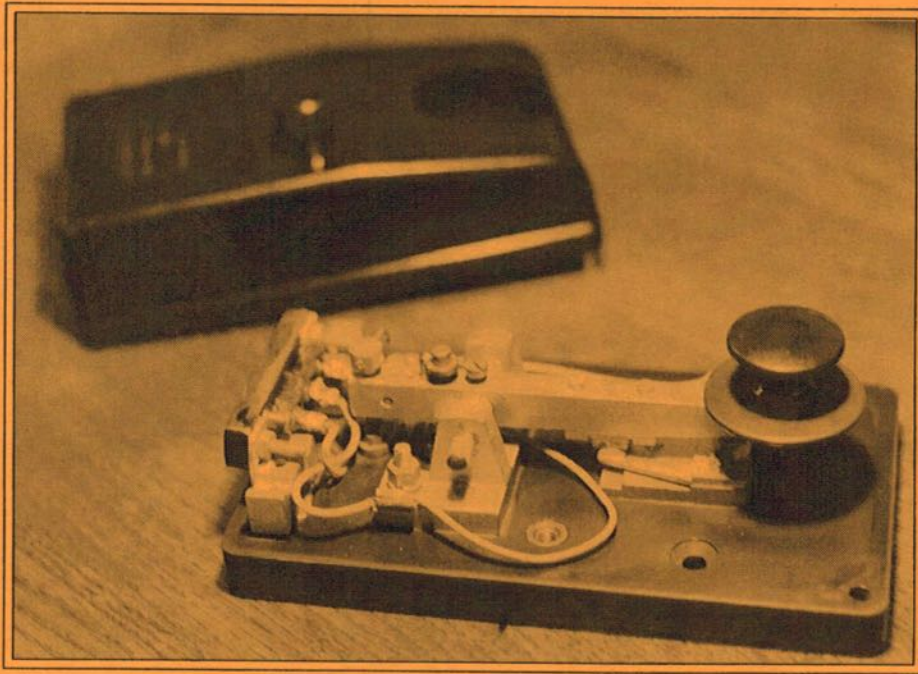


Flying  
the flag  
for  
Morse

Number 36 – October 1994

# Morsum Magnificat

*The Morse Magazine*



*RAF Type D Key*



Flying  
the flag  
for  
Morse

# Morsum Magnificat

ISSN 0953-6426

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

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Printed by Hertfordshire Display plc, Ware, Herts

ANNUAL SUBSCRIPTIONS:	1 Year	2 Years
United Kingdom:	£12.00	£22.50
Europe, including Eire:	£12.75	£24.00
Elsewhere: <i>Surface mail</i>	£12.75	£24.00
<i>Airmail</i>	£15.50	£29.50



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#### ON OUR FRONT COVER

RAF TYPE D key, Ref. 10A/7373. Bert van Kleef, PA0GVK, says, 'I like this rugged key and it works well.' *Photo/collection: Bert van Kleef*

Apologies to David Couch, VK6WT, for misspelling his name in the cover photo credits in the last issue of *MM*



# Comment

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**I** FIND IT A LITTLE DISTURBING that RN radio operators are no longer to be taught the Morse code. (see 'News', page 2 of this issue). I know that from a commercial and military communications point of view, Morse code is fast becoming obsolete in these satellite-orientated days. Several things worry me though. Satellites themselves are vulnerable to collisions with meteorites, or with man-made space rubbish. Second, the antennas which form a vital part of terrestrial satellite systems are vulnerable to the weather and, especially for military systems, to damage due to hostile action or just plain accident. Similarly, tropospheric-scatter links rely on large antenna arrays for their operation.

If these high-tech systems are put out of action, for whatever reason, it is vital to have some other system to fall back on. Such a system won't shift enormous volumes of data at high speed, but it requires only simple, robust, equipment – battery-powered if needs be – and an odd length of wire tossed over a tree or whatever, to put people back in touch.

The Navy decision to continue to teach Morse by flashing lamp at 8 wpm shows that there is some appreciation of the need to maintain an alternative means of communication. Why not keep a basic Morse operating qualification for radio operators too, at a speed safely above the notorious 10 wpm speed-barrier – say 14 wpm – which could at least be built on with further training and practice.

As compared to the traditional options available to a man to keep his trousers up – belt, braces or string – I suppose Morse now ranks on the same level as the string. Nevertheless, it can be reassuring to know that, providing you remember where you put the string, you can avoid that embarrassing situation of finding your trousers lying around your ankles at a time of stress.



G3GSR

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# News

## RN Morse Training Ceases

As from July this year, Morse training has ceased for radio operators in the surface fleet and will cease for submariners from 1996. This due entirely to the demise of Royal Navy and commercial CW activity.

All CW distress requirements (500kHz) will be supported through GMDSS. Flashing light (at 8 wpm) is still being taught.

(Report in *Royal Naval Amateur Radio Society Newsletter, Summer 1994*).

## EUCW

### Fraternising CW QSO Party 1994

The European CW Association's 14th CW Fraternising Party will be held on 19-20 November 1994 as follows (all times UTC):

#### 19 November

1500-1700	7.010-7.030MHz 14.020-14.050MHz
1800-2000	7.010-7.030MHz 3.520-3.550MHz

#### 20 November

0700-0900	7.010-7.030MHz 3.520-3.550MHz
1000-1200	7.010-7.030MHz 14.020-14.050MHz.

All amateur and SWL stations in Europe are invited to enter in one of the following four classes: A - Members of EUCW clubs using more than 10W input or 5W output; B - Members of EUCW clubs using QRP (less than

10W input or 5W output); C - Non-members of EUCW clubs using any power; D - Short-wave listeners.

**Exchanges:** Class A & B, RST/QTH/Name/Club/Membership number. Class C, RST/QTH/Name/NM (i.e., not a member). Class D, Log information from both stations.

**Call:** CQ EUCW TEST. Stations may be worked or logged only once a day, per band, during the contest.

**Scoring:** Class A/B/C - 1 point per QSO with own country, 3 points per QSO with other EU country. Class D - 3 points for every complete logged QSO.

**Multiplier, all classes:** 1 multiplier point for each EUCW-club worked/logged per day and band.

EUCW clubs are AGCW-DL (Germany); Benelux-QRP; BTC (Belgium); CTCW (Portugal); EHSC (Extremely High Speed Club); FISTS; FOC (First Class Operators); G-QRP; HACWG (Hungary); HCC (Spain); HSC (High Speed Club); HTC (Switzerland); IN-ORC (Italy); OK-QRP (Czech Republic); SCAG (Scandinavia); SHSC (Super High Speed Club); SLDXC (Germany); UCWC (Russia); UFT (France); U-QRQ-C (Russia); VHSC (Very High Speed Club), 3A-CW-G (Monaco) and members of these clubs are especially asked to support this event.

**Logs:** to include date, UTC, band, call, info sent, info received, and points claimed per QSO. Summary to include



full name, call, address, total points claimed, station details, power used, and signature. To be received by the EUCW Contest Manager, Guenther Nierbauer DJ2XP, Illingerstrasse 74, D-66564 Ottweiler, Germany, not later than 31 December 1994.

Certificates will be awarded to the three highest scorers in each class. Additionally, by courtesy of Jero Orellana Ramirez EA3DOS, they will receive 'Lilliput' miniature keys (as described in MM29, p.5) provided they are members of an EUCW Club.

This event offers a good opportunity to make contacts qualifying for the 'Worked EUCW' Award (see below).

#### **Worked EUCW Award**

The European CW Association's 'Worked EUCW' Award offers an award certificate printed on heavy parchment type paper depicting the map of Europe 'at the time of Samuel F.B. Morse'. There are three classes of award, 'Standard', for contacts made using any authorised transmission power; 'QRP', for contacts made using not more than 5 watts RF output transmission power; and 'SWL', for short-wave listeners.

Open to both members and non-members of EUCW Clubs, the requirements of the award are confirmed CW only contacts (SWLs – CW stations heard) with 100 different stations who are members of EUCW clubs, over 3 different amateur bands with a minimum of 20 stations worked or heard in each band. The total of 100 stations worked or heard over 3 bands must include at least 3 members of six different EUCW clubs.

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Only contacts made on or after Morse bicentennial day, 27 April 1991, count for the award, with up to 40 stations worked or heard on that day counting for double points. Full details of the award may be obtained by sending 2 IRCs to the EUCW Award Manager, Gunther Nierbauer DJ2XP, Illingerstr. 74, D-66564 Ottweiler, Germany.

The EUCW Fraternising CW QSO Party (see above) offers an excellent opportunity to gain qualifying points for this prestigious award.

#### **Belgian/Canadian Commemoration**

In connection with the 50th anniversary commemoration of the liberation of Belgium, all Belgian radio amateurs may use the special prefix OS instead of ON from 11 September to 31 December 1994.

On 11 November 1944, Canadian troops liberated the town of Knokke, suffering a loss of many lives in the process. Each year the Canadians who died there are remembered during a special 'Canadian Week' with many Canadian and Belgian veterans, VIPs and radio amateurs participating in ceremonies, festivities, and a 32 km 'Canadian Liberation March'.

During this year's March, on November 11, a special amateur station will be on the air on 40m and 80m CW from a 50 year-old army truck, using a WWII transmitter/receiver. The callsign of this unique station will be OS6NF.

#### **Vintage Military Manuals**

*MM* reader Ian Mant has recently started in business, trading as 'Vintage Technical Services', supplying copies of

technical manuals on vintage military equipment. His current catalogue comprises 40 pages x A4 listing all manuals available in equipment alphanumerical order and in manual code number order. Enquiries should be addressed to Vintage Technical Services, 28 Welbourne Road, Childwall, Liverpool L16 6AJ, enclosing an SAE. Telephone enquiries: 051-722 1178.

### **Portishead Radio – 75 Years of Service**

In 1995, Portishead Radio, BT's long-range maritime and aeronautical radio station, will be celebrating 75 years of service.

It was in early 1920 that callsign 'GKT' first appeared on the airwaves, from premises at Devizes, Wiltshire. 1924 saw the move to Portishead's current receiving location at Highbridge in Somerset, with transmitters sited at Portishead, near Bristol.

Many changes have taken place since those early days; satellite communication has now become commonplace amongst the shipping community, but Portishead still has plenty to offer. In excess of 100 ships a day are still being worked on the Morse telegraphy service. The aeronautical and 'Gateway' services provide a vital link from locations where normal telephone and telex lines are non-existent, and in times of war and famine, Portishead can provide an essential link.

Planned celebrations during 1995 include an 'old boys' reunion, where employees and ex-employees of Portishead Radio can get together and reminisce. Any seagoing radio officer who has used

Portishead in the past will also be welcome to visit during 1995, and it is hoped that a 'radio officers' day can be arranged.

Merchandise is planned to be made available to commemorate the anniversary, and a book of radio officers' reminiscences and anecdotes spanning the 75 years of service is in the planning stage.

To this end, if anyone who has had any contact with Portishead Radio since 1920 has any stories or anecdotes (humorous or otherwise) involving Portishead which they would like to share, please write to the address below. Any relating to the years up to 1945 would be especially welcome. The more that are received, the more likely that a commemorative booklet will be produced. Unsolicited testimonials or even general comments on the service will be more than welcome. All correspondence will be acknowledged.

Please send all contributions or requests for further information to: Larry Bennett (Radio Officer), BT Portishead Radio, Worston Road, Highbridge, Somerset TA9 3JY, England.

### **GMDSS Problems**

The following is an extract from the *W5YI Report* dated 15 September 1994:

'We were in London a couple of weeks ago and made it a point to visit the International Maritime Organisation. The IMO is the world-wide United Nations Organisation that promotes maritime safety (SOLAS – Safety of Life at Sea)...

'IMO resolutions are accepted as treaties by countries whose combined

ocean-going fleets represent 98% of the world total. They are also the ones that (in 1988) agreed to discontinue radiotelegraphy on the high seas and replace it with a high tech satellite-based automatic distress alerting system called GMDSS, the Global Maritime Distress and Safety System...

'Captain John L. Thompson heads the Navigation Section in the Maritime Safety Division. We chatted for more than an hour about GMDSS which is just now in the process of being implemented. It will be fully activated in 1999 – at which time Morse code at sea goes the way of the horse and buggy. Radio Officer Unions across the world are not too happy about that! Morse knowledge meant job security...

'I asked Captain Thompson how GMDSS was working out. He said portions of GMDSS – the EPIRBs (Emergency Position Indicating Radio Beacons) were in widespread use today. These manual and float-free devices emit a signal that is picked up by the satellite and relayed to coast stations.

'While GMDSS is a far superior system to radiotelegraphy, Thompson told us he was distressed by the number of false alarms that were being transmitted through the satellite. "Radio operators are 'pushing the button' not realising that they were setting off a very serious international distress alert," he said.

'He also told us about a large vessel that sank recently (either from or near South Africa) that was partially GMDSS-equipped that did not sound the alarm! This was caused by a securely attached EPIRB that did not automatically send a 406MHz distress signal to the satellite.

'The EPIRB is supposed to transmit from the ocean surface. It doesn't work if it goes down with the ship... which it did. The IMO is very concerned about ships that don't follow the rules. Float-free EPIRBs became mandatory on the high seas a year ago – the first part of GMDSS to be phased in.'

*(The W5YI Group, headed by Fred Maia W5YI, is the only organisation in the United States that is both a VEC (amateur radio volunteer examiner co-ordinator) and a COLEM (commercial operator license examination manager) administering examinations for both types of operator on behalf of the FCC.)*

### UFT AGM

The annual general meeting of the Union Française des Télégraphistes (UFT) was held on June 4 at Hyeres. The President, F6AXX, opened the meeting and announcing that the present membership was 520, welcomed members from home and abroad.

The location of the 1995 AGM is to be Rheims (which makes it attractive for southern 'G' members to try out *Le Tunnel*). This will allow the 10th anniversary of UFT to be held at its birthplace.

F3YP, President of France's national radio society, REF-UNION, explained that the 'CW-COMMISSION' of REF was to be wound-up and that UFT would then assume responsibility for all matters relating to amateur telegraphy. This arrangement would also allow non-licensed sympathisers with CW to have a voice.

During the general discussion 42 questions were raised, and some of the



replies given are set out below. Some long hours later, and after having to wake up some of our members (they'll know themselves who they are!), the final words of the meeting were spoken – 'Long life to UFT and see you next year.'

A Selection of Questions and Answers:

**Q.** Why not a UFT contest during the two summer months?

**A.** Too late for this year, but this will be organised as from next year.

**Q.** Can anything be done about QRM on 14.100 which creates difficulty in hearing beacons?

**A.** This is a serious problem, but it is one which we can't do much about. It isn't our responsibility.

**Q.** Can foreign amateurs pay their membership fees in IRCs?

**A.** We will accept anything, IRCs, gold ingots, anything except roubles!

**Q.** Is it possible to obtain two-letter calls for OMs who work CW?

**A.** A good idea, but don't count on it!

*(Report from La Pioche, magazine of UFT, 3/94, translated by Ken Quigg GI4CRQ. For information about UFT, see Club Profile, MM22, p.12).*

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## Married by Telegraph

A dispatch, dated at San Diego, April 25th, says: Last evening, at 9 o'clock, W.H. Story, operator of Signal Service at Camp Grant, was married to Miss Carrie Choate, the daughter of D.L. Choate, recently appointed postmaster of this city.

The parties were at Camp Grant, while the officiating clergyman was at

San Diego, the ceremony being performed by telegraph, in the presence of a large party of friends in the office at either end of the line. After the ceremony numerous congratulatory messages passed between the parties.

*(From the Palmyra Spectator, Missouri, 1876, Reprinted in Dots & Dashes, September 1991)*

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**Bygones**

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**Binders for**

Stocks of the binders designed to hold 8 issues of *MM* are now exhausted. New binders, matching the old ones in style and colour, but holding 12 issues (2 years-worth) will be available shortly.

See the next issue of *MM* for details



I AM ONE OF THOSE PEOPLE who habitually anticipate what others are going to say while they are still saying it. My thoughts champ at the bit, eager to arrive. If the speaker hesitates or struggles to find a word, I've got one ready to help. That's at regular talking speeds, which average about 150 wpm. How much more eager my mind is to jump to conclusions as I listen to code coming in at 10 or 20 or so

wpm. It is hard to hold back the mental horses. Suppressing this long-practised habit seems harder than it was to learn the code originally. The problem is compounded if the code characters have not been properly mastered (I went through that, too!); but overcome it we must – along with any tendency to let our attention drift off to something else – or we're almost certainly going to lose out and miss what follows while we speculate or daydream.

#### *At All Speeds*

For me, this tendency has two interesting features. The first is that it occurs throughout my whole range of receiving speeds, although maybe it is a little worse at the slower speeds. The other is that it tends to pick on the longest words most often. In addition, if I'm especially interested in what's coming in I'm very likely to miss a key part of it. All this says that my attention is being distracted from the signals. Expert telegraphers tell us that

the biggest source of error in copying is to get too interested in what's coming in.

No matter how uncomfortable it may be to break this habit, I've got to learn to concentrate single-mindedly on the

incoming signals. I must learn while telegraphing to accumulate and not to anticipate. It is a different ball-game. Perhaps the psychologists would say

that I've got to condition my thinking to accommodate the code.

#### *Telegrapher's Mindset*

I've got to learn to listen it out. It will take patience. Old habits will insist on butting in. I must persist until I've gained the telegrapher's mindset. Could it be that one of the best ways to arrive would be to listen a little more often to the really slow senders where the need to concentrate on the signals alone is more stringent? But of course we don't want to limit our speed range.

There's a closely related aspect. Sometimes, oftener than I like, I find my mind racing off ahead and I suddenly wonder: 'Where am I? Did I send that word? Did I leave out a letter?' This trouble is like that of the person whose words seem to tumble out, with thoughts gushing out so fast that they tumble all over each other. Although it's awkward, this happens less often when I have first written down what I want to send. **MM**

---

## Missing Out

by *Wm G. Pierpont NOHFF*

---

**A**T THE AGE OF 24, in 1963, I was fortunate in being selected as a radio operator to fill one of twelve vacancies, to winter in the Australian Antarctic Territory for twelve months or more. Those selected were a mixture of Post Master General landline (sounder) telegraphists, and ex-radio operators from our military services. We were to become Australian National Antarctic Research Expeditioners (ANARE).

Members of the communications group were posted to our four Antarctic stations, namely Macquarie I., Wilkes, Davis, and Mawson. I was posted to Mawson and returned there for a second stint in 1965. Mawson Station is named after Australia's eminent polar explorer, Sir Douglas Mawson, and was opened in 1954.

It is well worth mentioning that our expedition leader was Dr Philip Law, who led expeditions to the great South Land on 27 different occasions. He is now in his early 80s, active, and in good health, and attends our mid-winter reunions each June, as well as other

functions throughout the year. His record in promoting exploration and scientific endeavour in the Antarctic is incredible.

#### *Little or No Radio Experience*

Most of the landline telegraphists had little or no radio experience, but were good Morse men in their own right. The military boys were very encouraging and helpful, and in a reasonably short time we could receive CW by radio, and tune transmitters and receivers. We helped to rig the antennas and gained other radio knowledge.

For our part we showed some of them how to operate 'bugs' (semi-automatic keys) or 'jiggers' as we call them. I was lucky in having a little radio experience. I

had spent some time in New Guinea as a communications officer in 1961 and, later, in Brisbane with the PMG I helped occasionally on the Brisbane to Thursday Island radio circuit with public telegraph traffic.

#### *Helped the Ship's Operator*

My group left Melbourne in early January 1963, in our small polar vessel,

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## Australian Radio Operating in the Antarctic – 1963 and 1965

**An article in MM33 ('Polar Radio 1912 Style') described the radio operating activities of Sir Douglas Mawson's Australasian Antarctic Expedition in 1912–13. Following that article, Allan Moore VK1AL sent MM this account of Australian Antarctic radio operating 50 years later. He describes a world of polar radio far different from that of 1912. A world where Morse telegraphy was still giving good service, but was now beginning to be overtaken by radio teletype**

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1965 – Allan Moore at Mawson's 2nd Morse position. Left is an auto-dial unit for the 5kW transmitter and selector switches for other remote transmitters. Centre is a single-case typewriter for copying CW. Right is a Collins 51J-4 receiver and old Vibroplex bug on the desk

MV *Nella Dan* of 2147 tons, which was leased from Danish owners. We headed for Heard Island, located well south in the stormy Southern Ocean, and after what seemed to be an eternity of thrashing around, with many sleepless nights, we arrived at this magnificent, isolated, rugged volcanic outcrop rising many thousands of feet from the ocean.

During the voyage, we sometimes assisted the ship's operator by working Sydney Radio and handling fairly heavy volumes of official traffic for the expedition. The radio equipment was Danish and, from memory, was manufactured by Elektromechano.

We landed a team of scientific personnel, including a very experienced radio operator named Nils Lied (deceased early 1994), and headed further south for Mawson. This is located on the Antarctic Continent, a little beyond 66 degrees South latitude.

#### ***Expedition Changeovers***

After unloading and backloading the vessel, the expeditions changed hands after the usual celebrations and the *Nella Dan* headed for Davis, some 400 miles to the east. There, identical activities would occur – the expeditions would change over and the ship would depart

for Australia. We would not see her for the next year and our little group of 26 men settled in to their new working and living conditions. The *Nella* would head for Heard Island after Davis, to pick up the so-called 'summer' expedition and return them to Hobart or Melbourne.

(Sadly, after an illustrious history, the *Nella Dan* burned and sank off Macquarie Island, fortunately without loss of life, in 1987. It has since been replaced by our own Antarctic Vessel, the *Aurora Australis*, callsign VNAA.)

### Radio Office

Our radio office was a small prefabricated building, destined to be vacated when we built a new and larger office during the year. Our call sign at Mawson was VLV, and we communicated by Morse or radio teletype with the bases or radio stations listed below (on my second trip in 1965 some of the bases had closed down, or opened, or reopened – but for the purpose of this article they are lumped together).

### Equipment Used

Our equipment (listed opposite) may not be familiar to all the readers of *MM*, but some may strike a chord.

### Ships and Aircraft Worked

During my two separate expeditions we also worked with the Soviet polar vessel *Ob/USDV*, the Japanese polar vessel *Fuji/JSTY*, the *Nella Dan/OZKC*, our own helicopters and fixed-wing aircraft, and aircraft of the Soviet Union based in the Antarctic. On many occasions we worked a small Australian ex-loxster/fishing boat named the *Patanela* which was lost or presumed missing many years later. At the time (1965/66) she travelled to Heard Island and returned safely to Australia.

The bulk of the radio traffic was meteorological and scientific in nature, followed by administrative and personal traffic. Mawson station operated seven days a week, all year round, for about 20 hours each day.

Given the number of schedules and

LOCATION	COUNTRY	CALLSIGN	MODE USED
Macquarie Island	Australian Base	VJM	CW
Wilkes	Australian Base	VNJ	RTT/CW
Davis	Australian Base	VLZ	CW
Heard Island	Australian Base	VJH	CW
Perth Radio	Australia	VJP2/4	CW
Mirny	Soviet Union Base	UFE	RTT/CW
Molodheznaya	Soviet Union Base	RUZU	CW
Johannesburg	South Africa	ZUJ	CW/RTT
Marion Island	South African Base	ZRS	CW
S.A.N.A.E.	South African Base	ZRP	CW
Kerguelen Island	French Base	FJY2	CW/RTT
Amsterdam Island	French Base	FJY4	CW
Roi Baudoin	Belgian Base	ORV	CW

EQUIPMENT	MANUFACTURER	USE
<b>Transmitters</b>		
CTH7 – 5kW (Main TX)	AWA (Australia)	CW/RTT on longer circuits
G426 – 1.5kW (Secondary TX)	Redifon (UK)	CW/RTT plus SSB on longer circuits
1619C – 1kW	Philips (Australia)	An old but highly reliable broadcast transmitter fixed on 5835kc/s to work Davis on CW only
AT20 – 500W	STC (Australia) WWII RAAF TX	Several – on fixed frequencies to work ships and our field parties. One of these units was located permanently in our radio shack as a stand-by in the event of fire in the remote transmitter station. It was used extensively on 6244kc/s in my time to work direct with Soviet aircraft in the Antarctic
ART 13 – 100W	Collins (USA) WWII Aircraft TX	Converted to 400kc/s aircraft beacon
ANGRC-9 – 15W (‘Angry 9’)	USA WWII military transceivers	CW/Phone. Used for mobile vehicles on field trips, and using a ‘prayer’ wheel for dog sledging trips
<b>Receivers</b>		
51J-4	Collins (USA)	Main receivers – manual tune
PVR-500	Plessey (UK)	Crystal-locked RTT receivers, dual diversity
AFS-11	Redifon (UK)	FSK receiver adaptor
AR-7	Kingsley (Australia) WWII RAAF	Originally main receivers in earlier expeditions. Now used for aircraft and ships’ distress listening frequencies. Similar to HRO model

stations, this was a rare opportunity to absorb oneself in Morse, and in radio teletype as this gradually gained in popularity.

#### ***Mishmash***

There was also a mishmash of other WWII items, plus equipment built by

Australian organisations and individuals, which were phased out in my time. On my first expedition we worked Johannesburg by transmitting prepared Morse on tape, using the old Wheatstone (or similar) Morse transmitters, and received directly by ear. As happened in Kerguelen, we gradually moved to



RTT each way when aerals and equipment improved.

I recently had the pleasure of meeting up again, at our Morsecodians Fraternity reunion in Sydney, with Bill Storer (VK2EG) who helped open Mawson Station in 1954, and Leo McGarrigle (VK2YB) who served at Heard Island in 1950. Both remembered their primitive equipment which in the main consisted of AT20 transmitters, AR7 receivers and AR8/AT5 aircraft type receivers and transmitters.

For antennas we had the usual mixture, including dipoles and sloping 'V's, but the terminating rhombics were very popular and these seemed to be the most useful.

#### *Morse Keys*

We used a variety of keys, including conventional up-and-down keys; Australian Simplex Autos (semi and fully-automatic), made in Melbourne; American Vibroplex bugs; and a few oddities from the PMG days such as the MacDonald Pendograph and the Auto Morse jigger, both from Adelaide, South Australia.

We also had a go at making automatic keyers using valves (tubes), based on circuits from the *ARRL Handbook* of the day, and these worked well.

#### *Teletype Equipment*

This, again, was a mixture of equipment. We used Chicago Teletype Model 15s, and allied Model 14 tape punchers for RTT working, also the more modern Siemens Model 100 teletypes with tape punching and reception ability. When we went entirely to operating RTT be-

tween Mawson and Johannesburg, the tapes were very helpful during auroras.

This phenomenon would blank out frequencies for long periods at a time. On one occasion we lost contact with Johannesburg for nearly 16 days, but by working all one afternoon cleared our backlog. Obviously the weather reports were outdated, but they helped provide information for future forecasting.

#### *Good Rapport with Other Operators*

I am sure we all enjoyed working CW the most, and we had an exceedingly good rapport with operators of all nations. An example was our South African counterpart, Ray Statt, who was at Marion Island in 1963. Coincidentally, he was posted to the SANAE base on mainland Antarctica in 1965 enabling us to renew our radio friendship.

Another coincidence occurred one morning when I had just finished working Davis on 5835kc/s. A low intensity blizzard was blowing, causing annoying drift static (QRN). I heard a very weak signal calling me. It was Molodheznaya on our frequency and the operator asked if we would pass his weather message to the main Soviet base at Mirny.

I took the message and asked him his name. It was Oleg Brok – who had come through Mawson with his aircraft in 1963 and had been posted to Molodheznaya in 1965 – and he remembered my name as well. If Ray and Oleg read *Morsum Magnificat*, I hope they will make contact with me.

#### *Soviet Aircraft*

For me, the most enjoyable radio work was operating direct to the Soviet

aircraft when they flew the 1200 odd miles between Mirny and Molodheznaya, with our base roughly in between. Their ship, the *Ob*, left fuel for them in the summer months and we would meet the aircraft on improvised landing strips on top of the clear blue-ice plateau and help pump fuel into them. If the weather closed in we would take the crews back to our base, and provide meals and shelter until the blizzards finished.

These men in their flying machines were really magnificent. In my time, they flew in Lipinov 2s on skis (resembling Douglas DC-3s), Ilushin 12s on wheels (resembling Convairs), and the Antonov AN2 biplanes on skis which could land and take off in ridiculously short distances.

Although we were not expert, it seemed that the aircraft transmitters were similar to the ART-13, but with Russian characters on the face of them. I don't know about the receiving side however.

Their standard of Morse operating was superb and I only wish I had had the means to record some of our transmissions. While the Russian aircraft operators had conventional hand keys, some also had side-swipers (or Peckinlackers as Nils Lied called his), and they were extremely proficient in their use.

During the flying season, all Russian aircraft, their ground stations and we at Mawson, wound up our transmitters on the aircraft frequency of 6244kc/s and maintained remarkably good contact with each other.

#### ***First Intercontinental Trans-Antarctic Flight***

During 1963, our radio supervisor

Keith (Blue) MacDonald, an ex-Australian Navy operator (now deceased) with a previous tour of duty at Mawson in 1961, monitored the first flight of US aircraft across the Antarctic continent, from South America to South Africa.

I think the aircraft group consisted of two or three Hercules, and Blue maintained contact with them all through the long flight.

#### ***Radio in Field Vehicles***

Our Snowtrac and Weasel vehicles were equipped with the 'Angry-9' for field work, and we used the lower frequencies of 2720 and 4040 to work back to Mawson through the whip antenna. Our tractor-trains travelled many hundreds of miles into the interior of the continent during the autumn and spring months and we would have CW skeds to pass traffic each way during their up-to-three months' absences.

Our little station at Davis (manned by 10 men in those days) seemed to lie in a good radio reception area, and would work our travellers as well with very strong signal reports each way.

Our man-led dog teams also took Angry-9s with them and obtained power from the 'prayer' wheels which were hand-cranked. Usually a whip was used, but on the plateau ice, which is particularly pure, dipoles could actually be laid out straight onto the ice and they would load and transmit very well.

#### ***Still in Touch***

With modern technology these days, the fun of operating must surely have lessened. As far as the Australian Antarctic bases are concerned, Morse seems

to be on the way out with the introduction of satellite links to Australia and other places.

Many of our operators from the earlier days (some of whom have amateur radio licences) have not lost touch however. They recently joined forces in Melbourne, Williamstown and Canberra to commemorate the 140th Anniversary of the First Morse Telegraph Circuit in Australia (and in the Southern Hemisphere) by operating Morse telegraph lines between the three venues, exchanging public telegraph traffic without charge. (*See report in 'News' in MM35. – Ed.*)

#### *More from Others?*

This article is not an exhaustive study or recollection of events during my time in the Antarctic, and it only scratches the surface. Perhaps others may be induced to write about radio in their years where it differs from this account.

Also, I'm sure we would receive some great stories from operators at the Antarctic stations of other countries – and perhaps from our friends and colleagues who wintered in the far Northern regions as well.

*To them all: All the best from your Australian friends – Allan Moore (VK1AL) et al – 16 May 1994.*

*After reading these fascinating memories, we very much hope that other polar radio operators will respond to Allan's invitation by sending MM their own stories. – Ed.*

---

## That Station...

Of all the stations I have worked,  
This station is the best.  
A 'Haunt' for all the lazy boys –  
And those who need a rest.

Hard at work at six o'clock,  
Off come coats and vests,  
You carry in a pile of wood  
To smoke away the pests.

These pests are mainly different bugs,  
(The skeeters are the worst),  
And on the war-path all the time  
For naught but blood they thirst.

With head 'phones on at seven bells,  
You shoot some N-I-Ls.  
The spiders get so thick just then  
You pray for shrapnel shells.

At eight o'clock the 'larm is set,  
To wake you up for lunch;  
You dim the glim and pull the shades  
– And roll up in a bunch.

At one o'clock you Q-R-U,  
And set the clock for four;  
To get that M-S-G report,  
The P & O waits for.

At four o'clock your work is done,  
You've got that M-S-G;  
So nap till six, then doctor up  
That log, artistically.

*From 'Radio Ravings', conducted by  
D. Phectiff Inslater,  
Wireless Age, Nov. 1915*

# **G4ZPY**

## **PADDLE KEYS INTERNATIONAL**

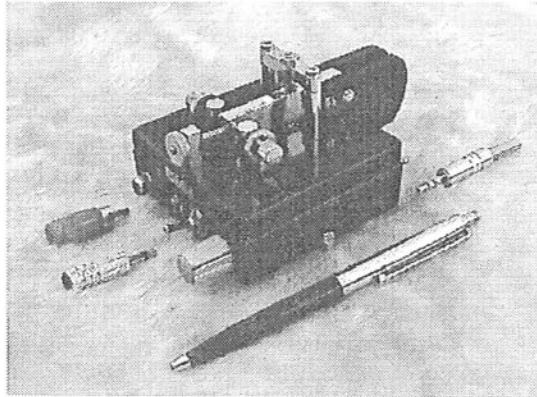
41 MILL DAM LANE, BURSCOUGH,  
ORMSKIRK, LANCS., ENGLAND L40 7TG  
TEL. (0704) 894299

Long have users of Single Lever Keys asked us to produce a combo for them. Now we've done it ... and we think it's the first one to be commercially made.

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Available in five different finishes, all with 'key-down' switches incorporated and with one little extra! If you get tired of using the Single Lever, and would like to change over to a Twin Lever, there is a jack socket fitted to enable another key to use the same Iambic Electronic Keyer.



The Single Lever Combo is just one of  
17 further models which were added to  
our product range in February 1994  
*For information on all our Products, just send a  
9" x 4" S.A.S.E. (GB), or 2 IRCs Overseas*



**D**O YOU SUFFER from the problem that you cannot easily change the speed of your keyer? You notch it up a bit and it goes into stratospheric speeds – so you turn it back a bit and now you are crawling?

If this is a familiar problem and you would like to fix it easily, cheaply, and reversibly then read on. This method is known to work with simple keyers, it may also work with microprocessor based keyers but I have not tried it.

### Two Problems

The root of the problem lies in the fact that simple keyers, such as the Kanga and Curtis Chip, use an *RC* oscillator to provide a timebase which drives a few gates to generate dits and dahs. Altering the frequency of the oscillator changes the speed at which the elements, and hence the code, are produced.

There are in fact two problems. The first is that the speed control is non-linear and crowds the high-speed end of the range. The second is that many commercial keyers cover a very wide speed range, e.g., 5–50 wpm, and thus make the first problem worse.

The first problem can in theory be solved by fitting a variable resistor that obeys the correct law, i.e., one whose resistance changes in a suitable non-

linear manner when it is turned. Such resistors may exist, but not for the normal amateur whose purchasing ability is limited to linear or log-law potentiometers.

### Solutions

I have developed four solutions to this problem using standard components. Two of them have been tested and work. The other two should work...

**Solution 1:** First decide the speed range over which you wish the keyer to work. This does not have to be an exact figure. Turn the speed control to give the required top speed. Now measure the resistance that the speed control

potentiometer has put into the circuit say, as an example, 11k $\Omega$ . Next, turn the speed control to give you the lowest speed you want and again measure the resistance, say 240k $\Omega$ .

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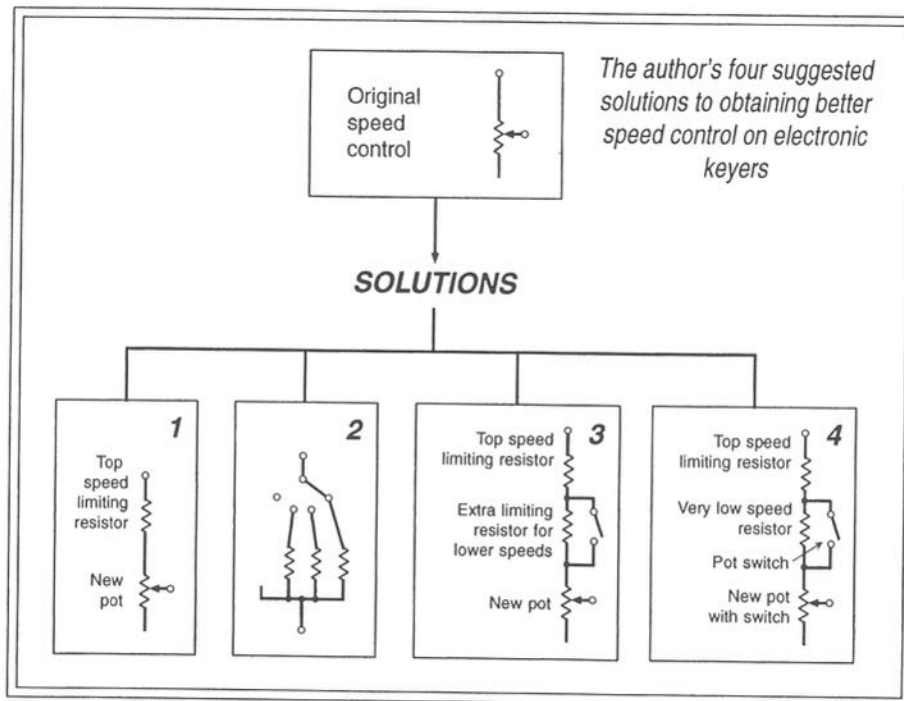
## Smoother Speed Control for Keyers

by Gerald Stancey G3MCK

---

Replace the existing pot with a linear pot of 229k $\Omega$  (i.e., 240 – 11) and a series R of 11k $\Omega$ . However, 229k $\Omega$  pots are not a standard value so you will have to choose the nearest, i.e., 250k $\Omega$ . If you have several 250k $\Omega$  pots measure each one with an ohmmeter, as due to tolerance spread some may be better than others for your application. This arrangement will give a slightly lower speed than you wanted. I have used this method to set my Curtis keyer to 16–30 wpm.

**Solution 2:** This method uses a rotary



switch instead of a potentiometer. This time, select values of resistance to give you both the required speed range and steps in between. I used a six-pole switch to set my Kanga keyer to 16, 18, 20, 22, 24 and 26 wpm. I found that 2 wpm steps were quite acceptable. Use of a switch with more poles would give a wider speed range or closer steps.

**Solutions 3 and 4:** These methods are hybrids of the above and have not been tested. They both give wider speed ranges while still allowing good 'band-spread'. The first does this by using a switch to select different values of top speed limiting resistance. The disadvantage here is that a hole must be drilled in the keyer's case for this switch.

The second uses a pot which carries an on/off switch which is used to give

one speed which is significantly lower than that given by the pot. For example, giving a single speed of 12 wpm then a continuously variable speed of 16–30 wpm. See illustrations above.

#### **Speed Measurement**

The above has glibly referred to speed, and in fact the keyers can be modified as described, i.e., your required speed range can be obtained by a system of trial and error.

For those who wish to delve a little deeper into the design, it appears that a graph of potentiometer resistance against reciprocal of speed in wpm is a straight line. If you construct this graph you can determine the values of the resistance required without the need for experimentation. **MM**

**I**N KEYER DESIGNS there are two features which provide good news/bad news situations. One feature is 'automatic character space' or 'forced letter space'. With this, if one uses a space between characters which is greater than the length of a dot but less than the correct space, the good news is that keyer automatically puts in the correct space.

The bad news is that if one does not move fast enough from one paddle to the other, the keyer may not put out what one intended. A sloppy 'A', for example, can become 'E T'. I think that it is instructive to try this feature, to see if one's too-close character spacing is corrected, or to see if one sometimes sends characters which have disjointed dots and dashes.

The other feature, which I think is less widely recognised, is dot memory timing. Dot and dash memories are usually used in keyers because at high speeds one tends to lead the keyer. However, most keyers incorporate this feature in the same way for a dash following a dot as for a dot following a dash, ignoring the fact that a dash is longer than a dot.

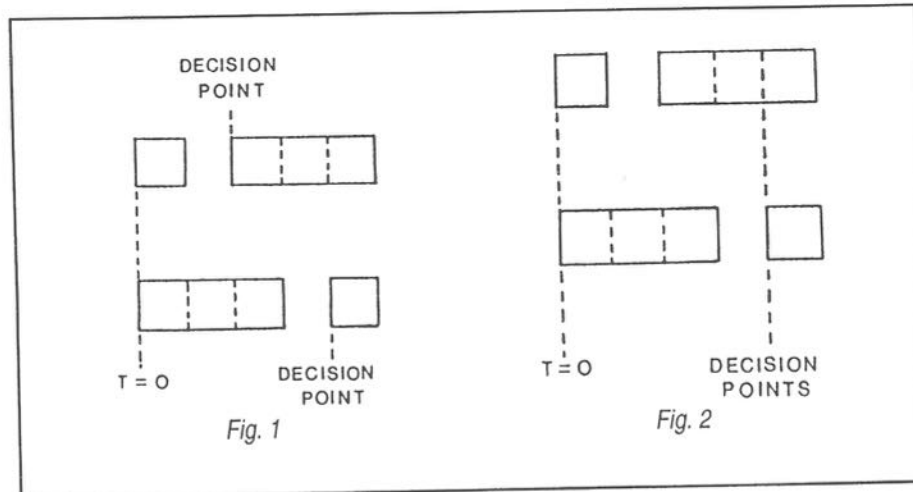
The bad news is the ensuing 'trailing dot' problem, in which one gets an

unwanted dot after a dash which has been preceded by one or more dots. This happens with conventional keyer designs because in making an 'A', for example, one must release the dot paddle before the dash starts, or an 'R' will result. In making an 'N', one has more time to release the dash paddle before the dot

## Keyer Design

Good News/Bad News

by Tony Berg W1OT



starts; this is why there's no 'trailing dash' problem! See **Fig. 1**.

The good news is that various designs incorporate dot memory timing which ameliorates the above effect. For example, the WB4VVF Accukeyer design responds as described above, but K8AW designed a two-chip modification for it which allows for release of the dot paddle until the end of a dash following a dot without getting a dot after the dash.

The KCOQ/N0II CMOS keyer design incorporates a hardware selectable feature to set this decision point either conventionally or a third of the way

through the dash. The K9CW contest keyer design, (with v 5.4 firmware), sets the point two thirds of the way through the dash. This makes the most sense to me, as it equalises the decision points. See **Fig. 2**.

Even if one normally does not use squeeze keying, the benefits of such dot memory timing can be verified by squeeze keying the letters 'A', 'R', 'N', and 'K' at increasing speeds with keyers of different designs, and noting rates of success at producing what was intended.

*Reprinted by arrangement, from FOCUS, Journal of the First Class CW Operators' Club, No. 4, Autumn 1990.*

### **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.

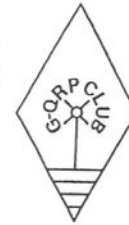
The club has awards, nets (including a beginners' net), dial-a-sked for beginners, straight key activities, QSL bureau, newsletter, and discounts from traders.

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

### **G-QRP Club**

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.

Enquiries to **Rev. George Dobbs G3RJV, St Aidan's Vicarage, 498 Manchester Road, Rochdale, Lancs OL11 3HE**. Send a large s.a.e. or two IRCs



**If you enjoy reading *Morsum Magnificat*,  
please tell your friends about it and  
encourage them to take out subscriptions too!**

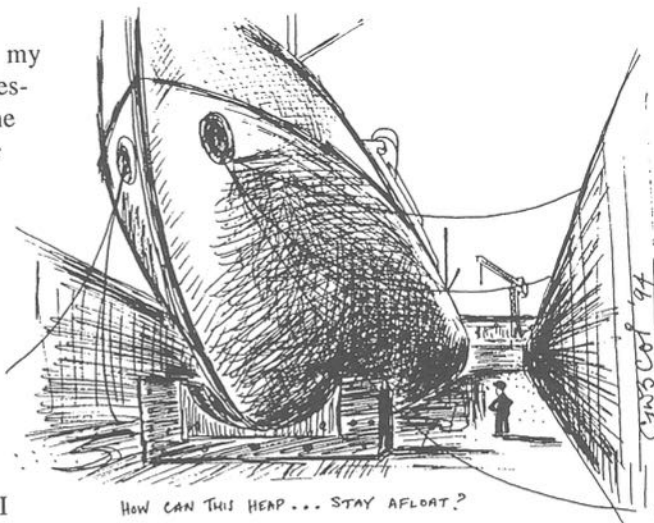
**A**LTHOUGH my first impressions of the Norwegian freighter *Nye Trygv* took place more than forty years ago, they are still fresh in my memory.

Imagine a 19-year-old youth just out of school, who has never been away from home, suddenly in the position of Radio Officer in a seagoing vessel. When I first saw the freighter at close range in the dry dock, my first thoughts were 'How can this heap of rusty scrap iron stay afloat?' That the vessel had been docked just because of the rust and the need for a few minor repairs did not enter my mind.

No wonder, I did not know anything about ships, let alone ship's maintenance. My previous nautical experience never got beyond the sight of beautiful steamers crossing the waves of the North Sea at full speed, admired from the beaches of the Hook of Holland where my parents had a summer cottage.

#### *Incomprehensible Welcome*

Without strain, nerves or embarrassment, I mounted the steps of the gang-



way, and entered my first ship. At the end of the steps a sailor, maybe impressed by my new uniform and shining shoes, showed me, without saying anything, the way to the master's cabin.

Captain Eigel Vesti, who had been notified by the Norwegian Consul in Rotterdam, welcomed me on board in a very incomprehensible kind of English.

Obviously this must have been my

fault because apart from the BBC I had not heard a word of spoken English in my life. (Schoolteachers of course are a different species and cannot be taken into account!). But this was the real McCoy, a completely different cup of tea compared with the newsreader in London!

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## Reflections from Uncle Bas – 20

Very Proud

by *Bastian van Es PA0RTW*

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### **Initial Doubts**

In spite of the language problems, the introduction and necessary paperwork went very well. Much later, the captain told me that at that moment he really had been in doubt as to my capabilities as a sailor and a Radio Officer. I had given him the impression of just being out of kindergarten!

At the time, though, he had not revealed these doubts, and at the end of the interview just said, 'follow me, I'll show you the radio cabin and your quarters.' He mounted the steps to the wheelhouse annexe chartroom and walked through a small passage to the door of the radio cabin.

I ran like a doggy behind him and could not believe my eyes. At that moment, I realised that what had begun as a fanciful adventure had changed into the reality of a beautiful, nicely paid position on board a genuine steamer.

### **Only a Short Trip**

The radio cabin was a very small shack, welded against the rear of the wheelhouse. Entry was via an iron door and another door within the radio cabin gave access to my own cabin in which there was a bunk, a wardrobe, a settee and a writing table. This was to be my 'home' for the next two years although I did not know this at the time.

The consul in Rotterdam had said,

'It is only a short trip, just to the West Indies and back.' Who was I to distrust this official person? The captain told me to get acquainted with the equipment and wasted no more time apart from a final remark, 'dinner at 1200'.

### **A Strange World**

There I was, alone in a completely strange world. But from the first moment I loved that radio cabin. It was

beautiful, it was fantastic. The smell of the radio equipment was sweeter than the most expensive perfume from Paris. It was also very familiar. I had grown up amongst surplus WWII radio gear and this made me feel very confident in that cabin and aboard that ship.

To be honest, I had been worried stiff that I would be a complete

fool concerning both ships and radio gear. How was I to operate radio apparatus of which I had not the slightest knowledge? My dad, who had been a radio amateur since 1925, had bought several surplus American army and navy receivers and transmitters after the war. One of the receivers was a BC-348 and there was also a transmitter type TDE.

### **Happy Coincidence**

Obviously, I had played around with both of these and now, by happy coincidence, I found the same equipment on the ss *Nye Trygv*. The echo sounder was



I FOUND THE SAME EQUIPMENT..

Marconi and we had studied this machine in detail at the radio school before taking the final exams. The same was true of the Automatic Alarm receiver. All in all, it was a piece of cake!

That the Marconist on board Norwegian ships has a lot more to do than just operating the radio station was unknown to me until several days later. However

at that moment I felt very proud, having dispatched my first cables via Bergen Radio (LGB) with no problems like 'PSE RPT' or 'QTB' (= 'I do not agree with your counting of words'. - Ed.).

There were many telegrams to follow before I left that ship after several years, and after sailing thousands and thousands of sea-miles in her. **MM**

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## Bold's Morse Theorems

### Bold's First Morse Theorem

**'Every CW Ham has a preferred range of speeds outside of which he rarely operates or listens. The maximum and minimum speeds are in the ratio 2:1.'**

*Explanation:* If you can readily copy 20 wpm, you will almost never listen to stations outside the speed range 10-30 wpm... This is completely subconscious. The reason for the upper limit is current ability. The lower limit is more interesting. I've heard QRQ operators, after tuning over the CW section of a band populated by a few slow, hesitant beginners, announce 'the band is empty tonight'.

It seems that, to them, code beneath the lower speed limit may not even be 'noticed' as Morse. Some tell me they even have difficulty reading slow Morse! So if a high-speed type doesn't come back to your careful 12 wpm answer to his CQ, maybe you're NOT being

snubbed, maybe you just 'weren't perceived'. Maybe someone will do a psychological study of this some day.

*(From 'The Morseman' column by Gary Bold ZLIAN, in Break-In, journal of NZART, June 1987.)*

### Bold's Second Morse Theorem

**'As operating experience grows, CW operators progressively underestimate their sending speed.'**

*Explanation:* This is quite subconscious. An experienced operator once told me, 'I called CQ at about 12 wpm on 80 last night, hoping to talk to some new Hams - but nobody answered'. I had in fact heard him; but he was actually sending at nearly 20 wpm as measured by my code reading software.

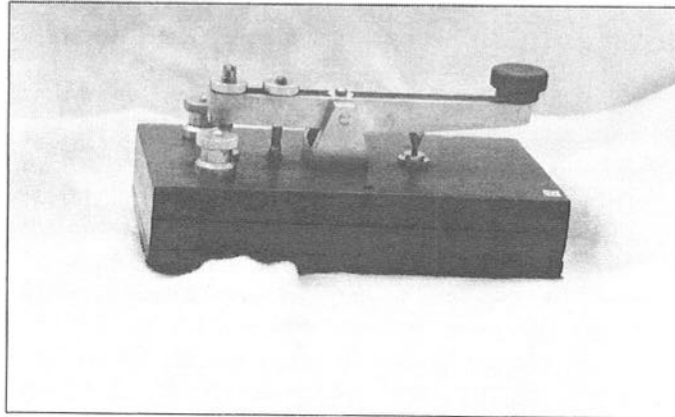
He found this hard to believe, and was astonished when I sent him some 'true' 12 wpm. So if you really want to give a newcomer some practice, please check your speed. Twelve words per minute is five dots per second. Set your keyer with a stopwatch.

*(From 'The Morseman' column by Gary Bold ZLIAN, in Break-In, journal of NZART, July 1987.)*

# Info Please!

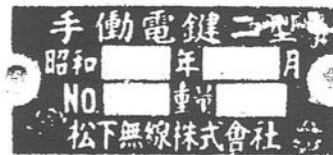
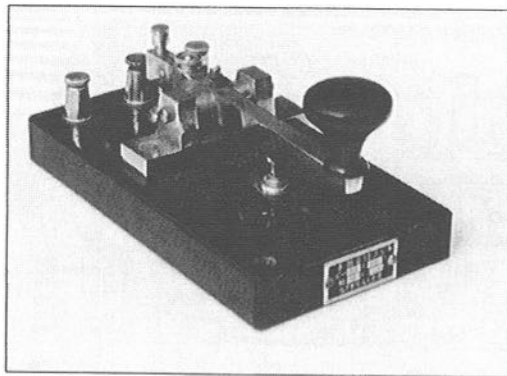
*Readers require further information on the following keys, etc.  
Please write to Tony Smith, 13 Morley Road, Sheringham, Norfolk NR26 8JE  
if you can help.*

*All useful information received will be published in MM in a later issue*



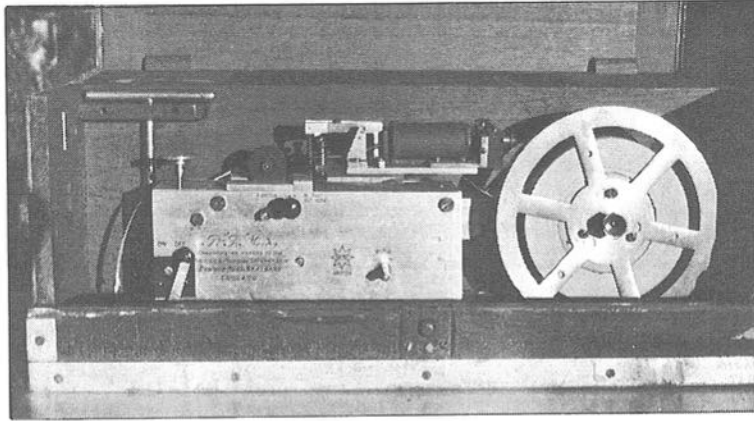
*Unknown key. No markings. Base slides open to reveal a large  
0.25 $\mu$ F paper capacitor. Any information welcome. Does the knob  
style indicate Italian origin?*

*Collection/Photo: Wyn Davies*



*Korean (?) key, and (above) the  
maker's plate on the same key.  
Information on the key and a translation  
of the plate are requested*

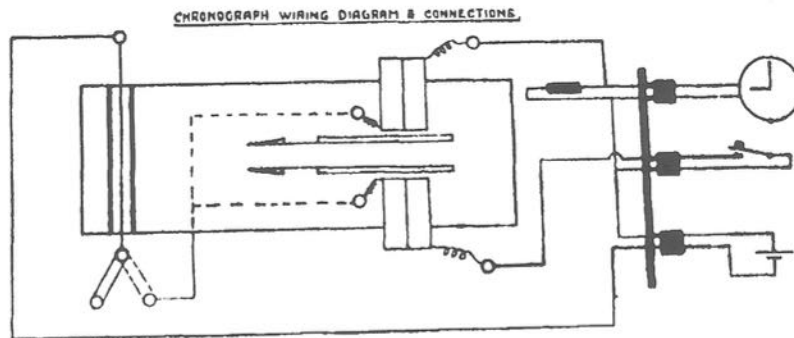
*Collection/Photo: Maurice Small G0HJC*



*Chronograph by F.T. Mercer(?), Chronometer Makers to the British and Colonial Governments, St. Albans, England, understood to have been used by the Government Observatory, Australia, in connection with the transmission of wireless time signals around Australia. The unit has two speeds, 'In - fast', Out - slow'. It has a clockwork mechanism with paper tape and two Morse inker solenoids, and is fitted in a well-made re-inforced wooden box to protect it in transit. The logo, a star, has the word 'OCTO' with 'BRITISH' underneath. The circuit diagram (below) indicates two inputs via sockets, one from a 'clock' and one from a Morse key.*

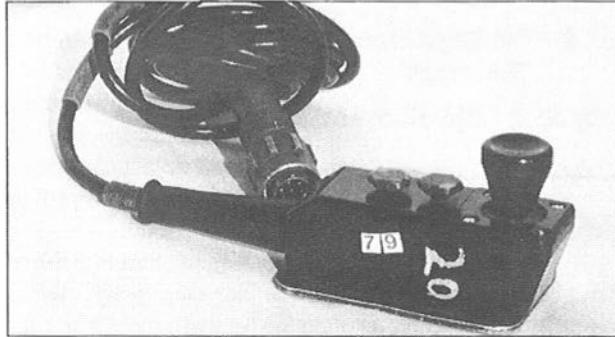
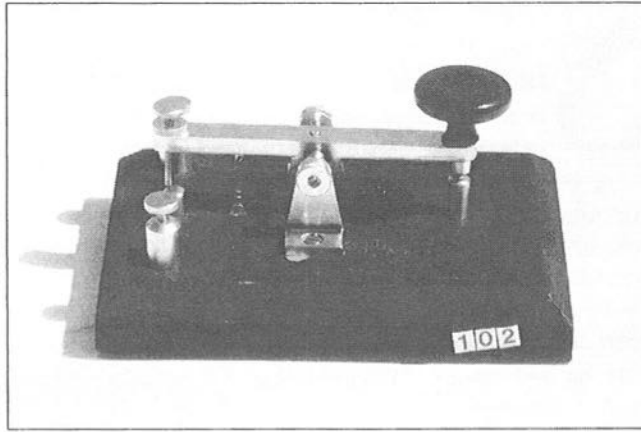
*Further information on operation and applications requested*

*Collection/Photo: Colin MacKinnon VK2DYM, Glenhaven, Australia*



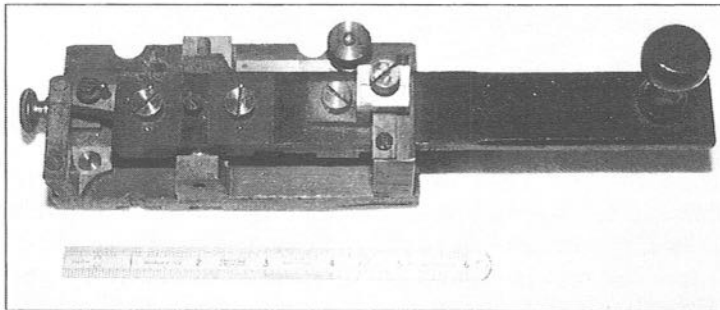
*Said to be a Chinese  
kit key by previous  
owner. Can anyone  
confirm this please, or  
provide other  
information?*

*Collection/Photo: Wyn Davies*



*Unknown miniature key.  
Any information welcome*

*Collection/Photo: Wyn Davies.*



*Mystery key with wooden actuating lever and tension springs on either  
side of the fulcrum. Near-side of base has been cut off, suggesting that  
key may be one half of a two-lever key as used for Bright's Bell or double  
sounder operation (see MM11, p.1); or perhaps a submarine cable key?*

*Information welcomed*

*Collection/Photo: John Pears G0FSP*



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**S**IX O'CLOCK SUPPER at the boarding house was a trying experience; with everyone trying to appear nonchalant and failing dismally. Even my shipmate, Jan Kopak, had lost some of his bounce. He had worked for the same building firm for more than five years and in that time he had managed to save some three thousand dollars, most of which he spent visiting his aged parents in Poland. He had returned to find that his supposedly safe job was no longer safe, and that his employer was facing bankruptcy.

Tuesday followed Monday just as it had done when the world was still sane and well ordered, and I embarked on a fresh round of radio stores, this time in the suburbs. Being unfamiliar with the terrain, I was not able to make my calls in the most economical order, or to plot the shortest course from one to the next.

By supper time and my return to the boarding house I had spoken, and spoken in vain, to only seven possible employers and this time at the cost of sixty cents car fare. Clearly, I was getting nowhere fast and fresh tactics were called for. Radio-servicing was out but there must be a job that I could do, if only I could find it. I wasn't fussy, and the only stipulation was that someone should pay me for doing it!

---

### *DiY Statistics*

If only I could list all the wild schemes, all the fantastic plans, that ran through my fevered brain that Tuesday night. I would have real-life plots for a hundred horror comics, or even aspire to lead a 'dirty trick' team.

Dawn brought some return to sanity and, so I flattered myself, to cold logic. I reasoned that in a city of two hundred thousand inhabitants (or whatever the figure was at that date), there could be (say) five

thousand employers of labour.

I needed only one job and to believe that five thousand employers didn't have a single job between them was contrary to common sense. A little mental arithmetic, coupled with some do-it-yourself statistics, indicated that natural wastage from deaths and retirements might well create 200 vacancies a day.

If only half of these were refilled, it meant one hundred jobs – and if one in ten corresponded to something I could do, or that I could persuade an employer I could do, there were ten jobs challenging me to find them. Ten into five thousand was five hundred and so, according to the law of averages, I only had to call upon five hundred bosses and all would be well!

Bosses are not spread evenly over the surface of a city but tend to bunch

---

## Deep in the Heart of Texas

### Part 2 – The Magic Word was 'Telegraph'

*by John Lingards Sykes*

---

together, especially in multi-storey office blocks. By concentrating my efforts on city skyscrapers I could call on more potential employers in a given time than in any other way. Besides there was no charge for riding elevators.

### *No Surprise*

The hour of eight-thirty found me on the thirty-fourth floor of the 'Gulf Building', the tallest office block in Houston at that time. The elevator had brought me to the thirty-first floor and I had walked up three flights of stairs. I cannot now recall precisely what I found on the thirty-fourth floor but it couldn't have had any job potential.

I descended the stairs to the thirty-third floor and again scrutinised door nameplates, and again drew blank. Down to floor thirty-two, thirty-one, down, down, down, my heart falling even faster than the rest of my body. Eleven, ten, nine, eight, and still no sign of a job.

But the next floor was number seven and seven was supposed to be a lucky number. I had never played crap (dice) but on the SS *West Kamak* I had learned some of the jargon, 'smallpox babies look like money', 'baby needs a pair of shoes', seven come eleven', and other

mystic incantations. Yes, I just KNEW that the seventh floor of the Gulf Building would decide my fate. My certainty was such, that the nameplate

GULF PIPELINE  
TELEGRAPH CO. Inc.

J.J. Sampson

Assistant Superintendent

aroused no surprise.

### *Black Despair*

It was merely confirmation. The magic word was 'TELEGRAPH'. I was a radio telegraphist and had certificates, both British and American, to prove it.

I knew nothing about pipelines nor why they should go with telegraphs, but that wasn't going to stop me; I could learn.

Alas for my misplaced egotism. Mr Sampson listened to half a sentence and stopped me with a gesture before assuring me in a few dreadfully plain words that he was laying staff off, not taking them

on. Seeing the dismay on my face, his voice softened slightly but his answer didn't change; he merely added the words 'I'm sorry'.

The interview, if such it could be called, had lasted less than a minute. Back in the corridor, I was seized with



SEIZED WITH BLACK DESPAIR...

black despair. What was I to do? In a few more days my wife would be boarding the SS *Rio Panuco*. If I had not found a job by the time she reached Houston I would not have enough money to pay her fare back home. Indeed, I would not have money at all! And then there was a child due in a few months time.

Truly, I had been not only foolish but stupidly reckless. If I didn't find a job this day I must send a cable to tell my wife not to sail. It would mean her staying on with my parents and my two young brothers. My father had been out of work for more than a year and I could not expect him to support my family as well as his own.

#### *Throw a Seven or Quit*

I looked again at the nameplate on the office door and, almost desperate, sought not to give in. Mr Sampson was only the ASSISTANT Superintendent and somewhere, if only I could find him, there must be a Superintendent. I hadn't far to look; a few doors further down the corridor a nameplate read

GULF PIPELINE  
TELEGRAPH CO. Inc.  
C.W. McKibben  
Superintendent

This was it – the last desperate throw of the dice and I MUST throw a seven or quit the game. My knock at the door brought a thunderous 'Come in'. I turned the handle and pushed. I do not recall my opening words but again it doesn't matter, since I never completed the sentence.

'Come in, come in; you're a bloody Englishman and I like to hear you talk.'

It was a sentence I will remember to my dying day – the happiest sentence ever spoken to me, and I KNEW that all was to be well. The speaker was a large elderly man of commanding presence, seated behind a huge desk and a battery of telephones right out of a Hollywood film set. The room was very much larger than the one I had just left, the carpet thicker and the furniture altogether more imposing. Truly, Superintendents were a very thick cut above Assistant Superintendents.

#### *Wired Wireless*

All this I took in with the twinkling of an eye, and boldness seemed my best course. 'Thank you Sir, I'll talk for as long as you are prepared to listen, but before I leave I want to hear you talk and to say something good.'

'Sit down and tell me all about it. What can I do for you? But first, when did you arrive from England?'

'Last Saturday, and I want a job.'

'You want a job?'

The Superintendent couldn't have looked more shocked if I had asked for HIS job or even to be made the President of the United States. 'What do you know? What can you do?'

'Wired wireless.'

'Wired wireless?' The Superintendent's tone told me at once that the term was completely new to him, but he tried not to give anything away and switched his questioning to more personal matters. What was my name, where did I come from, what school had I gone to, and what had I done since graduation?

I lied a bit and left out a bit. I dared not confess that I had only been to ele-

mentary school and evening technical classes. My situation was desperate and if it was going to take a lie, white, black, blue or green, then so be it, and may heaven and the Superintendent of the Gulf Pipeline Telegraph Co. forgive me.

### *Consultation*

The Superintendent's final question was simple enough, but its purpose completely puzzled me. 'When were you born?'

'Nineteen-hundred and two.'

'No, I mean the day and the month.'

'The eighteenth of January.'

He looked at me long and hard before murmuring under his breath, 'Capricorn, it could be, it could be, it just could be.'

He rose and walked over to a huge bookcase, where he spent over a couple of minutes consulting a small paperback booklet. When he turned to face me, his smile made my heart leap.

'When can you start?'

'Now.'

'Let's make it eight o'clock tomorrow morning, OK?'

'Yes Sir, OK indeed and thank you!'

Disdaining to make use of the office intercom, the Superintendent opened the door, poked his head into the corridor

and bellowed 'Sam.' Within seconds, the Assistant Superintendent made his appearance. He gave me a look that in other circumstances I could have mistaken for a stroke of lightning, but his only words were: 'Did you call, Mr McKibben?'

### *Just What We Need*

'Yes, Sam. We have some damn good timber here', nodding in my direction,

'and we must make good use of it.' Addressing me again, he went on: 'What is it you know son?'

'Wired wireless, Sir.'

'Wired wireless, Sam; isn't that just what we need?'

'Yes, Mr McKibben, just what we need.'

'That's just what I thought, Sam, but I wanted to make sure. Leave it with me and I'll see to it.'

It was clear that

'Sam' was just as vague about wired wireless as his boss, but he had no difficulty in recognising his cue. The Assistant Superintendent managed to retire in good order and I breathed a sigh of relief. I had gone over his head but I was sure he was not a vindictive man and would not stoop to vengeance.

As soon as the door was closed again, Mr McKibben spoke. 'Now, young man, tell me, what in heaven's name is this contradiction in terms, "wired wire



WHEN CAN YOU START?...

less”?’ I told him what little I knew and he bubbled with excitement.

‘We have an overhead pair between here and Fort Worth. We have two duplex telegraph pairs as well as phone on it, and we could do with another channel. Do you think you can put one on? Voice or telegraph?’

‘Yes, I am confident that I can. One of each, possibly more.’

#### *All-important Paperback*

We discussed technical matters for the next ten minutes or so before the Superintendent broke off and switched to what I wanted to hear. ‘Report to me tomorrow morning and then, as soon as I can arrange it, I want you to work from the Fort Worth end, a couple of hundred miles up-State. In the meantime I expect you could do with half a month’s pay in advance. Remain here while I go and see the cashier.’

As the Superintendent’s footsteps faded along the corridor, my curiosity got the better of my manners and drove me to the bookcase and that all-important paperback. I picked it up with reverence, gazed in awe and marvelled! It was a current copy of *Old Moore’s Almanack*.

I discovered much later that Mr McKibben had purchased it on a trip to London earlier in the year. In due course he told me that according to Old Moore I had been born under a lucky star, and it never occurred to me to doubt it. It had led me to a humane and understanding gentleman; the kindest I have ever known.

May God rest his soul!  
73, Jack

*MM*

## Readers’ ADs

### FOR SALE

LAMP DAYLIGHT SIGNALLING, Short Range, dated 1940, in excellent condition, £12.50 plus post & packing. Tom Hurst GW0GEV, Woodside, Parc Seymour, Penhow, Gwent, NP6 3AB.

KEYS FOR SALE, postage extra to prices shown: Bunnell Double Speed Key, solid oval frame, on wooden base, £65.00; Bench-er paddle, brand new in maker’s box, £65.00; Hi-Mound MK704, £30.00; Hi-Mound MK706, £25.00; Hi-Mound MK707, £25.00; Hi-Mound bug BK100, £50.00; Jones straight key, £55.00; Kent straight key, £25.00; NATO Navy key 5805-99-541-1439, £20.00; Key, telegraph, plastic, (Type 502?) £10.00; Lorenz Baumuster, T.2, £15.00; Modern twin paddle, brass construction, plastic paddles, no markings £20.00; American straight key, oval frame on wooden base, modern, £15.00; Brass straight key on wooden base, knob isolated from key arm by upright finger guard, £25.00; Semi-automatic, similar to Lightning Bug but unmarked, £50.00; Double Current key with send/receive changeover switch, round brass cover with glass top, £75.00. All prices negotiable. Hugh Whitbread G1MOS, Tel: 0473 643828 (work) 0394 387759 (home).

### WANTED

DUFFEL BAG CONTAINER for PRC-316 radio (code number S820-99-193-3504 or S820-99-193-1059 BAG TRANS - REC, RADIO). Ian Mant G4WWX, 28 Welbourne Road, Childwall, Liverpool L16 6AJ. Tel: 051-722 1178.

BACK NUMBERS of *MM* to complete my set, i.e., Nos 1-7 and 12-16. If anyone can help, or let me have photocopies, please contact Enrico Franciosi IK2HSW, Via Marco D’Agrate 10, 20139 Milano, Italy.

### WANTED/EXCHANGE

SINGLE NEEDLE TELEGRAPH; Marconi Multiple Tuner. Can be collected in the UK. Fons Vandenberghe, Lenniksesteenweg 462 B22, B-1500 Halle, Belgium. Tel: Office hours, 010-32-16-38.27.21; late evening, 010-32-2-356.05.56.



**I**T IS BY NO MEANS UNCOMMON to hear a simple 'dit dit' sent at the conclusion of a CW QSO on today's amateur bands. I wonder if this practice may have its origins in the days of World War II.

During those war years, Service operators had to keep to the official 'Allied Procedure Code' – 'dit dit' was not part of this! – and of course no plain language or 'chit chat' was allowed to take place between operators. We were, in any case, too busy handling traffic and it did not occur to us to try.

Furthermore, with channels being monitored, use of incorrect procedure could have resulted in prompt retribution from the Signals Officer! However, in those days of hand sending, a change of operator's 'fist' was always noticed at the change of a watch.

#### *Unofficial Exchange*

Operators were required to exchange QSA at frequent intervals, but this was left to their discretion as conditions could change rapidly, especially overseas with local tropical thunderstorms, static and fading.

During the midnight watch, when traffic was usually light, rather than call up the other station to exchange signal strength reports using the official procedure, an unofficial exchange often took place. The official procedure was:

Calling station: c/s v c/s  $\overline{\text{INT}}$  QSA  
K

Reply station: c/s v c/s R QSA 4  
QRN 1 QRU K

Calling station: c/s v c/s R QSA 5  
QRU  $\overline{\text{AR}}$

Reply station: c/s v c/s R  $\overline{\text{AR}}$

---

## DIT DIT

*by Eric McFarland G3GMM*

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The unofficial procedure to let the other operator know all was well, the channel clear, and signals readable, was to exchange 'dit dit'. Should the other

station not respond then official procedure was of course used immediately.

#### *Thanks and Goodbye!*

There was a second use of 'dit dit'. After sending a message, with no more traffic to follow, the sending station would sign off with  $\overline{\text{AR}}$ . The receiving station would acknowledge this by sending 'R dit dit' as a short form of acknowledgement – like saying 'OK, thank you' – instead of sending 'c/s v c/s R  $\overline{\text{AR}}$ '.

Some of us still use the old 'dit dit', especially in contest work, as a quick acknowledgement before moving on. When I use it, and it is returned, I always imagine an ex-Service operator, especially an ex-RAF wireless operator, at the other end and it re-creates that feeling of comradeship we had during the war years when we managed to

*continued on page 33*

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## London Calling...

*Following recent correspondence in MM about the BBC's Morse transmissions to Europe during WWII, Monika Pouw-Arnold, PA3FBB, referred in MM34 (p.44) to a leaflet dropped over Holland during the war which was reproduced in Rinus Hellemons' book De Vonkenboer. Monika has now provided MM with a translation of this interesting leaflet which (slightly edited) reads as follows. Note that 'moffen' is a word used by the Dutch during the war when referring to the German occupation forces:*

### Listen without interference

Have the 'moffen' erected a jammer in your neighbourhood, making it impossible to listen to the London broadcasts? If so, try all the wavelengths that are audible once again. If you have no success there's no need to worry. Despite these circumstances, it is possible to receive the news from London without missing one word, namely by listening to its Morse broadcasts during the night. These transmissions begin at 3.30(sic) mid-European time, on 216 metres and in the 49 metre band.

There are three Morse transmissions with the important news lasting half an hour each. From 2.30 to 3.00: news in English. From 3.00 to 3.30: news reports in French, and from 3.30 to 4.00: news in German.

These broadcasts are of particular importance for those people who already know the Morse code. They can write them down word by word and letter by letter. Even if one has no knowledge of English, French or German, the text can be taken down and passed to persons who know those languages to translate them.

But for you it is surely very worthwhile to learn the Morse code. In the next column you will find the Morse alphabet. The rhythm of the dots and dashes sent is relatively slow – about half the speed sent normally – only fifteen words per minute, and each word is repeated. If you start learning the Morse code now you will shortly be able to follow the London broadcasts.

This can be of great importance for those who, irrespective of the consequences, must receive reports and news from London regardless of the jamming. There will be times when London's broadcasts are of even greater importance to you, and it will be of equal importance to the 'mof' to stop you receiving them.

This is one more reason to begin receiving the Morse broadcasts as soon as possible. You can easily teach yourself the Morse code. There are plenty of books and journals on the subject, and you can always get a reliable friend to help you.

We will show you the basics only. We have already said that the Morse code consists of dots and dashes. After each dot a break will follow which lasts as long as the dot itself. One dash lasts as long as three dots. Each letter comprises from one to several dots and dashes, all following each other.

After each dot or each dash a break follows, its length representing **one unit**, in other words the time which is required to produce **one dot**. Between one letter, which consists of one or several dots and dashes, and the following letter there is a break which lasts for **two units** of time, in other words the time required to make **two dots**. Between two words a break of **three units** of time appears, in other words a time period equivalent to **three dots**.

We advise you to tap out the letters of the alphabet with, e.g., a pencil on a table, to become familiar with the characters. Take care with the breaks and repeat the exercise as often as you can. Above all, don't despair, you are sure to be able to learn it. Always practise wherever you are or whatever you are doing. You can tap with your fingers; you can whistle the dots and dashes. Practise together with someone you can trust.

Be prepared! You never know when this sort of undisturbed contact between us will be of the greatest importance to us all. 30.

*Monika comments, 'Note the small inaccuracy in the text concerning the time of the first broadcast; also the good old "30" at the end of the leaflet. Note too that the broadcasts were at "relatively slow speed, about half the speed sent normally – only fifteen words per minute". This is a speed that for even somewhat advanced amateur CW beginners today would still sound like the speed of a machine gun!'*

#### **DIT DIT** *continued from page 31*

create a small personal touch within the official system.

Perhaps you will agree that it is not a bad habit but a nice and quick way of saying 'thank you and goodbye' on today's amateur bands.

73 and 'dit dit' to you all.

*Extracted and adapted from an article in QRV, journal of the RAF Amateur Radio Society, Autumn 1990.*

*MM36 – October 1994*

#### **IN THE NEXT** *Morsum Magnificat*

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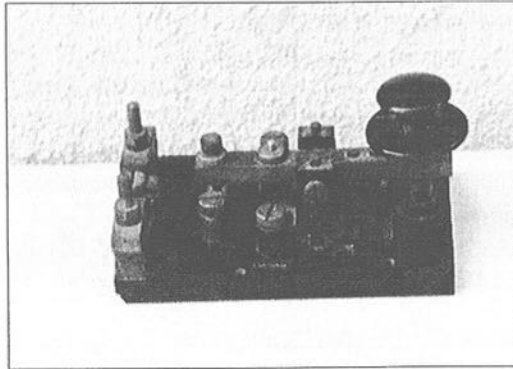
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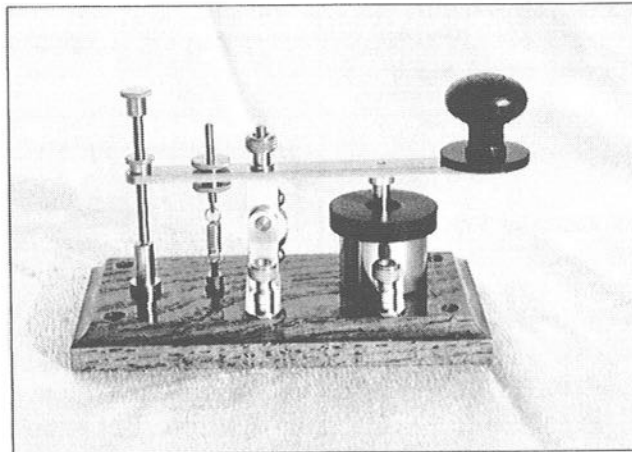
*Featuring keys and other collectors' items of telegraphic interest.  
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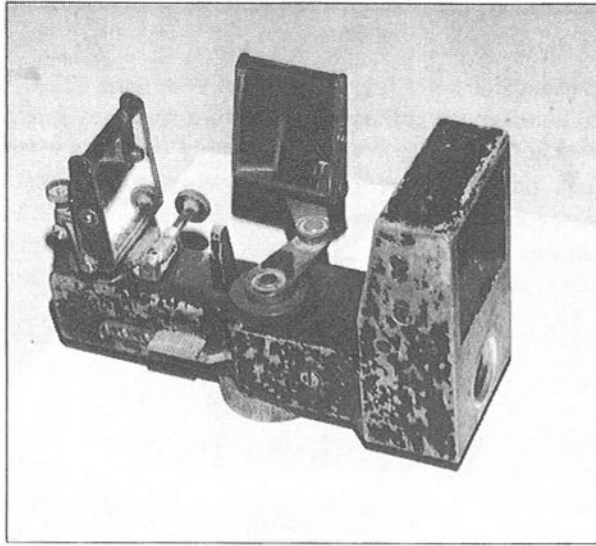
*British, three contact, Admy.  
Patt. No. 7681 Key Morse,  
Ser. No... WG.  
Front contact is 8.7mm dia.  
Two of the contact terminals  
are labelled, i.e., 'Front  
Contact' and 'Rocker'*

*Collection/Photo: Alex Vilensky*



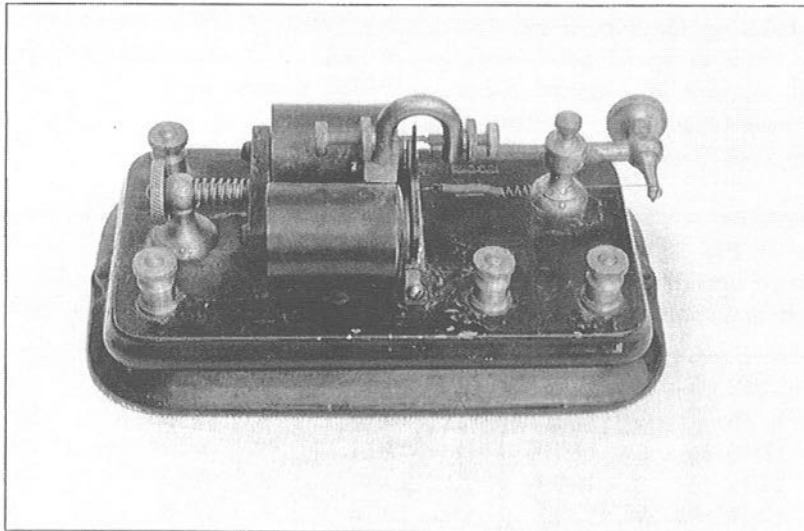
*Reproduction oilbreak spark transmitter key. Original believed  
to have been made by Ducretet and Roger for the French Navy*

*Reproduction built by Dennis Goacher G3LLZ, 1992*



*English heliograph. The supporting oak tripod, with brass fittings, is marked STAND LAMP OR HELIO A MkIII. The mechanism near the key keeps the shutter open for adjustment before use*

*Photo/collection: Henri Jacob F6GTC*



*Western Union telegraph Relay*

*Photo: Dennis Goacher, G3LLZ*



The small centre guide holes (I call them speed holes) in the perforated tapes used in Wheatstone automatic transmitters provide a precise method of measuring the speed of transmission. By coincidence, the standard speed word PARIS has the same telegraphic length as the word MORSE (see Fig. 1). Each word takes 25 speed holes on the tape so the latter could be used as the speed standard instead of PARIS to honour the memory of Prof. Morse!

Reading from left to right: vertical pairs of punched holes = dits. Slanted pairs = dahs. Small centre holes = guide holes, countable for speed. Total of speed holes passing through machine in 1 minute, divided by 25 = words per minute in accordance with the PARIS speed standard.

#### Timing Units

The PARIS 50 unit, 1 wpm, speed standard counts dits as one unit, dahs as three units, spaces between dits and dahs

as one unit, letter spaces as three units and word spaces as seven units. The total timing units per minute divided by 50 equals words per minute. The timing units for each letter are as shown in the table below and indicate the count with letter space/with word space.

In the word MORSE, for example, M = 10, O = 14, R = 10, S = 8, E = 8, making a total of 50 timing units. A six word 26-letter phrase containing all the alphabet, e.g. –

'VYCK QWARZ  
JUMPS BID FOX

LENGTH' contains 316 units and sent in one minute this is  $316/50 = 6.32$  words per minute. On Wheatstone tape there would be 158 speed holes for this phrase which, divided by 25 also equates to 6.32 wpm.

#### Binary Count

A binary method of counting the timing units is to print '1' for a dit-sound and '0' for a ditspace; a dah-sound of three timing units can be 3 x '1'

## Measuring Wheatstone Tape Speed

by Gaspard Lizée VE2ZK

A	8/12	B	12/16	C	14/18	D	10/14	E	4/8
F	12/16	G	12/16	H	10/14	I	6/10	J	16/20
K	12/16	L	12/16	M	10/14	N	8/12	O	14/18
P	14/18	Q	16/20	R	10/14	S	8/12	T	6/10
U	10/14	V	12/16	W	12/16	X	14/18	Y	16/20
Z	14/18								

Timing units for each letter (see text above)

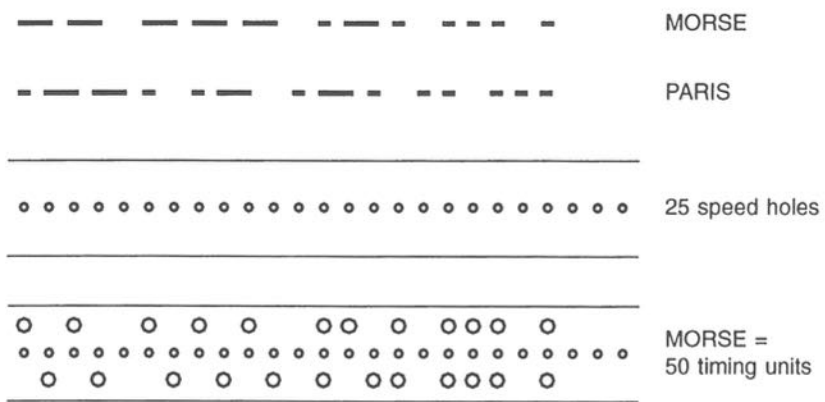
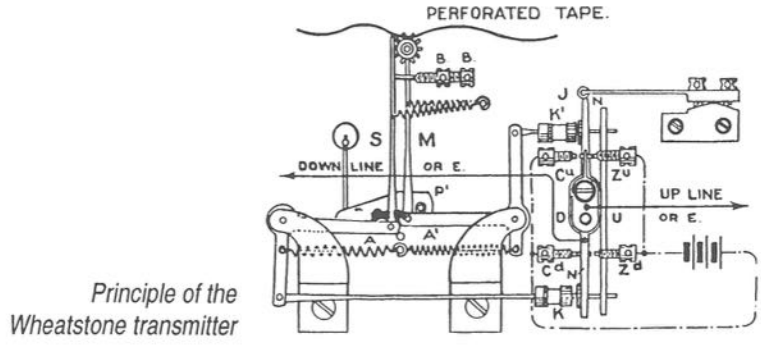
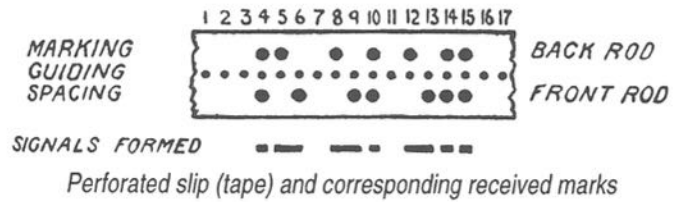


Fig.1



Principle of the Wheatstone transmitter

followed by '0'; a letter space of three timing units can be 3 x '0'; and a word space can be 7 x '0'. We thus see in print the timing units for any word and can easily count them.

Whatever the speed, the timing units count remains the same. If we wish to know how many speed holes are involved in punching the word into a commercial tape with a Wheatstone

typewriter perforator we simply divide the timing units by 2.

As an example, take the word 'VAILS' (another word of 50 timing units which could be used as a speed standard) and print it with the binary system outlined above. The advantage of this system in defining the space and signal values can then be clearly seen:

V = 101010111000 = 12  
 A = 10111000 = 8  
 I = 101000 = 6  
 L = 101110101000 = 12  
 S = 101010000000 = 12  
 Total = 50 units,  
 which sent in one minute equals 1 wpm.

Set out sequentially by this system, MORSE would be:

11101110001110111011100010111010001010100010000000

and PARIS:

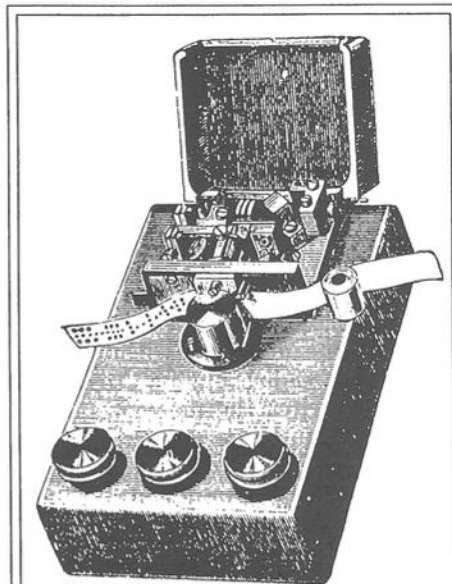
10111011101000101110001011101000101000101010000000

**Other Methods**

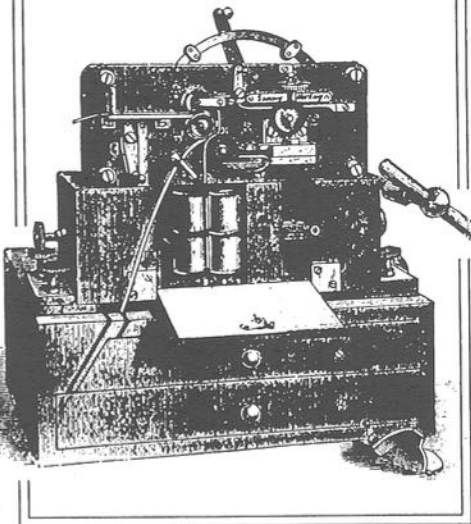
The Boehme tape keyer is geared to take 48 timing units or 24 speed holes to indicate a speed of 1 wpm compared to the PARIS standard which takes 50 timing units or 25 speed holes. Alternatively, the speed standard word CODEZ counts as 60 timing units or 30 speed holes in a perforated tape.

Using any of these different wpm gearings produces different results! Yet another way is the FCC system which simply counts the total number of symbols printed in one minute and divides the total by five to produce the wpm speed.

The most useful way is the PARIS/MORSE standard with a 50 timing unit count. This standard divides



Wheatstone perforator (above) and receiver (below)



readily to no more than two figures after the decimal point. Perhaps this is why the PARIS 50 unit standard was originally adopted?

**MM**  
(MM footnote. A British Post Office Engineering Department Technical Pamphlet for Workmen, dated 1919, describes a method of testing the speed at which a Wheatstone transmitter is running, as follows:

'1. At the sending office, a perforated slip (i.e., tape. - Ed.) with the letters A, B, C, repeated, and having two spaces between each letter, is prepared. A length of 3 or 4 feet of slip is sufficient.

2. The ends are carefully gummed to-

gether so that the slip forms a loop which can run continuously and accurately.

3. The speed of working, in words per minute, is equal to the number of groups of A, B, C, passing through the transmitter in 50 seconds (or twice the number of groups in 25 seconds).'

Another method of testing speed is referred to in *Telegraphy* by T.E. Herbert, (Pitman) 5th edition, revised, 1930: 'The speed of working may be obtained by dividing 3000 by the time in seconds occupied in passing 10 feet of perforated slip (reckoned as 50 words) through the instrument. As the base of the receiver is exactly 12 inches long it may be used as a measure.'

## Low-cost Easy-to-build CW Filter

by Ed Wetherhold W3NQN  
(see MM35, pages 11 - 16)

### KIT of PARTS

By arrangement with the author, *MM* is able to supply a kit containing the major parts as specified in the article. These are: 1 stack of seven 88mH inductors; two 0.2W 8/200Ω transformers; 1 set of matched capacitors; 1 plastic mounting clip for the filter assembly; detailed assembly instructions. (This leaves the switch, 'phone jack and plug, and housing to be obtained locally)

These kits are being handled by Ed Wetherhold and *MM* on a non-profit-making basis.

Readers in Europe should mail their orders to the *MM* Editorial Offices. Cheques, etc., must be in Sterling and payable in the UK. Credit Card orders (Access/Eurocard/Mastercard/Visa) welcome by mail or 'phone or fax. Give card number and date of expiry.

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Enquiries for kits from outside Europe should be directed to the author, Ed Wetherhold W3NQN, 1426 Catlyn Place, Annapolis, MD 21401-4208, USA

**D**R CRIPPEN had killed his wife in London and had buried her chopped-up body under the floor of his coal cellar. Panicking after a very intensive interrogation by Inspector Drew of Scotland Yard, he went over to Holland to board the Canadian Pacific Railways liner *Montrose* – sailing for Canada on 10 July 1910. With him was his mistress-typist Ethel Le Neve. He'd disguised himself a little, and Ethel was to be his 'son'; she was outfitted in men's clothes and her hair cut short.

Meanwhile, back in London, Inspector Drew had searched Crippen's flat, found the grisly remains of his wife, and had alerted Interpol, world-wide, to help track him down.

Captain Kendall, master of the *Montrose*, had been second mate of the *Lake Champlain* nine years earlier (1901) when this British ship had been the very first to be equipped with wireless, so he was well aware of its value. In his present position he was also aware of other things. He knew about Drew's search for Crippen and Le Neve; he had seen pictures of them in the newspapers. He was also very suspicious about two of his passengers who called themselves Mr Robinson and son.

His suspicions sharpened. Mr Robinson's son seemed very effeminate.

'His' clothes were ill-fitting. 'He' squeezed 'his' father's hand affectionately. Then a little event swept the last doubt from Captain Kendall's mind.

Mr Robinson tossed a magazine over to his 'son', who spread 'his' legs to catch it instead of bringing them to-

gether. This would make sense if 'he' was a 'she' who normally wore skirts. A woman would open her legs slightly to make a sort of catching-basin.

Captain Kendall immediately went up to the office of his wireless operator, comparing its appearance with that of the original radio 'shack' on the *Lake Champlain*. Then it had been literally a wooden shack (probably the origin of the term) on the side of a funnel. Now, on the *Montrose*, its knobs, wheels and gleaming paraphernalia gave an atmosphere of efficiency.

'Sparks', said Captain Kendall, 'all telegrams are, as you well know, a confidential matter between you and me; this one particularly so.'

CANADIAN PACIFIC RAILWAY  
STEAMSHIP LINES LIVERPOOL =  
AM VERY SUSPICIOUS OF TWO  
PASSENGERS WHO ARE OFFICIAL-  
LY MR ROBINSON AND SON. THEY  
SEEM TO FIT INSPECTOR DREW'S  
DESCRIPTION OF DR. CRIPPEN  
AND ETHEL LE NEVE. OUR ETA  
MONTREAL IS 0900 AUGUST 2ND.  
= KENDALL.

---

## Wireless Aids Man-hunt

---

by Ray Redwood

The CPR told Drew. Drew booked a passage to Canada (with two other police officers) in the *Laurentic* – a faster ship than the *Montrose*. Even though the *Montrose* had a two-day head start, the other ship would get there first. Drew told the newspapers. For the next week everyone on two continents would have one topic of conversation.

Charts and diagrams would show how the *Laurentic* was catching up then passing the *Montrose*. No one on the *Montrose*, except Captain Kendall and Sparks, knew what was happening. Kendall took a picture of the guilty couple striding down the foredeck.

As the ship steamed up to the Montreal pilot-station (Father Point, St Lawrence Seaway) four 'pilots' – only one genuine – in blue suits and white caps boarded her. Chief Inspector Drew arrested Dr Crippen. He was returned to England, tried, hanged.

The British government gave a £250

reward to Captain Kendall for bringing Crippen to justice. That was not the end of Kendall's story. Nearly three years later (29 May 1914) he was captain of the *Empress of Ireland* when she collided with the Norwegian vessel *Storstad* at almost the exact spot where Crippen had been captured. There was a fire and tremendous loss of life (1023 died, 444 survived). Kendall went down with his ship but surfaced and clung to wreckage – in the same way as Ron Ferguson, his Sparks. Half an hour later they were rescued by ships that had been brought to the scene – by wireless. (The eight minutes Ferguson spent sending an SOS were productive!)

*From QTC, A Seagoing Radio Officer's Scrapbook by Ray Redwood, published by Sequoia Press, Austin, Texas, 1989. Reviewed in MM17, p.46. We regret this book is now no longer available from the MM Bookshelf.*

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### Historic Televisions & Video Recorders

by Michael Bennett-Levy

Originally conceived as a catalogue of a personal collection, this book is profusely illustrated with beautiful colour photographs of TV sets produced in the UK prior to 1973, recorders and studio cameras. Appendices list pre-war TV receivers made in Great Britain, Germany, USA, France and Italy.

64pp, 8 1/4 x 11 3/4 in, paperback

£14.95 (UK): £15.65 (Eur/Sur)

### Oliver Lodge and the Invention of Radio

ed. Peter Rowlands & J. Patrick Wilson

A new look at Oliver Lodge and his work, and their place in the history of radio technology. Developed from previously unpublished manuscript sources by a team from Liverpool, Keele and Lancaster Universities, together with members of the family having personal knowledge of Lodge himself. Many illustrations, some previously unpublished.

241pp, 5 7/8 x 8 7/8 in, paperback

£11.40 (UK): £12.10 (Eur/Sur)

## TELEGRAPHY BOOKS *Detailed descriptions of the titles listed below available on request*

Introduction to Key Collecting by Tom French ( <i>MM17</i> ) .....	£6.75 (UK): £7.05 (Eur/Sur)
Vibroplex Collector's Guide by Tom French ( <i>MM17</i> ) .....	£9.75 (UK): £10.25 (Eur/Sur)
Bunnell's Last Catalog (with commentary) by Tom French ( <i>MM23</i> ) .....	£4.85 (UK): £5.05 (Eur/Sur)
Railroad Telegrapher's Handbook by Tom French ( <i>MM22</i> ) .....	£6.75 (UK): £7.05 (Eur/Sur)
Keys, Keys, Keys by Dave Ingram K4TWJ ( <i>RB13</i> ) .....	Out of print, and no longer available
McELROY, World's Champion Radio Telegrapher by Tom French .....	£14.70 (UK): £15.40 (Eur/Sur)
The Telegraph by Lewis Coe ( <i>MM31</i> ) .....	£19.10 (UK): £19.80 (Eur/Sur)
History, Theory & Practice of the Electric Telegraph by George B. Prescott .....	£12.75 (UK): £13.65 (Eur/Sur)

## RADIO BOOKS

A First Class Job! – a biography of Frank Murphy by Joan Long .....	£8.50 (UK): £9.30 (Eur/Sur)
Dawn of Australia's Radio Broadcasting by Philip Geeves .....	£3.95 (UK): £4.40 (Eur/Sur)
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No. 1 (1934-1951); 2 (1951-1954); 3 (1954-1956); 4 (1956-1960); 5 (1960-1963) .....	Each £2.95 (UK): £3.25 (Eur/Sur)
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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

## Erasure Signal

**Like Reg Prosser** (MM33, p.43) I too have difficulty with this signal and like him I also cheat, often by just sending a string of dots. I was therefore heartened to read in *Telecommunications Procedures for Civil Aeronautical Fixed Service*, published in 1959 by the Air Ministry and the Ministry of Civil Aviation, the following instruction 'error signal consisting of not less than eight dots'.

*Gerald Stancey G3MCK  
Staines, Middlesex*

**Monika Pouw-Arnold** (MM35, p.40) has the sure-fire answer to that almost mathematical problem of the awkward eight-dots erasure signal. I expect all *MM* readers put it to an immediate test and rapped out the rhythmic syllables of 'Mississippi' twice, without pause, on table-tops, desk-tops or whatever surface lay near their finger tips.

I certainly did and, presto, the eight dots came out as a perfect erasure signal. And as a bonus I shall now always remember how to spell 'Mississippi'! Thank you Monika.

*Reg Prosser GW4BUS  
Caernarfon, Gwynedd, Wales*

## Key With Spark GAP

**In the key with spark gap**, on page 24 of MM25, the spark gap (set at about

$\frac{1}{32}$ in) is to discharge static from the aerial. It is only in circuit on receive, and dates, possibly, from the early days of aircraft wireless communication.

The same principle was used later in the R.1082 receiver where a 1 megohm resistor was placed across the High-Z input to discharge aerial static.

*Dawson Thompson G3AHS  
Basingstoke, Hants*

## W/Ops or Signallers?

**On good authority**, we know 'a rose by any other name would smell as sweet', but it is easy to understand the slight irritation aircrew wireless operators felt (MM34, p.11) when their designation changed from the war-honoured 'W/Op' to that of 'Signaller' after the war.

In a less sublime way, we in the Royal Signals had our teeth set on edge when Infantry subalterns and officers, all the way up to brigadier, would refer to us as 'signallers'. When I transferred from the Infantry to the Royal Signals in 1942 I felt quite flattered to find that my rank changed from 'Private' to 'Signalman'. The term seemed like an unearned qualification rather than a rank no higher than the one I had held as a footslogger.

The official designation of a wireless operator in the Corps was 'Operator Wireless & Line', and as such we 'Owls' were the *hoi polloi* of Royal Signals. To

feel offended when answering to the name of 'signaller' was sheer snobbery of course, feeling it levelled us down to the flag-brandishing regimental signaller of infantry. We considered ourselves a step or two technically above regimental signallers!

When I transferred from Infantry to Royal Signals, I thought I had done with foot slogging, and that I would thenceforth travel in 'gin palaces' and command vehicles. In the event, I was to march more miles by far in the columns of Wingate's 'Chindits' in Burma, and to breathe more deeply the reek of cordite, than I ever did as a bona fide infantryman. On that expedition communications – all in CW mode – were highly successful, and we didn't mind at all about answering to the name of 'signaller'.

The soubriquet I always found most pleasing was 'Sparks' when, in another incarnation, I went to sea as a ship's Radio Officer. What a pity that in our obsolescence our time-honoured nickname should have been purloined by shore-side electricians. But... what's in a name?

*Reg Prosser GW4BUS  
Caernarfon, Gwynedd, Wales*

### **Knob Trap**

**After reading** Gerald Stancey's letter about knobs (MM35, p.44), readers may be interested in the following anecdote:

During WWII, I was one of a crew shipped to somewhere near St. Vincent, Cape Verde Isles, to collect an Italian tanker which had been recovered after use as a U-boat supply vessel. We were told that all booby-traps, etc., had been

dealt with, but after petrol was found in the auxiliary steam boiler fuel tank we proceeded very cautiously.

The radio gear was modern Italian Marconi but the receiver rotary coil assembly had been smashed. Unlike all the British ships I had worked on, the transmitter copper tubing to the aerial switching was dirty and green in places.

The key attracted our attention. It was similar in design to our own Marconi, with two pairs of auxiliary contacts, but was all polished brass, with no cover. When we got electric lighting the key knob looked a different colour from the key bar.

Polished brass – dirty copper? Our suspicions were aroused. A careful check found no bombs, but we found that the 350V motor alternator had been wired direct to the key bar!

We never got the transmitter working but by winding a coil on a loo-roller former we managed to produce an 0-V-1 receiver for 600m.

*John Black, Hildenborough, Kent*

### **Dramatic Morse**

**We Morse aficionados** must all have felt irritation at the way the light of our lives is misrepresented on television and cinema screens from time to time. In those dramas, radio communication is invariably by radio telephony, with a man-pack radio and about half a metre of rod aerial, working back to base some hundreds of miles distant – or more usually the radio has broken down for dramatic effect.

When Morse does present itself, usually in films about the French Resistance in WWII, the highly trained agent

has a 'fist' that is entirely at odds with what is coming over the film's sound track.

Surely it would be a simple matter for the producer to employ the services of a trained operator, i.e., any one of us, so that the camera could focus on a hand that was keying in harmony with the sound track? It wouldn't cost much; none of us would expect a starring role, just a glimpse of our right or left hands busy on the key in a professional manner.

And if communications from jungle locations are always effected by man-pack rigs, why did we encumber ourselves with mules, 140 amp-hour

lead-acid batteries, and 300 watt charging engines in those long-ago days in wartime Burma?

**Reg Prosser GW4BUS  
Caernarfon, Gwynedd, Wales**

*(While many films with Morse sequences have 'nonsense' code or unrelated material on their sound tracks, some do portray realistic code as mentioned in recent readers' letters in MM about 'Morse at the Movies'. There were some articles on this subject in the Morse Telegraph Club's Dots & Dashes, some years ago and a few films were credited with portraying realistic Morse (some with American sounder Morse, some >*

### RAF Type 51 Key

I was interested in John Densem's reference to the RAF Type 51 key used on the Comet 2 (MM34, p.13). My Type 51 key is marked with a pre-war stores reference number, i.e., '10F/20366 12 OZS TYPE 51'.

However, I do not recall ever seeing the Type 51 in aircraft in the 1939-45 period - although, admittedly, I only flew in a few aircraft. I think the Type 51 key

must be quite an old design which was brought into use for a (then) modern aircraft. The material used for the base plate rather dated it.

**Vic Reynolds G3COY/G4ATC  
Stoke-on-Trent, Staffs.**

*(Can anyone help with further information about this key? What other aircraft was it used on apart from the Comet? Was it used in ground stations? When did it first come into service? etc. - Ed.)*

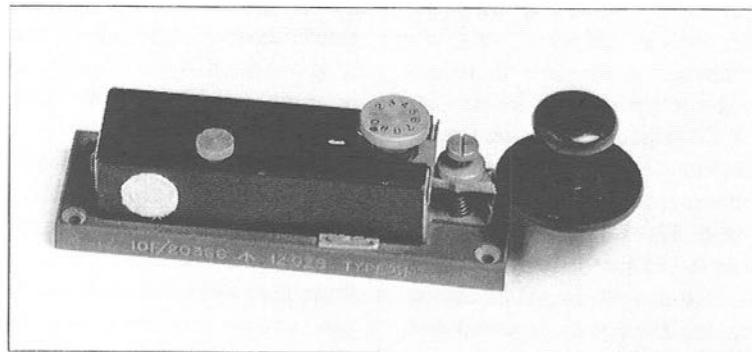


Photo by Geoff Arnold

Vic Reynolds' Type 51 Key

with *International CW*, according to the setting of the story). These included Whispering Smith; Morituri; Denver & Rio Grande, Suddenly; and On the Beach. It must be admitted, though, there were a great many more mentioned in which the Morse depicted was unrealistic. – Ed.)

### GRA-71 High Speed Sender

**Regarding the American AN/GRA-71** Clandestine Morse Burst Sending Set shown in MM35, p.34, this unit used with an adaptor unit AN/GRA-71 – UK-PRC-316 provides the British Army PRC-316 Patrol Radio with a high speed (300 wpm) Morse transmission facility.

I have both the UK/PRC-316 transmitter/receiver (these little sets, easily identified by the built-in Morse key, can be found at many rallies at present) and the complete AN/GRA-71 kit, but I am missing the duffel bag container for the PRC-316 (see Ian's 'wanted' ad elsewhere in this issue. – Ed.).

The Operating Manual indicates that the transmission rate of 300 wpm is limited by the keyer, although the adaptor unit is capable of keying at a much higher rate. The Coder, CO-3B, is an electromechanical Morse generator which enables the operator to record messages on magnetic tape in the Cartridge CA-3B which clips on the Coder.

Depressing the keys on the Coder records impulses on standard 1/4in recording tape, 12ft long, capable of carrying at least 125 five-letter words plus spaces. Dot magnetic impulses are recorded on one track of the tape and dash impulses on the other.

The Keyer, KE-8B, converts the mag-

netic impulses on the tape to dots and dashes, all of perfect length, and these key the radio. A clockwork motor operates a tape transport on the Keyer and when switched on this sends the recorded message at approximately 300 wpm.

*Ian G. Mant G4WWX  
Childwall, Liverpool*

### Happy Birthday PCH!

**I would like to pass my good wishes** and thanks to the radio amateurs of the Netherlands involved in celebrating the 90th Anniversary of Scheveningen Radio/PCH (see MM35, p.9. – Ed.). A most nostalgic occasion.

As every CW Marine Radio Officer knew well, PCH was one of the most powerful transmitters on the air. On medium wave I well remember hearing his MCW note giving a traffic list call on 500kHz one night whilst on passage from Capetown to Buenos Aires in the South Atlantic – a distance in excess of 6000 miles.

On the HF bands, before the invention of bandspread tuning (when the entire 16 and 22MHz shipping bands took up about one quarter of an inch on the dial), the secret of searching for an elusive coast-station was to find PCH, look up his assigned frequency in the *International List of Coast Stations* and move up or down from that spot.

I also recall my apprehension, as a young R/O, requesting this authoritative coast-station to QRT. This occurred one foul night in the Bay of Biscay, with a force nine westerly blowing. I was distress control ship for a Spanish coaster with engine trouble, who was being blown along the coast of Portugal, and I

was having considerable trouble communicating with the vessel, who had been reduced to QRP operation due to all his aerials being blown away.

Unfortunately, his minute CW signal could not compare with PCH, informing all shipping on 500kHz that 'The following has been heard on 500kHz' (etc.). I had to perform a quick QSY up to PCH20 on 4MHz to ask him to request that his colleague stop sending – which he did!

Mind you, he got his own back by releasing the story to the Reuters correspondent in the Hague, which resulted in the next traffic list from GKA listing

my call as GNZD/QTC25 ! – Happy Birthday PCH.

*Roy Clayton G4SSH  
Irtton, Scarborough, North Yorks*

### Creed Coding?

I was a teleprinter mechanic in Calcutta Signals Centre in 1946, and subsequently purchased a Creed 7B in the 1970s. I have wondered since whether any form of coding was used on these machines.

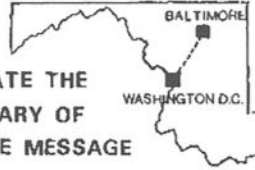
It would be quite simple to have several Type Heads with the digits mixed up. I'm certain the type heads could be assembled in any order apart from line >

### First Message Commemoration

A small group of CW enthusiasts put a special event station, GB4FMT, on the air to commemorate the first Morse message sent on 24 May 1844. We are Club members of the Leicester Radio Society. QSOs were not extensive but we did work about 80 stations. These were mostly Europeans, with some VEs and Ws and a 9Y4 (Trinidad and Tobago).

Unfortunately we did not contact the Amateur Radio Station at the Samuel Morse Museum at Poughkeepsie, NY although we had been in packet communication with them

G SPECIAL EVENT  
B STATION,  
4 TO COMMEMORATE THE  
F 150th ANNIVERSARY OF  
M THE FIRST MORSE MESSAGE  
T ON THE 24th MAY 1844.



STN	DATE	TIME	FREQ	RST
73	MOREUM	MAGNIFICAT		

LEICESTER RADIO SOCIETY.

over the anniversary celebrations.

Our rig was the club's TS950 using a 3-element beam and an 80m loop. I enclose one of our special QSL cards. The letters FMT were chosen to indicate 'First Morse Telegraph'.

*Colin Blunn G0IFM  
Stoney Stanton, Leics.*



feed' and 'carriage return'. Messages would then appear scrambled until the correct matching type head was fitted at the receiving end (line or radio). Does anyone know if such a system was ever used?

*Alan Hobden  
Ninfield, East Sussex*

### **Bunnell Invitation**

As you probably know, the J.H. Bunnell Company has been in business for over 100 years. In response to great interest, the company is in process of reissuing some of its unique classic telegraph instruments.

Its inaugural piece will be a Centennial Edition of one of its most novel and hard to find items, the Miniature Key and Sounder (see *MM35*, p.4. for details. – Ed.). These pieces were first produced approximately one hundred years ago and have become rare and valuable collectors' items.

Early response indicates that this limited edition will be well received. We plan on reissuing other Bunnell instruments in the future and would like very much to hear from you and your readers as to personal Bunnell favourites.

*Matthew Jacobs, President,  
J.H. Bunnell & Co,  
Division of MNJ Industrials,  
80 Locust Drive, Kings Park,  
NY 11754, USA*

### **Junkers or Junker?**

Re *MM35*, p.27, I have always assumed it was **incorrect** to think that the key was made by the aircraft manufacturer – the aircraft is called Junkers (with the 's'), but my key is clearly marked Jun-

ker (without an 's'), and bears the company's location as Honnef/Rh. This may help in settling the matter!

I have a German field key with a rubber-covered base and plastic cover which appears to be modelled on the Junker, and which I was led to believe was used in German tanks. It bears the inscription 'Baumuster T.1 – Anf.Z Ln26902' and the exhortation on the lid 'vor dem Offnen Stecker herausziehen' – 'pull out the plug before opening'!!

*Tony Timme G3CWW, Huddersfield*

### **The Sound of Spark**

On page 43 of *MM35* there is a letter from Monika Pouw-Arnold PA3FBF, regarding T9 reports. She was wondering how the spark transmitters sounded, and was looking for a cassette.

In RSGB's *Radio Communication* of March 1994, 'Technical Topics' from G3VA, there is a comment on the work of Dr John S. Belrose VE2CV, who wrote on the subject (*Proceedings of the Radio Club of America*, November 1993, pp.6-23) and built a 5MHz Braun spark transmitter and a crystal receiver. He prepared a tape with code transmissions at 60, 125 and 750 sparks per second, and a voice transmission using 10 000 sparks per second, as Fessenden did on 23 December 1900.

I quote from G3VA: 'Readers who would like to hear this themselves can obtain a copy of the recording by writing to Dr John Belrose VE2CV, 17 Tadoussac Drive, Aylmer QC, J9J 1G1, Canada, enclosing \$US10 to cover the cost of the tape, handling and mailing.'

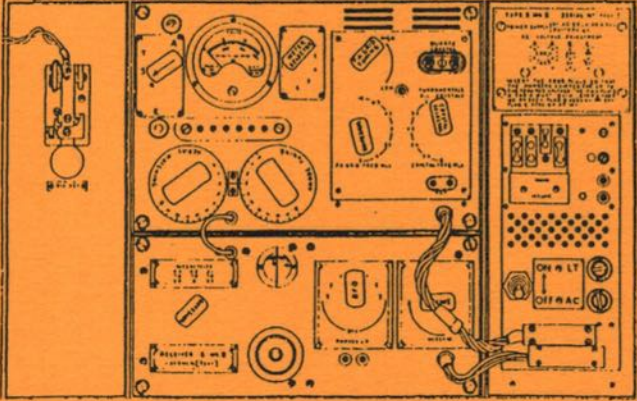
*Dr Jon Iza EA2SN  
Vitoria-Gasteiz, Spain*

*MM36 – October 1994*


# Morse QSLs

A series of reproductions of QSL cards with a Morse theme

**GB50CR** **CLANDESTINE RADIO OPERATIONS**



**F128**



**G3CNM**

FRANK ARMSTRONG - 27, GREEN LANE - HIGHER POYNTON - STOCKPORT - CHES.

TO RADIO..... G3EUE.....

**SKE in '83**

Key in use at G3CNM



LIONEL CORPN. New York. TYPE J.38 (EX. 1942)

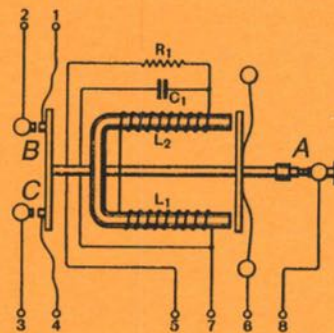
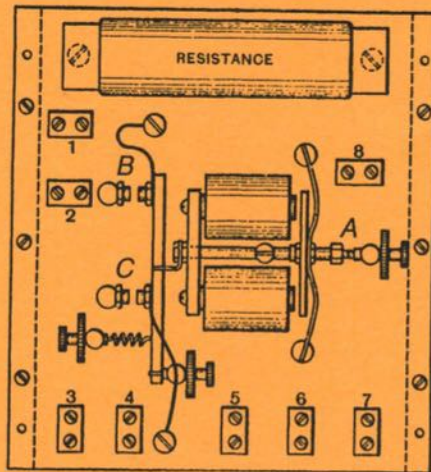
CONFIRMING OUR 3.5 MHz QSO DATED 31-MARCH-1983 DURING 'SKE-83'

*Frank*

*Thanks Ted*

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### Marconi Type 556 Send-Receive Magnetic Relay

'In most cases it is desirable to be able to receive signals in the intervals of transmitting. Thus, immediately the transmitter key is released the receiver should become operative and, when it is depressed, the receiver aerial should be earthed in order that no harm may be done to the receiver.'

The Relay Type 556 was designed to provide this facility in Marconi Marine installations in the 1930s.

Terminals 5 and 7 are connected to the ship's 110- or 220-volt DC supply through the manipulating key (!). Resistance  $R_1$  is a dropper, having a value suitable for the supply voltage. When the key is depressed, contacts 'B' connected to terminals 1 and 2 make first, earthing the receiver aerial and also completing the earth circuit for the transmitter. Next, contacts 'C' connected to terminals 3 and 4 make, completing the power supply to the transmitter.

Normally-closed contacts 'A', connected to terminals 6 and 8, break before either 'B' or 'C' make, but are not utilised in standard installations.

*Drawings from Handbook of Technical Instruction for Wireless Telegraphists,  
by kind permission*