

## The VMARS Equipment Directory – part 7

### The Rhode & Schwarz SK010 Transmitter - Tony Helm

The SK010 AM/CW TX by Rohde and Schwarz was designed for maritime use by the West German Mercantile Marine, The Kriegsmarine, (the West German Navy) and also for the West German Army for fixed station use, and mobile in such vehicles as the 1.5 Ton Unimog Radio Truck 404. Receivers used alongside were invariably the Siemens E-309 or E-311. The Army mainly used the set-up for 50 Baud Telex as Brigade rear link, much the same as we did with the WS53 (my Brigade in 1963) then later the D11. The set operates from AC mains and can be used with long or short whip/mast or long wire aerials. It is very neatly constructed, and easy to use, once the controls are mastered. The front panel is nowhere as complicated as it seems.

#### Output Power

A1 CW	100W
A2 MCW	35W
A3 AM	35W
A3+F1 AM	28W
F1	100W

#### Frequency Selection (Frequency coverage 1.5-24 MHz)

1 – 23 MHz in 1MHz steps.

0 – 900 kHz in 100 kHz steps.

0 – 100 kHz free tuning.

**Modulation frequency:** 1000 Hz  $\pm$  10%.

**Microphone** Carbon, US Army T17 or similar

**Telex** 50 Baud. (Siemens T100 or similar.)

**Size** Height 756mm, Depth 439mm, Width 626mm

**Weight** 104 Kg.

**Power Requirements** 220v + 5% – 15% at 50Hz or 117v + 5% – 15% at 60Hz

**Current drain** 2.5 Amps

#### Notes:

This radio has an interesting history. If we look back to the control commission operated by our occupying forces after WW2, we have two German Forces until 1955, then the embryo Army had to get its supplies and equipment from outside, notably the French and U.S.

In 1957 controls were relaxed, but combat equipment still had to come from outside, until June 4<sup>th</sup> 1964, when all controls were removed and full sovereignty restored.



Summarising, then, we have the SK010, built by the Germans for the Mercantile Marine, adopted by the Forces as it is civilian equipment, but when the Germans needed a 100 Watt HF SSB combat transceiver for the Leopard 1 they were designing in the early 60's, they had to turn to the French for the ERB 281, in the same way that they turned to us for the L7 105mm gun for the Leopard's main armament. So, a radio with a history, which in some ways perhaps could be construed as a sanctions-buster, it is a nice set to operate, with a very good ATU to match 50Ω.

**MF/HF Signal Generator (Joint Services Designation CT 452A) – Chris Cooper**

**NATO stock no:** 6625-99-924-8875

**Commercial Designation:** TF 144H/4S

**Frequency Range:** 10kHz to 72MHz in 12 bands

**Modes:** CW and AM

**Output:** 2V e.m.f.

**Output Impedance:** 50 ohms

**Attenuator:** 120dB in 1 dB steps (two rotary controls)

**Internal Modulation:** Sine wave 400Hz and 1kHz monitored up to 80%

**External Modulation:** Sine; 20Hz to 20kHz dependent on range (12 volts into 25k dependent on range for 80% mod)

**Calibrator:** 400kHz and 2MHz

**Power Requirements:** Vac 200-250, 40-60Hz, 80Va (can be internally set to Vac 100-130)

**Connectors:**

Vac	Plessey Mk 4, 3 way, small
RF output	BNC
Sine mod input	Screw terminals
Cal monitor	0.25 inch Jack

**Valves:**

RF oscillator	CV 2129; (QV03-12 or U.S. 5763)
Modulator & cal amp	CV 5065; (ECF82 or U.S. 6U8)
Mod amp & pwr cont	CV 5065; (ECF82 or U.S. 6U8)
ALC & mod amp	CV 5065; (ECF82 or U.S. 6U8)
Xtal cal	CV 491; (ECC82 or U.S.12AU7)
Regulator	CV 2721; (EL81 or U.S. 6CJ6)
Reference	CV 449; (5651)

**Transistors** OC71, 2 x OC35



**Diodes:** M107 bridge for low volt regulator  
2 x HP2800  
2 x HP5082-2800  
2 x CG63H  
8 x 1N540 HT bridge

**Other Features:** Incremental frequency control above 80kHz  
Stabilised HT and (dc) heater supply for the RF section

**Physical Data:** Height: 14.5 inches  
Width 19.75 inches,  
Depth 11 inches  
Weight 65lb

**Handbook:** Marconi Instruments OM 144H (II)

**Notes:** High quality instrument introduced early 1960s. The commercial version has different meter and power connector. Additional (direct) output, BNC, allows connection of frequency meter. Band selection is by a large turret with positive engagement. Sine wave purity beats (affordable) solid state generators. It is a good move to check and replace resistors where necessary, these tend to go high in value. Very accessible for maintenance although there are plenty of screws to undo (and replace). Meter thermocouples available from Ormond & Stollery. Designed and manufactured by Marconi Instruments.