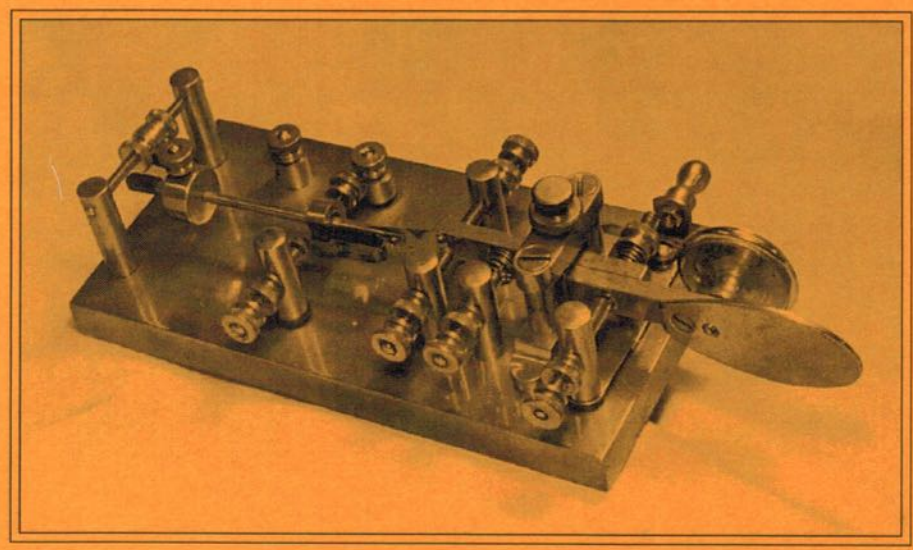
Flying the flag for Morse

Number 49 – Christmas 1996

Morsum Magnificat

The Morse Magazine



Home-brew Brass Blue Racer

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Morsum Magnificat

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MORSUM MAGNIFICAT was first published as a quarterly magazine in Holland, in 1983, by the late Rinus Hellemons PA0BFN. Now published six times a year in Britain, it aims to provide international coverage of all aspects of Morse telegraphy, past present and future. MORSUM MAGNIFICAT is for all Morse enthusiasts, amateur or professional, active or retired. It brings together material which would otherwise be lost to posterity, providing an invaluable source of interest, reference and record relating to the traditions and practice of Morse.

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ON OUR FRONT COVER

Home-brew Brass Blue Racer. An all-brass key sized like the Vibroplex Blue Racer, made by Robert Betts N1KPR.
Photo: N1KPR

Comment

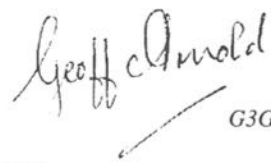
WITH OUR NEXT ISSUE, due out at the end of February, we reach Issue No. 50, a 'half-century' of *Morsum Magnificat* since the English-language edition began back in the Autumn of 1986. For any new readers who are wondering how come that there have only been 50 issues of a bi-monthly magazine in the course of 10 years, the answer is of course that until early 1993 *MM* was only published on a quarterly basis.

We want to do something a little special to celebrate our half-century, and after discussing various ideas have decided that Issue No. 50 will be a 60-page bumper helping of news, features and information about Morse. Planned articles include a 'final-final' round-up of data on the Key WT 8AMP, and the first instalment of Tony Smith's *magnum opus* on Morse learning methods used and recommended over the years. There are some really strange ones among them – my nomination for the weirdest of the lot must be one from an 1878 book on telegraphy which uses the sentences 'Earwigs infest summer houses' and 'Turnips make oxen' as memory aids for the letters E-I-S-H and T-M-O respectively.

Several readers have suggested that it would be nice if we could include in Issue 50 a cumulative index covering everything published in *MM* to date. Unfortunately this isn't really practical, as it would occupy most of the magazine. We are however looking at alternative ways of making such data available, and may be able to announce something in the fairly near future.

Finally, an answer to a query which comes in fairly regularly from new readers... what is the significance of the Morse symbols which appear at the bottom of the front cover of every issue? Although they don't look much like it, they are in fact two letter 'V's, run together but with the second 'V' sent with a sort of pensive hesitation! They were the on-air 'limbering-up' trademark signal of the founder of the original Dutch-language edition of *MM*, the late Rinus Hellemons PA0BFN, and are retained as a lasting tribute to him.

With every good wish to all our readers for a peaceful and prosperous 1997, from everyone at *MM*.



G3GSR

Contents

Adverts

News

Changes to IARU Region 1 HF Band Plan

The 1996 Region 1 Conference of the International Amateur Radio Union made a number of changes to the Region 1 voluntary HF Band Plan. **Table 1** shows the segments of each band where CW is the exclusive type of emission recommended. Copies of the full band plan, showing all modes of operation can be obtained from IARU Region 1 national societies. All frequencies shown are in kHz.

As will be seen, in terms of CW there is little change from the previous band plan. In most other segments of the new band plan, CW is still indicated as being permissible, but with a subtle change of emphasis. Where several modes are shown in a sub-band the new plan indicates that the first named has priority, exercised on a Non-interference basis

Table 1

Band	CW recommended segment
1.8MHz	1810-1838 CW
3.5MHz	3500-3510 Intercontinental DX CW
	3500-3560 CW, Contest preferred segment CW
	3560-3580 CW
7MHz	7000-7035 CW
10MHz	10100-10140 CW
14MHz	14000-14070 CW
	14000-14060 CW, Contest preferred segment CW
18MHz	18068-18100 CW
21MHz	21000-21080 CW
	21120-21149 CW
24MHz	24890-24920 CW
28MHz	28000-28050 CW
	28150-28190 CW

Table 2

Band	Shared segments (priority mode first)
3.5MHz	3580-3590 Digimode, CW
	3590-3600 Digimode (packet preferred), CW
7MHz	7035-7040 Digimode (except packet), SSTV, FAX, CW
10MHz	10140-10150 Digimode (except packet), CW
14MHz	14070-14089 Digimode, CW
	14089-14099 Digimode (non-automatic packet preferred), CW
18MHz	18100-18109 Digimode, CW
21MHz	21080-21100 Digimode, CW
	21100-21120 Digimode (packet preferred), CW
24MHz	24920-24929 Digimode, CW
28MHz	28050-28120 Digimode, CW
	28120-28150 Digimode (packet preferred), CW
	28190-28199 Regional time shared IBP only

according to the ITU Radio Regulations. Examples, covering segments exclusively allocated to CW as recently as ten years ago, are shown in **Table 2**. These also illustrate the extent to which CW has lost band plan frequencies to other modes in that period.

Concerning the bandplan, the Final Plenary of the 1996 conference carried the following recommendation from its Administrative and Organisational Committee:

'It is recommended

1. that it is essential that Member Societies actively promote the IARU band plans within their country in order to encourage all amateurs to honour them.
2. that all Member Societies draw their members' attention to these band plans at least once a year, in their publications.
3. that the Amateur Service makes full use of the spectrum allocated to the source.'

(Band Plan details from IARU Region 1 News, November 1996)

UK Amateurs Lose Part of 10GHz Band

Britain's Radiocommunications Agency issued the following press notice on 14 November 1996:

'The Amateur Service currently has a frequency allocation of 10.00 to 10.50GHz but in order to facilitate the timely introduction of Radio Fixed Access services in the UK, the amateur frequency allocation of 10.15 to 10.30GHz will be withdrawn... from the 1st April 1997... and will no longer be available for use by Radio Amateurs.

'With no sign of abatement in the demands on the spectrum for existing and new radio services the Agency continues to balance the need for radio amateurs to have access to spectrum with the demands of existing and new radio services. The Agency continues to explore allocations for Amateur Radio in spectrum that is not in as much demand, an example of this being the recent introduction of the LF allocation (73kHz) for the Amateur Service.'

The permitted types of transmission in the 10GHz band are Morse, Telephony, RTTY, Data, Facsimile, SSTV and FSTV.

RSGB Survey Results

The Radio Society of Great Britain has published the results of its survey of opinion on 'The Future of Amateur Radio', which was part of the Society's preparation for WRC-99.

The specific issue of the Morse test was covered, together with other issues relating to amateur radio. 7500 questionnaires were received, equivalent to 30 percent of RSGB members. Non-members were invited to participate, but very few chose to do so. Two-thirds of members believe that Morse should remain as an international licensing requirement, but in a breakdown between licence grades, the percentages in favour are: 'A' (full) licensees 79; 'B' (VHF only no-code) licensees 21. Just over half of members agreed that Morse should remain a national licensing requirement even if it ceased to be an international requirement.

The full results of the survey were published by Isis Research Ltd as a 44-page A4 document. Copies are available

to RSGB members at £5.00, including postage. The RSGB's report on the survey, in *Radio Communication*, December 1996, did not indicate if, in the light of the survey results, the Society has now formulated a policy on the question of the amateur Morse test.

Future of the Amateur Morse Test

As reported in MM48, there was no vote taken at the IARU Region 1 conference on the conclusion of the FASC that S.25.5 of the international radio regulations should be removed as a treaty obligation of administrations. Unfortunately, it has not yet proved possible to obtain details of the discussion at the conference on this matter, but it is understood informally that there was a considerable feeling that no change is necessary.

According to an IARU News Release dated 8 October 1996, the IARU's Future of the Amateur Service Committee (FASC), having completed a review of comments on its initial discussion document, is preparing a further paper on the subject of possible revisions to Article S25.

IARU Region 3 (Asia and Oceania) and Region 2 (North and South America) are to consider the FASC conclusions at their conferences in 1997 and 1998 respectively, prior to the expected consideration of the subject at the ITU World Radio Conference in 1999 (WRC-99).

Last Message from SAQ

Swedish coast station Grimeton/SAQ is unique, being the only Alexanderson-alternator transmitting station preserved and in working order. This station was formally closed down by a self-explanatory last message sent on 23 October 1996, as follows:

'CQ de SAQ
THE RADIO STATION GRIMETON IS NOW DECLARED A LISTED HISTORIC BUILDING BY THE COUNTY COUNCIL OF HALLAND, SWEDEN, AND GOVERNOR BJOERN MOLIN. THIS MESSAGE IS TRANSMITTED BY A 200 KW ALTERNATOR CONSTRUCTED AT GE BY ERNST ALEXANDERSON 80 YEARS AGO +'

In his speech at the closing ceremony, the Governor said: "Grimeton is a symbol of the contact between the old and the new world. During wartime the Grimeton station was a light in the darkness. It was our only radio connection across the Atlantic and stood as a symbol of freedom of speech."

In later years the Swedish Navy has used SAQ for traffic with submarines, and for that reason has kept it in working order; and a submarine radio M/49 was one of the gifts to the new museum.

Before starting the transmitter for the last message, the Stationmaster said: "It has got a very rough tone, but to me it is like a symphony with the alternator in the bass, supporting oil and waterpumps, and relays switching on and off. And of course the automatic transmission starts with V V V – Beethoven's Fifth!

The last message was transmitted four times, at different speeds, on 17.2kHz, starting at 09.00 UTC, 23 October 1996. The previous transmission two days earlier was only a test.

The first operator was Seth Myrby SM0AGP, managing director of Telia, second was Carl-Axel Wannerskog

SM6DU, Master of Engineering and President of the Radio Historical Museum in Gothenburg, third was Carl Henrik Walde SM5BF, Chief Engineer in the Navy, and the fourth was Ulf Sjoedén, SM6CVE, representing the Swedish Radioamateurs Association.

(Report by Birgitta Gustafsson to the World Wireless Beacon*)*

Morsecoders of WA Formed

At a meeting of 13 interested Morsemen, held on 8 November 1996, a club called 'The Morsecoders of Western Australia' was formed, which will seek to establish fraternal affiliation with other Morsecodians.

The objectives of the club are to promote and display the historic skills associated with the art of Morse telegraphy, and to support other organisations engaged in historical research and exhibition associated with Morse telegraphy.

The President of the new club is Colin Smith, and the Hon Secretary is Ricardo Crameri, Unit 21/59 Wasley St, North Perth, Western Australia 6006 (email: ricardo@wantree.com.au). The Hon Historian is Larry Rice, PO Box 46, Guildford, Western Australia 6935 (email: larry@omen.com.au).

(Information from Larry Rice)

MM Home Page Move

The *MM* home page on the World Wide Web has moved to a new site – i.e., http://ww.morsum.demon.co.uk – where it has a new, expanded layout. It contains extracts and articles from previous issues of *MM*; a summary of the contents of our current issue; details and reviews of scarce telegraphy books available from the *MM* Bookshelf; subscription details and links to other sites of Morse interest.

Death of Creator of Singing Telegram

George P. Oslin, 97, creator of the singing telegram, died of heart failure on October 24 in Delray Beach, FLA. Oslin was PR director for Western Union when, on a whim, he had a buxom blonde operator named Lucille Lipps sing a Happy birthday message to crooner Rudy Vallee in 1933.

(From People *magazine, 11/11/96. Contributed by Lynn Burlingame, N7CFO)*

Calling all Antarctic Radio Operators

Allan Moore, VK1AL, whose article 'Australian Radio Operating in the Antarctic 1963/65' appeared in MM36, has been asked by the editor of *Aurora*, magazine of the Australian Antarctic Club, to prepare an article covering Fifty Years of Radio Communications in the Antarctic, 1947–1997. (1947 was when the first 'modern day' station, VJM, opened on Macquarie Island).

He has enlisted the help of some 20 fellow-expeditioners from previous Australian expeditions covering the entire period, He would now like to hear from any *MM* readers who were with other expeditions to the Antarctic, particularly from 1947 to about 1975, who had any radio or related contacts with Australian bases at that time, with a view to their contributing to the 50th Anniversary special publication.

Operators, technicians or aviators who were with British, Russian, French, Belgian, Japanese, Chinese, USA, NZ,

South African, Argentinian, Chilean, or Norwegian expeditions (or any other expedition which he may have unintentionally not mentioned) are of special interest, and are asked to contact Al at PO Box 4572, Kingston, Canberra, ACT 2604, Australia.

Also, if readers know any ex-Antarctic expeditioners who are not *MM* readers, but who might be interested in contributing to Al's project, please draw their attention to this invitation.

Morse Collectible

An article in the *Wall Street Journal* of 1 November 1996, titled 'Antique Globes Spin Around the Collecting World', reports that 'a late-19th century table globe dedicated to Samuel Morse and including his facsimile signature and all the world's telegraph routes, sells for about $8750.'

(Keyclicks Mailing List)

CZEBRIS 1997

The rules for the Czebris 1997 contest are as follows:

Dates and times: February 28, 1600Z to March 2, 2359Z.

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

Power: Not exceeding 5W RF output. Stations unable to measure their output, take half DC input power to PA. e.g., 10W DC input = 5W RF output.

Stations eligible: Any licensed radio amateur.

Contest call: CQ QRP. Contest exchange: RST, Power, Name of operator.

Scoring: Stations may be worked once per band; Only QRP/QRP contacts score. Points scored are as follows:

Score by QRP station in:	For QSO with QRP station in:			
	UK	OK/OM	EU	Non-EU
UK	2	4	2	3
OK/OM	4	2	2	3
EU	4	4	1	2
Non-EU	4	4	2	1

Multipliers: None.

Final score: The sum of points obtained on each band.

Logs: Separate sheets for each band showing, for each QSO, date, time, call, exchanges (RST/Power/Name) sent and received. Also a summary sheet showing name, QTH and callsign, claimed score for each band and brief details of equipment used. Logs to be sent as follows (to be received by 15 April 1997): UK station logs to G.P. Stancey G3MCK, 14 Cherry Orchard, Staines, TW18 2DF. All other logs, to P. Doudera OK1CZ, U1. baterie 1, 16200 Praha 6, Czech Republic.

Certificates: The leading three stations in each continent will receive a certificate. All UK entrants will receive a certificate to show that they participated.

Disputes: The decision of the organisers will be final.

(Information from Gerald Stancey G3MCK, Contests and Communications Manager, G-QRP Club.)

New Home for Museum of Communication

Scotland's Museum of Communication, founded by Harry Matthews when he began to collect and restore old radio equipment in 1973, will shortly be mov-

ing to new prestigious accommodation in the centre of Edinburgh.

As part of the Scottish Telecom 'World of Communications' exhibition at Saltire Court, the 'historic section', mounted by the MoC Foundation, will begin with pre-electric communication and go on to cover Early Electrics, Telegraphy, Telephony, Radio, Military Communications and Television up to the 1960s.

The exhibition is due to open on 30 January 1997. It will be open six days a week, but at the time of going to press other details are not known. There will be a further report on this exciting development in a later issue of *MM*.

For Your Diary

Notice of some of the radio-related events likely to be of interest to collectors being held during the first half of 1997. The *Morsum Magnificat* team plan to be in attendance at all those marked with an *

If you are looking for telegraph items, you need to arrive early!

* The **London Amateur Radio and Computing Show** will be held on **Saturday and Sunday, March 8 and 9** at its usual venue, the Lea Valley Leisure Centre, Edmonton, London. Opening hours are 10am to 5pm on both days.

* The **National Vintage Communications Fair** will be staged at the National Exhibition Centre, Birmingham, on **Sunday, May 4**.

* The **Royal Naval Amateur Radio Society Mobile Rally** takes place on **Saturday, June 21** at HMS Collingwood, Fareham, Hants. The organisers promise that this event, which became part of the annual Field Gun Day in 1996, will be greatly expanded, with plenty of attractions for the family too.

G-QRP Winter Sports

The G-QRP Club's Winter Sports will be held from 26 December 1996 to 1 January 1997. 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.

Readers' ADs

EXCHANGE

EXCHANGE THE FOLLOWING for good quality straight keys. VIBROPLEX: Lightning Chrome de Luxe; Blue Racer Chrome de Luxe; Champion with black base; Champion with grey base; Iambic twin paddle; and Brass Racer. SPEED-X: De Luxe Model 501 (Les Logan); Model 114-320 (E.F. Johnson). NYE: Model M/SSK-1CP twin paddle. CANTERBURY: Twin paddle. KENT: Twin paddle. HI-MOUND: MK 706 Twin paddle and keyer; MK 706 with marble base; BK 100 bug key. LIONEL: J36 bug key, 1942. Please note – these keys are offered for exchange only, not for sale. Wyn Davies, Pen-y-Maes, Halcog, Brymbo, Wrecsam LL11 5DQ, Wales. Phone: 01978 756330.

FOR SWAP – three different models of Chinese keys. List of available keys upon request. Belgium and Holland keys wanted. Henri Heraud F6AOU, 9 Avenue de Bellevue, 91130 Risorangis, France, 'phone 01 69258417.

The First Alaska Telegraph

by Richard L. Thomas KB7BAD

TRANSPORTING TONS of telegraph equipment through the Alaska wilderness by horses, mules, dog-sleds, and river boats, and working in temperatures 60 below zero had little appeal to US Army infantrymen and coast artillerymen in 1900–1903. It was a particularly sore point with the private soldiers, whose pay was $13 a month.

In the summer it was different, of course. Then they were devoured by enormous swarms of mosquitoes while frequently sinking ankle-deep or more into swampy muskeg.

The saga unfolds like a Jack London novel: man pitted against a contemptuous, nearly indomitable environment. There was even a cliff-hanger ending, a deadline met only 72 hours before Congressional authority to spend construction money ran out.

Mean and Exhausting Struggle

While infantrymen and artillerymen alternately sweated and froze at hard-labour tasks, Signal Corps soldiers performed the more glamorous technical jobs involved in connecting 1396 miles of heavy No. 9 galvanised iron wire to perfect Alaska's first rapid communications system. It was a mean and exhausting struggle through rugged, roadless mountains, canyons, forests, tundra, and swamps.

Everyone agreed a better system was long overdue. Within Alaska, one-fifth the size of the 48 contiguous states, the only pre-telegraph way to communicate between distant points was the written word delivered by walking, dog-sled, horseback, or boat.

Communications to points outside Alaska were even worse. Mailing a letter to the nation's capital at Washington, DC and receiving a reply often took six months. So in May 1900 Congress appropriated $450 000 for a telegraph system.

Temporary Link into Canada

The army was directed to build lines across the land east to west and north to

south. (Census records of 1900 reveal that Alaska's population was only 63 592.) Equipment reached Alaska in July, and by the end of October, 336 miles of wire had been erected by soldier work-crews supervised by nine young lieutenants and one master sergeant.

The system's eastern terminal was to be at Fort Egbert at Eagle, on the Yukon River, 12 miles from the Canadian border. While the line inched eastward toward Eagle, the Canadian government, as a temporary arrangement, invited the Signal Corps to string a wire from Fort Egbert to the border and patch into the Canadian telegraph system.

First Messages from Fort Egbert

Messages then could be sent from Fort Egbert, Alaska, via Dawson in Canada's Yukon Territory to Whitehorse, also in Yukon Territory, and then be carried by train to Skagway (back in Alaska again), on the White Pass and Yukon railroad. From Skagway the telegrams were transported by ship to Seattle.

In Seattle, they were telegraphed to their final destinations. The process took five days. The army allowed commercial and personal telegrams to be sent for 56 cents per word.

Capt. Charles E. Farnsworth, Fort Egbert's commander, invited federal Judge James Wickersham, presiding over the court at Eagle, to announce completion of the line. The judge sent wires to US Senator Addison G. Foster, of the State of Washington; to the Tacoma, Washington newspaper, *The Ledger*, and to Edd S. Orr at Dawson, Yukon Territory.

Enter Billy Mitchell

The line's value in speeding word of 'outside' activities to Alaskans came on November 13 when a Fort Egbert telegrapher copied the news that Republican William McKinley had won the presidency over Democrat William Jennings Bryan in the November 6 election.

Meanwhile, work continued on the east-west line from Fort St Michael on Norton Sound to Fort Egbert, and the north-south line that started at Fort Liscum at Valdez and which would connect with the other line at Ketchumstuk. Ketchumstuk was south-east of where the city of Fairbanks later would spring up.

After construction had been under way for a year, Brig. Gen. Adolphus W. Greely, Signal Corps chief, assigned his protégé William (Billy) Mitchell to the project. At 21, Mitchell was the youngest 1st lieutenant in the US Army. He had built telegraph lines in Cuba and the Philippines.

Thermometers Banned

While Mitchell was responsible for supervising construction of only 190 of the 1396 miles of telegraph line, his name is identified prominently with the telegraph because he wrote an extensive account of his two years in Alaska. Mitchell detailed information that might otherwise have been lost or buried deep in military records.

(This is the same Billy Mitchell who, as a brigadier general in the 1930s, was so zealous in his advocacy of a strong air force that he harshly criticised his superior officers publicly for their lack of foresight. Mitchell was court-

martialled and suspended from the army, but 10 years after his death Congress awarded him a Medal of Honor and a posthumous promotion.)

Mitchell suggested construction would be faster if equipment and supplies were distributed in winter when the ground was frozen and horses and mules wouldn't bog down in the muskeg. Poles would be set and wire strung in summer. Mitchell forbade his crews to carry thermometers. He feared they would balk at working outside if they knew how cold it was. Without thermometers, they once laboured six weeks in 60-below-zero weather.

Tripod Poles Used

On portions of the route, particularly in permafrost and marshy areas, tripod poles eight to 10 feet tall were used. Single vertical poles would pop out of the ground through freezing and thawing action.

Twenty men made up a work crew, while supply trains consisted of 8 to 10 horses or mules, plus dog-sleds in winter. Maintenance cabins, stables, and storage sheds were built 35 to 40 miles apart, and a Signal Corps operator/repairman and two infantrymen helpers were assigned to each.

"The arrival and departure of each sled train was reported by telegraph to headquarters." Mitchell wrote. "Material was billed there just as on a railroad or steamship line, and was regularly checked and receipted for by the station keeper and passed on to the next."

Historical Messages

Mitchell said he and another man shot 70 caribou and 400 ptarmigan in two days, adding, "the men liked the caribou meat much better than the moose, beef, or wild sheep." During the salmon run, three soldiers worked constantly netting fish that were dried and smoked for sled-dog food.

On 24 August 1902, the western link from Fort St Michael on the Bering Sea, and the eastern link at Fort Egbert at Eagle were connected at Tanana Crossing (now called Tanacross).

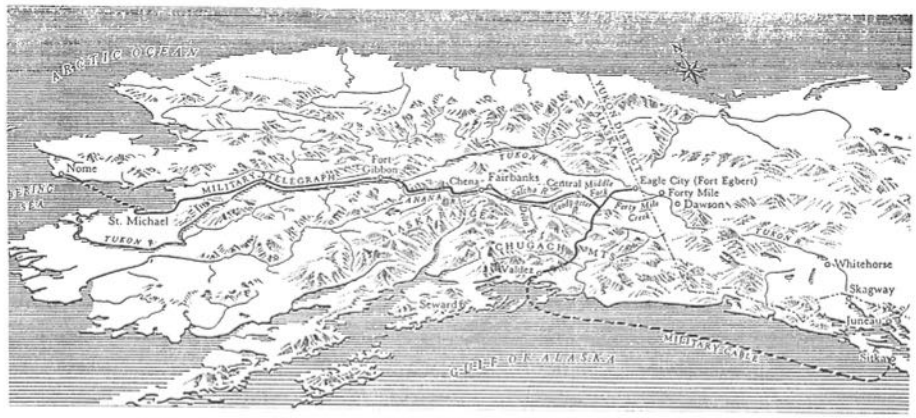
Telegrapher Fred Rogers then sat down under a tree and positioned his saddle as a backrest. With a portable telegraph desk before him, he spent the next three days sending and receiving messages, the details of which he related years later in an oral history session.

System Completed Just Before Deadline

Now the thrust was to complete the 428-mile north-and-south link to Fort Liscum at Valdez. It presented special problems because of terrain and other factors. (This segment was roughly on an alignment with today's Richardson Highway.)

One particularly troublesome spot for wire breakage was Thompson Pass, north of Valdez. Snow depths of 60 or more feet were common. Later (1903), submarine cable was spliced in through this section.

Finally, on 27 June 1903, crews headed by Lt. George S. Gibbs and Mitchell met on the banks of the Tanana River and made the final connections to complete the Alaska telegraph system. Mitchell wrote that he personally spliced together the east-west and north-



Map showing the Route of the Alaskan Military Telegraph System

south wires. The job was completed just three days before Congressional funding would have ended.

Amundsen Message

Soon afterward, 54 towns and villages had telegraph service, and by October of 1904 submarine cable (2128 miles of it) connected Valdez, Sitka, Juneau, and Skagway with Seattle. Alaska finally had its own rapid communications system, popularly called WAMCATS (Washington-Alaska Military Cable and Telegraph System.) It was state-of-the-art and the Information Superhighway of the time.

One of the more memorable uses of the telegraph occurred at Fort Egbert on 5 December 1905. With the thermometer nudging 60 below zero, there suddenly appeared Roald Amundsen, the Norwegian explorer. He had just travelled 1000 miles by dog sled and walking from his ship frozen in the ice. He sent a 3000-word telegram to Norway, announcing that after a search of 30 months he had discovered the Northwest Passage. (In December 1911, Amundsen discovered the South Pole.)

Townspeople and soldiers treated Amundsen royally during his two-month stay while he waited for money and instructions from Norway. Town officials later named a park and street after him, the street being the only road out of Eagle. The Eagle Historical Society has a copy of Amundsen's wire, which he wrote in English.

Other Telegraphic Exchanges

L. E. Trump of Fairbanks, a former railroad telegrapher in Colorado and later a wireless operator at Nome, estimates the army operator, or operators, sent Amundsen's long message to Valdez on a hand key in 2 hours 30 minutes. Resending it to Seattle on the slower cable system, which allowed a maximum speed of only 10 to 12 words a minute, would have taken another four or five hours.

Most WAMCATS telegrams were far less dramatic, leaning toward routine army matters and commercial and personal messages. Records reveal a dozen

telegraphic exchanges between civil authorities before Alexina Byron was allowed to open a saloon. The deciding judge was wobbly on issuing a liquor licence to a woman. The wires weren't always used for business. Signal Corps telegraphers tried to relieve the boredom of lonely relay stations with personal conversations, by exchanging jokes, and by playing telegraphic chess.

Fort Egbert Artefacts

Trump visited Eagle and says the Historical Society museum has been able to acquire only a few telegraph artefacts. They include a Fort Egbert telegraph key and 150-ohm mainline relay. Both apparently were manufactured for the Signal Corps by J.H. Bunnell & Company of New York, a leading source of telegraph equipment at the time.

The key is the early legless model with holes in the sides of the binding posts to insert the wires. Also displayed are some insulators, oak brackets, and a length of telegraph wire. From old photos and other sources, Trump believes there were double wires on portions of the line.

Short Life Before Advent of Wireless

The WAMCATS line's value to frontier Alaska was beyond description, but it nevertheless enjoyed a short life of only five years. The Signal Corps, alert to the latest technology, now enthusiastically expanded its use of wireless telegraphy.

Earlier, Fort St Michael had been linked by wireless to Port Safety, east of Nome, 107 miles across Norton Sound. At Fort Egbert, wireless equipment arrived in 1909. A special building and tall antenna tower were erected on Telegraph Hill, a mile from the post. Other Alaska military units were similarly equipped. By 1910, little traffic was moving over the telegraph wires, and in 1911 the Army closed Fort Egbert and abandoned its 46 buildings.

A small Signal Corps detachment remained behind to operate the five-kilowatt wireless station. The building housing the station burned to the ground in 1922. It soon was re-established in town with a single Signal Corps operator in charge until 1934. At that time, the army turned the facility over to a commercial company.

(The assistance of Alaskans Ed Trump, a Morse Telegraph Club member living in Fairbanks, and Mrs. Elva Scott of Eagle, historian and author, in the preparation of this article is gratefully acknowledged.) ***MM***

Vibrating Telegraphs

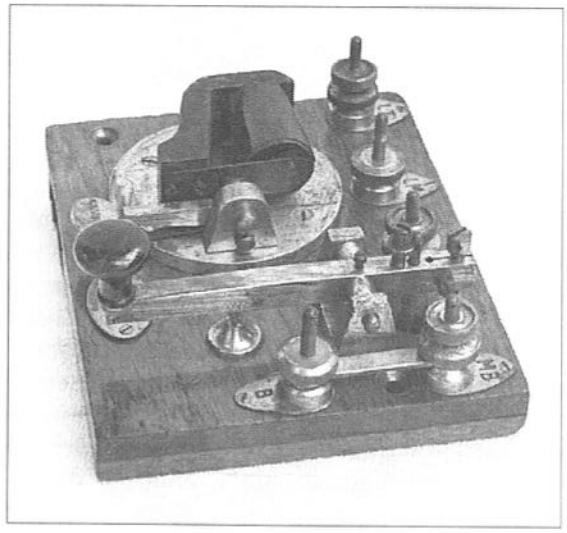
by Dennis Goacher G3LLZ

THE COMPLETE APPARATUS for a British Army vibrating telegraph consisted of a transmitter, a hand telephone and a battery. The battery voltage was 9–12V. The transmitters used were the 'Transmitter, vibrating, Mark IV' and the 'Vibrator, telegraph'. The first type was that formerly used by the Telegraph Companies, and around 1908 was still in use by the Royal Artillery. The second type was supplied to the telegraph units from that time on. When used in the field a 'Receiver head' was generally provided as well, connected in parallel with the receiver of the hand telephone.

The 'Transmitter Vibrating'

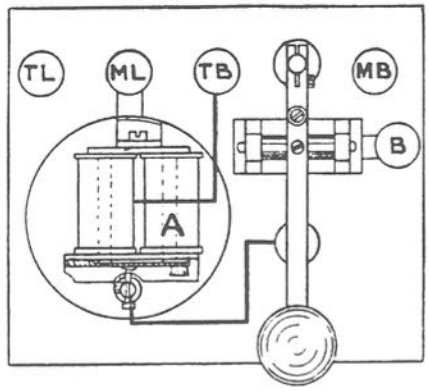
In the 'Transmitter, vibrating', the magnet cores are composed of split tubes of soft iron, packed with charcoal iron wire. The yoke is of soft iron, secured to the cores by two 4BA iron screws. The bobbins are formed by fixing ebonite cheeks to the ends of the cores, the latter being insulated with paper and shellac varnish.

The coils are wound with double silk covered copper wire, 32 SWG, soaked in paraffin before winding. The coils are wound so as to produce opposite poles at the free ends of the magnet limbs. Each bobbin is wound to a resistance of



Collection/Photo: Dennis Goacher G3LLZ

Transmitter, Vibrating, dated 1917 (Note too the Stuart & Moore Key on the front cover of MM29 which is also of this type)



This page:

(left) Transmitter, Vibrating

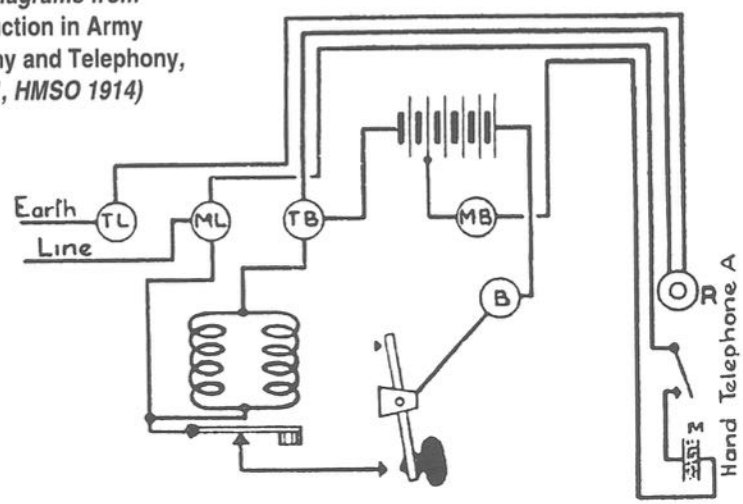
(below) Connections of Transmitter, Vibrating

Facing page:

(top) Transmitter, Vibrating, Mark IV, connected up with Telephone, Hand, 'C', Mark II

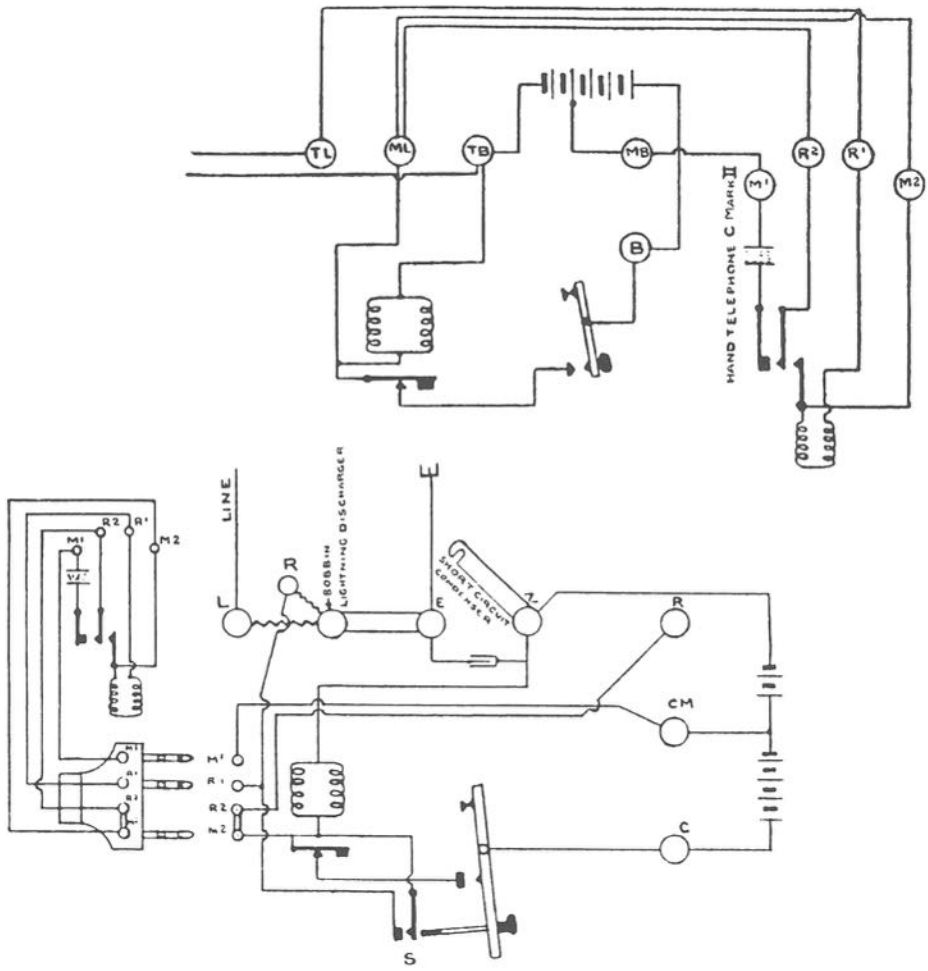
(bottom) Vibrator, Telegraph, with Telephone, Hand, 'C', Mark II

(All diagrams from Instruction in Army Telegraphy and Telephony, Vol. 1, HMSO 1914)



20 ohms; the inner ends are soldered to the cores, and the outer ends are led to the terminal marked 'T.B.'; the two coils are thus connected in parallel and have a combined resistance of 10 ohms. The coils are jacketed with sheet ebonite. The armature is of spring steel with a brass block fixed at the free end. The contacts are made of platinum.

Two adjusting pins are provided which, when not in use, are screwed into holes provided in a brass plate fixed into the side of the base. The knob of the key can be removed for packing and screwed into an oval brass plate on the top of the base. This plate also carries the maker's name and the date of manufacture. Screwed into the end of the base on their own threads are two brass woodscrews which may be removed and used to hold down the whole unit to a suitable table when in use.



The instrument, when properly adjusted, should produce a sharp and distinct sound when a current from one cell is passed through the coils, and should work without change of adjustment when used with up to 10 cells.

The 'Vibrator, Telegraph'

The 'Vibrator, Telegraph' is very similar to the above description, but with the following differences:

1. A capacitor of 1/20th microfarad capacity is inserted between the instrument and the earth terminal, and a brass strap is provided to short circuit it when not required.
2. A 'Discharger, lightning, bobbin' is provided, and a spare bobbin is mounted on the same fixing screw as the one in use.
3. The receiver is short-circuited when the key is depressed, by means of the

contact 'S'. This is to avoid unnecessary self-induction and resistance in the line.
4. A three-way plug is provided for connecting the 'Telephone, hand, "C", Mark IV', which is intended to be used with this instrument. Four terminal screws are provided on the plug and should be connected to the hand telephone as marked. The lead R2 is not required when the hand telephone is used with the vibrator, the terminal screw is only provided to avoid loose leads. If a 'Telephone, hand, "A"' is used with the vibrator, the microphone leads are connected to M1 and M2 and the receiver leads to R1 and R2; M2 and R2 are connected by a strap.
5. If a head receiver is used, it is connected to the terminals marked 'R' and not the plug.
6. The ends of the cores are fitted with small non-magnetic projections to prevent the armature from touching the cores. The steel plunger on the underside of the key lever is provided with an ivory tip. The capacitor is 1/20th microfarad, ±25%, and is jacketed with ebonite. The connections on the underside of the base are of 22 SWG tinned copper wire, cotton covered and braided.

(See also 'Who Buzzed First', MM26, p.12. – Ed.)

MM

Questions about
Non-English Morse

A RECENT LETTER from *MM* reader Bob Eldridge VE7BS drew our attention to an article in the January 1995 issue of the Russian Journal *Patriot* by RU3AX (translated by W4KM), which mentioned that the Russians still use – – · · – – for the exclamation mark, · – · – · – for the comma, and · · · · · · for a full stop (period).

These signals were changed by the Cairo revision, 1938, of the International Radio Communications Regulations (i.e., – – · · – – became the comma, · – · – · – became the full stop, the exclamation mark was abandoned, and the · · · · · · signal was discontinued). We therefore asked one of our Russian readers, Valery Pakhomov, UA3AO, if he could explain why these old signals are still being used in his country.

He replied as follows: 'Russia is a member of the ITU, and the International Radio Regulations are observed by State Telecommunications Institutions. This means that International Morse is used in Russia, with no modifications, for international communications.

'However, at the same time one can hear – – · · – – for (!), · – · – · – for (,) and · · · · · · for (.) when listening to transmissions by Russian stations in plain Russian language. For example, point-to-point, ship-to-shore, geologists expeditions and some special services stations use these old-fashioned punctuation marks.

'Sometimes, instead of · – · – · – and · · · · · · one can hear ЗПТ and ТЧК (Russian abbreviations for ЗАПЯТАЯ/comma and ТОЧКА/full stop). Such abbreviations are used in cases which require payment for each word sent.

'The only explanation I can give for this "apparent mystery" is that wireless operators of the older generation/school could not, and I think did not want to, get rid of their old habits. It has, therefore, become normal and habitual to keep the old signals for internal radio communications in Russia.

'As for Russian amateurs, they have been under such influence for decades, with the result that you can hear amateur traffic in plain language which is quite similar to that of the professionals.'

(Valery Pakhomov has had 39 years experience as a Radio Officer. His personal key collection of 62 Morse keys is exhibited at the Central Radio Club of Russia, Moscow.)

Morse in Scandinavia, Japan and Spain

Marco Eleuteri, IK0VSV, is a student of Nordic and Oriental languages as a hobby. He has written to *MM* to ask the following questions which perhaps some of our readers could answer?

'During transmissions "on-the-air" I have never heard the letters Ä, Å, Æ, Ö, Ø, Ü, used in Swedish, Norwegian and Danish.

'Where and when are these letters used? During a contact in Swedish recently, the other station asked me "Pse agn" and I had to repeat everything without using the non-English letters. Perhaps these letters are not used any more? But if not, the grammar is wrong!'

Regarding the use of Morse in Japanese, Marco writes, 'I have the "Katakana" and the "Hirakana" code, but not the "Kanji" code. Does a "Kanji" code exist?

'With the Katakana code it is possible to send all foreign originated words, and with the "Hirakana" all Japanese words can be sent. But if I need to send a Kanji figure, how do I do it?'

Finally, with regard to the use of Morse in Spanish, he asks, 'Are the letters Ñ and Ç sent by Spanish operators when using Morse in the Spanish language?'

More Info Please!

Morse enthusiasts in the English-speaking countries don't know a lot about the use of the 'non-English' signals in International Morse, or about the national language versions of Morse, e.g., where they are used, or even if they are still used! (Apart from Russian Morse, mentioned above, there are Japanese, Korean, Turkish, Arabic, Hebrew and Greek versions of the Morse code – if there are others, please let *MM* know).

We will welcome information in answer to the questions from Marco Eleuteri. We will also welcome information from readers about the use of the various national Morse codes today; or the present use of the non-English letters of International Morse in different countries. Also, are some operators (amateur or professional) still fluent in both International Morse and their own national code?

(Please address all correspondence in answer to these questions to Tony Smith, whose address can be found inside the front cover of MM*).*

Good Hand Sending

Some reflections and suggestions

by W.F. Reeves VE7CT (SK)

WHEN THE WRITER STARTED with landline Morse in 1917 and amateur radio three years later, the use of semi-automatic keys – bugs – was not widespread, and some real 'copper plate' hand sending was being produced in both codes, Morse and Continental. While Morse has nearly died out on landline, CW transmission is still very much alive, but really first-class hand sending seems scarce. This article is written in the hope that it will interest and help some amateurs in better performance with the hand key.

As with any manual art, if keying mistakes are unwittingly repeated long enough they will become habits and be hard to stop. The novice should, if possible, practice sending in the hearing of someone able – and willing – to offer constructive criticism. Failing that, do not practice sending until you can receive well enough to evaluate your own sending. This is a hard thing to do, and experienced hams can assist the novice greatly, both in club work and on the air.

The key should be securely fastened to the table in line with the forearm, in a similar position in relation to the body as the writing pad, or somewhat to the right of it. As an alternative the key can be fastened to one end of a board fitted with rubber feet, about six inches wide and long enough to accommodate the elbow. *(See note at end. – Ed.)*

There is a direct relationship between key sending and handwriting. Many of the old-time key experts also produced 'copper plate' writing, and the 'glass arm' affliction that no doubt spurred the development of the bug is similar to writer's cramp.

A free and easy style of holding and manipulating the key is akin to the exercises that were used in such training as the MacLean system of handwriting. The best method for good character formation without tiring is mainly forearm and wrist action rather than wrist and fingers, with the grip on the key being loose enough to prevent tenseness. The elbow will roll or 'ball' on the table top without leaving it, and the forearm will move up and down considerably further than the key lever.

There are two reasons for this 'overthrow'; one, the key-top movement is unnaturally short for the human arm, and continued sending without the overthrow would soon produce tenseness and strain. The other reason has to do with key design. A string of dots should measure

about 50 percent of closed circuit current on a meter, that is the dots should be the same length in milliseconds as the spaces between them. In a bug, one of the dot contacts is flexibly mounted, so that with proper adjustment there is 'follow' each time the contacts close, which provides the proper dot length. On the standard hand key with its rigid contacts, if the arm does not continue downward or pause after the contacts close, the dots will be too short or 'light'. A pause is not practicable for rhythmic hand sending, so the overthrow is the only solution.

With key travel and spring tension suited to the individual, and with correct grip and arm action, it should be possible to send continuous dots at a natural speed for several seconds without tiring, and with no discernible change in pace or 'percent make'. This is a good practice exercise.

Until proficiency is attained, don't be afraid to make the space between words extra long – this will help the receiver to separate the words in case there is any hesitation inside the words.

Improper spacing inside letters is a more serious error, and is most common on letters where dots and dashes are intermixed. In these more difficult letters one aid for the beginner is to make the dashes extra long. In the letter A for instance, if there is any pause between the dot and the dash it can be received as ET, but if the novice sender sends a dot and immediately closes the key, it can only be received as A even if the final key opening is delayed. Build up other letters from this beginning; R is formed by immediately making a dot after the dash in A is terminated; C is produced if the key is closed and R formed immediately it is opened. To make U or V, send the two or three dots and close the key; D or B are two or three dots sent from a closed key, and so on.

Your keying may not seem to be as imperishable as your writing, but when you are on the air who knows how many people are listening – and who knows, maybe somebody is recording it!

Good sending – and good CW QSO's! VE7CT.

Reprinted, with permission, from 73 *Magazine, December 1966.*

(This article refers to the American style of sending, using the classic American style hand key, with the elbow on the table. The author's comments on spacing can of course apply to any style of sending. – Ed.)

QRS for Beginners SVP!

by Jean-Michel F5SJQ

WITHOUT F5ZV's DISKETTE I would still be in the world of the Fonies...! It had indeed been a great aid, half an hour's work every day and the progress has been spectacular. So good that one day I dared call CQ on 144.050MHz. And, surprise, someone came back!

It was Jean-Marie, F6ENU/P on holiday, who partnered me on my first QSOs, very gently (never more than 5 wpm), every day, without exception, for a whole month.

The first steps having been taken, I was hooked! Since good things never come singly another OM, Jacques F6HRC, took up the good work and for more than one year, almost every morning, we had QSOs on 80m with some other friends who had come to join us.

Much Too Fast

For the present, CW QSOs represent almost all my traffic, at a moderate speed, and I consider myself to be a 'blossoming' key, with plenty of admiration for the 'profis' of CW... of which there are quite a number in the UFT.

However, there is nevertheless a little sour note. It is when I hear an OM coming back at a speed which is far too high for beginners, and, despite a QRS sent in desperation the QSO fizzles out.

I think that these OMs shouldn't forget that once (in some cases not all that long ago) it was they who were sending QRS! It just takes a little more time and a little more space between letters, even if sent a little rapidly, for a big improvement.

Best Memories

It is impossible for a learner to read a tricky message, believe me, my experience is of recent date. It is really the best method to discourage a beginner. A few QSOs of that type and the key goes back to the bottom of the drawer.

My best memories are of those contacts where I had 100 percent copy, and they encouraged me to continue, and thus the discouraging moments have been quickly forgotten.

Let the Spirit of Friendship and Tolerance reign forever in our wonderful world of Amateur Radio.

(From La Pioche, *journal of the Union Française des Télégraphistes, 4/95. Translated by Ken Quigg GI4CRQ.)*

('SVP' is used by French-speaking telegraphists as the abbreviation for "s'il vous plâit", meaning "if you please". – Ed.)

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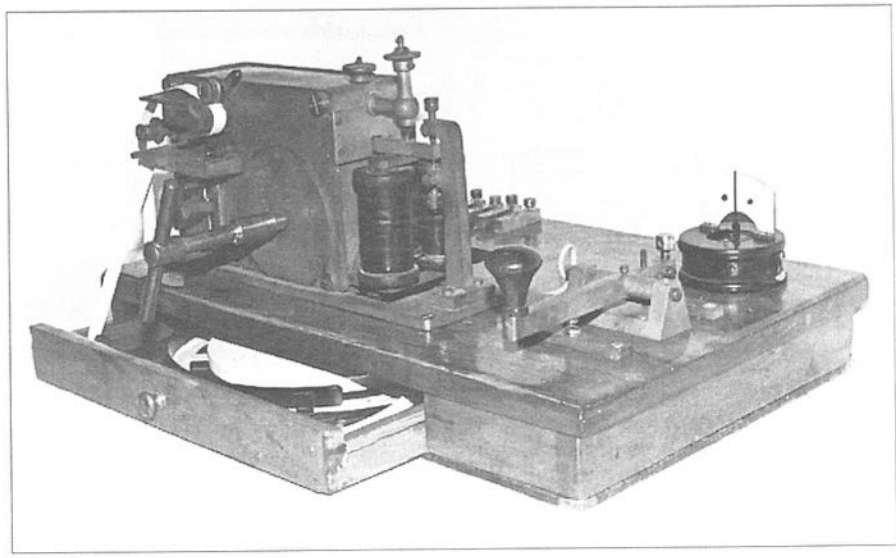
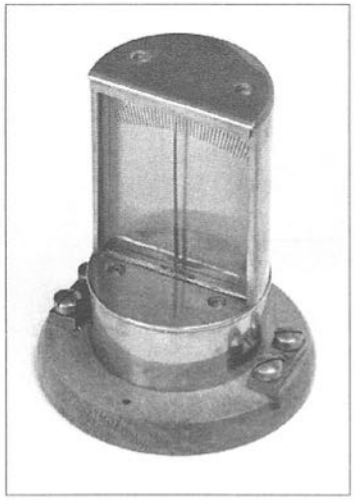


Photo/Collection: Jim W. Jack

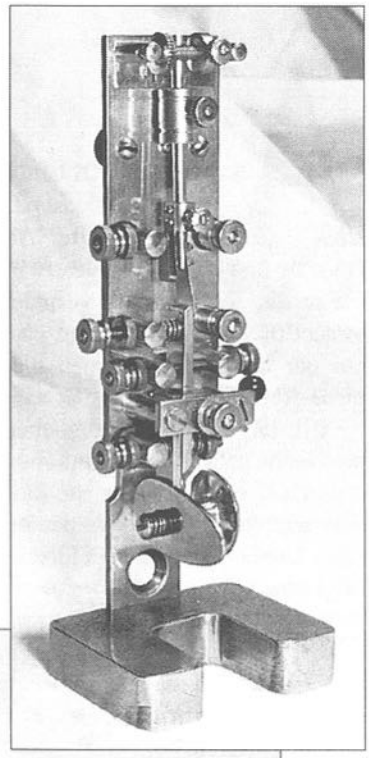
Railway Telegraph Terminal used on the Rhodesia Railways system. The sounder/inker is marked 'ELLIOTT BROTHERS (LONDON) LTD No. 25077'. The underside of the key fulcrum is marked '...NS BROs & Co 34', possibly indicating a manufacture date of 1934. The terminal has been restored by Jim W. Jack, ZS6YW/GM2AJW, who says: "An interesting point was that ordinary steel screws, now rusted, had been used hold the key components and terminals to the board. I cannot imagine that they were there originally and I have replaced these with brass screws. The sliding drawer with the tape magazine is in excellent condition. There is some doubt whether or not there was a glass cover over the galvanometer

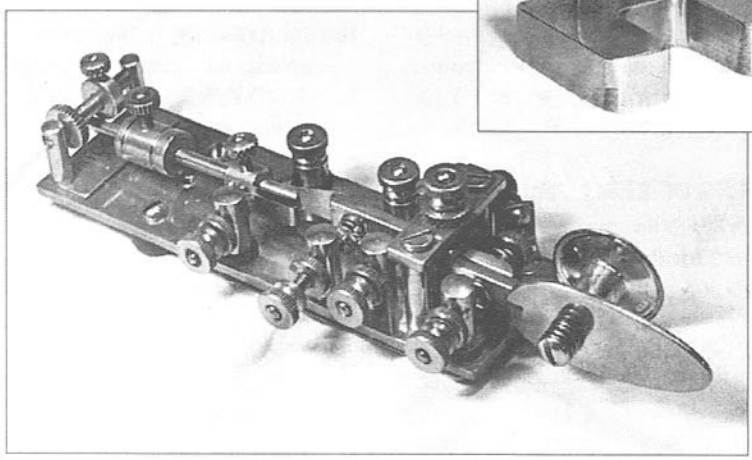
Featuring keys and other collectors' items of telegraphic interest.
If anyone can add to the information given please contact
Tony Smith, 13 Morley Road. Sheringham, Norfolk NR26 8JE



Photo/Collection: Fons Vanden Berghen

Typical Belgian Telegraphic Galvanometer





Photos: N1KPR

Home-brew Wire Chief's Midget, made by Robert W. Betts, N1KPR, who says: "Call it a midget. Call it the Wire Chief's Special. It's both. You can carry it in your pocket. You can use it at home or away. Operate it horizontal or vertical. I couldn't (and didn't expect to) find a real Midget or Chief's Special, and if I did could I afford them? So here it is. All brass, with certain adjustments and operational improvements over the originals (I say). As a Midget, it sits on rubber feet and doesn't try to 'walk' too much. As a Wire Chief, it is gorgeous to operate. The thumb piece adjusts through 90 degrees in three detents – horizontal, 45 degrees and vertical."

Birth Dates of the Vibroplex Keys

by John Elwood WW7P

AS A KEY COLLECTOR, I have been asked many times to date Vibroplex keys. At first it appeared nearly impossible to do; so I decided to undertake a project that would help us to know how old our keys are and when they were made. It's been a long job starting in 1990.

I'll start with serial numbers and approximate dates, then list the sources for my dates, such as when the keys were first and last advertised, patent dates, sales slips, Vibroplex's addresses over the years, information from owners, etc. After the above dates had been ascertained, other dates were determined by extrapolation of the figures. Remember, these are approximate dates, but I feel they are very close.

BLOCKS OF SERIAL NUMBERS

It appears that Vibroplex assigned blocks of numbers for different models of keys between 1905 and 1915.

KEY	SERIAL NUMBERS
Original	400-4,416
Double Lever	6,010-6,014
Double Lever	D5015-D5310
Original	9,000-9,999
'X'	10,238-12,250
No. 4	B518-B1623
Original	20,011-20,788
'X'	25,090-26,154
Original	50,000-51,814

Keys with the '253 Broadway' address and later plates, had serial numbers that ran consecutively.

DATES OF SERIAL NUMBERS

Note: Commas have been inserted to facilitate reading the numbers.

SERIAL NUMBER	APPROX. YEAR
400-1,286	1905
1,287-2,777	1906
2,778-3,255	1907
3,256-6,106	1908
6,107-9,999	
No numbers reported	
No numbers reported	1909
No numbers reported	1910
10,000-10,399	1911
10,400-11,766	1912
*	
20,000-20,621	
11,767-12,250	1913
*	
20,622-20,800	
25,000-25,577	
**	
50,000-50,907	
D5015-D5310	

25,578-26,154 } 1914
**
50,908-51,827
B518-B1623

**No numbers reported between 12,251-19,999*

***No numbers reported between 26,155-49,999*

51,828-54,231 1915
54,232-57,268 1916
57,269-60,308 1917
60,309-64,573 1918
64,574-72,352 1919
72,353-80,960 1920
80,961-84,681 1921
84,682-88,402 1922
88,403-91,375 1923
91,376-94,316 1924
94,317-95,865 1925
95,866-99,574 1926
99,575-101,339 1927
101,340-103,104 1928
103,105-103,952 1929
103,953-104,800 1930
104,801-105,648 1931
105,649-106,496 1932
106,497-107,344 1933
107,345-108,192 1934
108,193-109,040 1935
109,041-109,888 1936
109,889-110,736 1937
110,737-111,571 1938
111,572-113,865 1939
113,866-116,159 1940
116,160-118,452 1941
118,453-122,536 1942
122,537-126,619 1943
126,620-137,394 1944
137,395-148,169 1945
148,170-152,526 1946
152,527-156,883 1947
156,884-161,353 1948
161,354-165,822 1949
165,823-170,292 1950
170,293-174,762 1951
174,763-179,232 1952
179,233-183,702 1953
183,703-188,172 1954
188,173-192,642 1955
192,643-197,112 1956
197,113-201,582 1957
201,583-206,052 1958
206,053-210,517 1959
210,518-217,034 1960
217,035-223,551 1961
223,552-230,068 1962
230,069-236,585 1963
236,586-240,870 1964
240,871-245,155 1965
245,156-249,440 1966
249,441-253,725 1967
253,726-258,010 1968
258,011-263,874 1969
263,875-266,151 1970
266,152-267,328 1971
267,329-270,152 1972
270,153-272,975 1973
272,976-373,006

Only two numbers reported

373,007-375,415 1974
375,416-378,752 1975
378,753-382,089 1976
382,090-385,426 1977
385,427-386,951 1978

Company relocated to Portland, Maine

386,952-391,230 1979
4,003-4,955 } 1980
5,261-5,921
40,000-40,787
40,788-42,077 1981
Assorted Nos.) } 1982
42,078-49,762) /1984
01,185-01,671 1983
01,672-02,158 1984
49,763-51,710 } 1985
02,159-02,645
51,711-54,163 } 1986
02,646-03,132
54,164-55,911 } 1987
03,133-03,619
55,912-60,077

No numbers reported

60,078-61,963 } 1988
03,620-04,106
61,964-62,254 } 1989
04,107-04,337
62,255-65,764 } 1990
04,338-05,334
65,765-67,132 } 1991
05,335-06,439
67,133-69,068 } 1992
06,440-07,725
69,069-70,410 } 1993
07,726-07,896
70,411-70,778 } 1994
07,897-08,205
70,779-80,361

No numbers reported

80,362-80,870 } 1995
08,206-08,514

Production at Portland, Maine, and at new location, Mobile, AL

80,871-100,499

No numbers reported

100,500- 1995 (onwards)

continued...

DATE INFORMATION SOURCES

Key	Start Date/Source	Stop Date/Source
Original	June 1905 *The Commercial Telegrapher's Journal*, June 1905, Pg.32	Still in production
Double Lever	July 1907-August 1908 Nameplate from WD6DTC key	February 1925 *The Railroad Telegrapher*, Feb. 1925, Pg.32
'X'	December 1911 *The Railroad Telegrapher* Dec. 1911, Pg.376a	January 1923 *The Railroad Telegrapher*, January 1923, Pg.6
No.4/ Blue Racer	August 1914 *Journal of the Telegraph* Aug. 1914, Pg.15	December 1966 Harrison Ad. *QST*, Dec. 1966, Pg.170
Upright	November 1917 *Electrical Experimenter* Nov. 1917, Pg.458	February 1919 *Telegraph and Telephone Age*, Feb. 1919, Pg.ii
Midget	October 1918 *The Railroad Telegrapher* Oct. 1918, Pg.268	September 1920 *The Railroad Telegrapher*, September 1920, Pg.358
Martin Junior	c.July/August 1920 WW7P Survey	October 1939 *QST*, Oct. 1939, Pg.106
No.6/ Lightning	June 1927 *The Railroad Telegrapher* June 1927, Pg.126	November 1980 Tufts Ad. *73* Magazine, November 1980, Pg.163
Champion	November 1939 *QST*, Nov. 1939, Pg.114	November 1980 Tufts Ad. *73* Magazine, November 1980, Pg.163
Zephyr	January 1939 US. Pat. 2,187,351 shows a Zephyr. Filed Jan. 9, 1939	1958 WW7P Survey. Last Zephyr s/n: 201,928
Presentation	November 1948 *QST*, Nov. 1948, Pg.138	Still in production
Vibro-Keyer	January 1960 *QST*, Jan. 1960, Pg.140	Still in production
Iambic	December 1979 *QST*, Dec. 1979, Pg.212	Still in production
Brass Racer-Iambic	November 1982 *QST*, Nov. 1982, Pg.162	Still in production
Brass Racer-EK1	November 1982 *QST*, Nov. 1982, Pg.162	Still in production

PATENT NUMBERS

Most Recent Patent Date or Latest Pat. Number on Plate	**Date Range**
Aug. 9, 1904	
767,303	Aug. 9, 1904 - Apr. 15, 1906
Aug. 9, 1904	
'Others pending'	Apr. 16, 1906 - Jan. 21, 1907
Jan 22,1907	
842,154	Jan. 22, 1907 - Jun. 30, 1911
Jan 22,1907	
'Others pending'	Oct. 27, 1911 - Nov. 4, 1912
842,154	
'Others pending'	
Nov. 5, 1912	
1,043,449	Nov. 5, 1912 - Aug. 3, 1917
1,043,449	
'Others pending'	Aug. 4, 1917 - Mar. 18, 1918
1,178,291	
(Boulter)	Approx. 1918 & 1919 (WW7P survey)
1,260,008	Mar. 19, 1918 - Jul. 1920 (Start of 825 Broadway address)

Plates with Vertical Lists of Nos (On later keys with the Bug logo)

763,303	This number at top of the list is wrong. This patent is for a clip issued to Joseph A. Mayers, June 21, 1904. Correct number should have been 767,303, issued to Horace G. Martin, August 9, 1904.
1,260,008	825 Broadway: Jul. 1920 - Feb. 12, 1923. (*The Railroad Telegrapher*, Jul. 20, 1920, Pg.274)
1,445,226	This patent number preceded 1,260,008 plus other patents pending on Vibroplex keys. 825 Broadway: Feb. 13, 1923 (US. Pat. date) - Feb. 12, 1925 796 Fulton Street: Feb. 13, 1925 - Jan. 8, 1939 (*QST*, Apr. 1925, Pg.76. Minus 2 months for advert. to be submitted)

Note: Vibroplex magazine advertisements for the period June 1925 – April 1941 show the company's address as either '825 Broadway' or '832 Broadway'. However, all keys from this period are marked '796 Fulton St.'

Plates with Vertical Lists of Nos (continued)

1,260,008 'Other pats pending' 'Patented'	796 Fulton St: Jan. 9, 1939 - 3-26-42 (Date on J-36 key) 833 Broadway: 3-27-42 - 1945
833 Broadway	1946 - 1963 (WW7P Survey)
No Pat. Nos. No word 'Patented'. 833 Broadway	1963 - 1980 (WW7P Survey. New company using up '833 Broadway' plates between Sep. 1979 -1980)
No Pat. Nos. No word 'Patented'. No street address	1980 - August 1994 (WW7P Survey)

KEYS WITH RED/GREEN/BLUE COLOUR BASE

Start/Source	Stop/Source
June 1929	July 1936
QST, June 1929, Pg.86	*QST*, July 1936, Pg.71

SIGNIFICANT VIBROPLEX PATENTS

The following Vibroplex patents appear as the last patent number/or most recent date on the nameplate. For a rough estimate of when your key was made, use that patent date and the next patent's filing date. *(Note US style dating, i.e., 5/7/04 = 7th May 1904. – Ed.)*

Patent Number	Filing Date	Patent Date
767,303	5/7/04	8/9/04
842,154	4/16/06	1/22/07
1,043,449	10/27/11	11/5/12
1,178,291	8/1/14	4/4/16
1,260,008	8/4/17	3/19/18
1,445,226	12/10/21	2/13/23

Acknowledgments

As I mentioned at the beginning of this article, this has been a lengthy project; it has taken well over 6 years to complete, and has been quite costly. It has been prepared using data from over 3135 Vibroplex keys, with the aid of nearly 2000 owners.

I want to say a special 'thank you' to my wife Edith, for all her help and patience over the years. Another who has been most helpful is Tom French, W1IMQ.

This article deals only with the dating of keys. For much more information on Vibroplex keys, such as pictures, identification, advertisements, patents, modifications within models, nameplate data, etc., I recommend you purchase Tom French's latest book, *Vibroplex Collector's Guide*, 2nd Edition, 1996. Tom's address is: P.O. Box 88, Maynard, MA 01754, USA. *(Tom's new book will be available soon from the MM Bookshelf)*

A most heartfelt 'thank you' to the many who furnished data on their keys. The first draft of this article listed each of you, but it ran to two and a half pages – single spaced. I'm afraid no publisher would accept that, so this paragraph will show my appreciation for your fine co-operation.

Now, when someone asks how old your key is, you can say, "The birth date of my Vibroplex key is …"

Book Review

"Q41" and Beyond
The Story of a Wren Telegraphist

by Shirley Lawson

Reviewed by Geoff Arnold

SHIRLEY LAWSON was born near Blackpool shortly before World War II, and spent her early childhood surrounded by men and women in uniform. The uniforms came in a wide variety of styles and colours, but the one which took Shirley's fancy was that of the Women's Royal Naval Service – the WRNS or 'Wrens' as they were generally known.

Leaving school after the war, she resolved to join the Wrens as soon as she reached the minimum age of 18. As a member of the Brownies, the Girl Guides and the Sea Rangers, she had been fascinated by Morse code, and when presented with a choice of possible work categories at her recruitment interview, had little hesitation in deciding to become a Telegraphist.

Following a month's induction course at 'Dauntless', a naval shore establishment at Burghfield, Reading, Shirley was drafted to HMS 'Drake' at Plymouth, where the skills of radio operation were to be taught over the next nine months. As well as Morse operation, touch typing, procedure, cryptography, R/T operation, the use of teleprinters, direction-finding and radio theory all had to be learned. Although Wrens did not go to sea in those days, a short trip on a frigate gave the girls on Course "Q41" an insight into the difficulties experienced by seagoing telegraphists.

Having successfully passed the end-of-course exam, including Morse operating at 95% accuracy at 25 words a minute, the next posting was to the Royal Naval Air Station at Culdrose, Cornwall, to learn about communications procedures in the Fleet Air Arm. Then, training completed, it was back to Plymouth for a spell in the wireless office at Mount Wise, communicating with warships entering and leaving harbour, etc.

A posting to HMS 'Sea Eagle', the Joint Anti Submarine School in Londonderry followed. Then came an opportunity for Shirley to further her wish to see as much as possible of the world, when a notice came round asking for volunteers to be posted abroad. There were a number of places to which Wrens could be sent, but she did not mind where, so she put in her request to be considered. Success in the interview procedure led to her being drafted to Malta, to HMS 'Falcon', the Royal Naval Air Station at Hal Far. When her posting there ended, after the Suez crisis, it was home once more to a posting to HMS 'Pembroke' at Chatham.

Following her marriage in 1959, Shirley left the Wrens, and took various jobs in a solicitors, as an operator at a cable radio distribution company, and as a dental assistant. Feeling that her training should not be wasted, she applied to join the Womens Royal Naval Reserve, and was eventually accepted to work as a communications instructor in HMS 'Wessex', the drill ship of the Solent Division RNR at Southampton.

In the early 1960s, Shirley's husband was given a married accompanied draft to Singapore, during the time of the conflict between Indonesia and Malaysia. Shirley's involvement with the WRNR in the UK obviously had to be put on hold, and she became instead a communications instructor with SWANS, the Singapore Womens Auxiliary Naval Service. After a couple of years enjoying the delights of the Far East, she was off home again, and trying to pick up life where she had left it.

After jobs in an X-ray department and back in a dentists surgery, Shirley eventually went into the Civil Service, working at HMS 'Sultan', the engineering training school in Gosport, later moving on to a job with the Hampshire Constabulary. Her involvement in naval communications training continued, though she had now joined the RNXS, the Royal Naval Auxiliary Service, as an afloat member, giving her the opportunity to engage in seagoing exercises from time to time. Some years were also spent working at weekends as an Auxiliary Coast Guard.

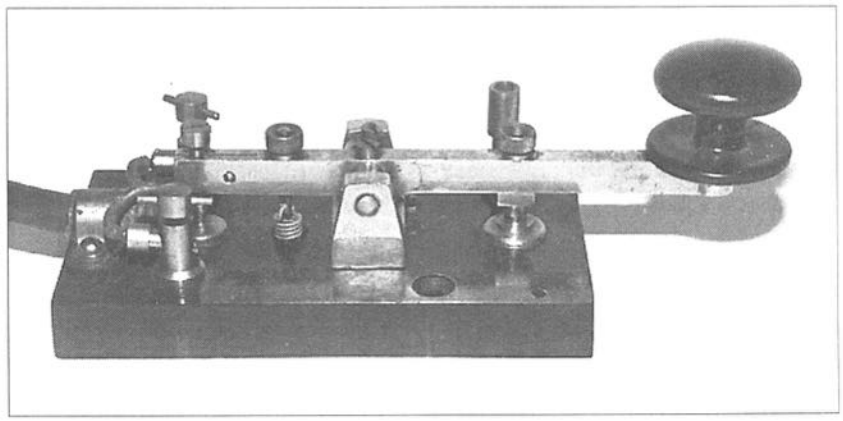
Since more recently becoming a licensed radio amateur, Shirley has joined the RAYNET organisation. She in now a communications trainer for the British Red Cross, and also teaches Marine VHF communications to yachtsmen, fishermen, etc. Her skills and experience in radio, acquired initially in the WRNS, have been put to good use over the years in many different ways.

This is one of those rare books which, when you reach the final pages, leaves you wishing that there was more. It is a tale told with humour and fascinating detail about the places and people involved, supported by a number of photographs. I would recommend the book to anyone who has served afloat, or who has visited those parts of the world described.

"Q41" and Beyond is published in softback, containing 86 pages measuring 5¾ x 8⅛in. It is available from the MM Bookshelf, price including post and packing is £5.70 to UK addresses, or £6.10 elsewhere (outside Europe by surface mail – airmail price on request).

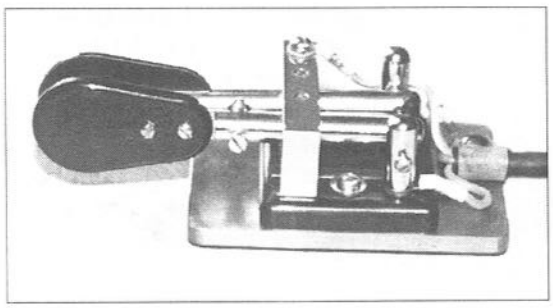
MM

Info Please!



Unknown key. Information requested

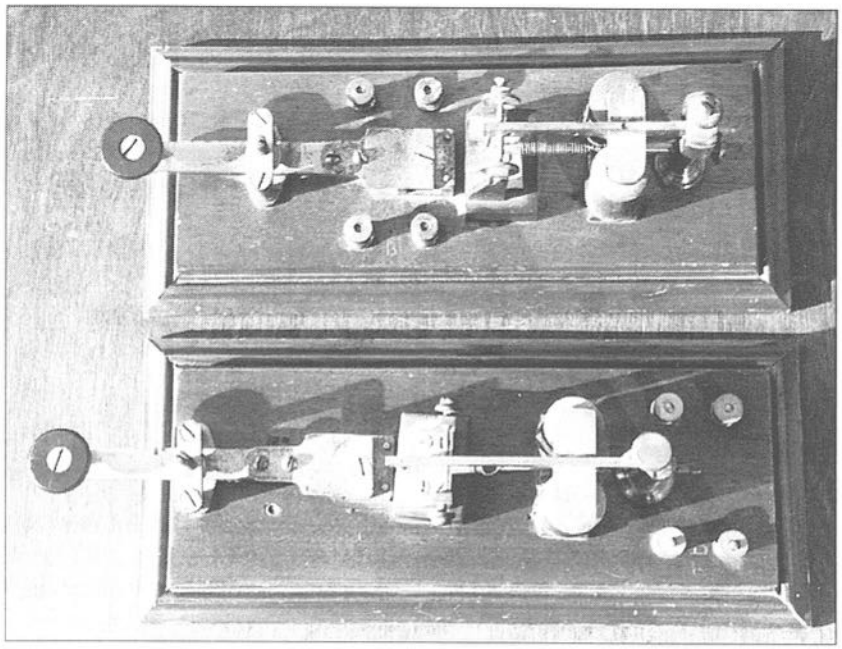
Collection/Photo: John Francis, G3LWI

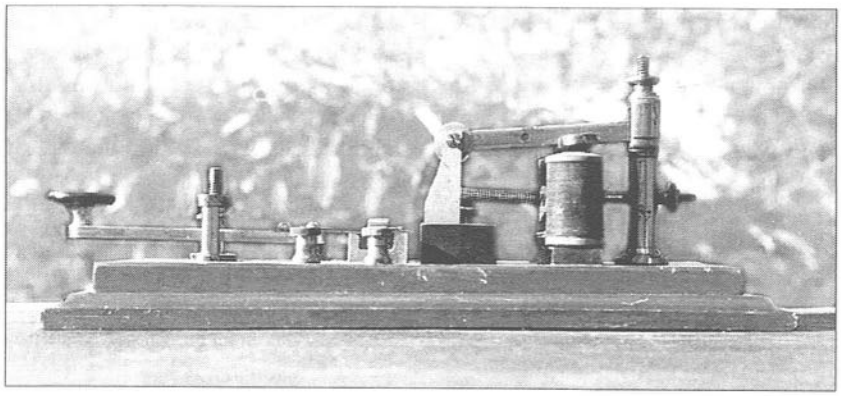


Twin paddle key from India. Levers 8mm diameter, base 80 x 60mm. No further details available. Info requested

Photo/Collection: Ken Homewood G4UBP

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*





Unusual Key on Base sets. Identification welcomed. There are two models, of similar design but with differences in detail. The keys are identical but are located at different positions on the base due to one sounder having a longer striking bar than the other. Each sounder has a different striking arrangement, and the armatures have slightly different shapes. Perhaps the style of key knob will assist in dating these instruments or confirming country of origin?

Photos/Collection: Martyn Jones G4XZJ

What Makes a Good Key?

by Gary Bold ZI1AN

THIS WAS THE TITLE of a letter by Gerald, G3MCK in MM25 which REALLY interested me. He said (edited), "For many years I have sought the ideal straight key. In my quest I have acquired quite a few, and an enigma.

"When using a new key, for a few weeks all is well, and I love it. I wonder why I spent good money buying all the other keys. Then, suddenly, I hate it. What possessed me to spend a lot of money on such a load of rubbish? I search in the cupboard and one of my other keys is placed on the table. The poor performer goes back in the cupboard.

"For a few weeks all is well. I love this key! Then ... yes, the cycle repeats itself!

"A number of questions arise. Am I alone in having such a relationship with my Morse keys? Why do I feel this way? What is it that makes a good key?

Desirable Characteristics

"Apart from correct adjustment and mounting, there are obvious desirable mechanical characteristics such as freedom of movement. However, there also appears to be something else – some characteristic which is impossible to define, but which one instinctively recognises when it is present.

"I have tried to analyse the mechanics of a key. While gap and tension are easy to understand, the inertia and flexibility of the arm, and the vibrations induced in the base by the closing contacts are beyond my analytical skills. Does a key have a 'natural resonant frequency' which suits it for use at one 'best' speed?

"What has amazed me over the years about the photographs of Morse keys appearing in *MM* is their wide variety of design. Perhaps this means that no-one has yet made the 'ideal' key, and my quest is like seeking the end of the rainbow. However, if it does exist, I would dearly like to try it..."

How does it 'Feel'?

I know what Gerald means. Morse keys are as individual as violins. The key (if it exists) is the first thing I inspect on entering a strange shack. I can't help it. If there's a Morse key on the operating table an inverse square attractive force draws me to it. I just have to try it. What gap and tension does its owner use? How does this key 'feel'? Could I use it? I've observed that other CW lovers share the same syndrome.

I share Gerald's interest in their dynamic behaviour. If you set up two different makes of key with identical knob, tension, and gap, they will nevertheless 'feel' different. I've read learned analyses of the vibration and behaviour of other musical instruments (yes, I consider the Morse key to be a musical instrument) in scientific journals, but never an analysis of the dynamics of Morse keys. If you have come across one anywhere, let me know.

The traditional 'European pattern' Morse key is based on a metal bar, pivoted in the middle. Roughly half of the bar's length and mass are behind the pivot. The 'American pattern' key is lighter, typically with a longer front section, sometimes drooping towards the knob. But all successful designs appear to have arms 4 to 6 inches long.

Compact Keys Feel Wrong

Now it seems that you could make a much more compact key by removing the section of bar behind the hinge, and shortening the section in front of it to an inch or less.

But all such keys 'feel wrong' to me. Many have been constructed for clandestine or portable use, but none of them are used regularly by operators I know. It seems to me that the traditional shape, having roughly half of the bar's mass behind the pivot evolved because it was superior.

This can only be because of some dynamic (i.e. motion related) property of the configuration, since compact keys can readily be made with the same nominal bar mass and moment of inertia as 'traditional' ones – there is no need, theoretically, to have any of the mass behind the pivot. Yet the 'good' keys I've used all do. What are your experiences?

Resonance Important?

Gerald speculates about 'resonances'. Indeed, all mechanical systems have these, the ones most exploited in radio systems being those of the quartz crystals in our oscillators. Each time the contacts of a Morse key are tapped closed, the bar will be excited into transient oscillation.

Back-of-the-envelope calculations tell me that the high speed of sound in metal, and the bar's size, mean that the frequencies at which the bar briefly rings will be well above the audio range, orders of magnitude higher than the typical 5–10Hz frequency of the bar's vertical motion. This bar resonance is therefore unlikely to influence the feel of the key. But maybe there are vibrations coupled to the key base, or even the operating table.

I have a hunch that a key feels 'responsive' to me when used on a wooden table or bench, but 'dead' when sitting on stone or concrete blocks. That's not silly. A wooden table could have a resonant frequency in the right range, and a key with a large, massive bar might couple energy into it more efficiently than a short, light key.

Players of cellos and double basses are well aware of the difference between playing on wooden and concrete stages. Have you any thoughts on 'good' keys? Let us know.

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

Who was Prof. Daubeny?

by Tony Smith

EVER SINCE I first read about Samuel Morse's demonstration of his telegraph at the University of New York on 2 September 1837 I have been curious about the identity of one of those present. In his account of the event (see MM19, p.10) Alfred Vail reports "I ... found Prof. Morse, Prof. Torry and Prof. Daubney ... in the mineralogical cabinet and Lecture room of Prof. Gale ..."

A little more information is provided by Prof. Gale in his account, which says, "... Professor Daubeny, of the English Oxford University, being on a visit to this country, was invited with a few friends to see the operation of the telegraph ..."

This intrigued me. Here at this now famous demonstration of a great American invention was an Englishman, but who was he? What was he doing there? Was there some hitherto unknown link between Oxford University and the Morse telegraph? And why are there no further references to Prof. Daubeny in the history of the telegraph?

After a visit to the library of Magdalen College, Oxford, by courtesy of Mr F.W.J. Scovill, the college's Deputy Librarian, I'm sorry to say, I have discovered there was no such link.

Prof. Charles Giles Bridle Daubeny MD, FRS, then Professor of Chemistry and Botany in the University of Oxford, was on a private visit to North America and had arrived in New York, after a 37 day passage from England, on Tuesday, August 28.

There seems no doubt, from both Vail's and Gale's accounts that on the following Saturday, September 2, he attended Morse's demonstration at the University, and this was possibly as a result of his acquaintance with Morse's colleague Prof. Torrey, who filled the chairs of Botany and Chemistry at the University of New York.

A few years later, in 1843, Prof. Daubeny privately published his journal of his 1837/38 tour of the United States and Canada. Only 100 copies were printed and one of those copies is in the library at Magdalen College.

Perhaps, I thought, I would now discover a hitherto unreported account of Morse's demonstration, and with great anticipation I opened the pages of this slim volume, which probably no-one had looked at since 1843. More disappointment however! There is indeed an entry

for September 2. The weather was extremely hot, and Prof. Daubeny describes his impressions of New York, including Broadway, The Battery, and various public buildings, considering that of the latter the only ones ranking above mediocrity were the City Hall and the new University in Washington Square. Perhaps this latter reference arose from his visit to the university on that day?

Two days later, on Monday, September 4, "After having participated in the hospitality of several gentlemen to whom I had brought introductions", he started his travels, proceeding by the Albany steamer to West Point "in company with Dr Torrie ... who was good enough to conduct me thus far on my voyage up the Hudson."

What a lost opportunity! One can only assume that as a chemist and a botanist, he was not sufficiently impressed by the demonstration of a scientific invention by a mere artist, that he did not appreciate its significance, and just did not think it worthy of mention in his journal.

By way of contrast, on September 5, he was happily measuring the height of the ground above West Point and naming in his journal a number of interesting plants he had collected. Of course, in those early days, Daubeny would not have been alone in failing to recognise the potential importance of the telegraph. Another seven years were to elapse before the triumphant demonstration between Washington and Baltimore (MM19, p.24) and one wonders if he might have included some account of the 1837 demonstration after all if his book had been published just one year later!

One wonders also if he ever realised in later years that, without any effort on his part, his name had become forever linked with an event which is now part of the history not only of America but of the development of world communications. ***MM***

(Note: The variations in the spelling of the names of some of the participants in this tale are reproduced exactly as they were recorded in the original accounts and journals. They must apparently have stemmed from informal on-the-spot introductions of one party to another, rather than any written correspondence or exchange of business cards between them. – Ed.)

The Code

by Roy Clarke VE3VJF

WHEN THE CANADIAN No-Code licence was introduced in 1990, there came a class of amateurs who were limited to VHF. It's a start to the wonderful world of Amateur Radio, but just over the horizon – it's very tempting – lie the 160–80m bands (see panel). Heaven – if only you have 'The Code'.

As the son of an RAF W/Op, one would think it's in the genes. Think again! Long before WWII I vividly remember, as a child, seeing my father copying code on a clipboard in our kitchen. My learning span must have been zero because I never did learn code. With seven kids in our family, my priority was eating, not learning code.

No-code... Great!

My first serious confrontation with the code came in 1976–77 when I signed up at St. Lawrence College for a ham course. What with drawing diagrams and trying to remember them, things were getting desperate, let alone trying to learn code. So, I went back to fighting fires and shift work, vowing to wait until retirement before tackling the code again.

Finally, on to retirement and shortwave listening – and wondering what was coming over in the code. In 1990, I tired of this and got bitten by the ham bug again. Lo and behold, there it was in the paper, a ham course at the fire station! I thought that being used to fire stations it would help me, so I signed up. "No code", they said. "Great!"

After being introduced to Ohm's law, I was worried as to my capabilities so I bought a solar calculator at Radio Shack for about $7.00. "That should help the economy". No bank loan needed. Things were getting better and exam night loomed closer. Wow! I passed. Old dogs **can** learn new tricks!

Code at the Fire Station

On to 1991, again those thoughts of 160–80m just over the horizon. "Why not?" Yes, a code course was starting in January, again at the fire station. I had already been on my wife's computer trying to learn the alphabet. The day of the course arrives. Big crowd. Get more tables out!

Our instructors are John VE3NFK, and Jack VE3YC. The latter strutting around with his cue cards (flash cards), saying, "You will all get it". Positive thinking I'd say. It emphasises that you must learn the cards the 'Navy' way.

The next few weeks we were sloshing around the seas and trying hard. Everyone learns things at different

The Canadian Test

The Canadian Morse code examination is in plain language and may include the twenty-six letters, the ten numbers, punctuation marks (comma, period, question mark, dash and fraction bar), Q-signals and emergency signals.

In both sending and receiving examinations, each character omitted or incorrectly sent or received is counted as one error. A mark of 100 percent is awarded for five errors or less, 99 percent for six errors, 98 percent for seven, 97 percent for eight, etc. The examiner will allow candidates two minutes to review and correct their copy before it is graded. The pass mark is 100 percent.

A candidate taking the 12 wpm examination who does not already have the 5 wpm qualification will be awarded the 5 wpm qualification without further examination if a mark of over 60 percent (fewer than 45 errors) on both sending and receiving is achieved in the 12 wpm examination.

Both examinations (5 wpm and 12 wpm) last for three minutes. Holders of the Basic amateur radio licence having the 5 wpm qualification are permitted to operate in the 160 and 80 metre bands. Those with the 12 wpm qualification may operate in all amateur bands below 30MHz.

levels so we gradually moved to groups. John's recordings were really punching out strong code for our befuddled minds. Now was that a 'G' or a 'W'?

A Miracle!

Slowly, and I use the word rather loosely, we started to get it. During smoke breaks outside the room, the conversation was "Did you get in any practice this week?" Shaking heads at times. At about the 5 wpm level I am thinking, "in for a penny, let's go for a dollar", and pressed onward.

Spring is arriving and the so-called 'wall' is there at 10 wpm. Our class is getting smaller as people make it. Numbers, numbers are driving me crazy as I try to get them.

More people are passing, you can tell by the smiles. Time is getting short and my XYL remarks "You'd better get it this week." By golly, the week did arrive and I was, as they say, relieved of a great weight thanks to some dedicated instructors.

Arriving home, smiling like a Cheshire cat, I had to convince my wife that Yes!, a miracle had occurred at 12 wpm. Dah di dah dit, Dah dah di dah!

(Roy Clarke, from Kingston, Ontario, is now an enthusiastic Morse operator actively helping others to master the code. He says "We run a slow speed CW net every Wednesday evening to encourage non-believers to participate, and things are looking up. With all the noise levels this year it certainly is looking better for the code men while frustration builds up for voice operators experiencing difficulty in getting through.") ***MM***

End of the *Bermuda Queen*

by John Hann

WORKING AT GANDER, Newfoundland Airport immediately after WWII as commercial flights across the Atlantic were starting up, our ground-to-air circuits were all CW, consisting of two circuits on split earphones with an extra circuit monitored on speaker.

One circuit was nearly always idle due to day or night conditions and since most flights at the time took place at night, we were sometimes not very busy during late morning and early afternoon hours.

As we were not allowed reading material on the circuit, I used to spend a lot of time scanning the spectrum logging new stations and noting their frequency.

Come Quickly!

One of the flights to cross the Atlantic to Foynes (Ireland) at that time was the Pan American flying boat, the *Bermuda Queen* and I had, two days earlier, gone down to Gander Lake to watch her take off, a very majestic sight.

During this period also there was, anchored at various spots across the Atlantic, a string of US coastguard ships. These served as lightships and weather stations to the burgeoning shipping fleets and commercial airline flights rapidly building up now that the war was over.

One morning after having worked a very busy midnight to 8:00 a.m. shift, having just finished breakfast in the mess hall and gone to bed, there was a knock on my door. It was the chief technician and the chief engineer for the station, both of whom knew of my so-called 'hobby' of monitoring. They begged me to come back to the station and see if I could locate the frequency of the weather ship off the southern tip of Iceland.

The 'Queen' is down

I did not have to think twice when they informed me that the *Bermuda Queen* was down in the Atlantic with somewhere between 70 and 80 passengers on board. The chief engineer felt that maybe, due to our location and having available a 50kW transmitter suitable for CW or R/T, we could go on stand-by and be ready to help if needed.

The US Coastguard, though, would not release information listing the frequencies of any of their stations. In spite of this refusal of possible help, the station manager and chief engineer felt that as many lives were at stake we should be ready to help if the need arose.

Despite having to contend with military callsigns, still in use at the time, and a large amount of coded traffic of various types, the traffic classification and traffic load helping somewhat, the weather ship frequency was located shortly before noon and the transmitter set up. In the event our help was not needed.

Out of Fuel

We were not given an official report of the incident, but from bits of information given us by station staff and one or two newspaper reports of the time, it appeared that when well out into the Atlantic on its westbound flight, the *Bermuda Queen* ran into an unreported heavy easterly headwind.

She was making somewhere in the vicinity of 100 mph air-speed and approximately 93 mph ground-speed. They apparently hoped to be able to reach Iceland for refuelling but ran out of fuel before making it.

In spite of fairly heavy seas, oil was poured on the water by the lightship. The 'Queen' landed about 4 miles downwind, taxied to the ship and tied up to it, close enough to transfer passengers by some sort of gangplank or breeches-buoy to the ship.

Still a QSP!

As I remember it, one man in his 70s became scared, suffered a heart attack and fell between the plane and the ship, thus becoming the only casualty of a very gallant rescue.

I also seem to remember the 'Queen' being sunk by gunfire from the lightship and the crew being brought into Boston or New York.

I am sure that any of this can be verified or corrected by research. Although we were not required to QSP it felt good to have been able to do what we did, and the acronym could still be applied to denote a Quite Superior Performance. ***MM***

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.

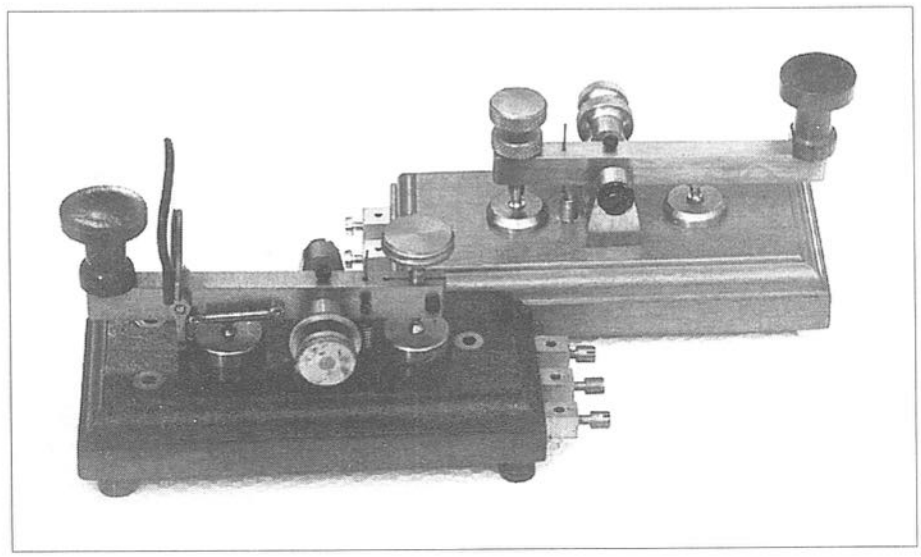
The Second Royal Eltham Troop, whose ages range from eight to seventeen years, have equipped themselves with a complete portable wireless telegraph outfit for both sending and receiving. Under the direction of their scoutmaster they are mastering the intricacies of the Continental and Morse codes, and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

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



Two early Italian telegraph keys, one with extra circuit closing lever

Collection/Photo: Wyn Davies

Unknown Keys in MM48

G3ETH's unknown key on page 42 of MM48 is a Gamages key. Fons Vanden Berghen's unknown key on page 43 is an Italian telegraph key. A similar key, but with an extra circuit closing lever was described in MM15, p.26. I enclose a photo *(see above)* of the two types of Italian key.

Wyn Davies
Brymbo, Wrecsam, Wales

REGARDING the unknown key on page 42 of MM48, I have a very similar key, obtained in Switzerland. I think this type of key was common in European countries, c.1930, for training and learning.

The unknown straight key on page 43 is an Italian key used by the Italian Posts and Telegraphs Administration, c.1920.

Christian Chefnay, F9WT
Lucinges, France

THE KEY at the bottom of page 43 of MM48 is an Italian postal/training key made by Forcieri, in Florence. Its age can be anything from 1890 to 1960. Sometimes the trademark and the year of manufacture can be found under the wooden base.

This one is probably the training model because there isn't the paddle lever located across the key arm, near the knob, which is usually found on the standard postal key.

Enrico Franciosi, IK2HSW
Milano, Italy

THE UNKNOWN KEY on page 43 of MM48 is an Italian standard key, 'Tasto (key) Forceri', used by the State Telegraphs, Railroads and the Army from 1873 until the end of line telegraphy in Italy.

Carlo Pria
Bollate-Ospiate, Italy

Swiss Army Key

The Swiss Army key on page 25 of MM48 appears to be the same as the 'unknown' key on page 35 of MM42, viewed from the opposite side.

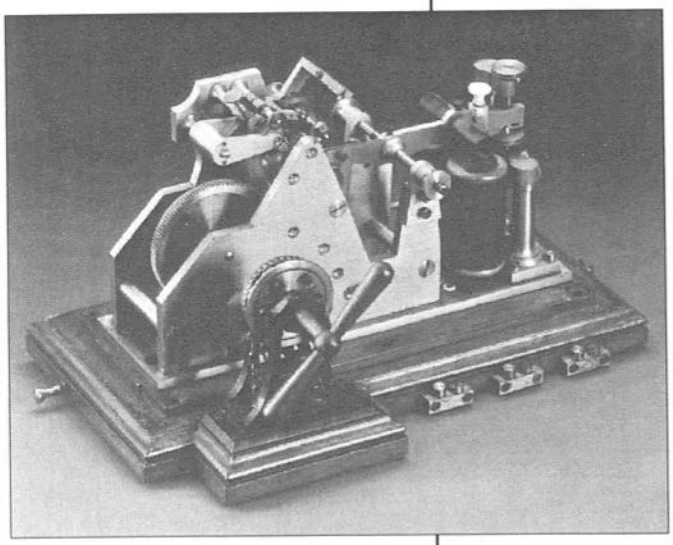
John Elwood, WW7P
Phoenix, Arizona, USA

Morse Inker

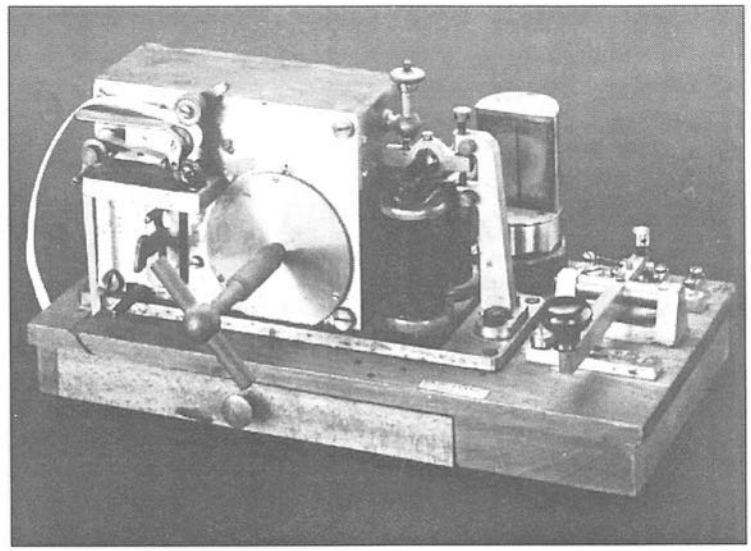
The unknown Morse inker shown on page 16 of MM47 was probably made by Siemens & Halske. I enclose photos *(see next page)* of two inkers made by that company, which, between them, incorporate similar features to the unidentified model.

As a matter of interest, I also enclose a photo *(below)* of an earlier Siemens & Halske model dated c.1862, driven by weights.

Fons Vanden Berghen
Halle, Belgium

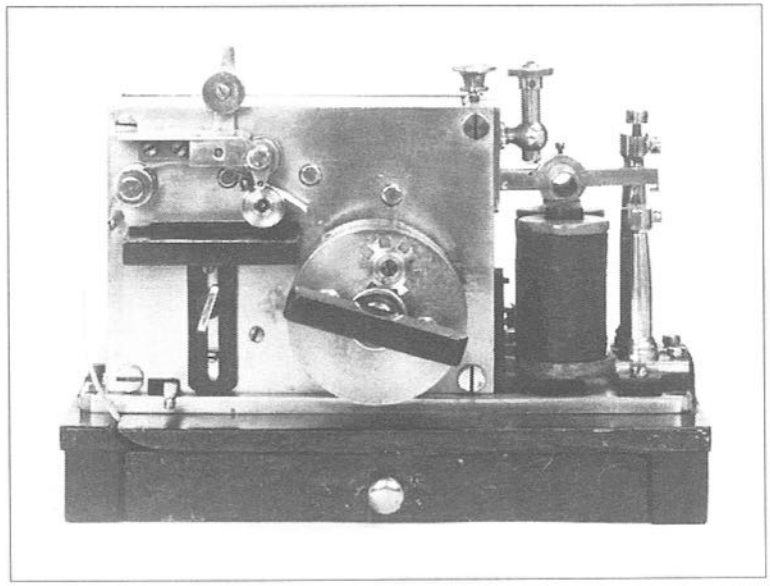


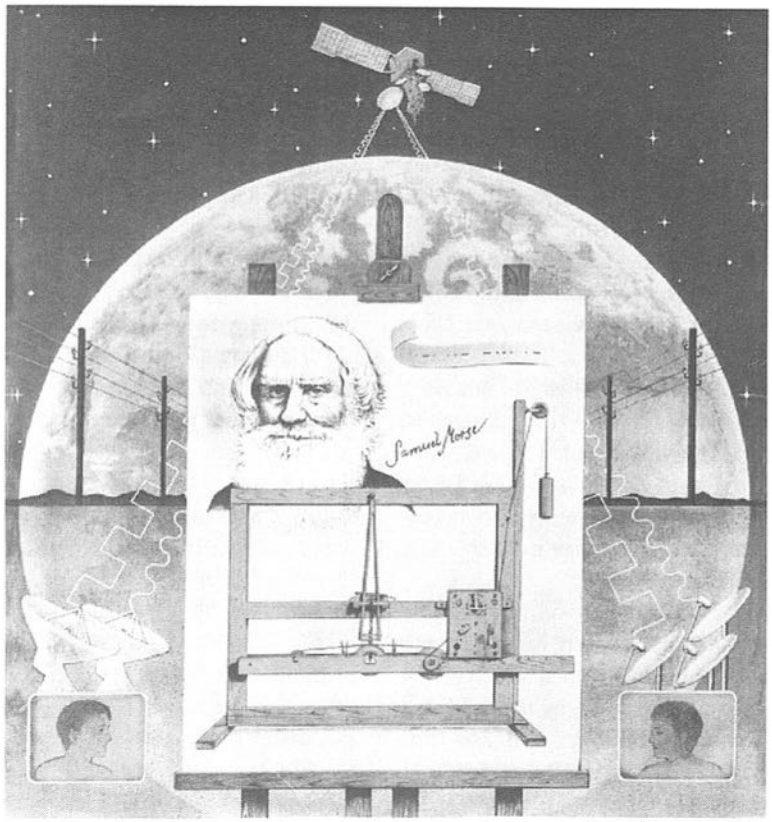
A Morse Inker by Siemens & Halske, c.1862
Photo/Collection: Fons Vanden Berghen



Siemens & Halske Morse Inkers

Photos/Collection: Fons Vanden Berghen





Commemoration

This photo shows a picture (dated 1989) which the German firm of Fuba circulated to their agencies.

I became a marine radio operator in 1939 when I passed the old Special Certificate. I know that I shouldn't have passed with my Boy Scout Morse, but there was a war on! I'm still helping part-time a cable-TV firm who sell Fuba products.

W.J. Black
Tonbridge, Kent

We Know the Feeling!

The first civilian telegrapher in Phoenix, Arizona, in the late 1880s was the uncle of Barry M. Goldwater, K7UGA , the Republican presidential nominee in 1964 and former US senator.

Senator Goldwater was quoted recently in an Arizona magazine: "My old uncle learned the Morse code so he could be the operator. And the first message he got was, 'Get the hell off the line'."

Richard L. Thomas, KB7BAD
Phoenix, Arizona, USA

Morse on TV and Radio in Zambia

Announcements by the Zambian Electoral Commission on TV and radio broadcasts from Zambian Broadcasting Services are preceded and followed by the letters ZUV sent twice in Morse at a speed of about 20 wpm.

I do not think there is any significance in the letters chosen, but the Morse gives a sense of importance and urgency to the message. If you play some Morse to the average Zambian and ask him what it is, he will generally answer that it is a 'radio message'.

Until a decade or so ago, telegrams were sent from rural post offices in Zambia by hand sent Morse on short wave radio.

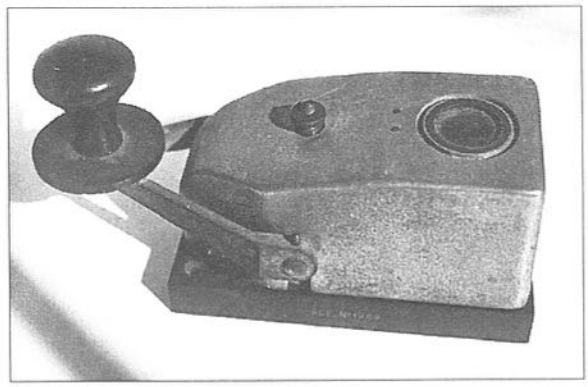
Brian Otter 9J2BO
Lusaka, Republic of Zambia

S.G. Brown, Nr 1969 Key

I can't help Tony Wilkes with his cleaning problem (MM48, p.48), but it is interesting to note that an unidentified key similar to his S.G. Brown 1969 key previously appeared in MM25, p.24, and was subsequently identified (in MM26, p.41) by Tony Timme as a 'P & O' key. It appears that this key may have been made by more than one maker.

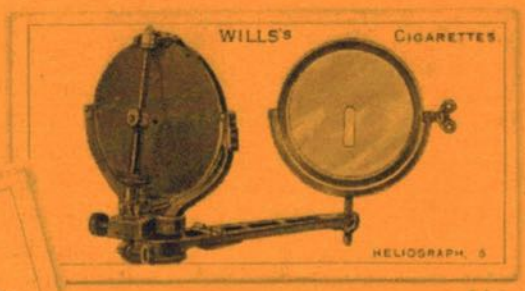
John Elwood WW7P
Phoenix, Arizona, USA

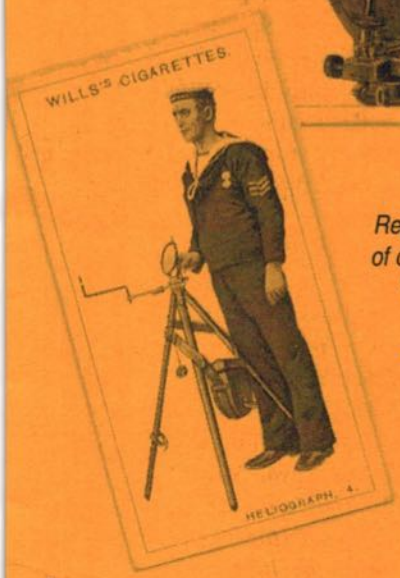
(Also in MM26, Gus Taylor recalled it being known as a 'Siemens Key' at the Liverpool Wireless College, but also thought they had been sold pre-WWII as ex-Air Ministry keys, probably having been made for airship use pre-1st April 1918 for the Royal Naval Air Service, and after that date its successor the Royal Air Force (formed from an amalgamation of the RNAS and the Royal Flying Corps). Clive Redfern recently sent us a photo of his key of this type marked 'Ref. No 1969 RAF', which certainly appears to confirm its use by the RAF. If other readers have keys of this type and can add to the above information, please contact MM. *– Ed.)*



S.G. Brown key, Ref No 1969
Photo/Collection: Tony Wilkes ZL3SLH

Ephemera





Reproductions of a series of cigarette cards from the 'Signalling' Series of W.D. & H.O. Wills of Bristol & London


47
SIGNALLING SERIES
WILLS'S CIGARETTES
HELIOGRAPH.
4.—The instrument is packed in a leather case, which can be slung across the shoulders by means of a shoulder strap. A tripod is also provided for mounting the helio. on. The advantage of the helio. is its portability. The signaller is here shown using the instrument with the signalling mirror and sighting rod in position. The leather case should be hung on the tripod in readiness for packing.
W.D.& H.O.WILLS. BRISTOL & LONDON.
ISSUED BY THE IMPERIAL TOBACCO Co (OF GREAT BRITAIN & IRELAND) LTD
ALBUMS FOR THESE PICTURE CARDS CAN BE OBTAINED AT 1/- EACH FROM ALL TOBACCONISTS


48
SIGNALLING SERIES
WILLS'S CIGARETTES
HELIOGRAPH.
5.—We here show the helio. with the jointed arm which carries the sighting vane and the duplex mirror. The duplex mirror is only used when the position of the sun renders it impossible to throw the light on to the distant station with one mirror. On the back of the signalling mirror may be seen the key for signalling the short and long flashes.
W.D.& H.O.WILLS. BRISTOL & LONDON.
ISSUED BY THE IMPERIAL TOBACCO Co (OF GREAT BRITAIN & IRELAND) LTD
ALBUMS FOR THESE PICTURE CARDS CAN BE OBTAINED AT 1/- EACH FROM ALL TOBACCONISTS


49
SIGNALLING SERIES
WILLS'S CIGARETTES
HELIOGRAPH.
6.—The operator is here seen signalling with the duplex mirror, his hand being placed on the key, which, when pressed, throws the light from the signalling mirror on to the distant station, and when released directs it on to the ground in front of the helio. As the sun alters its position so must the mechanism be adjusted to retain the light in the required direction.
W.D.& H.O.WILLS. BRISTOL & LONDON.
ISSUED BY THE IMPERIAL TOBACCO Co (OF GREAT BRITAIN & IRELAND) LTD
ALBUMS FOR THESE PICTURE CARDS CAN BE OBTAINED AT 1/- EACH FROM ALL TOBACCONISTS

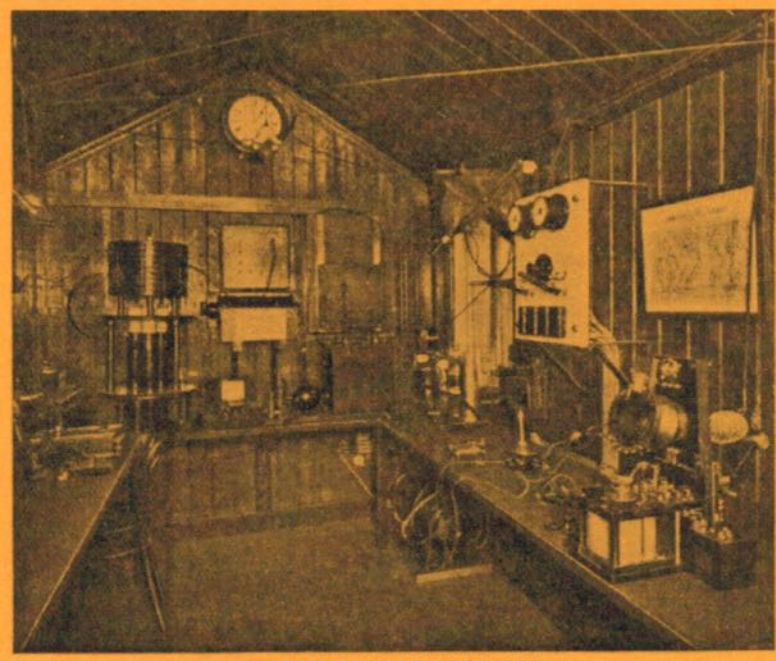
The London Telegraph Training College, Limited

For Radio (Wireless) and Cable Telegraphy.

CLASS ROOMS: "Morse House," No. 20 Penywern Road, Earl's Court, South Kensington, London, S.W.

OFFICES: 262 Earl's Court Road, South Kensington, London, S.W.
Telephone: 2696 Western.

THE College (est. 20 years) has TWO RADIO-TELEGRAPH STATIONS situated about 6 miles apart, licensed by the Postmaster-General, and fitted with complete installations of the latest types of instruments, including two sets of Marconi's Multiple Tuners and Magnetic Detectors SPECIALLY SUPPLIED BY MARCONI'S WIRELESS TELEGRAPH CO., LTD., FOR THE TRAINING OF STUDENTS DESIROUS OF ENTERING ITS SERVICE. In addition to the above, the College possesses a complete standard set of the "Singing Spark" or Telefunken System, supplied by MESSRS. SIEMENS BROS., FOR THE TRAINING OF OPERATORS AND ENGINEERS FOR THEIR WIRELESS TELEGRAPH DEPARTMENT, and also the most important parts of other less known Radio systems. LUCRATIVE APPOINTMENTS in the above Companies and leading Cable Companies are constantly being obtained for its students by the College, which in addition to being a training institution is thus AN EMPLOYMENT BUREAU. Qualified operators holding the Government Certificate can be supplied at short notice to Shipping and other Companies working their own Radio Installations.



RADIO STATION AT EARL'S COURT.

DAY AND EVENING CLASSES. An Illustrated Prospectus, containing full particulars of the work of the College, will be sent on application to the Secretary, Department Y.B.

From The Year Book of Wireless Telegraphy and Telephony, 1913