Don't try to steal it from him – that gives rise to bad feelings!

(Summary by MM. *Original translation by Ken Quigg GI4CRQ.)*

I think those 10 Commandments must have been put together by the same man who devised a T-shirt I saw at a radio rally last year.

It read: "My wife told me that if I buy another radio she'll leave me ... I'm really going to miss her!" – Ed.

Back Issues Corner

Key Adjustment

by Charles F. Rockey W9SCH (1940)

AFTER HAVING LISTENED TO, and indulged in, all manner of code manipulation on the various amateur bands during the last five years, I have formed the opinion that many of the 'punk fists' heard on the air are not the result of inability or 'cussedness' on the part of the respective operators but of improperly adjusted keys.

Of late there has been much said about the proper use and adjustment of the semi-automatic or 'bug' key, therefore more along this subject would obviously be superfluous. However, doubtless due to its simplicity and apparent obviousness, the subject of proper use and adjustment of the common, so-called, hand key has been almost neglected. Result: possibly thirty per cent more 'lids' than need be.

Simple Lever

Fundamentally, the hand key is nothing more or less than a simple lever of the second class, which your physics professor will tell you is a lever wherein the resistance or counter effort is situated between the effort point and the bearing or fulcrum and in which case the effort and counter effort oppose each other in direction. In the case of the key, the counter force is represented by the spring and the power to balance it is, of course, the operator's arm.

The fact that there is a back stop, and the presence of the contacts, is incidental to the fundamental analysis. Therefore a little thought will reveal that in the operation of brass pounding what one really does is to periodically overbalance the spring tension, by pressure of the wrist, to the extent that the end result of closing the contacts is obtained.

Thus it is readily seen that in pounding the key one is not working against the contacts but against the spring. The spring, however, is not the only factor. Assuming that, as in all good keys, the trunnion bearings are quite frictionless the other factor that must be considered is the distance over which the effort must move, inasmuch as the work accomplished is not the force exerted alone or the distance alone but the product of the two.

Problem of Balance

Thus the problem resolves itself into that of balancing the operator's physical characteristics with the characteristics of the key which involve the spring tension and the distance of vertical knob travel, a case of mechanical impedance matching, as it were.

It is easy, then, to see that when the key is properly adjusted the operator is working at his peak of efficiency. When the spring is too loose or when the distance of knob travel is too small, the operator must work against himself and therefore he wastes energy. It is easy to see, also, how a too stiff spring or too wide contacts (too much vertical knob travel) will likewise tire one out.

From this it may be gathered that there is a critical key adjustment for every operator, which indeed seems to be the case. In my own case it appears that the 'best' adjustment seems to vary, slightly, from day to day, facetious as it may seem. There can be no hard and fast rules for key adjustment because individuals are so unlike. However, a few principles, humbly suggested, might be in order.

Start at the Minimum

1. Adjustments should be set at minimum spacing and spring tension and be increased until things 'feel right'. One must be his own judge in this matter and no rules can be set. Again – let it be stressed that no one else can properly set your key for you.

2. Plenty of time should be taken in these adjustments and they should be corrected from time to time. This is no 'set and forget' matter if best results are to be had. 'Trifles make perfection but perfection is no trifle.'

3. DO NOT MAKE THESE ADJUSTMENTS WITH THE TRANSMITTER ON THE AIR. This should be presupposed, but bears repetition anyway. Use a buzzer or oscillator for listening tests.

4. Make sure that your key is in good condition to begin with. If it isn't, fix it up or throw it out and get one that is. One cannot play a sonata on a cow-bell!

Glad to QSO

In conclusion, let me suggest that you try readjusting your key and see whether it doesn't improve your operating pleasure and skill. You will probably find as a result that where you were formerly a 'QRU 73 CUL' artist, you will become a staunch supporter of the 'Royal Order of Bacon Rind Munchers' and the other fellows will be glad to QSO you. Try it and see.

(Reprinted with permission from QST, *journal of ARRL, January 1940.)*

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

NATO Keys

I'm wondering if it would be possible to obtain information on NATO keys. Somewhere in the military archives there must be a list of NATO numbers that have been allocated to keys. I am sure that such a list exists.

I have a number of keys with NATO numbers. If we could locate the list it would tell us how many NATO keys there are out there.

Murray Willer VE3FRX
Toronto, Ontario
Canada

(If any reader has such a list, or can suggest where a copy might be obtained, please write to Tony Smith, address inside front cover. – Ed.)

Neglected Exclamation Mark

I am pleased to second the suggestion of J. Bruce Prior, TA2ZO, that the exclamation mark be restored to the International Morse code. It is a most useful conveyor of an emotion that is frequently felt in our QSOs (contacts), and its current absence from textbooks and from the International Radio Communications Regulations is most puzzling.

I should add that · · · – · is already well established not only on keyboard-radio interfaces manufactured by AEA and Kantronics, mentioned by TA2ZO, but also on all other interfaces that I am familiar with, such as the MFJ electronic keyers and the MFJ Multi-Mode Data Controller.

In addition, although somewhat infrequently, it is already used by some hams, including me, probably under the influence of the increased use of keyboard interfaces for International Morse on the air.

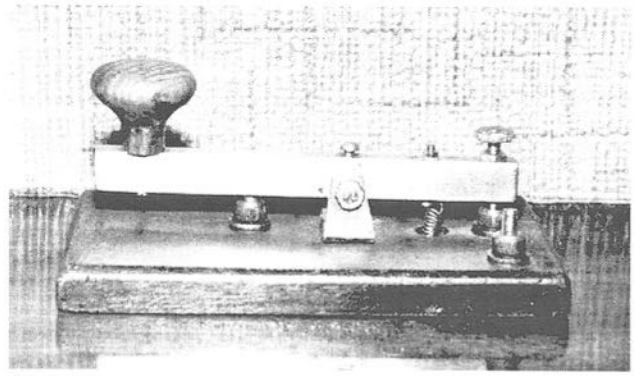
In American (landline) Morse – – – · is still current for the exclamation mark – or as current as landline Morse can be now! (I listen to one radio net carried on entirely in landline Morse, sent with bugs and handkeys, of course.)

John W. Martin, KB7RFE
Tucson, Arizona, USA

With reference to J. Bruce Prior's letter (MM39, p.45), we in Holland (and the 'Dutch section of Belgium') have the luck of our language to provide us with 'hè' (pronounced approx. 'hay'), which is a sort of pronounced exclamation mark.

Matters discussed in everyday conversation are often stressed, or commented on, by this word. So '· · · · ·' is frequently used in PA-PA and PA-ON CW contacts.

Monika Pouw-Arnold PA3FBF
Mijdrecht, Holland



Hobbies *magazine kit key, early 1920s. Knob not original*

Photo: John Power GM0KTO

'Hobbies' Magazine Key

Referring to the unknown key bought at a collectors' fair, featured on page 40 of MM38, I have a key almost identical to this, except for slightly different terminal posts and key contacts, which was assembled by my great grandfather from a kit supplied by *Hobbies* magazine during the early 1920s.

It is something of a family heirloom and survived intact, minus the knob, until 1988 when my dog (then a pup) decided to sharpen his teeth on the woodwork. The marks have since been filled in, necessitating re-varnishing. A cupboard door knob was fitted around this time, which also received unwelcome canine attention!

The only time I have seen a similar key was in the shack of Mike Mistofsky, GM4KLO, who told me that his had been made by his grandfather during the 1920s. His reference to *Hobbies* magazine confirmed what my dad had told me about the key passed to him from his grandfather and which I had played with from childhood days.

Further enquiries within my family revealed that, contrary to my hopes, great grandfather McClelland (d. 1942) was not a radio amateur. He did, however, build a crystal set, of which there is no trace, and a quaint instrument of torture known as a 'shocking coil', which still works and resembles a small spark transmitter. Indeed it performs like one, its pattern on a TV screen being easily spotted!

Many thanks for an excellent magazine.

John Power GM0KTO
Glasgow, Scotland

'Understand'

During training at RAF Compton Bassett, · · · – · meant specifically 'Here is some plain language text', not just 'beginning of transmission'.

I don't ever remember sending or receiving this prosign after leaving the training school.

Bob Eldridge VE7BS
Pemberton BC, Canada

Regarding the use of · · · – · (SN barred), as discussed in MM38, p.44, I have been told by G3JUL that he recalls seeing a German signals manual where

$\overline{SN}$ was used to precede messages, the inference being that it was used to stress what followed.

The main thing is where it is used. If it precedes the message then it means 'understand the following'. Think German not English and you read 'you will understand what I am to say', or 'yes I have understood your last message or instruction'. We have corrupted its use and lost its meaning.

Incidentally, in the book *The Heart of the Great Western* there are a few pages (66–71) on railway signalling using the single needle instrument, and the examples shown terminate each message with $\overline{SN}$.

Gerald Stancey G3MCK
Staines, Middlesex

Sorry Grace!

At Chicksands Priory Y Station, during WWII, it was the practice when taking over the 'Mighty Wurlitzer' D/F control panel at the start of a watch to send a CQ by key to all outstation operators to log their initials.

On one occasion, after the usual CQ OP $\overline{IMI}$, the outstations replied in sequence until an unrecognisable 'GS' was received from a station near the south coast. Assuming it was a 'bolshie' operator telling me to 'Get Stuffed', I furiously repeated OP $\overline{IMI}$ OP $\overline{IMI}$ OP $\overline{IMI}$, and back came the reply GS GS GS.

The work was piling up – bearings were being screamed for – so I picked up the phone, twirled the handle savagely and let loose a stream of foul language as only a corporal can.

A moment's silence was followed by a timid little female voice: "I'm the new WAAF operator and my name is Grace Shand."

Collapse of all listening in!!

Jack Barker
Surbiton, Surrey

Erasure Signal

Further to previous correspondence on this subject in MM35–38, I am enclosing some information on the 'error' signal as appears in US publications (Joint Chiefs of Staff – Joint Communications Instructions) JANAP 124, dated February 1950, and ACP 124(D) dated October 1983.

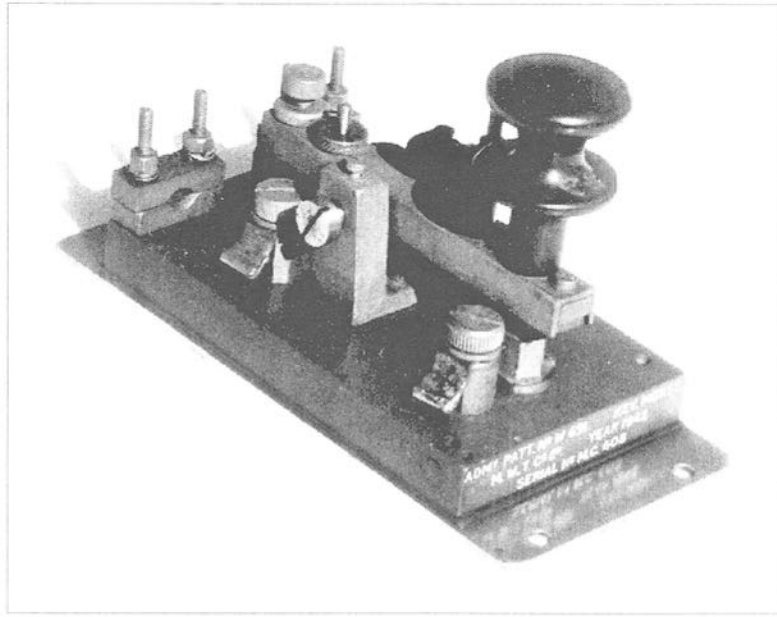
The 1950 publication states: 'To correct errors, a succession of eight or more E's is transmitted and means "An error in transmission has just been made." (The phrase "eight or more E's" is intended to facilitate operations and shall not be construed as permitting transmission of an excessive number of E's) ...'.

The 1983 publication says: 'The error prosign will be of not less than eight (8) E's. It should not be unduly prolonged. It may be used to correct errors and to cancel transmissions in progress. If an error is made during transmission, the error prosign will be transmitted, followed by the repetition of the last word, group or prosign correctly transmitted.'

John N. Elwood WW7P
Phoenix, Arizona, USA

AP 691 Key

With reference to the Admiralty Pattern Key 65485 shown on the front cover of MM32, and Jim Lycett's comments on the inside cover, there is an earlier version of this key. This is the



Admiralty Pattern 691 Key, made by Marconi's Wireless Telegraph Co., 1942

Photo/Collection: Wyn Davies

AP 691, made by Marconi's Wireless Telegraph Co. in 1942.

It looks very similar to the AP65485, has a similar shaped knob, and could be the key remembered by operators who used them in WWII. Like the AP 65485, it is smaller than the AP 7681. It has a post with a screw thread alongside the arm which probably indicates that it once had a cover.

Wyn Davies
Brymbo, Wales

55

Pat Hawker G3VA's letter (MM39, p.42) repeats an odd mistranslation that originally appeared in *Radio Communication*. To quote: 'the German-originated 55 (often listed as "viele erflug" (i.e., "much pleasure") seems to be ...'

'Erflug' is not a German word. What was probably meant is 'viel Erfolg', i.e., 'much success'. The German word for pleasure is usually 'Freude' or, occasionally, 'Vergnügen'.

It would be interesting to see the actual list in the German *QRV* journal for February/March 1947 which G3VA mentioned. I have, however, found a list of abbreviations in a German book (not dated), in which 55 is shown as 'viel Erfolg'.

Ken Quigg GI4CRQ
Belfast, Northern Ireland

'Viele erflug' should be 'viel Erfolg', meaning 'much success'. It's not a world-shaking error, but perhaps it should be corrected.

Another possible origin of 55 was

suggested when the subject was discussed in the original Dutch edition of *MM*. There is an old Dutch/German idiom which translates as 'giving him/her five', meaning 'shaking hands' for, e.g., goodbye.

One hand = five fingers. As two hands are involved in a handshake, the result is 5+5, abbreviated to '55'.

Monika Pouw-Arnold PA3FBF
Mijdrecht, Holland

TOPS

I was interested to read the notes about TOPS CW CLUB in MM39 (p.12). The origin of the word was explained to me many years ago by Phil Evans, the Club Secretary. If you turn it into Yorkshire dialect you will get "T'Ops", and again if you then translate this into English you will get "The Operators."

As a Yorkshire Dalesman I have always remembered this though I do not know how Phil arrived at the idea as I'm sure he was a Welshman. However, I believe he was stationed at Catterick Camp during the war and perhaps that is where he got the idea.

After the Newsletter ceased publication, I continued as Contest Manager for some years as I thought the club was only 'in limbo' and would continue when Phil thought he was able. A member in Sweden suggested that he could take over the job when I 'had had enough' and it was later passed to OE1TKW.

I would certainly be pleased to see the Club revived but whoever takes it on will have a lot of work to do. The FISTS Club has largely taken over where TOPS left off and has a much larger membership than TOPS used to have.

What happened to the Amateur Radio Mobile Society?

Peter Lumb G3IRM (TOPS 305)
Bury St Edmunds, Suffolk

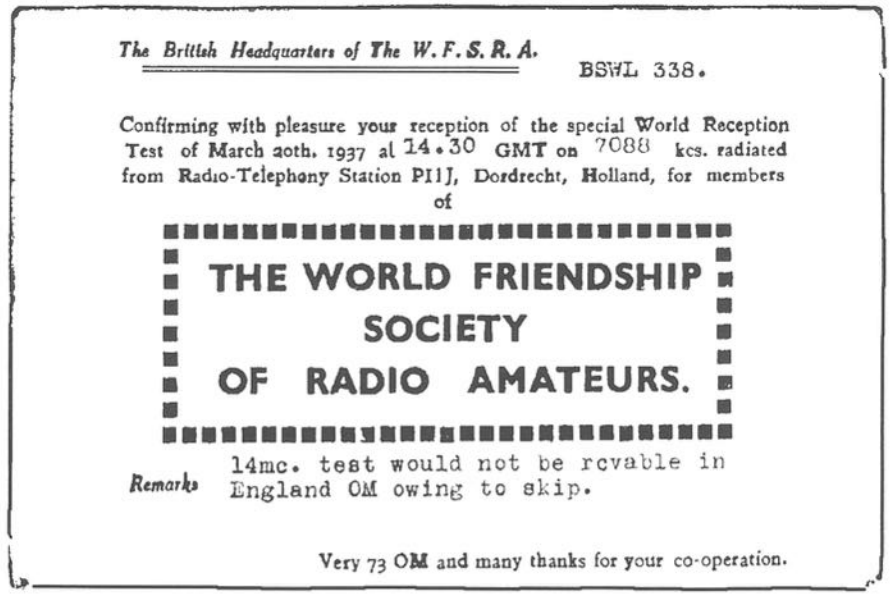
In the article on TOPS in MM39 (p.12), which was founded by GW8WJ and G6AQ under the auspices of the World Friendship Society of Radio Amateurs, you asked for information about the WFSRA. I joined this society in 1936 and, for what they are worth, these are my recollections.

In 1936, I was a member of the British Short Wave League (Membership No. BSWL 338). Newsletters, etc., were circulated and the BSWL numbers were useful when sending SWL reports to stations heard.

This society promoted the WFSRA in its literature. I think the British organiser of the WFSRA (was it G6AQ?) was a friend of the BSWL secretary. I met them both at a small gathering of BSWL members at Radiolympia in, I think, 1936 and joined the WFSRA myself shortly afterwards.

Membership of WFSRA was dependent on signing a form promising not to allow one's radio equipment to be used for warlike purposes, or words to that effect. This was not very significant for a teenage schoolboy possessing only a simple home-built receiver! Nevertheless, I received an ornate membership certificate to hang on the wall.

Apart from possibly a small one-off payment for costs, I do not recall any regular subscription or WFSRA newsletter. There were occasional special events, such as the transmission from PI1J in Holland on 20 March 1937, for



The British Headquarters of The W. F. S. R. A.

BSWL 338.

Confirming with pleasure your reception of the special World Reception Test of March 20th. 1937 at 14.30 GMT on 7088 kcs. radiated from Radio-Telephony Station PI1J, Dordrecht, Holland, for members of

THE WORLD FRIENDSHIP SOCIETY OF RADIO AMATEURS.

Remarks 14mc. test would not be revable in England OM owing to skip.

Very 73 OM and many thanks for your co-operation.

WFSRA QSL card received by Robert Charlton. TOPS CW Club was originally formed under the auspices of this society

which I received a QSL card in response to a reception report.

The postmark on the card was Berkhamsted which I think is probably where the WFSRA British headquarters were located (G6AQ QTH?). I regret I no longer have the membership certificate.

Robert Charlton G3CPC
Twickenham, Middlesex

Auxiliary Callsigns

I find that I often wish to communicate with fellow hams off the bands, simply because, in the absence of a scheduled contact, QSOs are quite happenstance.

Until somewhat recently the postal service ('snail mail') has been the only recourse for this purpose since, understandably, telephone numbers are not given in the callbooks and databases.

Now that on-line services are becoming commonplace, I wonder whether we should publicise on-line addresses as auxiliary callsigns. Becoming somewhat common are letterheads that carry an on-line address or two for fast communication. Examples are when arranging, or changing, schedules and frequencies for QSOs; also when exchanging long files, such as hard-to-obtain magazine articles or diagrams.

I have found these ancillary media of communication to be most useful, and I must say that their use has enhanced, but never substituted for, my enjoyment of CW. My recommendation, then, is that we all circulate our on-line addresses through the organisations we belong to that keep membership rosters, and in

our private communications with each other. I would appreciate if mine could accompany this letter if it is published.

John W. Martin, KB7RFE
Tucson, Arizona, USA.
jaymart@primenet.com

(If other correspondents have E-mail addresses and would like them published with their letters, please mention this when writing. – Ed.)

Marconi or Ericsson Key?

Regarding the 'unknown' key at the bottom of page 39, MM38, I have two keys identical to this. One was originally bought from the Marconi Company by Louis Varney, G5RV, when he left their employment. Since he bought it from Marconi, he thought it was a Marconi key.

The second key has a note attached to it: 'This key was used to control Marconi 20kW Transmitter at Drummondville, Quebec, from October 1926 to October 1963.' This was signed by the late Fred Howe, VE3JU, who worked for a while for the Canadian Marconi Company in the '20s, working in Montreal and Drummondville.

From this information it would appear that Marconi supplied these keys with their transmitters during the early '20s, but they may have obtained them from another supplier.

The design is not typically Marconi, but rather resembles the old Swedish Ericsson telegraph key with its long lever, and with both contacts at the rear of the lever. It was certainly not unusual for transmitter manufacturers to obtain their keys from companies who specialised in them, and it is even possible Marconi bought the keys from Ericsson.

As an example, I recently picked up a standard Nye Viking SPEED-X hand key mounted on a heavy 4 x 6in ebonite base, and was told that the key and base was supplied to the US Navy by Collins (now Rockwell) as standard equipment with Collins transmitters.

Murray Willer VE3FRX
Toronto, Ontario, Canada

The unknown key at the bottom of page 39, MM38, has been identified by G3JUL as being used on a Marconi/Adcock HF D/F terminal of 1950.

Gerald Stancey G3MCK
Staines, Middlesex

KEY W/T (AUST) No.1

With reference to Colin McKinnon's key Z1/ZAA 0274, shown on page 16 of MM37, my own key of this type is marked Z1/ZAA 7990 KEY W/T (AUST) No. 1, and has no later nameplate covering the earlier designation.

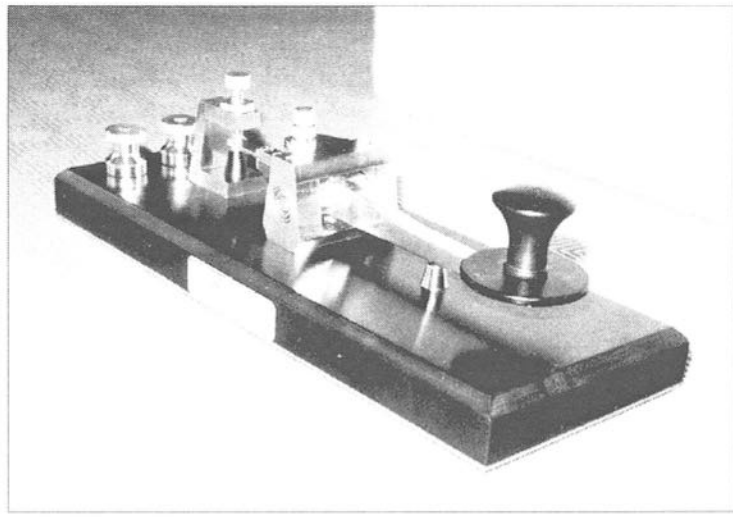
I feel the black plastic terminal knobs are original. My key has them also, and I can remember seeing the same type on other equipment in the past.

Peter Lord VK3N/XPL
Camberwell, Victoria, Australia

Golden Section Key

Using Dr Jim Lycett's drawings, as made available by *MM*, I have made two Golden Section keys as featured in MM27, page 12, one for myself and one for my friend Bill, VK2FKE.

They are a delight to look at and to use. Having been an amateur for only four years, however, and knowing the code only for that period, I asked Bill



Wes Tyler's Golden Section Key

Photo: VK2WES

who is a professional to put the key through its paces. His comment: 'A lovely piece of gear'!

I made the key from scrap brass from a local yard. The base is salvaged 20mm black phenolic electric switchboard terminal material. The pin is 3/16in stainless steel and the bearings are sealed units. The sections and screws were machined to suit. The tools I used were a 4 1/2in centre lathe, a 1/2in pedestal drill, a 6in bench grinder and the usual hand tools.

I made some additions to Jim's design. There is a third terminal connected to the copper point in the back stop for relay operation in changing over a QRP rig. There is a safety stop under the arm, used when transporting the key to avoid damage to the contact plate and the points. A 14-gauge brass plate has been countersunk screwed to the underside of the base; and future additions will be the insertion of brass bushes in the base for securing screws, also brass covers over the bearings to improve appearance.

I thoroughly enjoyed this project and the results justify the hours invested in it. My thanks to *MM* and to Jim Lycett for making it possible.

Wes Tyler VK2WES
New South Wales, Australia

Reading Visual Signalling

I was interested in the recent correspondence on this subject. In 1942 I went by troopship round the Cape in a convoy escorted by Royal Navy destroyers. They used lamp Morse to signal between ships, and I found that I could easily read the traffic which was in plain language.

At that time I had held my ham ticket for six years and I guess my normal CW working speed was 16–18 wpm – certainly less than 20 wpm. So I doubt if they were flashing their lamps at over 10–12 wpm.

You can, however, do an order of magnitude calculation:

The standard word PARIS (taking the dot as 1 unit, the dash as 3, spaces between dots and dashes as 1, between letters 3, and between words 5) equals 48 units. The fastest speed will be limited by the operator's ability to separate the end of a dot or dash from the start of the next dot or dash, i.e., a time of 1 unit.

The persistence of vision will depend on the intensity of the light. Let the persistence be 1/p seconds. At maximum speed the unit will be 1/p seconds, therefore PARIS will take 48/p seconds.

The number of words per minute will be 60 ÷ 48/p = 60p/48 = 5p/4 wpm.

So, if the persistence of vision = 1/5 second (p=5)

maximum speed is about 6 wpm

If persistence of vision = 1/10 second (p=10)

maximum speed is about 12 wpm.

These figures correlate well with experience. I do not know what average persistence of vision figures are, but I guess they are in this region. The calculation probably indicates upper limits.

Bill Lord GM5NU
Edinburgh, Scotland

(With a space of 7 units between words, the standard word equates to 50 units. Using this, the above calculations give the same results.

Persistence of vision varies according to which part of the eye's retina is receiving the image. The flickering of lights driven from a 25Hz generator is clearly visible., but the 50Hz flicker of an interlaced TV picture is apparent only to peripheral vision – looking out of the 'corner' of the eye. Can any reader provide us with figures relating to the persistence of vision? – Ed.)

Western Electric Key

The AT & T, Western Electric, key on page 35 of MM39 is a fairly common key here in the States. It is very similar to the J.H. Bunnell warhorse, the Triumph key. Although WECo was the manufacturing arm for Bell, J.H. Bunnell made some of their keys to WECo specifications.

Dr Joseph Jacobs
Northport, NY, USA

Readers' ADs

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TWO KEYS ZA 34835, as used in Type A Mk.3, Type B 3Mk.II (B2 set), and other WWII SOE W/T sets. Price $75.00 each (plus $5.00 shipping outside Continental USA). Dr Joseph Jacobs, 60 Seaview Terrace, Northport, NY 11768, USA, 'phone (516) 261-1576.

WANTED

TELEGRAPH EQUIPMENT, especially Wheatstone perfo/keyboard (3 keys); Baudot transmitter and keyboard (5 keys); single needle telegraph. Can be collected in the UK. Exchange items (telegraphy, telephony, radio) also available. Fons Vanden Berghen, Lenniksesteenweg 462/22, B-1500 Halle, Belgium. Tel: Office +32.16.38.27.21. Late evening: +32.2.356.05.56.

BROWN BROS BUG or combination key model CSA (bug and straight key). Also 1934 Mac Key (send left view photo). Have interesting trades or cash. Tom French 'the McElroy Collector', 151 Barton Road, Stow MA 01775, USA. Phone (508) 562 5573, try between 1200–2400 GMT.

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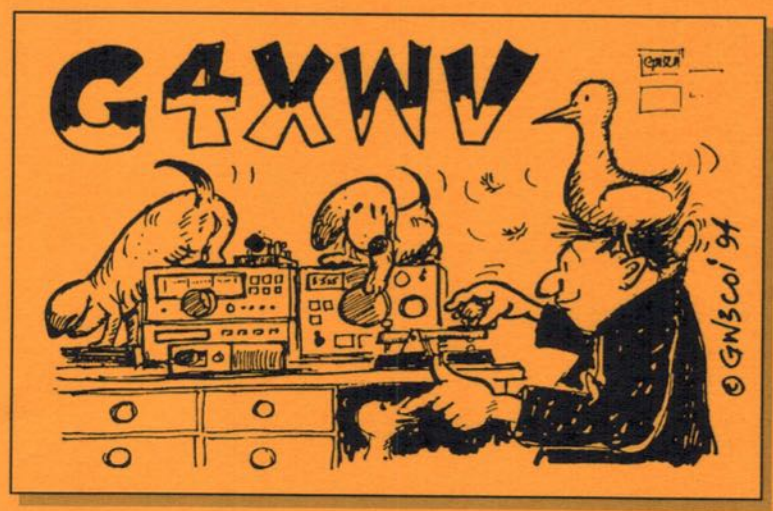

GØFPV

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EASTWOOD,
LEIGH - ON - SEA,
ESSEX, SS9 4DE
ENGLAND

OPERATOR: IAN MARQUIS
BORN 1963 - LICENSED 1986

Vy 73! TKS FER QSO.

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ELECTRIC TELEGRAPH MESSAGE

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NR 138 APRIL 30TH 1995

QUESTACON
30 APR 1995
The National Science & Technology Centre Canberra

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MR TONY SMITH
13 MORLEY ROAD SHERINGHAM
NORFOLK NR26 8JE ENGLAND

THIS MESSAGE COMMEMORATES THE LAST MORSE TRANSMISSION IN AUSTRALIA OVER A DEDICATED TELEGRAPH CHANNEL STOP THIS MARKS THE END OF AN ERA WHICH COMMENCED WITH THE OPENING OF THE MELBOURNE/WILLIAMSTOWN LINE IN 1854 STOP TRANSMISSION IN OTHER YEARS WILL BE BY VOICE CHANNEL AND MODEMS STOP
REGARDS --- JOHN HOULDER AND CREW

1700 HRS/30TH A LM

Courtesy of Morsecodians Fraternity volunteer operators using facilities provided by Telecom Australia

Telecom AUSTRALIA

The Morsecodians Fraternity operated their annual telegraph 'landline' from the National Science and Technology Centre at Canberra to the historic Overland Telegraph Station at Alice Springs for nine days in April. This year they also linked up with the Killer Whale Museum at Eden, New South Wales, while Eden was celebrating the 125th anniversary of its Telegraph connection with the Gabo Island Lighthouse. Allan Moore, VK1AL, wrote to say "we all had a great time, and are literally 'Morsed-0ut'!" MM hopes to carry a fuller report later.

The above telegram, sent over the line from Alice Springs to Canberra records the fact that Telecom Australia is unable to provide a dedicated telegraph channel for future events. The use of a voice channel, with modems and telegraph relay sets, however, will make the end result exactly the same.