Flying the flag for Morse

Number 55 – Christmas 1997

Morsum Magnificat

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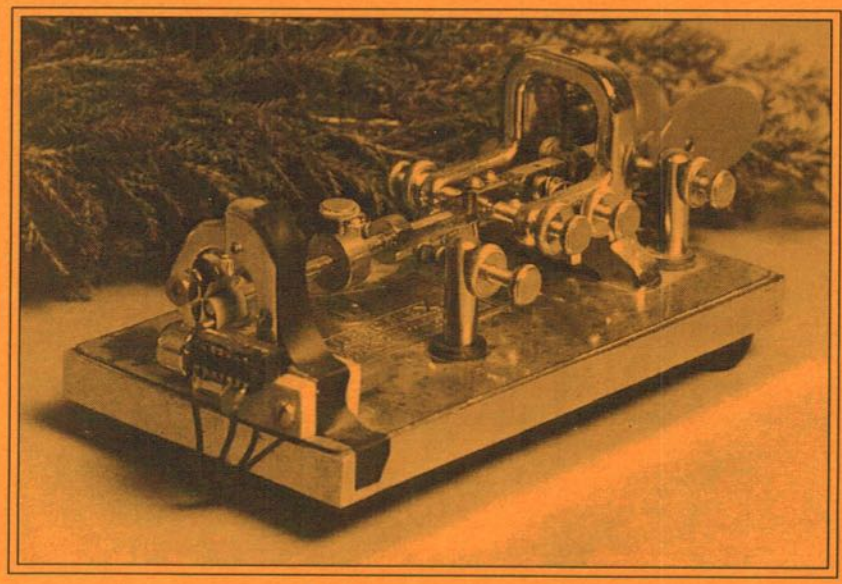
The Morse Magazine



Vibroplex 'Presentation' Model

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Morsum Magnificat

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ON OUR FRONT COVER

Vibroplex 'Presentation' model, first produced 1948, and still in production. This key, serial No. 193162, was bought in USA c.1956. It has been modified by the addition of a small magnet located on the vibrating arm to produce 'clean' dots from a small reed relay. Its owner, Jens H. Nohns, says "This bug served me well from 1958 to 1970, first in Royal Danish Navy ships and coast station work (Faroe Islands), and later in Maersk Line ships all over the world. Since 1982 it has been in use with my ham call OZ1CAR."

Photo: OZ1CAR

Comment

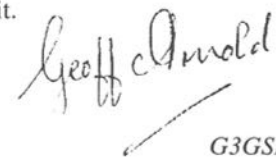
IT WAS OBVIOUSLY INEVITABLE that medium-frequency W/T watchkeeping by UK coast radio stations would eventually come to an end, but knowing that fact does nothing to reduce the lump in the throat or to dry the tear in the eye when reading the closure announcement which appears in our 'News' pages in this issue.

Radiotelegram traffic handled by these stations on MF W/T has dwindled to no more than a handful of messages each day at the most, but the final 'nail in the coffin' was the decision by the UK Coastguard Agency that it would no longer pay British Telecom Maritime Radio Services for keeping the distress listening watch on 500kHz. Instead, that watch will in future be maintained at the Coastguard stations themselves – the few that will remain when their current round of reorganisation and cost-cutting has been completed!

With revenue dropping like a stone, even the recent programme of coast station closures and centralised watchkeeping arrangements was not enough to sustain the MF coast stations as a viable business.

Having spent the first half of my working life in the marine radio and electronics industry, both afloat and ashore, I feel very sad about this ending of an era – it is almost as if I, too, have been declared redundant!

I shall console myself by looking back on those years and remembering the good times – the places I visited, the people I met, and the interesting and rewarding work. The job had its ups and downs, of course, but all in all I count it a privilege to have done it.



G3GSR

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Closure of UK 500kHz and MF Commercial Morse Services

In the period leading up to 31 December 1997, the following message, originated by British Telecom, is being periodically transmitted by British coast stations GLD, GCC, GKR, and GPK:

'CQ de GLD GCC GKR GPK =
FROM 01/0000Z JANUARY 1998 THE UK COASTGUARD AGENCY NO LONGER REQUIRES BRITISH TELECOM MARITIME RADIO SERVICES TO MAINTAIN A 500KHZ DISTRESS WATCH. AT THE SAME TIME, BRITISH TELECOM'S MF COAST RADIO STATIONS WILL CEASE ALL MORSE COMMERCIAL SERVICES. HF MORSE SERVICES WILL CONTINUE AS NORMAL VIA PORTISHEADRADIO/GKA. MF COAST STATION STAFF SEND BEST WISHES TO ALL RADIO OPERATORS, PAST AND PRESENT, WHO USED BRITAIN'S MF MORSE SERVICES DURING THE PAST 89 YEARS+'

It is anticipated that farewell transmissions and responses on this highly emotive occasion will commence on 500kHz at 2348Z on December 31.
(Our thanks to Bruce Morris, GW4XXF, who copied the above message from GLD at 2100Z on 7 November 1997.)

CW Super-Station Op Assists in Life-Saving Operation

Dateline 8 August 1997:
The life of a ship's cook was saved today by the efforts, in part, of an alert Radio Officer at the CW Super-Station operated by Globe Wireless in Half Moon Bay, California.

Radio Officer Walter J. Kane, III was on duty at the CW Super-Station control point in California. From there he was monitoring the receivers connected to high-gain antennas at four radio stations on the US East, Gulf and West coasts (KFS, KPH, WCC and WNU). He heard a distress call from the vessel *Oituz* and relayed the information to the United States Coast Guard.

The Coast Guard, in turn, called in the Mexican Navy who effected the rescue of the, by then, very wet cook.

The detailed account below is in Mr. Kane's own words:

'At approximately 1745UTC, I detected a weak Morse Code signal on one of my local scanners calling WCC. I answered the call, from the general cargo vessel *Oituz*, radio callsign YQIE, (on 8MHz) and received a message which read:
FROM MV OITUZ YQIE TO ALL SHIPS STOP PSN 1848N/09459W FROM VERA CRUZ TO FRONTERA REPORTED MAN OVERBOARD / COOK DESPINA GHEORGHE /

MALE / ROMANIAN NATIONALITY STOP (signed) MASTER

I asked the ship to standby and telephoned the US Coast Guard Rescue Coordination Center (RCC) in New York who then teleconferenced me with the Duty Officer at USCG District 8 (New Orleans). The Duty Officer plotted the vessel's position; it seems the vessel was actually in Mexican territorial waters, near Vera Cruz. Mexico, outside the jurisdiction of the USCG. RCC asked me to ask the vessel if they were searching the area.

With an exchange of Morse Code messages, the Captain responded that he had a lifeboat in the water and was searching. Upon relaying that information, the USCG indicated that all they would do was pass the information to the Mexican Navy.

Later, I called Petty Officer Taylor at USCG District 8 (who) ... told me that they had ... (relayed) the message ... to the Mexican Navy. At approximately 1915 UTC the ship's radio officer called, using Morse Code, to say:

1850 UTC CREW MEMBER REPORTED MISSING WAS FOUND ALIVE BY MEXICAN NAVY STOP THANKS FOR YOU AND ALL ALERTED STATIONS

I called Petty Officer Taylor back to give him the good news and his response was: 'I feel good today, knowing I helped save someone's life.'

I replied: 'Me, too.'

A short time later the ship sent a message to its owners which read, in part:

2/8/1600LT/2100UTC S.A.R. OPERATION FINISHED STOP COOK DESPINA GHEORGHE OVERBOARD SAVED ALIVE BY MEXICAN NAVY IN PSN 1848N/09459W STOP PATIENT AT PRESENT ON BOARD MEXICAN NAVY UNDER MEDICAL ASSISTANCE IN ROUTE TO COATSA COALCOS FOR REPATRIATION STOP "

(Globe Wireless news release, relayed to MM by SOWP Editor, Ted Phelps W8TP, 15 October 1997.)

Amateur Morse Test Review Delayed Until 2001

As anticipated in MM53 (p.4), the expected review of Article S25 of the International Radio Regulations will not be considered at the ITU's World Radiocommunication Conference in 1999 (WRC-99) after all.

Article S25 contains the international radio regulations specific to the Amateur and Amateur Satellite Services, and includes the Morse code requirement for operation below 30MHz.

Because of the large number of other issues identified for inclusion in the WRC-99 agenda at WRC-97 (held in Geneva, November 1997), the review of S25 has been provisionally placed on the agenda for the WRC due to be held in the year 2001 (WRC-01).

ARRL Seeks Changes to CW Waiver Rules

The American Radio Relay League has asked the Federal Communications Commission (FCC) to change the way Morse code exam exemptions for severely handicapped applicants are handled.

Under the League's proposed changes, a candidate at least would have to

attempt the CW test – with any and all necessary accommodations – before being granted an exam waiver based on a physician's certification. Also, Volunteer Examiner Coordinators (VECs) would be entitled to request medical information pertinent to an applicant's handicap from the certifying physician. VECs also would be required to have this information on file before the application is forwarded to the FCC for processing.

The League says these two 'rather minor changes' are needed to restrict the waiver process to use by severely handicapped individuals 'for whom the process was intended in the first place.'

It says the changes would 'stem abuses' of the waiver system without putting unreasonable burdens on examinees. The present system has been in effect for seven years. The League says that experience has shown that many applicants without severe handicaps 'have abused the process' by obtaining physicians' certifications of inability to pass the telegraphy examination.

At present, 8 percent of those applying through the ARRL-VEC have requested a medical exemption from the higher-speed code requirement. Another large VEC (W5YI-VEC) reports similar experience. The League cited 'a growing suspicion' in the ham community of anyone who has upgraded by using the waiver route. But, says the League, this is 'completely unfair to those who require and deserve the exemption because they cannot be accommodated by procedural means.'

FCC rules requires volunteer examiners to exercise broad latitude in administering CW exams to accommodate handicapped applicants. Measures include using a flashing light or vibrating surface for hearing-impaired applicants, pausing in sending after sentences, phrases, words or even characters to allow an examinee time to interpret; or even substituting a sending test for a receiving test. Instead, the League observes in its filing, there is 'a tendency for applicants to seek exemptions' instead of accommodations.

The League says it believes the procedural changes alone will help to deter those who might abuse the process while still allowing exemptions to deserving applicants.

(From the ARRL Letter Online, October 3, 1997, published by The American Radio Relay League.)

G4ZPY Ham-boree in Hawaii

G4ZPY Paddle Keys International principals, Gordon and Brenda Crowhurst, are inviting 'Hams and their partners from all over the World to an evening meal in Hawaii', on 26 July 1998.

The occasion is Gordon and Brenda's wedding anniversary. They were married in Hawaii three years ago and for them, says Gordon, 'It is our Island of Paradise on Earth.'

If any of their friends and acquaintances would like to meet them on this special occasion, the couple suggest they spend a holiday in Hawaii at that time. 'Everyone must make their own holiday arrangements,' says Gordon, 'and pay for their evening meal also.' For those interested, he adds, 'There are a lot of mountains that you can DX from. Hawaii is on the Pacific Rim.'

If anyone is interested in this invitation, and would like more details, Gordon and Brenda are available most times on the 'phone (except between 1600 and 1830) up to 2300 hours local time.

'We must know at the earliest time possible of your intentions', says Gordon: 'We have to notify our Hawaiian friends so that they can locate a venue large enough to seat us all.'

SARL News Bulletin Now Again in Morse Code

The following news item was broadcast on the South African Radio League's news bulletin on 26 October 1997.

'Following many years of absence, the SARL News Bulletin will again be transmitted on Morse code at 12 words per minute. These transmissions will be ideal practice sessions for newcomers to this mode of operation and will also assist others to maintain their Morse code operating capability.

'The bulletin will be transmitted in CW on Tuesday evenings at 18h15 SAST, via the ZS6FOR beacon which is under the care of ZS6QL. The frequency is 7028kHz. Reception reports are invited and will be acknowledged. Reports together with a transcript of the bulletin should be sent to the SARL, PO Box 807, Houghton 2041.'

(Information from Roger Gould-King ZS6QL)

Morse in the *WSJ*

The *Wall Street Journal*, 1 October 1997, carried an article by Staff Reporter Anna Wilde Mathews titled 'The Internet Generation Taps Into Morse Code'. It describes, among other things, the activities of the Morse Telegraph Club, including their on-line dial-up circuits which use modern technology to link their old-style telegraph instruments.

The wide ranging article touches on many other facets of Morse which may be familiar to readers of *MM*. The recent closure of US Coast Guard CW monitoring; Morse guidance signals on airport radio frequencies; and the continued use of Morse in training 1st year students at the US Naval Academy.

It refers to the use of Morse in earlier days for Wall Street buy and sell orders; the control of railways; the dissemination of correct time nationwide; its use in the Civil War; news reporting; and its role in the sinking of the *Titanic*.

Chronicling the gradual demise of Morse in the United States, it mentions the last Western Union Morse telegram in 1960; the abandonment of Morse by the Boy Scouts of America in 1991; and goes on to describe a revival of interest 'among the most techno-savvy' who often learn about it through the Internet.

Morse web sites abound, reports Mathews, and more than 20 audio and computer software programs promise to teach code to a generation that never actually saw it used.

She says that at least 85 000 members of the American Radio Relay League (ARRL) use Morse regularly, and reports that the circulation of *MORSEls*, newsletter of the Morse 2000 Group, dedicated to helping disabled people communicate with Morse, has grown from 45 to 2600 in the last two years.

She concludes ... 'But no one uses Morse more religiously than the 2400

members of the Morse Telegraph Club ...' She quotes Jim Adkins, the club's president: 'It's a part of history. Our mission is to keep it going.'

This excellent article has but one failing. It does not distinguish between American and International Morse. Unless the reader knows otherwise, it would be easy to assume that the code used by both Samuel F.B. Morse in 1844 and the MTC's modern dial-up circuits, is the same code as that employed by amateur and commercial radio users today. Despite this shortcoming, it is very nice to see such an article in such an eminent publication.

(Our thanks to Chris Rees, G3TUX, for drawing our attention to this article.)

G-QRP Winter Sports

The G-QRP Club's Winter Sports will be held from 26 December 1997 to 1 January 1998. Look out for maximum activity on all QRP frequencies, especially on the CW bands, and enjoy the possibility of some surprising DX using less than five watts of power.

G4ZFE CW 'Pile Up!'

'Pile Up!' is a freeware CW trainer which simulates pile-ups of up to 9 stations calling at once. It requires Windows 95 and a Sound Blaster compatible card, and is Internet ready to send your score to G4ZFE to appear on the Pile Up! 'High Scores' Page. Further information, and the program itself, is available on: http://www.babbage.demon.co.uk/pileup95.html

For those with appropriate computer facilities but no Internet access, the latest version of 'Pile Up!' can be obtained by sending a 1.44MB diskette and return postage to Richard Everitt G4ZFE, 7 Emery Down Close, Martins Heron, Bracknell, Berks RG12 9FH, England. Richard says 'I find that Pile Up! is good practice before a contest and also helps to improve keyboard skills.'

G4ZPY New Miniature Combo

G4ZPY Paddle Keys International have introduced a new addition to their line of Morse keys, expected to be of particular interest to QRPers, back-packers and mobile operators. This is an iambic combination using their existing miniature '3 in 1' twin paddle with the new micro miniature 'Tick-2' iambic keyer from Embedded Research of America.

The Tick-2 supports both iambic modes, A and B. It has switchable sidetone, selectable paddles for left-handed or right-handed operation, low current consumption (powered by a small internal battery), speed control via the paddles, and a 20-character memory.

The price is £125 sterling (approx. US$200) plus postage and personalisation if required. The Tick-2 is available as a separate unit, priced at £45 plus postage, and is also available as an assembled PCB for those who wish to install it within their own QRP rig.

Send an s.a.s.e. (UK), or $1 or one IRC from overseas, for further information to: G4ZPY Paddle Keys International, 41 Mill Dam Lane, Burscough, Ormskirk, L40 7TG, England.

ORIGINAL-QRP-Contest

Operators of original (true) QRP rigs, commercial or home-brew (but not including QRO equipment rated higher

MIXED GROUPS (SYKO). The following are **one-minute tests at 6 w.p.m.,** including barred letters—5 groups of 4 each, with 9 letters, 9 figures and 2 barred letters. These are sent **without separation signs,** intervals between groups being left as in plain language. Allow 12 seconds per group + interval. Tests can be used horizontally, or vertically using 5 columns.

(*a*) -----	19V4	K$\bar{a}$Z$\bar{e}$	E8L7	D6B2	Q5H3	·-·-·
	⊖J7Y	2G95	7S1R	$\bar{x}$C$\bar{p}$T	8N4P	
	A$\bar{c}$i$\bar{o}$	F3U4	W605	29H7	L1E⊖	
	3P8D	5K2V	1B⊖S	4G7W	F$\bar{b}$9$\bar{u}$	
(*b*) -----	Q$\bar{n}$FZ	S6B1	N9E4	72R⊖	J3C5	·-·-·
	8U2L	7Z3X	4H8P	1W5G	K$\bar{c}$6$\bar{b}$	
	⊖i9V	6057	8T3D	$\bar{u}$A$\bar{o}$M	9Y2V	
	41X3	N$\bar{x}$P$\bar{a}$	W⊖G6	C9Q7	R4Z8	

than 20W output with power temporarily reduced) are invited to take part in this contest from 1500 UTC December 27 to 1500 UTC December 28, 1997, in the QRP segments of the 80, 40, and 20m bands. Next contest 4–5 July 1998. Further information from Contest Manager, Dr Hartmut Weber DJ7ST, Schlesierweg 13, D-38228 Salzgitter, Germany.

Accented Letters – Info Wanted

MM reader Duncan Leak has drawn our attention to some unfamiliar Morse letters which appear in the 1937 Signal Card published by HM Stationery Office, and in Pitman's *The Complete Morse Instructor*, published 1944. The Signal Card refers to them as 'accented letters', and the Pitman's book calls them 'barred letters', but neither explains their use.

The letters are:

$\bar{b}$: −···− ('B barred')
$\bar{c}$: −·−·− ('C barred')
$\bar{p}$: ·−−·− ('P barred')
$\bar{x}$: −··−· ('X barred')

The book also lists the use of some of these symbols as punctuation or procedural signs (e.g. −····− = double hyphen or break sign; −·−·−· = commencing signal; −···−· = fraction bar) separately, but it does not explain the purpose of the barred letters. Are any readers familiar with these letters, and if so can they provide any information about them please?

Longmans The Morse Code – Learning & Practice *(revised 1942) has a table of 'accented or modified letters, termed "barred" letters' which besides the above, also includes:*

·−·− 'A barred' written $\bar{a}$
··−·· 'E barred' written $\bar{e}$
−−·−− 'N barred' written $\bar{n}$
−−−· 'O barred' written $\bar{o}$
···− 'U barred' written $\bar{u}$.

Again, it does not explain where or when these might be used, but does give details of a set of fiendishly difficult tests which include them (see above). No doubt ex-seagoing operators, among others, will recognise all these characters as accented letters or punctuation, although with different names to those given here. – Ed.

AGCW-DL Activities 1998

All radio amateurs are invited to take part in the following CW activities organised by AGCW-DL:

Happy New Year Contest
January 1, 0900-1200 UTC; 3.510–3.560, 7.010–7.040, 14.010–14.060MHz. Includes SWLs. Further information from Contest Manager, Antonius Recker DL1YEX, Gustav-Mahler-Weg 3, D-48147 Muenster, Germany.

QRP Winter Contest
January 3, 1500 UTC, to January 4, 1500 UTC; 3.5, 7, 14, 21, 28MHz. Next contest (Summer) will be 18–19 July 1998. Further information from Contest Manager, Lutz Noack DL4DRA, Hochschulstr. 30/702, D-01069 Dresden, Germany.

Straight Key Party
February 7, 1600–1900 UTC; 3.510–3.560MHz. Includes SWLs. Further information from Contest Manager, F.W. Fabri DF1OY, Gruenwalder Str.104, D-81547 Muenchen, Germany.

Semi-Automatic Key Evening
February 19, 1900–2030 UTC; 3.540–3.560MHz. Further information from Contest Manager, Ulf-Dietmar Ernst DK9KR, Elbstrasse 60, D-28199 Bremen, Germany.

(Info from AGCW-DL)

Short Break

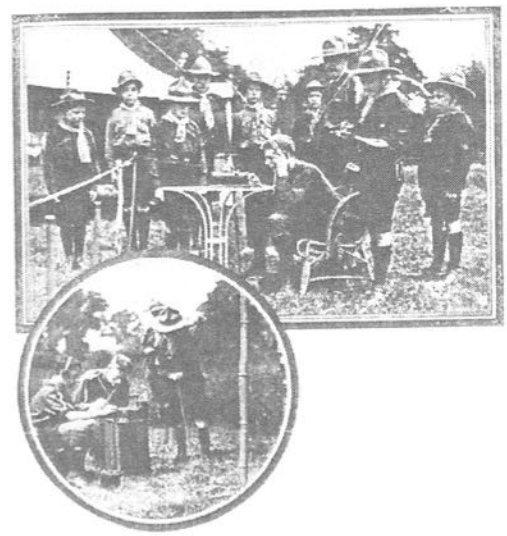
English Boy Scouts Studying Wireless

Some of the Boy Scout troops of England are giving considerable attention to the studying and using of practical field wireless telegraphy.

The Second Royal Eltham Troop, whose ages range from eight to seventeen years, have equipped themselves with a complete portable wireless telegraph outfit for both sending and receiving. Under the direction of their scoutmaster they are mastering the intricacies of the Continental and Morse codes, and many of them are already making good progress.

At their camp they use a portable, light, iron table, while the field workers who go out a distance of two to five miles pack the apparatus on their backs. The field workers when out on march do not carry a table, using one of the outfit boxes for a sending table and the other for a seat. Tall bamboo poles are used to hoist the aerials.

(From Popular Electricity *Magazine, August 1912.)*



Is Morse Passing?

Amateurs to the Rescue

This article appeared in 1934, after the British Post Office had announced the discontinuance of Morse operation for Inland Telegraphs. It urged the wireless amateurs of the day to keep the code alive for their own use. Interestingly, some of the things it says are still relevant today when the future of amateur Morse itself is under threat

IT WAS MELANCHOLY NEWS that the last Morse instrument was superannuated from the Central Telegraph Office, London, and that the inland telegraph system of the country was in the final throes of going over to mechanised printing.

No doubt, technically and economically, it is all justified, but what a pity! To think that Morse should pass out with only a facetious reference in an evening paper. The servant of a hundred years – 1837 saw its birth – and yet there is no poet to write an ode in praise of a rhythm approaching in its perfection that of any hexameter. Going, if not gone, the rhythmic glide of smoothly flowing dots and dashes, each click significant, both in itself and in its context, to the sympathetic ear. Instead, the meaningless click of a typewriter and a callous translation into cold print.

This moan applies chiefly to line telegraphy for – Heaven be praised! – Morse still remains the backbone of wireless telegraphy, and on a really 'all-wave' receiver a vast amount of interest can still be got by listening to code.

In these days, however, even commercial wireless Morse is largely mechanised, and one must read very well even to follow it at the lowest Wheatstone speeds, which are so frequently used on wireless channels, not to mention trying, as a mild amusement, to write it down. But frankly, to anyone with a good Morse upbringing the standard of wireless manual sending has always been appallingly low.

Individuality at the Key

Not that one sighs for the mechanical perfection of the Wheatstone transmitter; on the contrary, an automatic transmitter running at, say, 35 words per minute is usually not so pleasant to listen to as a good manual Morse of the same speed.

A surprising amount of individuality can be expressed in the operation of a key. There has been a time when one

could distinguish an individual from any half-dozen senders working at the moment.

It is impossible to predict what system of commercial signalling may in future become standardised in wireless practice. So far Morse holds the field in 'getting the goods across'. Facsimile systems as a means of conveying intelligence – that is, the picture transmission of written or printed messages – are on trial and may become of considerable importance.

So also may the telewriter systems of modern telegraph practice. But these are features rather of fixed station operation, and one of the outstanding values of wireless is its service under mobile conditions. Here it appears certain that Morse will hold the field for many a day.

It has been interesting to watch the Admiralty's scheme for organising a volunteer body of Morse operators for possible naval use. The work of wireless generally in the Great War was inestimable. Navy, Army and Air Force used it liberally and thousands of men were trained (and part-trained) for wireless duty.

An invaluable nucleus of expert operators and instructors came from the Post Office, and many useful people came also from the ranks of pre-War wireless amateurs – the good old 'Crystal Brigade'.

Once again it rather looks as if the amateurs will have to keep the flag flying. Independent amateurs still exist in plenty, and their numbers include many Morse men accustomed to operating both ways in difficult conditions. The amateur wireless societies of today still have a priceless opportunity to keep Morse fully alive, and it is to be hoped that they will not be slow to take advantage of it.

(The article continues with comments on the best way to learn Morse – by sound rather than by mnemonics – and emphasises the need for tuition to be given by an expert. It concludes 'There must be many Post Office men who, deploring the passing of an old friend, would be glad to ensure that, though Sam Morse's body lies a-mouldering in the grave, his code goes marching on.')

(From Wireless World, *23 November 1934 (with grateful acknowledgement). Our thanks also to Chris Rees. G3TUX, for drawing our attention to this article.)*

2nd IARU HST World Championships

A report by
László ('Lacy') Weisz HA3NU
(HST Co-ordinator, International Amateur Radio Union Region 1)

THE FIRST IARU High Speed Telegraphy World Championships were held in Siofok, Hungary, two years ago and we have just brought the second one to a successful close. This time the Bulgarian national radio society (BFRA) was host to the event and the competition took place from 6 to 10 October 1997 in Sofia, Bulgaria.

Participants were accommodated at the Hotel Rodina, situated in the city centre. On the top (21st) floor an amateur radio station was set up with the special call LZ0HST.

The Program

Monday was the day of arrival and registration and the official opening ceremony was held in the evening. Following that the HST Working Group approved the membership of the International Jury and the programme for the championships.

Members of the Transmitting Jury (who need to have high CW skills), came from five countries and were as follows: DL2CC (Germany), HA3NS (Hungary), LZ1PJ (Bulgaria), UA4FUL (Russia), YO4HW (Romania).

For the remaining tests Jury members were appointed from Austria, Bulgaria, Croatia, Japan, Korea, and Romania.

On Tuesday, competitors of all categories took part in the Receiving tests. In the afternoon they began the Transmitting; RUFZ (callsign receiving); and PED (pile up trainer) tests. It was the first time the PED test had been used, with competitors having to cope with continuous QRM from four 'stations' during the five-minute test.

On Wednesday, the competition continued until every competitor had finished all the tests. It was 10.30 in the evening when OE1JJB finished his transmitting and the competition came to an end.

Final Events

On Thursday there was an excursion to Rila Monastery, one of the most famous sights in Bulgaria, situated in the picturesque mountains of Rila. This included a short walk in the colourful forest surrounding the Monastery, followed by lunch.

In the evening the closing ceremony

The Hungarian Team at the World HST Championships

The Transmitting Jury at work

A group of competitors from several nations enjoying the excursion to Rila Monastery

of the Championships was held at the hotel, followed by a hamfest.

Championship Results

Winners in categories A – F:

Category and Call	Speeds Letters	Figures	Mixed
Receiving tests:			
A (Junior Females)			
EU012	310	420	250
B (Junior Males)			
EW8NV	270	420	230
C (Females)			
EU7KT	310	470	270
D (Males)			
EU7KI	330	500	290
E (Senior Females)			
UA3VAT	220	320	190
F (Senior Males)			
UA3VBW	290	440	240
Transmitting tests:			
(Categories as above)			
A. RV9CPW	215	267	193
B. EW8NV	276	349	209
C. EU7KT	268	315	202
D. EU7KI	294	392	253
E. UA3VAT	161	189	131
F. UA3VBW	216	244	177

Radioamateur Practising Tests:
(Categories as above)

	RUFZ/score	PED/QSO
A. EU012	39411	20
B. EW8NV	42560	31
C. EU7KT	41902	23
D. HA3OV	61230	43
E. HA5BA	26162	20
F. UA3VBW	42328	22

Individual Champions:

(Top scorer in each Category across all tests)

A	EU012
B	EW8NV
C	EU7KT
D	EU7KI
E	UA3VAT
F	UA3VBW

Final Team Places:

1. Belarus	9. Croatia
2. Russia	10. Japan
3. Romania	11. Ukraine
4. Hungary	12. Korea
5. Bulgaria	13. Germany
6. Macedonia	14. Austria
7. Czech Rep.	15. Italy
8. Yugoslavia	

HST Co-ordinator's Comments

I have worked hard to obtain an increase in the number of participating countries but despite gaining three new countries the overall total remained at 15.

We were very sorry that, for various reasons, contestants from the following countries who had expressed the intention of coming were unable to attend: A4 (Oman) cancelled at the last minute. From ER (Moldova) the junior competitor had a problem with his passport and the team could not cross the border. Competitors from VE (Canada) and OM (Slovakia) had other commitments (DX-pedition, job ...), while potential attendees from HB9 (Switzerland), OH (Finland) and the USA were unable to attend for financial reasons.

Explanatory Notes

COMPETITORS: A national team participating in the Championships may consist of any number up to a maximum of twelve competitors in six categories (with up to two competitors in each category), as follows:
A - 'Junior Females' (up to 20 years of age);
B - 'Junior Males' (the same);
C - 'Females' (over 20 years of age);
D - 'Males' (the same);
E - 'Senior Females' (40 years of age, or over).
F - 'Senior Males' (45 years of age, or over);

When a national radio society does not send a national team to the Championships it may invite individuals (including representatives of CW Clubs) to take part in the Championships at their own expense.

TESTS: The Championships comprise various competitions as follows, with all transmitting and receiving tests using the PARIS system:
(a) Reception of 5-letter groups for a period of one minute, with an initial speed of 100 marks (letters) per minute.
(b) Reception of 5-figure groups for a period of one minute, with an initial speed of 150 marks (figures) per minute.
(c) Transmission of 5-letter groups for a period of one minute, with the highest possible speed, and best possible accuracy.
(d) Transmission of 5-figure groups for a period of one minute, with the highest possible speed, and best possible accuracy.
(e) Reception of 5-character mixed text groups for a period of one minute, with an initial speed of 100 marks (characters) per minute.
(f) Transmission of 5-character mixed text groups for a period of one minute, with the highest possible speed, and best possible accuracy.
(g) Radioamateur Practising Tests, using the RUFZ radio amateur callsign receiving program compiled by DL3DZZ and the PED Pile Up Trainer program compiled by JE3MAS.

My plea for more competitors to come from Western Europe fell on deaf ears. Perhaps they cannot escape from the thought: "I can't win, so I won't go". I'm not sure, but that's how it seems to me! Whatever the reason, one thing is sure: they cannot know what they are missing. Taking part in these Championships is an unforgettable experience!

OE1JJB is a good example. He was an observer in the Transmitting Jury and had listened to almost all the transmitting tests. He enjoyed the atmosphere and the good performances so much that he decided to take the transmitting test himself. He took it just for FUN and when he finished he was applauded by the Jury.

Very Successful

Looking at the results, it could seem that there were only Belorussians and Russians taking part. Certainly, the field is divided between these two countries and the rest. This is because the champions train very seriously (for many hours each day!).

Despite this, representatives of six countries received medals and eleven countries were placed 1st to 6th in their various events, mainly due to the Radioamateur Practising Tests which are based on 'everyday' ham experience.

All in all, the competition was very successful, with performances even higher than they were two years ago in Hungary. The next championships will take place in Italy, in 1999, when I hope we will be able to welcome a few more new countries.

MM

Short Breaks

Remarkable Development

The development of wireless telegraphy during the last three years is remarkable. In January 1909, there were 92 wireless stations in action and 416 ships provided with wireless apparatus. In January 1910, there were 136 land stations and 619 ships provided; in January 1911, there were 219 land stations and 988 ships fitted with wireless apparatus.

*(*Popular Electricity Magazine, *August 1912.)*

Upper Case for Weather Reports

Those of you who are interested in signalling and radio will notice that simple Beaufort letters can easily be sent by Morse. But capitals, R, etc., cannot be sent by Morse... Instead the letter 'a' before any letter shows it has to be read as a capital. Thus 'ar ar' means RR which means 'continuous heavy rain'.

(From How to be a Weatherman, *by Lt. Commander Mitchell-Christie, published by Woolworths.*

Contributed by Alex Henderson G0EJF)

RNAS Morse

Requirements from Training Transfer Card:

1. BUZZING

Eight words per minute (five letters to a word).

Sending and receiving

Test to be of three minutes duration

5. SENDING ON SILENCED KEY

Clearly readable Tape Record, produced at a rate of eight words per minute.

(Royal Naval Air Service training requirement 1917.
Contributed by Stan Barr, G0CLV.)

New Italian Robot Morse Beacon

FOLLOWING several years of operation with an earlier design, a more sophisticated robot Morse beacon now operates on 28.195MHz. Designed and built by father and son Ivano and Marco Deevietro, I4DVT and IK4EWK, it is located at Pontecchio Marconi (Bologna), where Marconi made his first experiments, and operates under the supervision of the Bologna Branch of ARI, Italy's national radio society.

Its purpose is to assist in the assessment of long-range propagation on the 10, 12, 15, and 17m amateur bands, and to assist users in determining the effectiveness of their antenna patterns and receiver S-meter scales. In this connection, it has accurate signal strength calibration, with an output power of 32W, reducing in 3dB steps on request down to 0.125W. It also broadcasts messages of general interest, and exists to commemorate the work of Guglielmo Marconi when he lived at Pontecchio.

How to QSO with the Robot

Identification cycle:

··· IY4M IY4M – · · · – · · · · · · · IY4M MARCONI MEMORIAL BEACON ROBOT QRV QRV

After each ID cycle the robot switches to 'stand by' for 30 seconds. The user must send 'VV' several times to enable the robot to synchronise its speed with that of the caller. Speeds from 50 to 300 characters per minute are accepted.

After this preamble, the user sends 'IY4M' followed by his own call twice and then 'K'. After the IY4M a dummy 'de' may be sent if desired. If the callsign is not properly received, the calling sequence may be repeated with just one callsign instead of two. The robot has to recognise the callsign at least twice before a QSO can proceed. In case of doubt, it sends 'PSE AGN' asking for a new full attempt.

Once contact has been established, a welcome message is sent to the user. If he or she has had a previous contact with the robot, this is referred to in the welcome, also the operator's name if it is on the callsign database. If your name is not on record, you can (optionally) send it at least two times followed by 'K' at the robot's request.

The robot then asks for your RST. This can be sent one or more times followed by 'K'. The letter 'N' can be used instead of '9', e.g., '5NN K' for '599 K'.

The robot then waits for a continuous or intermittent signal of at least 5–6 seconds to measure the user's signal strength. It then transmits your RST report.

To give a more 'human' feeling to the QSO, the robot selects at random the texts of its responses from different options available. Special QSL cards are sent by the team responsible for the beacon in response to all SWL reports and to all stations having a successful QSO with the robot.

Commands

Individual 'commands' (followed by a well separated 'K') can be sent as follows:

DBM K Request for your signal strength report in dBμV. When the robot replies 'R R' send a continuous or intermittent signal for 5–10 seconds.

DBM "freq" K Request a change of receiving frequency for 10 seconds within the following ranges:

28000.0–29999.9kHz
24500.0–24999.9kHz
21000.0–21499.9kHz
18000.0–18499.9kHz.

The decimal point can be entered as '.' ',' or 'R' (for example 28005R5). The signal intensity (in dBμV) received by the beacon on the requested frequency during the ten second period is sent back on the nominal output frequency of the beacon (28195.00kHz).

INFO K Request to transmit information and operating conditions of the beacon. This includes UTC and date; nominal output frequency; output power in watts; antenna type; QTH and locator; current CW speed (wpm); internal temperature of the hardware box in degrees celsius; external ambient temperature; address for more information including a list of commands.

PWR 1–9 K Request for a variation in beacon power. Codes are:

1 = 32W; 2 = 16W; 3 = 8W;
4 = 4W; 5 = 2W; 6 = 1W;
7 = 0.5W; 8 = 0.25W; 9 = 0.125W.

PWR K Request to know current output power.

QRG K Request to know the exact transmitting frequency.

QRO K Request to set the output power at 32W.

QRP K Request to set the output power at 8W.

QRPP K Request to set the power output at 1W.

QRS K Request to slow down the beacon speed by 25 percent. This command can be repeated to obtain still lower speed.

QRQ K Request to increase the beacon speed by 25 percent. This can be repeated to obtain even higher speed.

QRR K To reset the robot's speed to equal that of the user.

QSA K Request to know the user's signal strength in S-units as received by the robot. Procedure as in 'DBM'.

QSA "freq" K Similar to the DBM "freq" command. The report returned is the signal strength of the user on the frequency requested in S-units instead of dBμV.

QSB K Request to send a sequence of different output power levels from 32W down to 0.125W in 3dB steps. Each level is identified with a number 1–9, as in the PWR command above, and lasts for a few seconds.

QSY "band" K The beacon's output is moved to the selected band (12, 15, 17m) to send a short ID message as in the command QTG below. The frequencies on each band are chosen by the control station which can also disable this feature. Default frequencies are: 18105.0; 21145.0; 24920.0kHz.

QTC K Request to know which QTC messages are available, numbered 0 to 9.

QTC 0–9 K Request to broadcast specific number (0–9) general QTC message.

QTG K Request to transmit a short version of the ID message with the current output power.

QTH K Request to transmit the Locator and the name of the site where the beacon is located.

QTR K Request to send the beacon date and time.

TEMP K Request to send the value of the internal temperature of the unit, also the external ambient temperature, in degrees celsius.

WPM K Request to send the CW speed of the user in words per minute (wpm) and the dot/dash ratio of the characters.

Further Information

The address for QSLs and for further information is:

ARI Beacon Robot IY4M, PO Box 2128, 40100 Bologna, ITALY.

(Information from IARU Region 1 News, November 1997)

Reflections from Uncle Bas – 25

Sacks of Soya

by Bastian van Es PA0RTW

CAPTAIN SÖRENSEN of the Swedish freighter ss *Petersborg*, in which I worked as a Radio Officer, retired. He was a stout seaman whose main interests on board were the sea, the ship and the weather, not necessarily in that order. He had a very good relationship with the Chief Engineer. In the messroom where they consumed their meals, they always shared the same table, and every afternoon they had a drink or two in the Captain's cabin.

Much later the Second Engineer told me that during those meetings there was never any talk about engines or engine rooms, because the Captain was completely ignorant of such matters. Even worse, he couldn't care less and was not at all interested in the intricacies of the machinery.

The only thing that mattered was that the propellers were ploughing through the water and propelling the ship at a nice speed. His only remark, when problems occurred, was that it was the task of the engine room crew to deal with them and he didn't want to be bothered with the details.

He had the same ideas about the meals, cleaning, bed-linen and the like. These were the tasks of the Purser. He presumed the man had made a study of such matters and was paid nicely to watch the cook and the supplies.

About the Radio Officer he had a very definite opinion. When I signed on he said: 'I need daily weather reports, time signals and the usual telegrams. I presume you have been to school to take care of those chores. How or when you do them is your business so do not bother me with poor radio conditions or broken equipment. For me the sun is not shining every day either.'

That was the end of the introduction and to be perfectly honest I did not have any problems with the man during all the years I sailed in that ship. In fact, I was very sorry when he left after a long life at sea to retire to a small village in Sweden.

New Captain

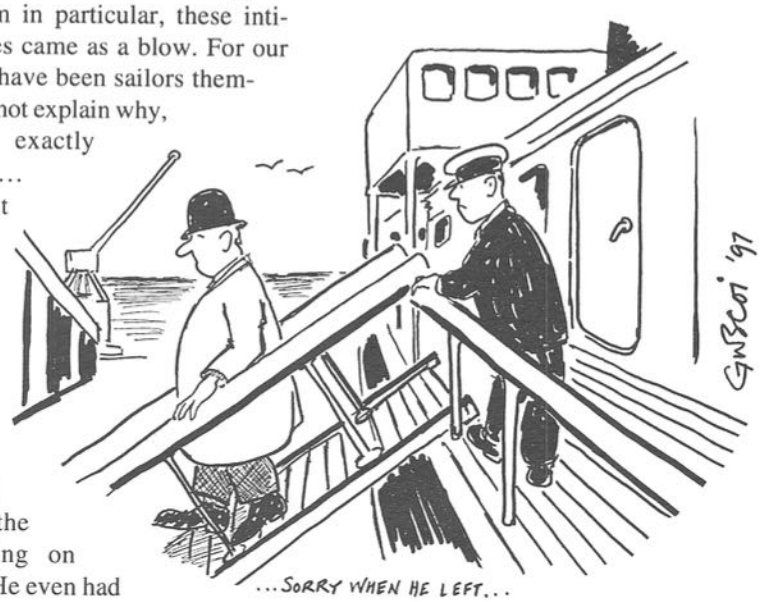
His successor, who took over in Baltimore, was a young lad with a lot of revolutionary ideas. I was not the only one who classified him as such. The entire crew had the same opinion and in no time there was a long list of complaints and everyone was grumbling about him.

To give you an example, he demand-

ed from the Chief Engineer long detailed lists containing specific information about the main engine, power consumption, and even private information about his staff.

The next one in line for questioning was the Purser, can you imagine? For many years he had had complete control of his own domain, to the complete satisfaction of every one involved, and now a newcomer wanted to upset the apple-cart! For him in particular, these intimate inquiries came as a blow. For our readers who have been sailors themselves I need not explain why, they know exactly what I mean ...

The most disturbing fact, however was the Captain's knowledge of ship's life. He was perfectly aware of the ins and outs of all the business going on aboard ship. He even had a detailed knowledge of engine rooms and machinery.



Swallow or Choke

After a few weeks, when the new rules from our young Captain had penetrated into the farthest corners of the ship, the quiet and peaceful atmosphere which had engulfed the vessel for many years had evaporated.

However, for the crew members it was a case of either swallowing or choking, as we say in Holland, and after a relatively short time the herd was following the leader. That, of course, is how it should be. The Captain is, as we all know, the boss and the Almighty on a ship, no question about that.

For me as a Radio Officer I did not have any difficulties at all with Captain Eigil Vesti. I liked the man. His predecessor had never shown any interest at all in my activities, the new man on the other hand visited me regularly and it was clear that he knew quite a bit about the proceedings.

He even knew about the GMT watch-hours as stipulated in the Geneva Convention. This came as a surprise since it was my experience that few people apart from radio operators understood this rather complex system. I think he was actually trying to catch me playing

hooky, but as the radio was, and is, my greatest hobby, I was in the radio shack almost twenty four hours a day.

Extra Duty

His remarks at times were, to say the least, not entirely flattering. His favourite was: 'Let's be honest, the job of a Radio Officer is extremely easy, and when the ship is in port he can go on sitting on his butt doing nothing as usual. In my opinion, this is very inefficient'. Obviously I did not reply, and just kept quiet.

... BURST OUT LAUGHING ...

I completely forgot about his remarks until we arrived in Recife, Brazil, where the ship was to load sacks of soya for Hamburg. When we had docked the Captain came into the radio cabin and told me to help count the cargo when it was being stored in the holds.

So far as I know this was always done by the mates and I told him so. He was not amused and told me it was of the greatest importance that I should give a hand. This duty did not please me in the least since I usually left the ship immediately after arrival and forgot everything about maritime affairs.

Never Asked Again

Before the loading of the cargo began, the mate handed me a board on which was fixed a couple of loading forms. I was not the only one who had to undertake this task. Adjacent to the other holds were consecutively posted the second and third mates. Apart from us, there were the representatives of the sender of the goods, and on the pier was a customs officer.

I felt quite reassured with all these people around me, because within the hour it became clear that my way of controlling the stock was perfectly useless. The cargo seemed to come from every direction, the winches were running at top speed and I lost count completely of the number of sacks.

The Portuguese gentleman who stood beside me burst out laughing and offered to let me copy his figures. Obviously the information on my forms did not have any value whatsoever and an impartial comparison was out of the question. As a result I was quite worried that the Captain might say about my poor performance.

It turned out quite well, he did not comment and seemed to have forgotten all about it. It may sound strange, but he never asked me again to take on any chores apart from the radio.

MM

Bookshelf

A mail order book service for selected telegraphy and radio titles. The letters *MM* or *RB* followed by a number after each title 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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New title

In response to enquiries from readers, we have imported a small quantity of *Radiotelegraph and Radiotelephone Codes, Prowords and Abbreviations*, as mentioned in 'News' in MM53/54. This listing of abbreviations, Q-codes, Z-codes, procedural signals, phonetic alphabets, and Morse alphabets, was originally compiled for the Summerland Amateur Radio Club in Australia by John W. Alcorn VK2JWA. What began as a minor club project 'blew out like the national debt' says John, so he thought that having put all that effort into it, it was worth making the results available to a wider audience.

84 pages, 8¼ x 11¾in, softbound

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The Story of the Key by Louise Ramsey Moreau *(MM38)* ..... £3.95 (UK): £4.25 (Eur/Sur)
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Sparks Around the Bridge by Harry C. Hutson *(RB44)* ..... £8.85 (UK): £10.00 (Eur/Sur)
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Showcase

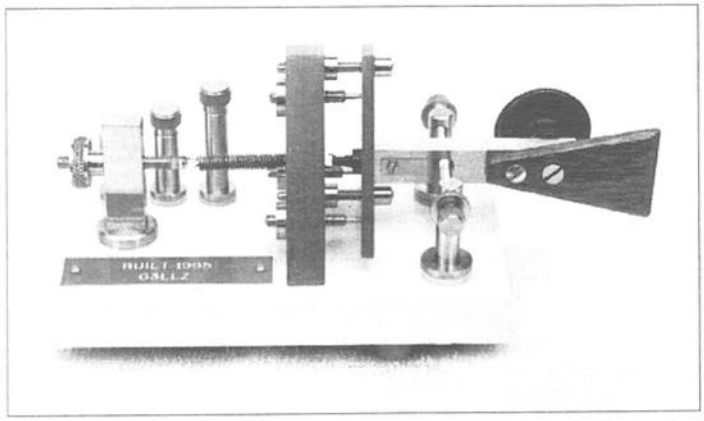
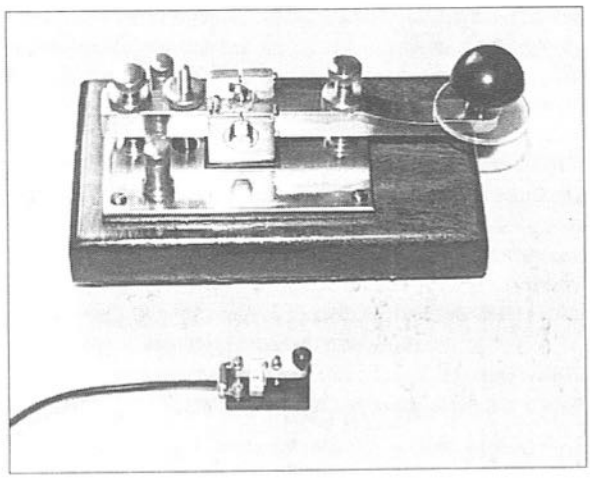


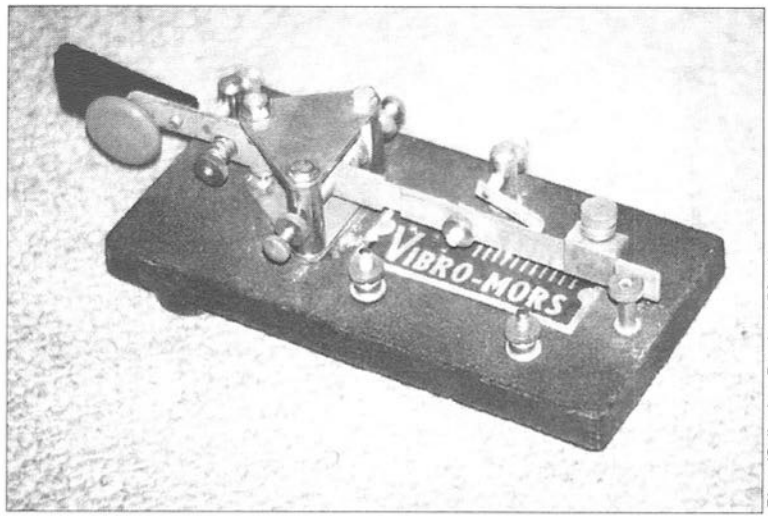
Photo: Dennis Goacher

Unusual single paddle key made by Dennis Goacher G3LLZ, based on a design that appeared in Ham Radio *magazine in May 1969. The lever is attached to a triangular moving plate which is supported by three needle points fixed to a substantial brass mounting. The points rest in shallow dimples on the moving plate and this is held in position by a tension spring attached to an adjuster at the back of the key. The lever is earthed and the circuit is completed by moving the lever to either of the inslated fixed contacts.*
The base is ½in (13mm) mild steel, and the main mounting is ⅜in (10mm) brass



'David & Goliath', two home-brew keys made by Ken Homewood G4UBP to amuse himself!. Goliath is 175 x 95 x 75mm and David is 30 x 20 x 25mm! Both are fully operational and David goes well with Ken's 'Oner' QRP transmitter (1 x 1 x 1in)

Photo: G4UBP



Photo/Collection: Bernhard Pfander

Vibro-mors, made over a period of about 15 years, from 1953. Sold exclusively by the Radio-Lune radio store, 10 Rue de la Lune, Paris. This key was well-known by French Naval and Aviation operators in the 1950s and 60s as it was the only semi-automatic key manufactured in France. Very close to Radio-Lune was a school for radio operators, the 'Ecole Centrale de T.S.F.', and also located in the Rue de la Lune. From the Radio-Lune advertisement it appears that its proprietor was a former student of that school

Information: Christian Chefnay F9WT

Avis à tous les Radio-Télégraphistes
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« VIBROMORS »
(SEMI-AUTOMATIQUE)
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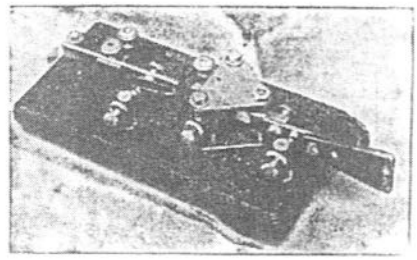

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Vibro-mors advertisement by Radio-Lune from RADIO REF, *January 1959*

The Schurr Profi Twin Paddle

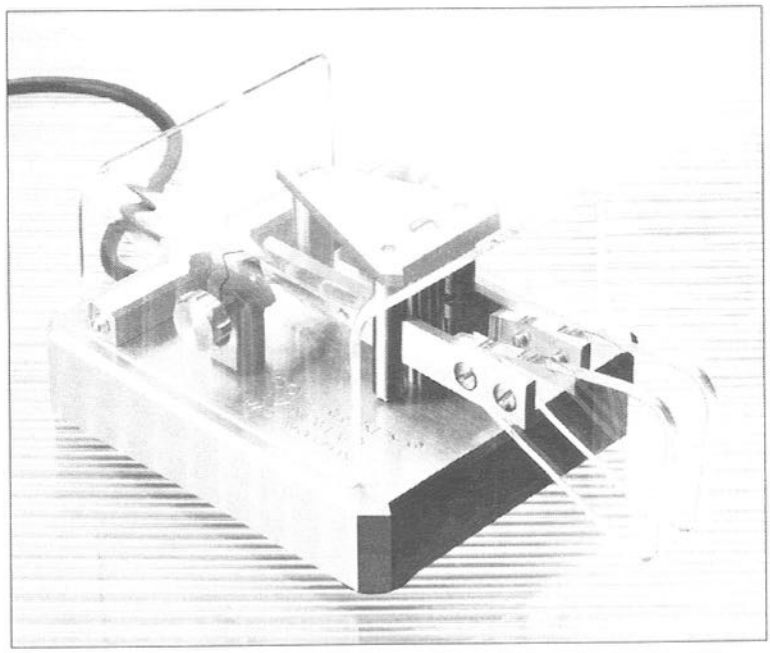
A Review

by Gerald Stancey G3MCK

MY FIRST IMPRESSION of the Schurr Profi paddle was that it looks good. In fact, it is an item of beauty. However, we don't buy paddles for their looks so how does it do its job? The answer is very well.

It is a conventional twin paddle made of polished brass with Perspex finger plates, weighing about 3 pounds (1.4kg) and measuring 3¾ by 3⅛ inches (95 x 80mm). The paddles are attached to vertical brass rods which pivot on steel pin bearings.

One adjustment sets the tension for both paddles but individual adjustments



are provided for the gaps. All adjustments are made by knurled screws. The gap adjusters are 'stiff' screws without the locking-nuts that can upset the gap when they are tightened. This is similar to that used on the Bencher paddle.

Unlike most other paddles the connecting wires run inside the base. This allows the use of very short rubber feet which are about 3/32 inch (2.4mm) long instead of the more usual 1/4 inch (6mm) long. This makes the paddle very stable. After using my Schurr paddle I was surprised how much my other paddles, which have the longer rubber feet, sway. The combination of these short feet and the precision adjustments make it possible to set and maintain very fine gaps.

The edges of the base and levers are slightly bevelled. This does nothing for the key's performance but certainly increases its eye appeal. Without doubt, it is a very high quality piece of engineering.

To summarise, functionally it is an excellent paddle and it looks good. Quality such as this does not come cheap, but for the connoisseur, or as a present for a special occasion, this key must be seriously considered.

It can be obtained in the UK from The QRP Component Company, PO Box 88, Haslemere, Surrey, GU27 2RF, price £129.95 including VAT, carriage extra.

MM

Readers' ADs

FOR SALE

18-PAGE ILLUSTRATED LIST all kinds of telegraph related items surplus to my needs. $3.00 plus equivalent of 4 US stamps ($5.00 refund on $25 purchase). Dr. Joseph Jacobs, 5 Yorktown Place, Fort Salonga, NY 11768, USA. Phone: 516-261-1576. Fax: 516-754-4616. E-mail: joekey@aol.com

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

PHOTOCOPIES OF BACK ISSUES OF MM. All out-of-print issues available. Price per copy, by airmail (US dollars, cash only): Europe $7.00; Africa/America $8.00; Oceania $10.00. Jeronimo Orellana R, EA3DOS, Av Roma 10, 08015 Barcelona, Spain.

(Note: Original copies of some back issues are still available from the editorial office at regular prices. See inside front cover for details. – Ed.)

The Teaching-Learning Environment

by Wm.G. Pierpont N0HFF

THERE ARE TWO BASIC KINDS of learning programs: teacher-student and self-instruction. The goal of both is successful learning. For those lacking in self-discipline and motivation, the regularly scheduled class is the preferred way to go. Optimum self-instruction requires not only motivation and enthusiasm to learn, but also right guidance along the way so as to avoid wasted time in detours and dead-end traps.

Both ways require the willingness to spend the necessary time to acquire the degree of skill you want. There are today, as well as for many years in the past, a number of on-the-air amateur programmes to teach the beginner from scratch, and others to help build up speed to a useful range, including the popular daily ARRL code practice programmes.

Regular Place and Time

Learning takes place in an environment, a place with surroundings. The experts tell us that having a suitable and regular place to study and practice, one without distractions, and a regular time to do it, makes learning much easier. Normally we think of this as a classroom with a teacher and students, and a definite schedule for instruction.

However, to have a definite place at home (or other convenient location) works well. Regularity is one of the very important requirements for efficient learning, (i.e., taking place in the same location, one associated with learning, and at regular times). Preferably it should be daily, allowing for time off at weekends. It also has to be systematic for good, forward-going progress.

One of the problems of class scheduling is that of timing: to find times and places which will meet the needs of the students. Too often, for prospective amateurs, this must be limited to once or twice a week, and most likely in the evenings after work, when one may already be tired, or on weekends when other demands on time distract one's attention or may make attendance irregular. This is not ideal, but can be made to work.

The Teacher

The quality and ability of a teacher is of the utmost importance. He or she brings an influence which greatly affects morale, which as we have seen is so important, and is needed to promote the enthusiasm and interest necessary for rapid lesson-by-lesson advancement.

The 'atmosphere' which the teacher brings is a major key to the learning process of a class: it can make or break it. The personal relationship of teacher to student is also a factor not to be overlooked.

The teacher can provide encouragement when things seem to go too slowly, can help with any problems before they become big, and prevent wasted effort and discouragement when he sees something going wrong. A teacher can be the difference between success and failure. No machine can provide this personalised help.

Of all teacher-student relationships, the one-to-one teacher-student relationship is the most effective. There the progress can be matched closely to the student's ability to progress, both in attitude and learning itself. For example, one competent teacher was able to bring a responsive, eager student from zero to a solid 30 wpm in a month's time: that's progress!

The Presence of Other Students

The influence of others present is of considerable importance. While we have emphasised the value of non-competition in the basic skill-learning process, there are students who do their best with competition, even in the most critical initial-learning period.

They work well in a class environment with others of similar mind. However, their competitive attitude may discourage classmates who are not of a competitive nature: something that may prove to be almost a disaster for the rest of the class.

Many classes have been organised with a degree of privacy, providing each learner with a pair of headphones and a key. Some set-ups have added booth-like partitions to increase this privacy. All of the instructions and code practice materials are heard through the headphones.

A typical telegraph school, civilian or military, often had a series of tables, each able to accommodate from about 6 to 20 students. Each table was supplied with either its own individual instructor, or equipment which sent code material at a given stage or level of instruction, sometimes both. The student then moved from table to table as he advanced in skill.

Records of Progress

Some kind of progress charts can help motivate the student by keeping him informed as to how he is doing and that he is going forward. Most of us need that kind of assurance.

The Self-Teaching Situation

It was the advent of 'machinery' which could produce code signals (the Omnigraph, the phonograph, etc.), that brought the first real help for the self-learner. Then it became possible to learn by ear only, at times and places convenient to the learner, and at modest cost, even though these were rather limited in the variety and quantity of material they provided for practice.

The real turning point in availability and variety came when the wire recorder and the tape recorder arrived on the market. Here, like the phonograph, the 'machine' was something people probably already owned and could be used for other things besides code-learning. This kept the cost down.

Prepared code tape courses soon became available. In addition, code practice

could easily be recorded from the radio or other sources and played over and over as desired. Many good courses became available and many are available today.

Later came electronic keyboards and keyers, which form perfect code characters, and are ready to be used at convenience, while some of them even offer a wide variety of pre-programmed materials for practice. One of their main advantages is that they always produce perfectly formed characters – something that greatly expedites initial learning and, later, speed building.

Computers

Several excellent code teachers highly recommend computer programs rather than class instruction, especially the interactive programs, as the very best teachers of all for beginners.

They are impersonal, avoid any distracting sense of competition, do not create emotional barriers, and permit the student to work at times convenient to his schedule and to learn at his own rate. Very many people have advanced rapidly using them. They are popular and effective.

Personal computers make possible a fantastic range of code learning and practice. Several excellent freeware programs, as well as commercially produced programs, are available for learning and for speed-growth. Some people have been able to prepare their own programs, tailored for their own particular needs.

Interactive programs give the learner the maximum opportunity to advance rapidly at his own speed. Some of these also provide automatic adjustment of the learning steps, resolving any problem areas as they arise.

Programs are available which give either immediate or delayed helps to the student, and some provide step by step 'report cards.' There are programs also which allow the student to conduct QSOs with the computer, just as if he were actually on the air. The potential here is very great indeed.

What a Contrast!

Contrast this with the old way, where for many years it was normal to begin to learn the Morse code from a printed table of the code characters expressed in printed dots and dashes. Almost everyone started that way, even in the telegraph schools.

Many people did succeed in learning it this way, even by themselves, but for most of them it was a slow and often discouraging process. There had to be a point where they went from the visual symbols to interpreting by sound: that was the hard part. The marvel is so many succeeded.

Reading Devices

Finally, there are available computer programs and devices which can read received code transmissions. Because they are machines, they can only read code signals which are reasonably accurate in timing.

For the student who has access to one of these, it will give him a chance to see how accurate his sending is. They are not recommended as substitutes for personal receiving.

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

Elmering New CW Operators

by Larry Kayser VA3LK

HOW DO WE ATTRACT new Amateurs into becoming CW operators? How do we make this happen? What should we be doing, and how should we do it?

We have lots of CW training systems. We have lots of rigs available, and there is lots of CW activity. We need ways to attract newcomers to the senior mode of amateur radio.

Put your thinking cap on. What is and what is not working to attract newcomers into becoming CW operators? We need to solve this problem now and I need your help. Please let me know what you think.

(Larry's questions are addressed to amateurs in Canada, but they are significant in all countries. Please write to MM *if you can contribute to this discussion. – Ed.)*

What is a Good Basic CW Station?

If I had to prioritise my views on the most important feature in a CW station, it would be QSK (break-in). There is a big difference between VOX as a transmit/receive control and QSK.

My friend Irv, W7GX, sent me a Corsair II and told me this was a real CW radio. He is right. I love this rig, and even at 10 years of age it is a dream to use. It has the 500Hz filter and I use the 2kHz filter for just listening around. Ten-Tec make CW radios and it's hard to go wrong with them. Every Ten-Tec has QSK, and the factory service is extraordinary.

I also hear a lot of Icom-706s being used, both portable and CW mobile. Ray, W2YS, loves his pair of older TS-930s. Many different radios seem to have their devotees, but some transceivers are just not CW radios. Recently a transceiver that was reviewed in *QST* completely missed the first dit – ugh!

At the lower end of the scale is the early Heathkit HW-16 with its companion HG-10 VFO. I hear many of these rigs in service and if I had one I would not let it go. The Collins family of radios are represented by the KWM-380 which has some very dedicated and enthusiastic CW users.

Remember at the end of the day to watch what other CW operators are using, and then ask questions during the QSO about why they are using one particular rig over another. There is a lot of choice out there.

Bencher Conversion

Several years ago I tried sending with an Iambic Bencher. Success eluded me, so I asked Bencher for a conversion kit to make the Iambic into a single-lever model.

About $25 later, I had the key converted and it works great. It works a lot better for me anyway. If you have the same problem, ask Bencher for the conversion kit.

(Extracted and edited for MM *from Larry Kayser's Morse column 'CW Today', in* The Canadian Amateur, *journal of Canada's national radio society, RAC.)*

Short Break

Complex Communications for a Mass Flight

by Donald K. deNeuf WA1SPM (SK)

ONE OF THE GREATEST historic mass aircraft flights in formation is sometimes overlooked. On 1 July 1933 a squadron of 25 Savoia-Marchetti SM.55X flying boats of the Royal Italian Air Force under the command of General Italo Balbo took off from Ortobello, Italy, for a transatlantic round trip to the Chicago World's Fair. An entire year was devoted to training the pilots for the flight and in preparing the aircraft. The exercise lasted for 43 days and the actual time flying the 19 200km was 103 hours.

The communications system was one of the most ambitious and effective attempted up to that time, involving wireless, landlines, and submarine cable circuitry. Fourteen bases were established to provide fuel and shelter and communications for the aircraft and crews. The Westward flight was via Amsterdam, Londonderry, Reykjavik, Cartright, Shediak Bay and Montreal on the way to Chicago. The return went via New York, Casco Bay, Shediak Bay, Shoal Harbor, Horta, and Lisbon. The telecommunications system carefully planned continuous two-way radiotelegraphy between the aircraft and the stopover bases throughout the flight, collection of weather forecasts and reports from bases, coastal stations, and ships and submarines stationed along the route over the Atlantic. Special facilities were also set up between them and the US Weather Bureau.

Each flying boat carried a skilled and seasoned radiotelegraph operator and the most modern wireless equipment, including a 400 watt transmitter capable of operation on both low and high frequencies, together with radio-compass equipment. Seven trawlers and two submarines along the flight paths transmitted signals for radio-compass bearings aboard the aircraft. The flying boats used 400 metres and the bases and ships used 840 metres.

Two planes were lost in landing mishaps in Amsterdam and Lisbon, but the venture was highly successful and highlighted the great importance of reliable and rapid aeronautical telecommunications. Among other honours, General Balbo received from the United States its Distinguished Flying Cross medal and he became Mussolini's Air Marshall of Italy. ***MM***

Those Were the Days!

by Gustavo A. Coll

AS A YOUNG MAN in Uruguay, in 1956, I joined Cable & Wireless, which operated in Uruguay as 'The Western Telegraph Co. Ltd'. Its Head Office was in England, where I went for training for a year and a half.

After a period as a technician, my responsibility was for some time to look after their submarine telegraph cables in the River Plate, mainly between the Argentine coast near Buenos Aires and the Uruguayan resort of Punta del Este.

The idea of repairing submarine cables from locally hired tugs or similar craft was a sound one taking into account the cost and time involved in bringing into the area a 'proper' cable ship, based in those days in far-off Rio de Janeiro.

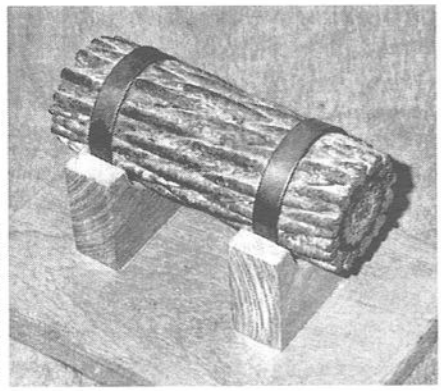


Photo: Gustavo A. Coll

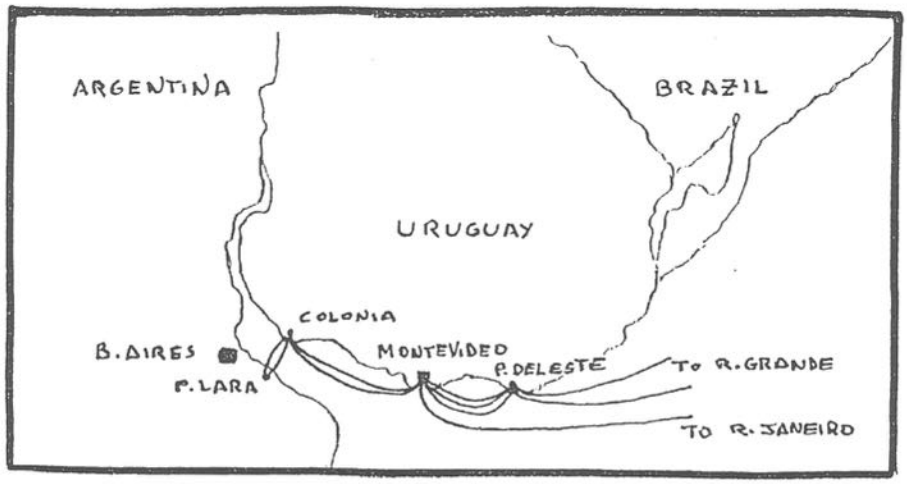
Portion of the 1866 cable laid between Colonia and Punta Lara. Diameter is approximately 2½ inches (64mm)

It must be made clear that I am talking about 'steam age' telegraphy with low speed cables, some of them pretty old. In fact, one of them had been laid in the year 1866 by The River Plate Telegraph Co., and a very good portion of it was still in use until 1973 when the system was abandoned. I still have a piece of it which I picked up in 1970! This cable crossed the River Plate, joining Colonia in Uruguay and Punta Lara in Argentina.

Locating Faults

Since cable repair was not a full-time job, most of the time I was on duty looking after the circuits between Buenos Aires and Rio de Janeiro. It happened more than once that one of the cables was interrupted and one of my jobs was to test the cable to ascertain the nature of the fault and localise it in terms of electrical and nautical units.

In other words if, afterwards, when trying to pick the cable the fault was not



Map of the area of responsibility described by the author

where I thought it would be, a very red-faced technician would be the result!

The theory behind some of the localisation tests assumed that the cables were on the ocean, with high salinity water. The River Plate is just that, a river with, in the best cases, brackish water, but that is another story! Let me add that although shallow (less than 10 feet in some places) it is in some parts very wide, and the cable across the river had a length of about 23 miles!

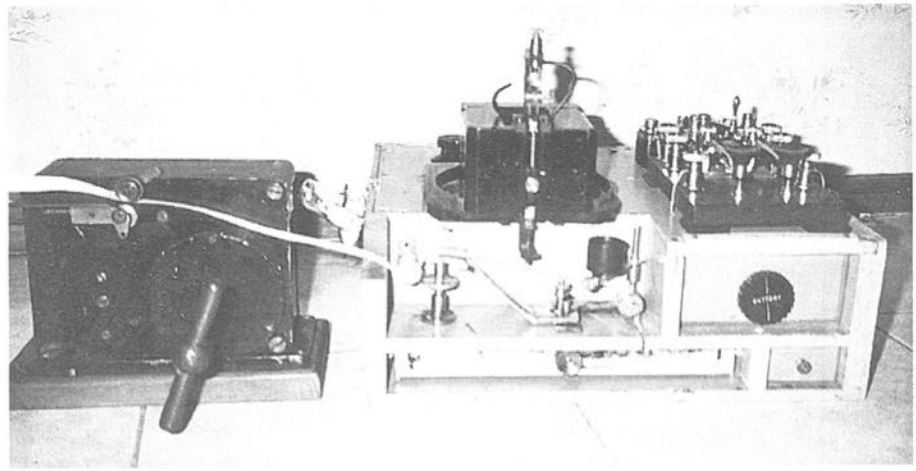
Communication with Shore Station

Due to the high capacitance of the cables it was not possible to use a telephone to get in touch with the shore station unless it was fairly near. Then we used a Mk.V set (the British Army Telephone Set D Mk.V, as mentioned in MM33, p.44, and MM34, p.46), and no, we never used it for Morse sending!

Eventually we used radiotelephones, but for several reasons they were not always effective. Most of the time, therefore, we used either cable code (which utilises reversed polarity to differentiate between dots and dashes) or plain Morse code, in both cases using syphon recorders, a must for cable code. (For historical reasons the Buenos Aires and Colonia ends used plain Morse code. To contact them we simply used one key of a normal cable key.)

Technical Difficulties

On one occasion we were asked by another cable company operating in Uruguay, Italcable, to mend their Montevideo to Rio de Janeiro cable. It is beyond the scope of these notes to describe the technical difficulties encountered when trying to obtain a recognisable signal while receiving cable code in such in such a long cable (some 1100 nautical miles). Suffice to say, I gave the Rio de Janeiro office instructions beforehand to look for a long, long dash to start test procedures without any attempt to talk to them.



Portable syphon recorder used on board the tugs. The paper tape was pulled through by the spring-wound mechanism on the left

Photo: Gustavo A. Coll

Tests on board were carried out using a beautiful portable test set made by Muirhead and Co. This set was basically a Wheatstone bridge with a mirror galvanometer which in effect simulated a needle instrument with a needle one metre long! The first time I opened this set for minor repairs I was most impressed to find that the components inside were marked 'War finish' although their appearance and functionality were impeccable.

My duties also demanded that we had to do the actual localisation of the cable with some simple but accurate navigation aids such as the sextant and station pointer. There was no GPS in those days!

Sometimes I used a D/F set but since I did not entirely trust the 'pilots' we had on board I mainly used this to ascertain our whereabouts during foggy passages.

Tugs Used

This leads me to describe the type of tugs we used, which were basically harbour tugs with little room for an extra crew; i.e., the 'cable gang' and two technicians (myself and an assistant).

The gang had to sleep in makeshift quarters in the hold and we, sometimes, had a berth. Other times we had to sleep in the dining room, among test sets and navigation charts. It all depended on the type of tug we managed to hire.

I remember one of them quite vividly, the *Powerful* built in England at the beginning of the century with a steam engine converted to gas-oil burning. It was big and seaworthy with a history of proud service to many ships and many cable repairs. Sadly it is now in the breakers' yard.

I think that one of the things that made 'local repairs', as they were called, very interesting was the fact that there

was a beginning and an end, allowing one to have a definite sense of accomplishment, plus a dash of adventure. Those were the days!

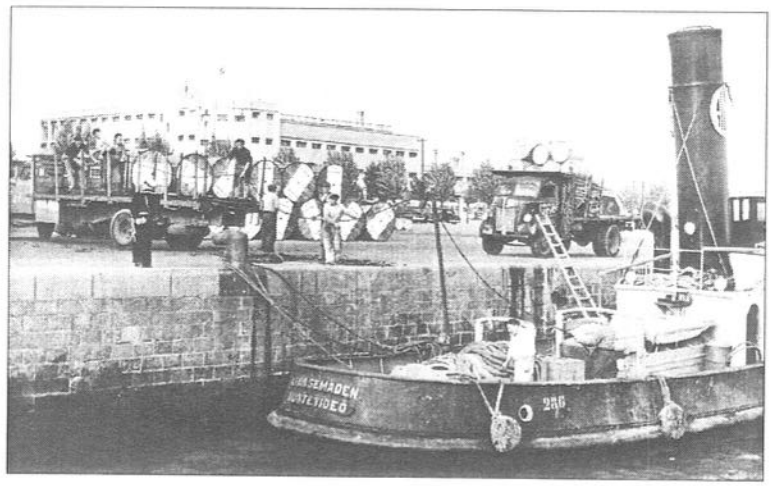
The tug Powerful *at Colonia harbour, with two types of cable coiled astern. The thicker one is probably a tri-core, i.e., having three separate conductors*

Back-up Landline

As a back-up to our two submarine cables between Montevideo and Colonia we had two Morse landlines running along the railway lines. One was copper and the other iron, but all in all they were pretty useless (or so I thought) on account of interruptions, inherent low speed for automatic transmission, etc.

Despite these disadvantages, it was noticed that some sort of unaccounted traffic regularly emanated from Montevideo on a daily basis, destined for Colonia.

After some investigation, it transpired that one of the two linesmen at Colonia was a rather resourceful gentleman who as a sideline had a profitable business



Another tug used for repairing submarine cables, the Leon Semadan, *being loaded at Montevideo harbour*

The heading part of a Greetings telegram form dating from about 1930

exchanging currency for the many Argentine tourists entering Uruguay through Colonia.

He had had a few setbacks due to not having up-to-date information, and had arranged with his linesman friend at Montevideo to receive daily updated exchange rates for both Argentine and US currency.

This was stopped of course, but I'm glad to report that today this enterprising gentleman is very active in his own, official, currency exchange business.

MM

Beginners' Corner

In Praise of the Hand-Key

by Dr Gary Bold ZL1AN

I WANT TO REMIND YOU that the venerable hand-key is still a potent and respectable weapon. In the last few evenings I've heard several measured, interesting QSOs conducted by traditional vertical switches at both ends, wielded by skilled practitioners who were a delight to listen to. I also have several friends who usually use bugs or keyers, but who occasionally revert to a hand-key just for the joy of using it.

'Acceptable' hand-key sending isn't difficult to attain, but you have to start off right. On several occasions learners have visited my basement classroom for advice. Typically, using my practice software, they have learned to read Morse pretty well, and have dutifully followed my recommendation not to commence sending until they have the correct sounds embedded in the brain.

But when they start pounding the key, nothing seems to go right. Their arms get tired, their Morse 'sounds wrong', and my Morse reading software can't make sense of their fists at all.

They know that something is wrong, but they have never seen correct sending, so they have no idea what.

Faults Eradicated

When I watch them send for only 10 seconds, I can always see what is wrong. All the classical faults are often present. The wrong grip; 'finger sending' with a tense, stiff arm; characters running together; choppy dits and dahs of almost the same length; attempting to send too fast. Fortunately, these learners usually come to me early, before these faults have become deeply embedded in the brain. I can demonstrate how to eradicate them in one 20–30 minute session.

I correct the grip. I show how to relax the arm, to pump the wrist, to slow down. I recommended exercises to get the dit/dah ratio right. I correct the pause between characters. (In severe cases, I recommend removing the hand from the key completely between characters or words.)

They retire to re-group. After only a week of remedial practice, their sending is often completely transformed. Some get so excited 'my computer can read me now!' that they call me up and send Morse to me over the phone! Sometimes, even I can hardly believe the difference.

Good Advice from 1924

A good, description of the mechanics of 'how to do it', is contained in the following extract from advice given by H. M. Lewis, on both 'American' and 'European' sending, from *QST* 1924. In particular, for 'European' sending, note the advice to 'sharply drop the wrist' to form each element. When you start, the wrist should move down 20–30mm. This will decrease as you gain speed and experience.

'There are two major patterns of Morse key in use today. One is the light, springy, steel-lever type American key. The other is the rigid, heavy 'chunk of brass' European key, typified by the British Postal Telegraph key. Some French and German keys are even heavier and clumsier. These two fundamental types require two entirely different methods of handling. The consensus of opinion of experienced operators, and also by the various committees set up by Telegraph administrations to study the cause of 'Telegrapher's cramps', is that the two types should be operated as follows:

AMERICAN KEY – fixed with knob 15 to 18 inches back from the edge of the table, two or three fingers lightly on the knob towards the back, and thumb touching the edge. Movement must be from the wrist and forearm, not the finger joints, and the elbow should not 'walk' around the table. Generally the fingers should not leave the knob during the transmission of a word, and don't attempt that 'nerve-sending' stuff: it is certain to ruin your style, and if persisted in for long periods results in the affliction known as 'telegrapher's cramp' (glass arm).

EUROPEAN KEY – fixed at edge of table, a little to the right of the operator's normal sitting position. Two fingers hooked over the top of the knob, thumb just under its head, and third and fourth fingers hanging free. The wrist should be about level with the key knob, and the forearm absolutely horizontal, the elbow quite a few inches away from the body. In operating, the wrist should drop sharply with every signal, but the elbow should be almost stationary in space. The light grip on the knob may be completely released at the termination of each complete letter. This assists in the formation of good spacing. This type of key is generally used with a stronger type spring and a larger gap than the American type, but on any key most Amateurs attempt to send with far too small a gap and too light a spring.'

Helpful Exercise

I described the 'element ratio-correcting' exercise I recommend in a previous 'Morseman' column. This has been so successful that I'll repeat it here:

'Often, during the day (but furtively, so that those around you don't think you're losing your marbles) play this exercise on whatever table you're sitting at: wrist-pump out a continuous sequence of 4 dits and 2 dahs, ' di di di di dah... dah... di di di di dah... dah... '.

Tap your foot regularly on the accented elements, about 1 beat per second – the 4 dits and 2 dahs should take exactly the same time (the element lengths are 1:3, but there's a dit-space between each one, so the total durations are 2:4). This gets the relative lengths of the elements right.'

Attaining acceptable hand-key sending is not hard. Many learners I know who start off right can do 12 wpm after a week. I taught my son, ZL1WGB, to send to Novice standard, from scratch, in one hour – but he is an accomplished musician with excellent co-ordination, timing, and listening skills.

Try It Just Once!

You can do it too. You don't have to be a virtuoso sender or reader to try CW. There are a couple of QSOs going on right now at less than 12 wpm in the long grass at the bottom of 80.

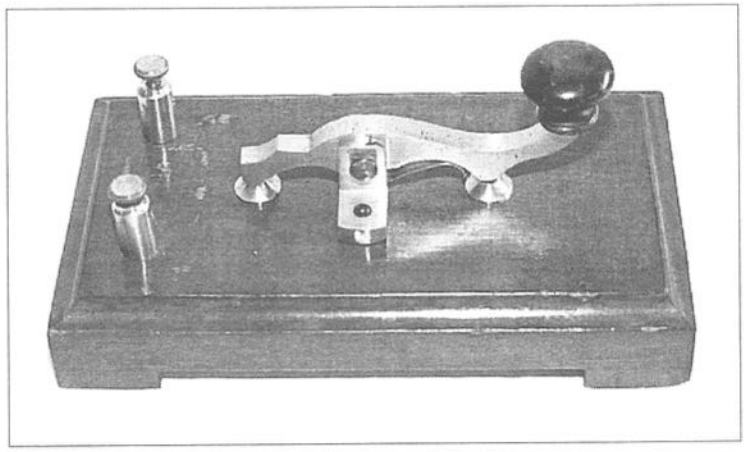
If you've passed the test recently, but never operated CW, do this for me. Try it just once. Read my article on 'The first CW QSO' in the Callbook *(reprinted in MM54, page 40 – Ed.)* and do what it says.

I don't care if you never do it again. But now you will be able to say that, just once, you have experienced a part of communication history. You will have communicated with another human using just your muscles and your ears and your brain, in words that went straight between minds.

It can be an eerie feeling. That first CW QSO always gives people a buzz! Always!

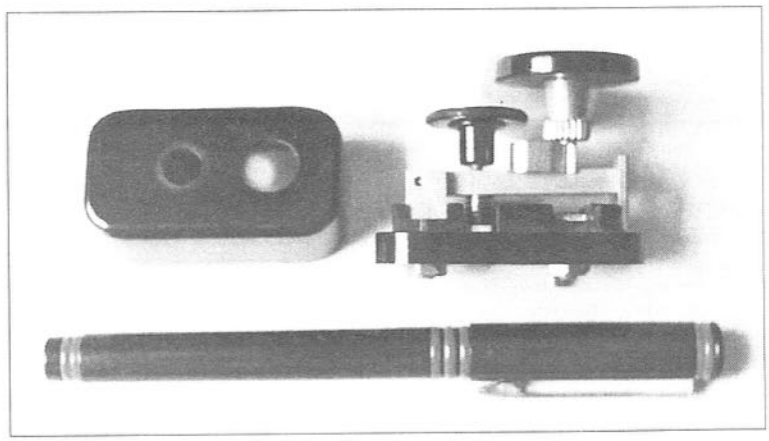
(Extracted and adapted for MM *from Gary Bold's 'The Morseman' column in* Break-in, *journal of NZART, November 1995)*

Info Please!



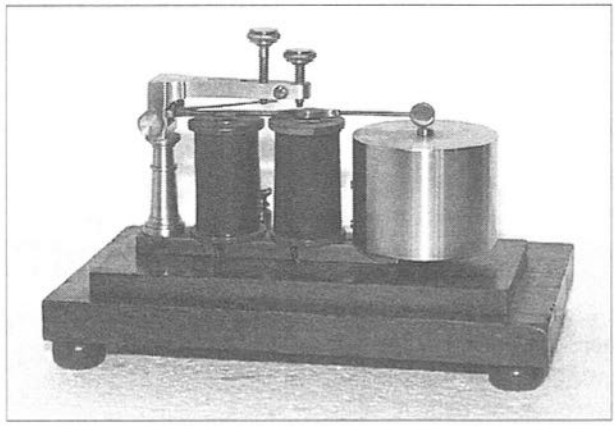
Early camelback key. Identification requested

Photo/Collection: Jean Le Galudec



Miniature key, possibly used for clandestine operations? Purchased from military sources in France just after WWII. Identification and/or further information requested by Alex Pringle GM3MAS

Collection/Photo: F2WW



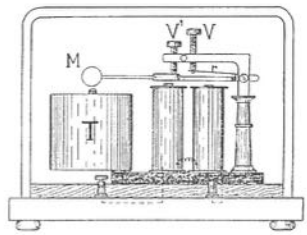
Belgian Drum Sounder

Photo/Collection: Fons Vanden Berghen

The following explanation of how this sounder works (translated by Ken Quigg, GI4CRQ) comes from a 1931 book on Belgian Telegraphs and Telephones, but Fons has seen a reference to this type of sounder in an earlier book c.1900. If anyone has further information about this instrument, including other countries and the service(s) in which it was used; when it was invented; and how long it remained in service, please contact Tony Smith.

'This apparatus uses an electromagnet the winding of which is connected in series with the signal lines. The armature has at its end a fairly long rod which carries a hammer M which is able to strike a hollow cylindrical drum T. The leaf-spring r is terminated by a fork; the screw V has a circular groove cut into it, close to its end. The forked end of the leaf-spring is located in the groove at the end of the screw so that, by adjusting the screw V, one may lower or raise the end of the leaf-spring. This spring serves to restore the armature upwards.

The screw V' limits the travel of the armature in an upwards direction while the drum limits its travel downwards. To increase or reduce the current necessary to operate the armature it is thus necessary to turn the screw V' out or in. The resistance of the solenoid is about 100Ω. The sounder should operate with a current of 8mA. The drum, the coils and the supporting frame are mounted on a narrow strip of ebonite or iron which is itself attached to a panel. This latter carries the two terminal posts.'



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

Hams' Signals Save Crew and Plane

by Helmut K. 'Al' Seike AA8GQ (ex DL9DQ)

With a German Air Transport Group Palermo, Sicily, 1943

OUR ORDERS were to fly from Catania, Sicily, a cargo of 2 tons of Army-tents to the oasis Siwa, 29.2N, 25.5E. We took off at 23:00 and sneaked across the Mediterranean at wave-top level to circumvent the Brit's RADAR on Malta. Since that distance ranged on a JU-52's operational limits, we flew at reduced air speed to conserve fuel.

At 06:30 next morning with six more hours to go, we reached Benghasi, Libya, unmolested. Three hours later, the left engine's oil pump failed. Having become even slower now, we just would arrive at our destination a bit later, we thought.

However, shortly afterwards, because of spark plug problems, the right engine began running rough and we had to cut its power. With only one engine, and although at full throttle, we were losing altitude slowly but steadily, and so as not to crash we decided upon an emergency landing. *(The JU-52 was three-engined aircraft. – Ed.)*

No-man's Land

Now here we sat, 300 km from Benghasi, and 270 km to our destination, in a rocky, sandy, vegetationless no-man's land. Since the sun was beating down near vertically we tried getting some relief under our aircraft's wings. Not for long, however, as there we were virtually eaten alive by sand fleas.

Only God knows where in this forsaken desert this pest might have come from. So, back into the plane. But here we became roasted instead, since without the slightest air movement the inside temperature rose to over 46 deg. C. One would get burnt if touching the plane's aluminum structure. Misery got worse yet as at night the temperature dropped to 7 deg. C and by 04:00 one's skin was covered with sticky residue.

Nobody Answered

Attempts to contact our base, 1200 km away, on 3 to 6 MHz, with 70 Watt and a 5 m long antenna 4.5 m above bone dry ground, were fruitless during daytime. So I tried that after sunset. Through three nights, from dusk to dawn, I combed the band but nobody ever answered.

With our water supply gone, the situation now became grave. Certainly, our unit would search for us when it became known to them that we hadn't arrived at

our destination. But that could take several days since a direct radio link between Army and Air Force didn't exist. However, uncertain whether we might be able to hold out that long, I resorted in despair to a last, although illegal, try:

In those years, a handful of selected German hams possessed a special war-amateur radio license. Weekly, the amateur radio club's (DASD) headquarters in Berlin would transmit on 80 m a bulletin which then all licensees acknowledged. These communications were due tonight, I remembered, so, I tuned the 80 m ham-band, hoping also to hear my friend, D4FMF, in Berlin.

Just a 'K'

With great joy, I indeed heard with S4 his QSL for the bulletin. Without waiting for headquarters' 'QRU SK' to end, I began calling D4FMF. But it would have been unwise to identify myself by the plane's call letters, NGVJ, as by no means, would he have been able to react. Instead, I used my first name, 'Helmut'. A ridiculous undertaking perhaps, which I couldn't have tried on any other of the hams who were tuned in.

My heart was pounding up to my ears. Had he heard my calls? Would, and could, he answer and how? The seconds of silence following seemed an eternity. Then, I heard a 'K'; nothing else however. That could have come only from my friend I figured, and therefore I sent this open text message:

'30.6 N 23.6 E WATER OILPUMP SPARK PLUGS QSP PALERMO SK'.

A Single Dit

Silence... But then I received a single 'dit' on CW which convinced me he had received my message and would initiate action immediately. He told me later he had received my transmission at only S2, but hams know how to cope with that!

Although well aware of the fact that in wartime, transmission of uncoded text was strictly forbidden, I couldn't have cared less. Better to face a court-martial than to sit here miserably to rot away. If I had sent a coded message it would have meant nothing to my friend Franz.

Delayed Happy Ending

It was about 21:00 when he sent that single 'dit'. His alerting officers at the Air Force's High Command, Berlin, their search for a 'Helmut' within combat groups stationed at Palermo, and identification of his unit, took just about four hours.

At around 03:00, a plane was dispatched from Palermo carrying aircraft mechanics, water, food, fuel and repair parts, and before noon time it had found us. I can't recall how many Liter of water we consumed. After repairs had been made, we completed the mission, a bit groggy, though.

The ordeal didn't have a happy ending yet, as later on, Franz and I had to stand trial in war-courts for 'violation of war-communications laws, for illegal radio transmissions, and for sending uncoded text, and jeopardizing combat units' safety'. However, by High Commands' intervention in Berlin and Rome, the allegations against us were finally dismissed.

(This article originally appeared in The World Wireless Beacon, *Newsletter of the Society of Wireless Pioneers, Inc., Sept–Oct 1995.)*

Your Letters

Readers' letters on any Morse subject are always welcome, but may be edited when space is limited. When more than one subject is covered, letters may be divided into single subjects in order to bring comments on various matters together for easy reference

Learning Plateau

Reference to the 8 wpm learning 'plateau' mentioned in the Perry Auto-Time System (MM52, p.17), and how to overcome it, reminds me of my own experience in 1987. Although enthusiastically practising every day, I experienced this plateau and was stuck at 8 wpm for three whole months, copying without mistakes at that speed, but unable to make further progress. Then, reluctantly, I had to go on a holiday that had been booked in advance, dreading the prospect of two weeks without hearing any Morse at all!

The first evening after I returned home I switched on my receiver to resume Wim/PA3BRP's lessons on 2 metres. Without any problem I copied his text without missing anything, assuming this to be about 6–8 wpm. When he finished, my jaw dropped when he announced that he had been sending at the test speed of 12 wpm!

There was no doubt about it. The speed WAS 12 wpm, and later that evening I could even copy much of W1AW at 15 wpm. I couldn't believe such progress was possible after two weeks absence from the code! Next day it was the same and my sudden progress was reality, not a dream.

So my suggestion that a 5 wpm novice test is the best way forward for amateur CW (with further progress being made through actual operating on the air – see MM50, p.55), is not a concession to laziness but a way to prevent the development of an unnecessary hatred of CW by plateau frustrated learners. In my own case, I'm sure that only my great enthusiasm for Morse, retained from earlier days, prevented me from giving up at the plateau stage.

Monika Pouw-Arnold PA3FBF
Mijdrecht, Holland

Morseflame

The lighter/buzzer KOB (Key on Box) novelty shown at the top of page 25 in MM52 is called a 'Morseflame'.

John Elwood, WW7P
Phoenix, Arizona, USA

Timing Morse Practice Tests

I recently met one of my former Morse students who has become a Morse Examiner. In conversation he mentioned that he had worries over how to judge the necessary 12 wpm for the test passage, and also how to ensure he maintained a constant sending speed during the test.

I have been broadcasting slow Morse practice sessions for some 12 years, and well remember being faced with the same problems and how, as a result, I developed the 'Rule of 28'.

Morse at 12 wpm is assumed to be

12 words of 5 letters average, or 60 letters per minute, hence 30 letters per half-minute. Time has to be allowed for the word spaces in each half-minute, but this will obviously depend on the number of words in the text. Using six standard words in half a minute means there will be 5 x 7 dot word spaces. What did this mean in practice? It was getting too complicated!

The aim was to develop a SIMPLE method and the solution to the problem of word spaces was to make an arbitrary deduction of the equivalent of 2 letters per half minute; thus the 30 was reduced to 28 letters per half-minute.

In use, the letters were counted in the passage, with figures, punctuation and procedural marks counting as two characters, and every 28th letter marked with a dot for a half-minute and with the appropriate number for full minutes.

In a 3-minute passage, this system worked well enough for all practical purposes. If a particular half-minute had a few 'long' words then the timing mark would be reached a little early as there were few word spaces. Conversely, many 'short' words would reach the timing mark a little late. However, over a passage of three minutes the 'overs' and 'unders' would tend to balance out. Additionally, the 'Rule of 28' can be reduced by 5 for 10 wpm, and increased by 5 for 15 wpm with acceptable results in practice.

The advent of the UK QSO type test provided Examiners with test scripts carrying an indication of the time required for the passages, averaging some two and a half minutes. The 'Rule of 28' works quite well with these passages, never being more than a few letters out at the end of the stated time. If one wishes to split hairs, a reduction to 27 letters per half-minute shows slightly better accuracy.

Thus, the 'Rule of 28' allows one to pitch the speed of sending close to the required 12 wpm, and to maintain the speed during the passage. It has one further advantage. If you send the alphabet in close to 25 seconds prior to the passage you can be sure that for all practical purposes the sending will be as close to 12 wpm as one can expect with hand keying.

Ron Wilson G4NZU
West Bridgford, Nottingham

Positions and Points

The Editorial comment in MM53 reminded me of my days when I was training to become a radio operator with the Canadian Coast Guard. We were taught that the correct format for transmitting position co-ordinates was to send the latitude figure first, followed by the longitude. This was supposedly to help defer the confusing position reports that could be received. A decimal point was to be used to distinguish between degrees, minutes and seconds. All of this came before the use of more specific position gatherers, such as GPS units, where the seconds are converted to a decimal of a minute.

Regarding the 'r' used instead of the decimal point, a colleague mentioned to me at one time that the 'r' had come from the railway telegraphist, just as the long dash signifying the figure zero. This may explain why you recall the late 1950s being the time when the 'r' came in. I believe that many old railway telegra-

phists were then turning to the marine world, as their positions for the railway companies were soon becoming obsolete.

More recently, the ITU Radio Regulations (1994), Article 39, Number 3095, lays down that:

'As a general rule, a ship shall signal its position in latitude and longitude (Greenwich) ... In Morse radiotelegraphy, the signal · – · – · – shall be used to separate the degrees from the minutes ...'

I hope this helps to unravel the mystery (or perhaps confuse things even more!).

J. Guevremont
Camlachie, Ontario, Canada

Surely it is not necessary to send 'lat' or 'lon'. The N or S following the first group and the E or W following the second is enough indication. The /MM stations I work on the Amateur bands invariably send in the form 'QTH 24N 122W' (avoiding the minutes and seconds dilemma).

In the *Maritime Mobile Manual* 1973 edition, Part C (extracts from the Telegraph Regulations) it says:

'4.6 Minute and second signs

4.6.1 To transmit the minute (') or second (") signs, when such signs follow figures – for example 1' 15" – the apostrophe signal (· – – – – ·) must be used once or twice as appropriate. The signal (· – · · – ·) reserved for inverted commas may not be used for the second sign.'

Re the decimal point, it seems to me 'r' is quite universal now for the decimal point. The period is not useful for decimal point, as most countries use a printed comma for the purpose. The computer likes decimal co-ordinates, but there is a possibility of confusion between decimal and mins/secs when receiving by Morse code.

The Continental Code of 1851 included the symbol · – – · (wide spacing) for the decimal point.

The Phillips Code (landline) added some punctuation symbols in 1876 including – · · · · – (DU) for the decimal point.

Bob Eldridge VE7BS
Pemberton BC, Canada

Special Screwdrivers

I recently purchased a very special screwdriver set that I use with my radios and keys. The set is originally designed for firearms repair and maintenance where an exact fit for the slot is very important. I was made aware of this set at a course I took on the care and restoration of metal artefacts.

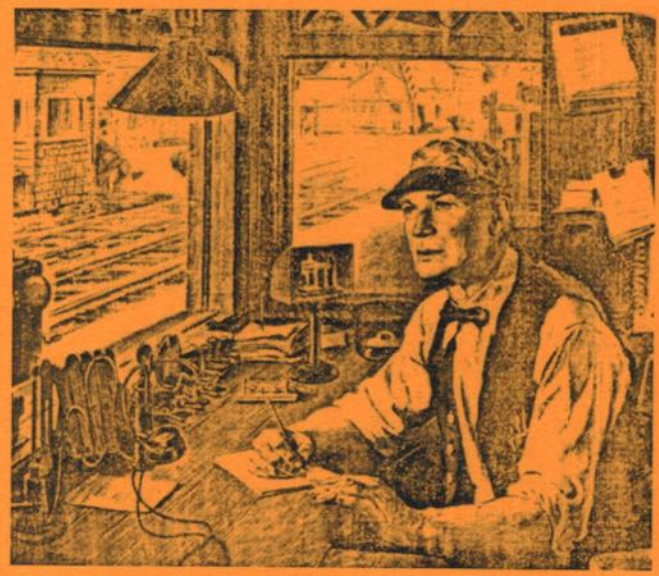
I have the 'Super-Set' and the 'Thin-Bit Set', from Brownells, Inc., and am very pleased with the quality. I don't know how I got along without them previously.

This information may be of interest to readers of *MM*. According to their catalogue, the company will ship to other countries.

Chris Bisaillion, VE3CBK
Kanata, Ontario, Canada

(Chris sent MM *details of these screwdriver sets which are intended to give a comprehensive range of slot sizes and widths to match virtually any screw within their range, thus avoiding damage to the screw. Full details are available from Brownells, Inc., 200 South Front Street, Montezuma, Iowa 50171, USA. Tel: 515-623-5401. Fax: 515-623-3896. – Ed.)*

Ephemera



WAR BOND MESSAGE

(in dots and dashes)

▬ •▬▬• • ▬▬ ▬ •▬• T-H-E W-A-R

Right now, Tom Blake wishes someone else were station agent . . . wishes Centerville had a separate telegraph office . . . wishes anything that would keep him from having to translate those chill, metallic taps into their terribly familiar words.

▬▬• • •▬▬• ▬ •▬• ▬ ▬▬ • ▬• ▬ D-E-P-A-R-T-M-E-N-T

Maybe it's easier in the city, where a name in a telegram is just a name . . . not someone you've seen grow up from a freckle-faced kid who used to hang around the depot watching the trains.

•▬• • ▬▬• •▬• • ▬ •▬• R-E-G-R-E-T-S . . .

Sometimes that phrase is addressed to an elm-shaded mansion on the hill . . . sometimes to a cottage the other side of the tracks. It doesn't matter. The stricken look on a woman's face stays with you just the same.

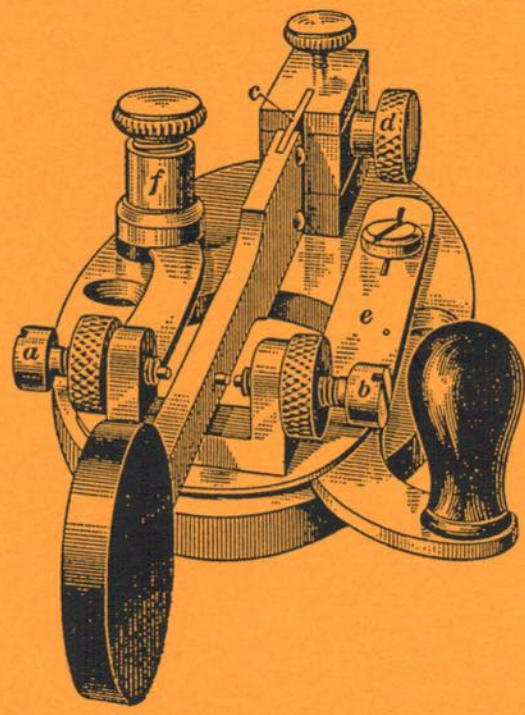
When will those dread telegrams cease? Not until this war is won. *And it cannot be won without our unflagging support.* That is why each brief, tragic message . . . to anyone, anywhere . . . is a War Bond message *to you.*

Sixteen billion *extra* dollars are needed in War Bonds *now.* It means investing *twice* as much as you did before. But what of it? After all, *four dollars* to use freely in a free world are better than *three* spent now. And no sacrifice is too much that keeps even *one* telegram from beginning . . . T-H-E W-A-R D-E-P-A-R-T-M-E-N-T R-E-G-R-E-T-S

New York Central

Back the Attack
Buy More than Before!

Advertisement from WWII urging US citizens to buy War Bonds.
As the advert illustrates a railroad telegrapher, the message is in American Morse



Bunnell Double-speed Key

This key, made by Bunnell & Company, is operated by a sidewise rocking motion of the lever, which it is claimed does not produce cramp of the hand.

Two contact points are provided at the ends of adjusting screws **a** *and* **b**. *Spring* **c** *offers resistance to side motion of the lever, and its tension may be adjusted by moving the clamping block shown at the end of the spring. The block is locked in position by screw* **d**.

The circuit-breaker is shown at **e**; *one terminal of the key, at* **f**; *and the other, at the top of the lever block. The contact points should be adjusted close together with the key lever normally midway between them, but not touching either.*

When operating, the lever makes contact in either direction, no two successive contacts being made on the same side. For example, if the dash of letter D *is made to the right, the first dot is made to the left, and the second dot to the right.*

Illustration and text taken from: Elementary Telegraphy, *published for International Correspondence College, USA, 1911*