
In this part, we feature a selection of items of test gear, presented by Chris Cooper.

**Signal Generator (Joint-Services Designation CT 212)**

- **Army Designation:** Oscillator Test No 1: ZD 00783
- **Frequency Range:** 85 kHz to 32 MHz in 7 bands
- **Modes:** CW, AM, and FM (above 2 MHz)
- **Output:** RF 100mV e.m.f.
- **Output Impedance:** 75 ohm
- **Attenuator:** 100dB in 2dB steps (two rotary switches)
- **AM Modulation:** 30% at 1 kHz
- **FM Deviation:** up to 30 kHz
- **Power Requirements:** Vac 100-125 or 200-250, 50VA at 50 Hz or 12 Vdc, 42 W
- **Additional Output:** 12 Vac at 1 kHz, impedance 2.5 k
- **Connectors:** Vac; Plessey Mk 4, 3 way small
  Vdc; Plessey Mk 4, 2 way small
  RF; Burndepert coaxial
- **Valves:**
  - RF Oscillator: CV 138 (EF 91 or U.S. 6AM6)
  - Amplifier: CV 138 (EF 91 or U.S. 6AM6)
  - Modulator: CV 138 (EF 91 or U.S. 6AM6)
  - AF oscillator: CV 136 (EL91 or U.S. 6AM5)
  - Stabiliser: CV 287 (150B3)
  - Rectifier: CV 493 (6X4)
- **Diodes:** 2 x CV 103
  2 x Westinghouse WX6
- **Vibrator:** 12 Volt non-synchronous
- **Other Features:**
  - The unit is provided for hermetic sealing and fitted with a dessicator.
  - A moving coil meter is provided for setting carrier and Modulation Levels

**Physical Data:**
- Height 8.5 inches, Width 11 inches, Depth 10.5 inches (incl cover), Weight 28lb

**Handbook:** BR 1771 (12)

**Notes:**
- Introduced during the 1950s.
- Remained in service to support Larkspur equipment through the 1970s.
- The equipment has the advantage of being small, light. Additionally, operation from 12 Vdc allows use in the field.

**Noise Generator (Joint-Services Designation CT 82)**

- **Navy Designation:** Noise Generator AP 67166
- **Frequency Coverage:** 15 kHz to 100 MHz
- **Output Impedance:** 43, 75 or 400 ohms (selectable)
- **Noise Factor Scale:** 43 ohms: 0 to 9dB, +10dB 75 ohms: 0 to 11dB, +10dB 400 ohms: 0 to 4dB, +10dB
- **Audio Power Meter Scale:** 0 to 16 dB
- **Audio Input Impedance:** Nominal 12, 47 or 95 ohms (selectable)
- **Power Requirements:** Vac 115, 180, 200, 210, 220, 230, 240, 250 50VA at 50 to 500 Hz
- **Connectors:** Vac; Plessey Mk 4, 3 way small
  RF; Burndepert coaxial
  Audio input; 0.25 inch Jack
- **Valves:** Noise diodes 2 x CV 2398
  Rectifier CV 493 (6X4)
- **Other Features:**
  - Noise is generated by controlling the filament current of 2 wire-ended saturated diodes. These are wired in parallel to provide a short term capability of +10dB to the normal noise output thereby enabling the noise figure of receivers and amplifiers in the lower frequency ranges to be determined. Two meters are fitted. One for measuring diode current (noise power). The second is provided as an audio power meter. Front panel sockets are provided for monitoring internal power supplies.

**Physical Data:**
- Height 9.25 inches, Width 11 inches, Depth 8.25 inches
- Weight 21 lbs

**Handbook:** BR 1771 (12)

**Notes:**
- A useful instrument but great care must be taken to limit the length of time the diodes are run at high current.
- Replacement diodes are very expensive.
- Manufactured by McMichael Radio
VHF Signal Generator (Joint Services Designation CT 394A)

Commercial Designation: TF 801D/1
Frequency Range: 10 to 470MHz in 5 bands
Modes: CW and AM (provision for external pulse modulation)
Output: -134dBm to +10dBm
Output Impedance: 50 ohms
Attenuator: Piston 130dB marked in 1dB intervals
Internal Modulation: Sine wave 1kHz monitored up to 90%
External Modulation: Sine; 30Hz to 20kHz (5 volts over 1M for 90%)
Pulse: 50Hz to 50kHz (+50 volts over 1M)
Calibrator: 5 MHz
Power Requirements: Vac 180-250, 40-100Hz, 100Va
(can be internally set to Vac 100-150)

Connectors: Vac; Plessey Mk 4, 3 way small
RF output; N type
Pulse mod i/p; N type
Sine mod input; Screw terminals
Cal monitor; 0.25 inch Jack

Valves:
RF oscillator; CV 273; (TD03-10 or U.S. 5861)
Amplifier; CV 2466; (QCV02-6 or U.S. 6939)
Modulator; CV 491; (ECC82 or U.S. 12AU7)
Pulse mod clamp; CV 469; (EA76 or U.S. 6489)
ALC; CV 491; (ECC82 or U.S. 12AU7)
CV 850; (EF95 or U.S. 6AK5)
Meter amp; CV 455; (ECC81 or U.S. 12AT7)
Calibrator; CV 2522 (6AS8)
Rectifier; CV 717 (SR4GY)
Regulator; CV 1075; (KT66 or U.S. 6L6G)
Control valve; CV 850; (EF95 or U.S. 6AK5)
Reference; CV 449; (5651)
(mod and alc each one triode in CV 491)

Transistor
OC71

Diodes:
C2D
CS2A
2 x OA202
2 x CG1E

Other Features: Separate meters for carrier and modulation
Incremental frequency control

Physical Data: Height 14.5 inches, Width 23.5 inches, Depth 10.5 inches
Weight 67lb

Handbook: Marconi Instruments OM 801D

Notes: High quality instrument introduced late 1950s. The commercial version has different meters and power connector. Some replacement valves (CV 273, CV 2466, CV 1075) expensive. Instruments sought by audio buffs for the KT 66 and paper power supply capacitors. Designed and manufactured by Marconi Instruments.