



Mk. 123
Accessories
Country of origin:
England

This Supplement is a follow up of the 'Mk. 123' section in the 'Great Britain' chapter of WftW Volume 4.

Remarks

The Mk. 123 transmitter-receiver had a built-in AC mains power unit for connecting the set to almost any AC mains grid voltage.

For operation on 12V, an external Mk. 123V inverter unit connected to the set via a multi core cable to the power input plug located at the top. The existence of a 6V inverter unit type Mk. 621V was revealed by Reinhard Glowgowski from Germany, who has this unit in his collection, along with a rare Mk. 123 encoder unit.

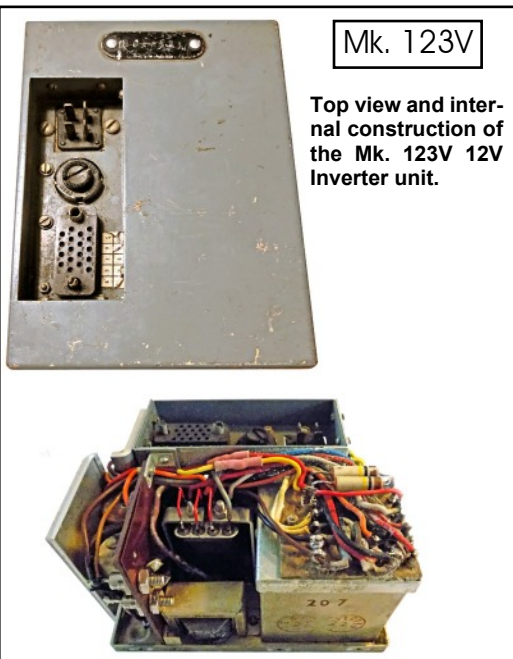
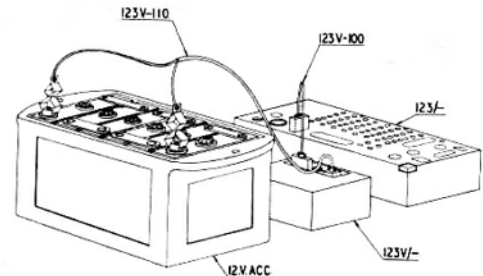
Both inverter units, providing power to a Mk. 123 radio from a DC source, were transistorised, using a pair of 2N147 germanium transistors. The basic design of the electrical circuits of both units was believed to be similar.

DATA SUMMARY

The Mk. 123 was a self-contained miniature HF transmitter-receiver developed and built by the GCHQ Special Communications Unit around 1956. It was used by Diplomatic service, special forces and for clandestine operations.

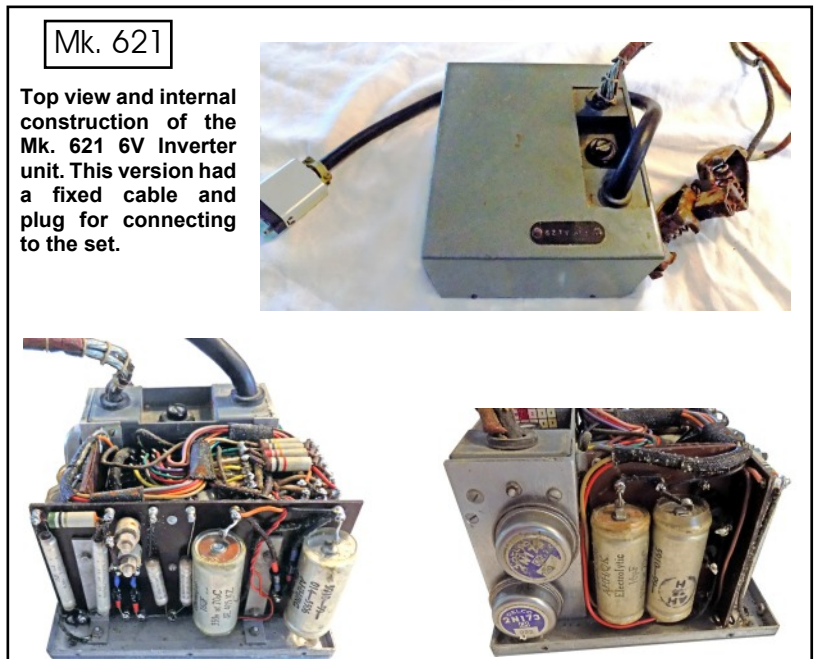
References:

- Photographs and information courtesy Reinhard Glowgowski, Germany.
- Wireless for the Warrior, Volume 4, Clandestine Radio, Louis Meulstee, Wimborne 2004, ISBN 0952063 36 0.



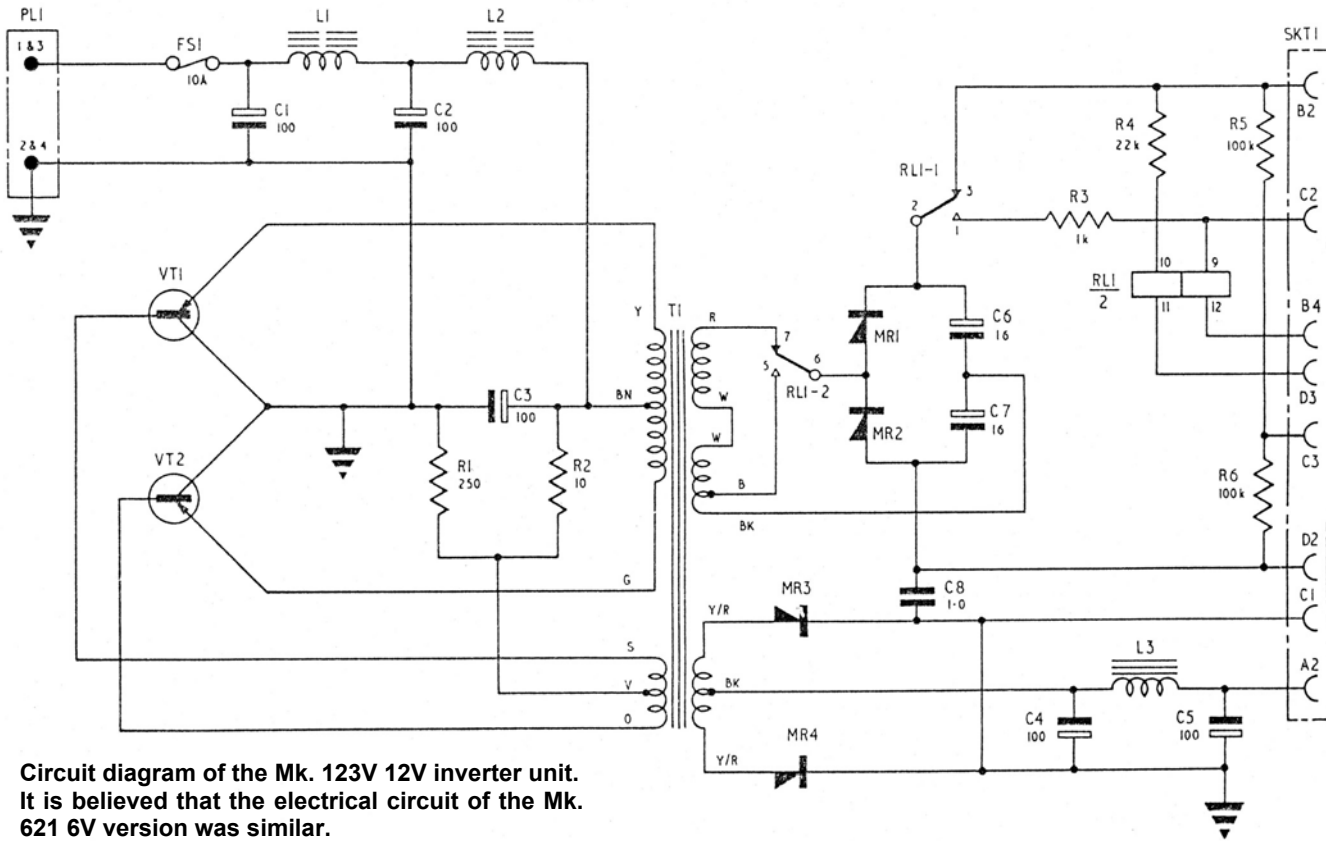
Mk. 123V

Top view and internal construction of the Mk. 123V 12V Inverter unit.



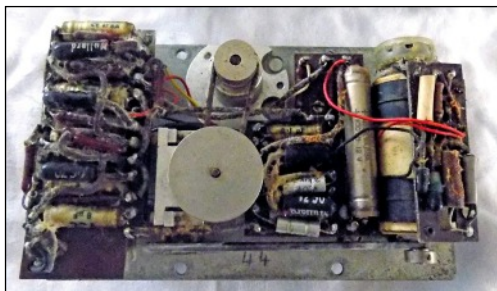
Mk. 621

Top view and internal construction of the Mk. 621 6V Inverter unit. This version had a fixed cable and plug for connecting to the set.



Circuit diagram of the Mk. 123V 12V inverter unit. It is believed that the electrical circuit of the Mk. 621 6V version was similar.

Mk. 123 Encoder unit.

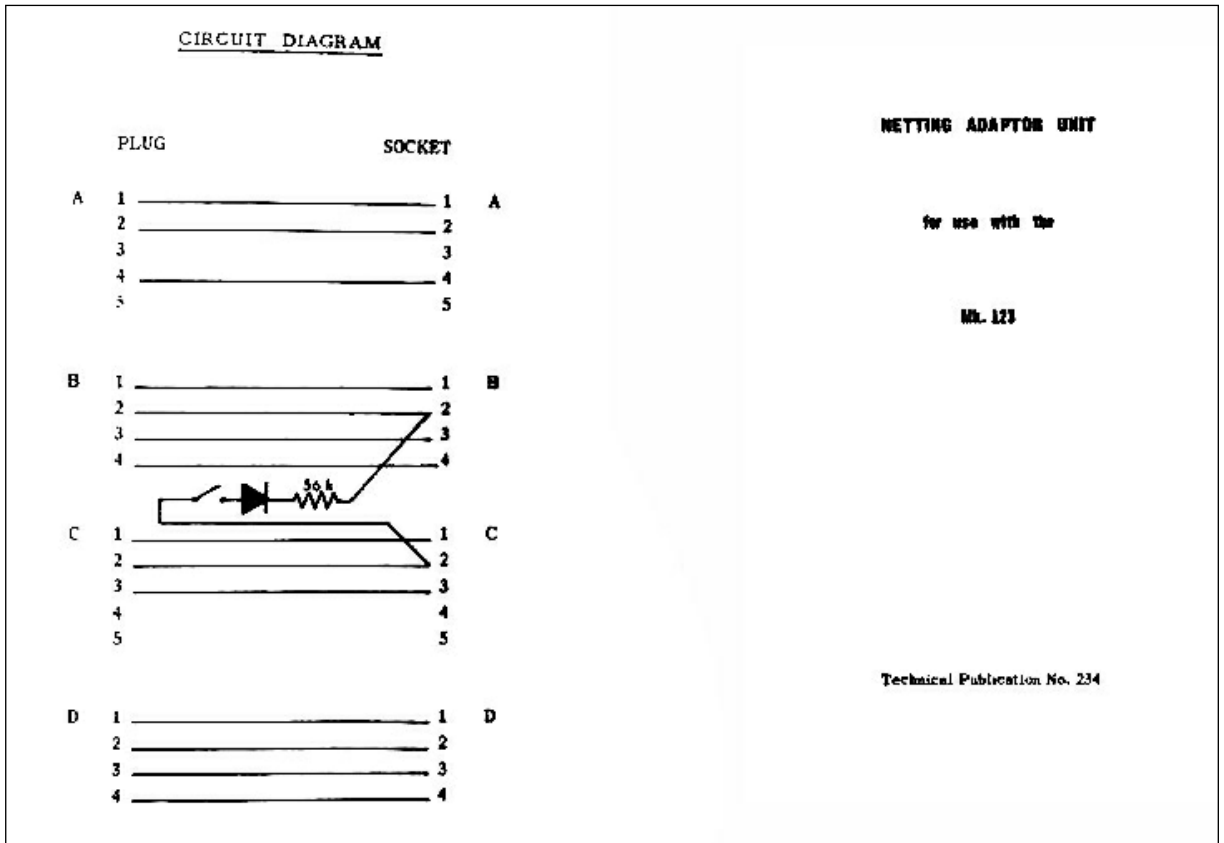



Internal view of the Mk. 123 encoder unit.

Probably as a substitute to the Wheatstone keyer (See Chapter 231) was a tape based high speed keying system using miniature cassettes. Shown here is the encoder unit; the actual high speed keyer unit is missing.



Tape cassette as used with the Mk. 123. This type differed slightly from the cassette in the picture above.





The Netting Adaptor Unit

- Physical Data

Length	2.4in. (60mm)
Width	1.4in. (35mm)
Depth	0.7in. (17mm)
Weight	2oz. (60g)
- Description

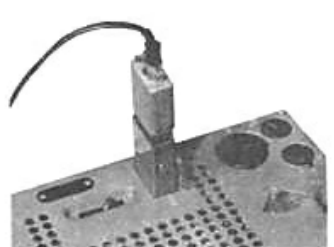
The Netting Adaptor is a small unit designed to fit between the Mk.123 power input plug and the set connector No. 10.

The unit enables an operator using the Mk.123 set to tune the receiver to the 'net' frequency produced by a crystal plugged into the transmitter.

The Adaptor Unit is wired so that a proportion of the receiver h.t. supply is fed into the transmitter, sufficient for the oscillator to function, but not for the p.a. to operate. This is achieved by connecting a resistor, a diode and a switch in series between pins B2 and C2 in the mains connector. The diode prevents h.t. being fed back to the receiver whilst transmitting.

3. Operating

- Plug the Netting Adaptor Unit into the Mk.123 set (No. 10) and plug the power input plug into the top of the unit.



- Plug a crystal of the 'net' frequency into the crystal socket (No. 19).
- Switch the Send/Receive switch (No. 11) to 'receive'.
- Switch the BFD switch (No. 2) to 'on'.
- Set the volume control (No. 4) to minimum.
- Set the receiver dial (No. 6) to the 'net' frequency and check that the wave-change switch (No. 1) is set to the correct band.
- Whilst pressing the switch button on the side of the Adaptor Unit, turn the controls (No. 15 and No. 17) on the transmitter until maximum signal is heard in the headphones.
- Still pressing the Adaptor Unit switch, tune the receiver (No. 6) to the signal null point. Release the switch.
- The receiver is now set to the 'net' frequency.

A Netting Adapter Unit could be issued if simplex operation on a single frequency was required, and the receiver had to be accurately tuned into a net, known as 'netting'. The Netting Adapter Unit described in Technical Publication No. 234 (above) was a small unit with a push button, connected between the Mk. 123 power input plug and the set power input connector.