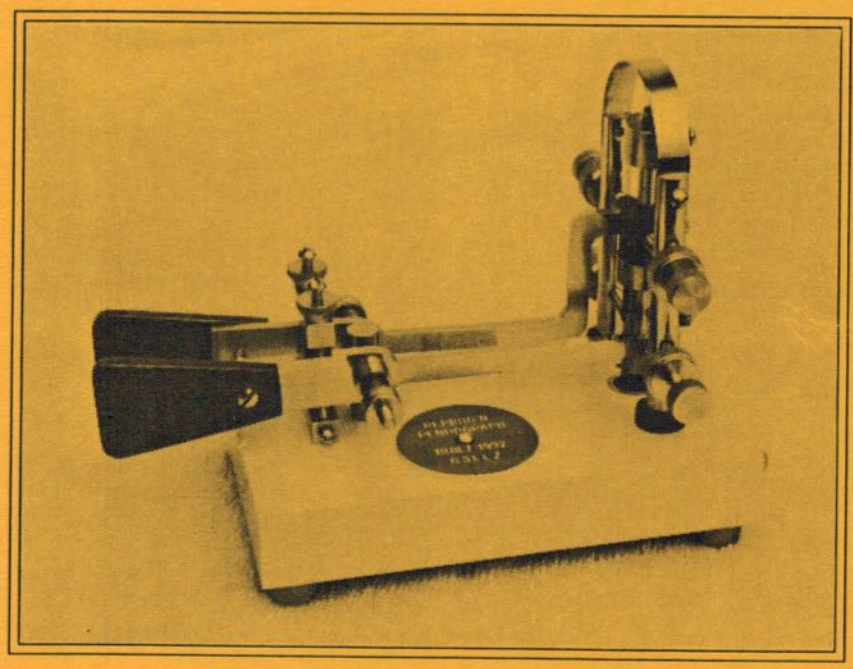
Number 24 – Summer 1992

Morsum Magnificat



The Morse Magazine

Morsum Magnificat

the Morse Magazine

MORSUM MAGNIFICAT was first published in Holland, in 1983, by the late Rinus Hellemons PA0BFN. Now published 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

A reproduction Australian Pendograph built by Dennis Goacher G3LLZ, based on sketches and photographs provided by John Houlder. The base is milled from ¾" mild steel and is hollow, similar to the original casting. Other parts are mainly brass, with finger paddles of teak. *(Photo: Dennis Goacher)*

(The original of this key was described by John Houlder in MM11, p.22. – Ed.)

Comment

IT'S THAT TIME OF YEAR when we look at the subscription rates for *Morsum Magnificat* and try to guess what the Post Office will do to ur mailing bill in their regular autumn price review.

So far as the UK is concerned, they've surprised us ll by promising no increase in 1992. However, wheth- r that means we can expect one any day after 1 anuary 1993 is not entirely clear. Neither is it clear /hether the price-freeze extends to overseas mail.

Despite this, we're taking a chance, and keeping ur subscription rates the same for 1992–93. I just ope they don't 'do the dirty on us'.

We sometimes get enquiries from readers about /hen their subscription falls due for renewal. You ıay rest assured that we do send out notices with the ıst issue of your subscription, but you can easily heck during the year by looking at the address label n the envelope from any copy of the magazine.

The code above your name on the label is in two arts. The letters are a simple short-hand indicator /hich tells us what sort of envelope and postage are equired for each address. The two figures are the umber of the last issue that you've currently paid or. (At this point, I can hear you all scrabbling ırough your waste-paper bins, trying to find the nvelope this magazine came in!)

Finally, a plea. When you send us cheques for ıbscription renewals, books, etc., would you please ıake them payable to G C Arnold Partners. I know ıat it's natural to write Morsum Magnificat, but our usiness account is in the partnership name, and the ew UK Cheques Act can make it difficult to bank heques made out to another name. Thank you for our co-operation!

Geoff C Arnold

G3GSR

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News

Morsecodians at Alice Springs

THE ANNUAL Canberra/Alice Morse telegraph circuit was open this year from Saturday, April 25 to Sunday, May 3, operated as usual by members of the Sydney Morsecodians Fraternity located at the Old Telegraph Station in Alice Springs and the National Science and Technology Centre in Canberra.

A brief look at a map of Australia will show the enormous distance involved in this latter-day landline (sounder) circuit, provided by courtesy of Telecom Australia. This year, the Morsecodians offered the public 'free' telegraph messages. Special forms were used for the occasion and the messages were written out by visitors in Canberra and transmitted to Alice Springs or written out in Alice and transmitted to Canberra, being posted to their final destinations by mail.

The reaction to this service was overwhelming and unexpected, probably because the word 'free' was included in the notices prominently displayed at each station. The proximity of Mother's Day had also been overlooked and a lot of people took the opportunity to send Mother's Day greetings (see example illustrated).

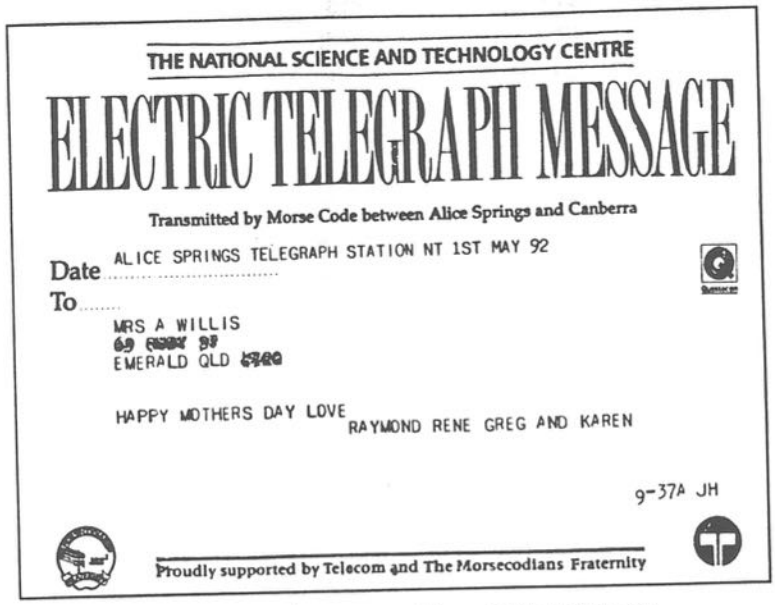
A total of 1007 messages were handled during the week, 485 originating in Canberra and 522 in Alice Springs, and there was a postal allowance at each end from the separate administrations. John Houlder reports, 'We blew this in the first three days. Fortunately everybody saw the value of the whole exercise so the postal budget became rather elastic!

'To give you some idea of the popularity of the free messages, I opened up the line at Canberra on Saturday morning, May 2. This was the "morning after" the "open night" at Alice when the Telegraph Station was thrown open to the townspeople for barbecues, etc., while those working at the station dressed in period costumes.

'After I exchanged pleasantries on the line, I was informed that they (Alice Springs) had 130 messages on hand for transmission to Canberra. This would have been a fairly daunting task on a Morse circuit in the good old days in the Post Office. We took it in turns, taking about forty or so each at this end and we were clear by 11.30 a.m. except for the messages that were by now starting to bank up from the Saturday morning lodgements.

'The operation coincided with National Heritage Week in Australia, the theme of which this year was Australian WWII history. It is probably not widely known to *MM* readers that Darwin, capital of the Northern Territory, received about 70 bombing raids from the Japanese Air Force over a period of 18 months, commencing in February 1942.

'This year was exactly 50 years after the bombing and Morsecodian Reg (Curly) Moger obtained from the National Library in Canberra copies of all the press stories relating to the bombing in 1942.



THE NATIONAL SCIENCE AND TECHNOLOGY CENTRE

ELECTRIC TELEGRAPH MESSAGE

Transmitted by Morse Code between Alice Springs and Canberra

Date ALICE SPRINGS TELEGRAPH STATION NT 1ST MAY 92

To

MRS A WILLIS
69 [illegible] ST
EMERALD QLD 4720

HAPPY MOTHERS DAY LOVE RAYMOND RENE GREG AND KAREN

9-37A JH

Proudly supported by Telecom and The Morsecodians Fraternity

Electric telegraph message – Happy Mother's Day, etc.

On the evening of Friday, May 1, I retransmitted all these stories over the line to Alice Springs.

In all some 2400 words were transmitted and the press reports were then displayed on notice boards for the public to read. All in all, it was our most successful year yet and each year in Alice Springs it gets bigger and better and is becoming more widely known.'

All information in this report was provided by John Houlder, Charnwood, ACT, Australia.

Europe for QRP

ALL LICENSED radio amateurs worldwide are invited to participate in this year's Europe for QRP weekend, organised by the G and OK QRP Clubs (UK and Czechoslovakia) to be held from 1600 UTC on October 2 until 2359 UTC on 4 October 1992.

Mode and frequencies: CW only, on 3.560, 7.030, 14.060, 21.060 and 28.060MHz, all ±10kHz. Power not to exceed 5 watts RF output. Stations unable to measure output should take half their DC input (e.g. 10W input = 5W output, etc.). **Call:** CQ EU QRP.

Exchanges to be logged: RST, power output and name of operator.

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

Separate log sheets are required for each band showing, for each contact, date, time, call, RST, name, and power received and sent. A summary sheet must also be provided showing call, name and address, claimed score for each band, total claimed

score, and brief details of equipment used.

Logs must be sent to P. Doudera OK1CZ, U1 baterie 1, 16200 Praha 6, Czechoslovakia, by 15 November 1992. Merit certificates will be awarded to the three leading stations from each continent. The judges' decision is final in case of dispute.

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

Russian QRP contest

ALL AMATEUR STATIONS are invited to participate in this contest which will be held from 1500 UTC August 22 to 1500 UTC on 23 August 1992. Call CQ R QRP TEST, using 5 watts or less on all QRP frequencies, plus or minus QRM.

Exchanges: RST/serial number/power. Milliwatt stations should use 01 for 100mW, 02 for 200mW, and so on.

Scoring: Contact with HQ station RV3GM counts as 10 points. Russian stations in own continent, 1 point, Russian stations outside own continent, 3 points.

Multipliers: Each Russian prefix contacted, RA1, RA3, RV1, RV3 and so on, counts as a multiplier on each band. Total score is the total points for all bands multiplied by the total number of multipliers.

Logs: Separate sheets required for each band, together with a summary sheet showing score claimed, station details and name and address of contestant. Logs to be sent to U QRP Club, PO Box 229, Lipetsck, 398043, Russia, within 30 days of the contest. Stations enclosing a US $1 bill will receive a special prize. Leaders will receive certificates.

Important note: Owing to the recent political changes, stations outside Russia must only work stations within the Russian Republic in this contest, but each prefix worked within the Republic will count as a multiplier.

Please support our Russian friends who are trying so hard to establish QRP in their country despite many difficulties.

From Gus Taylor G8PG, Communications Manager, G-QRP Club.

FOC Late Summer CW QSO Party

ALL AMATEURS ARE INVITED to this party which aims to promote two-way CW activity on all amateur bands. It is not a contest and there is no basic information to exchange. The idea is simply to chat to each other and non-members working members will have the opportunity to learn a little about the First Class CW Operators' Club and what it stands for.

The party begins at 0000Z on Saturday September 5 and ends at 2400Z on Sunday September 20. The club station G4FOC will be activated by the President and members of the committee. FOC activity on the main bands is around 25kHz up from the bottom band-edge and members will make themselves known by calling CQ FOC during the party.

Logs and reports will be welcomed by Peter Miles G3KDB, 151 Leomansley View, Lichfield, Staffs WS13 8AU, England, before the end of October, to gauge the levels of activity, propagation, etc. Plaques will be awarded to both members and non-members for those working the greatest number of FOC members during this event and to those who have contributed to the success of the event in any way considered worthy of a prize by the adjudicators.

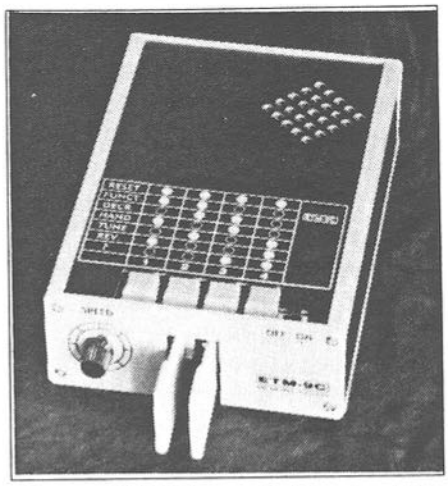
Information from Chris Page G4BUE, on behalf of FOC.

New Samson Keyer

HERMANN SAMSON DJ2BW, who has been producing electronic keyers at his works in Germany for over 26 years, has recently released a new iambic memory keyer, the ETM-9C, containing (by arrangement with Idiom Press) the same microprocessor chip and firmware as the CMOS Super Keyer 2 described in *QST*, November 1990 and the *ARRL Handbook 1992*.

This keyer employs microprocessor technology and has only four Command buttons. Some Commands are entered by using the buttons, but most are simply keyed in by Morse code via the paddles.

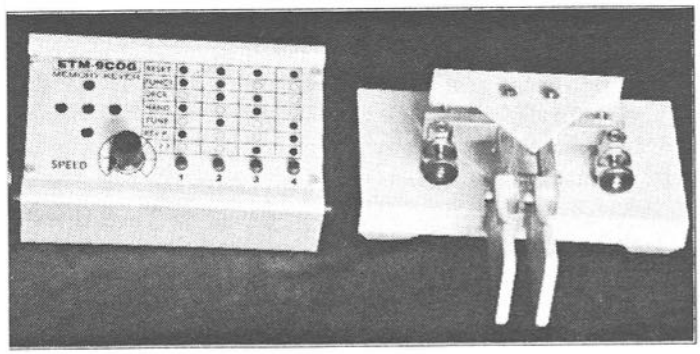
Amongst its many features, the keyer has optional dot and dash memories; various other memory facilities, including a memory entry immediate correction facility; nine selectable timing patterns, which can mimic nine different types of keyer, including Curtis; digital and linear analogue speed control from 6 to 60 wpm, with speed announcement via sidetone; adjustable weight control from 25–75%; optional reverse keying for left-handed operators; auto contest serial numbers, with switched decrement facility if contact is not completed; high speed mode, 500–990 wpm, for meteor scatter operation; low power consumption, claimed to give over 12 months' operation from three AA-size batteries; and a detailed operating manual.



Samson ETM-9C keyer with integral paddles

The new keyer has the same paddle assembly as other keyers in the Samson range, e.g. the ETM-5C and the ETM-8C, using point pivot and cup steel bearings, and solid silver contacts adjustable for gap and tension. This assembly is also available separately as the ETM-SQ twin-paddle key mounted on a heavy enamelled steel base

Two versions of the new keyer are



Samson ETM-9COG keyer and ETM-SQ twin-paddle key

available, Model ETM-9C with integral paddles costs £149.00 plus £3.75 post and insurance; and Model ETM-9COG without paddles is £102.00 plus £3.10 post and insurance. The ETM-SQ twin-paddle key costs £37.00 plus £3.75 post, etc.

The sole UK agent, Frank H. Watts G5BM, can arrange for the ETM-9C and ETM-9COG to be dispatched direct from Germany to foreign customers in Europe or elsewhere via airmail (insured) without payment of Value Added Tax.

Further information about this arrangement, and about all Samson products, can be obtained from him at Woodland View, Birches Lane, Newent, Glos. GL18 1DN, England.

A1A available to *MM* readers

CLAUDE PASSET 3A2LF publishes an occasional Morse journal, *A1A*, in the French language, containing much information of interest to key collectors. Issue No. 3 (32 pages, A5) has just been published and is available to readers of *MM* free of charge except for postage costs.

To obtain a copy, send two IRCs to Claude Passet, 7 rue de la Turbie, MC-98000 Monaco.

Information from Claude Passet, 3A2LF.

Nottingham Morse Seminar for 1993

RON WILSON G4NZU has provided advance information that a Morse seminar will be held at Sherwood Community Centre, Mansfield Road, Nottingham on Saturday, 15 May 1993.

A previous seminar, held in 1989, and reported in MM13, p.34, was extremely well received by most participants and it has been a matter of great regret to them that it has not been possible until now to plan a further seminar.

More details will be published nearer the date, but in the meantime Ron will welcome all ideas and suggestions regarding specific features, etc., which could be provided as part of the 1993 event, even if he can't promise to arrange everything suggested!

Please write to him with your ideas at 9 Greythorn Drive, West Bridgford, Nottingham, NG2 7GG – and make a note in your diaries now to reserve the date for what promises to be a very enjoyable and interesting day for all Morse enthusiasts, whatever their abilities.

UCWC Contest 1992

ALL LICENSED AMATEURS, and short-wave listeners, are welcome to take part in this CW-only contest organised by the International Radiotelegraphy Morse Club (UCWC), which is a member of the European CW Association.

Date and time: 4 October 1992, from 0000–0800 UTC. **Call**: CQ UCWC. **Bands:** 3.5–28MHz (excluding WARC bands). **Mode:** CW only. **Exchanges:** UCWC members – RST plus membership number; non-members – RST plus name.

Scoring: Each QSO within same continent – 1 point; Each QSO between different continents – 3 points. SWLs score 1 point for each logged QSO, which must include calls, numbers, etc., of both stations.

Multiplier: Each UCWC member worked gives one multiplier point on each band. On 3.5 and 7MHz multiply scoring by 2. UCWC members do not qualify for multipliers, score is QSO points only.

Classes: A – UCWC members; B – SWL-UCWC members; C – non-members of UCWC; D – SWLs not members of UCWC; E – club stations.

Awards: Special memorial cup for winner of each class; UCWC awards for 2nd and 3rd place in each class; Special memorial pennants for 1st place in each DXCC country.

Logs: to be sent 'till November 1992' *(presumably that means end of November – Ed.)*, by registered letter to UCWC Contest Secretary, UA4YR Vladimir Momot, Strelka 23-8, Alatyr, Shuvashia, 429800, Russia.

Results: Contestants wishing to receive the full results of the UCWC 1992 contest should make a note to this effect in their logs and enclose one IRC.

UCWC Award

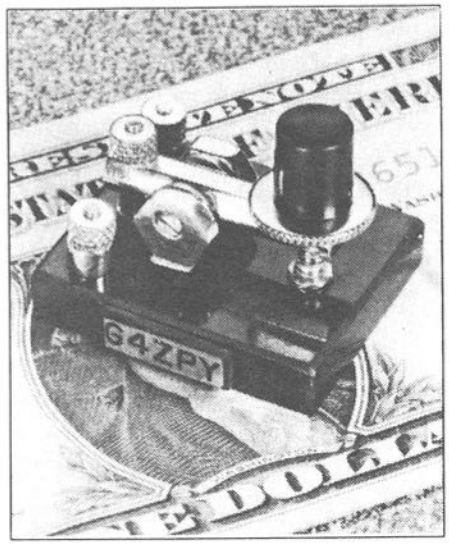
THE UCWC CONTEST provides a good opportunity to qualify for the UCWC Award which is available for CW-only contacts (all bands) made with UCWC members after 1 January 1990. Class 3 is awarded for contacts with 10 members; Class 2 for 25 members; Class 1 for 50 members. QSLs from UCWC-SWL members are valid for the award.

Applications and fee (DM7; US $5; or 8 IRCs) by registered letter to Vladimir Stepanenko UB1RR, PO Pox 28, Chernigov-Postamt 250000, Ukraine.

Baby Morse Key

A new key, believed to be the smallest in the world, has recently been announced by G4ZPY Paddle Keys International, of 41 Mill Dam Lane, Burscough, Ormskirk, Lancs L40 7TG.

The G4ZPY Baby Key has a key arm just 25mm (1 inch) long, with fully adjustable silver contacts and adjustable spring tensioner. The key is mounted on a polished Paxolin base measuring 30 x 25 x 6mm. *(When I went looking for the keys on the G4ZPY stand at the RSGB Convention in Birmingham in May, I coudn't find them at first, they are so tiny! – Ed.)*



Although Gordon Crowhurst G4ZPY believes it to be the smallest operational Morse key in the world, the price of the Baby is comparable with that of keys of a more conventional size, as it takes just as long to make.

Initially, supplies of the Baby are restricted, but it is already proving popular, especially with overseas customers of G4ZPY.

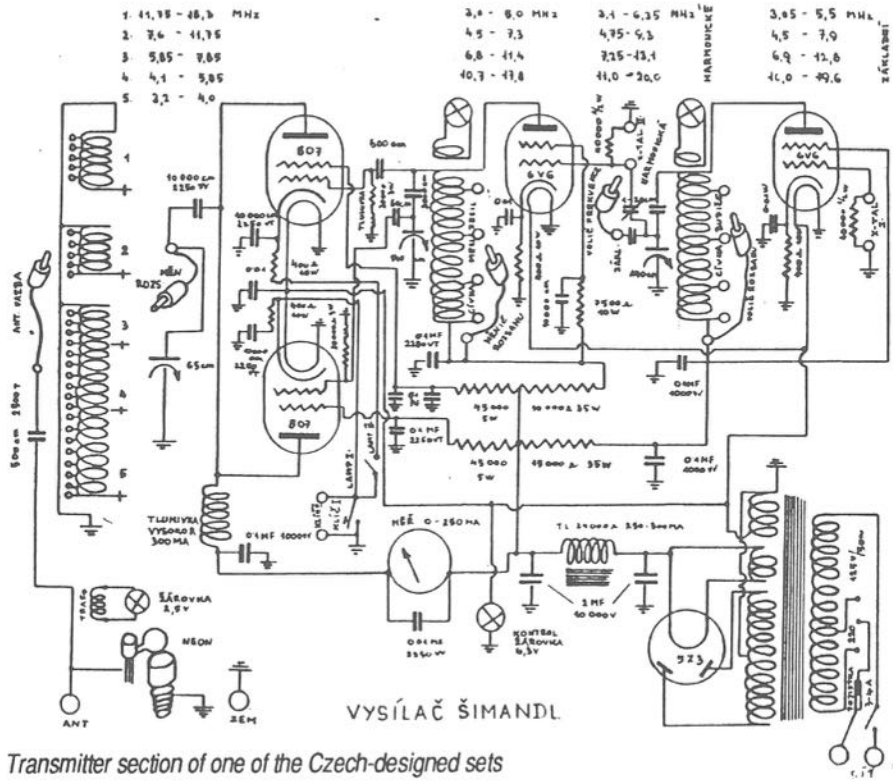
A copy of the new G4ZPY Paddle Keys International colour brochure, with details of the Baby Key, can be obtained by sending a SASE (UK) or 2 IRCs (overseas) to the above address.

Commemoration

DURING WWII Czechoslovak Independent Armoured Brigade Group was established in Great Britain. Some of its members were trained in special paradescent courses. RAF planes (138th Special Tasks Squadron) transported them over occupied Czechoslovakia where they were dropped.

These men performed various tasks, such as communication, intelligence, organisational, sabotage and terrorist, in the occupied territory. Among them there were 40 radio-telegraphists, 12 of whom were killed during the fight against fascism or were executed.

OK QRP Club decided to commemorate the activities of these radio-telegraphists during the annual OK/G QRP weekend *(see page 3 for*



Transmitter section of one of the Czech-designed sets

details). During 1992 a special event station OM5MCP will be active from the QTH of the club station OK1KBS as well as from some places where parachutist and resistance group radio stations were active. On some occasions the original TX/RX used by the telegraphists will be used (this is a radio station designed and constructed by a Czech constructor in England).

QSL for OM5MCP (Memory of Czechoslovak Para-groups) should be sent via OK1HR. OK1HR will also send a commemorative card to all who send logs from the OK/G QRP weekend (please include 2 IRCs to cover costs and postage).

A New Application for the Morse Code

A couple of weeks ago, I was standing waiting to pay for some purchases in our local B&Q do-it-yourself super-store, when suddenly from the next check-out came an electronic bleep with the unmistakable rhythm '– · · · – · · · – · · · –'. I turned in amazement and found that it seemed to be coming from a small black plastic box beside the till.

The neighbouring check-out was unmanned, and gave the impression of having been suddenly abandoned by its operator, for there were price lists, rubber stamps and pads, etc., still strewn across it. Suddenly, a supervisor hurried across from the office, tidied away all the bits and pieces, made some adjustment to the till, and pressed a button on the bleeping black box.

The 'Xs' stopped, and a single, satisfied 'OK' in Morse came from the box, '– – – – · –' followed by silence.

Obviously it is some sort of security device, but why signal in Morse? Do B&Q workers have to learn the code? The staff were, perhaps naturally, somewhat guarded in their response to my enquiries about it at the time.

The development engineer who designed the box obviously knows and uses Morse. In view of the adoption of XXXs as a warning signal, I wonder if he is an ex-seagoing radio officer, for 'XXX' is a recognised alerting call in the maritime service indicating that an 'Urgency' message is about to be transmitted .

Whatever the background to this strange happening, it is further proof that Morse is by no means dead!

G3GSR

Bookshelf

A mail order book service for selected telegraphy and radio titles. The letters MM or RB followed by a number after each description indicate the magazine and issue in which a review appeared.

The prices quoted for each title are inclusive of postage and packing, the first figure being for despatch to UK addresses, the second for despatch to the rest of Europe by airmail or elsewhere in the world by surface mail. Airmail rates for the rest of the world on request, or if you are using your credit card we can ship by air at your instruction, simply adding the difference in postal cost to your bill.

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G C Arnold Partners, 9 Wetherby Close, Broadstone, Dorset BH18 8JB, England, *marking the envelope 'MM Bookshelf'.*

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Introduction to Key Collecting *by Tom French*

What to look for, where to find them... with photos and original ads, from ordinary keys to rare models. Helps you build a superior collection while avoiding common mistakes. *(MM17)*
64 pages, 7 x 8.5in, softcover, saddlewire bound
£6.45 (UK): £6.75 (Eur/Sur)

Vibroplex Collector's Guide *by Tom French*

Chapters on identifying the parts of a bug and on distinguishing the seven 'look-alike' Vibroplex bugs. Methods of adjustment. Complete text and drawings of all major Vibroplex patents. *(MM17)*
87 pages, 8.5 x 11in, softcover, perfect bound
£9.65 (UK): £10.15 (Eur/Sur)

Bunnell's Last Catalog (with commentary) *by Tom French* (American Morse Series)

The 1965 catalogue of J.H. Bunnell & Company, manufacturer of keys, sounders, etc., abridged from the 1918 catalogue, plus a commentary and a 1918/1965 price list. *(MM23)*
36 pages, 5.5 x 8.5in, softcover, saddlewire bound
£4.65 (UK): £4.85 (Eur/Sur)

Vibroplex Pocket Reference *by Tom French*

Indispensable for identifying and dating the many models of the Vibroplex bugs.
6 pages, 3.7 x 6.5in, folder
£1.25 (UK): £1.55 (Eur/Sur)

Railroad Telegrapher's Handbook *by Tom French* (American Morse Series)

Illustrations of landline telegraph equipment, listings of train order rules, and ads from early telegraphers' magazines. Everything you need to know to become a railroad telegrapher. *(MM22)*
60 pages, 7 x 8.5in, softcover, saddlewire bound
£6.45 (UK): £6.75 (Eur/Sur)

Mac-Key Blue Book *by Tom French*

If you're interested in the bugs made by Ted McElroy (Mac-Keys), bring this booklet along to all the hamfests and flea markets. Authoritative, illustrated, super-informative. *(MM24)*
16 pages, 5.5 x 8.5in, paperback, saddlewire bound
£3.15 (UK): £3.40 (Eur/Sur)

Keys, Keys, Keys *by Dave Ingram K4TWJ*

The 'key story' from the 1800s right up to the present day. Covering hand keys, 'bugs' and automatics, military keys, home-made keys, unusual and rare keys, plus restoration, with an average of around 2 photographs per page. *(RB13)*
102 pages, 7 x 10in, paperback
£6.55 (UK): £6.95 (Eur/Sur)

Het Racal Handboek

Compiled by a Racal enthusiast in Holland, with copies of the original manufacturer's technical publicity leaflets for a wide range of receivers, transmitters, etc. About one third of the material is in Dutch, and the rest in English. An essential reference work for the Racal collector. *(RB14)*
102 pages, 8.25 x 11.75in, paperback
£12.50 (UK): £13.00 (Eur/Sur)

Radio Art *by Robert Hawes*

A fascinating 'coffee-table' book describing the evolution of the wireless set, with special reference to cabinet design and the social and psychological influences which have shaped its form and colour from the earliest 'bird's-nests' and 'breadboards' to the present day. Full of glorious colour photos of wireless sets from the 1920s to the 90s, including some rare and unusual ones. *(RB16)*
128pp, 11.75 x 9in, hardback
£17.50 (UK): £18.00 (Eur/Sur)

Radio Art Postcards *by Robert Hawes*

A selection of 30 colour photos from *Radio Art*, easily removed for display or to post to your friends. *(RB15)*
6.125 x 4.125in, paperback
£3.50 inc. VAT (UK): £3.50 (Eur/Sur)

QTC – a Seagoing Radio Officer's Scrapbook

This title is no longer available from 'Bookshelf'

Single-Needle on the LNER

Part 2

FURTHER EXTRACTS FROM THE BOOKLET Let's Send a Message by the Single Needle, *published in 1943 by the London and North Eastern Railway—*

The Parts of a Message

Look at the telegram form illustrated (**Fig. 2.1**). In addition to the actual message there is a column at the left-hand side containing letters and figures. This column is for your, the telegraphist's use.

First there is the *prefix*. Every telegram must have a prefix. There is a complete list of the various prefixes in the LNER book of *Instructions relating to the Transmission of Telegraph Messages.* (This book should be kept near your instrument.) At the bottom of the list, reproduced here, you will see 'DB', the prefix used on an ordinary message. If you are sending a 'DB' to a station for passing on to another not on your circuit, 'DB' becomes 'DL'. The transmitting clerk at the passing-on station alters the prefix back to 'DB' when he sends the message on.

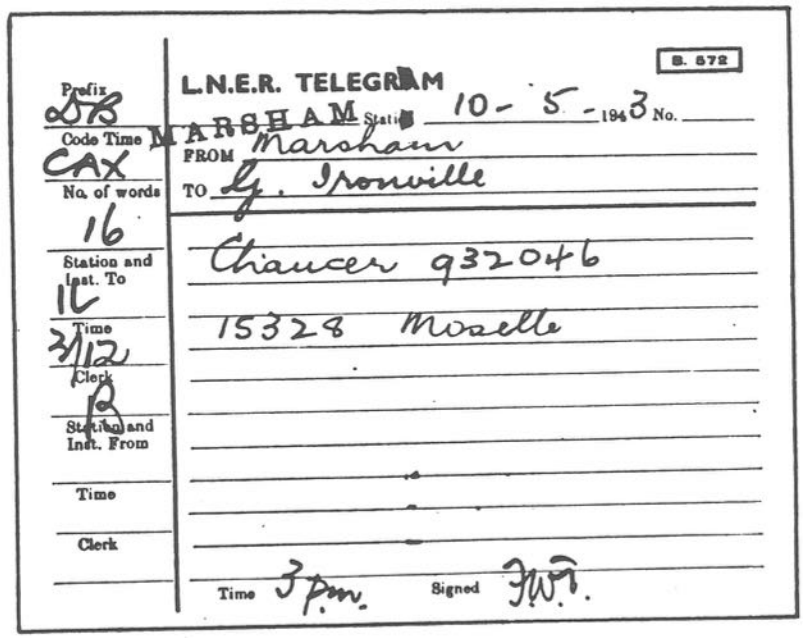


Fig. 2.1

Next there is the *code time*. This is fully explained under "How to use the Timing Code'.

When counting the *number of words* (the next part of the message) remember that a single character standing on its own is, for telegraphic purposes, one word. So also, is each figure in a number. The first of the numbers in the specimen message counts as six words; the second as five words. The counting of words is fully dealt with in the *Instructions* book mentioned above.

The portion of the telegram form headed '*Station and Inst. To*' is for a record of the callsign of the station to which a message is telegraphed. If you have a choice of circuits, the number of the instrument actually used is inserted in this space.

The '*Time*' heading of the next space refers to the time the message is sent to, and acknowledged as received correctly by, the other operator.

The space headed '*Clerk*' is for the sending operator's initials.

The three spaces at the foot of the column are used similarly when receiving a message, the time being that when final acknowledgement is sent to the sending station. At transmitting stations, where a message is received on one circuit and sent forward on another, all the spaces on the left of the form are filled.

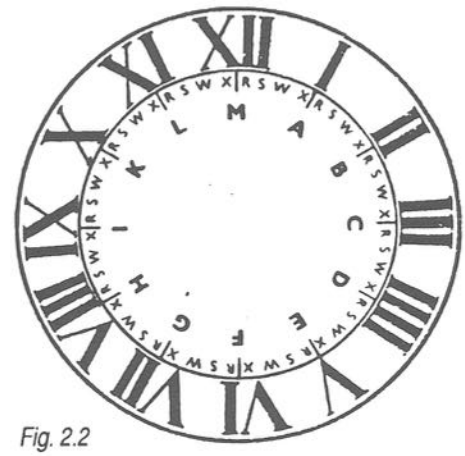


Fig. 2.2

The words above the heavy horizontal line on the message form are the address. Those below the line are the *text*, or 'body' of the message.

The '*Time*' space at the foot of the form is for the time the message is written by the sender, who then signs or initials the message for handing in.

How to use the Timing Code

Under the prefix on the message form is the code time. This indicates the time the message was actually handed in to the sending clerk. A message may be written by someone a distance from the sending station (for example a Locomotive Running foreman), signed by him and timed (at the foot), say, 6.30 p.m. Yet by the time it reaches the clerk at the telegraph it may be 6.40 p.m., and that is the *time of handing in*.

Returning to the specimen message (which was written out at 3 p.m.): the code time is CAX, which means 3.9 p.m. The clock face (**Fig. 2.2**) is an unusual one. It has been specially drawn to show you how code time is arrived at and why CAX means 3.9 p.m.

Each hour figure from 1 to 12, you see, is represented by one of the letters A to M, excluding J, which might be confused, in writing, with I. If a message is handed in exactly on an hour the code time is simply

the single letter that represents that hour. For instance, 4 o'clock, whether a.m. or p.m., is just D. Noon or midnight is plain M.

The letters A to M round the clock, as well as denoting the hours, indicate even multiples of five minutes. You know that D is 4 o'clock. To code 4.5 p.m. you write down D (for the fourth hour) and add A, which is at the fifth minute. DA, then, is 4.5 p.m. It follows that DB is 4.10, DC is 4.15, and so on.

Refer to the clock face illustration again: notice between each hour letter the smaller letters RSWX. One of these is used when the minute hand of the office clock, at the time of coding, is between any of the two letters in the series A to M. Then you write the hour letter as before, also the last large letter the minute hand has *passed* and, finally, the letter (R or S or W or X) at which the minute hand now *points*.

This may sound awfully difficult but actually it is a simple job to code time. Study the following examples with the aid of the clock face picture and see how easy it is:

1.9	AAX	5.27	EES
1.10	AB	6.2	FS
2.16	BCR	9.43	IHW
3.20	CD	11.50	LK

How to Send a Message

Having (a) secured the attention of the receiving station; (b) offered your message (by sending the prefix); and (c) heard an acknowledgement, you send the message by repeating the prefix, then giving the code time, number of words, address from, address to, and finally the body or text of the message.

The message on the specimen telegram (Fig. 2.1) would be sent as follows:

Signal	*Explanation*
DB	Prefix–ordinary message
CAX	Code time (3.9)
ONE SIX	Number of words spelt out without FI before 'one' and FF after 'six'
MARSHAM	Address from
TO	Sent but not counted
G	Goods Agent (abbreviated address)
IRONVILLE	Station to
II	End of Address
CHAUCER	Code word meaning 'Following wagons have arrived without labels. Wire consignee and destination'
FI	Commencement of figures
NINE THREE TWO NOUGHT FOUR SIX	Figures spelt
III	Full stop (not counted)
ONE FIVE THREE TWO EIGHT	Figures spelt
FF	Figures finished
MOSELLE	Code word meaning 'Give matter special attention'
SN	Message finished

Receiving and Delivering a Message

The signalled conclusion of a message is either SN (finished) or SQ ('that is the end of the message but I have another for you'). The sending operator then pauses while the receiver counts the number of words and reads quickly through the message. If a word has been missed (this is revealed by comparing with the 'Number of Words' already signalled, its position may be obvious because the message as written does not otherwise 'make sense'.

Then the receiving clerk, noting the last word preceding the missing one queries 'after — ?' Suppose, in the course of a message, there are the words '... tons of forwarded yesterday...' It seems that between 'of' and 'forwarded' there should be another word. The receiving clerk signals 'after of', meaning that the word following 'of' is queried. The sending clerk sends 'wheat', thus confirming that the word has been missed.

If the number of words counted does not agree with the 'number of words' already signalled, the sending clerk, upon request, checks the whole message by quoting the initial of each word or figure.

When satisfied that the message has been correctly received, the receiving operator sends 'RD' unless there is a further message to take, when he gives 'T' or 'G', as the case may be.

Needless to add, no time must be lost in delivering the message but the urgency of one, compared with another, is determined by its prefix.

The Railways' Telegraphic Code

In the course of railway business particular operations are frequently repeated. Telegrams sent in connection with them similarly recur, perhaps many times in the course of a day. Much time is saved and delays avoided by using code words instead of many-worded phrases in common use.

Near each telegraph instrument there should be kept a book of *Code to be used in telegrams upon Railway Companies' Business*. This contains nearly 800 code words covering all kinds of railway subjects from acceptance of traffic to warning of witnesses to attend a police court. About 330 of the code words are for private use on the LNER but the remainder can be fitted into telegrams to other railway companies.

Always use a code word if you can – it saves your time, the other operator's time, and generally helps to speed up telegraph operation.

At the end of the code book is a further set of private LNER codes for the telegraphic description of coaching rolling stock, 'common user' coaching vehicles and freight rolling stock. Yet another set of code words is provided for train working in the Scottish Area only.

If you should be handed a wire and the wording could be shortened by the use of a code word or two, you should ask the sender to do so. All departments are supplied with the code book and there should be no difficulty in decoding at the other end.

Abbreviated Addresses

Another time-saving idea for use when sending telegrams between LNER stations is the abbreviation of addresses. A telegram for a Locomotive Running Superintendent is simply addressed 'LR', followed by the name of the station.

When sending a telegram to a small station only the station name, or its call-sign, is required in the 'to' space, but where there are several offices at a large station, telegrams to it require some indication, in the address, of the person for whom the message is intended. So this list of abbreviations is used:

B = Booking Office
G = Goods Agent
L = Luggage Office
P = Parcels Office

S = Station Master's Office
Y = Yardmaster's Office.

When wiring a large goods station, the following further initials are available:

A = Goods (Accounts) Office
F = Goods (Forwarding) Office
R = Goods (Receiving) Office.

Glance through a copy of the code book as soon as you can – it's all in there.

The Prefixes

The priority of a message is determined by its prefix. The list below gives a description of the various messages and their order of importance.

1. **DM** = Danger message. This is used only in case of accident, or to prevent an accident, and supersedes all other messages on a circuit. You can interrupt a less important message between any other two places than your own station by 'butting in' with a 'DM'.
2. **MT** = Train Report.
3. **TEQ** = Train Enquiry. This prefix refers only to train enquiries sent as an operating matter.
4. **TAS** = Train Message. For use on messages about trains in motion, the running of special trains, ordinary trains out of course, relief of train crews, etc.
5. **DS** = Telegraph Engineering Message. Used only when absolutely necessary in case of a fault in, or breakdown of, the electrical apparatus.
6. **RQ** = Repetition Required.
7. **SP** = Special Message. For urgent communications only.
8. **CR, SR, SRL, CSR, LR, WR, CWR, SWR, PR, FR** = Daily Wagon, Sheet, Coaching Stock, Pillow, Rug and Fruit Reports.

The following three classes are used only at stations doing postal telegram business over the wires (at many stations postal telegrams are phoned to the nearest Post Office).

9. **SU** = Postal Telegraph Urgent Service Message.
10. **SG** = Railway Telegraph and Postal Service Message.
11. **S** = Postal Paid message.
    SRP = Postal Reply Paid Message.
    SA = Postal Free Pass Message.
    SARP = Postal Free Message, Reply Franked.

Then comes the last on the list, but nevertheless important.

12. **DB** = Ordinary Railway Message.

You have already read that when DB has to be transmitted it is originally sent as DL. Similarly changed prefixes are sent in the following cases:

Direct	*For Transmission*
TAS	TAX
DS	DX
SP	XP
SG	XG
S	X
SRP	XRP
SA	XA
SARP	XARP.

Extracts from the LNER booklet Let's send a message by the Single Needle *are printed by kind permission of the British Railways Board.*

American Telegraph Instrument Makers 1837–1900 (Part 2)

MAKER	ADDRESS	CITY	DATES	PRODUCTS	NOTES
Fleming, Potter & Co. (V)	Pine & Chestnut Sts.	Philadelphia	1870-71	General line	
...Same...	2nd & Chestnut Sts.	Philadelphia	1871-	...Same...	
Foote					[See Shawk & Foote]
Foote, Pierson & Co.	82-84 Fulton St.	New York	1896-	General line	
Fowler					[See Lewis & Fowler]
Frederick, Pearce & Co. (A)		New York			
Frey, Joseph J.B.	213 Church St.	New York	1870-	Self-closing key	With A. Illig.
Gaynor Electric Co. (A)		Louisville	c. 1875	Registers	
Gilliland & Co. (A)	41 Dey St.	New York	1875	General line	
Gold & Stock Telegraph Co.	195 Broadway [9]	New York	1876	Printers	10
Gray & Barton (A)	162 S. Water St.	Chicago	1869	General line	Elisha Gray, inventor
...Same...	479 State St.	Chicago	1870-72	...Same...	(S) Western Electric
Greeley, E.S. & Co.	5 & 7 Dey St.	New York	1885-96	General line	(S) Foote, Pierson & Co.
Grinnell, H.B. & Co. (A)	7 Murray St.	New York	1875-78		
Hall, Thomas		Boston	1846-66	Keys, relays	(S) Palmer & Hall
Hamblet					[See Edmands & Hamblet]
Henning, R.					
Hicks, George B.	144 Superior St.	Cleveland	1858-62	Repeaters	
Hicks & Shawk (A)	...Same...	...Same...	1869-84	General line	11
Hinds & Williams	318 Washington St.	Boston	1850-56	General line	(S)Charles Williams, Jr.
Hochhausen, W.		New York	c. 1875	Keys, sounders	
House, Royal E.			1848-	Printers	Made by J.B. Richards
Hughes, David E.			1855-59	Printers	(S) G.M. Phelps
Huttman, William E.	154 S. Water St.	Chicago	c. 1867	"Made to Order"	With Erpelding, J.

9 This building subsequently became AT&T headquarters

10 Gold & Stock quotation services used instruments made by Phelps, Edison, Pope and Gray.

11 Before 1869 this was a Western Union shop, making instruments marked accordingly.

"General line" products include at least keys, sounders and relays.
(A) May have been an agent only, and probably not an instrument maker.
(V) Verification sought that this firm actually made instruments.
(S) Succeeded by...

MAKER	ADDRESS	CITY	DATES	PRODUCTS	NOTES
Illig, A.					[See Frey, J.J.B.]
d'Infreville, George		New York	1881	Keys	
Jenkins, M.R.		Browning, Mo.	1886	"Double Acting" key	Made by Bunnell
Johnson, W.H.		Louisville	c. 1870	Sounders	
Jones					[See Barber, Palmer]
Jones					[See Pearce & Jones]
Jones, C.E. & Bro.	58 Pike's Opera House	Cincinnati	1878-80	General line	
...Same...	51 W. Fourth St.	Same	1880-82	Same	
...Same...	Carlisle Bldg.	Same	1882-87	Same	
Jones Electrical Mfg. Co. (A)		New York		Box Relays	Made by Bunnell
Keeling, J.S.	16 Broadway	New York	1865-67	General line	
Kline					[See Nickolaus & Kline]
Know & Shain		Philadelphia	c. 1870	Keys, registers	
Lannert & Decker		Cleveland	1876-77	General line	
Lannert, J.A.		Cleveland	1877-81	Keys & sounders	(S) Lannert & Decker
Laws, Dr. S.S.		New York	1866	Printers	Gold report'g ticker, built by Chester
Lewis & Fowler Mfg. Co.	27-35 Walworth St.	Brooklyn	1886-87	"Concklin's" keys & Sdrs	(S) Empire Electrical Mfg. Co.
Lyman, A.B.	91 1/2 Seneca St.	Cleveland	1876-80	General line	"Phil Sheridan" line
...Same...	36 S. Water St.	Same	1880-94	Same	(S) I.H. Moses
Mack, F.G. & Co. (A)	55 1/2 Frankfort St.	1877-			
Manhattan Electrical Supply Co.	54 Water St.	New York	1880	General line	"MESCO" later variation
...Same...	32 Courtlant St.	Same	1888-		
Merchant's Mfg. & Constr'n Co.	50 Broad St.	New York	1872-76	Printers	Sam. J. Burrell, Sup't.
...Same...	40 Broad St.	Same	1876	Same	
Mona Manufacturing Co.	PO Box 178	Newark	1874	Snapper sounders	
Moses, I.H.	36 S. Water St.	Cleveland	1888-97	Keys and sounders	
Murray					[See Edison & Murray]

"General line" products include at least keys, sounders and relays.
(A) May have been an agent only, and probably not an instrument maker.
(V) Verification sought that this firm actually made instruments.
(S) Succeeded by...

MAKER	ADDRESS	CITY	DATES	PRODUCTS	NOTES
National Electric Co.		New York	c. 1890	General line	
New Haven Clock Co.	29 Murray St.	New York	1883-90	General line	(S) National Electric?
Nickolaus & Kline			c. 1876	"Monitor" relay	
Norton Telegraph Works	Br'way & Broome Sts.	New York	1852-55	General line	(S) Charles T. Chester
Palmer					[See Barber, Palmer]
Palmer & Barber		Utica	c. 1875		(S) Utica Fire Alarm
Palmer & Hall		New York	1847-49		
...Same...		Boston	1850		
Partrick					[See Chester, Partrick]
Partrick, Bunnell & Co.	38 S. Fourth St.	Philadelphia	1872-75	General line	(S) Partrick & Carter
...Same...	22 Dey St.	New York	1874-75	Same	
Partrick & Carter	38 S. Fourth St.	Philadelphia	1867-76	General line	
...Same...	114 S. Second St.	Same	1876-	Same	
...Same...	125 S. Second St.	Same	1891-97	Same	
Pearce & Jones	64-66 John St.	New York	c. 1875	General line	
Pearce, R.K. & Co. (A)	54 S. Fourth St.	Philadelphia	1878	General line	
...Same...	38 S. Fourth St.	Same	1879-	Same	Bought Tillotson's office.
Pennsylvania Railroad Co.	Altoona Shops	Altoona, Pa.	c. 1880	General line	
Phelps, George M.		Troy, N.Y.	1855-71	General line	
Phelps, William P.		Same			With George Phelps
Pierson, E.M.			c. 1860	Repeaters	
Pope, Edison & Co.	78-80 Broadway	New York	c. 1869		(S) F.L. Pope & Co.
Pope, F.L. & Co.	194 Fulton St.	New York	1869-72	General Line	"Nonpareil" instruments
...Same...	38 Vesey St.	Same	1873-74	Same	
...Same...	80 Broadway	Same	1874-	Same	
Pope, R.W.	Box 5278	New York	c. 1876	Snapper sounders	
Post & Co.		Cincinnati	1880-	General line	
Potter					[See Fleming, Potter]
Putt, D.W. & Co.		Wellsville, O.	1870-74	Practice Sets	

"General line" products include at least keys, sounders and relays.
(A) May have been an agent only, and probably not an instrument maker.
(V) Verification sought that this firm actually made instruments.
(S) Succeeded by...

To be concluded in the next issue...

Mac-Key Blue Book

An illustrated guide to the bugs made by T.R. McElroy

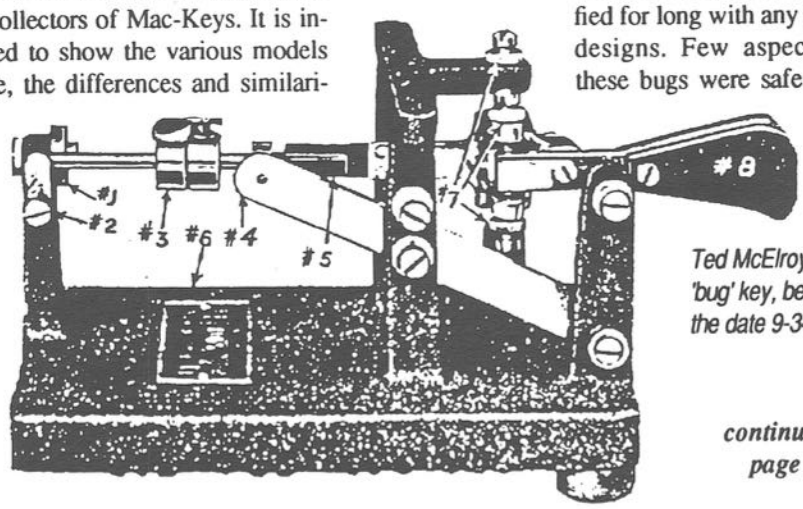
reviewed by Tony Smith

WORLD SPEED CHAMPION for the reception of radio-telegraph code, Theodore Roosevelt McElroy started making keys in 1934. Working at home, he brought the various parts from the plater and the foundryman together and assembled them into his semi-automatic key. These were 'bugs' in common parlance, but he gave them a name to identify the style and the maker. He called them Mac-Keys although he shortly dropped the hyphen from the name. The unusual (but not unique) T-bar frame style continued for six years and the name for two years beyond that, when he ceased making keys altogether. Apart from bugs, he also made straight keys but these are outside the scope of this present publication.

Tom French's booklet is written for collectors of Mac-Keys. It is intended to show the various models made, the differences and similarities between successive models and to properly place them in time. It is not easy. Only after several modifications did McElroy distinguish one by name from its predecessors so the earlier models have been arbitrarily designated by year name.

The models described (most with illustrations) are the 1934, 1935, 1936A (brass plate/aluminium plate), 1936B, 1936 Special, Junior, 1937 (several variations), 1938A and 1938B, 600, 500, S-600-PC, S-600-SC, CP-500, 500-742 and A-400.

Tom French is performing a valuable service for key collectors with his ever increasing range of books on specialised aspects of the subject. In this present publication, he hopes that his list is all-inclusive but comments 'It's obvious that Ted McElroy wasn't satisfied for long with any of his designs. Few aspects of these bugs were safe from



Ted McElroy's first 'bug' key, bearing the date 9-34

continued on page 23 ☛

More on Moby Dick

by Hugh Miller KA7LXY

I HAVE TO OFFER SOME CORRECTIONS to my letter in MM22, p.44, about the rubber-covered key nicknamed 'Moby Dick' in MM1. Contrary to my statement in that letter, and after looking at the manual for the US Navy set TBX-2, I conclude that I reversed the situation and in fact this key was used in all TBX models **before** the TBX-8 and **not** with the TBX-8 itself which was the last production model and significantly different in circuitry from the earlier models based on the original 1939 design.

Note also that although the eighth contracted production was the last in the series this does not necessarily imply that every number suffix was in fact produced: a contract may be cancelled and its model number not re-issued. I have never heard, for example, of any TBX-7 in existence.

Boat Use

Also, contrary to the notes in MM22, the TBX was never intended to be floated to shore, although its very light metal cabinet and locking cover did make that a possibility, and perhaps a valuable feature. Besides its use as a shore-party radio, the manual also refers to its installation in a small one-mast wooden boat of the 'whale-boat' size class, perhaps a large lifeboat?

The correct number for the TBX-8 final is 2E22 (not 2EZZ as stated), a 6-volt quick-heating pentode. The single transmitter valve in earlier TBX models is the 837, a 12-volt cathode-type pentode which also appeared in Navy suppressor-grid modulated aircraft transmitters.

The list of TBX-2 components includes '1 telegraph key (mounted in rubber jacket on special base with cord and plug attached)'... 'Attach the key to the buttons on top of the Transmitter-Receiver unit so that the top of the set forms an arm rest'. The photo of the key in MM22 shows the locking mounting holes in the key base. Possibly the replacement of this key with the metal-boxed model of the TBX-8 reflects concern that the rubber-covered key could not be adjusted or have its contacts cleaned without destroying the waterproof cover.

Posed Photos

Readers may be interested in the accompanying location photos. The 'Co-ordinating disembarkation' scene, like so many 'radio-operating' photos of WWII, is a staged piece: the sectioned-mast antenna is leaning against a pipe; the operator's headset is not plugged in; on the deck beside him is lying the 'lip microphone' to be worn like a moustache strapped to the face.

The radio itself is sitting on top of the same-sized accessory battery box. On top can be seen 'Moby Dick' clamped to the radio. The fellow to the left is pretending to crank the hand-powered transmitter generator. This generator produced 12 and

All US Marine Corps Photographs

Co-ordinating disembarkation of Marines off Iwo Jima

500V DC and is unlike any other US military design. Rather than standing off the ground on tripod legs, this one is designed to be secured by a 'U-shaped' mount and tightened to a vertical post such as a mast or a palm tree.

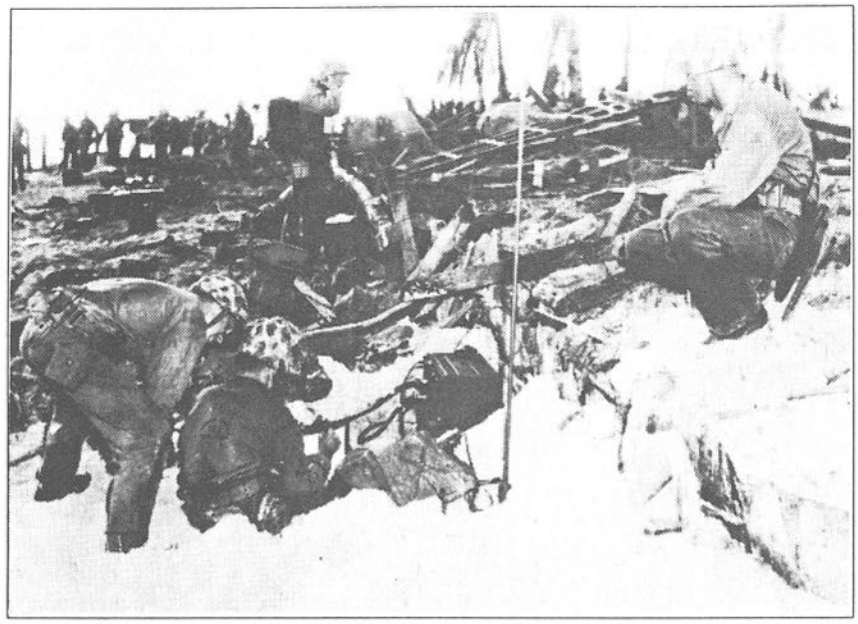
The photo shows the generator clamped to some horizontal piping, but be assured the fellow could not crank it under load in this awkward position. On top of the radio you may also see the corrugations used to strengthen the thin gauge metal cabinet. This is so thin that every time the radio is moved one hears the cabinet buckle slightly!

No Antenna!

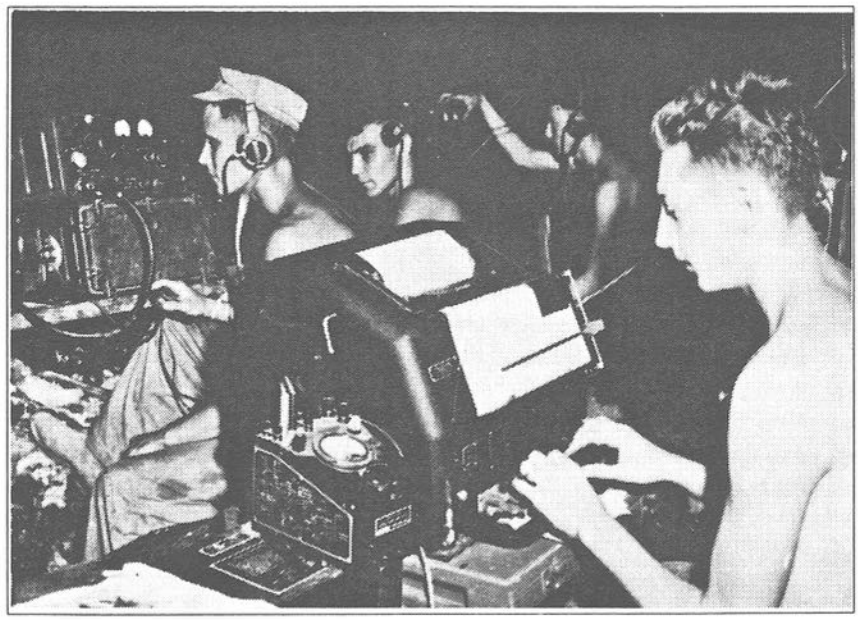
The second photo, on Roi Island, illustrates the radio's intended and typical use. The dark lump at the rear of the radio case is again 'Moby Dick'. The fellow in the middle background is, I believe, wearing a TBY VHF-voice radio in its canvas bag, but without the whip antenna attached.

The last photo, on Okinawa, apparently shows TBXs used as auxiliary communications receivers. The presence of the TTY machine in the foreground indicates that there was probably better communication equipment elsewhere in the post. The TBXs are seen without keys or microphones. What were they monitoring? Possibly warning-alert networks? This was a role relegated to simpler, auxiliary type equipment.

The fellow to the left is tuning his TBX receiver, using his thumb on the edgewise thumbwheel tuning control. Also I note that these early TBXs used white-faced panel meters, quite unusual for Navy



Radio telephone sets installed near low sea wall on Roi



Supervisor's room in Communication Center on Okinawa

combat equipment. The TBX-8, perhaps from lessons learned in combat, had black-faced meters.

Sounded Great

As if this wasn't enough trivia inspired by a simple 'What is it?' question, let me inflict on you one TBX anecdote of my own. Some years ago, I was testing a TBX at home one night and I happened to tune in Radio Noumea, French New Caledonia, from the South Pacific. They began playing a pop tune, a long dance number that intrigued me.

Thinking it would be stronger on a more powerful set, I hurriedly switched on my solid state digital read-out radio and tuned in. It sounded awful, a case of 'transistor audio' at its worst. I went back to the TBX and it sounded great through its one wide-band IF stage at 1600kHz and simple valve (tube) audio stage.

When the song ended, I was flustered by the announcer's French language and missed its title. I wrote to Radio Noumea in English; they sent me a QSL card, which I had not requested, but no information!

Several years later, pawing through a bin in a used-records shop, I suddenly connected the title on the obscure record before me with the lyric I had heard that night years before. (*My Special Friend* by the Australian musicians 'Talk Talk').

As I pulled out my money to pay, I began ranting to the clerk about how I had heard the tune on short-wave radio and had wondered for years... Then I noticed the expression on her face. She looked at me as if I was a certified nut case. I quickly dropped the subject but I was very happy at this ending to my search.

Deadly Poison

One final TBX note. Walt Hutchens, in an article on Navy portable radios in *Electric Radio* magazine, pointed out the hazards from the copious use of radium paint on the TBX (and TBY) front panel. The radio has to be treated as a radio-active source, which means no continuous exposure to it, and as being tainted with a deadly poison when cleaning the set is considered.

MM

MAC-KEY BLUE BOOK

(continued from page 19)

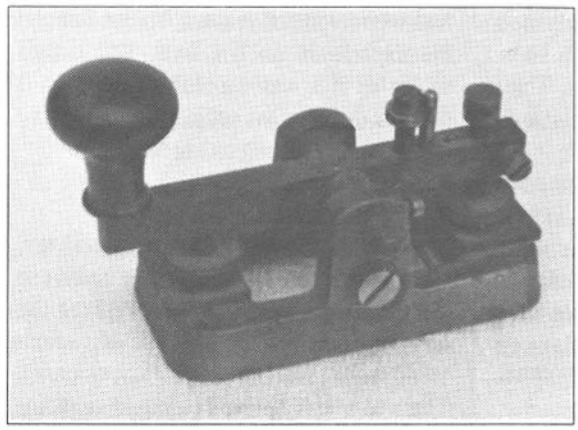
change. So neither of us should be surprised if you have a Mac-Key with a feature not shown in these pages.' He asks for details of such further variations to be sent to him c/o the publisher for inclusion in a later edition of this authoritative and helpful booklet.

The *Mac-Key Blue Book* (16 pages, paperback, saddlewire bound, 5½ x 8½in) is available from the publisher, Artifax Books, P.O. Box 88, Maynard, MA 01754, USA. Price $4.50 plus postage as follows: Surface $2.00 per order any quantity or destination; Air, Europe $3.75, Canada and Western Hemisphere $3.00, Asia/Africa/Pacific Rim $4.50. All payments in US funds only.

Readers outside North America who prefer to pay in Sterling may find it more convenient to obtain this publication from the 'MM Bookshelf'. UK price £3.15 including post and packing. Europe airmail (elsewhere surface) £3.40. See page 10 of this issue for further details. ***MM***

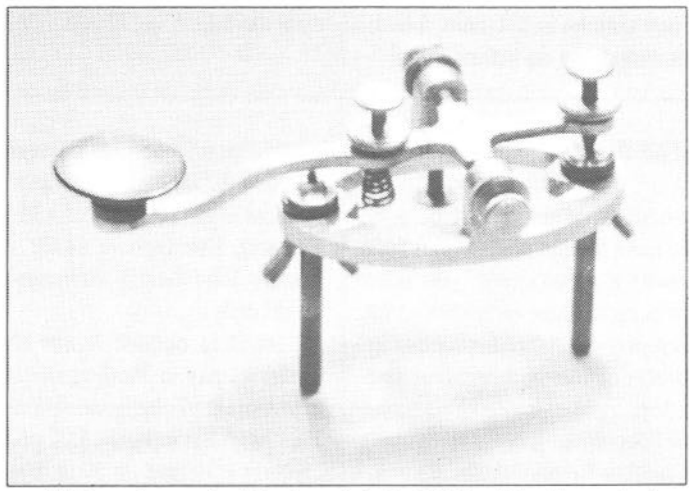
Showcase

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



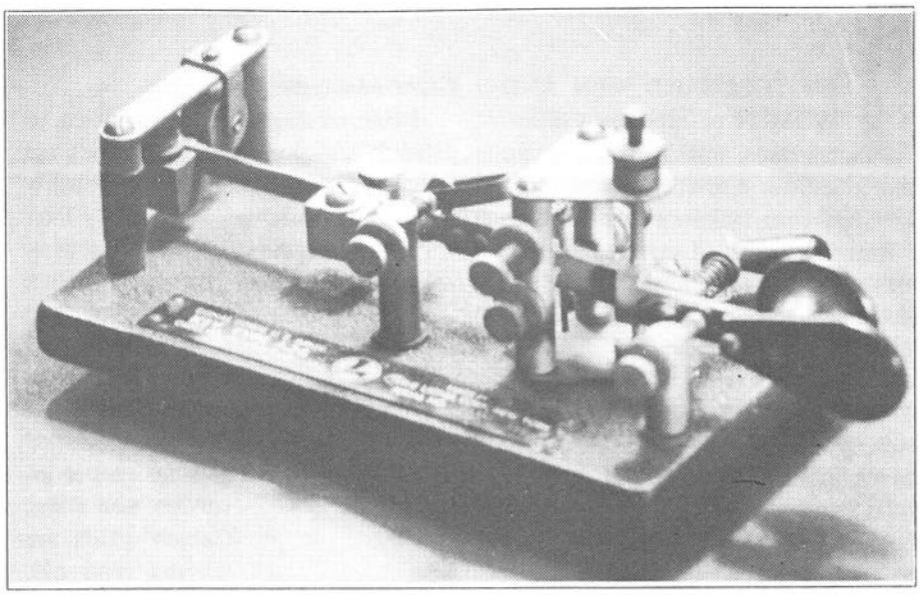
Unknown key. Unusual in having a base which is a copper sand casting. It also has only the smallest amount of machining and fitted parts. Small size, about 3 x 1½in, has a very nice feel. Further information required

Collection/photo: Dennis Goacher G3LLZ



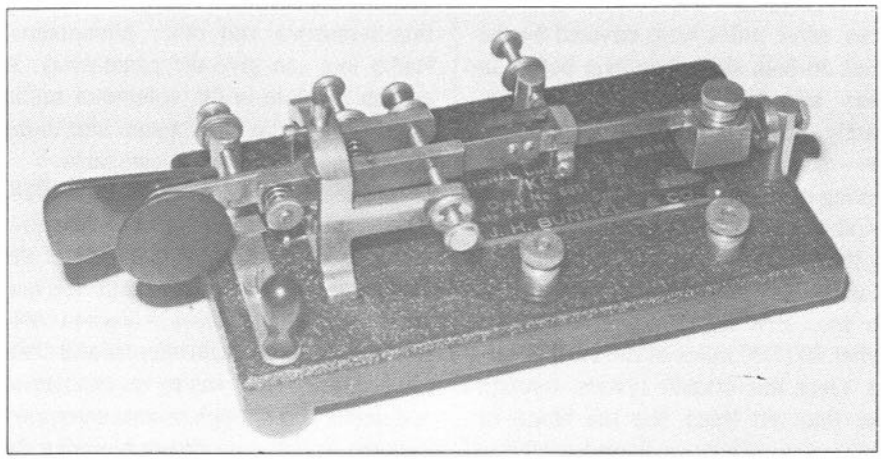
J H Bunnell open circuit leg key. Cat. No. 9035, polished brass body

Collection/photo: Jon Hanson G0FJT



US Army Signal Corps J-36, Lionel Corp., 1942

Collection/photo: Jon Hanson G0FJT



US Army Signal Corps J-36, J.H. Bunnell, serial No. 2413, 1942

Collection/photo: Colin Waters G3TSS

The Signal Corps designated all bugs J-36. They were basically commercial bugs made by Vibroplex, Lionel and others, adopted by the military.
Information from Introduction to Key Collecting *by Tom French W1IMQ*
(reviewed in MM17, and available from the MM Bookshelf; see page 10 of this issue)

The Thin Red Lines

Cable and Wireless at War
A Review

by Tony Smith

TEN THOUSAND MEN AND WOMEN of fifty-seven different races, working in some two hundred stations in seventy countries, and on the high seas, maintained the life-lines of British and Allied communications over the 355 000 mile Imperial Cable and Wireless network during World War Two. Their story is told in *The Thin Red Lines*, by Charles Graves, published by the Standard Art Book Co. Ltd, London, after the war.

Once the war got going, it was fought at breakneck speed. Campaigns which would previously have taken two years, were completed in six weeks. More miles were covered by the armies on both sides than ever before in history, and all this was due to the immensely increased speed of communications – radio being essential for the tactical handling of troops, and cable for strategy.

Cable & Wireless owned 155 000 of the 350 000 miles of cables throughout the world, as well as 91 wireless circuits, later increased to 138, which covered another 200 000 miles of the Earth's surface. Over this arterial system, through these thin red lines, the life-blood of Allied communications flowed, enabling governments to co-ordinate policy, strategy and supplies; newspapers and broadcasting agencies to receive the latest war news; and families at home to exchange messages with their evacuated children or their men fighting overseas.

Greater Invention?

Radio messages can be scrambled, or difficult codes used, but no codes are unbreakable, and both sides probably intercepted every message sent by their enemies during the war. It makes one wonder, says the author, whether, if wireless had been discovered before cables instead of after them, cables would not have been regarded as a far greater invention than radio. Cables which are seventy years old, he says, can work twenty-four hours a day for three hundred and sixty five days a year, unlike radio with its vulnerability to ordinary thunderstorms and other phenomena. Radio too, can give the game away. A sudden increase in the volume of traffic on a wireless circuit is a sure hint to the enemy of some imminent campaign.

Cable & Wireless was created in 1928, when the British government and the governments of the various countries of the Empire decided to merge, into one network, all existing beam wireless and cable services concerned with international communications. This was to be maintained and developed through private enterprise, with the British government reserving the right to take it over in the event of war.

In the event, this never happened, and the Company functioned throughout WWII without government interference, keeping its services going often in the face of great difficulties. This book is the story of those

difficulties and how they were overcome, and of some of the individual achievements of the people involved.

For the most part, high-speed Morse and teleprinter circuits were used for the work, but the hand-key had its day as well, particularly in emergency situations.

Destroy All Instruments!

After the fall of Singapore, a Japanese ship shelled the cable station on the Cocos Islands, 600 miles south of Java. This was a vital link in the communications route to Australia, the loss of which could not be afforded.

On 3 March 1942, signals stopped, resuming a few hours later with the news, sent by hand, that the staff were safe, although the cable office had received a direct hit.

No sea or air protection could be given to the station, so a radio message was sent to Batavia, in plain English, to the effect that Batavia should destroy their instruments because Cocos had been permanently put out of action. This message was intended to be intercepted by the Japanese while, at the same time, the instructions were countermanded by cable, which could not be tapped.

For the rest of the war, the station remained operational, maintaining vital communications between London and Canberra. When occasional Japanese reconnaissance planes flew over it, all they saw was a group of damaged buildings, apparently deserted. Whenever Cocos was mentioned over the air in official communications it was always referred to as 'Brown', 'Robinson', 'Jones', or some other name, successfully concealing the true state of affairs.

Employees of Cable & Wireless often worked with the armed services overseas, and their status as civilians caused various problems, particularly as they were not in uniform in operational areas.

As a result a new unit called 'Telcom' was formed. All Cable & Wireless men were given a status similar to that of war correspondents, and were put into uniform, wearing a special cap badge bearing the astrological sign of the god Mercury.

No military ranks were allocated, but it was generally agreed that senior operators were equivalent to lieutenants, managers to captains, and the Divisional Manager to a lieutenant-colonel.

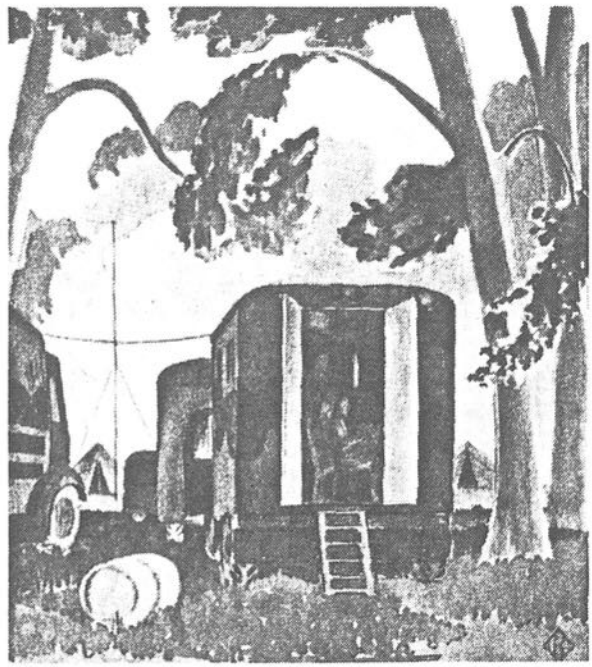
Blue Trains

During the War, the RAF created mobile radio transmitting stations known as 'Blue Trains', providing forward radio communications. The traffic to be handled was so great that Cable & Wireless was asked to help by providing its own Blue Trains. The first one went to Algiers shortly after the landings in North Africa, and consisted of five vans and one trailer, with a staff of nine operators and three engineers.

The purpose of the C&W Blue Trains was to handle traffic from war correspondents at each successive advanced press camp, in order to pass news of the latest battle developments as quickly as possible to the outside world.

From a forward observation post a correspondent would observe the action. In a sheltered spot just behind the battle line, he would write his dispatch on a portable typewriter. This would be handed to a radio operator in the Blue Train who would transmit it, usually by hand, to the receiv-

The 'Blue Train' in use on the Allied Armies' drive from Salerno to Vienna



From a water-colour by C. Conway-Gordon, a C&W operator attached to the unit

ing room at a main base where it was taken down manually on typewriters.

After censoring, for security, the story was punched on Morse slip and sent to the Central Telegraph Station in London by automatic high-speed transmission, from where it was passed by direct line to the correspondent's newspaper office in Fleet Street.

The Blue Trains followed the fighting through Italy into Austria. They went to Greece and Burma, and when Singapore was liberated they took a floating telegraph station with them to flash the news to a waiting world.

Hardships

Telcom operators often had to work in primitive conditions. Four operators were sent to Rangoon, suffering various hardships on the way, often without food, shelter, or sanitary arrangements, and losing most of their luggage. When the ship landed them in the vicinity of Rangoon, they carried their equipment for miles to find the Signals Unit where they were to set up station.

Although soaked to the skin, within two and a half hours they were on the air, passing correspondents' messages which had previously been flown out as the opportunity offered. They sat sideways at the operating table because it was too low to get their knees underneath. The tarpaulin roof was only inches above their heads, the heat was such that sixty minutes at a stretch was too much during the day, and there was no water for washing.

Despite all this, they dispatched three thousand words to Colombo by the first

evening, using an American 'under-slung' key, and these were read in newspapers around the world the following morning.

Re-occupation

As the Allied forces re-occupied various areas, the Cable & Wireless senior staff immediately headed for the Company's old offices.

In Singapore, Mr J.D. Mackie found a Japanese colonel sitting in his chair. Mr Mackie, from Aberdeen, jerked his thumb, saying with typical Scots brevity, 'Oot!', and out went the colonel!

Mr Mackie called his old Sikh watchman to muster as many of his old staff as possible, and ninety out of a hundred Chinese employees soon re-appeared.

Although the offices were intact, the instrument rooms were out of order, but within fourteen days the first message out of Singapore was sent by General Sir Miles Dempsey, Commanding British Forces in Malaya, to the Chairman of Cable & Wireless commemorating the occasion.

Effrontery

In Hong Kong, the local Cable & Wireless manager had been a prisoner of war. He broke camp twelve days before the British fleet arrived, and took charge of his office again, warning the Japanese forces, who were astounded at his effrontery, that any attempt at sabotage would result in court-martial when the Navy and Army arrived.

Once liberated, all the Hong Kong staff reported for immediate duty. They opened and maintained communications until relief arrived, transmitting government messages and press dispatches to London, via Colombo.

When Allied prisoners were liberated from the Japanese, they were allowed to send free messages to their relatives all over the world, announcing their deliverance and state of health, and relatives were allowed to send messages free in return.

Just before dawn on 31 August 1945, the first trickle of messages started from Colombo, having been transmitted from Hong Kong, Singapore and Rangoon. The trickle became a flood, and finally over 114 000 messages were handled.

These were telephoned from London where possible, and in hundreds of homes, families, often after years of anxiety and doubt about the fate of their loved ones, heard the words, 'Safe ... coming home soon'.

Traffic Carried

In 1944, the last full year of the war, Cable & Wireless carried 704 719 661 words, compared with 231 million in 1938, the last full pre-war year, an increase of 205.7 per cent.

Nearly 85 million Press words were transmitted from London, from D-Day to total surrender in Berlin. During 1945 more than 720 million words were handled over the complete Cable & Wireless system.

The book is long out of print. It may, however, be possible to find a copy in a second-hand bookshop, or local libraries may still have it in stock. It is based on the reports of the staff of Cable & Wireless themselves, many of whom died at their posts, and, as the author says, it is '... a slight memorial to some of those who gave their lives that others might live in freedom'. ***MM***

Radio and Railway Morse in Canada

by Moe Lynn VE6BLY

THE MORSE TELEGRAPH was inaugurated in Canada with a line between Toronto and Hamilton, Ontario, on 12 December 1846, by the Toronto, Hamilton and Niagara Electromagnetic Telegraph Company. As was usual then, and in later years, the railway and the telegraph were linked. In those pioneering days, when the railway tracks were run across virgin country, the telegraph circuits used for operating trains were usually the only available means for communicating messages. As communities developed along the railways, the railway telegraph circuits began to carry public as well as railway traffic.

By 1864, John Rae, surgeon and explorer (who searched for Sir John Franklin with Sir John Richardson in 1851), had surveyed a route for a telegraph line from Winnipeg to the Rocky Mountains in Western Canada, heralding a construction era which eventually resulted in a telegraphic span from coast to coast with lines extending to the northernmost territories.

Because of its use by the railways, the American code used on these lines became known as 'Railway Morse', or 'Land Line Morse' on the commercial lines, and this code was also used by at least one Radio Communications system. This was the Royal Canadian Signals three-mile landline between their Fort McMurray, Alberta, radio station and the Northern Alberta Railways telegraph office at Waterways, Alberta, on the Athabasca River where the railway ended and water transport began.

Northern Radio Network

The first station of the North West Territories and Yukon Radio System (NWT&YRS), which used International Morse, was opened in Mayo, Yukon Territory, in 1923. Fort McMurray was the tenth station to be opened, in 1933, and these stations greatly improved communications with the remoter parts of Northern Canada. Before 1924, for instance, Dawson City, YT, had a limited mail service and a Dominion Government telegraph line running some hundreds of miles to Hazelton, British Columbia, with maintenance a great problem as the line wandered through bush, up hill and down dale.

An NWT&YRS station opened at Herschel Island, NWT, in 1926. Previously, in 1924, a crew had been sent to Herschel to provide a service for Arctic whaling ships harbouring there, only to lose their food supplies and equipment when the ss *Lady Kindersley* sank on her annual voyage through the Arctic re-supplying the Hudson Bay Company's trading posts. Other stations continued to be opened until a total of 19 were in operation, and these began to be taken over by civilian

Sgt. M.R. (Moe) Lynn at the operating desk of a typical NWT&YRS station in 1960

Canadian Forces Photo

operators in 1957. It is not known exactly when Fort McMurray ceased using Railway Morse for its traffic with the Northern Alberta Railways telegraph office.

If callsigns are of interest to anyone, they were issued to the radio stations with the prefix VE followed by a letter. A was Dawson City; B, Mayo; C, Fort Simpson; D, Edmonton; F, Aklavik; G, Fort Smith; H, Fort Resolution and so on through the alphabet until the next prefix, VD, came into use with VDI for Beaverlodge Lake, Saskatchewan.

The photograph above shows the writer of this article in 1960 at the type of operating position used by the NWT&YRS stations, with from one to ten positions at each station. This particular desk is now in the Communications and Electronic (formerly Royal Canadian Signals) Museum, at Kingston, Ontario, where station diaries, records, etc., are also on display or are available to visitors.

The writer has available on Commodore C-128 floppy disc a concise history of the NWT&YRS written in 1960 by C.W. (Cal) Vince, WO1 (Retired). Stories relating to 'The System' will be greatly welcomed for inclusion in a future updated version of this history. ***MM***

(Moe Lynn is at 10644 – 146 Street, Edmonton, AB, Canada, T5N 3A7)

More Discussion

On abbreviations and procedures

by Philip Scrivens G0HHL

I READ WITH INTEREST the article 'Abbreviations and Procedures' in MM22, p.32, but seriously question VE7BS's comment about IMI, when he says 'So whether it means "Question mark" or "Please repeat" is unimportant. It certainly means both to most amateurs.'

Nearly 50 years ago I was trained by the Army that the symbol IMI meant 'say again' or 'I say again' depending on the context in which it was used. In *The Morse Code for Radio Amateurs* published by the RSGB there is shown a specimen QSO in which IMI signifies 'I say again' and it is also used in this context in RSGB news bulletins.

When I obtained my new callsign I tuned with some trepidation to one of the HF bands and replied to a G4 calling CQ. In the course of the QSO I sent 'my name is Phil IMI Phil es QTH is Derby IMI Derby'. My G4 contact replied somewhat tersely 'don't you know who you are or where you are?'! I have found that many operators are confused by the use of IMI and indeed I have met few operators who use this symbol in this context.

Unsatisfactory Position

Some time later a colleague suggested I should use II to mean 'I say again'. The use of this symbol is mentioned in the example QSO in the RSGB's *Amateur Radio Operating Manual*. In this QSO there also appears 'pse rpt ur name?' I have found that 'rpt' can easily be confused with 'rprt' and for that reason do not like it. How often has 'pse rpt ...' ended up with yet another signal report!

To ask for a repeat of information must be one of the most common problems facing the radio amateur, yet there is no consistent guidance given in any of the usual reference books.

Is it not time this unsatisfactory position about how to say 'please say again' and 'I say again' was cleared up on an international basis? If IMI is unacceptable (and it seems likely to remain so in the absence of some definitive ruling) then I wonder if the Q-code could be used. Does not QSM mean 'please repeat last message'? *(In professional use it means 'repeat the last telegram' – Ed.)* I have never heard it used and when I tried it once I did not meet with much success!

Why QRK and QSA?

It was not unreasonable to expect that with the advent of the Novice licence and the QSO-type Morse test some clear form of procedure would be laid down. It seems unfortunate to me that in the two examples of QSOs quoted in the article 'The New UK 5 wpm Novice Morse Test' (MM21, p.28) the first QSO commenced with CT whereas the second did not, and, in the list of Q-codes to be learned there appear QRK and QSA.

I wonder how many amateur operators

remember what these mean, and how many have ever used them? They seem rather unnecessary when the amateur RST convention seems to say it all.

Then there is the 'end of message' symbol $\overline{AR}$. Should this be before or after the callsigns at the end of an over? Should it be used in every over? and, in any case, why use it at all?

Used Out of Habit?

I suspect that most of us use $\overline{AR}$ out of habit with little or no thought to its meaning or purpose. Presumably, when station 'A' was sending a series of unrelated messages to station 'B', $\overline{CT}$ and $\overline{AR}$ were used to indicate the commencement and end of each particular message. Now it seems we are left with the symbols but seldom the reason for their use.

In the examples of a CW QSO given in the books likely to be read by a newcomer to the hobby, variations in procedure detail are to be found and these variations are, to say the least of it, confusing. Those who have been operating for years may not be unduly concerned by anomalies in procedures but these anomalies do little for the confidence of the newcomer or, for that matter, for international understanding.

To tell novices and newcomers to learn CW properly and not to pick up bad habits is pretty pointless if there is no definitive example to follow.

Lost Newcomers?

Finally, may I say how grateful I was to the really good operators who were unfailingly kind, patient, and helpful to me when I obtained my licence and first dared to venture on the amateur bands. I soon learned to ignore those who were rude and unhelpful and who, by so doing, perform a great disservice to amateur radio.

I had age and experience on my side, but I do wonder how many would-be CW operators are lost to the hobby through the discourtesy of those who adopt an attitude of disdain and intolerance to the struggling newcomer. ***MM***

(MM will welcome comments on the various points made by G0HHL. – Ed.)

Readers' ADs

FOR SALE

27 Keys WT 8 Amp, No2 MkII, ZA 2869, various versions WER & LMK, some 5-hole base, some 4-hole. Property of Norwegian Radio Historical Society, price £10 each plus postage. Write to Tore Moe LA5CL, Kobenhavngt 15, N-0566 Oslo 5, Norway.

Three Keys WT 8 Amp, No2 MkIII, ZA 16929, all bakelite version. One marked C.E.L. Two without maker's initials but marked with a circled 'C'. Price £7.00 each including p&p in UK. Book bargains: *SOE – the Special Operations Executive* by M.R.D. Foot, list £8.50, few at £5.50 inc. p&p UK; *Clandestine Warfare (Weapons and Equipment of the SOE/OSS)* by Melton & Ladd, list £14.95, few at £12.00 inc p&p UK. John I. Brown G3EUR, 74 Humber Avenue, South Ockendon, Essex RM15 5JN. Tel: 0708 852371.

EXCHANGE

Working instructions for Wireless Sets No. 62 and No. 18/68 offered in exchange for Key and Plug Assembly No. 8 to enable me to complete my W.S. No. 18 installation. Ian Mant G4WWX, 28 Welbourne Road, Liverpool L16 6AJ.

WANTED

Any issues of *MM* prior to No. 19, to purchase to complete my collection. John Clark G0OWN, 2 Lyndhurst Road, Broadstairs, Kent CT10 1DD.

The same issues are sought by key collector Enrico Franciosi IK2HSW, Via Marco d'Agrate 10, 20139 Milano, Italy.

Alfred Vail

Another View

ALFRED VAIL'S DECISION 'I have made up my mind to leave the Telegraph to take care of itself, since it cannot take care of me', quoted in 'Alfred Vail's Magnetic Friendship with Morse', Part 2, in issue 21 of *MM*, is taken from a letter he wrote to Morse on 21 September 1848.

After congratulating Morse on his latest success in the courts in defending his patent, he continued, 'The Washington and N.O. Co. is at last organised, and for the last three weeks we have received daily communications from N.O. Our prospects are flattering. And what do you think they have done with me? Superintendent of the Washington and N.O. line all the way from Washington to Columbia at $900!!!!!

'This game will not be played for long. I have made up my mind to leave the Telegraph to take care of itself, since it cannot take care of me. I shall, in a few months, leave Washington for New Jersey, family, kit and all, and bid adieu to the subject of the Telegraph for some more profitable business...

'I have just finished a most beautiful register with a pen lever key and an expanding reel. Have orders for six of the same kind to be made at once, three for the south and three for the west.'

This letter was quoted by James D. Reid (author of *The Telegraph in America*) in the *Electrical World*, 12 October 1895, who commented, 'The truth is Mr Vail had no natural aptitude for executive work, and he had a temper somewhat variable and unhappy. He and I got along very well together until I determined to order my own instruments, his being too heavy and too difficult, as I thought, for an operator to handle while receiving. We had our instruments made by the same maker – Clark & Co., Philadelphia. Yet even that did not greatly separate us, and we were always friends.

'About some things his notions were very crude. It was under his guidance that David Brooks, Henry C. Hepburn and I, in 1845, undertook to insulate the line from Lancaster to Harrisburg, by saturating bits of cotton cloth in beeswax and wrapping them round projecting arms. The bees enjoyed it greatly, but it spoiled our work.

'But I have no desire to criticise him. He seemed to me to have great opportunities which he did not use. He might have had, I thought, the register work of the country and secured a large business. But it went from him to others, and so he left the field.' ***MM***

Why Farnsworth?

by Tony Smith

A POPULAR METHOD of learning Morse code is the 'Farnsworth Method', in which the characters are sent at a target speed of, say, 12, 15, or 20 w.p.m., while the spaces between the characters and words are much longer than is normal for the chosen character speed. The extra spacing provides 'thinking time' for the learner and as proficiency improves this is gradually reduced until the spacing is correct for the target speed. At higher speeds spacing is then normal with nothing extra added.

The idea is to prevent the student from counting the dits and the dahs during the learning process by sending at such a speed that rhythm recognition is easy and counting is not. The method is so well known that one would assume it is based on specific recommended spacing ratios. However, when the American Radio Relay League (ARRL) set about converting all its Morse materials to a Farnsworth 18 w.p.m. character rate (for its code practice and test tapes, and W1AW transmissions) no definitive specification could be found and it was necessary for the League to devise its own Morse Transmission Farnsworth Timing Standard (see panel).

Who Was Farnsworth?

Apart from the mystery of the missing specification, there is also mystery about the association of Farnsworth's name with this learning method. Research by Bill Fisher W2OC reveals that Donald R. (Russ) Farnsworth was a blind amateur who was first licensed in the mid-1930s as W9SUV, who also held the calls W6TTB and W0JYC. In the late 1950s, Russ Farnsworth asked Bart Bartlett W6OWP to help him prepare some tapes for a code learning course he had developed.

Bart had a Kleinschmidt tape perforator and with this he produced the perfectly timed punched tapes which Russ then used to make the final audio tapes for his Epsilon Records code course. Surprisingly, however, it appears that Farnsworth did not use the increased spacing idea now universally attributed to him.

His method of instruction was to maintain the code speed at a constant 13 w.p.m. (characters and spacing) throughout the course, starting with simple text and gradually increasing the complexity of the text material. But if Farnsworth didn't invent the system, who did? And why is it named after him?

Earlier Uses of the System

I cannot suggest why Farnsworth's name has become synonymous with this particular learning method, but I can certainly demonstrate that the method goes back long before him. I have found several references to the idea in old publications and if readers of *MM* can produce others I would be pleased to hear from them.

A *Wireless World* booklet, first pub-

The ARRL Morse Transmission Timing Standard (Extract)

1. Standard timing

The period of a single dot is one unit, measured in seconds. A dash is a period of three units. A period of one unit separates each element (dot or dash) within a character.

A period of three units separates each character within a word. A period of seven units separates each word. For purposes of specifying code speed, the PARIS 50-unit standard is used...

2. Farnsworth timing

At speeds below 18 w.p.m., characters are sent using 18 w.p.m. timing, but with extra delay added between characters and words to produce an overall lower speed.

Speeds are specified as *s*/*c*, where *s* is the overall transmission speed and *c* is character speed. For example, a 5 w.p.m. transmission sent with 18 w.p.m. characters is specified as 5/18 speed.

The character timing used is as specified in 1. (left), using the unit, dot and dash periods, as well as the one-unit inter-element spacing. The adjustment to a lower speed is made by adding delay between characters and words.

The added delays are constant for a given Farnsworth speed and will maintain the 3/7 ratio of character space to word space. The added delays are calculated as follows:

$$t_a = \frac{60c - 37.2s}{sc}$$

$$t_c = \frac{3t_a}{19}$$

$$t_w = \frac{7t_a}{19}$$

where

t_a = total delay to add to the characters (31 units) of a standard 50-unit word

t_c = period between characters

t_w = period between words.

(all periods in seconds)

lished in 1939, suggests the learner should get the assistance of a competent operator to send practice signals to him. It advocates that, except at the very earliest stage, the symbols for individual letters should be sent at a relatively high speed, corresponding to a rate of 12 to 18 w.p.m.

It goes on, 'Though the spacing between the elements of individual letters should be in correct ratio, spacing between letters and words should at first be greatly exaggerated in order that the learner may have time to think about what he has just heard... As the learner gains confidence, spacing between letters and words should of course be gradually reduced until it finally reaches the correct ratio'.

My copy of this booklet [Ref. 3] is the 13th edition, 1961, which is presumably a reprint of the original 1939 publication. If anyone has a much earlier edition, I would be pleased to receive their confirmation that this assumption is correct.

Gamages Records

An earlier reference is to be found in Gamages' catalogue of 1922. This suggests 'Speed up your Morse by purchas-

ing a set of Gamages Morse Buzzer Gramophone Records. The records (8) are graduated from beginners rate to regulation speed, and in all cases each letter is sent at top speed but the "spacing" varies, which governs the rate of transmission.'

Audible Alphabet System

Even earlier is a punched tape system marketed by Frederick J. Drake & Co., of Chicago, and described by Theo A. Edison in 1902. He says, 'It is not the speed at which the letter is sounded that perplexes the learner, but the rapid succession in which they follow each other. The principle feature of the Audible Alphabets is the graduation in the intervals between the letters.

'By beginning with a record in which the characters are widely separated and then changing to others with less and less intervals, the student gradually reaches the one having normal telegraph spacing.'

(This system, with its associated transmitting instrument, will be described more fully in a later article.)

No Conclusions Possible

So why Farnsworth? – and if he didn't invent the system, who did? It is very satisfying to find a similar method dating as far back as 1902. I wouldn't be surprised, however, to find that similar systems of learning were recommended almost from the beginning of professional Morse telegraphy some 55 years previously. If anyone can provide earlier references, I would be pleased to hear from them.

References

1. *A Standard for Morse Timing*, by Jon Bloom KE3Z, (ARRL Laboratory), reprinted in *SCAG Newsletter*, Spring 1991.
2. *Morse Code: The Essential Language*, by L. Peter Carron Jnr. W3DKV, 2nd edition, 1991, pub. ARRL. Also correspondence (1989) between Bill Fisher W2OC, and W3DKV, courtesy W3DKV.
3. *'Learning Morse', a Guide to Wireless Operating*, by H.F. Smith, pub. *Wireless World*, 13th edition, 1961, first published 1939.
4. Gamages, London, catalogue 1922.
5. *Telegraphy Self-Taught*, by Theo A. Edison, pub. Frederick J. Drake & Co., Chicago, 1902.

MM

REFLECTIONS from Uncle Bas – 15

Weather Forecasts

by Bastian van Es PA0RTW

DURING OUR TRAINING as radio officers we were taught telegraphy, electronics, administration, English and first-aid, although I never understood why first-aid was included in a course for radio operators.

Let's be honest, fatal accidents occur quite rarely in radio rooms and even in the event of a fatality how can a knowledge of first-aid improve the condition of a corpse? Fortunately such tragic incidents never occurred in my life at sea, nor on shore for that matter.

Besides theory lessons, we received practical training on the use of receivers, transmitters and auxiliary equipment. Apart from CW lessons (90 per cent of the time), we had to copy the news on short wave, and especially the New York Stock Exchange which was our teacher's special favourite.

Weather forecasts were received from GBY on 150kHz on an old Marconi long-wave receiver. It was a very strong and beautiful signal. For us beginners it was good experience while the steady, QRM free, signal at an agreeable speed gave us the feeling of being able-bodied radio operators who had no need for further training whatsoever.

Only From London!

Afterwards at sea I realised it had been a mistake to let us copy that strong British transmitter and almost nothing else. Few ships had long wave receivers in those days and, as we all know, short wave reception is hardly ever QRM free, or as beautiful as that British transmitter on long wave just a few hundred miles away.

However, every seaman knows that taking weather forecasts is the most important duty of a ship's radio officer. And indeed the captain of my first ship informed me that he wanted that information twice a day, and more if necessary. He was a Norwegian captain but he had no interest whatsoever in Norwegian weather forecasts.

He insisted on reports from London and I might have told him to listen to the BBC, which has world-wide coverage with lovely signals, but I didn't. I was a brave young man in those days but to say such things to an old experienced Norwegian captain would have meant the end of my career at sea. I just said 'Aye Aye Sir', and disappeared into the radio cabin in search of a weather forecast.

He Never Noticed

The main receiver was a WWII BC-348 with a tuning range of 500kHz to 18MHz, so I never found GBY on 150kHz. I tuned all day, that day, on short wave to find a re-transmission of GBY but although I heard many signals from all over the world I heard no weather forecast from London. Searching through the *List of Coast Stations* gave me no

clue either. I was getting worried and had to compose a weather report from the North Sea area somehow.

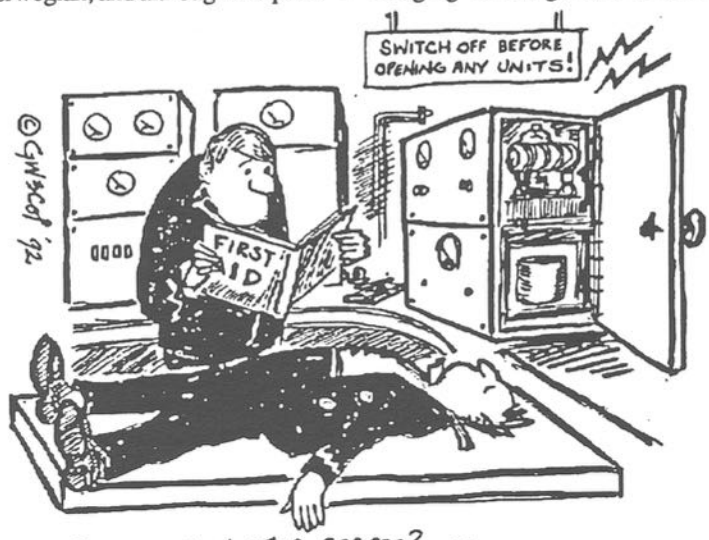
In the end I copied a phone transmission from Scheveningen Radio/PCH, in Dutch, covering the Channel and the North Sea, and translated the entire report into English. As I mentioned before, the captain was Norwegian, and although he spoke English fluently he never noticed my schoolboy English. It was the summer of 1955, beautiful weather, the sea as calm as a bathtub, so he might not have even read my report for the Channel and the North Sea. It was a report which was never broadcast, in phone or CW.

Never Told Him

Later, in the Atlantic, I wanted the weather reports from Washington/NSS, a coastguard station in the USA which also gave time signals and was a frequency standard. Once again I did not get the signals I wanted.

Fortunately, in approaching the East Coast of the USA, many stations transmitted weather reports and all those stations had lovely signals, just right for an inexperienced radio operator.

At our first port of call, San Juan, Puerto Rico, I found out what I was doing wrong. Alongside the pier where we were discharging our cargo was another Norwegian freighter. I got talking with the radio officer and explained my problems with NSS and the weather forecasts.



. . . THE CONDITION OF A CORPSE? . . .

The man, with already a good many years at sea, told me that the frequencies and operating schedule had changed completely and he gave me the correct details. He also gave me the short wave frequencies of British coast stations but, being so far away from GB, I did not care any more.

I never told the captain about the problems I had. He was a lenient man, but even after several years he might have thrown me overboard. ***MM***

Your Letters

Chinese Morse

A Chinese student from the Ministry of Posts and Telecommunications, Peking, working with me on a DTI scholarship, recently explained to me how Morse code was used in China.

It appears that every Chinese character, of which there are about 4000, had a unique 4-figure code. When a message was to be sent, a translator converted the message into these 4-figure numbers which were then sent by an operator using international Morse.

At the receiving end, they were received and translated back into picture characters by another translator. Apparently receiving translators capable of writing down the message without having to first convert the Morse into figures were held in quite high regard.

Dennis Goacher G3LLZ,
Swindon, Wilts

(There is an article on Chinese Morse 'in the pipeline'. – Ed.)

Japanese Key

MM22's cover key appears to be an aircraft key of the Japanese Navy Airforce. It can be found in a photo, together with radio equipment, in the handbook *Japanese Aircraft Performance and Characteristics* published by the (US) Office of Naval Intelligence, December 1944.

In large print on the inside cover is the message, 'PREVENT SOUVENIRING'. Perhaps this is one reason why these keys are rare! On the nameplate, just below the button, is an anchor in a small circle stamped into the metal tag.

Just to the right of the nameplate can be seen the makers' logo, in this case I believe it is the symbol for Hitachi. Inside the cover is a heavy nickel-plated key. It is not a speed key – the arm is too heavy – but most aircraft communication was no doubt at a fairly slow speed.

This is the nicest looking key I have seen. The finish is dark green flake, almost like a reptile skin pattern, and the quality of materials, the perfect fit and high quality finish remind me of the excellent German toy trains of my youth. Another similar key is also shown in the ONI handbook but with a toggle switch upper left. Incidentally, I have seen the same key painted black and I would not dismiss this as a post-war treatment. I have seen other WWII Japanese equipment which was apparently painted black when fresh paint was called for.

Oddly enough, some of the associated radio equipment I have scrutinised is not of the same quality construction, having poor fitting mechanical devices.

Hugh Miller KA7LXY,
Woodinville, WA, USA

CW Etiquette

When I first became interested in amateur radio, I was told that it was not the done thing to reply to another operator at a speed greater than his. To do so showed that one was neither a gentleman nor an operator! I must admit that I am still not certain

exactly how to interpret this advice.

For example, it is obvious that if a station is calling CQ at 25 wpm then it is poor operating to call him at, say, 35 wpm. However, if you call him at 12 wpm how should the CQer respond? At 12 wpm, i.e., your speed, or at 25 wpm? It can be implied that as you have read his call, and not asked him to QRS, you have indicated your willingness (and ability) for him to conduct the QSO at 25 wpm.

The question can also be asked, should the 12 wpm operator have called the higher speed station in the first place? After all, the CQer by sending at 25 wpm was indicating his ability, and perhaps desire, to have a QSO at that speed.

He may be wishing to improve his CW and not look too kindly on spending (wasting?) his valuable time at lower speeds. This may seem an unfriendly attitude but compare it with an equivalent scenario. You call CQ VK and a YU replies. How do you feel?

I raise the question as I am not too certain of the correct answer and wonder what views other readers of *MM* may have on this subject?

Gerald Stancey G3MCK,
Staines, Middlesex

Using the Double Needle

Bearing in mind the professed difficulty of some in mastering the code, I wonder how the DOUBLE NEEDLE could be mastered instead?

'The alphabet is formed partly by simple, partly by complex deviations. Take the left-hand needle: Two movements to the left indicate A; three, B; once right and left, C; once left and right, D; once right, E; twice, F; three times, G. The following eight letters are formed by the simple movement of the right-hand needle, whilst the remaining portion of the alphabet is represented by combined movements.

The rate of transmission varies greatly, being dependent not merely on the experience of the telegraphist but on his education and quickness of comprehension. An intelligent operator would find no difficulty in reading forty words per minute, whilst an illiterate railway signalman would find two sufficient for his comprehension in an equal space of time...'

This is from the *Cornhill Magazine*, July 1860. Incidentally, although the article does not allude to the event, the opening of the Electric and International Telegraph Co's new Central Telegraph Office in Telegraph Street, London, in 1860 may have sparked off this article.

Bill Guest G4IYB,
Hinchley Wood, Surrey

Media CW

The French TV channel known as M6 sometimes puts out a CW signal, reading 'M6', before or after publicity announcements. It doesn't use a straight key but a music synthesiser, — – · · · · making very nice music for a CW enthusiast!

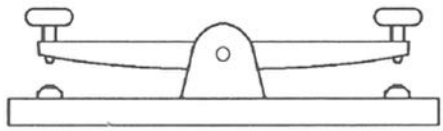
Are there any other radio or TV presentations using CW?

Claude Passet 3A2LF,
Monaco

(In the UK, the Inspector Morse *TV series spells out 'MORSE' musically in its theme tune, and London Broadcasting (LBC) has a specially written signature tune incorporating 'CQ' which is used to introduce the Clive Bull 1 a.m. call-in radio show. We would be pleased to hear of others. – Ed.)*

Double-ended Key

I recently saw an unusual key dating, possibly, from the beginning of the century. It has a wooden base and a straightforward varnished brass arm, just like many other early Morse keys, but this one is symmetrical with knobs at each end of the arm to form what appears to be a double key.



The sketch shows the general arrangement. Does any reader of *MM* know what this key was used for?

John Gilbert ON4AGJ,
Brugge, Belgium

If it's T6, Say So!

I'm puzzled about the way many amateurs assess the signals they receive in CW as they seem to know only two reports, '599' and '339', especially in contests or DX working. The tone is always '9' though I'm sure many home-brewers don't deserve it. I often hear Russians with the famous 'chirp' receiving 'T9' from all stations they work. Only a few (perhaps old-timers) dare to give T9C or T8, and even then it should be T6, and no more!

So if you hear a 'U' running high power with a wide clicking signal, or spreading across the band with harmonics, for goodness sake please tell him about it and long-suffering local hams working near him will bless you!

Usually, nobody seems to care so the offending station, receiving 599 reports, thinks that everything is fine. I once heard several stations calling a harmonic and wondering why they were getting no reply!

Here are a few phrases which may help if the 'U' station doesn't understand English very well.

Your signal is very bad. U WAS OЧENX PLOHOJ SIG.

Check your transmitter. SMOTRITE WAШ TX.

You have got harmonics all over the band. OT WAS MNOGO GARMONIK PO DIAPAZONU.

Your signal is very wide. WAШ SIG OЧENX ШIROKIJ.

You are causing interference on other frequencies. OT WAS QRM NA DRUGIH ЧASTOTAH.

(Ш = – – – – Ч = – – – ·)

Andy Troubachov UA3PIP,
Tulah, Russia

Key Identification

The unknown key in MM3, p.23, is a US J-48-A (Signal Corps 3Z3448A), specification Nr 271-1800 of March 9, 1941. Used with BC654A (SCR 284-A). Made by Crosley Radio Corp. (Ref: PASSET, Claude, 'Identification des manipulateurs J -' in *A1A* No. 1, 1988; No. 2, 1989; No. 3, 1992).*

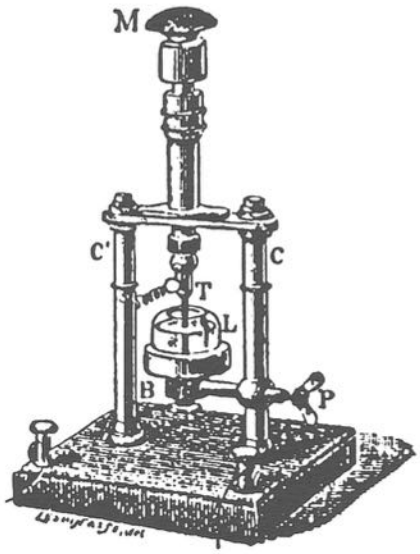
The J51 'unknown' key in MM5, p.44, is a US Signal Corps 6B452 key for signal lamp M227 or M438 used with signal lamp equipment SE-11 and SE-11-A.

The Ducretet et Roger oilbreak key on the back cover of MM20 was used in the French Naval Service, c.1910. It was developed from an earlier 'laboratory key' as illustrated. To avoid problems with spark transmissions the contacts were immersed in petroleum or vaseline oil, while Marconi and others preferred large

contacts or large heatsinks around the contacts. I don't know of any other maker of oil keys, but there were half-a-dozen D. et R. models from 1910–1920.

Claude Passet 3A2LF, Monaco

*(*See the News pages in this issue for information about the availability of issue No. 3 of* A1A. *– Ed.)*



First model of Ducretet et Roger 'Laboratory Key'

The Battle of Jutland

Norman Burton in his letter 'Early German Wireless' (MM23) rightly emphasises the excellent design of German radio equipment in WWI and WWII but accepts uncritically the old canard that the Battle of Jutland was brought about by the British D/F stations detecting the very slight change in the bearings of the German High Seas Fleet as it prepared to sail.

Writing in *Wireless World*, September 1985, I pointed out that 'the first casualty of war is truth. Churchill believed that in war truth has to be surrounded by a bodyguard of lies. Fair enough, but unless one is careful some wartime "deceptions" become firmly established as "history" ... capable of misleading even such a distinguished historian of radio technology as Professor Charles Susskind.

'In his interesting paper *Who invented radar?* (presented at the IEE's "50th anniversary of radar" seminar) he included the story of how the naval battle of Jutland on May 31, 1916 was brought about by the D/F stations detecting a tiny change in the bearings of the transmissions from German warships in the Jade estuary near Wilhelmshaven over 300 miles away, representing a change in bearing of about one degree. This story has been widely accepted ever since the end of the Great War. It was not until recently that the true story emerged in Patrick Beesly's book *Room 40*.

'Whereas the success of Alan Turing in 1942 in cracking the four-rotor German Enigma cipher remained secret for 30 years, the astonishing degree to which Admiral Hall's 'Room 40' cryptanalysts were able to read the German naval ciphers virtually throughout the first World War remained hidden for over 60 years.

'Patrick Beesly shows that the intention of the German fleet to put to sea was obtained from a series of messages from May 28, 1916 onwards, including traffic via Bruges informing U-boats to reckon with their own ships being at sea on May 31 and June 1. There can be no doubt that it was the decoding of the messages, rather than super-accurate D/F bearings, that provided the intelligence that led to the Grand Fleet sailing to intercept the Ger-

man warships and so bringing about the last major clash of battleships – 35 British and 21 German – in an action in which no less than 248 vessels were involved... This amended story does not deny due credit to H.J. Round, since his sensitive receivers were used for interception as well as D/F.

'At the IEE seminar I mentioned this to Dr Susskind and he graciously admitted that he had long had reservations about the D/F story. His wife also found my version credible as she was actually involved in decoding German naval traffic in World War II.'

Pat Hawker G3VA,
London SE22

Dental Morse Prank

The following, which appeared in our local newspaper, the *Minneapolis Star Tribune* on 13 April 1991, may be of interest to *MM* readers in the current 50th anniversary recollections of WWII.

'Biting Humor

The US Navy once took a dim view of a dental prank played on Japan's military leader, but the joke will live on at a Naval museum.

'A Navy Dental Corps official this week picked up mementoes of the taunting message "Remember Pearl Harbor", engraved in Morse code on the dentures of Gen. Hideki Tojo. They will be displayed at the Navy Dental Corps Historical Museum on Bethesda, Maryland.

'The perpetrator, the late George Foster, was reprimanded at the time. "He's probably rolling around on his cloud right now, laughing his fool head off", said his widow, Beverly Foster, in Pompano Beach, Florida.

'Foster, who died in 1989, was the head dental surgeon at a prisoner of war camp in Tokyo, where Tojo was among his patients in 1947. He and another surgeon engraved the message on the inside of the general's dentures.

'When their commanding officer heard of it, he ordered the message removed. Foster told Tojo the dentures needed cleaning and took off the coded message.

'Tojo, who as Japanese premier had been a prime architect of his nation's war strategy, had asked for new teeth so he could speak better at his war crimes trial. He was executed for his crimes in 1948.

'Foster was stripped of a Navy commendation for his stunt.

'Lt. Bill Hanes, of the Navy Dental Corps, took for the museum a gold dental bridge mold used for Tojo and a photo of Foster looking down Tojo's mouth.'

Jay Mathisrud WB0L,
Minneapolis, USA

L.E.M. Key

I recently purchased the new L.E.M. brass key mentioned in MM23, p.5, and note that you would like comments on it.

I like everything about this key, its design and workmanship are excellent. In my short time as an amateur I have only used three other keys but this one suits me best. Its long low base makes a rock-steady platform when sending. There is also no need for any further adjustment once the gap has been set. I only wish I had obtained this key when starting out!

Very best wishes for your magazine which is most enjoyable and interesting. The article 'My days as an Amateur Morse Examiner', also in MM23, was a cracker!

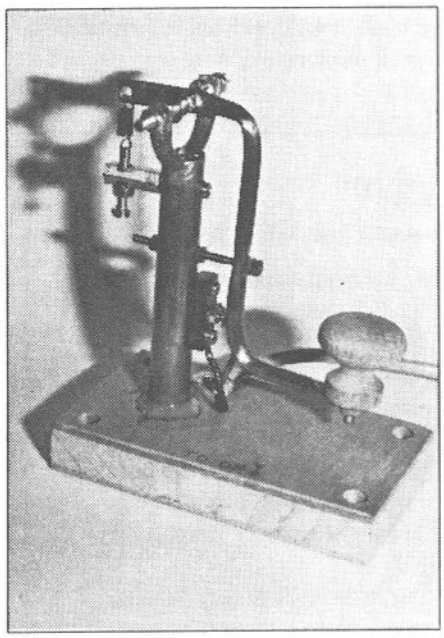
G.F. Armstrong G0LIU,
Carlisle, Cumbria

Pump, Pipe or Pickaxe?

Readers of *MM* may like to see the latest creation, made from copper pipe, by F6EQC, which would surely win a contest for the most inventive home-made key! You can call it a 'pump' as it certainly looks like a water pump, equally you could call it a pipe as it also looks rather like a tobacco pipe. Curiously, although we have the verb 'pomper' in French, we call the hand-key 'La pioche', meaning 'pickaxe', but I don't know why!

The basic idea with this key is to have a vertical arm so that the base is smaller and the key very stable. My friend is a real craftsman and the key is a true work of art. Has any *MM* reader made anything similar using this principle?

Dominique Bourcart FE1OEB,
Poix-Terron, France



Pump-key made by F6EQC

What Key Was It?

Ever since I took my Morse test I have been intrigued by the key used in the test. This was in 1983 at some government offices in Derby Square, Liverpool.

The key was a delight to use. It was quite small and looked fairly modern. The arm was bent, rather like American keys, and made from stainless steel, although as time has passed it may have been a chrome finish. The rear of the key was covered by a plastic case and seemed to contain components which may have been chokes or relays.

I asked if the pattern was available commercially and was told that it was made in their own *(Post Office/BT? – Ed.)* workshops to their own pattern. Can anyone provide more information about this key please?

Rik Whittaker G4WAU,
Stockport, Cheshire

Isle of Wight

I was interested in the article about Marconi in the Isle of Wight in MM23. I recently had the opportunity to spend the day there and made a point of visiting the places with Marconi connections. However, a few changes have taken place and the situation today is as follows:

Alum Bay – The Needles Hotel is no more and has been replaced by a large children's 'fun park'. The stone memorial to Marconi, with inscriptions on four sides, is still there and is at the far end of the large car park.

(The fence of the 'fun park' is hard up against the memorial, giving the impression that the developers would have done away with it given half the chance! – Ed.)

Ladywood Cottage – Enquiries at

Osborne House drew a blank. No-one in the reception area had heard of it but the senior attendant present thought it might possibly now be an old people's home or something similar. Presumably it is no longer accessible to the general public.

Knowles Farm – The Farm and surrounding land is now owned by the National Trust. It consists of two (or three) cottages lived in by tenants of the NT. A ¼ mile walk has to be made from the nearest parking area.

The most westerly cottage is where Marconi had his living quarters and study. A stone slab with inscription is set in the outside wall and this may be the same stone erected by Miss Kirkpatrick. In the field between this cottage and the cliff top a deep hole surrounded by cement can be seen. This is where Marconi installed his mast (or one of them).

John St. Leger G3VDL,
Okehampton, Devon

What Is It?

Several new readers have written to ask about the meaning of the Morse characters which appear at the bottom of the front cover of each issue of *MM*.

They originated long before my association with the magazine began, of course. However, I understand from Tony G4FAI that they represent a 'tuning-up' signal used on the air by the magazine's founder, the late Rinus Hellemons PA0BFN.

The characters are in fact two distorted 'Vs', with the first dot of the second 'V' tagged on the tail-end of the first, and the remaining elements of the second 'V' sent very slowly, in an almost pensive fashion.

The signal became a 'trade mark' of Rinus, recognised immediately by those who contacted him regularly on the amateur bands, and since adopted and used by some of our long-standing readers.

Geoff G3GSR

Ode to a Wireless Operator

by Harry Pearson, Sable Island (old SD), 1905

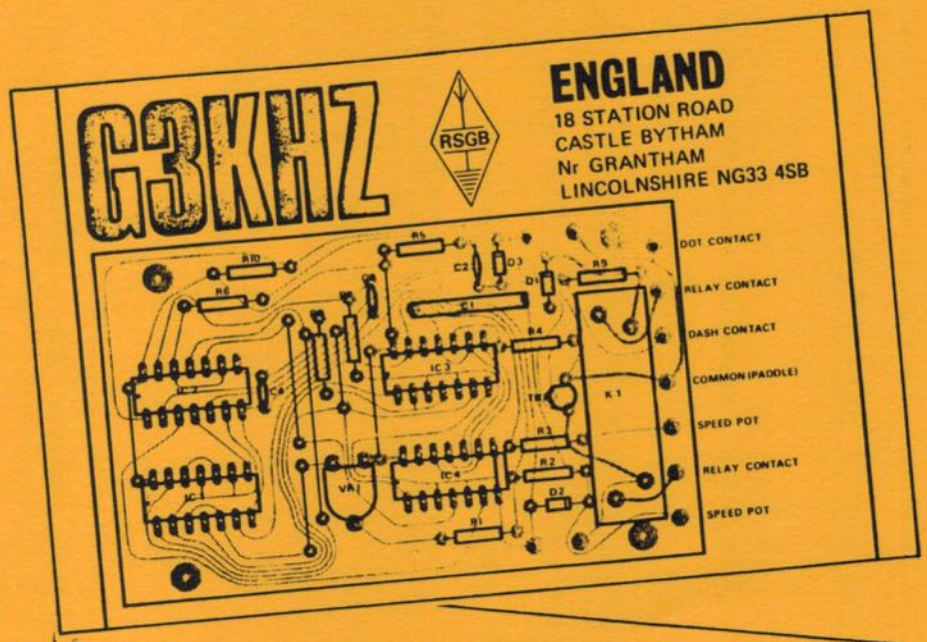
When the air is fine and balmy
and the ether's free and clear
and the sigs come in like thunder
with a biff that jars the ear,
Then the PBO* is happy and he
wears a sunny smile and
doesn't curse the traffic that
keeps coming all the while,
But when the X's come on steady
with a sizzly frizzly roar
and the sigs die down to nothing,
Then the common Op gets sore
and the language that he uses
melts the contacts off his key
burns the 'Bradfield' to a cinder,
leaves the aerial hanging free,
And the Old Recording Angel wears
a stern and saddened look as he
logs the bad Op's language in
the big Recording Book.

*(PBO = Poor Bloody Operator)

Contributed by Gerry Kennedy, Dublin

Morse QSLs

A new series of reproductions of QSL cards with a Morse theme



THE EASTERN TELEGRAPH COMPANY, LIMITED.

PK STATION, 1879.

Memorandum to

Morse Staff

I notice a great many errors are made from indistinct signals & Guessing altho' I like to see the work go off without delay. I prefer seeing the station with less errors. please therefore take nothing unless you are sure and repeat more doubtful words

GUESSING ON THE MIRROR CIRCUIT - 1879