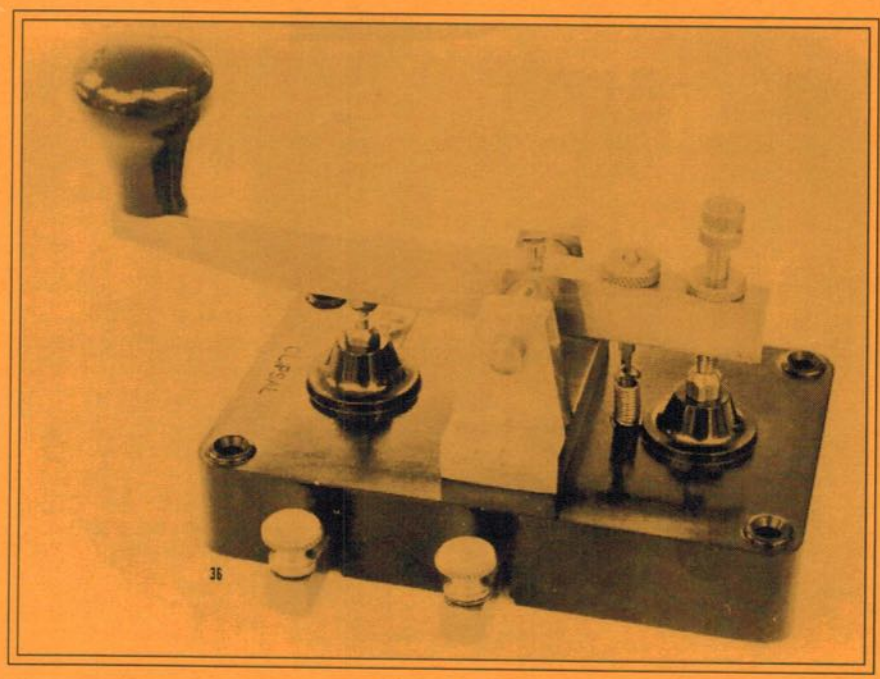
Flying the flag for Morse

Number 45 – April 1996

Morsum Magnificat

The Morse Magazine



Clipsal Key

Flying the flag for Morse

Morsum Magnificat

ISSN 0953-6426

EDITORIAL AND SUBSCRIPTION OFFICES:
Morsum Magnificat, 9 Wetherby Close,
Broadstone, Dorset BH18 8JB, England.
Phone/FAX: Broadstone (01202) 658474;
International +44 1202 658474

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.

EDITOR Geoff Arnold G3GSR

CONSULTANT EDITOR Tony Smith G4FAI
(13 Morley Road, Sheringham, Norfolk NR26 8JE, England. Phone: 01263 821936)

© G C Arnold Partners 1996 Printed by Hertfordshire Display plc, Ware, Herts

ANNUAL SUBSCRIPTIONS:

	UK	*Europe Airmail*	*Rest of the World Airmail*
1 Year:	£12.00	£12.75	£15.50
2 Year:	£22.50	£24.00	£29.50

Payment by Access, Eurocard, Master-card or Visa is also accepted; quote your card number and expiry date, checking that you have written them clearly and correctly. Overseas cheques, etc., must be payable in Sterling and drawn on a London Clearing Bank. We no longer accept payments via PostGiro or PostCash International.

Make all cheques payable to 'G C Arnold Partners'.

Subscribers in North America only can make payment in US Dollars to our subscription agents there, Wise Owl Worldwide Publications, 4314 West 238th Street, Torrance, CA 90505-4509, USA. Make checks payable to Wise Owl Worldwide Publications.

RATES:	*Airmail*
1 Year:	$26.50
2 Year:	$50.00

For VISA or MASTERCARD orders via Wise Owl, call (310) 375-6258. Best times to call: week-days 9am to 9pm Pacific Time, or week-ends 9am to 6pm Pacific Time. If renewing your subscription by mail, please send them the reminder you received. If 'phoning, tell them you are renewing, and which was the last issue you had.

All subscription copies are individually mailed directly from the UK

ON OUR FRONT COVER

CLIPSAL key, with guarantee marked Ref. No 2/41, which may indicate month and year of manufacture. Made by Gerard Electric Mfrs. Ltd, Park Terrace, Bowden, South Australia. Collection: John Elwood WW7P. Photo: Ray Nelligan

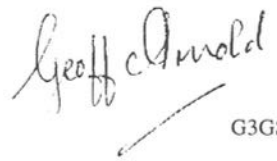
Comment

OVER THE YEARS, I have met many radio enthusiasts who aren't interested in Morse, or who feel that their brains aren't capable of coping with it, but I've never met one of the violently anti-Morse brigade. I've read their opinions, of course, but never actually met one face to face – until the recent London Amateur Radio Show and Vintage Sound and Vision Fair, that is!

A young radio amateur came to our stand, told me that due to work commitments he'd been unable to follow his hobby for the past couple of years, and asked me what was all this argument going on about the future status of Morse. I explained the background and developments to date, and we agreed that we'd be very sorry to see Morse disappear as an integral part of amateur radio. Suddenly another visitor to our stand, who'd been browsing through our various books on valves and vintage equipment, turned to the first and said: "I suppose you think that, just because you know how to turn a transmitter on and off, you're superior to the rest of us!"

It very rapidly became obvious that no reasoned argument or discussion would be entertained by our attacker – his mind was made up! So far as he was concerned, there was plenty of spectrum space for all, and anyone who wanted to should be allowed to buy a transmitter and go on any band, regardless of their knowledge or skills. He really didn't see why there was a need to limit access to the amateur bands in any way whatsoever, but suggested that if it was thought absolutely essential, an annual licence fee of, say, £1000 would be a suitable method!

I'm afraid that both the original enquirer and I gave up at this point. Here was a man with a severe attitude problem, as present-day jargon puts it, complemented by a totally closed mind. Had it been possible to carry on a rational discussion with him, some interesting views might have emerged. As it is, I don't know who he was, what was his background, whether he was licensed or not, for he wore no callsign badge or other identification. I was simply left to speculate on what had shaped his opinions in that way.



G3GSR

Contents

Adverts

News

ARRL Sets up Policy Review Committee

At the 1996 Annual Meeting of the American Radio Relay League's Board of Directors, on January 19–20, the President was authorised to set up a committee to make recommendations for ARRL policy positions relative to matters likely to be discussed at WRC-99.

In summary, these include ensuring that no structural changes should reduce the privileges of existing classes; maintaining the integrity of the amateur examination and licensing process; the possibility of harmonising the standards of amateur licensing in different countries, thus reducing the barriers to movement of radio amateurs across international borders; consideration of Article S25 of the international Radio Regulations, the technical and operational rules governing the Amateur and Amateur-Satellite Services, including but not limited to the requirement to demonstrate Morse code ability in order to operate below 30MHz.

The committee's first task is to define the process by which ARRL members shall be consulted on these issues, and the opinions of the membership objectively determined. The target date for completion of these initial tasks is 120 days after the appointment of the committee. The committee's final report is to be made to the Board of Directors not later than 17 December 1996.

OHTC New Sked Times

The OH-Telegraphy Club (OHTC) was founded in June 1994 with the aim of developing and spreading QRQ (high speed) CW operation in Finland. The President of the club is Seppo Niemispelto, OH6VR. The motto of OHTC is 'CW FOREVER!!!'

The club-station, OH0-9ABD can be heard on Saturdays on 3.535MHz at 11.00 UTC, and on 14.055MHz from 13.00 to 15.00 UTC. On Sundays it can also be heard on 3.535MHz at 11.00 UTC. (Revised schedule).

Non-members are invited to call in on these skeds using telegraphy speeds of 30 wpm or higher, keying as cleanly as possible, preferably using BK or full QSK.

After some contacts it is suggested they ask a member to send them a recommendation for OHTC membership. Two-way 30-minute 'test' CW-QSOs, at a minimum speed of 30 wpm, are required to obtain such recommendations.

Four recommendations are required, which must include two from Finnish members of OHTC. To apply for membership, send the recommendations received to the Secretary of OHTC, Janne Karresuo OH6LBW, Timonviita 3, 60150 Seinjoki, Finland.

Applications should include a declaration that the applicant has not used a computer, decoder, encoder or keyboard

to read or send CW during the qualifying 'test' QSOs. Enclose $5.00, 40 fimk, or 10 x IRCs to cover costs.

Apart from the above scheduled operations, OHTC members heard on any band at any time will also welcome calls from non-members. Current members include OH1LA, OH6VR, OH4YR, OH6MLX, OH6NTO, OH6NVC, OH4LYX, OH6LBW, OH6MQE, OH6NLZ, OH6LWW OH7JR, DL8KAZ, Z32KV, OH2IW, 9A3UF.

(Information from OH6LBW.)

GB2CW Speed Morse Practice

New RSGB GB2CW Morse practice transmissions from Scotland, at speeds from 15 to 30 wpm, are designed to provide existing CW operators with regular weekly practice to help improve their receiving skills. The operator will normally be George Allan, GM4HYF, who is also Hon. Secretary of MEGS (Morse Enthusiasts Group Scotland).

The transmissions can be heard every Thursday on 3.527MHz ±QRM, as follows:

Speed	*Local Time*
15 wpm	20.45
18 wpm	21.00
22 wpm	21.15
25 wpm	21.30
27 wpm	21.45
30 wpm	22.00
Ends	22.15

(Times and speeds are approximate)

MEGS

Apart from the GB2CW transmissions, GM4HYF is greatly involved in the training activities of MEGS (Morse Enthusiasts Group Scotland). All Morse enthusiasts are welcome to join MEGS and participate in its comprehensive training programme. This ranges from meeting the needs of absolute beginners to advanced techniques, using both tape and 'on-air' training methods as appropriate.

Nets are held on Mondays and Thursdays from 19.00 onwards, on 3.530 and 3.535MHz, and the group publishes a twice-yearly newsletter. A club profile of MEGS appeared in MM27 (p.38).

Life membership costs just £1.00. Further information can be obtained from George M. Allan GM4HYF, 22 Tynwald Avenue, High Burnside, Rutherglen, Glasgow G73 4RN.

World QRP Day

June 17 is designated annually by the International Amateur Radio Union as World QRP Day. It is not a contest. The idea is simply to try working with low power.

Many QRP stations will be heard using typical power levels from 5 watts output down to milliwatts. High power stations are asked to avoid interference to these QRP stations – or better still, to reduce power themselves and join in the fun!

Telegraph WEB Pages

Telegraphy has hit the Internet! WEB pages of interest to readers of *MM* are as follows:

The 'Telegraph Lore' page, presented by Greg Raven, provides a wealth of telegraph related information, including a review of *MM*! Its URL is http://www.cris.com/~gsraven.

Neal McEwen, K5RW, provides

information in his home page on all aspects of American key collecting, including a list of semi-automatic key makers, and a variety of key collecting references. His URL is http://fohnix.metronet.com/~nmcewen/k5rw.html.

The register of the Western Union telegraph collection is located at http:/www.si.edu/organiza/museums/nmah/homepage/lemel/archives/wu.htm'.

MM will welcome news of other sites of telegraphic interest on the Internet.

AGCW-DL QRP/QRP Party

All licensed amateurs and SWLs are invited to participate in AGCW-DL's CW only QRP/QRP Party to be held on May 1 from 1300 to 1900 UTC, on 3.510–3.560 and 7.010–7.040MHz.

Categories: A = 5 watts output maximum (or 10 watts input); B = 10 watts output maximum (or 20 watts input).

Call: CQ QRP. Exchange: RST+QSO-Nr/Category. Example: 579001/A.

Scoring: QSO with own country = 1 point; QSO with another country = 2 points. Double score for QSO with

Help Wanted – SEL Products

MM is seeking information about Morse products made by Signalling Equipment Ltd of Potters Bar. The illustration shows their Morse Practice unit No.1261 advertised in 1944. Readers are asked to send Tony Smith (address inside front cover) details of any keys, buzzers or other Morse equipment they have bearing the name 'Signalling Equipment Ltd', 'S.E.L.' (or the S.E.L. monogram reproduced here), 'J & L Randall Ltd' or 'Merit'. The time scale is likely to extend from WWII to well after the war and products are known to range from military equipment to toy practice sets. Photographs, copies of advertisements, leaflets, etc., will be very welcome.

Signalling Equipment Ltd advert (from Wireless World *September 1944)*

The SEL logo

category A station; Each station may be logged only once per band. Use of keyboards or automatic readers is not permitted.

SWL-Logs: To be listed separately for each band and contain callsigns of both stations heard, including at least one full report.

Multipliers: Each DXCC country worked = 1 multiplier point per band. Total score: QSO-points 80m x multipliers for 80m + QSO-points 40m x multipliers for 40m.

Logs: To be sent to Antonius Recker DL1YEX, Hegerskamp 33, D-48155 Munster, Germany, postmarked not later than 31 May 1996.

Results: obtainable by sending a self-addressed envelope plus one IRC.

(Information from Activity Group CW, Germany.)

Museums of Interest – Holland

1. Havenmuseum De Visserijschool, Ijmuiden. As well as featuring the Dutch fishing industry, maritime traditions, offshore workings, etc., this museum has much on radiotelegraphy, e.g., Marconist's shacks from the 30s and 70s, a former workstation from PCH, etc.

In the radio section, a hand key linked with a Morse decoder invites visitors to try their fists! On the captain's bridge (with all instruments working) are displayed all known communication-codes and abbreviations. An amateur radio station, PI4RCK, operates every Wednesday and Sunday afternoon.

The museum is open Wednesday and Sunday 13.00–17.00, also during holidays. Special arrangements can be made by telephone for groups of about 10 persons to visit at other times.

Admission: Adults NLG 4, Children (4–12 years) NLG 2.50.

Catering: snack-room in the museum. Car parking: in surrounding streets. Address: Havenkade 55, 1973 AK Ijmuiden, The Netherlands. Tel: +31-255-538007.

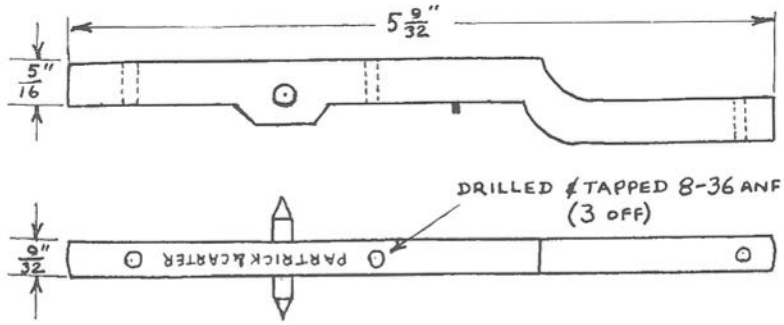
2. PTT-Museum, Den Haag. Exhibits relating to the postal service are in the basement. In the storeys above are exhibits relating to telegraphy, telex, telephone, radio and TV.

On display is the original transmitter/receiver of PCII (now PA0CII) Henk Jesse, who in 1923 was the third European radio amateur to make contact with America. As there is insufficient space to display the museum's entire collection, special temporary exhibitions are arranged from time to time.

Opening times: Monday to Friday, 10.00–17.00. Saturday, Sunday and holidays, 12.00–17.00. Admission: Adults NLG 5, Children (4–15 years) NLG 3.

Travel by train or bus to 'Centraal Station' of Den Haag. Car parking in surrounding streets or nearby public car parks depending on traffic conditions. Address: Zeestraat 82, 2518 AD Den Haag, The Netherlands. Tel: +31-70-3307500.

3. Omroepmuseum, Hilversum. This museum features equipment and documents from the past, including WWII, up to today's most advanced digital items. Includes wireless sets, gramophones, a recording studio from the time of Edison, broadcast transmitters from all periods, and a wireless shop from the early days of wireless. Special exhibitions from time to time.



Help Wanted – Partrick & Carter Key

Wes Tyler, VK2WES, is seeking information on a Partrick & Carter Morse key (USA) of which he only has the lever. The sketch above shows what he has. He would appreciate any information, photographs, drawings, etc., which would help him construct the remainder of the key.

He will gladly reimburse any expenses incurred. Contact Wes at PO Box 43W, West Gosford, NSW 2250, Australia.

At the entrance, a hand key, with the code beside it, invites visitors to test their fist, or call others inside the museum.

The museum shop offers souvenirs, etc., and various books related to broadcasting in the Dutch language.

Opening times: Tuesday to Friday, 10.00–17.00. Saturday and Sunday 12.00–17.00. Guided tours available by prior telephonic request. Access suitable for wheelchairs.

Admission: Adults NLG 7.50, Children (up to 12 years) NLG 5.25.

Travel: by train to 'Hilversum-Sportpark' (three minutes walk from station) or park in spacious car park at front of museum. Address: Oude Amersfoortse Weg 121-131, PO Box 10, 1200 JB Hilversum, The Netherlands. Phone: +31-35-6885888.

(Our thanks to Monika Pouw-Arnold, PA3FBF, for this information. We welcome news about museums with some element of Morse interest from around the world. As well as being of general interest, this information is for the benefit of MM *readers visiting other countries who like to include visits to such museums in their itineraries. – Ed.)*

It lives!

An advertisement placed by the Ministry of Defence in the Recruitment section of the *Daily Mail* for Thursday, 14 March 1996, included the following vacancy:

"The No. 1 Radio School at RAF Locking, Weston-super-Mare, wish to appoint ... an Instructional Officer 1 – Telecommunications ... required to instruct military students in telecommuni-

cations procedures and transmitting and receiving Morse code at 18 words per minute.

"You must have experience in, and be competent to teach, telecommunication principles. Also the ability to read, receive and transmit Morse code is essential. At least one of the following qualifications in a relevant subject is required: ONC, C&G or NVQ level 3 or above.

"Starting salary will be £14,901 with a potential rise in accordance with a performance related pay system. It is pensionable under the Civil Service Pension scheme.

"Applicants should be aware that, under present plans, (this post) will move to RAF Cosford, near Telford, West Midlands in 1998."

The answer to the question 'Is professional Morse dead?' is, it seems, still a firm 'NO'!

For Your Diary

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

* The **National Vintage Communications Fair**, organised as usual by Jonathan Hill and presented by *The Sound and Vision Yearbook*, will take place in the Pavilions Hall at the **National Exhibition Centre**, Birmingham, on **Sunday, May 5**. Opening hours will be 10.30 a.m. to 5 p.m.

* The 27th **Elvaston Castle National Radio Rally** will be held on **Sunday, June 9** at the **Elvaston Castle Country Park**, located on the B5010 which runs between the A6 and A52, 5 miles south-east of Derby.

* The 1996 **Royal Naval ARS Annual Mobile Rally** will take place on **Saturday, June 15**, becoming part of the annual Field Gun Day at HMS Collingwood. This is described as a good day out for all the family, with plenty of sideshows, refreshments and other attractions. **HMS Collingwood** is located on the B3385 Fareham to Lee-on-Solent road (leave the M27 at Junction 11 and follow the A27 towards Fareham; the B3385 is a turning under the railway viaduct). Opening hours will be **12.30 to 5.30 p.m. Please make a note of the change from the traditional day and time.**

Finally, advance notice of some events for the second half of 1996:

* **Hamfest '96**, organised by the Flight Refuelling ARS, will be held in the Flight Refuelling Sports and Social Club grounds, Wimborne, Dorset on **Sunday, August 11**.

* The **Leicester Amateur Radio Exhibition** will be held at the Granby Halls, Leicester, on **Friday and Saturday, October 18/19**.

* Finally, news just in that the **1996 Christmas National Vintage Communications Fair** will be staged in London, at the **Wembley Conference and Exhibition Centre**, on **Sunday, December 1**. The organisers confirm that the Spring NVCF will continue to be held each May at the National Exhibition Centre in Birmingham.

Mr Marseille

Part 1

by Charles Lunsford

A FEW MONTHS AGO a B-17 flew into my town as part of an exhibition by the Confederate Air Force, and my wife and I went to see it. The CAF, as always, had done a beautiful job of restoration and it looked almost new.

The usual 1940s music blared from big loudspeakers and the usual baseball cap and T-shirt booth was doing a brisk business. The crowd was the same group one always sees when the old airplanes come to town. A few young people were there, but most were older folks. People who were young when the airplane was young.

Most were ten, maybe fifteen years older than me. Some were there for the memories. Some, a few, may have been survivors who flew in airplanes like this and lived to tell it. Some were there to remember the many who didn't survive.

They serve to remind me of that generation of young men and women who went to war 50 years ago and paid the price. They won for us what may prove to be the beginning of a lasting peace.

Empty Radio Compartment

I wanted to see this B-17 because I think it was the greatest strategic weapon of its time and because I had never been inside one. Specifically, I wanted to see the radio operator's station.

It was a large compartment to the rear of the bomb-bay. There was a nice big side window to see out and the whole area was lighted by a large overhead Plexiglas hatch that could be removed to mount a .50 calibre machine gun.

A big table extended from the forward bulkhead and on it rested an antique radio receiver. It was a BC-348, the type I trained on as a student. Non-working, I'm sure, but an authentic touch. Sadly, there was no T-47 type transmitter. I suppose none are still around.

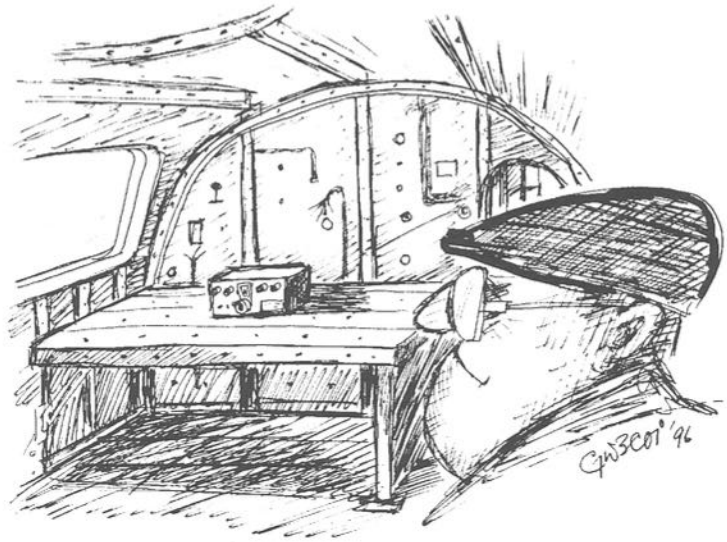
As I looked around, this radio compartment seemed empty and silent. Something was missing. Except for the old receiver looking forlorn and forgotten, there weren't any of those big, shock mounted metal boxes, that were full of wires and vacuum tubes and capacitors and solder.

The ones that had knobs and cranks and flickering lighted dials. The ones

that were warm to the touch and hummed and crackled and sparked and needed a 60-foot antenna.

Barren and Sterile

Like a room stripped of furnishings, the radio equipment was absent. Also absent was the man who nursed those big boxes, and cursed them sometimes and made them work – the radio operator. He was no longer necessary.



. . SEEMED EMPTY AND SILENT . . .

This grand old lady of the air had been fitted with modern radio equipment. I didn't see it but I knew it was there, somewhere. One doesn't see the new stuff. It's all tucked away out of sight. Little miniature black boxes full of transistors and semiconductors and microchips that do wondrous new things in communication and navigation.

No knobs or dials or cranks. No hum, no crackle, no sparks. They don't even get warm. Very modern. Very efficient. Very dull. As I stood in this barren and sterile compartment, I mused for a moment on a part of history that had significantly, and emotionally, impacted on my own life.

Radio operators evolved from telegraph operators. Telegraph is sent over a wire, radio through the air. No wires, but the same general method of sending and receiving. Hence, early radio was referred to as 'wireless'. Thomas Edison began as a telegrapher and he was one of the best and fastest ever.

Little Mention of the Radio Operator

Everyone familiar with the *Titanic* disaster of 1912 knows that ill-fated ship carried a Radio Officer who went down with his ship heroically sending 'CQD',

forerunner of 'SOS', until his radio faded into silence. Radio officers, usually known as 'Sparks', were and still are (for the time being), carried by seagoing vessels.

As aviation evolved, aircraft, both civil and military, began to carry a crew member to operate the radio equipment. Early radio sets were large, complex and bulky and continued that way until well into the 1960s. Today only a few military airplanes carry a radio operator. No civil aircraft use one.

When old wars, airplanes and airmen are recalled, it is always the pilots, bombardiers and navigators who get mentioned. Little or nothing about the radio operator, unless his sometime other job as gunner got him a word or two.

Few Remember

In all literature of World War II flying, only one 'wireless' operator is recognised for his achievements. Brian Goodale, known as 'Concave' because of his height and posture, flew with the famous RAF 617 Squadron – 'The Dam Busters' – a unit formed of hand-picked crews that attacked and destroyed the major dams vital to Germany's war machine in the spring of 1943. The squadron then became a specialised unit flying very high risk missions until the end of the war.

Brian Goodale won a Distinguished Flying Cross and bar, unheard of for a wireless operator. Decorations went first to pilots, the bombardiers, navigators and gunners. A wireless operator had little chance. He was one of only two wireless operators, from the original 19 crews, to survive the war.

So it isn't surprising that few under the age of 50 remember that a radio operator was once an essential part of any aircrew. Without him, there was no communication.

One of the Last of Them

I remember because I was one of the last of them. I was an Airborne Radio Operator. My class of twenty was the next to the last ever trained by the Air Force at Keesler Air Force Base, Biloxi, Mississippi.

Graduating in May, 1956, we were the last few and only a small part of that class drew a flying assignment. We were destined to become relics of the past like those big boxes of tubes and wires and Samuel F.B. Morse whose little system of dots and dashes was, for a long, long time, the only way radio communication was possible.

Before I fade into the past with 'Sparks' of the *Titanic* and Morse and his code, I want to talk about the best radio operator I had the pleasure to work with.

I never met this man. I never knew his name nor did he know mine. I don't know if he was tall or short, young or old. We met over the air and carried on a sort of friendship for nearly three years through the dots and dashes of International Morse Code.

Distinctive Fist

Every radio operator has his own distinctive style in the way he taps out code on his key. It's called a 'fist' and it is as individual as a fingerprint. By fist, 'Mister Marseille' and I came to 'know' each other.

He was not a flying operator. He was one of the International Civil Aviation Organisation (ICAO) controller-operators working in the Marseille Flight Information Region (FIR), which controlled most of the south of France and a large part of the central Mediterranean.

Marseille FIR, in those days, had no high-frequency voice radio capability, so this man communicated totally in Morse code. He worked mostly days, but he was occasionally on duty at night.

Fresh Out of Radio School

Fresh out of Airborne Radio School, I arrived in France in late July of 1956, assigned to the 12th Troop Carrier Squadron, 60th Troop Carrier Wing (Medium), based at Dreux Air Base in Normandy. The primary mission of the Wing was combat cargo – airdrops of troops and equipment.

The Wing was equipped with shiny new C-119G aircraft. Built by Fairchild who named it 'Packet', it was more commonly known as the 'Flying Boxcar', carried over from its ancestor, the C-82.

The 12th Squadron emblem was a pair of winged dice with 'boxcars' showing. The cargo compartment of the airplane was almost as big as a railroad boxcar and did the same job. One of the most powerful twin-engine aircraft ever built; its one failing was that in order to drop equipment, the clam shell doors at the rear of the cargo compartment had to be removed.

It flew funny without the rear end of its fuselage which led to it being replaced with aircraft of later design whose cargo door could be opened in flight. The last C-119 ever built, number 53-8156, was one of the 12th Squadron birds.

Always On the Move

There was no war, so the only 'combat cargo' we did was training. We went to Germany to drop the 11th Airborne and the 10th Special Forces and we did some equipment drops in the 7th US Army manoeuvres and England's Farnborough Air Show. But there wasn't enough of that to keep us busy, so, along with the other two wings in Europe we were used for air logistics. We flew freight.

'You Call, We Haul' was our unofficial motto. You name it, we hauled it. From soup to nuts to beer, people and nuclear weapons, all over Europe, North Africa and the Middle East, even India. Short missions, long missions, day, night, sometimes in weather that would frighten a Nantucket Whaler.

We were like gypsies, always on the move, living out of a suitcase, away from base for up to 60 days at a time. Casablanca one day, Athens the next, and Oslo the next. It was wild, but it was fun. When one is young, everything is fun.

Sometimes No Radio!

European Air Traffic Control was primitive everywhere except in England. In North Africa and the Middle East, it was mostly non-existent, with only a few ancient Adcock Range Beacons, the first radio compass stations dating from the early thirties.

Sometimes the control tower had radio, sometimes not. Sometimes there

was no tower! Maybe a windsock, maybe not. At one remote place in Turkey we flew into an old, very short runway with weeds and grass growing up between the cracks and we had to buzz it to scare the sheep and goats away in order to land. We just guessed at the wind direction.

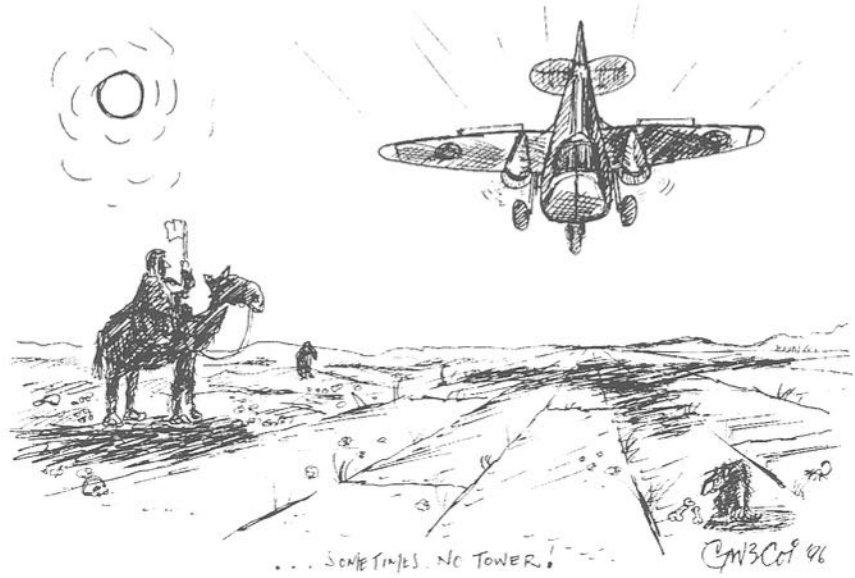
There were two Flight Information Regions that had no voice high frequency capability – Basrah in Iraq and Marseille, as I said. A few others had limited voice, but they couldn't be counted on and we frequently worked them in Morse code.

Those that had voice operated mostly on a frequency of 8930.5 kilocycles. The term 'cycle' has been replaced and is now known as 'hertz', in honour of one Heinrich Rudolph Hertz (1857–1894), who was the first to broadcast and receive radio waves. We didn't know about Hertz in the 1950s. We thought Marconi was the first. So, with all respect due to Herr Hertz, I'll use cycles.

Radio Discipline

High frequency radio (short wave) is not line of sight but follows the curve of the earth and bounces off the ionosphere. It can be transmitted for very long distances which is good. Not so good is the fact that every station on that frequency, however far away, can also send or receive. It's a giant party line.

Visualise, if you can, a situation where, say, 20 aircraft flying at any given time in the FIRs of Rome, Athens, Cairo, Tunis, Lod (Israel), Casablanca and Algiers, along with the two stations in Turkey, Ankara and Istanbul, are all using the same frequency. If you know



anything at all about Citizens Band radio, then the word chaos will come to mind.

But it wasn't chaos because we used a mostly outdated thing called radio discipline. 'Know what you have to say, say it, and GET OFF THE AIR!' It was, however, busy. You had to listen, wait your turn, quickly make your call up, and be ready when the ground operator answered. If you didn't play the game properly, then you were ignored for about 30 minutes.

The same rules of the airwaves applied to non-voice radio, but the congestion was considerably lessened. The frequency was different for Morse code and only those aircraft in the FIR could be heard, usually no more than five or so.

Faster Than I Could Read

My experience with Mr Marseille, the controller in that FIR, began on my initial training flight on the way to Athens, Greece. I was flying with an experienced radio operator whose job it was to expose me to the real world of airborne radio operation, to evaluate me and check me out.

Having seen so many classmates go to non-flying assignments, and having lost the chances of flying training in the Air Force Cadet programme because of my eyesight, I was ecstatic at finally being up there in the 'Wild Blue Yonder'. But this was business and I had to learn as much as I could. Radio school notwithstanding, it soon became obvious I had a lot to learn.

Somewhere approaching southern France, the Paris controller handed us over to Marseille and I listened as the trainer made contact in Morse code. Marseille's call sign was FNM and he answered on the 4th call. His reply was very fast and crisp. He was using an automatic telegraph key, known as a 'bug'. He was faster than I could read.

I'm Not Ready for This!

The trainer sent our position report and the estimated time of arrival over Marseille. All done in Morse code, using 'Q' signals. (Example: QNH denotes the atmospheric pressure in inches or millibars of mercury at any given airport, needed by the pilot to correct the altimeter to show correct altitude.)

With 'Q' signals, it wasn't necessary for the communicating parties to speak the same language. I carried an inch thick book of 'Q' signals everywhere I went for three years and used it until it was in rags.

'Wow', I thought as I listened to the traffic, 'This is real radio operating'. Then the trainer told me he wanted me to make the next transmission to Marseille. 'Oh, God,' I thought, 'I'm not ready for this'. But I wasn't going to let anyone know. So, acting in what I thought was a confident, devil-may-care manner, I changed seats with the trainer.

Part 2, describing the special on-air relationship that built up between the author and 'Mr Marseille', will appear in the next issue of *MM*.

(This article originally appeared in Air & Space/Smithsonian, *June/July issue, 1994, and is reproduced by kind permission of the author. All Rights Reserved, 1993, Charles L. Lunsford.)*

Wirespeak

A brief look at an even briefer language

by Heidi Anderson

(reprinted from *AP World*, Jan/Feb 1993)

ALMOST EVERY AP staffer can remember reading the message wire for the first time and bumping into a bizarre word or two. Perhaps a word so alien that it required a translation from a veteran colleague.

That's wirespeak, a strange combination of abbreviations, contractions and misspellings found only on AP computers and printers. Most staffers can toss around the secret handshakes like a pro, filing dandies like 'cupla', 'foner' and 'xgr' *(see glossary for meanings. – Ed.)*. But that's really only giving a cupla quick breaths to the last generation of a once mighty breed that ruled the wire.

Test your knowledge of wirespeak by tackling this beast:

Scotus tdy dedd 5 pw O+ Potus dz n xtd 2 t Pips bc cgsl xgn Q sj is uxl. [1]

If you didn't get past the '5', don't even bother with this one:

Quaffe fenes [2]

Origin of the Species

In the early years of the AP, the wire (read: Western Union) ruled communications from town to town. It was slow and it charged by the word, so an early AP executive named Phillips invented a code that abbreviated hundreds of commonly used words and phrases. Like 'Scotus', for example, which is short for 'Supreme Court of the United States.'

'Phillips Code' quickly became a standard. Telegraph operators and news reporters added it to their Morse repertoire, which already included short notations such as '-1-' (wait a minute) and '-95-' (urgent). Phillips Code saved time and money, and helped Morsers avoid a precursor to Repetitive Strain Injury known as 'glass arm'. If you didn't know Phillips Code, you didn't work at AP.

The code grew over the years. In 1914, it was compiled into 64 pages of

Footnotes

[1] Phillips Code, circa 1914: 'Supreme Court of the United States today decided that the power of the president of the United States does not extend to the Philippines because Congressional decision on the subject is unconstitutional.'

[2] AP's 'Code A', circa 1914. Quaff fenes = 'Will remain here in Little Rock.'

9-point type and published under the title 'An Easily Acquired Method for General Newspaper and Court Reporting.' On the first page of one copy still kicking around the AP offices, a previous owner scrawled: 'Hello. Come in and fight your way out.'

"I started learning Phillips Code in 1918," recalls Aubrey Keel, now 91. Keel, a former traffic bureau chief in Des Moines, started with AP in 1926 as a Morse operator *(see 'Morse in the AP', MM32, p6. – Ed.)*. "It took me a year to be proficient in it, but I studied a little at a time. Sometimes someone would send an abbreviation that you wouldn't understand. But, with the context of the story in your mind, you sort of did your own translation. It was a little like translating a foreign language."

Before long, Phillips Code grew out of control. Abbreviating every word in the English language was an impossible chore, and reporters filled the gaps with unwieldy groupings, inventing monsters like 'caserovingedsable' and 'retackmentativeness,' leaving newspaper editors on the other end scratching their heads.

Phillips Code began to disappear in the '30s, as technology improved and the teletype debuted. It remains today only as one of many ingredients comprising the wirespeak stew.

Quaffe Fenes?

But 'Quaffe fenes'? Where does that come from?

If you haven't heard that lately, you're in good company. It's a dead language. But once it kept the best company secrets.

'Quaffe fenes' is part of what came to be known as Code A, a blip in the wirespeak evolution that lived fast, died young and left a very confusing corpse. Invented about the same time as Phillips Code, it was a spy decoder-ring type of language. Words and phrases weren't abbreviated, as they were in the Phillips Code. They were invented – new, nonsensical words designed to substitute for standard English. There were 365 separate words, for example, to represent every day of the year.

Bud Harvison, who joined AP as a newsman in the 1940s and retired in 1989, says Code A was invented to discourage United Press staffers from pilfering AP news, back when the two wire services shared office space. So why not just use the phone?

"You just didn't pick up the phone in those days," Harvison says. "Long distance took forever to get through, and then the quality wasn't reliable. (AP General Manager) Kent Cooper actually made it a sin. He trained us to use Western Union."

Keel remembers Code A only as a series of mysterious words that would appear occasionally on a newsroom printer.

"Someone would take the message to the bureau chief, who would then unlock a drawer in his desk, produce the small book and shut the door of his office," Keel says. He figured it was personnel information. It probably was. The Code A decryption book lists codes for everything from 'wires down' to 'don't hire this man, he drinks.'

Eventually, Code A withered and died. It never provided secrecy anyway. "Everyone picked it up," says Harvison.

A GLOSSARY OF TERMS

Morse Code

-1- ..... wait a minute
-4- ..... where shall I go ahead?
-17- ..... to all points
-18- ..... what's the matter?
-25- ..... busy on another wire
-30- ..... end of report
-73- ..... best wishes/good night
-95- ..... urgent

Phillips Code

apc ..... appreciate
CQ..... correct
ex- ..... out of or from (just like Latin)
FABIB ... filed a petition of bankruptcy
Pku ..... peculiar
POTUS .. President of the United States
U ..... you
Xgr..... Legislature

Code A

Naked..... advise me by day-letter
Nodds..... being delayed by lax work on part of the wire company
Odors ..... daily wire report
Opule ..... do not hire

Code A (continued)

Parga ..... is not friendly with
Picro..... opposition beating us
Prune..... we beat the opposition on
Punge ..... we will not bear any of the expense
Quags ..... wire me quickly
Quake..... wires partially prostrated

Modern Wirespeak

cupla ..... a couple of
foner..... telephone number or phone interview
prolly ..... probably
sap..... soon as possible
sappest ... sooner than soon as possible
shud ..... should
unhave ... don't have
unfind..... can't find
unknow .. don't know
thanx ..... thank you
thx ..... thank you
tks ..... thank you
tnx ..... thank you
tx ..... thank you
wud ..... would

"I think in some cases AP and UP even used the same codes."

Newer generations of newspeople filtered into AP bureaux, and few of them could remember Code A. Even fewer cared to learn.

As Harvison puts it, "they got tired of sending people to dusty closets and drawers for that little code book."

Modern-day Mutations

But the spirit of Code A, if not its actual words, lives on, as do the descendants of other wire languages.

You can see it on the message wire and in E-mail:

Phillips Code remnants like 'apc' or 'tnx'; Morse code left-overs like '-73-' (best wishes); the spirit of Western

Union penny-pinching in compound words like 'unhave' or 'uppick.'

(One Chief R/O I sailed with would delight in marking such unnatural contractions as code groups and charging them at 5 letters to the word in any telegrams he accepted. This often caused great annoyance to regular passengers, who would complain that they had never been prevented from saving money in this way on any other liner they'd sailed in! – Ed.)

General News Editor Jack Cappon, the AP's word guru, says it simply makes sense to shorten messages – as long as everyone understands what it means. Wirespeakers are only doing what humans have done with language since writing on cave walls.

"I'm not sure it's a technically bona fide language, but it's definitely a legitimate code language based on standard English," says Springfield, Mass, correspondent Jeff Donn, who holds a doctorate in romance languages.

"I think it has characteristics of a bona fide language for two reasons: it compresses words to make compound words and has a ton of phonetic spelling," Donn says. "Phonetic spelling is reminiscent of Spanish. And Esperanto (a universal language created in 1887 by a Polish doctor) used the same two qualities of wirespeak – compression and phonetics – to create a new language."

There are even rules of usage, albeit loose ones. Take the word 'sap', a derivation from the acronym ASAP, which means 'as soon as possible.' From 'sap' comes 'sappest', a superlative form meaning 'sooner than soon as possible.' (There's also 'soonest', which appears to fall in immediacy somewhere between 'sap' and 'sappest.') They are not interchangeable.

"The feeling I get out here in the boonies," says Donn, "is that, while we tend to ask for things 'sap', only the General Desk has the ability to ask for it 'sappest'."

But in the Wrong Hands...

One final note of caution: wirespeak must be handled carefully. Otherwise it might backfire, as in the case of a mysterious dark horse Indy 500 winner in the 1930s.

A small Colorado paper, which was holding its PMs edition for race results, messaged the Indianapolis AP bureau asking for an expedited report.

The bureau telegraphed back, using typical telegraph-speak of the time, 'Will overhead Indy 500 winner.' [3]

A newspaper editor misunderstood.

Says Managing Editor Darrell Christian: "The paper then wrote its own bulletin saying an obscure driver named Will Overhead won the race. Even went so far as to write a transition graf [4] into the running story."

(Reprinted, with permission of the Associated Press, from AP World, *January/February 1993.)*

Footnotes

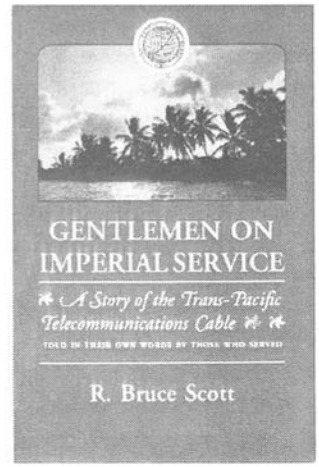
[3] The term 'overhead' refers to speeding a piece of news across the AP wire directly to a particular paper.

[4] A 'transition graf' is a paragraph in a news story that acts as a bridge between two ideas or topics.

Gentlemen on Imperial Service

A Book Review

by Tony Smith



THIS BOOK TELLS THE STORY of the transpacific cable, a submarine cable running from Canada to Australia and New Zealand, with cable stations at Fanning Island, Fiji, and Norfolk Island. For the telegraph historian, it relates how the idea was conceived by Sir Sandford Fleming, Chief Engineer of the Canadian Pacific Railway Company and discussed for over a quarter of a century before its completion in November 1902.

It describes the development of the system, from simple manually operated instruments to modern technology. It tells how the cable was administered by many masters, first the Pacific Cable Board, and subsequently by Imperial and International Communications, Cable & Wireless Ltd, Australian Overseas Telecommunications Commission (now Telstra Corporation Ltd), Canadian Overseas Telecommunications Corporation and Teleglobe.

Based on the personal experiences of the author, R. Bruce Scott, and others employed on the cable, it also provides a fascinating insight into the way of life of the Morse operators who manned the cable stations in the South Seas, Australia, New Zealand, Fiji and Canada.

Boys Wanted

At the end of the first world war, Scott was an office boy in Sydney, Australia, when he saw an advertisement in the *Sydney Morning Herald*: 'WANTED, boys fifteen years of age to learn submarine telegraphy and serve overseas. Apply Pacific Cable Board, 77 Pitt Street.'

He asked a Boy Scout friend what it meant. 'Oh, that's the latest way of communicating between submarines', was the reply. Intrigued by the prospect, he applied for the job and discovered what it really was. After a year in the offices at Pitt Street, he was sent for training as

a cable operator at the Southport Cable Station in Queensland.

At Southport, trainees read long distance cables from stations in the Pacific area; sent and received Morse with key and sounder; typed ten-letter code words; transmitted messages by hand perforator and keyboard perforator, and with two-pedal cable keys.

Emphasis was placed on cultivating the correct wrist action for tireless operation hour after hour. The PCB rulebook said 'The course of instruction should be such as will bring about the power of youths to key, perforate, and type on the several instruments in a correct manner free from blundering, and to receive with accuracy.' It was necessary, it added, to stamp out the erasure habit and avoid carelessness of any description.

Training Completed

Scott completed his training in 1922. In Sydney he was placed on one year's probation and signed a five-year contract of service. He was also given an official handbook of working rules and regulations which stressed that, on and off duty, he should remember his responsibilities as a 'Gentleman on Imperial Service', and govern himself accordingly.

The handbook listed the various speeds at which cables were worked and the number of words to be handled per hour. At a speed of two hundred letters per minute, for instance, it was 2400 words per hour. It continued 'Senders not generally securing the above earning power of the several listed speeds should be called upon for report, and the incident brought to the attention of the manager.'

Original Methods

At that time, the methods of transmission and reception had changed little since their original invention. Traffic between Sydney and Melbourne was sent by key on a manually operated overland circuit.

Messages over the Auckland-Sydney cable were read by means of a syphon recorder, with wavy line signals recorded on a moving tape, passing over a typewriter behind a thick glass filled with water, which magnified the signals to a suitable size to assist decoding. Press messages received were typed out with ten carbon copies, for distribution to various press services, and required a strong-wristed operator to produce so many legible copies in one strike!

Transmission on the cable was by means of a keyboard perforator and a Cox transmitter. The cable was worked at 200 letters a minute and that speed had to be maintained, regardless of what difficulties the operator might have reading handwritten cablegrams, which were sometimes almost illegible.

Accuracy Essential

Not only did an operator have to keep the traffic moving, he also had to be accurate. A check was made of each succeeding month's work and his annual pay increment was not recommended until his record over the preceding twelve months reached the required standard.

Delayed increments meant a permanent loss of seniority. The monthly percentage of errors for junior operators

was 0.025 and for seniors 0.012. Scott says the system produced some of the best operators in the world. An experienced Pacific Cable Board operator could get a job with any other cable company, at a higher salary, but few accepted such offers.

After less than two years at Sydney, a vacancy occurred for a bachelor operator on Fanning Island, the most exotic station in the service. An isolated coral atoll in the middle of the Pacific Ocean, normally only experienced operators were sent there because of the difficulty in reading signals over the long cable from Canada.

End of an Era

Scott volunteered for the job and was accepted. At eighteen, he was the youngest operator ever to go to Fanning Island. He provides an engaging account of life and work there and at other stations in the system. He transferred to Bamfield cable station on Vancouver Island in 1930 and remained there until his retirement in 1960. By coincidence, it was the end of an era. Bamfield was closing and his final emotional task was to wind up the affairs and dispose of the assets of the old station.

It is a fascinating book with so much detail of interest to telegraphy enthusiasts it is impossible to do justice to it in a short review. While telling the stories of individual Morsemen working within a great twentieth century enterprise, it also tells the story of the enterprise itself. It is surely a must for every telegraph buff's bookshelf!

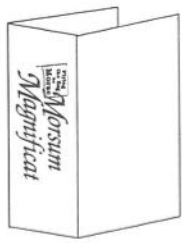
Gentlemen on Imperial Service, by R. Bruce Scott, 1994, is published by Sono Nis Press, Victoria, British Columbia, Canada. Paperback, 130 pages, including 38 photos.

It will be available from the MM Bookshelf, and from our stand at rallies, etc., from early May. – Ed.

(Thanks to Ken Quigg, GI4CRQ, for the loan of his copy of this book).

BACK ISSUES *Limited stocks of Issues Nos.* ***26, 27, and 31 to 44 only*** *now available, price £2.20 each to UK addresses; £2.40 to Europe or £2.75 elsewhere by airmail. Deduct 20% if ordering 3 or more back issues*

Morsum Magnificat



BINDERS

Covered in a hard-wearing red grained finish, with the magazine title logo blocked in gold on the spine. Each binder holds two years-worth of the magazine, retained by strong wires, but easily removable should the need arise.

UK addresses – £6.50 each, or £12.00 for 2 binders (both prices inc. VAT)
Other EU States – £7.20, or £13.20 for 2 (inc. VAT);
Rest of the world– £6.15, or £11.25 for 2 (no VAT).
All prices include postage and packing. Send your order with a cheque or postal order, **payable to G C Arnold Partners**, or Visa/Mastercard number and expiry date.

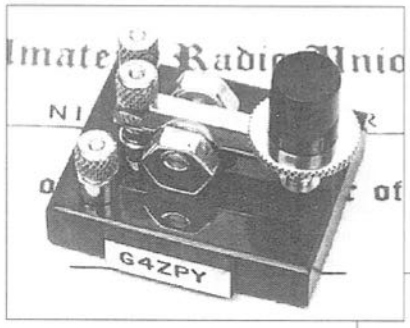
Overseas payments must be by Visa/Mastercard or in Sterling. Due to high costs, we can no longer accept payment by PostGiro or PostCash International

G C Arnold Partners, 9 Wetherby Close, Broadstone, Dorset BH18 8JB, England, phone/fax 01202 658474

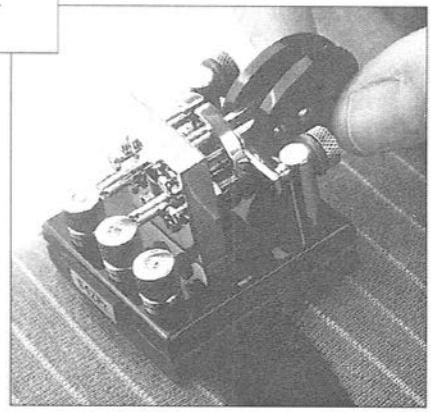
G4ZPY
PADDLE KEYS
INTERNATIONAL

41 MILL DAM LANE, BURSCOUGH,
ORMSKIRK, LANCS., ENGLAND L40 7TG
TEL/FAX (01704) 894299

Another two of our World Famous Keys ...



#55 - The "Baby" Micro Miniature Pump Key. Fully adjustable and useable. At 25mm by 32mm, it is the smallest in the World.



#56 - Miniature "3 in 1" Twin Paddle Key. Just 44 by 44mm, the only key in the World with a Magnetic Base.

Both designed with QRP in mind

For information on all our Products, just send a 9" x 4" S.A.S.E. (GB), or 2 IRCs Overseas

The Code Book

Morse Code Instruction Manual (Revised and Expanded Second Edition)

and

Ham Stories

Book Reviews

by Tony Smith

THE FIRST EDITION of *The Code Book* was reviewed in MM34 (p.38). That edition went well and sold out in the first six months after publication. This second edition has been expanded to over twice the size. Much of the extra material, concerning students' difficulties, has been acquired in response to a request for feedback on the first edition.

As previously, before teaching anything, the first part of the book discusses the learning process. The subjects of various sections indicate the scope of this approach: Commitment, Determination, Discipline, How the Brain Works, Logic, Thinking about Morse code, Routine thinking, The Philosophy of Learning Morse code, Communicating Without Thinking, Instinct at Work, Instinctive Mode.

Summarised like that it all sounds a bit complicated, but it's not. It is a logical and practical approach to a subject that over the years has caused problems for many who have tried to learn the code.

The structured self-study course of 24 lessons is intended to be combined with commercial audio practice cassettes, computer program courses, random code generators or 'home-brewed' tapes made by an experienced amateur, and advice is given on the actual requirements before any of these are obtained.

There is also good advice relating to the more commonly experienced difficulties in learning the code, as well as advice on how to study and practise and how to approach the US Morse exams.

A number of appendices cover the W1AW code practice schedule, common Q-codes, a short list of CW abbreviations, the R-S-T system, the phonetic alphabet, international time conversion tables for the US and Canada, US amateur frequency allocations, and a table of frequency usage for the letters of the alphabet in the English language.

When I reviewed the first edition of this book I commented that while some parts are related specifically to the requirements of the USA Morse test, the advice on how to approach the learning process, and the course itself, could be of value to learners or improvers in other countries.

I still have that view. For learners outside the USA, still struggling after

trying other ways of learning Morse, this book could well show them where they are going wrong, and help them finally master the code.

A COMPANION BOOK to *The Code Book* is *Ham Stories*, a compilation of inspirational stories based on the author's personal experiences as a Volunteer Examiner and theory and code instructor. They describe problems and successes experienced by a number of individuals as they sought to pass the Morse test or upgrade within the US licensing system.

Described as 'inspirational', I confess to a certain wariness as I picked up this book. I just couldn't imagine how learning Morse and passing the test, even if there were difficulties overcome along the way, could possibly be considered an inspirational experience. But I was wrong!

For anyone learning Morse, or indeed for any Morse person who has become slightly jaded over the years, this is the tonic and encouragement you need to work harder at the code or even renew your faith in amateur radio! The stories are not only very readable and very human, they ARE inspiring! ***MM***

The Code Book: Morse Code Instruction Manual, by Robert W. Betts N1KPR, is obtainable from R.W.B/C.G. (Publishing), 8 Little Fawn Drive, Shelton, CT 06484, USA. It costs (USA) $19.95, (Foreign) $24.95, post-paid.
Its companion book, _Ham Stories_, also by Robert Betts, is available from the same address, price (USA) $9.95, (Foreign) $12.95, post-paid.

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

News Extra

UK Morse Test Anniversary

On 10 May 1986, the RSGB commenced Morse Tests on behalf of the RA (Radiocommunications Agency). The occasion was more than just the appointment of a new agency by the Department of Trade and Industry; for the very first time in the United Kingdom, radio amateurs were testing fellow amateurs.

Ten years later the Morse Test Service is still manned by 300 volunteers, organised in 70 county teams, who carry out in excess of 1000 Morse tests annually for both the full 12 wpm and Novice 5 wpm class A licence requirements.

To commemorate this important milestone, the Society proposes to award a souvenir Morse Test Anniversary certificate to any amateur who makes contact with 10 Special Event stations active using CW during the anniversary weekend of 11–12 May 1996.

These stations will be operated by the county Morse testing teams, and for ease of identification the RA have approved the use of the GB10 prefix, followed by the RSGB County code suffix. For example, the London team will use GB10LDN and Norfolk GB10NOR. Additional stations will also be active from RSGB HQ (GB10RS), The Chief Morse Examiner (GB10CW), Deputy Chief Morse Examiner (GB10QSO) and the Strathclyde Morse test team will use their Club Call GM0RSE.

In order to encourage newcomers to apply for the award, each team will spend some time working QRS in the Novice CW section of the 80 metre band.

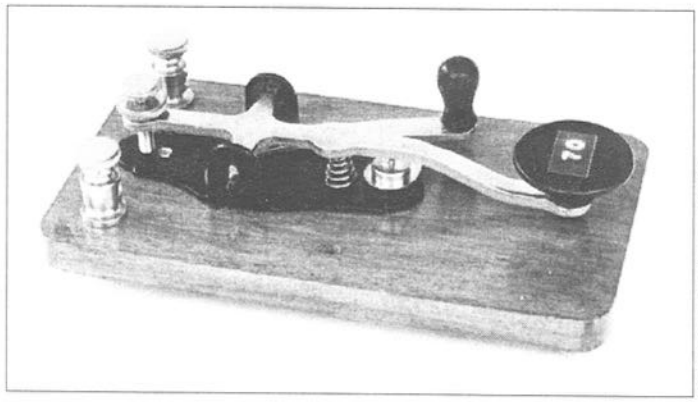
The cost of the certificate is £2, $5, or 6 IRCs and Log Extracts should be sent to the Chief Morse Examiner, Roy Clayton G4SSH, 9 Green Island, Irton, Scarborough, North Yorkshire YO12 4RN. QSL cards are not required to claim the award, which is also available to listeners.

(Information from Roy Clayton G4SSH)

Morse Test Service – 10th Anniversary Special Event Stations 11–12 May 1996

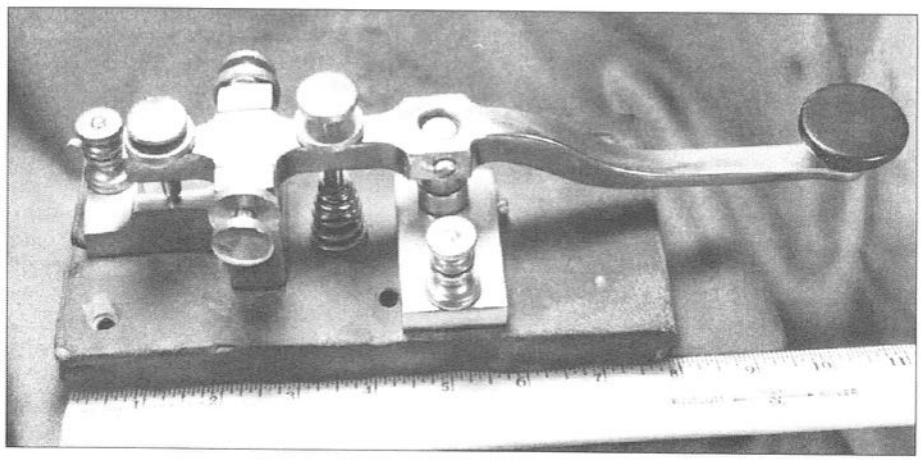
GB10CW	Chief Morse Examiner
GB10QSO	Deputy Chief Morse Examiner
GB10RS	RSGB HQ (Hertfordshire)
GB10ATM	Co. Antrim
GB10ARM	Co. Armagh
GB10BFD	Bedfordshire
GB10BRK	Berkshire
GB10CNL	Cornwall (Poldhu)
GB10CBA	Cumbria
GB10DYS	Derbyshire
GB10DGL	Dumfries & Galloway
GB10HPH	Hampshire
GB10LNH	Lancashire
GB10LEC	Leicestershire
GB10LCN	Lincolnshire
GB10LDN	London
GB10NHM	Northampton
GB10NLD	Northumberland
GB10NOR	Norfolk
GB10SPE	Shropshire
GB10SFD	Staffordshire
GB10SFK	Suffolk
GB10SXW	Sussex West
GB10SRY	Surrey
GB10TYS	Tayside
GB10TWR	Tyne & Wear
GB10YSE	Yorkshire East
GB10YSN	Yorkshire North
GB10WMD	West Midlands
ZC4CYP	Cyprus (awaiting confirmation)
GM0RSE	Strathclyde Morse Test team (Club Call)

Info Please!



Collection: John Elwood WW7P.
Photo: Ray Nelligan

Unknown key. Information welcomed



Photo/collection: Lynn A. Burlingame N7CFO

Unknown very large key, base 8 inches long, no markings. Info welcomed

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

Bookshelf

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

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

SEND YOUR ORDER TO:

G C Arnold Partners, 9 Wetherby Close,
Broadstone, Dorset BH18 8JB, England

Payment accepted by Access, Eurocard, Mastercard or Visa (quote your card number and expiry date), or by cheque, draft or postal orders. Overseas cheques and drafts must be payable in Sterling, and drawn on a London Clearing Bank. We no longer accept payment by PostGiro or PostCash International.

MAKE ALL CHEQUES, ETC., PAYABLE TO G C ARNOLD PARTNERS

New additions to the Bookshelf

Wake of the Wirelessman *by B. J. Clemons*

This is the true story of Dale Clemons, born in 1895 in Iowa, who graduated as a marine wireless operator in 1914. For two years he sailed in everything from lumber schooners to passenger liners, then returned to school to pursue a career as an electrical engineer. Within months, the USA declared war on Germany, and Dale went back to sea as radio operator on the ss *Vigo*, an armed merchant ship disguised as a warship.

Sailing across the Atlantic, the *Vigo* successfully dodged German raiders and torpedo attacks, but it was breakdowns due to advanced corrosion of the ageing vessel, that were to prove her undoing.

Although there have been books relating the experiences of seagoing radio operators from the 1930s onwards, *Wake of the Wirelessman* describes the practices, equipment and happenings of an earlier time, revealing many fascinating and little-known facts.

266 + 18pp, 6 x 9in, softbound

£12.95 (UK): £13.75 (Eur/Sur)

Wake of the Wirelessman *and* ***Gentlemen on Imperial Service*** *(see review on p.18 of this issue) will be available from the MM Bookshelf from early May 1996.*

TELEGRAPHY BOOKS, etc.

Detailed descriptions of the titles listed below available on request

Railroad Telegrapher's Handbook by Tom French *(MM22)* ..... £6.75 (UK): £7.05 (Eur/Sur)
McELROY, World's Champion Radio Telegrapher by Tom French ..... £14.70 (UK): £15.40 (Eur/Sur)
History, Theory & Practice of the Electric Telegraph by George B. Prescott ..... £12.75 (UK): £13.65 (Eur/Sur)
The Story of the Key by Louise Ramsey Moreau *(MM38)* ..... £3.95 (UK): £4.25 (Eur/Sur)
Wake of the Wirelessman by B. J. Clemons ..... £12.95 (UK): £13.75 (Eur/Sur)
Gentlemen on Imperial Service by R. Bruce Scott *(MM45)* ..... £8.775 (UK): £9.25 (Eur/Sur)

RADIO & AUDIO BOOKS

Radio Art by Robert Hawes *(RB16)* ..... £14.50 (UK): £15.00 (Eur/Sur)
Wires, Wheels and Wings by Harry Reddin *(MM42)* ..... £19.00 (UK): £19.65 (Eur/Sur)
Early Radio – in Marconi's Footsteps by Peter R. Jensen *(MM38)* ..... £28.00 (UK): £28.75 (Eur/Sur)
Communications Receivers – the Vacuum Tube Era by Raymond S. Moore ..... £15.00 (UK): £15.85 (Eur/Sur)
The RACAL Handbook by Rinus Jansen ..... £13.00 (UK): £13.75 (Eur/Sur)
The Golden Age of Radio in the Home by John W. Stokes ..... £17.50 (UK): £18.00 (Eur/Sur)
More Golden Age of Radio by John W. Stokes ..... £25.00 (UK): £25.50 (Eur/Sur)
Comprehensive Radio Valve Guides, in five books:
No. 1 (1934-1951); **2** (1951-1954); **3** (1954-1956); **4** (1956-1960); **5** (1960-1963) ..... Each £2.95 (UK): £3.25 (Eur/Sur)
Or, the set of five books: £14.00 (UK): £15.50 (Eur/Sur)
Radio, TV, Industrial & Transmitting Valve Equivalents ..... £2.95 (UK): £3.25 (Eur/Sur)
70 Years of Radio Valves and Tubes by John W. Stokes ..... £20.25 (UK): £21.25 (Eur/Sur)
Valve Amplifiers by Morgan Jones *(RB38)* ..... £26.50 (UK): £27.30 (Eur/Sur)
Wireless for the Warrior - Volume 1 (WS1 – WS88) by Louis Meulstee *(RB38)* ..... £27.50 (UK): £28.30 (Eur/Sur)
The Sound & Vision Yearbook – 1995/96 ..... £3.50 (UK): £4.00 (Eur/Sur)
Electronic and Radio Engineering by F. E. Terman *(RB37)* ..... £22.50 (UK): £23.30 (Eur/Sur)
Audio! Audio! by Jonathan Hill ..... £11.35 (UK): £12.00 (Eur/Sur)
Saga of the Vacuum Tube by Gerald F. Tyne *(RB39)* ..... £14.30 (UK): £15.20 (Eur/Sur)

Credit card orders welcome by phone or fax on 01202 658474

Keys for the Wireless Set No. 19

(Canada and USA)

by Chris Bisaillion VE3CBK

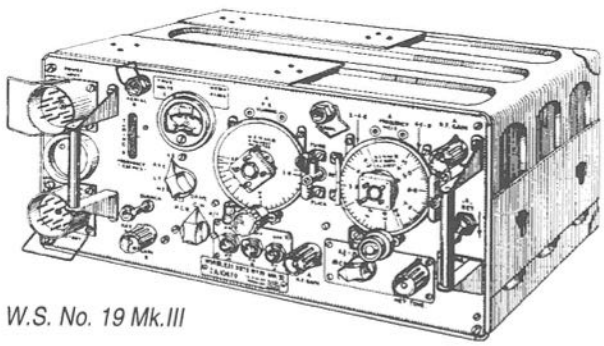
TONY SMITH'S ARTICLE, 'Key WT 8 Amp Worldwide Survey Results' (MM28 pp.7-23) and Louis Meulstee's article, 'Unusual Military Morse Keys', in *The AWA Review* Vol. 8, 1993 pp. 39-41, inspired me to combine several sources of information to elaborate on keys that were used with the Wireless Set No. 19, the workhorse Wireless Set of the Second World War.

Mk.II Set

The Wireless Set (Canadian) No. 19 Mk.II used two types of Key and Plug Assemblies described as follows. The first type is the Key and Plug Assemblies No. 9, ZA/CAN/BR 0937 (Manufacturers # PC 90691C-1) as shown in **Fig. 1** and **Fig. 2**. Internally it has a three-bridge Key W.T. 8 Amp No. 2.

The second type is the Key and Plug Assemblies, CDN, No. 9 Type 1, ZA/CAN 1643 (Manufacturers # R 11950-1) as shown in **Figs. 3 and 4**. Internally it has a two-bridge Key W.T. 8 Amp No. 2 made by Northern Electric Co. The designation 'Key and Plug Assembly R 11950' is stamped into the base from underneath creating raised lettering under the lever arm.

There is an interesting note in the Working Instructions for the WS No. 19 Mk.II; 'Key and Plug Assembly, PC90691C-1 will be supplied instead of Key and Plug Assembly, R.11950 until present stock is exhausted.'



W.S. No. 19 Mk.III

Mk.III Set

The Wireless Set (Canadian) No. 19 Mk.III also used two assemblies described as follows. The first is the Key and Plug Assemblies No. 9, ZA/CAN/BR 0937 already described above.

The second type is the Key and Plug Assemblies,

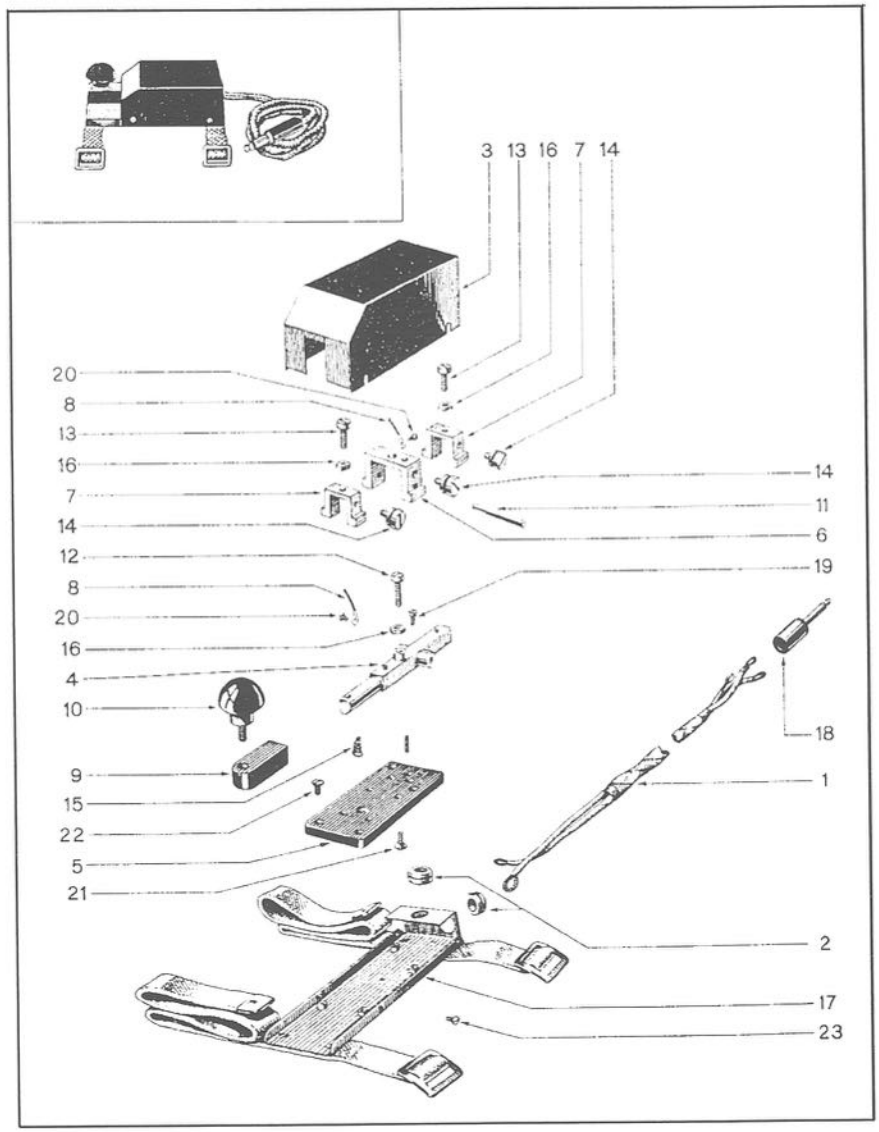
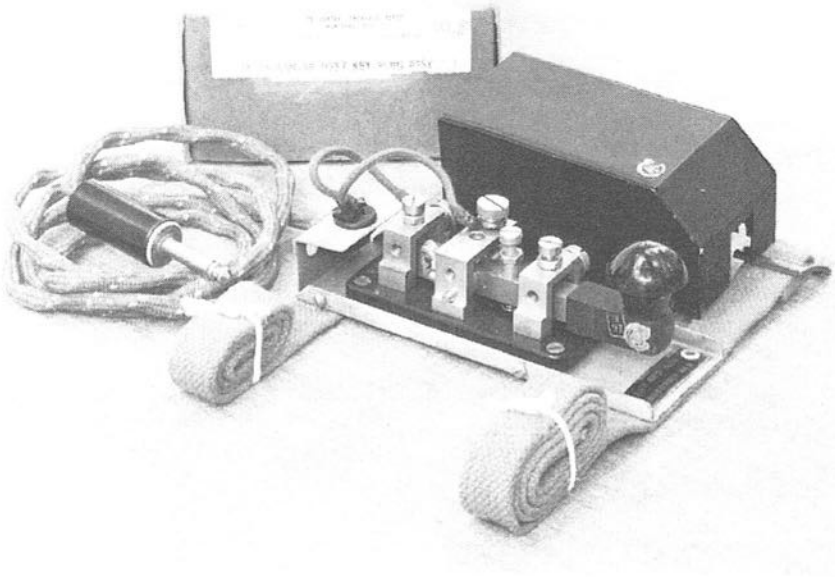


Fig. 1. Key and Plug Assemblies No. 9 (ZA/CAN/BR 0937), from EMER FZ 256/2 and FZ 256/3

CDN, No. 9 Type 2, ZA/CAN 0715 (Manufacturers # RCA 110072-1) made by Westclox as shown in **Figs. 5 and 6**. Internally it has a two-bridge Key W.T. 8 Amp No. 2 of pressed steel construction.

to page 30 >



All photographs by Deborah Bisaillion

Fig. 2. Key and Plug Assemblies No. 9 (ZA/CAN/BR 0937)

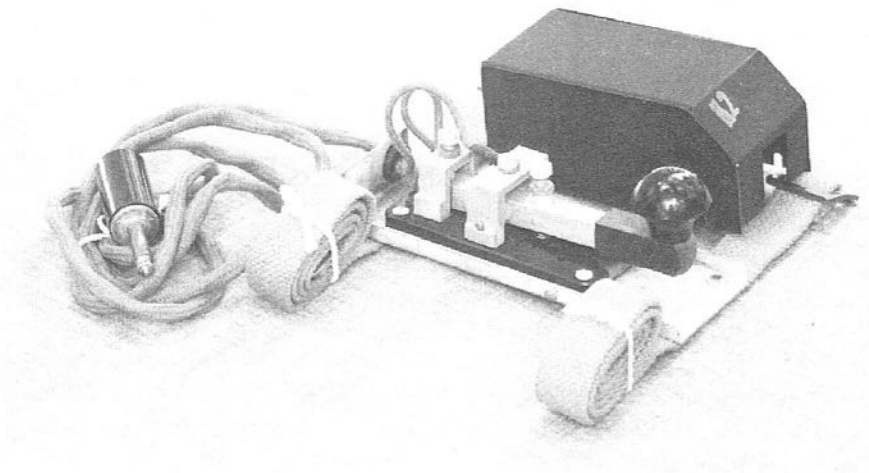


Fig. 3. Key and Plug Assemblies, CDN, No. 9 Type 1 (ZA/CAN 1643)

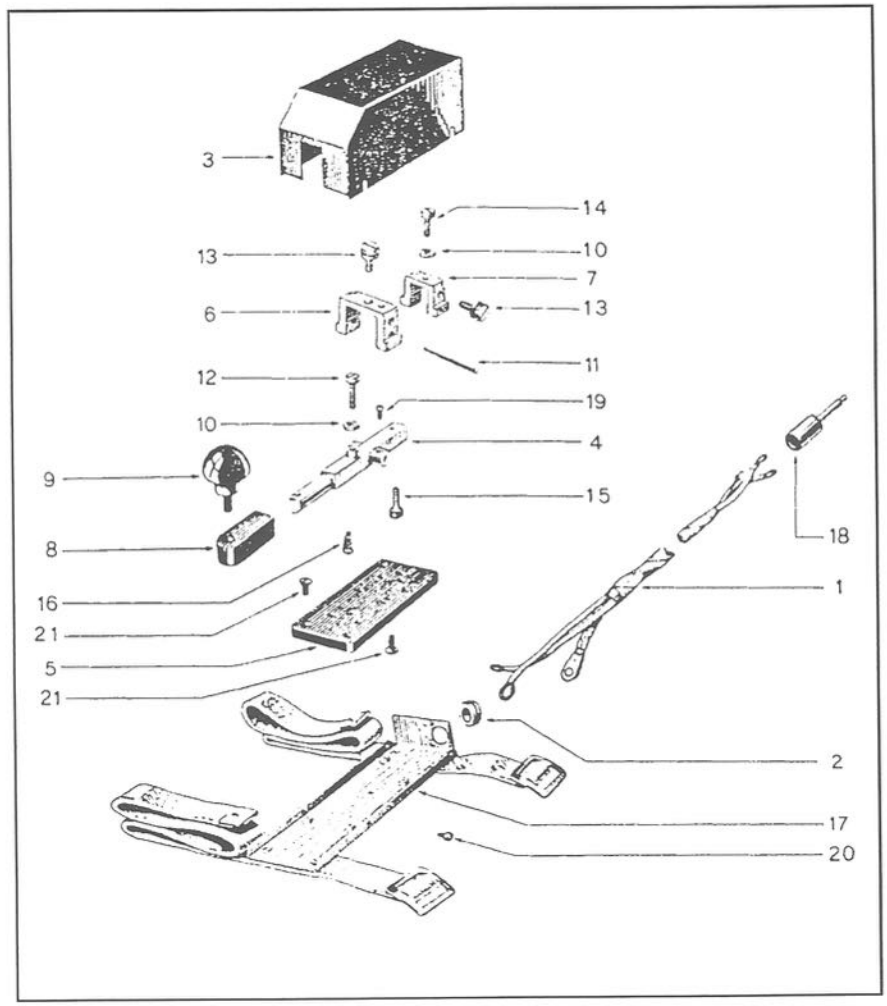


Fig. 4. Key and Plug Assemblies, CDN, No. 9. Type 1 (ZA/CAN 1643), from EMER FZ 256/2

Another key was used with the WS No. 19, in the Wireless Remote Control Units, CDN, No. 1 designated ZA/CAN 0977 (Manufacturers # RCA 111809-1) as shown in **Figs. 7 and 8**. Note the different knob shape and lack of high voltage guard sleeve.

Key Designations v. Assembly Numbers

Details of how the internal key designations relate to the assembly numbers are summarised in Table 1, on the opposite page.

Variants

And now for the variants! I believe that variants are the spice of any collection and we must have them all. What a quest!

I have found several British-built Key and Plug Assemblies No. 9 with the designation ZA 0937 on the cover but packed in a cardboard box with the designation ZA/CAN/BR 0937 printed on the label as shown in **Fig. 9**. This indicates that the Canadians used British-built keys interchangeably. The internal key has the designation Key W.T. 8 Amp No. 2 Mk.II. I found slight variations in these British-built Key and Plug Assemblies No. 9 as follows:

1. Standard plated base, flat black painted cover, Key W.T. 8 Amp No. 2 Mk.II designation on Bakelite base, cord is beige with red, yellow, and blue stripes.

2. Standard plated base, flat black painted cover, Key W.T. 8 Amp No. 2 Mk.II designation on Bakelite base, cord is dark brown with yellow, red, and blue stripes.

3. Standard plated base, flat black painted cover, Key W.T. 8 Amp No. 2 Mk.II ZA 2869 LMK designation stamped on lever arm, cord is dark brown with yellow, red, and blue stripes.

4. Standard plated base, flat black painted cover, Key W.T. 8 Amp No. 2 Mk.II designation on Bakelite base, cord is light brown with green, yellow and blue stripes, brass lever arm.

5. Flat black painted base, black wrinkle painted cover, Key W.T. 8 Amp No. 2 Mk.I designation on Bakelite base, cord is beige with no stripes.

to page 32 >

Table 1. Assembly Numbers and Internal Key Designations

Designation	V.A.O.S. # (Note 1)	Manufacturer #	Internal Key Designation	V.A.O.S. #
Key and Plug Assemblies No. 9	ZA/CAN/BR 0937	PC 90691C-1	Keys, W/T, 8-Amp, No. C2	ZA/CAN 0982
Key and Plug Assemblies CDN No. 9, Type 1	ZA/CAN 1643	R 11950-1	Keys, W/T, 8-Amp, No. C4	ZA/CAN 1522
Key and Plug Assemblies CDN No. 9, Type 2	ZA/CAN 0715	RCA 110072-1	Keys, W/T, 8-Amp, No. C3	ZA/CAN 0926
Wireless Remote Control, CDN, No. 1	ZA/CAN 1332	PC 82506 C-190	Keys, W/T, 8-Amp, No. C1	ZA/CAN 0977 (Note 2)

*Note 1: V.A.O.S. = **V**ocabulary of **A**rmy **O**rdnance **S**pares.*

Note 2: Keys, ZA/CAN 0977, is identical to Keys, ZA/CAN 0926, with the following exceptions:

1. KNOBS, ZA/CAN 0975 replaces KNOBS, ZA/CAN 0968.

2. GUARD, ZA/CAN 0967 is omitted

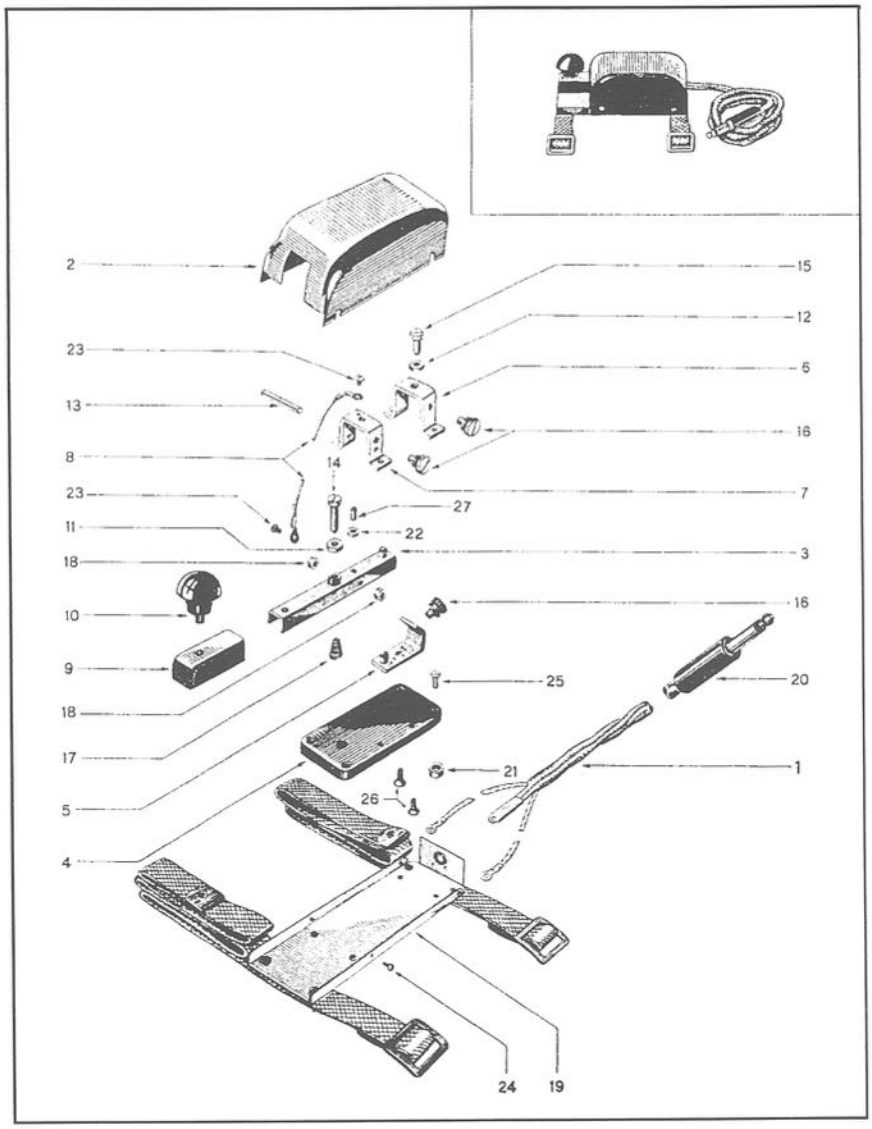


Fig. 5. Key and Plug Assemblies, CDN, No. 9 Type 2 (ZA/CAN 0715), from EMER FZ 256/3

American Sets

The United States of America also manufactured the Wireless Set No. 19 and had their own suppliers of Key and Plug Assemblies No. 9, namely, J.H. Bunnell (New York, NY) and

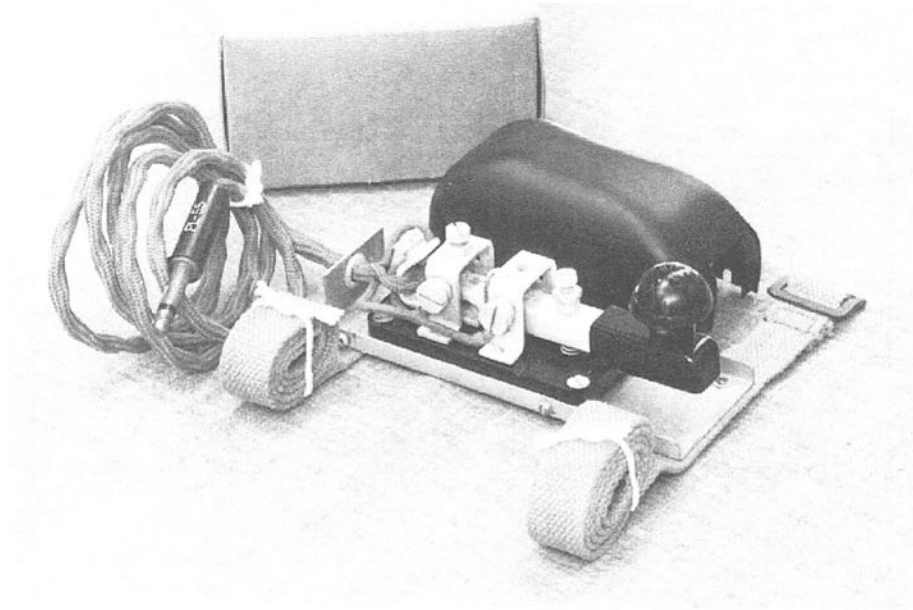


Fig. 6. Key and Plug Assemblies, CDN, No. 9 Type 2 (ZA/CAN 0715)

Alden Products Company (Brockton, Mass). The 'Tabular List of Replaceable Parts for the Wireless Set No. 19 – Mark II manufactured by RCA Victor Division of the Radio Corporation of America – dated May 20, 1943' lists the two assemblies under the designation 90691C-1.

The J.H. Bunnell Key and Plug Assembly No. 9 is shown in **Fig. 10** in two variations. The lower key has a black wrinkle finish base and the designation ink-stamped on the lever arm, the upper key has a plated base with the designation stamped on the base under the lever arm and interestingly enough it has the Canadian Army designation ('C' with a broad arrow) stamped in red on the cover.

This means that this key was destined for use in the Canadian Army and represents a strong connection between US manufacture and Canadian use of Wireless Set No. 19 equipment.

The Alden Key and Plug Assembly No. 9 is shown in **Fig. 11**. The key is a modified J-37 with the knurled lever set nuts moved internally to the frame to reduce width to meet the overall width requirements of the Key and Plug Assembly No. 9.

Two variations are shown, the upper key has brass hardware components and the lower key has black painted hardware components.

Most Variations Found?

After many years of collecting, I believe I have found most variants of the keys that were used with the

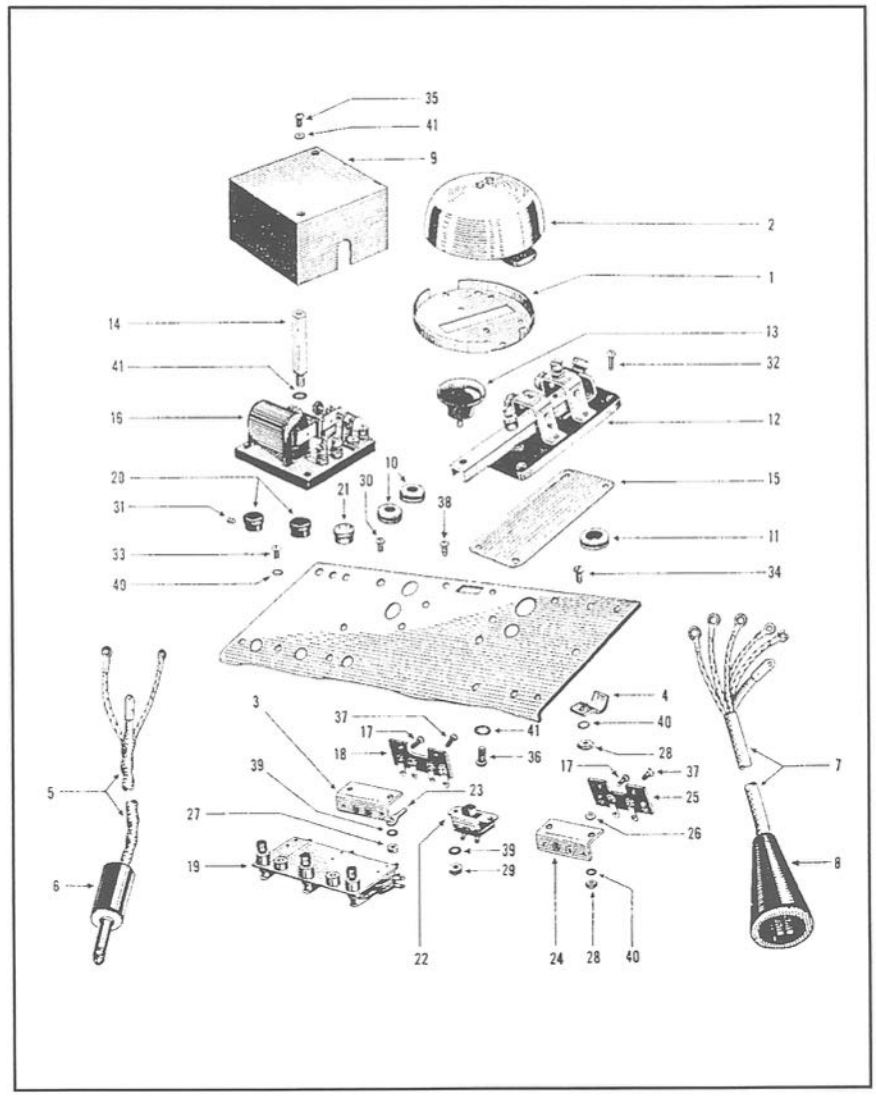


Fig. 7. Keys, W.T. 8 Amp, No. C1 (ZA/CAN 0977) item 12 as used in Wireless Remote Control Units, CDN, No. 1 (ZA/CAN 1332), from EMER FZ 256/3

Canadian and American versions of the Wireless Set No. 19, but I would be glad to hear from readers with information on ones that I have possibly missed and any anecdotes that would help to complete the picture.

Although many variations of the keys for the Wireless Set No. 19 existed, it is

to page 37 >

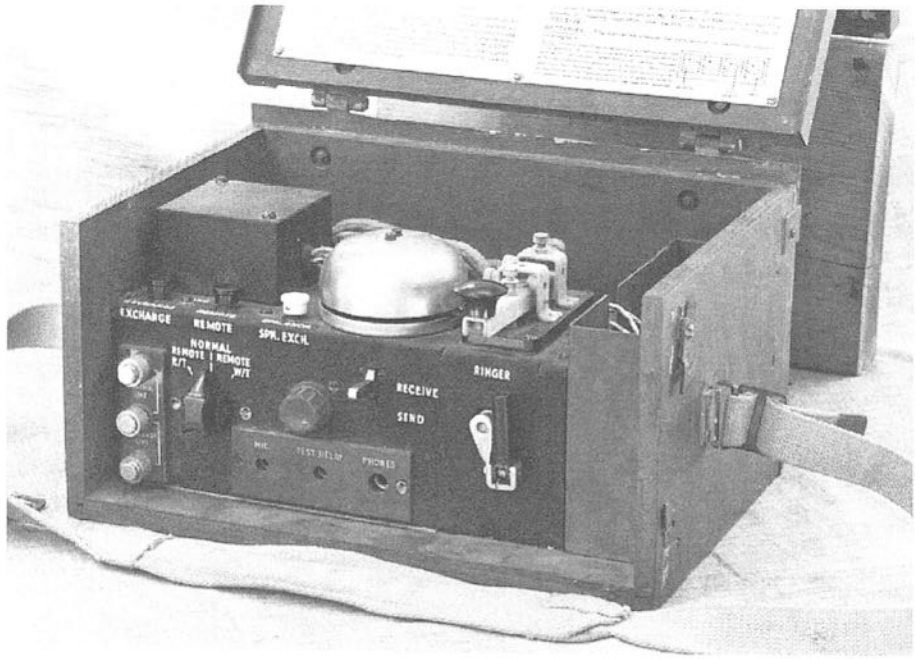
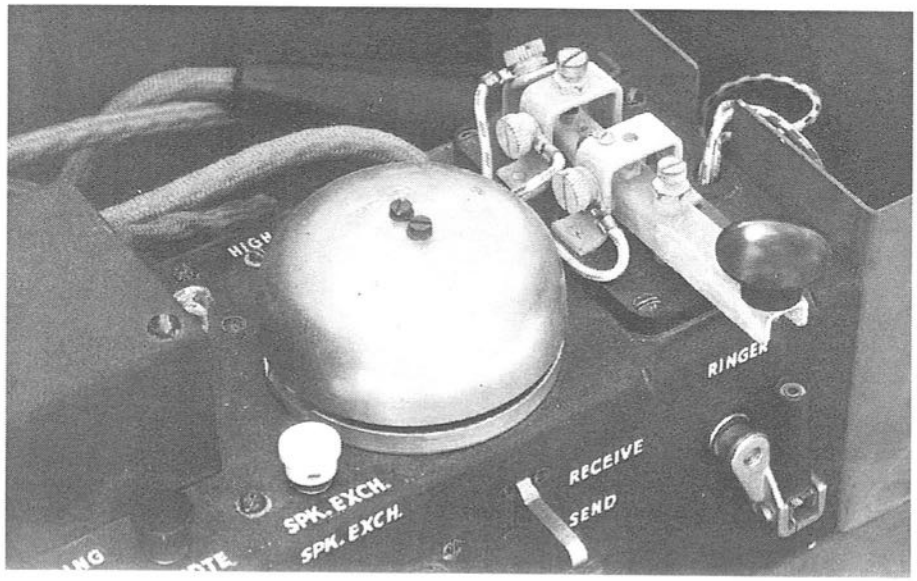
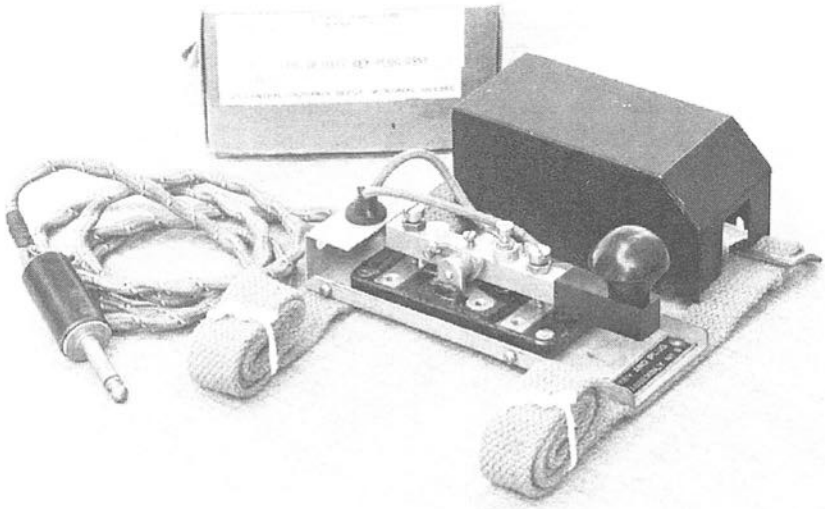
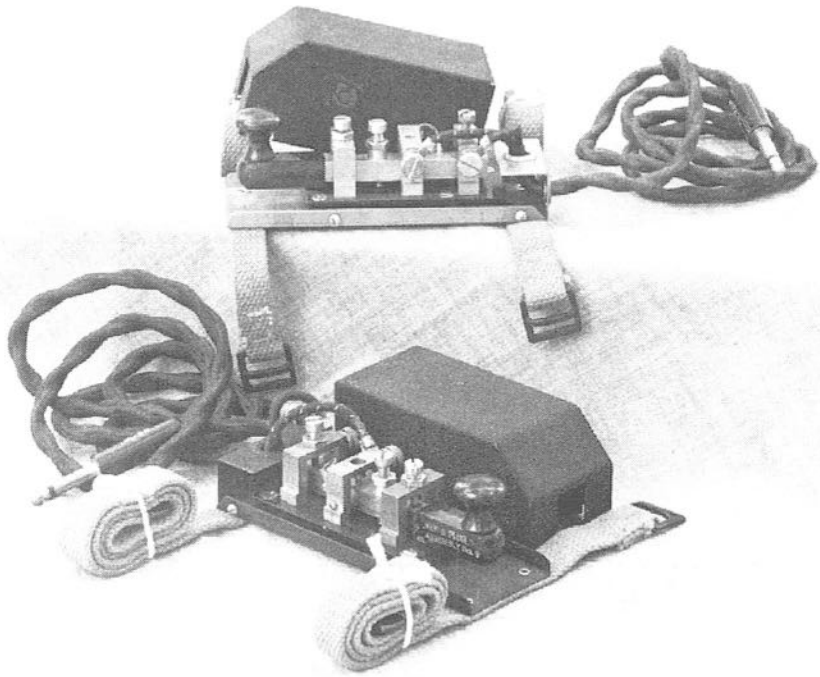


Fig. 8. Keys, W.T. 8 Amp, No. C1 (ZA/CAN 0977) as used in Wireless Remote Control Units, CDN, No. 1 (ZA/CAN 1332), also shown below in close-up







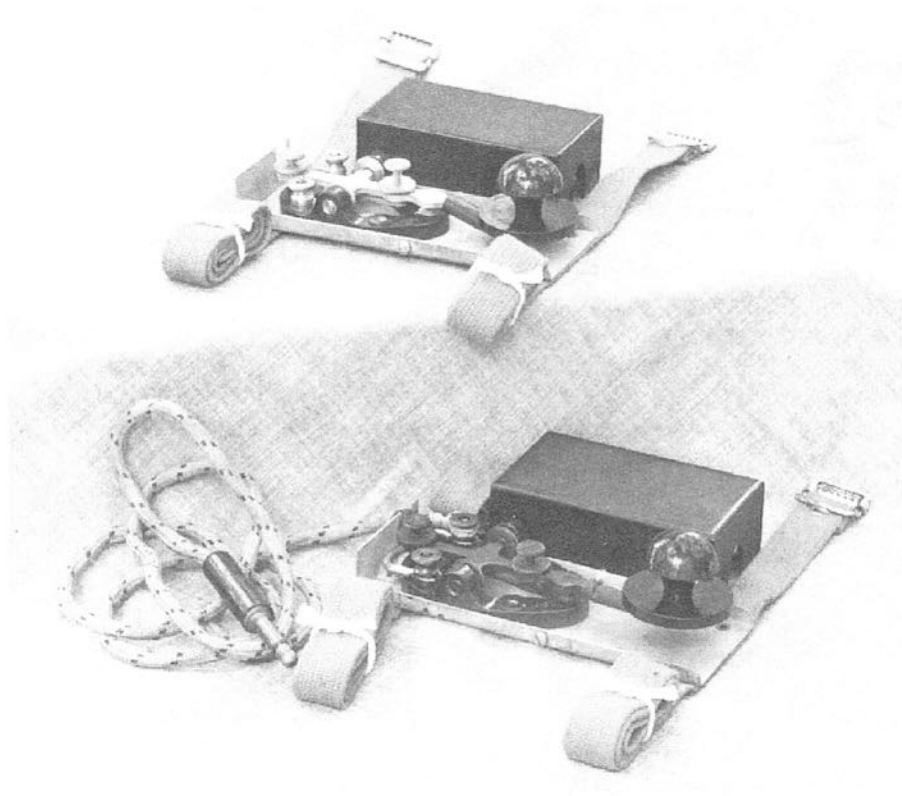


Fig. 11. Alden Key and Plug Assemblies No. 9 (USA)

reasonable to assume that these were not intentional variants. Lack of available materials and substitutions made during wartime manufacture, meant that equipment had to be made available for service in a timely manner.

On the opposite page:
Fig. 9 (top). British Built Key and Plug Assemblies No. 9 (ZA 0937).
Box is marked ZA/CAN/BR 0937.
Fig. 10 (bottom). J.H. Bunnell Key and Plug Assemblies No. 9 (USA)

Dedication

Fifty plus years later it is quite an honour to be able to sit back and ponder the variations from a collector's point of view. I dedicate this article to the Wireless Operators that no doubt had to use these keys under extremely adverse conditions.

(Chris Bisaillion owns the Whiskeytown Wireless Collection. His speciality is the Wireless Set No. 19.)

RUFZ Top-List Competition

RUFZ is a simple program for an off-line 'CW callsign reading contest' simulation, which was previously described in MM40, p.23. The name RUFZ is an abbreviation for the German word 'Rufzeichen', meaning 'call'.
There is now an opportunity to use the latest version of RUFZ in the same way that it is used in the World High Speed Telegraphy Championships – but in the less pressurised atmosphere of your own home or at your radio club (where a small local contest could perhaps be arranged?).
This can be done by participating in the worldwide RUFZ Top-List competition which publishes an ongoing table of results every week.

RUFZ IS AN EASY-TO-USE PC program for use under DOS (not Windows). There is a README file explaining how to modify the program, if required, but on-screen instructions are sufficient to run the program immediately with its standard settings.

Basically, the program sends 50 callsigns which have to be read and typed onto the keyboard. If you wish, you can set your own starting speed. If you copy a call correctly the sending speed increases. If you copy a call incorrectly the speed decreases. After 50 callsigns, your score is displayed on screen, including the fastest speed you achieved during the run.

It is not necessary to be a 'super high-speed Morse expert' to take part in the Top-List competition. The 'top guns' will undoubtedly take it seriously, but it is also very enjoyable for the less-skilled and it can help them improve their Morse reading and typing skills.

The most important thing is not winning, but taking part... And demonstrating to other radio amateurs that amateur CW is not only still alive and well but capable of using modern technology in its pursuit of excellence!

The best result in this section of the World Championships in 1995 was obtained by Antal Hudanik HA3OV (Hungary), with a speed of 546 symbols per minute based on the PARIS-standard, and a score of 52 275. At the other end of the scale, the lowest position in a recent Top-List results table was 168 symbols per minute with a score of 4441 (Don't be intimidated by the speeds quoted. It is not the overall speed but the best

speed achieved in copying any one call during the run).

Why not try the program a few times and then send in your own entry. Remember, you can set your own starting speed (as low as you like). Practise awhile to see if you can beat your previous performance, then start sending entries as your ability improves!

Don't worry if you are at the bottom end of list. If there are more entries from slower operators, others will be encouraged to take part and will be stimulated to try to improve their skills. Remember, today's beginners are tomorrow's experts!

Instructions for RUFZ Top-List Competition

1. Use RUFZ version 2.12 or later with DOS. (Not under Windows or DOS-emulation).
2. Use 50 calls per attempt. (Default = 50)
3. Decide on your own initial speed. (See README file).
4. Use original callsign-file (i.e., RFZFILE.DTA unmodified, see README file)

Where to Send Your Score

Send your own callsign, score and maximum speed, as displayed on screen after your best attempt:

1. By packet radio to: DL4MM@DB0TUD.#SAX.DEU.EU
2. By post to: Mathias Kolpe DL4MM, Breitscheidstr. 17, D-01237 Dresden, Germany.
3. By fax to: +49-351 252 63 13
4. By e-mail to: je1cka@nal.go.jp OR KOLPE@t-online.de

Where to Find the Top-List Table

1. Every Tuesday in PR-mailboxes @CONTEST
2. On request by e-mail: mail to: info-contest@dumpty.nal.go.jp with the command in the body: /get rufztop.list
3. KA9FOX web page: http://www.4w.com/ham/ka9fox/rufz_scores.txt
4. Lists and other information about the Top-List will also be published from time to time in *MM*.

How to Obtain RUFZ

Help CW achieve a higher profile in amateur radio. Tell your friends about the RUFZ Top-List and how it can help them improve their CW skills. Suggest they try RUFZ, and take part in the Top-List even if they are not yet high-speed operators! Copies of RUFZ can be obtained in any of the following ways:

1. Packet radio:
Search for 'RUFZ' at @IBM in any mailbox, or mail a request to DL4MM@DB0TUD.#SAX.DEU.EU for personal 7PL-files.

2. Internet:
ftp://ftp.eskimo.com/u/o/oolon/rufz.zip
ftp://kgic18.geo.tu-dresden.de/pub/hamradio/incoming
http://www.access.digex.net/~k3sa/pvrc.html

3. E-mail info-server:
mailto://info-contest@dumpty.nal.go.jp with the command in the body: #get rufzpack.uue. When reply is received, uudecode the body when RUFZPACK.EXE will be generated. Run RUFZPACK at the DOS prompt to obtain all RUFZ files.

continued on page 48

Power Sources for Telegraph Circuits

by L.E. 'Ed' Trump AL7N

IT MAY BE DESIRABLE to set up a telegraph circuit or circuits for a home telegraph office, fair demo or museum exhibit. In regard to power sources for such set-ups, for satisfactory operation and safety as well as protection of valuable antique equipment, there are a number of things to consider in order to do the job right.

1. For reasons explained in a previous article *('Observations on Telegraph Instrument Use in Circuit', MM44, page 26)* adequate voltage must be supplied in order for the instruments to operate properly, particularly if high resistance 100, 120 or 150Ω 'mainline' instruments are to be used. The 'open circuit' voltage is the supply voltage such as would be measured in the circuit across an open key with a DC voltmeter. For circuits with more than two mainline instruments in circuit, this voltage should be not less than 100 volts in order to obtain proper operation and ease of adjustment of the sounders or relays. Lower voltages can be used but performance will suffer if too many instruments are cut into a circuit with insufficient supply voltage, regardless of the operating current value.

2. Sufficient current must be available to operate the circuit or circuits desired at the proper current level without overloading the power supply. Means must also be provided to limit the current in the circuit or circuits to a proper and

NOTE FOR NON-AMERICAN READERS

This article refers to the use of mains transformers and other equipment based on the American 115-volt mains supply. Readers outside the United States wishing to construct the power source described in this article should use mains transformers and other equipment suitable for the mains voltage of their own country. If they are unsure of anything relating to such a change in the circuit, they should consult a qualified electrician.

safe value consistent with the type of instruments to be used.

3. Isolation must be provided between different circuits using common power supply terminals to avoid interaction between them. That is, when one circuit is keyed, other circuits 'taking battery' from the same supply must be unaffected.

4. Last but by no means least, the power source must be safely constructed, properly fused on the 115V AC side and set up to minimise hazards to those working with it.

THE AUTHOR ASSUMES ABSOLUTELY NO RESPONSIBILITY WHATSOEVER FOR ANY INJURY OR HARM TO PERSONS OR PROPERTY BY ANYONE USING ANY OF THE FOLLOWING INFORMATION.

Transformers

It will be assumed that the commercial 115V AC mains will be used as power source primary supply.

Suitable transformers can be found at surplus outlets, ham swapfests, or Radio Shack Stores. A single 'isolation' type transformer that has a secondary output of 110 to 115 RMS VAC can be used, or alternatively, several lower voltage transformers can be used by wiring their primaries in parallel, and their secondary windings in series to obtain just about any desired output voltage.

Both positive and negative output voltages with respect to earth common can be obtained from the same transformer or transformers by use of a full wave bridge rectifier wired in a certain way (see **Fig. 1**). This results in two half-wave rectified outputs each having its own filter network and opposite output polarities. It efficiently uses both

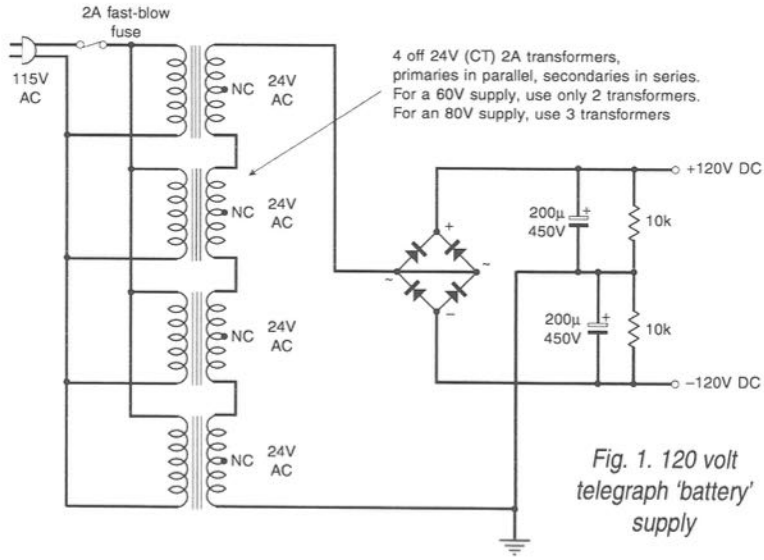
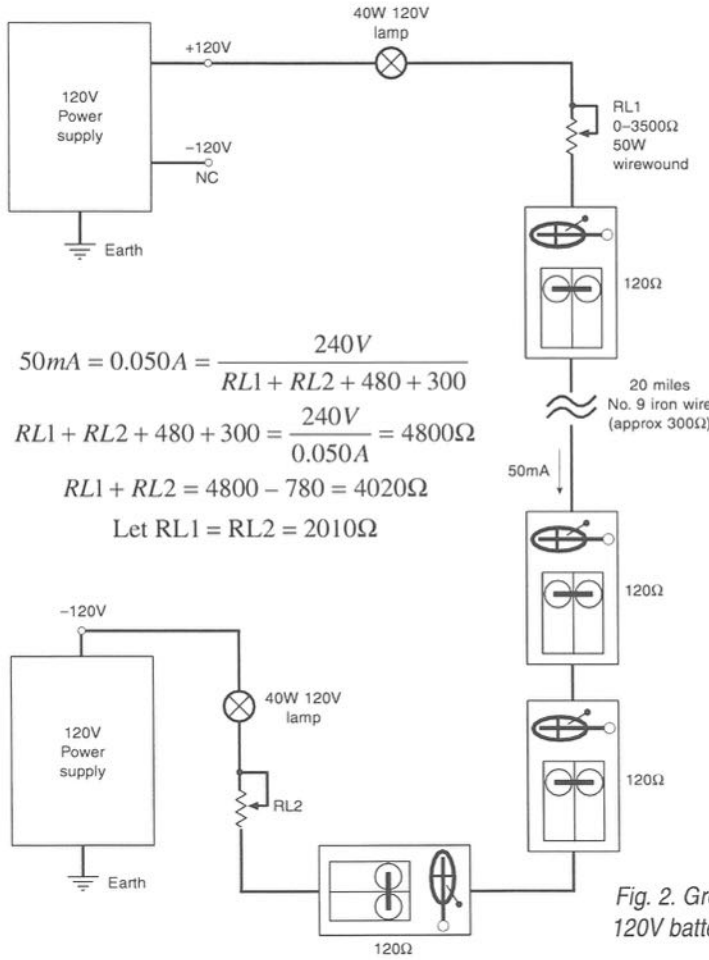


Fig. 1. 120 volt telegraph 'battery' supply



$$50mA = 0.050A = \frac{240V}{RL1 + RL2 + 480 + 300}$$

$$RL1 + RL2 + 480 + 300 = \frac{240V}{0.050A} = 4800\Omega$$

$$RL1 + RL2 = 4800 - 780 = 4020\Omega$$

$$\text{Let RL1} = \text{RL2} = 2010\Omega$$

Fig. 2. Ground return circuit – 120V battery feed at each end

halves of the AC input cycle, and is entirely adequate for telegraph purposes. See the diagrams and notes.

Current Regulation

For current regulating purposes use 3500 or 5000Ω wirewound rheostats rated at least 90mA (35 or 50 watt) minimum. These can be obtained through Fair Radio Sales in Lima, Ohio, or perhaps at swapfests, etc.

Use Ohm's Law to calculate initially the series resistance value required to set up a circuit. The calculated value may differ somewhat from what is actually required, due to differences in ground resistances, etc., in the case of ground return circuits, but it will be a good starting point.

Each feed from the power source should be routed through a common 40-watt 120-volt incandescent lamp (a com-

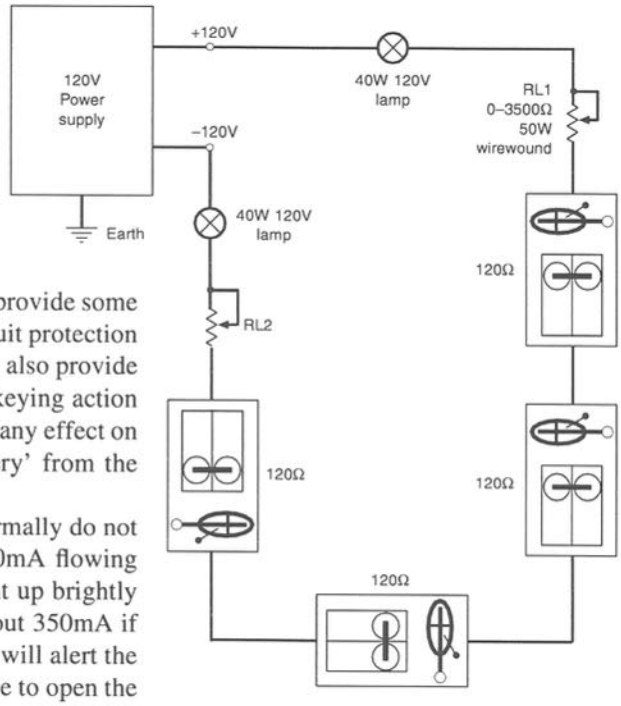


Fig. 3. Non-ground return circuit, double battery feed

mon light bulb) in order to provide some over-current and short-circuit protection for the circuit. These lamps also provide some isolation so that the keying action of one circuit will not have any effect on other circuits 'taking battery' from the same voltage supply.

Such 40-watt lamps normally do not glow visibly with 50 or 60mA flowing through them, but will light up brightly and limit the current to about 350mA if a short circuit occurs. This will alert the operator or attendant in time to open the circuit and clear the trouble before any serious damage occurs to the instruments. Lamps should be wired in the circuit as close to the voltage supply output as possible for maximum protection. The lamps can be mounted using 'Cleat' type porcelain sockets.

Good Earth Connection

All transformer AC primaries should be properly fused. Normally a 1A or 2A fast-blow fuse will carry such a supply at full output without blowing yet will protect the AC mains if something goes seriously wrong in the rectifiers or filters of the supply.

All telegraph power supplies should have their common or 'return' side connected to a good earth ground.

A good earth ground connection can be made rather easily by attaching a garden hose to a ten foot section of hard drawn copper water pipe, turning on the water and letting the water dig the hole as the pipe is pressed down into the earth. Given a location free of large rocks, this will sink a ten-foot ground pipe about as fast as it takes to tell about it and will produce a very good ground connection for telegraph purposes. All that remains is to disconnect the hose and solder on the ground wire.

Safety Precautions Essential

Power supply construction is pretty much up to the individual. The various points in the circuitry that are at high voltage potential should be covered or otherwise adequately protected against

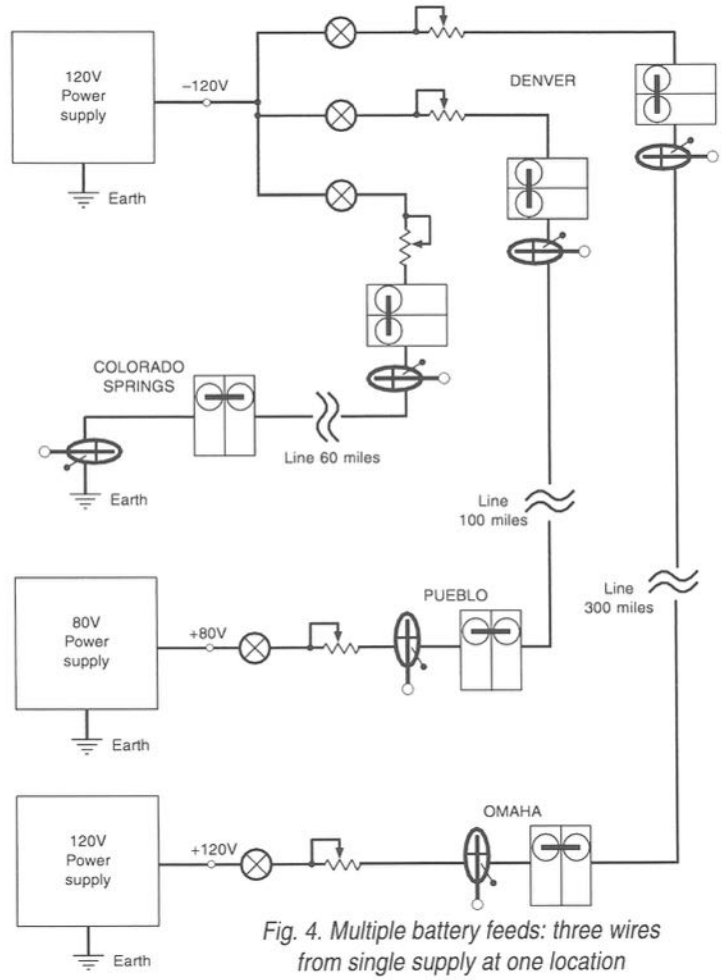


Fig. 4. Multiple battery feeds: three wires from single supply at one location

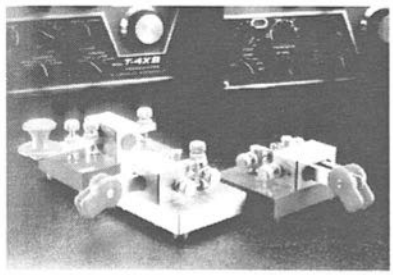
accidental contact by people or animals, and the units must not be overfused on the AC side.

Filter capacitors must have adequate working voltage ratings and be wired into the circuit with their polarity correct. As shown in the diagrams, a single solid-state diode bridge rectifier unit can be used to provide both voltage polarities from a single transformer secondary winding or windings.

Such power supplies are electrically equivalent to what was actually used in commercial and railroad telegraph service and will give long trouble-free service if properly set up.

(A further article by Ed Trump will appear in a future issue of MM describing the function, construction, connections and restoration of electromagnet coils in telegraph sounders and relays.)

The CW Centre! ©



Jones keys

Peter Jones

Pump Key	Red base	£62.61
	Brass base	£70.76
Single paddle	red	£86.82
	brass	£83.61
Twin paddle	red	£77.19
	brass	£85.22

R A Kent

Pump key	kit	£41.50
	assembled	£53.50
Single paddle	kit	£46.50
	assembled	£56.50
Twin paddle	kit	£53.50
	assembled	£67.50

Morse Tutors

G3TUX "Omega" multimode	£44.95
R A Kent	£49.95

Omega Tutor

Bencher Paddles

Single lever	ST1 Black base	£64.95
	ST2 Chrome base	£79.95
Twin lever	BY1 Black base	£64.95
	BY2 Chrome base	£79.95

DK1WE Miniature Keys

"Minky" pump	£87.95
"Twinky" twin lever paddle	£94.95

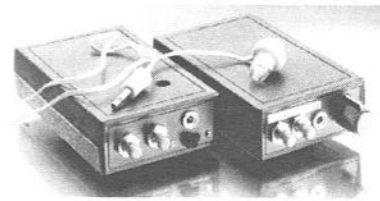
Swedish D1000 Pump key £99.95

Keyers

Curtis 8044ABM chip		£19.95
"Oak Hills" Curtis keyer	kit	£33.95
	assembled pcb	£44.95
R A Kent Electronic keyer		
	NEW!	£45.00
R A Kent Memory Module		£25.00

Practice Oscillators

R A Kent (built in speaker)		£17.50
C M Howes ST2	pcb kit	£9.80
	HA12R case	£10.10
ST2+HA12R	ready to use	£29.95



Prices include 17.5% Value added tax but **not** shipping costs. Export orders welcome.
Used keys and paddles of all makes bought and sold.

G3TUX

The QRP Component Company
7 Kings Road, Haslemere, Surrey GU27 2QA
Tel: 01428 641771 Fax: 01428 661794

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

New Exclamation Mark?

In MM44, p.47, Keith Stammers G0SXG suggested the use of II (unbarred) as an exclamation mark. Unfortunately, this symbol is not suitable for the purpose. Apart from the meanings mentioned, it is also used on the Continent as a repetition signal between two words to be repeated, for example: QTH HEIDELBERG I I HEIDELBERG. This meaning has been included in 'Morse books' published in this country since 1945.

Many thanks to PA3FBF, for supporting the proposal by AGCW to use – – · · · – – · · · – – as an exclamation mark. (MM44, p.47).

Otto A. Wiesner DJ5QK
Heidelberg, Germany

Grasshopper Key

I am seeking information about the 'Grasshopper Key' and wonder if any reader can help. I particularly want information as to how it works, and its overall size, with a view to making a working replica. The version I have in mind is shown in *The Story of the Key*, Fig. 6.7, which at one time was on display in the Science Museum, London.

The museum tells me that the key was on loan, and has now been returned to its owners. Inquiries to the company owning the key elicited the reply that it had been used as a model for 12 copies which were to be given away as presentations. They would not, therefore, give me any information about the key as they did not want further copies to be made.

Perhaps there are some *MM* readers who have used such keys, or have references they could loan me? Their assistance would help me make what I consider to be an example of an important stage of Morse key design. Any help would be greatly appreciated.

Dennis Goacher G3LLZ
27 Glevum Road
Swindon, Wilts, SN3 4AA

Key from 'Buzzer Practice'

The unknown key at the top of p. 32 in MM44 appears to be a key from the British Air Ministry 'Buzzer Practice', Ref. 10A/4067, from WWII, taken from the original unit and mounted on a new base.

Jean Revidon FA6AOD
Sevran, France

re 'CH'

I refer to the letter in MM44 (p.46) from Monika Pouw-Arnold PA3FBF about the use of 'CH' by a Russian operator. It should be noted that the Russian

language has characters which cannot be simply compared with our 'Latin' characters.

The Russian Morse – – – –, in fact, means 'SH' in English, so in the example quoted by PA3FBF the name 'Sasha' was the correct spelling.

In Russian there is no 'H' (as for example in the word 'ham'). The Russian 'CH' is · · · · in Russian Morse. Its pronunciation is the 'unsounding' H, not easily explained in English, as in the name 'Jaime' in the Spanish language; so the use of – – – – cannot be recommended for 'CH'.

The Russians have other problems with Russian transcription to English. The city name KIEV, for example, is sent as KIEW because of the different spelling resulting when translated to English.

Otto A. Wiesner DJ5QK
Heidelberg, Germany

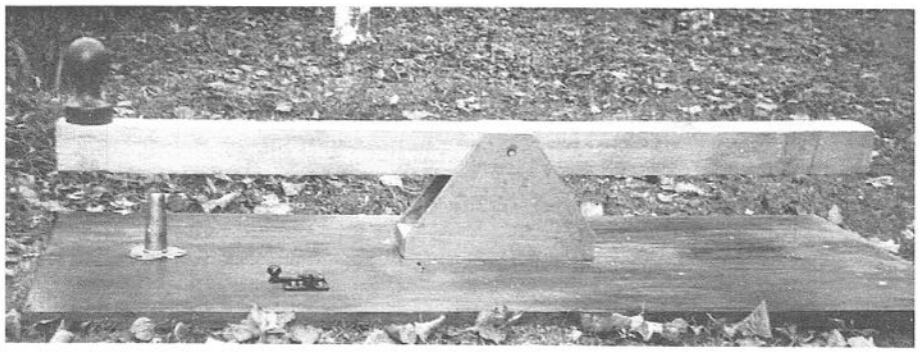
Big Key

After reading about the biggest key in the world (MM44, p.6), I thought I would tell you about the key we made for Jamboree-on-the-Air 1995 (see photograph below, with Key WT 8 Amp on the base for comparison of size).

The base was a 6ft 6in door, the bearing rod was ½-inch copper pipe, the spring was provided by bungee elastic, and the knob was a 'dolly' from the top of a marquee pole. Electrical connection to a TS-130S was via a relay.

It took two hands/arms to operate it. Our Venture Scout station GB2SSD, operating from the 67th Doncaster HQ, made just one contact with it, and the station we worked had no idea what key we were using! We call it the 'G3UWR Special' – because it made only the one contact!

C. Bonsall G3UWR
Carcroft, South Yorkshire



Radio Bygones *The vintage wireless magazine*

G C Arnold Partners, 9 Wetherby Close, Broadstone, Dorset BH18 8JB
Telephone/FAX: 01202 658474

including in the current issue ...
- Reminiscences of a Flight Radio Officer
- The Hallicrafters S-38E
- Early Cosmos valves by Metropolitan-Vickers

Annual subscription (6 issues) £18.50 in UK; £19.50 elsewhere in Europe, or £23.75 rest of the world by airmail, or send £3.25 for a sample copy.

Morse Jewellery

The Dutch ladies' weekly magazine *Story*, Nr 2/96, gives details of ladies' and gentlemen's jewellery (rings, scarf-pins, cuff-links, etc.) decorated with Morse code signals. The item, translated into English, reads:

'In the era of electronic means of communication, Morse-code seems to be far behind us. This is just the reason for artist Jan Pycke to use those mysterious Morse characters for his avant-garde jewellery. The Morse-code, which undoubtedly will make you think of the old western cowboy

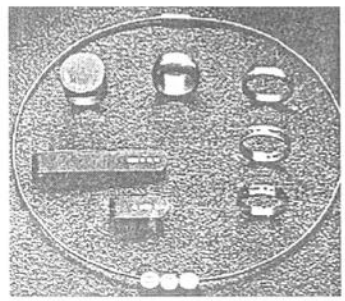


Photo of jewellery

pictures in which a (telegrapher) rapidly signals a message via his Morse-telegraph, is shown in a plain manner on this unique jewellery. The Morse characters are of titanium, being non-allergic, combined with gold. The letters on each (item) are of your own choice. More information from: Phenix N.V./Belgium. Phone: 0032-3-2330859.'

Monika Pouw-Arnold PA3FBF
Mijdrecht, Holland

RUFZ Top-List Competition

continued from page 39

4. By Mail:

From: Mathias Kolpe DL4MM, Breitscheidstr. 17, D-01237 Dresden, Germany. (Free disk, for cost of handling/mailing only). Within Europe send 3 x IRCs or US $4.00 or 5 DM. Outside Europe send 5 x IRCs or US $7.00). Do not send SASE or disk.

Please Note

Copies of RUFZ can be passed on to others, but they must be ORIGINAL, unmodified copies to ensure that users are on equal terms with all other participants in the Top-List competition. ***MM***

Readers' ADs

FOR SALE

LIMITED QUANTITIES of Morse ephemera, Samuel F.B. Morse photos, Code Instruction manuals and Morse code story book. Telegraphy history book available in the Spring. Info: SASE or equivalent postage funds. Robert W. Betts, 8 Little Fawn Drive, Shelton, CT 06484, USA.

KEYS TO EXCHANGE, list on request. Mizuho CW/SSB 21MHz transceiver, £150. MFJ 9020 CW 14MHz transceiver, new, £200. F6AOU, as callbook, or 'phone 33 (1) 69258417.

WANTED

Technical Instruction for Marine Radio Officers by Dowsett and Walker (9th Edition (or later?)). Please 'phone Editorial Office on 01202 658474 (Dorset).

An advertisement from Wireless World for April 1942

RAYMART
CRAFT A CREED

ALL who are learning to become Wireless Telegraphy Operators and all who are acting as instructors for members of the A.T.C., Home Guard or the Signal Section of any branch of the Services must have reliable apparatus to work with.

IN placing before you the Raymart range of British made Keys and High Note Buzzer, we wish to impress upon you the fact that each Raymart instrument has been most carefully designed and assembled, is built to the highest standard of efficiency and is absolutely reliable in use.

SPECIAL TERMS can be offered to Schools, Training Establishments, Home Guards and A.T.C. Quantity enquiries from the Trade will receive every consideration.

RAYMART
CRAFT A CREED

WIRELESS TELEGRAPHY EQUIPMENT

THE RAYMART "SPEED" KEY

In designing the Raymart range of keys the importance of scientific weight distribution as an aid to practically effortless high-speed sending received special consideration. All parts are of best quality materials and are precision made. The knobs are of high-grade bakelite and the washer or paddle which is fitted below it is made of polished "Erinfort."

The contacts are of ¼in. solid sterling silver. A high grade of spring is fitted and gap adjustment is easily and accurately carried out. The base of the key is drilled for two-hole screw fixing. The appearance of the instrument is all that can be desired, and the metal parts are instrument lacquer finished.

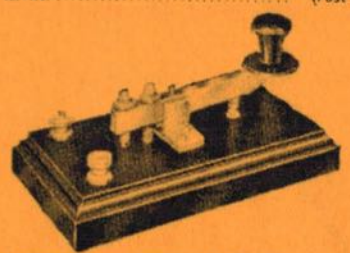
The Raymart "Speed" Key offers exceptional value for money ..... PRICE **8/6**

THE RAYMART HIGH NOTE BUZZER

An ideal British-made buzzer for Morse practice. Very robust, totally enclosed in bakelite case. Heavy coin silver contacts .... PRICE **2/-** *(Post 3d.)*

STANDARD G.P.O. TYPE KEY

Specification
The bar of this instrument is made from solid brass, ¼in. by 5/16in.
The pivot boss is of solid brass.
The large brass knurled spring adjustment and spacing screws and locking nuts are of such diameter that close and permanent adjustment is easily effected.
Solid Sterling Silver Contacts of approximately ¼in. diameter are fitted.
The heavy knob is made from bakelite and is highly polished and a turned and polished "Erinfort" washer or paddle is fitted below it.
The Key will be lacquer instrument finish and the wood base is fully covered with sheet "Erinfort" which will preserve the appearance of the key throughout its long and useful term of service. ..... PRICE **9/6** *(Post 6d.)*

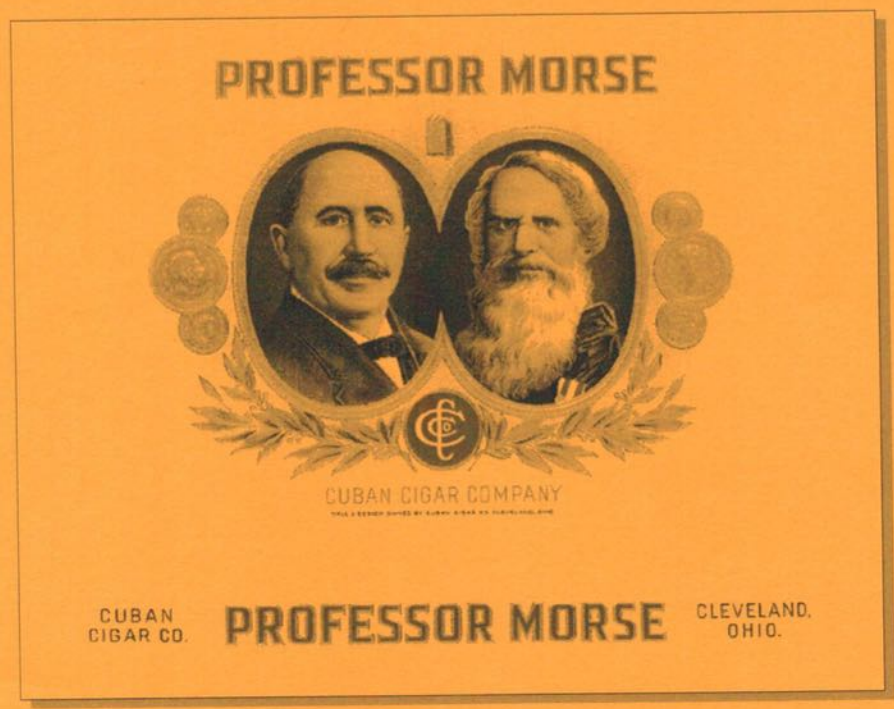


THE RAYMART MORSE KEY KIT

Anyone can assemble the Raymart **KIT** of Parts for making a G.P.O. Type of Morse Key, in less than 10 minutes. The "Erinofort" cover for the wood base is ready drilled and acts as a template.
This Kit of Parts is identical with those used for the Raymart Standard Key described in detail above, but you will need as a base a two-way switch block (cost only a few pence) and 2 terminals. Your local electrician can supply. **THE KIT** **7/6** *(Post Free)*

48, HOLLOWAY HEAD - BIRMINGHAM, 1
Telephone : MIDLAND 3254

Morse Ephemera



'The Professors Morse'. Cigar box label c.1908–1910 used by the Cuban Cigar Company of Cleveland, Ohio. Depicts Samuel F.B. Morse on the right and his younger brother, Sydney Edwards Morse on the left.

A high quality full colour replica of this label, approx. 8½ x 11in, is available as part of a set of telegraph ephemera from RWB/CG (Publishing), 8 Little Fawn Drive, Shelton, CT 06484, USA.

The set of three items also includes a multicolour calendar cover designed for the Morse Telegraph Club to celebrate the 200th anniversary of the birth of Samuel F.B. Morse; and a certificate containing two portraits of Morse issued by two Connecticut Amateur Radio Clubs to commemorate the 150th anniversary of the first Morse message, sent in 1844, i.e., 'What Hath God Wrought'. Each item has a separate certificate containing explanatory information. The set costs $10.79 post-paid (USA); or $13.00 (in US currency only) for airmail dispatch to other countries. For further information send s.a.e. plus return postage, to the above address.

Also available are a number of collectable photographs of Samuel F.B. Morse at different stages in his life, size 8 x 10in, suitable for framing. Price per photo, including post and packing, $15.00 (USA), or $17.00 (foreign). Send s.a.e. plus return postage for full details.