

Number 79 – February 2002

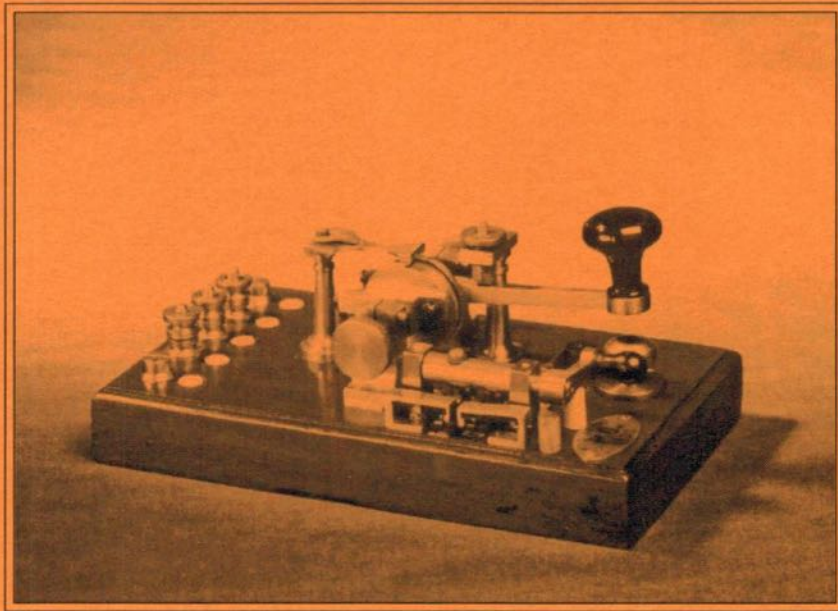
Flying  
the flag  
for  
Morse

# Morsum Magnificat

ISSN 0953-6426

£2.75

*The Morse Magazine*



*British Post Office Key*



The International Journal of Morse Telegraphy

Flying  
the flag  
for  
Morse

# Morsum Magnificat

**EDITORIAL AND  
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*MORSUM MAGNIFICAT was first published as a quarterly magazine in Holland, in 1983, by the late Rinus Hellemons PA0BFN. It has been produced four, then six times a year in Britain since 1986, and up to January 1999 was published and edited by Tony Smith, G4FAI and Geoff Arnold, G3GSR. 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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MM home page – www.MorseMag.com

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Printed by Hertfordshire Display plc, Ware, Herts

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**ANNUAL SUBSCRIPTIONS (six issues):**

UK £15.00

Europe £17.00

Rest of the World £20.00 (US \$30 approx)

*All overseas copies are despatched by Airmail*

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Also, we shall jog your memory with a renewal reminder included with that final issue.

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Editorial offices (see top of page). Price including postage £2.75 each to UK; £2.95 to Europe; £3.25 (US \$5) Rest of the World by airmail. Deduct 20% if ordering 3 or more.

**FRONT COVER**

Unusual British Post Office key.

Photo/Collection: Fons Vanden Berghen - Halle, Belgium

## Comment

April 12<sup>th</sup> this year will be the 90<sup>th</sup> anniversary of the tragic sinking of the Titanic. Loss of life would have been much worse if it had not been for wireless and the dedication of Jack Phillips, the Marconi 'radio officer' is well remembered. Special events have been organised by the Titanic Wireless Commemorative Group, in Jack Phillips' home town, Godalming, Surrey (see News).

Also included in this issue is an in-depth article by Dr Ken Jones on the communication system used on the Titanic and other ships at the time.

*Zyg Nilski, G3OKD*

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# News

## Voices from the Past Titanic Survivors on Tape Special Event Station

The voices of people who were saved when the Titanic struck an iceberg on her maiden voyage in April 1912 with the loss of over 1500 lives will be heard for the first time in Britain when Ralph Barrett, Broadcasting Consultant, talks in Godalming, Surrey, on Friday 12 April.

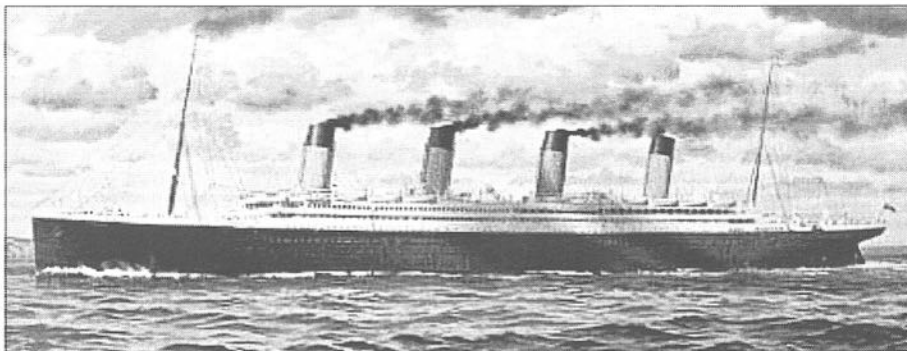
His talk is part of the programme commemorating the 90th anniversary of the loss of the liner and honouring 25-year-old Godalming born and bred Jack Phillips, the Chief Wireless Telegraphist who stayed at his post sending out distress signals to alert other ships before losing his life when the ship went down two hours and forty minutes after striking the

iceberg. His heroism saved over 700 lives.

Mr Barrett will make a presentation on the early use of radio to summon aid and it was the Titanic Historical Society of America which provided him with the tape of the interviews, made for the Society's archive at a convention in the 1950's. "They give an astonishing insight into the events which followed after the liner struck the iceberg", says Mr Barrett.

His presentation will launch an international radio link-up, complementing an exhibition on Jack Phillips and the Titanic, which will run at Godalming Museum from Tuesday 12 March to Saturday 25 May.

The link-up is being organised on Saturday 13 and Sunday 14 April 2002 by the Titanic Wireless Commemorative Group. 20 local radio amateurs who, operating from a replica of the Titanic's wireless room, will contact radio amateurs





*Jack Phillips: Titanic's Chief Wireless Telegraphist*

worldwide, using a special call sign for the event - GB90MGY (Titanic's call sign was MGY). They will be active on CW only on all amateur short wave bands, 80-10 metres (including WARC bands) from 10.30 a.m. Saturday 13 April until 06.47 a.m. - the precise time in the UK that the Titanic sank - on Monday 15 April. Contacts and reports will be confirmed 100% via the QSL bureau.

Experts will be on hand to explain to visitors what is happening and they will be able to use a Morse key.

#### **Summary of Events**

Tuesday 12 March to Saturday 25 May: Exhibition on Jack Phillips and the Titanic at Godalming Museum, 109A High Street. Open Tuesday to Saturday 10 a.m. to 4 p.m. (until 25 March and 5 p.m. after that). Admission Free.  
Friday 12 April: Talk by Ralph Barrett, Broadcasting Consultant, on Titanic and

the Wireless SOS, at the Borough Hall, Godalming, 7.30 p.m. Tickets at £3 available from Godalming Museum. (Tel: 01483 426510).

Saturday 13 to Sunday 14 April: Radio Station GB90MGY special event station at the Wilfrid Noyce Centre, Godalming. Open 10.30 a.m. to 6.30 p.m. Admission Free. For further information, contact the Titanic Wireless Commemorative Group: Michael Shortland: Tel +44 (0) 1483574996; e-mail:

msa-consult@dial.pipex.com or visit [www.gdrs.net/titanic](http://www.gdrs.net/titanic) or the Godalming Museum: Derek Watson, Publicity Officer - Home

Tel +44 (0) 1483414673, or Museum: Tel +44 (0) 1483426510; [museum@godalming.ndo.co.uk](mailto:museum@godalming.ndo.co.uk).

## **Touch Sounder Project**

Martin Mueller has developed a circuit that brings old telegraph sounders to life. It consists of a capacitive touch switch and a custom integrated circuit that sends a Morse code message on the sounder whenever anyone touches any part of the sounder body. When embedded in a nice wooden base, with the sounder mounted on top, it makes a great showpiece or paperweight.

With this circuit installed, the sounder comes to life and starts sending



everything installed inside and it comes out looking really nice.

The internet address is <http://web1.greatbasin.net/~muellerpage/main.htm>

As Martin says, "If you love telegraph, I'm sure you'll love this project!" He can also be contacted by e-mail: [mmueller@gbis.com](mailto:mmueller@gbis.com)

a message anytime anyone touches any metal part of the sounder. It is quite a surprise! The message he selected is "What Hath God Wrought!" reportedly the first message sent by Samuel Morse on his telegraph.

This circuit is designed to bring virtually any telegraph sounder to life. Martin has a website with full plans available free online and he also will sell the chip and circuit board at a low cost. These instructions will guide you through the assembly, testing, adjustment, and use of the animator circuit. Only a soldering iron and some small hand tools are needed to complete the project.

An example of one Martin built is shown in the photo. He purchased the base from a local trophy dealer and had them make the brass nameplate at the same time. The base is hollowed out with

## GACW CW DX Contest Samuel Morse Party

GACW, Argentine CW Group have announced their first international event - The Samuel Morse Party, which will take place during the third weekend of April each year. The first takes place this year, which is the 25th anniversary of GACW. The event will take place on 19th/20th April 2002 and the objective is for amateurs around the world to contact other amateurs in as many CQ zones and radio countries as possible on all bands.

### Full Rules

**Dates:** Third week end of April each year i.e. 20th/21st. April 2002 (19th/20th April

2003 - 17th/18th April 2004, etc) for 24 hours from 12.00 UTC Saturday to 12.00 UTC Sunday.

**Objective:** For amateurs around the world to contact other amateurs in as many CQ zones and radio countries as possible.

**Bands:** All bands, 3.5 MHz through 28 MHz excluding WARC bands.

**Single Operator Categories:** Those stations at which one person performs all of the operating, logging, and spotting functions. The use of DX alerting assistance of any kind places the station Multi Operator category. Single band or all band; only one signal allowed at any time; the operator can change bands at any time.

*Single Operator High. Single Operator Low* - The output power shall not exceed 100 watts. *Single Operator QRPp* - The power output must not exceed 5 watts.

**Multi-Operator Categories:** All band operation only.

*Single Transmitter* - Only one transmitter and one band permitted during any 10 minute period defined as starting with the first logged QSO on a band. Exception: One-and only one-other band may be used during any 10 minute period if-and only if the station worked is a new multiplier. Logs found in violation of the ten-minute rule will be automatically reclassified as multi-multi. *Multi-Transmitter* - No limit to transmitters but only one signal and running station allowed per band.

**Number exchange:** RST report plus CQ zone.

**Multiplier:** Two types of multiplier will be used. A multiplier of one (1) for each different zone contacted on each band. A multiplier of one (1) for each different

country contacted on each band. Stations are permitted to contact their own country and zone for multiplier credit. The CQ WAZ definitions, DXCC and the GACW country list, WAE country list, and WAC boundaries are the standards to be used. Maritime mobile stations will count only for a zone multiplier.

**Points:** Contacts between stations on different continents are worth three (3) points. Contacts between stations on the same continent but different countries, one (1) point. Contacts between stations in the same country are permitted for zone or country multiplier credit but have zero (0) point value. The DX station will added (2) extra points for each QSO with stations in South America.

**Scoring:** All stations - The final score is the result of the total QSO points multiplied by the sum of your zone and country multiplier. Example: 100 QSO points x 100 multiplier (20 Zones + 80 Countries) = 10,000 (final score).

**Awards:** Diploma Urano D. Silva, LUIDAY to the first one on each category. Diploma Proyecto TITAN, to the first one in the multi-single and multi-multi categories

**Club competition:** The club can be a local or national group/club. (except IARU member Societies). There is no country or geographic area limit. Mention your Club/Group participation in your summary sheet.

**Log instructions:** All date/times must be in UTC. All sent and received exchanges are to be logged. Indicate zone and country multiplier only the FIRST TIME it is worked on each band. Logs must be checked for duplicated contacts, correct QSO points and multipliers. Submitted

logs must have duplicate contacts clearly shown. List all QSOs chronologically - Do not use a separate sheet for each band. Each entry must be accompanied by a summary sheet showing all scoring information, category of competition, contestant's name and address and a signed declaration that all contest rules and regulations for amateur radio in the country of operation have been observed.

All entrants are required to submit cross-check sheets (an alphabetical list of calls worked) for each band (Except those who send electronic logs). QRPp and low power stations must indicate same on their summary sheets and state the actual maximum power output used, with a signed declaration.

**Disqualification:** Violation of amateur radio regulations in the country of the contestant, or the rules of the contest; unsportsmanlike conduct; taking credit for excessive duplicate contacts; unverifiable QSOs; or unverifiable multipliers will be deemed sufficient cause for disqualification. The use of non-amateur means such as telephones, emails, telegrams, etc., to illicit contacts or multipliers during a contest is unsportsman-like and the entry is subject to disqualification.

Actions and decisions of the GACW Contest Committee are official and final.

**Deadline:** All entries must be postmarked NO LATER than May 30<sup>th</sup> and sent to: GACW DX CONTEST, P.O. Box 9, B1875ZAA Wilde, Buenos Aires, ARGENTINA.

**Internet:** Entries sent by e-mail should attach the Log and Summary sheet as a .TXT (Text) file. Please name the appropriate file as: *your call.extension*, e.g. LUIDAY.txt

E-mail to Alberto U. SILVA, LUIDZ - [uranito@infovia.com.ar](mailto:uranito@infovia.com.ar)

Web Institutional Page <http://www.geocities.com/gacwar>

(Information: Raul Marcelo Diaz, LU6EF, GACW Coordinator.)

## Sparks, What's Going On?

Three ex-merchant Radio Officers are planning to produce a book of the recollections of marine radio officers and would like any ex-radio officer with a story, to contact them. Their appeal reads:

"Since our beautiful profession has ended February 1999, we feel, that we should not be deprived of the wonderful stories of our many trips we have made on

### **THE MORSE ENTHUSIASTS GROUP SCOTLAND**



MEGS was formed in 1991 to encourage the use of Morse, especially by newcomers. Regular skeds are held using our callsign 'GMORSE' each Monday and Thursday from 7 until 9 p.m. (local time) around 3.530MHz. Among other services, we offer Morse practice tapes free of charge, other than postage. This offer is now also available to *MM* readers. Membership is open worldwide, the 'Scotland' in our title simply shows place of origin. Lifetime membership £1.00.

**Details from Secretary: G.M. Allan GM4HYF, 22 Tynwald Avenue, Rutherglen, Glasgow G73 4RN, Scotland.**



board of our ships or airplanes or what we have encountered at our coast stations.

Therefore, we, OM Föcking and OMMarschner, both ex-radio-officers in the German Merchant Fleet and OM Polak, ex-radio-officer of the Dutch Merchant Fleet, commissioned by Radio-Holland, have taken the opportunity to have a book published, containing the most interesting stories experienced by radio-officers from different countries.

We know, that many countries have a club of ex-radio-officers and that very nice and amusing stories have been appeared in their newsletters etc.

We should like to bring out a selection of the best stories and or new stories in an edition, probably with the title: "Sparks, What's Going On?"

In view of the costs we will not exceed a size of 160 pages with a page format of about 210 mm x 148 mm. We estimate a sales price of 15.00 – 20.00 Euro.

We would appreciate very much if ex-radio officers will be inclined to render your cooperation by sending us, free of honoraria, one or two of their own stories in English or, if that is impossible, in their own language, not exceeding 1½ - 2 A4 pages, if possible with one or two illustrations. A few lines of a curriculum vitae would be welcome, i.e. the information you are prepared to release.

We should like to have contributions to our proposal by the end of June 2002.

So that we know how many copies to print, we sincerely invite everyone to let us know as soon as possible if they wish to receive one or more copies.

Contact: S. Föcking,

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Wormserstraße 16, 55276 Oppenheim, e-mail: foeking@main-rheiner.de or Ing. H.C. Polak, Hannie Schaftplantsoen 41, 5348 GC Oss, Holland, e-mail: hansp@scarlet.nl or R. Marschner, Narzissenweg 10, 53359 Rheinbach, Germany, e-mail: DL9CM@t-online.de  
(Information: David Smith - ZL2BBB)

## Two Metre CW Group

A Yahoo Reflector has been formed to promote activity on 2m CW. 49 members have joined since November, 2001.

There is lively discussion on the reflector which is moderated, single handed, by Angie Sitton, GØHGA. The

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*the vintage wireless magazine*

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www.radiobygones.com



group use Yahoo Instant Messenger to make real time skeds and they are now discussing the idea of actually running a net as part of Monday Activity Nights which are an established feature on the two metre band now.

Members are from all parts of the UK including GI/GW/GM and, at present, one each in PA/DL/EI. Members are from a broad spectrum of experienced CW operators and beginners. The idea is that knowledge and resources can be pooled to help one another and especially newcomers. Angie will help those new to computers with the intricate maze of signing up. She is a very experienced CW operator and gets a special pleasure to be able to help people and in turn get help from those who know more.

This is a dedicated 2m CW group and information is posted to the reflector about their activity on the band, stations worked and who got away. They discuss rigs, antennas etc.

The groups homepage is at <http://www.qsl.net/g0hga/2mCW.htm> where there is also a link to the reflector.

Angie Sitton can also be contacted by e-mail at [g0hga@ntlworld.com](mailto:g0hga@ntlworld.com)

## ABC/SARC Marconi Centenary Celebration

SARC (Summerland Amateur Radio Club, Lismore, NSW) mounted a Marconi Centenary Display at the local ABC radio station to commemorate the centenary of the transatlantic transmission on 12 December 2001.

The display during the week was an outstanding success. The main day, Wednesday 12th December was very well

attended with up to 1000 passing through the ABC Studios, Lismore, New South Wales (there were too many to count). The ABC had an all day demonstration and public participation in the station



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and studio operation.

The Radio Centenary cake was cut by Australia's oldest active licensed Amateur, Alf Webb, VK2UC, who is 96 and active on all HF bands. Alf built his first radio in the 1920's and has been active ever since.

The SARC display in the foyer was very popular and a highlight of the celebrations. There were working Morse sounders, spark and tone instruments. Also, sound from Edison cylinders, crystal sets from the 1920's, home and mantle sets from 1925 to the 1960s and historical, souvenir and commemorative books etc. from the 1920's onwards.

Historical information on Marconi's Poldhu to St John's experiment was on display and equipment, radios and other developments. Also, history on local broadcast stations from 1930 onwards.

Information handouts were also available for visitors. Public interest and curiosity continued throughout the week. Many visitors were previous technicians or operators, either amateur, military or commercial and including one elderly lady who was in the Air Force interception service. She copied Morse code groups at speeds of up to 60 words per minute, which she insisted was not uncommon for these operators. She readily recalled using sounders and using American Morse on landline circuits. Many others told of interesting situations and experiences.

SARC publicity on the ABC was continuous, including a slot on prime-time TV news. Two local newspapers ran articles on the events. Thanks are due to the ABC and members who lent equipment or in many ways made the show a success.

*(Report by John Alcorn, VK2JWA)*

## **New Release of 'Morseall' for the Disabled**

Pehr Anderson has released a new version of his Morse code user interface for computers called Morseall. It runs with the Linux operating system.

The system lets a disabled person use a computer with only a single mouse button!

He and his mother have been working with one user who was paralysed for 10 years. They are interested in promoting this system to Morse code enthusiasts and anyone who might want to be interested in helping the disabled.

The software is free for all purposes, written for a free operating system and costs nothing to deploy as the users can tap Morse code using a standard mouse!

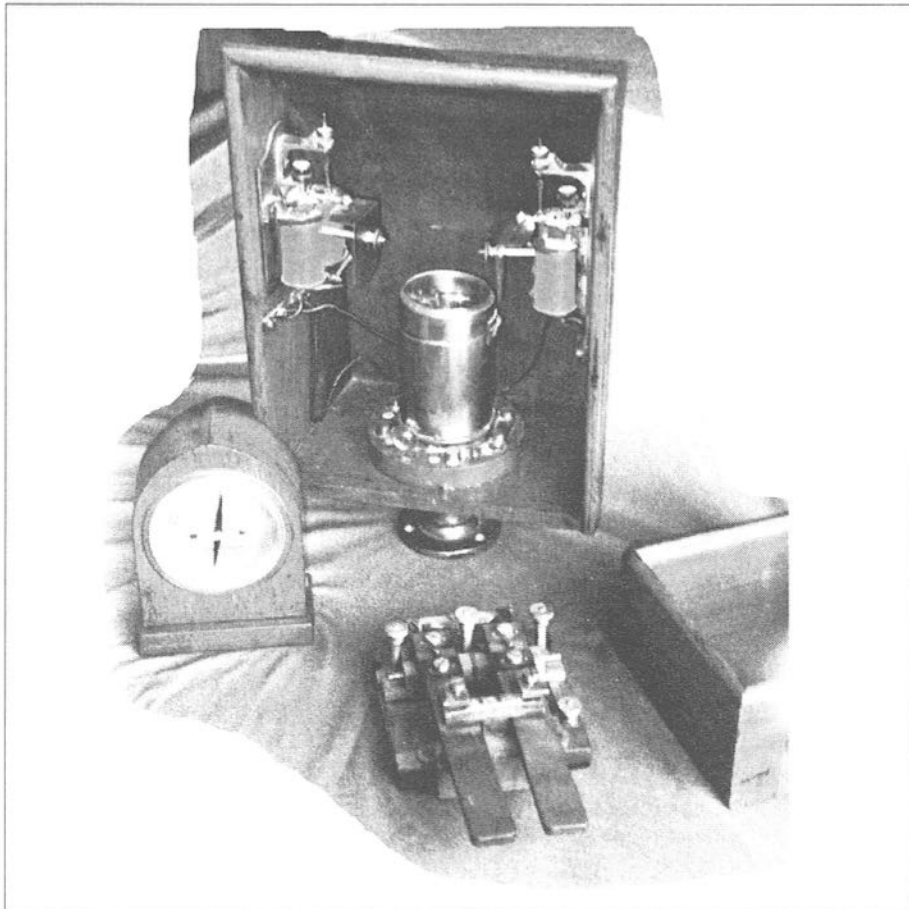
For more information visit their web site at <http://morseall.org>  
(Information: Pehr Anderson)

**Please mention *Morsum Magnificat* when contacting contributors**

# Showcase

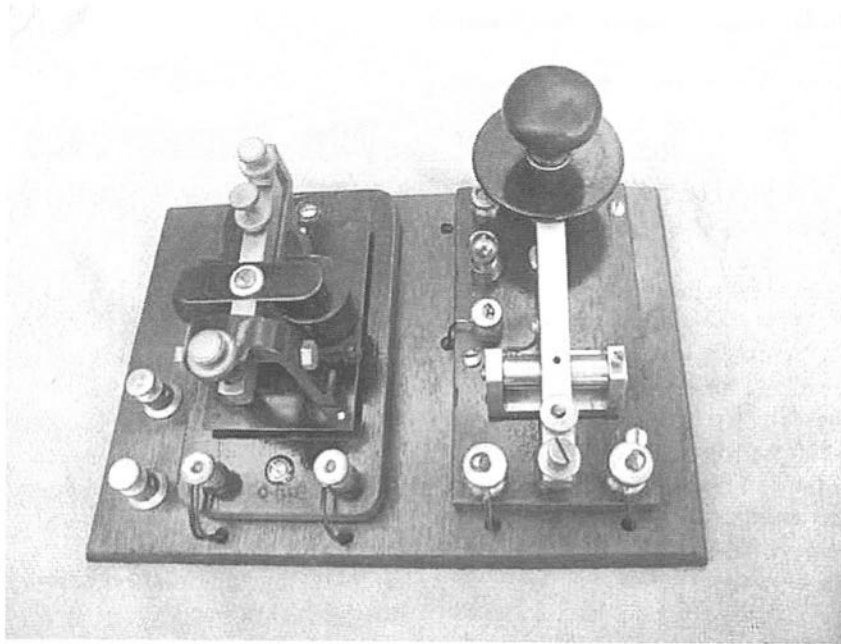
Readers are invited to contribute any additional information and stories, no matter how minor, to the Editor, *Morsum Magnificat*. There have been thousands of designs of keys & telegraphy instruments. Information will be lost unless it is compiled in one place and shared with other readers.

Photo: George Robbins, G3LNG



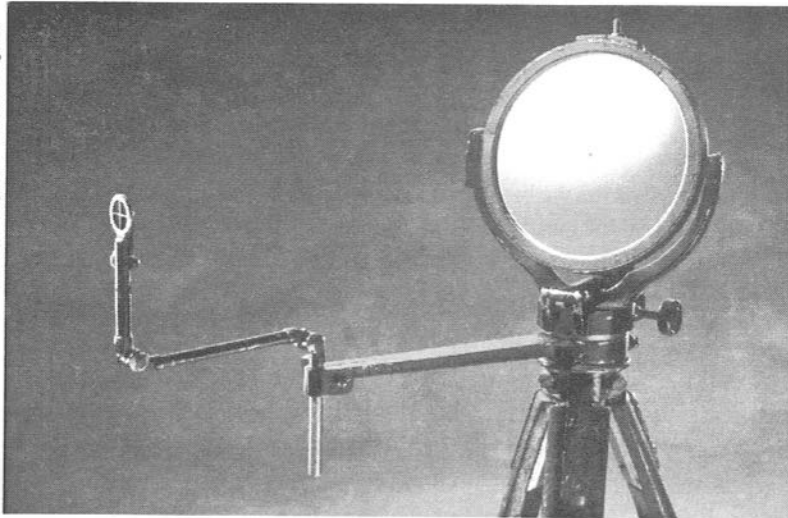
*This Bright's Double Plate Sounder complete with key, polarised relay and galvanometer turned up in the estate of a Silent Key. Sometimes referred to as 'ting-tang' telegraphs because the action of each electromagnet causes a clapper to strike plates tuned to different tones. They were used on the railways in Britain from the 19<sup>th</sup> century, the two tone sounds represent the Morse dots & dashes and required a dual key to achieve this. The widow of the SK has put this equipment up for sale. See reader's ads.*

Photo/Collection: John Alcorn, VK2JWA



This KOB was constructed by John Alcorn, VK2JWA. He used a Gamages key which suited well and the Menominee sounder. The sounder base is marked 4 ohms but the coils are 110 ohms, 220 total. It works very well on 12V but not at less than about 7V. The key has a lamp which is convenient for practising. The sounder only draws 57 MA so the lamp must be connected in parallel for both to work.

Photo/Collection: Fons Vanden Berghen - Halle, Belgium



British army Mk V heliograph. There is a secondary mirror which can be positioned to direct the sun onto this, the signalling mirror.

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**E**RNST KRENKEL, callsign-RAEM, was both a professional and an amateur radio operator. Taking part in many adventurous Arctic expeditions in the 1930's, he was not only a Hero of the Soviet Union but a hero of international amateur radio too. A recent honour is his inclusion in the inaugural group of 50 inductees into the CQ Amateur Radio Hall of Fame, administered by CQ Magazine, which recognises individuals who have significantly affected the course of amateur radio.

Articles, which have already appeared about him in MM, include *RAEM is My Callsign* (MM6, p22), *Listening for RAEM* (MM8, p.16), and *Commemorating the 90th Anniversary of the Birth of E.T. Krenkel* (MM39, p.16).

In 1937, he was a member of a four-man expedition, which flew to the North Pole and spent the next nine months on an ice floe drifting south, taking scientific observations on the way, before being dramatically rescued as the ice broke up. In its time, this expedition attracted worldwide interest, rather as the moon landings did in later years.

Recently, Mike Hewitt G4AYO, found the website of the Russian Robinson Club, "a club for those interested in islands, polar and marine amateur radio communications" (<http://rrc.sc.ru>), which contains a page, written by Krenkel himself, describing his amateur radio activity from UPOL, the 1937 expedition's radio station. Mike

## Who Remembers RAEM and UPOL?

*Compiled by Tony Smith*

has translated the article from the original Russian, as follows:

### **"Radio Station 'UPOL'**

Our small three-valve receiver was designed for telegraphic work. Nevertheless we understood broadcasting stations perfectly on it. The loudspeaker rarely worked, the output was insufficient. Our tent was therefore equipped with radio. Each of us had his own pair of earphones. One could at will get into one's sleeping bag with headphones, cover up one's head and listen in the warm to the latest news from the Big Land.

In the light of summer time, the audibility of even such powerful broadcasting stations, as Moscow, was weak. We only now and then heard the Comintern (Communist International). Then, at the end of August, audibility began to improve. With the approaching polar darkness we had excellent and positive reception of Moscow at any time.

It could be said with confidence that for these nine months we were the most conscientious radio listeners of the Soviet Union. In the middle of twelfth night, even with three minutes to go, the receiver was still switched on, tuned in, and we four, with bated breath, sat and waited, for our news from Moscow.

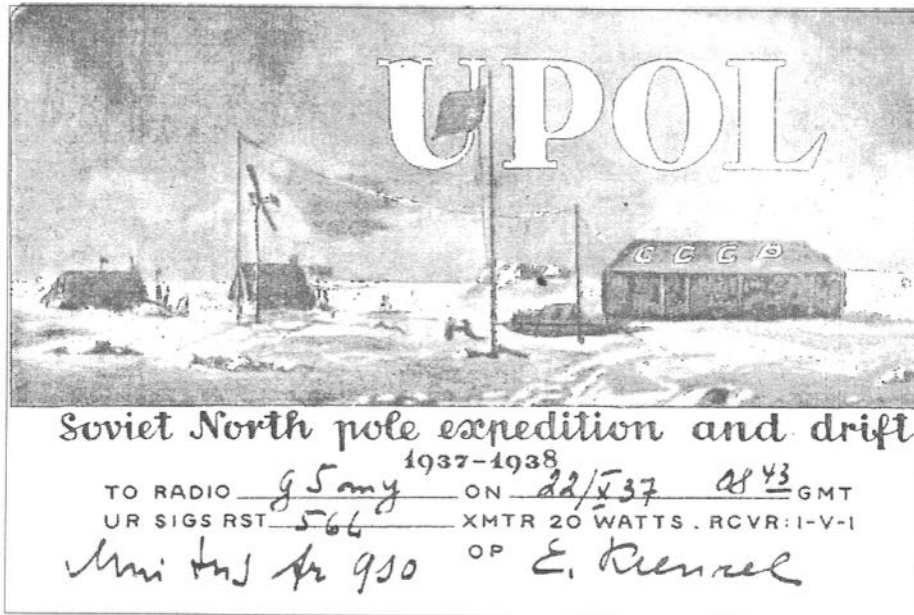
We were very well informed about all events at home and abroad. With the collective of radio workers, especially with managers of Moscow broadcasting centre, we established very warm friendly relations. We sent them all sorts of questions, secured special concerts, and asked to be given the chance to talk with our wives and children in front of a microphone in Moscow. All these requests they carried out promptly and thoroughly.

Besides Moscow, we had the opportunity to listen to most European stations. High-powered stations could be received regularly each day. During particularly favourable conditions the airwaves literally swarmed with broadcasting stations. Even at the Pole the difficulty was to tune in and separate these many stations.

It was interesting to observe the "pranks" of the air. One day a telephone working quite low-powered stations of the Rostov State farm was heard perfectly. Some evenings stations such as Vladivostok and Budapest prevented me working Rudolf Island. Sometimes at 4-5 o'clock in the morning Moscow time a whole number of American stations was heard, but audibility was fairly weak.

For the facilitation of

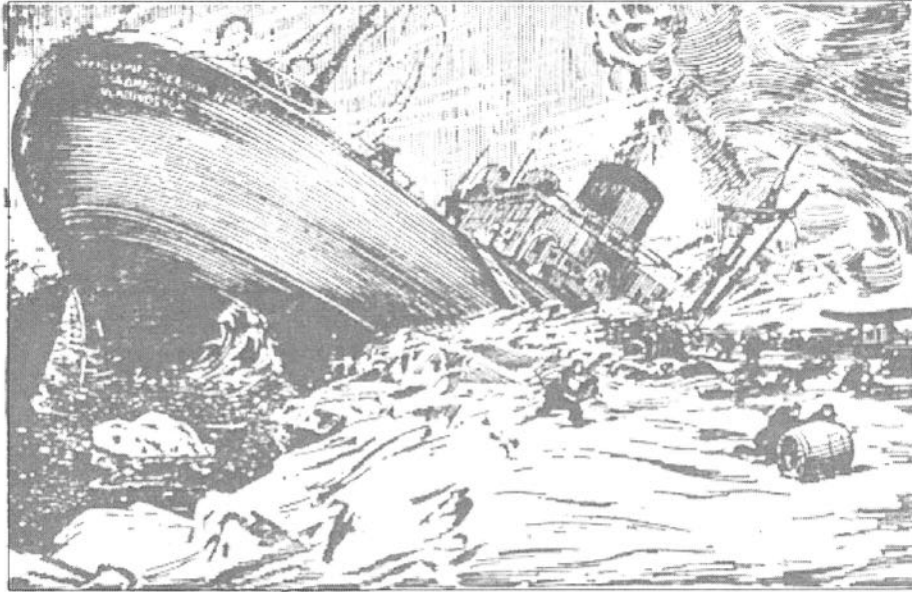
Collection: Mike Hewitt G4AYO



QSL card received by G5MY following his contact with the drifting ice station on 22<sup>nd</sup> October 1937.

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RAEM was the call of S/S Cheluskin smashed by ice in the Polar sea in 1934. I was there the chief operator. Since then RAEM is my personal amateur call. Mail address: Ernst Krenkel, Chapligin street, I/A, Moscow, USSR.

Г 313460 6/VI 1960 г. Типография ГЭИ. Москва, Шаболова наб., 19. Зах. 237.

*Reverse of Ernst Krenkel's amateur radio QSL card explaining how he received his unique callsign. He was the only amateur in the USSR allowed to QSL direct from his home address.*

astronomical observations we used a microphone. Fedorov, outside the tent with his theodolite, dictated his readings into the microphone, and one of us, sitting with headphones in the tent, listened for Fedorov's report and wrote down in the tent the reading and time according to the chronometer.

One day I decided to make good use of this microphone and inserted it directly into the antenna. Rudolf Island heard us. It is true, badly, the modulation was quite weak, but everything was heard. I did not consider it possible to delve into

the sealed transmitter. In our condition it would have been a crime to experiment with the working of the equipment. However I was sorry that the transmitter was not telegraph-telephone. It is a pity that my optimism with regard to the conditions for spreading radio waves in the Arctic did not spread as far as the mainland.

Rudolf Island worked us all the time on 800 metres, using a transmitter at 30 watts. Although it was a telegraph-telephone transmitter, it never occurred to either of us to try telephone



transmission to Rudolf Island. Only after my attempt with unsuitable facilities did Rudolf Island set its telephone working and we heard it extremely well. It was a new source of joy.

In autumn, aircraft from Moscow delivered newspapers, letters and even gramophone records to Rudolf Island - talking letters from friends and relatives. Letters were transmitted to us by telephone and gave us many joyful minutes.

A special job in my work was contacting radio amateurs on short-waves. Leaving Moscow, I promised radio amateurs of the Soviet Union to actively maintain communications with them. It was not my fault that I was unable to fulfil the promise in a way that I would have liked.

As on many other occasions I was severely limited by the wind and the batteries. At the slightest opportunity I tried to work radio amateurs. But this work always went on only "under wind". Not only had accumulators to be fully charged, but while working radio amateurs there had to be a fresh wind. I worked until the first signs of an abating wind in order to ensure time to restore, with the help of the windmill, the electric power output used up. Only with observance of these conditions could working radio amateurs be permitted.

Nevertheless, since there was only little free time, I "crept" onto the air for meetings with amateur radio short-wave enthusiasts. In August Moscow announced a competition - for the first radio amateur who got in touch with the Pole.

The first Soviet short-wave enthusiast who established

communications with me was the old "enthusiast of the air", Leningrader Saltykov. Only Vedchinkin contacted me from Moscow. I also had contacts with other Leningrad short-wave enthusiasts, with Sverdlovsk and Krasnoyarsk. Before take-off to the Pole I left the editorial staff of the magazine "Radio Front" my personal short-wave receiver, which I asked be passed to the short-wave enthusiast who established the first two-way communications with me. The receiver was awarded to Saltykov.

On the ice we did not have elevators and tramways, which usually create deafening interference to the receiver. We had ideal conditions for radio communications. With the help of a small three-valve receiver I managed to make contact with all the world. A Norwegian from Alesund made the first foreign contact with me. Then a circle of acquaintances extended all over the air.

Contacts with radio amateurs usually went on at nighttime. Doubling as the night watchman of our expedition, I strolled around the tent and the Globe, as my comrades peacefully slept in their sleeping bags.

In a special notebook I precisely recorded the details of communications with those stations with whom I had a "QSO" - two-way communication, I noted the audibility of amateur stations. On separate occasions I managed to get in touch with most of the European States. Norway, Sweden, England, Iceland, France, Czechoslovakia, Belgium and Holland appeared in my log.

The USA, as the country having the greatest number of radio amateur transmitters, stood in first place for the

number of contacts with the Pole. The American press was interested in the work of our station. My UPOL callsign had only to appear on the amateur bands and amateurs literally pounced on me with several stations from various parts of the world and different continents simultaneously calling me.

On one occasion successful communication was established, without interruption, with eleven Americans in succession. They passed me from hand to hand. A few friendly words and the person I was speaking to passed me on. Conversations usually dragged on and lasted longer than normal conversations between radio amateurs. After the establishment of communications I was compelled first and foremost to receive enthusiastic outpourings, offers of help in the passing of radio messages, requests for regular communications.

Friends showed up on the Hawaiian Islands. I worked one of them several times and he turned into a supporter of our expedition, he was worried - would the ice melt, aren't you afraid?... He was well-informed about our drifting expedition. He reported to us the contents of our reports. Only the day before they had been printed in central Moscow newspapers. By his reports we saw how quickly the foreign printing of our radio messages, sent to Pravda and Izvestiya could be reprinted.

I successfully worked Alaska and Canada. The record for distance was communication with stations in South Australia and New Zealand. These stations were almost our antipodes. Almost all communication, with rare exceptions, was made on 20 metres.

Doubtless, this was a fine achievement for a 20-watt transmitter

During the expedition two-way communication was maintained with the following amateur stations:

From 27 May to 31 July inclusive. (from 89° to 88° North latitude)

LA1M (Norway) F8IS W2CYS (USA New York) PA0AS GI5AJ G6KP G5RI TF3C UIAD (Leningrad) UIAP (USSR, Leningrad) W1EWD (USA Rhode Island) OK1PK ON4BW D3FZI (Germany) U3CY (Moscow) PA0FF UK1CR (USSR, Rudolf Island) D3GKR F8AI PA0GN K6SO (Hawaii) VK5WK VK2DG

From 1 August to 31 October inclusive (from 88° to 84° North latitude)

SM5UW W7LQS VE5LD G5MY W8PMB W1AEF W9PNE GM2JF W2KAP

From 1 November to 4 December inclusive (from 84° to 82° North latitude)

W2SB W2FSN W8EME K7RT G5JX F8GQ W9THH W9ALV W9VDQ W8CMH W8HRD W8NOT W9AJA W9PLX W8BGX W8LSK W8DFH U1CO (Leningrad) ZL4BR U9ML (Sverdlovsk) W1HUD GM2JF W2BHW W2GTZ PA0DA SM5WM SM5QU U1AD (Leningrad) U1BC (Leningrad)"

#### **Search for the Contacts**

After reading this article, Mike Hewitt, a keen "Krenkel" fan, did a search on the Internet for all the callsigns recorded. He writes: "As you would expect many were no longer listed. Alf SM5IQ has since researched the SM calls listed - these seem to be reissued calls. W8NOT

was listed and it gave his e-mail address and date of birth! He responded to my e-mail via a speedy letter (see below). A 'Google' search on W8NOT finds the UPOL reference and a photo of a meeting of his radio club.

"I looked in Papanin's book (diary of the leader of the expedition) for 4th November - the day of W8NOT's QSO. There was indeed a reference to a QSO with an American station. There was also reference to a QSO with a French station. F8GQ was the only French station listed by Krenkel and F8GQ was still listed (but not on E-mail). I sent him a letter and had a reply only to learn that the callsign was reissued in 1963 - the current F8GQ was only 7 in 1937!

"W2SB is a Club Station but they have not responded to my E-mail message - 1937 is a long time ago, I may write to some of the other stations who are still listed (but not on E-mail). Most of these will be reissued callsigns - but I may just strike lucky!"

If MM readers know the original holders of any of the callsigns listed, who might be able to assist Mike in his research on the contacts made by RAEM in 1937, please contact MM in the first instance. We will be pleased to pass on all information to him. Mike has a large collection of Krenkel memorabilia, and

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is also interested in receiving other information, memories or material relating to RAEM.

### QSO with W8NOT

Ken Wright, W8NOT, replied to Mike's e-mail as follows: "I have all my old log books so finding the entry for UPOL was quite easy. The QSO was on 4 November 1937 from 1147 to 1151 p.m. my local time (minus 5 hours UTC) on



*Drawing in guest-book by Ernst Krenkel when he visited the home of SM5IQ during the First European Championships in Foxhunting near Stockholm in 1961.*

20m CW. Krenkel said it was the Soviet Drifting Expedition North Pole. He gave me his present position 83/49 North and 2 degrees East.

"His signal sounded like he was using a self-excited oscillator - the tone was quite rough. I gave him RST 553 and he gave me 569x. I was xtal controlled on 14.008 kHz, and he was just a little higher in frequency. My home brew rig was: 53 xtal osc. and doubler, 45 buffer, T20 buffer and T55 final, 150 watts input,

Reproduced by kind permission of SM5IQ

probably about 100 watts output. The receiver was a National NC101X - it only covered the 160, 80, 40 and 20 metre ham bands. My antenna was a 20 metre dipole. It was half wave with a quarter wave matching section made of aluminium tubing and fed with 600 ohm open wire line.

"Krenkel sent me a nice QSL card. It had a drawing of the camp on the ice and the antenna. Unfortunately I no longer have the card or any other cards from that

many of those operators were Silent Keys and my file was largely useless or confusing because of the reissue of many of the call signs.

"I did away with it, but quite recently I started a new one using a logging program on my computer. A couple of months ago I bought a new Yaesu FT1000MP Mark V transceiver and this has revived my somewhat-lagging interest in ham radio. I also acquired a 3 element-tri-band yagi, in place of my

Photo: Alf Lindgren SM5IQ



*Krenkel at a banquet held after the European Foxhunting championships in Vilnius in September, 1963, where he had just received a gift from the Swedes.*

period (what a shame!). I am 89 years old and have had this call for 66 years. I am sorry, but I really cannot remember anything else about the QSO."

"Ken later wrote to Mike: "When we got back on the air after WWII, I started a card-index file of all my QSOs. It helped to make more friendly chats and I kept it up for many years until I noticed that so

mono-band 15 meter beam, I put up a 30 meter sloping dipole that works very well and a quarter wave antenna for 80 meters. So, now this old man is having fun pounding a lot of brass again!"

#### **Krenkel in Later Life**

Alf Lindgren, SM5IQ (mentioned above), another "Krenkel" enthusiast, met Ernst personally. He writes: "My first

contact with RAEM - and the only one by means of radio - was in 1947, when I happened to be involved in a Soviet contest on 7 MHz, CW. Our first "eye-ball QSO" took place in August 1961, when Sweden arranged the first European C h a m p i o n s h i p competitions in fox hunting (now ARDF). Krenkel was the head of the Soviet team, including a trainer and three runners.

I was in charge of the competitions (I was the SSA fox hunt manager from 1948, when I introduced the sport into Sweden) and Krenkel and I discussed ARDF and other things during his stay in our country. I know only a few phrases in Russian, but both of us spoke German, so we understood each other perfectly.

We were invited to Moscow in September, to a fox hunt in Ismailovskiy Park - a simple hunt, but lots of flags and speeches and spectators. Krenkel guided us (but only us Swedes) in Moscow, and all doors were opened when he made a gesture to his Hero of the Soviet Union star. Despite that, he was not stuck-up at all. Once, when he parked his car, a very old woman with a broom approached him and said: "But tovaritj, I have to sweep the street here". Krenkel said something friendly and moved his car. - Suddenly, when we were walking in a park, he began

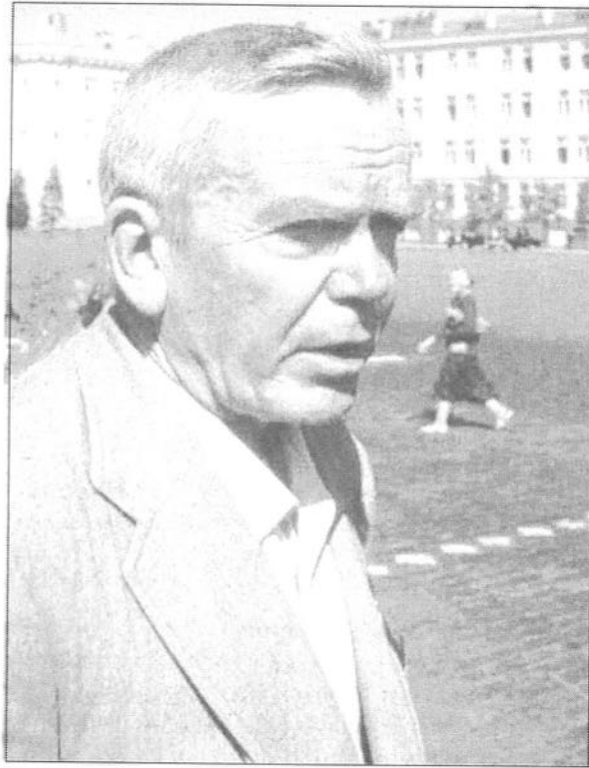


Photo: SM5IQ

*Krenkel, taken in Moscow during SM5IQ's visit in 1961.*

reciting Pushkin with his deep voice...

Ernst Krenkel guided us in his little Moskvitch for a couple of days. 'We' were SM5ZD (well-known from IARU Region I in the 50's and 60's) and his XYL, SM5AZO, president of Sweden's national radio society (SSA) and I, so the small car was somewhat overcrowded!

One evening two of us were invited to his datja in the village of Zhukova, together with two delegates from each of the other participating countries. Mrs Krenkel sat at the end of the table, and with her shawl she looked like a



USSR 4 kopek commemorative stamp honouring Ernst Krenkel and his achievements, issued 1973.

matrioshka (those wooden puppets) and was busy filling our glasses with vodka. Ernst had driven the car on our way out, but fortunately he asked his son to take us back to Gostinitza Ukraina!

In 1963, the Second ARDF European Championship was held in Vilnius, I think it was in September. We went there via Moscow and back the same way. Krenkel was there, probably as an observer from Federatsya Radio Sport. On our way back, we stayed for a couple of days in Moscow and again he took care of us.

It was easy to take a liking to Ernst Krenkel. He was humorous. He never said a deprecating word about the Soviet system, yet I have a feeling that he kept it at a healthy distance from himself. He knew exactly what Swedes in general felt and thought of the Soviet Union, something that ordinary Soviet citizens did not have the faintest idea of. But why

he so openly showed that he preferred Swedes to the visitors from the Eastern Bloc countries I do not know."

#### Web page

Alf has a homepage at <http://home.swipnet.se/sm5iq> - choose S V E N S K A (=Swedish) and then 'Ernst Krenkel, radioamatör,

polarforskare...' This has an excerpt from Krenkel's autobiography (written when he was 38!). Alf says: "I have an almost unreadable copy of this book, *Erinnerungen* (Memories), published as an advanced textbook in German. I have translated in some chapters into Swedish, but you may enjoy some pictures from the book and also one from our guest-book, where Ernst made a drawing on one of the competition-free days, when the whole Soviet team visited our house during the ARDF Championships 1961."

#### Acknowledgements

Thanks to Mike Hewitt, G4AYO, for allowing MM to use his translation of Krenkel's original article. Also to Ken Wright, W8NOT, for permission to include details of his 1937 logged QSO with UPOL; and to Alf Lindgren, SM5IQ, for sharing his memories of Krenkel with MM.

## Heliograph Demonstration held for IMAs at Fort Huachuca, Arizona

by Jim Riddle, KD7AOI

On November 15th 2001, I was privileged to demonstrate the heliograph and discuss its history at Fort Huachuca. This was at the invitation of Mr. Vince Breslin, the post's Army Signal's Command Historian. Nearly two-dozen Army Signal Command IMAs (Army Reservists called to Active Duty under Operation Enduring Freedom) gathered for an orientation tour of signal history including Arizona's Fort Huachuca's Museum and historical landmarks. An IMA, I learned from Mr. Breslin, is an "Individual Mobilization Augmentee". This was, incidentally, my second trip to the post, the first being several years ago to visit and photograph a couple of its heliograph sites as part of a research project I'm working on.

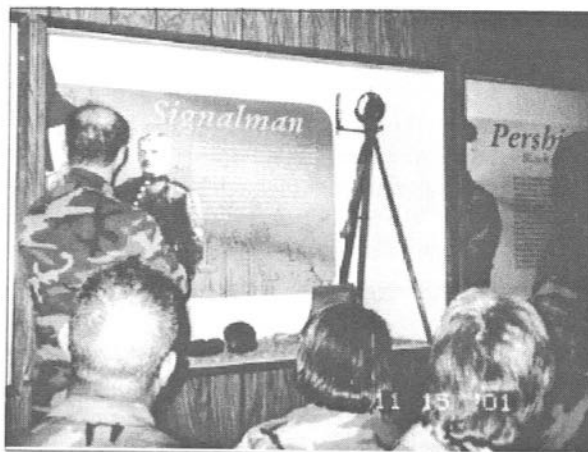
Mr. Breslin provided a lecture at the post's museum on the part the heliograph played in the 1886 pursuit and surrender of Geronimo. Afterwards the IMAs traveled to "Observation Hill" where I demonstrated the device and provided instruction to the IMAs on the San Pedro Valley heliograph sites of the late 1800s and early

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1900s. The soldiers, furnished with 1890 data of distances and bearings were able to locate the distant stations using only a compass. The event sponsor was the Army Signal Command's Chief of Staff, Colonel Melita McCully.

At the time it was possible that many of these reservists could be seeing duty in Afghanistan, a country not unfamiliar with the heliograph as will be noted from the following:

"... The British army found the Mance heliograph ideally suited to field operations in India and Afghanistan. It was used to transmit daily reports and orders to and from the remote mountain posts and for



*Will Barnes and a Mance heliograph*



*Trapping the Shadow Spot*

tactical communications when troops were in the field. (One hundred and ten years later, TV pictures were to show Afghan guerilla units using British pattern heliographs in their conflict with the Russians.) The present Afghans have found the helio' useful for the same reason as their British enemies of old; namely, a simple uncomplicated mechanism that requires no batteries or complex maintenance." (Source: "The Telegraph: A History of Morse's Invention and its Predecessors

Congressional Medal of Honor at Fort Apache who used a flag (probably a wigwag) for signaling the Apache situation whilst at great risk from a mountain to the nearby fort. His heroic service predated the use of the heliograph in the US.

My favorite photo is the one I call "Trapping the Shadow Spot", a step essential in transferring the shadow spot to the target vane's center, thereby assuring perfect alignment with the distant heliograph station. *MM*

### ***The Radio Officers Association***

Membership is open primarily to former MN radio officers but is also open to anyone who has had an association with maritime communications or is interested in the subject. Members receive the quarterly newsletter QSO and its associated amateur component QRZ. There is an annual reunion and AGM. 2001 sees the meeting taking place in Bristol. For further details and information please contact the Membership Secretary - John Russell, 21 Landcross Drive, Northampton, NN3 3LR.

in the United States" by Lewis Coe TK 5115 C54 1993 McFarland and Company, Publishers ISBN 0-89950-736-0).

The photo taken in the museum is of Will Barnes and a Mance heliograph similar to the ones we used in the demonstrations. Will Barnes was a signalman who was awarded the



**G**ARY BOLD'S REFLECTIONS on the Titanic's radio (MM 78) were interesting, particularly in respect of the reported statement by Dr Duguid in his autobiography. I was left wondering whether Dr Duguid's recall and description was reliable. Perhaps advancing age was distorting his memory? In possession of such dramatic and important information, what ship's wireless operator would not inform his Captain without delay, even in 1912? We will never know. Reading signals at 6000 miles with any of the passive detectors of the time would be surprising, although theoretically possible.

Before sailing from Belfast, the Titanic is said to have exchanged messages with a station on the Canary Islands off the west coast of Africa and at Port Said in Egypt. Port Said is about 2700 miles from Belfast. In 1912, wireless communication with, for example, India and South Africa, even with hundreds of kilowatts from large land based stations, especially using spark transmitters, was not a practical proposition. It would not be so until the coming of the Marconi short wave beam system in 1926-27. Like Gary, I have seen no record of Titanic signals being received at sea at any distance greater than about 2500 miles. I will refer to the Titanic operating wavelengths later, although to work efficiently, spark transmitters required large capacity in the frequency generating circuit and therefore could operate

## More on 'Maggie' and the Titanic

by *Dr Ken Jones G3RRN*

effectively only at low-medium frequency or lower. Small capacitance had limited greatly the power of the early transmitters.

### **Titanic's Wireless Room**

I have made a special study of maritime radio at the time of the Titanic, so the thoughts and information I have to offer may be of interest. This was a time when Morse was king indeed. Other forms of modulation became practically possible only with the coming of real continuous wave radio. Incidentally, I had the wonderful experience of interviewing recently, and recording on tape for archive and heritage purposes, the experiences of an alert centenarian ex-ships wireless officer. He trained at the Marconi training school in London and went to sea as a 17 year old, just five years after the Titanic disaster. He can read Morse still! He may be the oldest spark era ship's radio officer alive.

The so called reconstruction of

the Titanic Marconi room shown in Gary's article is best described perhaps as a representation built for a film set and contains a number of significant inaccuracies. I know of only one photograph of the Titanic radio room, taken by Father Frank Browne SJ, MC, three years before his ordination. He has been described, with justification, as the Irish Cartier Bresson and is recognised now as one of the world's greatest

include the superb collection of the Titanic, which he took during a brief journey from Cherbourg. Because of an accidental double exposure, he nearly threw away the photograph of Harold Bride sitting at the equipment on the Titanic, until he learned that it was the only picture ever taken in the liner's Marconi room. He captured also the now famous photograph of Jack Phillips and Harold Bride standing on the boat-deck

of the Titanic. He met and talked with Jack Phillips on more than one occasion.

Frank Browne disembarked at Queenstown (now Cobh), the last port of call in Europe, following a two-day cruise paid for by his uncle, leaving the Titanic to sail into the sunset and history. He became, following ordination, Chaplain to the Irish Guards in the First World War where, for his outstanding bravery in action, he earned the MC and Bar and the French Croix de Guerre. His many Titanic photographs amount to an



By kind permission of Marconi plc

*The Olympic Operator's Position: As was the normal practice, the magnetic detector is screwed to the wall. The clockwork winding key projects from the right of the case. The multiple tuner, which couples it to the aerial, is on the table below it. The wireless operator is sitting in front of the valve receiver on the table. The plate variable capacitors and a Fleming diode valve are visible on top of the wooden case and the potentiometers for adjusting the valve voltages are on the front of the case. The charging board for the receiver batteries is fastened to the wall above the operator's head.*

photographers of all time. When he died in 1960 he left an immense collection of photographic negatives of exceptional quality and historical importance.

Frank Browne's photographs

include an interesting story in their own right.

Although there is no other photographic evidence of the Titanic's radio installation, apart from some views which capture the special 5 kW, 4-wire

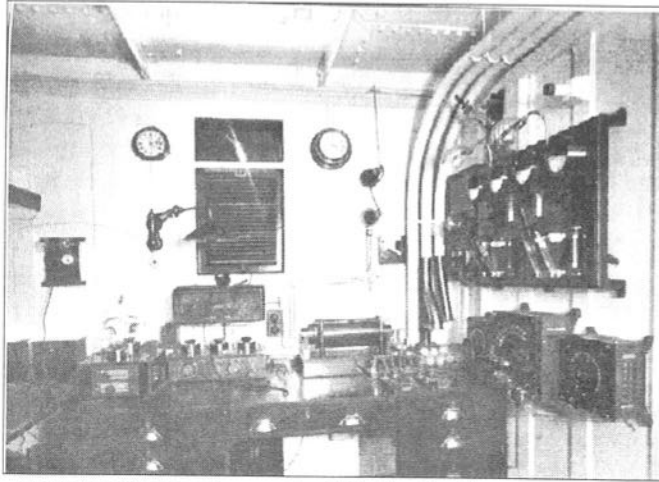
Marconi balanced top 'T' aerial, very good photographs exist of the radio room of the Olympic, the sister ship of the Titanic. One shows the general layout of the operator's room, including the receiving equipment referred to in this article, and another is of an Olympic radio officer sitting at the operating position. There is no reason to believe that the equipment was not more or less identical on the Titanic, even though the operating room layout differed slightly.

### The Transmitters

These American owned ships were laid down and built together at the Harland and Wolff shipyard, Belfast, the Titanic being launched very shortly after the Olympic. Radio equipment and radio officers in both ships were provided by the Marconi International Marine Communication Company. Marconi radio equipment, of which there are plentiful illustrations of the various units manufactured, was fairly standardised.

The main transmitter consisted of a 5 kW asynchronous rotary spark transmitter. The schematic shown on page 36 of MM73 is incorrect, being appropriate for a one and a half kilowatt transmitter with a plain spark discharger, but not the 5 kW set of the Titanic. The set-up shown in the MM73 schematic is finely reconstructed in the entrance to the Telecommunications Gallery of the London Museum of Science and Technology. This represents the equipment of

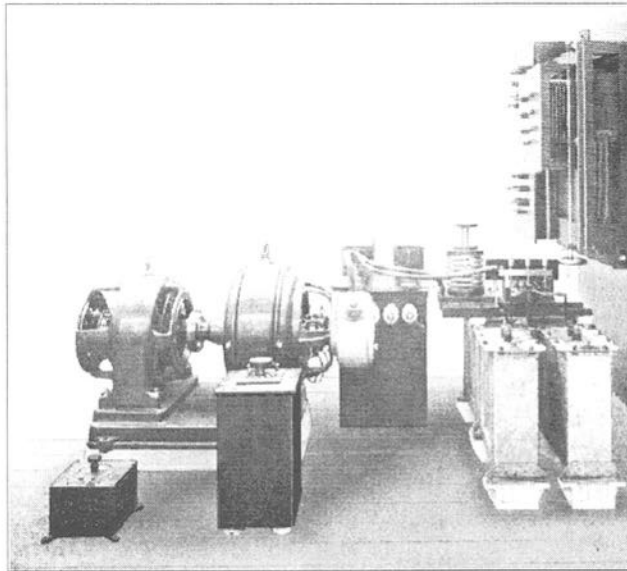
By kind permission of Marconi plc



*Titanic-type Operating Room on the RMS Olympic: The operator's room or 'Marconi room' on the Olympic, is shown soon after it and the Titanic were launched. The magnetic detector is screwed to the wall under the window with the associated multiple tuner on the table below it. The Fleming valve receiver is to the left of the table, with its battery box next to it and its charging board above on the wall. The 'silent room', which was at least as big as the operator's room, and which contained the 5 kW spark transmitter, is beyond the bulkhead to the right of the photograph, the entrance door of which is just off the picture to the right.*

For example, although located in the same position on the bridge deck between the transmitter silent room and the radio officer's bedroom on both ships, unlike the Olympic, the Titanic operating room did not have an outward-facing window.

Empress of Britain (callsign MPB) in 1910. It is well worth a visit. However the 5 kW set was much larger and more elaborate. It had a separate motor driven alternator, to which was attached a 16 stud asynchronous rotary spark discharger. As



*The Marconi 5 kW Rotary Spark Transmitter: This was considerably bigger than the standard one and a half kW set, requiring a large silent room next to the operator's room and, of course, away from the Marconi officers' bedroom! Unlike the lower powered sets, it had a separate alternator and driving motor. The spark discharger can be seen bolted to the alternator in the centre of the picture, behind which is the high tension transformer and RF chokes, capable of delivering 5 kVA at either 10 or 20 kilovolts with a primary voltage of 300 volts at 70 hertz. The large tanks to the left are the RF tuning capacitors surmounted by a spiral inductor for fine RF tuning of the primary circuit. On the wall above is the variable coupling 'jigger' (RF transformer) and aerial tuning inductors with tapping plugs.*

a result of the rotary spark discharger, the received signals would be reasonably musical, even with the simple passive receivers of the time, including the magnetic detector.

The main transmitter was contained in a separate room to the right of the table. This was not so much for interference protection, since the receivers were effectively muted during transmission, but to contain the considerable noise of the spark. The emergency gear, referred to by Gary, is

the 10-inch induction coil on the table to the right of the Multiple Tuner in the Olympic photograph. This could provide a modest crude RF output using the normal tuned aerial circuits in the transmitter room, in the event of failure of the main rotary spark generator or the ship's main power supply.

Phillips and Bride did have a problem at the start of the voyage. This was described by an American newspaper reporter who interviewed Bride following the sinking as a "... burnt-out secretary..." (!). This may have been due to mishearing Bride's description of a fault in the high-tension transformer secondary during the voyage. This was repaired

by Phillips in time to send out the CQD call, but resulted in a large backlog of passengers' private messages. Perhaps this was why Jack Phillips told Cyril Evans of the Californian to "Keep out! Shut up! You're jamming my signal. I'm working Cape Race" (callsign MCE), when he tried to warn the Titanic of the ice field only 45 minutes ahead of them and the impending disaster.

Although the power input to the motor-generator combination was nominally 5 kW, the power radiated by

the aerial probably was not more than one-tenth of this. Professor J A Fleming (later Sir Ambrose Fleming), adviser to the Marconi Company, has provided calculations to show the relative inefficiency of this early equipment, published in his publication, "The Wireless Telegraphist's Pocket Book".

### Reception

The aerial was fairly large for the operating frequencies and, of course, the earth was near perfect. The operating wavelengths on the Titanic were 300 and 600 metres (1000 and 500 kHz), although the main operating wavelength was 600 metres. This remained, of course, the main marine wavelength until the end of the century. Reception was possible down to at least 120 kHz (2500 metres), for news broadcasts etc. from powerful land based stations, such as Poldhu, on the Lizard, Cornwall.

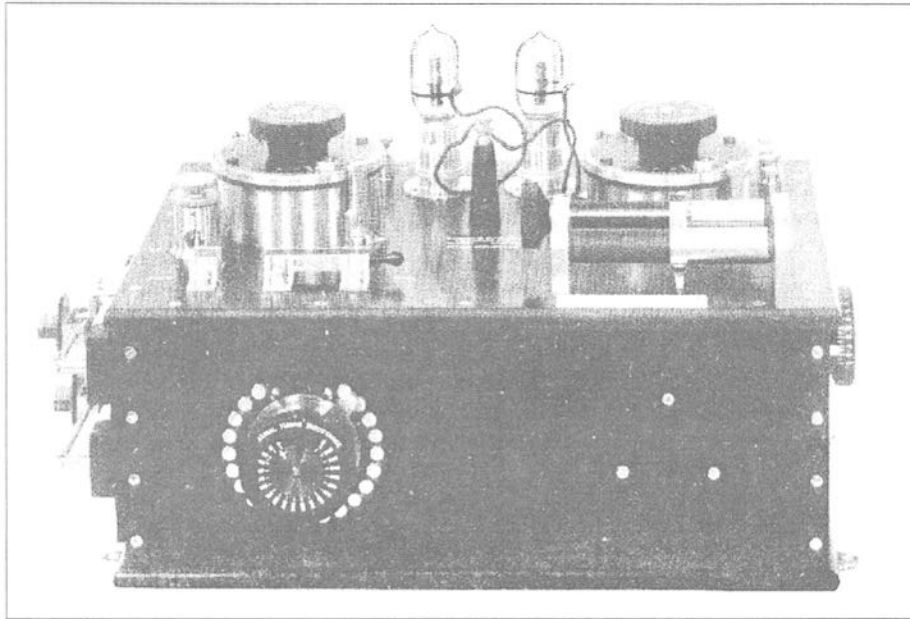
The receivers of the Titanic were, as Gary has indicated, passive. The days of the practical amplification of radio frequencies, and even audio, were still a few years in the future. The Titanic had at least two receivers, namely the Marconi valve receiver and, of course, the magnetic detector or 'Maggie', as it became known affectionately to the radio officers. The valve receiver was the most sensitive, but the 'Maggie' was the most reliable. By this time, the Branly-type coherer had been abandoned, since it was too slow for the speed of 'modern' marine wireless telegraphy. The Lodge-Muirhead wheel coherer (the term coherer was invented by Oliver Lodge) was available at this time, was sensitive and was reasonably fast. However, it was subject to patent,

and the Lodge-Muirhead Syndicate was a commercial competitor.

### Fleming Diodes

The valve receiver had two Fleming thermionic diodes. The triode was not available when the Titanic equipment was designed, hence there was no amplification. These valves could have either carbon or metallic filaments for 4 or 12 volts, although the 4-volt carbon valve was recommended for ordinary purposes. In the Titanic photograph, the valves appear to be of the metallic filament type, whereas the valve receiver in both Olympic photographs appears to be of the carbon filament type. The filament voltage was provided by two, 3-cell lead-acid batteries, charged from a special charging board. The latter can be seen by Mr Brent's head on the Olympic. Only one valve was used, the other being a standby in case of filament failure, which was not unlikely.

Unlike the magnetic detector, the valve and crystal receivers required high-resistance headphones or, if only low-resistance headphones were available, the use of a telephone transformer. Some 5 kW ship installations were provided with a type No. 16 crystal receiver as an alternative to the valve receiver. This appears not to be the case on either the Olympic or the Titanic. However, it was possible to replace the Fleming diodes with plug-in crystal detector replacements, although I have no information of their availability on the Titanic. The use of balanced crystal receivers with a balancing battery, facilitated the reduction of so-called



*The Marconi Valve Receiver: The valve receiver used a single Fleming thermionic diode, with another diode alongside as a standby. The valve operated on both filament and anode from a 6 volt lead-acid accumulator. Like the multiple tuner, it contained three tuned circuits with variable coupling. One of the variable capacitors was the so-called billicondenser, seen on the top right of the receiver. We would recognise this as a piston type variable capacitor. The Marconi valve receiver was more sensitive than the magnetic detector, but not so robust. However, it was generally quite reliable and was used when maximum sensitivity was required. The valve could be replaced by a plug-in crystal adaptor.*

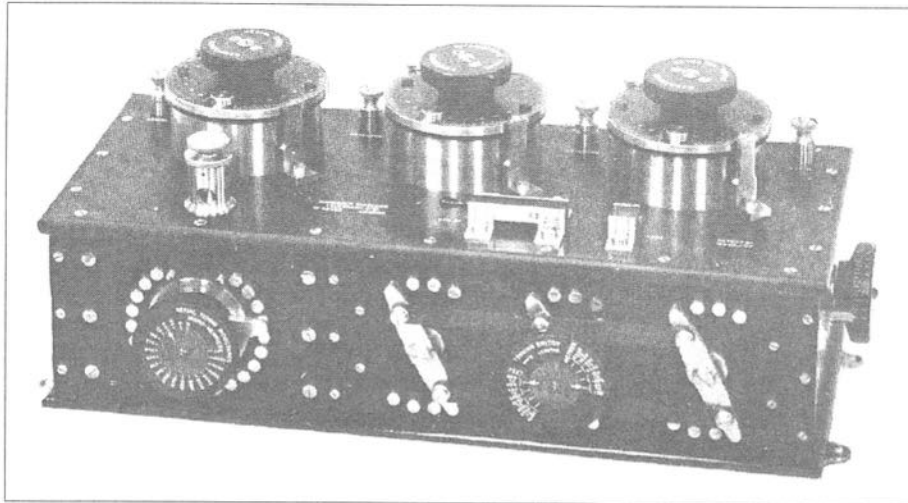
'atmospherics' or 'Xs', and even strong interfering signals, so that receiving could take place in conditions which "... would otherwise make work impossible". The magnetic detector could be thrown into temporary paralysis by high levels of static.

### Selectivity

By the time of the Titanic, considerable selectivity was in use. The valve and crystal receivers had multiple, built-in, fairly sharply tuned and elaborate LC circuitry and the magnetic detector was used normally with the Franklin Multiple Tuner, shown on the desk in the

photographs. They were certainly not broadband tuners. The Multiple Tuner was at least as good as any modern tuning unit, after all, Charles Franklin (of the Marconi Company) had invented the modern variable capacitor in 1902 and variable coupling in 1907. Receiver selectivity was adequate, having regard to the prevailing conditions generally.

I look back with some astonishment to the receiver selectivity we tolerated as radio amateurs in the 1960s and the extent of spread of some AM transmissions. I am sure that professional operators had the same experiences. I cannot imagine the QRM



*The Marconi Multiple Tuner: The sophisticated so-called multiple tuner, used with the magnetic detector, contained three LC tuned circuits using Franklin plate variable capacitors and integral variable coupling. Selectivity was fairly sharp, sometimes too sharp for the operators when initially tuning in weak signals. It was capable of tuning from 100 to 3000 metres (100 kHz to 3 MHz) using switched inductance and capacitance.*

to be any worse in 1912 than that on some present day amateur bands. Spark transmitters went out of use completely by about 1950, not only because of their rather broad bandwidth emissions in increasingly congested bands and much narrower channel spacing, but also because of their considerable inefficiency. May I suggest, that having regard to the nature and sensitivity of the receiving technology of 1912, to say that they covered the whole of the medium wave band is exaggerated and largely meaningless. Syntony was well established and the frequency spread of transmitters was restricted by limiting the degree of tuned circuit coupling in the transmitter (that is, controlling the logarithmic decrement of the damped spark-trains).

#### **More on the 'Maggie'**

I cannot agree with Gary's  
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comment about the magnetic detector. It did not lead receiver development into a blind alley, because it fulfilled very well the specific function for which it was intended when it was introduced. Other types of reception were used and being developed in parallel, as described above. It certainly very effectively renders spark transmissions very readable with a pair of low resistance headphones. I know, because I have seen it demonstrated and heard the result. Copying of signals was no problem for the operators. The 'Maggie' was suitable for all cases where absolute certainty of communication was desirable and where no-one specially skilled in adjustment was available.

There was no problem about the acceptable sensitivity of the magnetic detector. Cyril Evans, the single-handed wireless operator on the Californian, in giving evidence to the American enquiry

into the Titanic disaster concerning his advice to the Titanic, referred to earlier, regarding the ice conditions that the Californian had encountered, said that the response received from the Titanic on his magnetic detector "...came in with a bang...". However, its demise was hastened by the introduction of continuous wave (CW) transmissions using the arc generator, the RF alternator and, of course, the thermionic valve oscillator. The magnetic detector could adequately receive spark-only generated damped wave-trains, for which it was designed, and not for CW signals.

#### **'Maggie' Adjustment**

No adjustment of the 'Maggie' was necessary by the operator to undertake, unless he wished to do so. It was sent out of the factory adjusted for maximum sensitivity and would remain so indefinitely. However, it was left to the operator to decide whether *like* or *opposite* poles of the magnets should be together. This depended on whether the operator liked the slight 'breathing' sound in the normal configuration or complete silence and lesser sensitivity. In any case, there was scope for running repairs, such as the replacement of the soft iron band, the primary or secondary windings of the detector coils and the clockwork spring. It should be remembered, however, that the 'Maggie' was a dual detector device. Spare parts were held for this purpose. In the event of a failure of the clockwork, the operator could move the band-driving pulley by hand. Reception of Morse under such conditions would have been interesting if the operator was single-handed!

#### **Reception Tuning**

The 'mutual inductor' was not "...broadly tuned to the operating wavelength..." and there were no undisclosed components. What you got was what you saw. The only hidden component was the clockwork drive mechanism. There was no tuning of the primary winding carrying the RF currents, since this was not part of the tuned circuitry. All the tuning was done by the tuner (RF tuning-unit in modern terms), usually the Multiple Tuner with which it was used normally. Pre-detector tuning was very sharp.

The primary winding wound on the glass tube, which carried RF current to earth from the Multiple Tuner, caused transient demagnetisation of the moving wire band. This is similar in effect to the demagnetising effect of withdrawing slowly a magnetised piece of metal out of an alternating magnetic field. Each spark-induced damped wave momentarily reduces the residual magnetism in the moving soft iron band, causing the field to shift by an amount depending on the strength of the signal. The resulting changes in the field are detected by an induced current in the so-called secondary winding. Sounds made evident in the headphones are dependent on the 'group frequency' of the spark which, as mentioned previously, sounded reasonably musical with a rotary spark gap. The pitch depended on the frequency of the alternator and the number of studs on the rotary spark discharger. The soft-iron wire band moves through the 'primary' coil at approximately 7 cm to 8 cm per second. Comparison with an AC transformer surely is superficial.



Whatever the physics of the 'Maggie', without the magnets and without the moving soft iron band, the 'Maggie' is completely deaf. I have been told that increasing the speed of the band through the primary coil increases the sensitivity to some extent. To his great regret, I suspect, Cyril Furnstone Evans, wireless operator on the Californian, switched off the clockwork drive of his Maggie' a little too soon. Harold Cottam on the Carpathia nearly did so, but, in the event, heard the Titanic distress call and just managed to change maritime history and the fortunes of his Captain, Arthur Rostron.



By kind permission of Marconi plc

### Technological Change

For many years, the magnetic detector was the reliable mainstay of the radio officer's work, particularly with the coast radio stations and other ships at normal working distances. It should not be dismissed too readily. It worked very well and very reliably as a detector of spark generated RF, and practically all RF was, at the time, spark generated. It was no more a blind alley than was the thermionic diode in the face of the triode valve or the radio valve in general, faced with the

*The Standard Ship Radio Room: This is thought to be the radio room (or Marconi room) on the Cunard passenger ship Carpathia, which went to the rescue of the Titanic, with Harold Cottam, the radio officer involved. The magnetic detector and multiple tuner are to his right, with the emergency spark transmitter on the shelf above. The Marconi valve receiver is on the table to the left, partly obscured by the casing of the motor and alternator starters. The high resistance headphones for the valve receiver are on the table and he appears to be using the magnetic detector!*

accelerating technology of the transistor and solid-state physics.

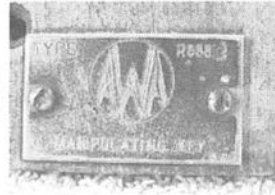
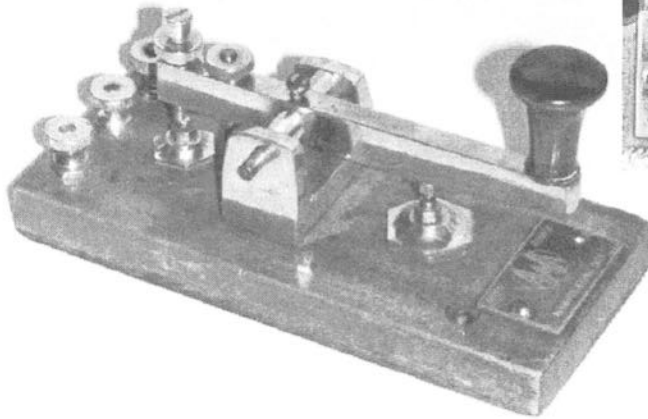
Perhaps it is worth reflecting on how exciting the practice of wireless telegraphy must have been in those days. To some it is still. That is something that increasing radio technical sophistication has not improved on.

MM

# Info Please!

Readers are invited to contribute any additional information and stories, no matter how minor, to the Editor, *Morsum Magnificat*. There have been thousands of designs of keys & telegraphy instruments. Information will be lost unless it is compiled in one place and shared with other readers.

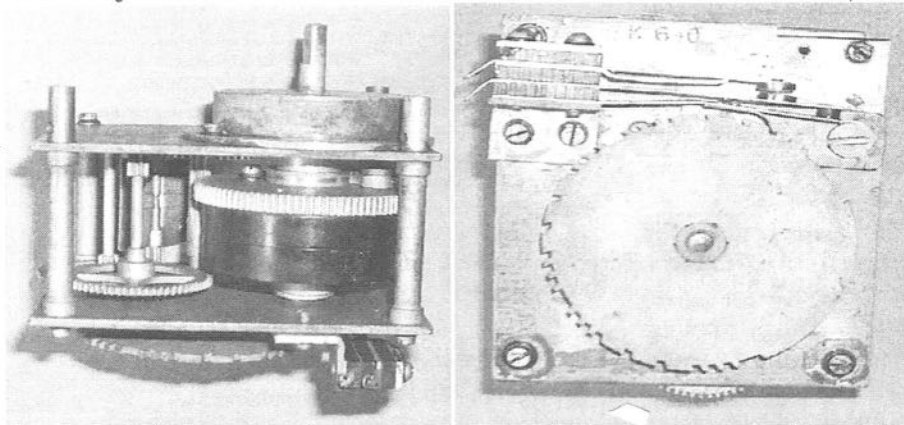
Photo/Collection: Neal McEwen



There is a photo of this key in MM57 but little information was obtained. There is a well worn label with the AWA logo in the circle, which is thought to be "Amalgamated Wireless of Australia". At the top of

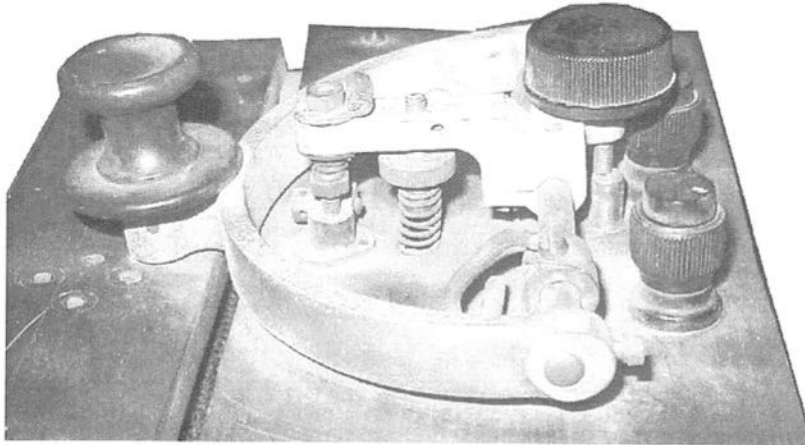
the label is "TYPE R688B". At the bottom of the label is "MANIPULATING KEY" and in very very small letters in the lower right is "10-177". The underside of the base is filled with bees wax to close the holes. Info please!

Photo/Collection: Geoffrey Walsh. GM4FH



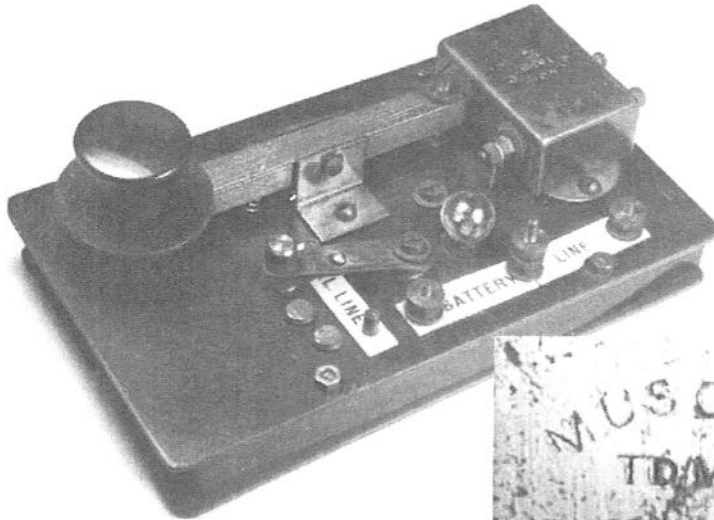
Two views of a clockwork device that operates contacts by projections for a rotating wheel. It sends SOS three times, then a long pause and then repeats and so on until the spring is unwound. There is no escapement but speed is regulated roughly by a rapidly rotating air vane. The gears are of a hard aluminium alloy. The plates of the frame are of brass. The only marking on it is 'K640'. Would this have been part of the equipment of a lifeboat for keying a transmitter, or something for an airman who had to ditch in the sea – possibly WWII? Does anyone know about this type of sender?

Photo/Collection: Mike Prince



*This key, purchased recently by Mike Prince, has obviously been repaired and/or rebuilt during its life. The wire appears to have been originally connected to the contact arm in the middle. It is possible that the "axle" on which the semi-circular arm pivots was originally made of insulating material, with the idea of isolating high voltages. The two aluminium castings appear to be made for the job, rather than adapted. Any other information would be appreciated.*

Photo/Collection: Dave Pennes



*This item is some sort of practice set. There is no manufacturer ID on it. It has a British style look to it. Do the markings on the buzzer imply a military origin? It's a compact 3" X 5" item that's exceedingly well made.*

*MM79 – February 2002*

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**O**F ALL THE MORSE SENDING devices available, be it keyboard, hand/straight key, bug, jigger or electronic, the most popular nowadays is probably some kind of electronic keyer, and increasingly of a type which has "iambic" or "squeeze" capability. An electronic keyer with this feature must use a paddle with two separate contacts, one for dots and the other for dashes. The term "iambic" comes from poetry, where the verse has a di-dah-di-dah.... rhythm, which is what we get when the paddles are squeezed together.

It's difficult to determine the exact time at which amateurs were introduced to the technique, although James Garrett's article (Ref. 1), where he described his popular "Accu-Keyer" was notable in promoting the iambic method. In addition to generating dots and dashes in the usual way, the proficient operator has only to squeeze the paddles to get characters such as C, R, K, F, full-stop, message begins, message ends and brackets, which significantly reduces the number of movements required. The skilled user is thus able to cruise along at a comfortable speed for long periods without fatigue-CW becomes even more fun. Please do not believe the myth that an electronic keyer will ruin your 'fist'. Existing hand/straight key and/or bug proficiency will not suffer (by going to electronic) if we always try to reply to other stations with the key type that is appropriate, or as band conditions allow.

## An Electronic Keyer Paddle from "Scrap-Box" Parts

*by Drew Diamond, VK3XU*

There are some fine looking, and no doubt pleasant to use, keyer paddles available at present. But for the person who likes to have a go at making things at minimum cost, it would seem that a device which is essentially just a pair of electrical contacts should be a doddle. There have been details published for numerous devices made from bits and pieces like paper clips, ignition points, computer mouse(s), clothes pegs, mouse traps, rubber bands and nails, hack-saw blades, micro-switches etc. They make interesting novelty items, but generally they do not provide the level of performance required by the more serious operator.

Therefore, the following "scrap-box" model is offered. No finicky springs or pivots or bearings are used. Rather, the moving parts are a pair of ordinary single-sided 1.6 mm thick epoxy glass-fibre printed circuit board strips, about 10 x 85 mm, which interestingly, has just about the right amount of "springiness" for the

job. The copper side of the strips provide the electrical path to the dot and dash contacts.

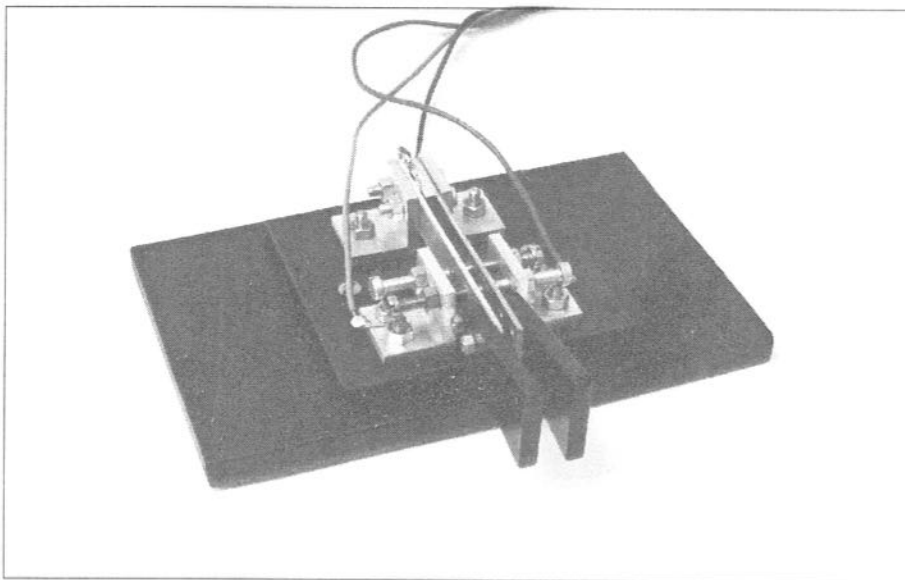
The screw adjustable back-stops have two functions; when finger pressure is released, the fibre side of the strip falls back against the stop which effectively damps vibrations, and, the stop imparts a slight tension, thus permitting a degree of control over the pressure required to close the contacts- more tension- more finger pressure required.

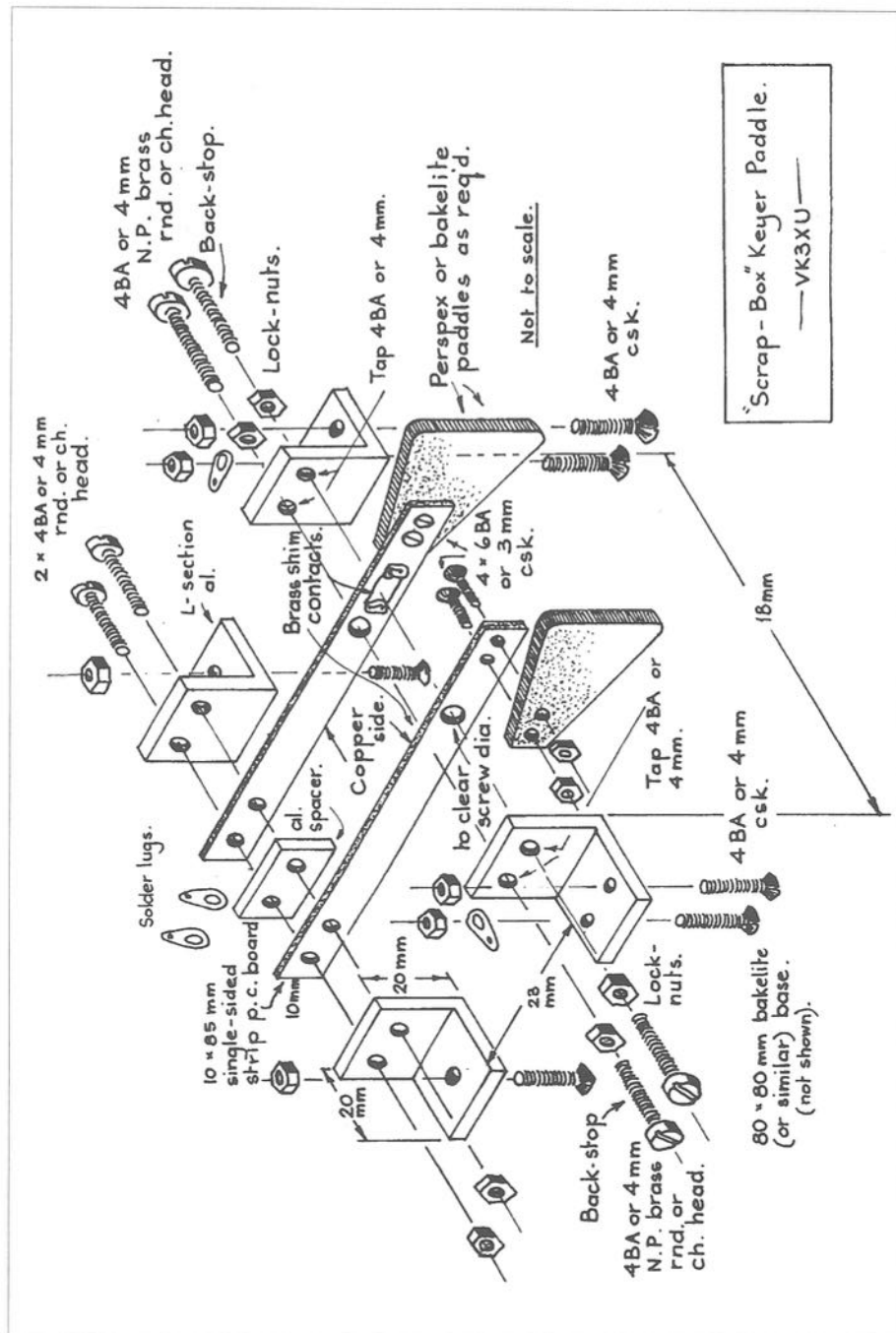
Dot and dash contacts are nickel plated (N.P.) or plain brass screws, which pass through clearance holes in the strips. A small pad of shim brass (or similar) is soldered to the copper foil to provide a wear-resistant contact surface at the point of closure on each strip (rather than just the copper foil, which would wear through too soon).

Brackets are made from 20 mm

lengths of 20 x 20 x 3 mm (or similar) L-section aluminium extrusion. The exploded drawing shows the components required and some salient dimensions. Exact duplication is not necessary- although the pair of P.C. strips should be similarly sized. Back-stop and contact screws should be positioned side-by-side upon the contact bracket, and spaced about 10 mm apart. If you do not have a tap to suit these, drill a plain hole and fit a lock nut each side. Note that each P.C. strip has an off-set clearance hole for its opposite contact screw. The hole must be just large enough to allow the screw to pass through without interference.

Base plate (not shown in the drawing) may be an 80 x 80 mm square of phenolic, ABS, bakelite or similar material, about 6 mm thick. The screws which hold the brackets must be countersunk- and the corresponding





holes in the underside of the base countersunk to sufficient depth so that their heads are recessed. The base may be fixed upon an additional steel plate, or attached to some other object, as desired.

Solder tags under fixing nuts for the contact brackets provide the wire connection points for dot and dash. The convention (for right-hand) is that dots are made with thumb, and dashes with index and second fingers. The P.C. strips are separated with a spacer block made from a scrap of 3 mm al. For the common connection (usually chassis ground), two solder tags (the second to provide even spacing) are sandwiched as shown.

The paddle knobs may be made from perspex, ply-wood, bakelite.... and shaped as desired. Those shown are triangular, although oval or rectangular may be preferred.

When the assembly is complete, back the contact screw(s) well away initially, then bring the backstop(s) up to the fibre side of the strip until it touches, then advance the screw a little further—perhaps half a turn, then nip up the lock nut. Now advance the contact screw to within about 0.3 or 0.5 mm of the shim contact plate, and lock. Test and fine adjust as necessary after connecting the paddle to your electronic keyer.

If you are new to electronic keying, try not to go on-air until a reasonable proficiency has been attained, but practice off-air to get a feel for the technique. Don't worry too much at first about the iambic mode, as you should find that it will come naturally after a period of training. Always remember, the mark of a good Morse operator is sending which is not necessarily fast, but is regular, accurately spaced, rhythmic, and has the correct number of dots and dashes for each character. No-one is impressed with a "stick-along-a-picket-fence" clatter which is riddled with errors. Common sending faults are 5 for H, and 6 for B, with extra dots sprinkled about for good measure. Watch out also for G instead of ME (NAG for NAME heard often), NN for C, NST for TEST, and PD for AND.

#### References and Further Reading

1. "The WB4VVF Accu-Keyer"; James Garret, WB4VVF, QST, Aug. '73.
2. "Electronic Keyer Paddles"; Dr Gary Bold, ZL4AN, NZART Break-In, Aug. '88.
3. "Which Paddle, Which Keyer?"; Gerald Stancey, G3MCK, *Morsum Magnificat* #58.

*First published in Amateur Radio, July 2001.*

**MM**

#### **FISTS CW Club – The International Morse Preservation Society**



FISTS exists to promote amateur CW activity. It welcomes members with all levels of Morse proficiency, and especially newcomers to the key.

The club has awards, nets (including a beginners' net), dial-a-sked for beginners, straight key activities, QSL bureau, newsletter, and discounts from traders.

Further information can be obtained from **Geo. Longden G3ZQS, 119 Cemetery Road, Darwen, Lancs BB3 2LZ**. Send an s.a.e. or two IRCs.

## The Barclay Box-Relay

by *Dave Pennes*

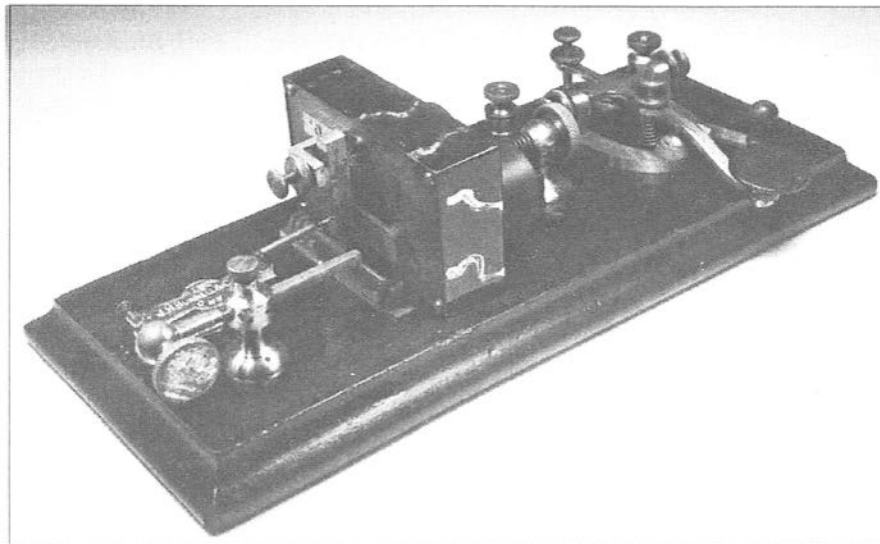
**T**HE BARCLAY BOX-RELAY ("snare") KOB consists of a key and an unusual style sounder with horizontal coils enclosed in a resonator box. They were made by the J.H. Bunnell Company from around 1910 to around 1920 or so. The Manhattan Electrical Supply Company lists Barclay instruments in their catalogues of the day but it is believed they were produced by Bunnell.

The sounder part of the instrument was also available as a stand-alone instrument without the key. These devices were widely used as main line instruments by the railroads in the USA. There are multiple varieties of these devices including those that function as simple KOB's with a single set of contacts, or

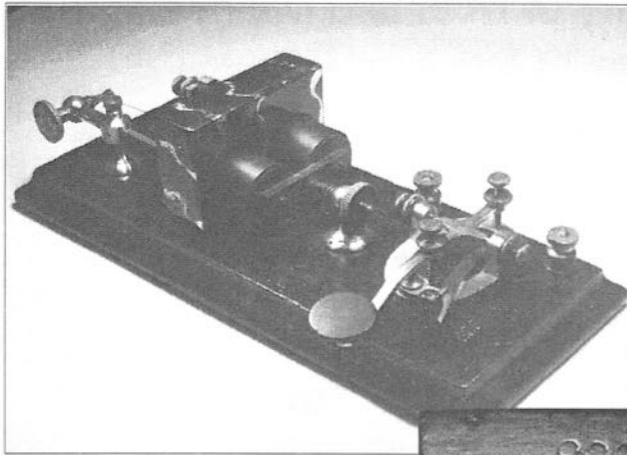
those that function as 'sounding relays' with 2 sets of contacts.

There are variations in the size and composition of the wooden boards, some devices being more compactly constructed than others. It is suspected that earlier versions had walnut or mahogany wooden bases whereas later versions were made of ash or birch.

Earlier versions had barrel-style binding posts while later models had the typical flat-style Bunnell binding posts



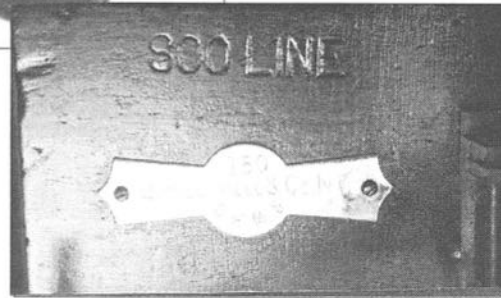




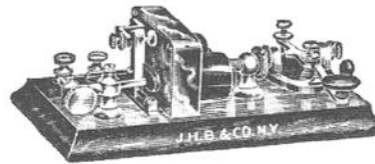
ohm instrument used on the 'Soo Line', which is the colloquial name for the Minneapolis, St. Paul, and Sault St. Marie railroad. The advertisement comes from a 1918 Bunnell Catalogue. *MM*

with slotted screws. All had the characteristic tiger striping on the sounding box also found on Mecograph bugs (see MM 74 front cover).

This particular item is a 150



#### BARCLAY BOX RELAYS.



No. 404.

The Snare Drum Principle which Mr. Barclay has so ingeniously applied to his Box Relays produces a clear, pleasing sound that is very penetrating, and consequently can be easily read even in noisy places or on lines having weak currents.

Box is of burnished brass and all other metal parts are polished and mounted on a hardwood base.

#### Schedule BA.

| List No. |   | Price Each |
|----------|---|------------|
| 404      | 150 Ohms with Key and Local Contacts .....      |            |
| 0083     | 250 Ohms with Key and Local Contacts .....      |            |
| 405      | 150 Ohms with Key, without Local Contacts ..... |            |
| 0084     | 250 Ohms with Key, without Local Contacts ..... |            |
| 426      | 150 Ohms without Key, with Local Contacts ..... |            |
| 0085     | 250 Ohms without Key, with Local Contacts ..... |            |
| 427      | 150 Ohms without Key or Local Contacts .....    |            |
| 0086     | 250 Ohms without Key or Local Contacts .....    |            |

# A Century of Dots and Dashes

Looking back from 1954

Report extracted and condensed by Tony Smith from *The Sunday Advertiser Supplement*, Adelaide, January 16, 1954

The centenary of the introduction of the electric telegraph into this country falls on March 3, 1954. The occasion will be celebrated by the Australian Post Office with considerable publicity and a commemorative stamp issue...

In the past 100 years, the telegraph service has become an integral part of Australia's daily life. Australians, with an annual average of 3.3 telegrams for every person in the country, are among the world's most prolific users of this method of communication. The figure in the United Kingdom is 1.1 and in the USA 1.5. Put in another way, Australia's population of a little more than eight million lodges some 29 million telegrams yearly.

The electric telegraph was introduced in Melbourne only 10 years after the erection of the first Morse line between Washington and Baltimore in

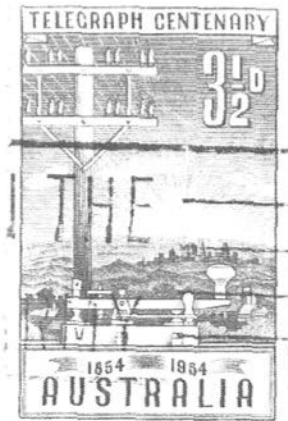
the US... Telegraphists of those days operated instruments which, by comparison with present-day apparatus, must have been extremely crude.

## Longest Message

Telegram delivery messengers, too, did not enjoy the congenial conditions of today. In the PMG Irregularities Book, now in the Postal Historic Museum, is the record of a telegram messenger who, on arriving for duty with dirty boots, was given an hour's extra duty without pay. Two messengers seen walking together were each fined 2/6d - a lot of money when they earned only 10/- a week.

Another messenger, who absented himself without permission, was given two hours extra duty without pay. Yet another, who smoked while in uniform, had three hours extra duty imposed on him.

One of the longest messages ever transmitted in the history of the Australian telegraph service was the entire speech of our first Prime Minister, Sir Edmund



Stamp issued by the Australian Post Office to commemorate the centenary of the Australian telegraph service.

Barton. It was sent from Maitland to Adelaide and was more than 13,600 words long.

The result of the "Australian Champion Sweepstakes" (now the Melbourne Cup) was telegraphed for the first time on October 1, 1859.

### Fighting Crime

The bushrangers, Hal, Gardiner and Gilbert, had every reason to resent the introduction of the telegraph service in Australia. Troopers knew their whereabouts within days instead of weeks when paid informers lodged messages at local post offices to tip off the authorities...

When, in the late 1870s, the Kelly gang took possession of Jerilderie, they quickly put the local telegraph line out of action. When they left, they threatened telegraph master Jefferson with injury or death if he attempted to get a message through.

Jefferson ignored the threats. He patched up his instruments with scraps of wire and told the outside world what was happening. In his own interests, the department removed Jefferson from Jerilderie soon after.

### Rapid Changes

The first 100 years of the electric telegraph in Australia has seen rapid

changes and improvements of a highly technical nature. They include the introduction of continental or universal Morse throughout Australia in 1897; codes used in each State before then were not uniform.

Another event of importance was the linking of Australia with Europe by cable from Java to Darwin in 1871, followed a year later by the completion of the Overland Telegraph from Darwin to Adelaide...

One hundred years ago, two telegraph offices operated a nine-mile length of wire. Today (in 1954), more than 9,000 telegraph offices throughout the Commonwealth operate approximately 853,000 miles of channel...

### Private Lines

The leasing of private channels to public organisations and business firms provides direct communication to a chief telegraph office, or inter-communication between city offices and outlying factories, or even undertakings in other States.

The first private line was established in 1933, when the Melbourne Stock Exchange was linked by teleprinter to Melbourne's chief telegraph office. Today, 350 lines are leased to various organisations... *MM*

|   |   |
|---|---|
|  | <p><b>G-QRP Club</b></p> <p>The G-QRP Club promotes and encourages low-power operating on the amateur bands with activity periods, awards and trophies. Facilities include a quarterly magazine, Morse training tapes, kits, traders' discounts and a QSL bureau. Novices and SWLs welcome.</p> <p>Enquiries to <b>Rev. George Dobbs G3RJV, St Aidan's Vicarage, 498 Manchester Road, Rochdale, Lancs OL11 3HE.</b> Send a large s.a.e. or two IRCs</p> |
|---|---|

# MM Bookshelf

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**The Singing Line** by Alice Thompson

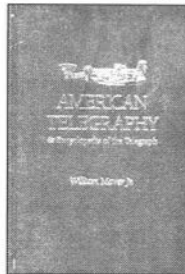
An inspired chronicle by the great-great-granddaughter of Charles Todd who constructed the trans-Australia telegraph with 400 men in the 1860s (and named Alice Springs after his wife). Alice Thompson describes how she traced his footsteps from Adelaide across thousands of miles of desert, outback, swamp and mountain when he constructed part of the telegraph link between Australia and Great Britain. Softback, 291 pages, 5 x 7¾ ins, 39 photos. **£9.50 UK - £10.00 EU - £11.00 World**



**AWA Review (USA) Vol. 14, 2001**

Includes an 84 page article on Spark Keys, including 119 photos. Also a 57 page article, "The First Years of the Canadian Marconi Co." with 52 photos and a 27 page article on the American Wireless Telegraph Co., with 14 photos. Softcover, 6 x 9 in.

**£20.00 UK - £21.50 EU - £23.00 World**



**American Telegraphy & Encyclopedia of the Telegraph** by William Maver Jr.

Facsimile by Lindsay Publications of the 700 page illustrated 1912 encyclopedia (5th Edition) but carries copyrights that go back to 1892. This is a classic encyclopedia of telegraphy with 544 illustrations of equipment, circuits, procedures and installation methods. A must have for collectors & historians. 6 x 9in (15.5 x 23.5 cm), Gold-blocked hardcover.

**£39.00 UK - £40.00 EU - £43.50 World**

|  | UK     | EU     | WORLD  |
|--|--------|--------|--------|
| <b>History of Telegraphy</b> by Ken Beauchamp<br>Published by the IEE, a thoroughly researched book on the history of telegraphy.  | £60.00 | £61.00 | £63.00 |
| <b>Faszination Morsetasten</b> by Gregor Ulsamer<br>German Telegraph Keys Collector's Guide.   | £20.00 | £22.80 | £23.30 |
| <b>Vibroplex Collector's Guide</b> by Tom French<br>Now in print again.  | £15.00 | £15.80 | £17.60 |
| <b>Marconi's Atlantic Leap</b> by Gordon Bussey<br>Hardback, illustrated with 71 archive photos. 96pp - centennial edition.  | £7.00  | £7.20  | £7.50  |
| <b>American Telegraphy &amp; Encyclopedia of the Telegraph</b> by William Maver Jr.<br>Facsimile of the 700 page illustrated 1912 encyclopedia (5th Edition)<br>of equipment, circuits, and procedures of the telegraph - a classic. | £39.00 | £40.00 | £43.50 |
| <b>The Singing Line</b> by Alice Thompson  | £9.50  | £10.00 | £11.00 |

|  | UK     | EU     | WORLD  |
|--|--------|--------|--------|
| Charles Todd constructed the trans-Australia telegraph (and named Alice Springs after his wife).<br>Inspired chronicle by their great-great-granddaughter. |        |        |        |
| <b>Marconi &amp; His Wireless Stations in Wales</b> by Hari Williams   | £5.60  | £6.50  | £7.00  |
| Illustrated account of the early Welsh stations and the relationship between Marconi and Preece.   |        |        |        |
| <b>Classics of Communication</b> by Fons Vanden Berghen  | £16.95 | £18.25 | £21.00 |
| Profusely illustrated history of communication including much on telgraphy.  |        |        |        |
| <b>AWA Review Vol. 8, 1993</b> by The Antique Wireless Association   | £9.50  | £10.50 | £12.00 |
| Includes 45 page paper by Louis Meulstee on "Unusual Military Morse Keys" (delivery Jan. 2002)   |        |        |        |
| <b>Perera's Collector's Reference CD</b> by Tom Perera   | £9.00  | £9.20  | £9.70  |
| An absolute mine of information for collectors compiled from variety of sources  |        |        |        |
| <b>Perera's Telegraph Collector's Guide</b> by Tom Perera  | £7.60  | £8.10  | £8.90  |
| An essential pocket-size reference guide for collector and historian   |        |        |        |
| <b>The Story of the Key</b> by Louise Ramsey Moreau  | £4.25  | £4.50  | £5.00  |
| The Best of MM Vol. 1. 77 photos/illustrations, 60 pages.  |        |        |        |
| <b>Wake of the Wirelessman</b> by B. J. Clemons  | £14.20 | £14.70 | £17.00 |
| A true story of an early maritime wireless operator  |        |        |        |
| <b>"Q41" and Beyond</b> by Shirley Lawson  | £6.20  | £7.20  | £7.90  |
| The story of a Wren (Womens Royal Naval Service) telegraphist  |        |        |        |
| <b>Railroad Telegrapher's Handbook</b> by Tom French   | £8.00  | £8.30  | £9.00  |
| Old-time telegraphy on the American railroads  |        |        |        |
| <b>Bunnell's Last Catalogue</b> with notes by Tom French   | £5.50  | £5.70  | £6.00  |
| Illustrates and describes the company's many telegraph instruments   |        |        |        |
| <b>History, Theory &amp; Practice of the Electric Telegraph</b>  | £14.50 | £15.50 | £17.50 |
| (facsimile reprint of 1866 edition) by George B. Prescott  |        |        |        |
| <b>The Victorian Internet</b> by Tom Standage (MM63)   | £8.30  | £8.40  | £9.30  |
| A history of the electric telegraph in the 19th century  |        |        |        |
| <b>A History of the GPO Mark 1, 2 and 3</b>  |        |        |        |
| <b>Morse Telegraph Keys</b> by Dennis Goacher (MM65)   | £6.00  | £6.50  | £7.20  |
| <b>The Phillips Code</b> - a facsimile reprint by Ken Miller (MM61)  | £5.00  | £5.20  | £5.50  |
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# 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. Please note that the views in readers letters are not necessarily those of MM.*

## New UK Licence Classes

I view the new UK Licence Classes with concern. I believe that it will not halt the decline in amateur radio but will harm the hobby and has been introduced solely for the benefit of commercial interests.

Amateur radio is a technical hobby; this means that to be successful you have to apply your-self and get a modicum of expertise. The old style Class A/B licences were about the right level.

The Foundation Licence gives a person with virtually no experience the ability to run more power than the accepted QRP limit. I feel sorry for these people who will have insufficient skill to get results from their shiny black box. It is optimistic to think that this will encourage them to work for the intermediate (old novice) licence. They are more likely to leave the hobby disillusioned people.

During the interim period we can expect more QRM from people who do not know what they are doing. There will also be those who ignore the power limit and cause RFI. The RA may well take the view that when they get any RFI complaint the first action is to close the amateur down until they get round to

investigating the problem. This will impact all of us.

The same remarks apply, albeit less strongly, to the Intermediate Licence. Novice Licensees can now run 50W, more power than many Class A Licensees run. Where is the incentive to up-grade here?

The CW requirement for the Foundation Licence is worthy of a Monty Python sketch. However, it is not funny as it encourages people to think of Morse as dots and dashes and is done at a speed, 3-4 wpm, where no meaningful sound patterns are made.

The fascinating hobby of SWL is ignored.

When BT are aggressively advertising licence free hand-helds with a range of 2 miles who needs to bother with any licence to broadcast.

*Gerald Stancey, G3MCK  
Rutland, UK*

## Info Please MM78 "Moby Dick" Key

With reference to Heisuke Kimura, JA1DVV's key on page 37 of MM78, this is the key which my wife, Edith,

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nicknamed "Moby Dick" – see MM1 page 38, key #6, the 10<sup>th</sup> key in my collection.

There were articles on this key by Hugh Miller, KA7LXY in MM22, page 44 and MM24, pages 20-23.

Hugh identifies "Moby Dick" as a US Navy key which was used on all TBX Navy sets before TBX-8 and NOT with the TBX-8 (TBX numbering does not necessarily imply that every a model with every number suffix was in fact produced).

I cannot identify the maker of my key since the only marking is a big 'USN' with an anchor in orange on the underside of the base. A maker's mark of 2 or 3 letters would be included with a number, all prefixed with a 'C'.

I am happy to see that another "Moby Dick" has shown up in Japan.

*John Elwood, WW7P  
Phoenix, Arizona, USA*

The rubber covered key from JA1DVV on page 37 of MM78 was first featured in Showcase in MM1 where John Elwood nicknamed it "Moby Dick". Hugh Miller, in a follow-up article in MM24, p.20, corrected some earlier details and provided further information plus photos of the set in use in a re-created WWII setting.

The key was used with all TBX models before TBX-8. The TBX was a shore-party radio and was also for use in small one-mast wooden boats. The key fitted on top of the set when in use. The article in MM24 is the most interesting and informative.

*Tony Smith, G4FAI  
Norfolk, UK*

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## Info Please MM78 Signalling Lamp

I was interested to see the signalling lamp on page 37 of MM78. The key used in your unit was made by Akrad Radio at Waihi - a goldmining town which is about 2 hours southeast of Auckland.

Akrad is made up from the words AucKland and RAdio. By the time I came to New Zealand, the Waihi factory had been taken over by Pye, then Philips and regrettably is now closed down.

Akrad Radio Ltd was formed in 1932 by a Waihi man, Mr K. M. Wrigley and had a staff of three. In 1940 they had a staff of 30 and were joined by Mr Ted Grant, who eventually became Chief Designer for Pye. Ted sent me an email in April 2000 (ted.grant@xtra.co.nz). He said "Akrad made a Morse key as part of a Morse practice set for budding hams. They were conventional and fairly robust, but not expensive". I own several keys that are the same model as the key pictured in MM78, and guessed that they were the "Akrad model", but it was not easy to prove.

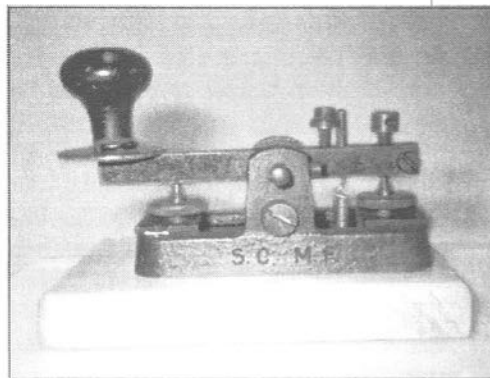
This style of key is common at New Zealand radio junk sales - the key does not have a good action so is unsuited for use above learner speeds. Then in May this year, I struck up conversation with Ian Sangster (sangsfam Ianawhata@zfree.co.nz) who was a stall-holder at the Cambridge Radio Sale. He told me that he had seen one of these keys with the manufacturer's paper sticker still attached - yes, it was Akrad Radio.

I saw a very similar unit for sale at

Bulls Antiques in September this year. I did not study the unit very closely as I was taken aback by the horrific price ticket of NZ\$350. Every detail that I remember of the unit that I saw was identical to the one pictured in MM78. However, I can't remember details of the cabling or the lamp mounting leg. It would be interesting if the one I saw was not the actual unit in MM78, as this would indicate that it could have been commercially produced.

There is a picture of an Akrad key on my web page - click on the thumbnail image to enlarge - <http://www.qsl.net/zl2bbb/Straight%20Keys.html>. Each of the Akrad keys that I own, have a base that is 70mm wide, 150mm long and 13mm thick. The wood is Rimu (a New Zealand native pine) and it has a clear finish, possibly varnish. The finish on the base is very similar to what you would get by using polyurethane on Rimu. If the base of the key in this unit is different to this, it could mean that the complete signalling unit might have been made by Akrad, or that they might have specially made this key for this signalling lamp.

**David Smith, ZL2BBB  
Hastings,**



## Info Please MM78 P36

With reference to Fons Vanden Berghen's key on page 36. This key was designated model F17 and was used by the GPO and certain other services. I think it was based on the DC/163/16 made by Signalling Equipment Ltd. (SEL) of Potters Bar.

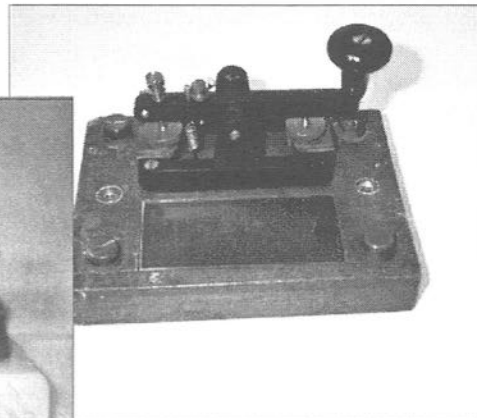
Attached is a photo of one with the Send/Receive switch removed.

I am surmising the GPO used them when they ran out of their brass single current keys. See MM 25 page 41 for reader's reports on these keys.

**Wyn Davies  
Wreccsam, Wales**

I have two of these keys, one in a heavy black crinkle finish and unmarked. The other, has a smoother finish, marked 'F17' on the left hand side of the base and 'SCMF' on the other side as shown in the photo. Does anyone know the meaning of 'SCMF'?

**Jack Barker  
Surbiton, UK**



Above - The F17 key and left - the SEL key.



## Info please MM No77 p 37 Saunders Signalling Key

The key illustrated is a cable-key, used for hand sending bi-polar signals on submarine cables. The code was based on Morse, but using positive and negative pulses of equal length instead of dots and dashes. The inscription should read 'Latimer Clark Muirhead & Co Ltd..' etc. This key has particular interest to me.

In 1870 the Eastern Telegraph Company laid a cable system between here (i.e. Porthcurno) and India, via Carcavelos, Gibraltar, Malta, Suez Canal, Aden etc. By 1872 the system reached Australia and was that country's first telegraph link with Europe. This pioneer cable was followed by others radiating from Porthcurno to all parts of the British Empire and beyond until Porthcurno was the worlds largest cable station and the main telegraphic gateway to the world for Victorian undersea communications.

Rob Wardenaar's key undoubtedly came from the old Eastern Telegraph Co cable station, no other administration on the island would have used such a device. We have similar ones in our collection of signalling and testing keys of all shapes and sizes at the museum, many of them connected to equipment and working.

The key doesn't date from 1870 however, more like 1890- 1910, as they continued in use for emergency sending, communicating with repair ships, etc. long after the main telegram traffic was being sent by automatic transmitters.

*John Packer, Hon. Curator  
Cable & Wireless Porthcurno Trust*

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## Readers Ads

*Readers advertisements are free to MM subscribers. The number of insertions should be specified, otherwise it will be assumed that it is required in the next issue only. Non-subscribers are welcome to advertise in the Classified Ads section. Please contact MM for styles available and rates.*

*Ads can include one photo free of charge*

### FOR SALE

**SILENT KEY SALE:** Double Plate Sounder i.e. "ting-tang" telegraph used on British railways. The two tone sounds represent the Morse dots & dashes. Complete with two sounders, polarised relay in resonator box, dual-action key in wooden case and galvanometer. See MM79 Showcase. Offers via George Robbins, G3LNG, 79 Rosemont Road, Mossley Hill, Liverpool, L17 6BY, UK. Tel: +44 (0)151 7241001.

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**THE MM Q & Z CODEBOOK**, a comprehensive 82-page list of the Q-codes and Z-codes, including a one-page list of the original Q-codes of 1912. Available from Dick Kraayveld PA3ALM, Merellaan 209, 3145 EH Maassluis, Holland. Price £5 UK, or US\$10.00 outside UK, including postage in both cases. Payment accepted in cash only.

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**MINT COPY** of MM19 Spring 1991 Morse Bicentennial Issue, £5 inc p&p (UK only, overseas extra). Contact Bruce Morris, GW4XXF +44 (0) 1654 710741 email: [bruce@gw4xxf.free-online.co.uk](mailto:bruce@gw4xxf.free-online.co.uk)

**EXCHANGE & WANTED**

**WANTED:** Marconi 365A or B key with roller bearings. Will pay going price and it will end up as property of Radio Officers Association as an addition to the equipment held. Contact David Barlow, G3PLE, Pine, Churchtown, Cury, Nr Helston, Cornwall, TR12 7BW, UK. Tel: +44 (0) 1326 240738, e-mail: [dbarlow@lizardwireless.org](mailto:dbarlow@lizardwireless.org)

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**WANTED TO BUY:** Telegraphic Code Books, as used to reduce the costs of telegrams by replacing common phrases with codewords. Would be interested in both originals of photocopies. I am a hobbyist in Cryptography and am facinated in different ways data is and has been represented for different purposes (e.g. speed, economy, confidentiality etc.) Also interested in related items. Letters to Mark Darling,

132 Knowlands, Highworth, SN6 7NE, United Kingdom or e-mail: [darling@patrol.i-way.co.uk](mailto:darling@patrol.i-way.co.uk)

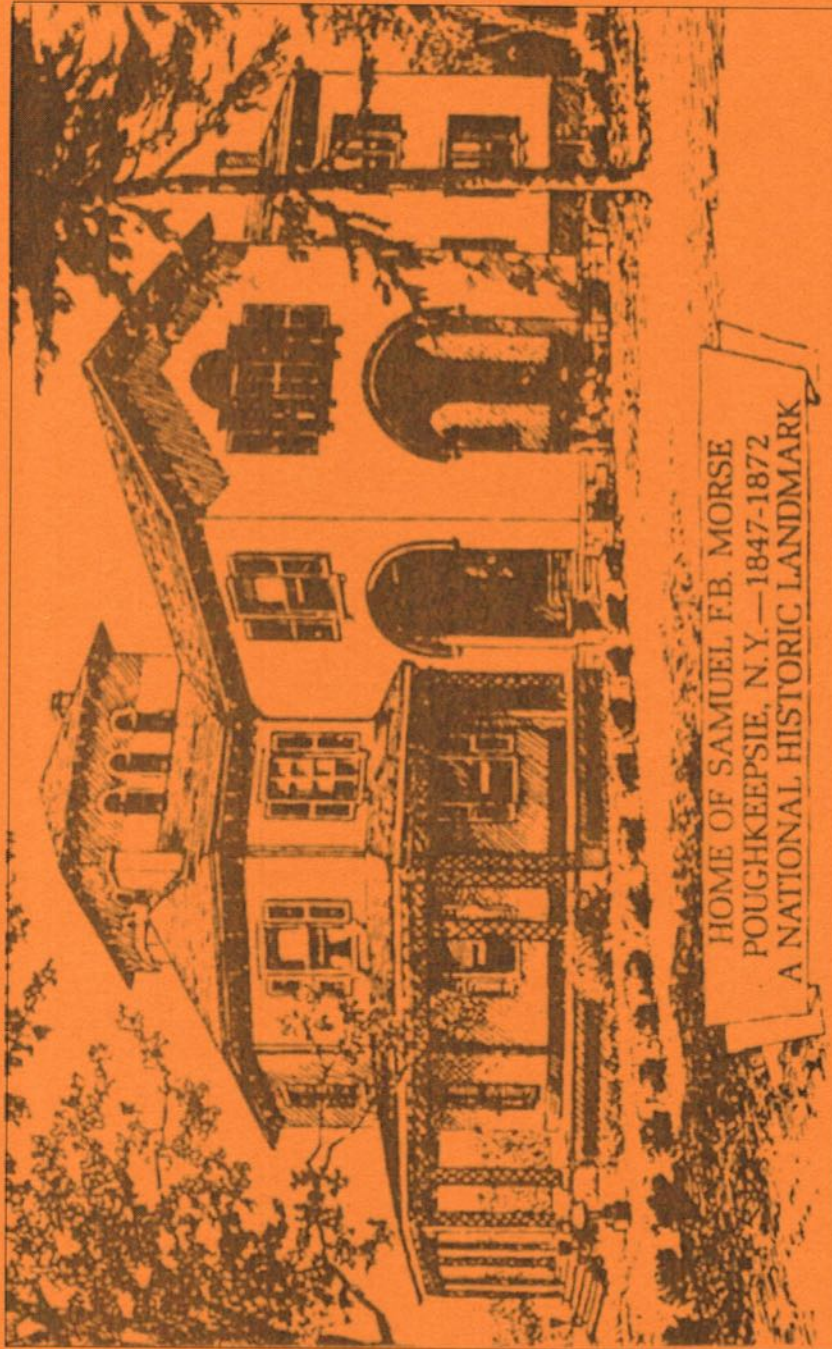
**WANTED: TELEGRAPHY ITEMS** (esp. land-line). I am looking for somewhat special telegraphy apparatus: Single and Double Needle, Wheatstone etc. Buy or swap. I can swap for early electricity (e.g. tubes from Crookes, Röntgen and Geissler; Ruhmkorff; Wimshurst;..), very old radiovalves, some telephony and of course telegraphy. Who else collects telegraphy ?? All letters answered. Fons Vanden Berghen; Lenniksesteenweg 462/22; B-1500 Halle, Belgium.

Tel. +32.2.356 05 56 ( home: after 8 pm my local time) or office: +32.16.38 27 21 or e-mail: [fovabe@telindus.be](mailto:fovabe@telindus.be)

**WANTED TO BUY:** Back issues of MM nos. 6, 9 to 22 inclusive. Also 1960s NATO Navy key (5805-99-580-8558). Please contact Stephen Parry, G4LJZ, E-mail: [stephen@keying.co.uk](mailto:stephen@keying.co.uk)

**WANTED TO BUY:** Old large commercial Morse key such as H. White 1918, or GPO double-current type keys, with or without the metal/metal-glass cover. Would consider exchanging my old Air Ministry Morse Key Type B1, Ref: 10F/7839 in as new condition. Letters to: D. Johnson W5FZ, 15514 Ensenada Drive, Houston, TX 77083-5008, Texas, USA. Or Email: [fullerphone@yahoo.com](mailto:fullerphone@yahoo.com)

**WANTED:** Early paddles such as the Nikey, Autronic, Ham-key HK1 & HK2. Ray Bullock, 40 Little Harlescott Lane, Shrewsbury SY1 3PY, England. Tel: +44 (0) 1743 245896.



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*A Marconi advertisement from The Yearbook of Wireless Telegraphy 1922.*