Introduction to Morse Code
Lesson - 4

25 July 2020

by

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What we will cover today

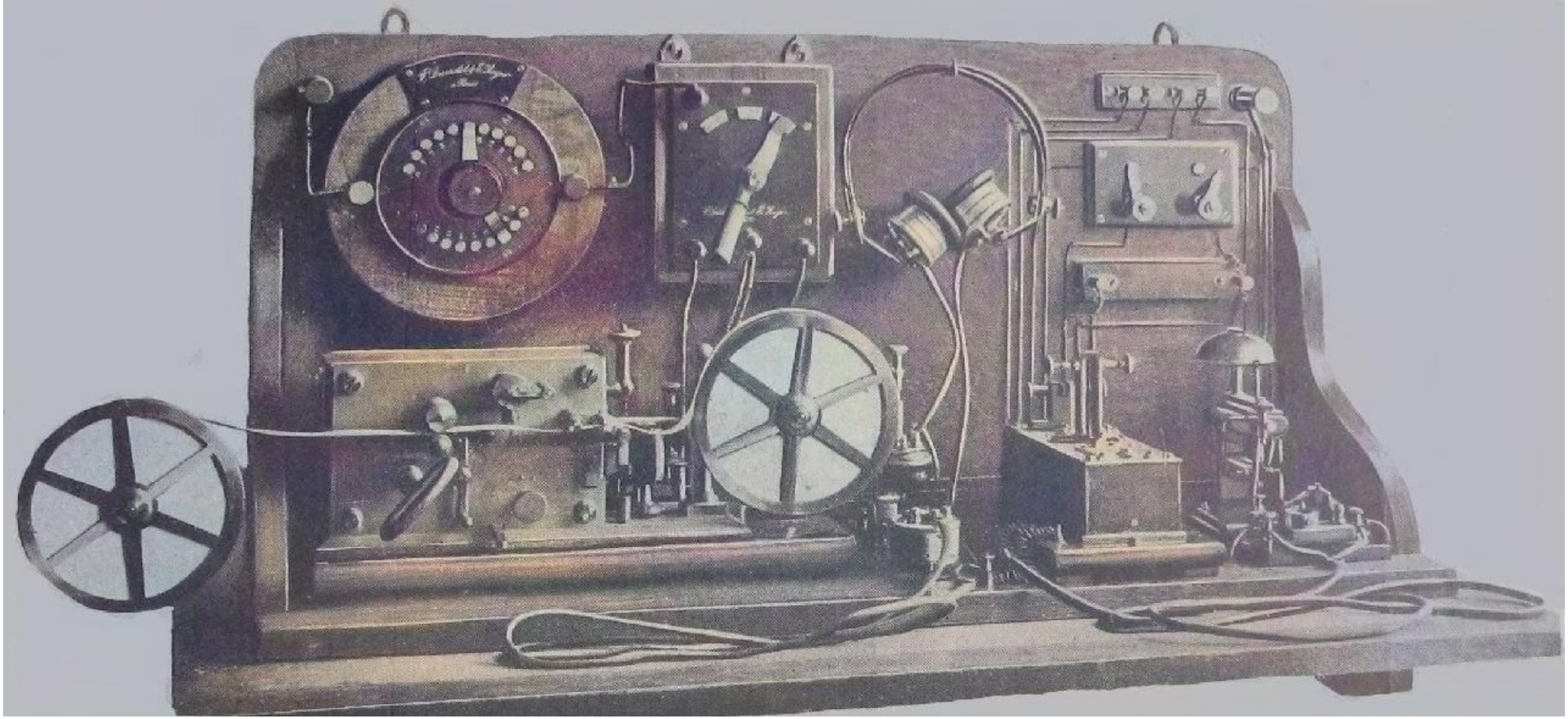
- A bit of history in pictures - for fun
- Recap of Lesson - 3 (Blue background slides)
- Review of JLM results obtained by all
- Practicals - adding one more character in JLM
- South India Amateur Radio Society - SIARS website resources
- Introduction to browser based software called ‘LCWO’
- (Video of WW II Army Morse Training with a straight Key)
- (Video of a SSB QSO with CW check in)

A Bit of History

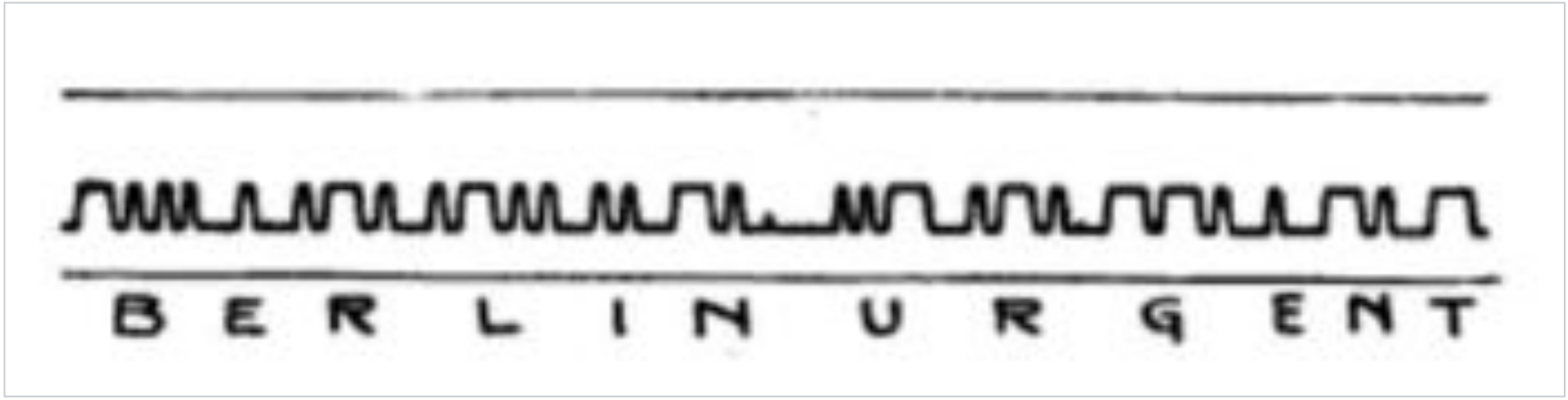
Guglielmo Marconi

Guglielmo Marconi, who built the first radio receivers, with his early spark transmitter *(right)* and coherer receiver *(left)* from the 1890s. The receiver records the Morse code on paper tape

One of Marconi's first coherer receivers, used in his "black box" demonstration at Toynbee Hall, London, 1896. The coherer is at right, with the "tapper" just behind it, The relay is at left, batteries are in background

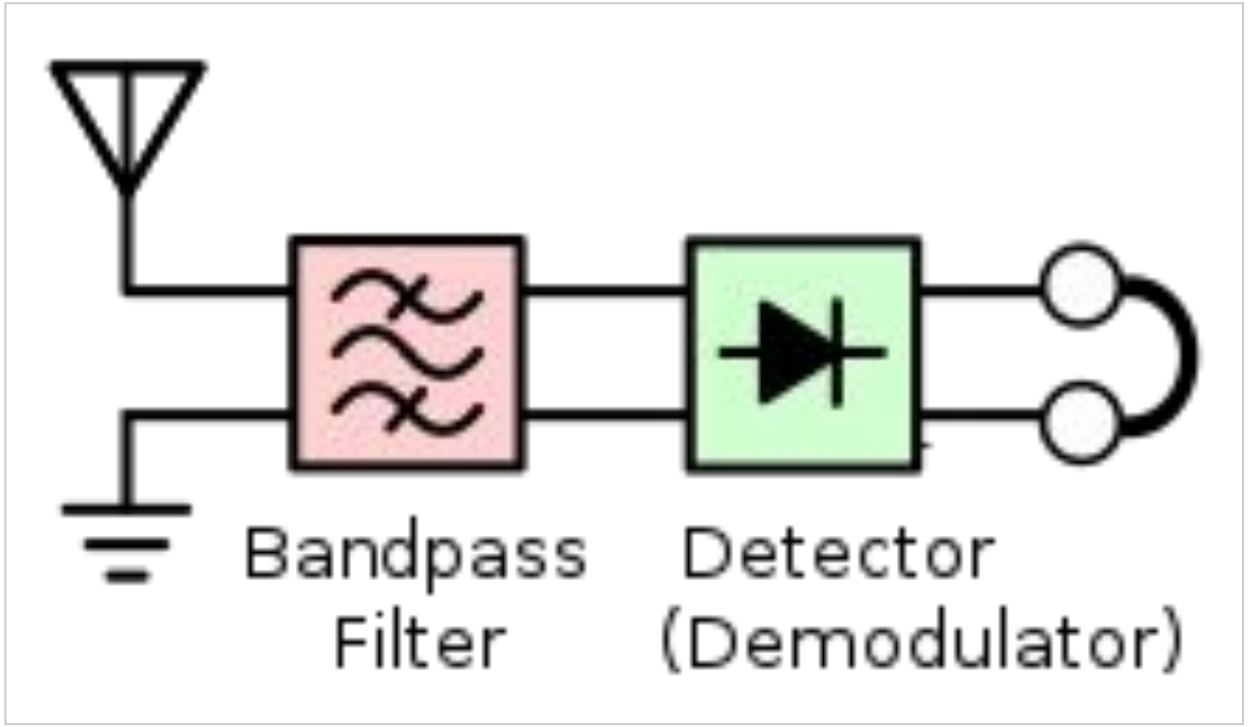


A typical commercial radiotelegraphy receiver from the first decade of the 20th century. The coherer *(right)* detects the pulses of radio waves, and the "dots" and "dashes" of Morse code were recorded in ink on paper tape by a siphon recorder *(left)* and transcribed later.



Example of transatlantic radiotelegraph message recorded on paper tape by a siphon recorder at RCA's New York receiving center in 1920. The translation of the Morse code is given below the tape.

Generic block diagram of an unamplified radio receiver from the wireless telegraphy era

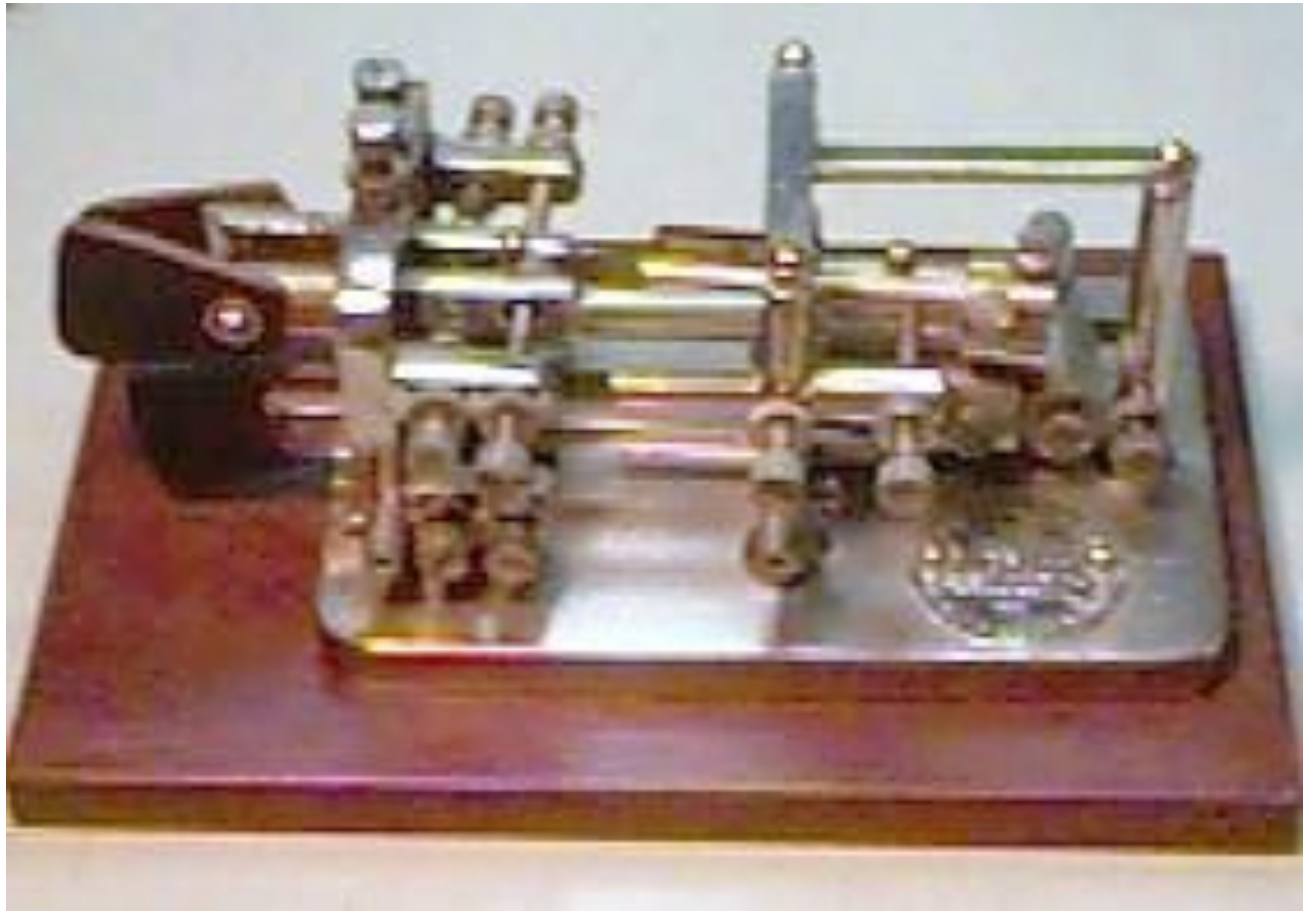


K.P. Thomas Automorse key made my Hitchcox Bros. in Adelaide, SA, Australia, circa 1920

It is distinguished by ***three*** paddles-- automatic dots, automatic dashes, and manual dashes.

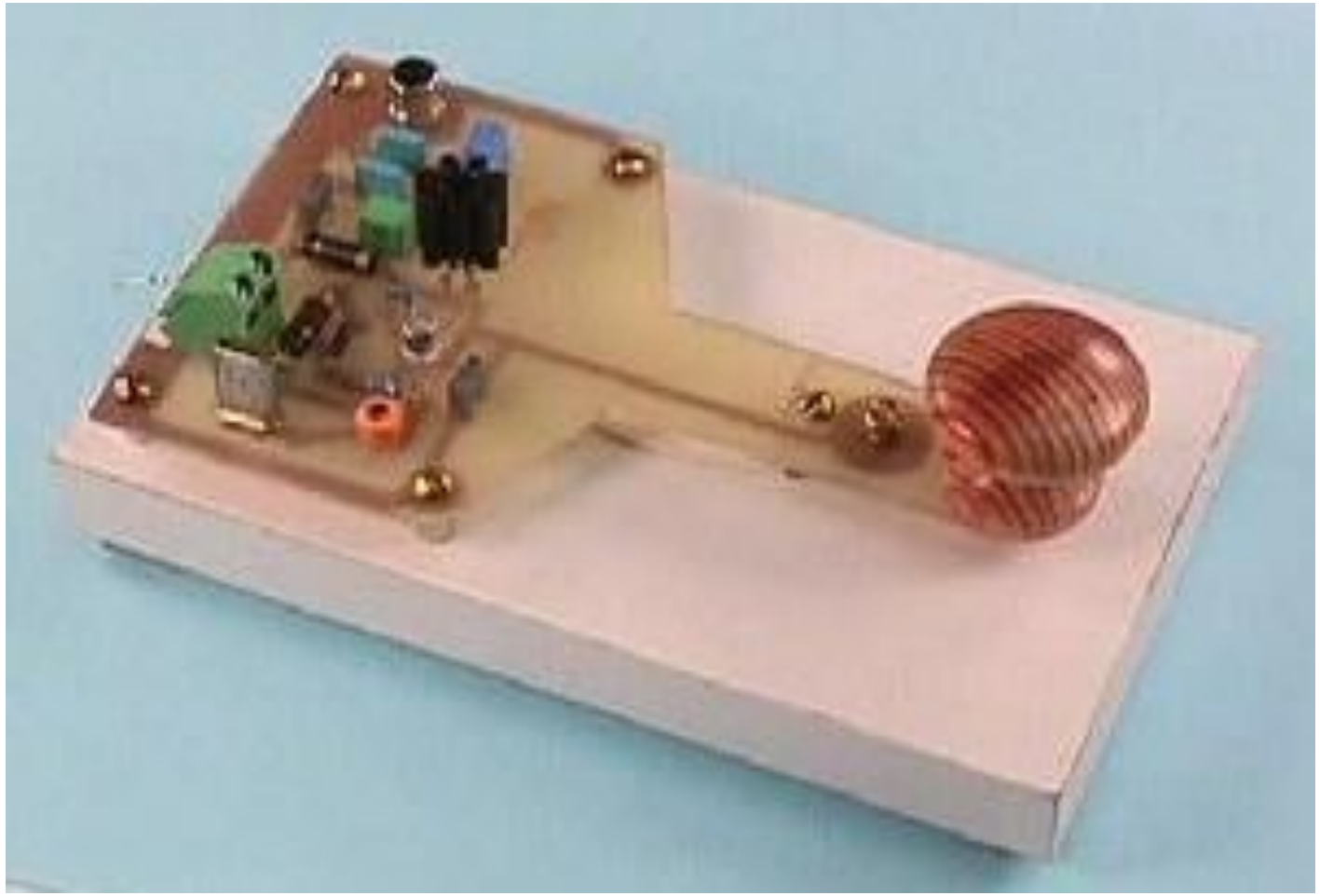
Credits : N1FN's Key page

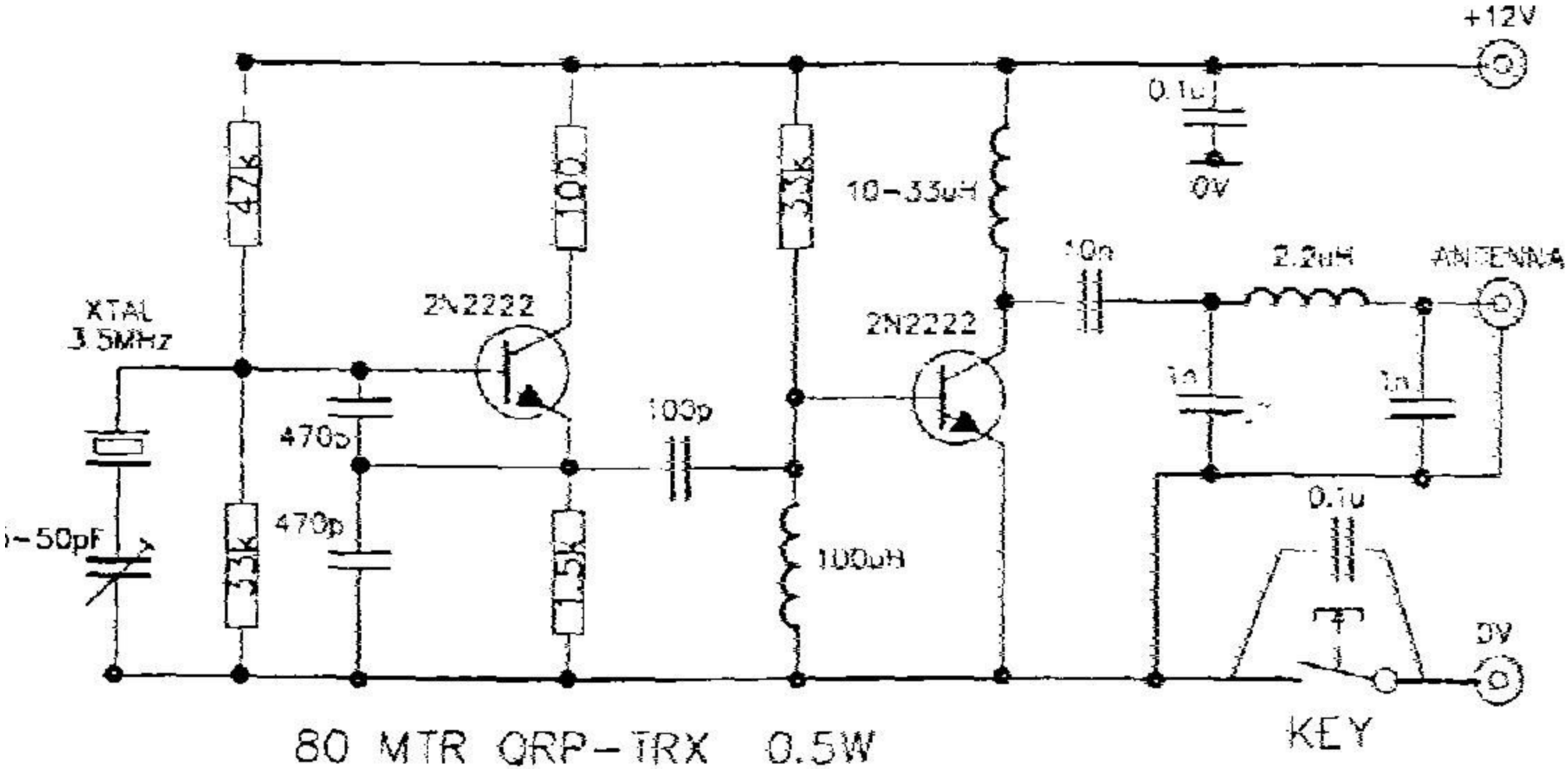
http://morsex.com/n1fn/keys.htm



"Apell" key, made by Johnny Apell (SM7UCZ) himself as a "display model"

The key itself is made from circuit board material, on which is.... a half-watt 80M transmitter! It's a 2N2222 circuit on the colorburst frequency. The schematic circuit diagram was taped to the underside of the base

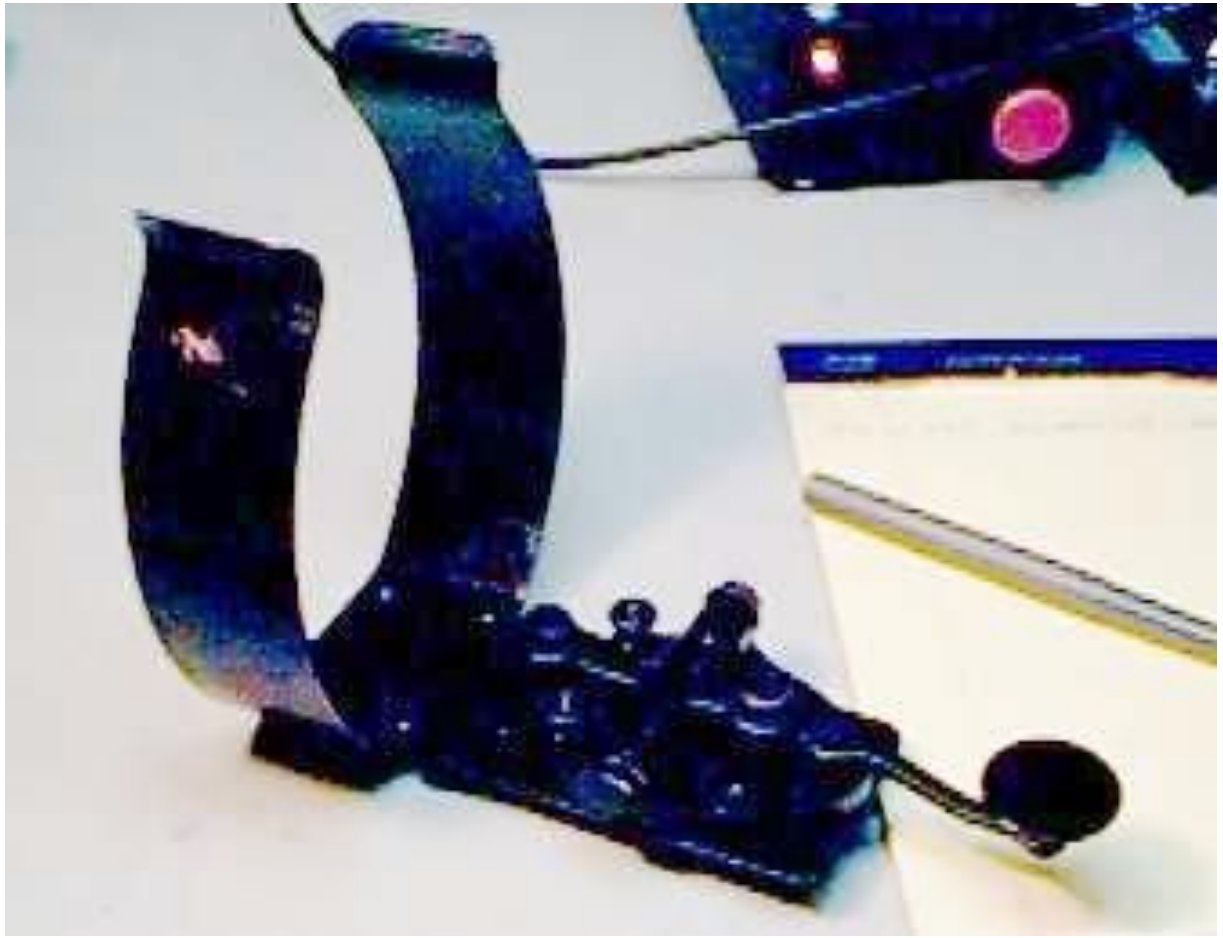




80 MTR QRP-TRX 0.5W

The J45 key is fairly common-- it's actually a J37 key mounted on a spring steel leg clamp for use on aircraft, in tanks, etc.

Shown here, the key is hinged for use on a desk-- it flips over for use when clamped on the operator's leg.



No. AMF 668

Government of India
Ministry of Communications
(W.P.C. Wing)

-:oooooo:-

AMATEUR STATION OPERATOR'S CERTIFICATE (Grade I)*
(~~Grade II~~)

(issued under the Indian Wireless Telegraphy Amateur Services Rules, 1958)

-.-.-.-

This is to certify that Shri S. Rajaram has been examined and has qualified in sending and receiving in International Morse Code on tone signals at *twelve/~~five~~ words per minute in clear English and has a *general / ~~elementary~~ knowledge of operating procedure and the regulations regarding the prevention of harmful interference and *general ~~elementary~~ knowledge of Radio Theory and Practice.

It is also certified that the holder has made a declaration that he will preserve the secrecy of correspondence.

New Delhi
Dated: 2nd August, 1975

Signature: K. Varadarajan
(K. VARADARAJAN)
Designation: Assistant Wireless Adviser to the Government of India

Wireless Planning & Co-ordination Wing, Ministry of Communications.

*(To be struck of whenever unnecessary)

ENDORSEMENTS

mad

Recap of Lesson - 3

Introduction to Morse Code
Recap of Lesson - 3

What covered in the last class :-

1. Report on results of receiving Lesson - 1
2. Words and spacing between them
3. Video clip of an actual CW QSO : just for fun
4. Software - Just Learn Morse
5. New sound patterns for the day
6. Receiving Lesson -2 : practicals

Word Spacing
&
Audio Pattern of the Gap in Between Dits/Dahs, Letters and Words

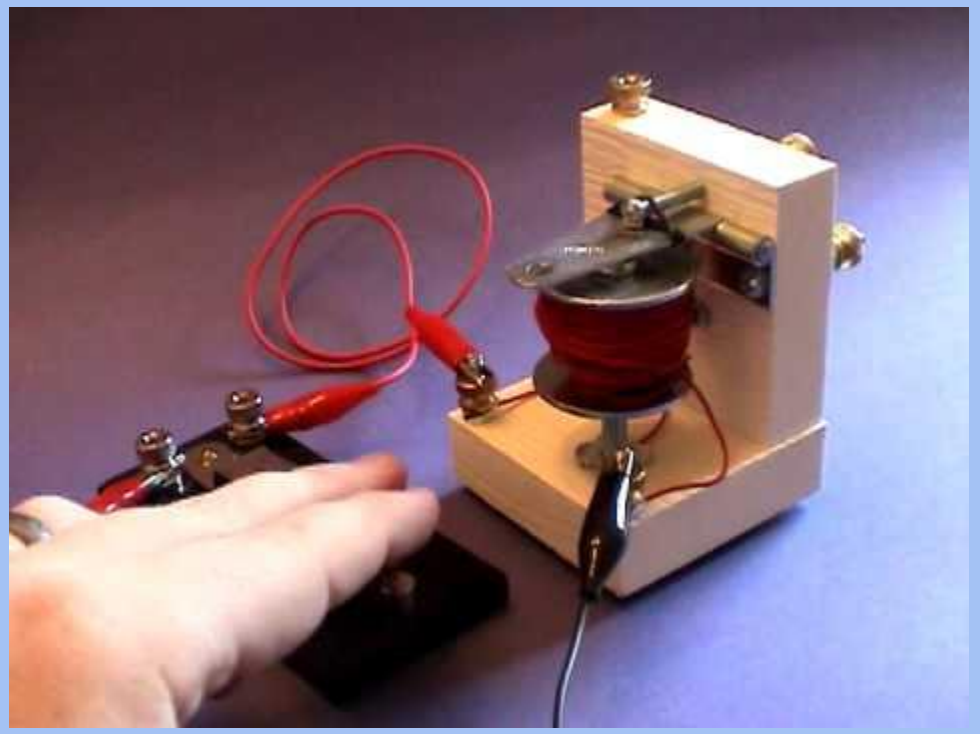
Theory

- Unit of space = time-length of dot (time for which we press the key)
- This is the reference time interval
- Length of Dah = 3 Dits
- Within a letter - space = 1 Dit
- Between two letters of a word, space = 3 Dits
- Betweeen two words, space = 7 Dits
- Practical Demo with different speeds of Dit, Dah, Letters and Words

Rythm of Dits and Dahs at Various Speeds

- Straight Key - human timings : demo
- Iambic Paddle Key with Electronic Keyer timed by an ATtiny Microcontroller - better for learning the mind patterns of code, letter and word spacing : demo
- High and low speed Dits and Dahs

Olden Days Telegraph System Sounds



Just Learn Morse

Desktop / Laptop Software

CPO : A Code Practice Oscillator KIt

Practicals

Part - 1 : Sending via Paddles using HF Radio Oscillator

Format - writing down received code with space between each word :

eke tek5 ekekek tek5 t e5 ket5

Part - 2 : Sending and receiving via ‘Just Learn Morse’ Software

Review of JLM results obtained by All

All Candidates are above 90%

Practicals - adding one more character in JLM

- Open JLM and add ‘N’ (Dah Dit)
- Practice at 5/12
- Practice at 8/12 if comfortable
- Send me results via Whatsapp

Introduction to browser based software called ‘LCWO’

Questions

Please type your Questions in the Chat Box