

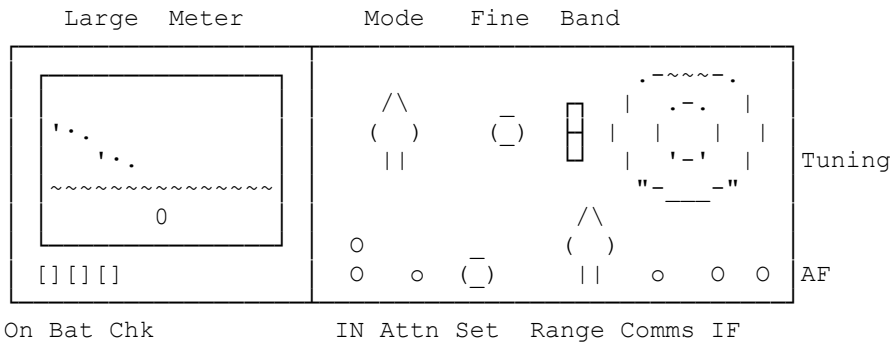
DYMAR Mod Meter Type 1785

(8 Bit ASCII Graphics use code page 437 or 850)

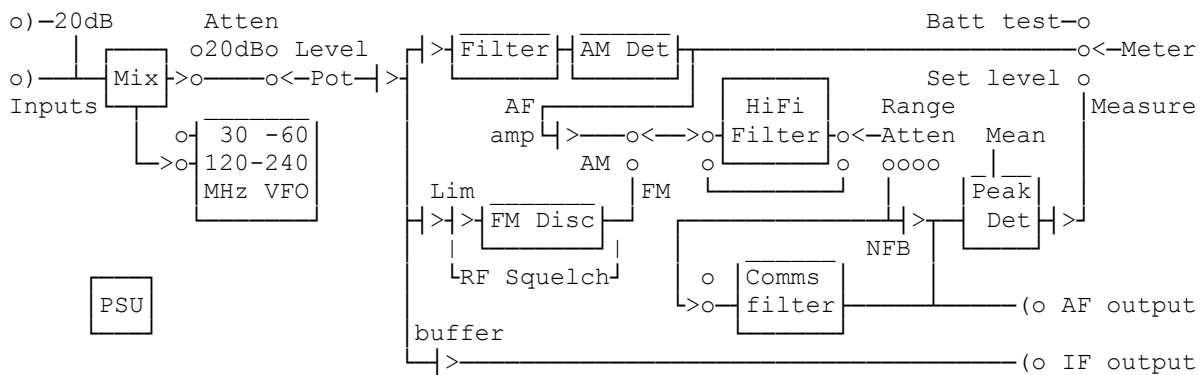
By G8MNY

(Updated Mar 08)

I have one of these old VHF-UHF AM/FM Modulation meters it is similar to the Marconi TF2300 type. It has a blue grey metal case plastic case 42 x 17 x 20cm & has a large 13cm mirror scaled meter on the left & slow motion Rx converter tuning knob & dial on the right.



SCHEMATIC



I have now reverse engineered the whole thing & have all the circuits. I have done lots of modifications, so it now fully calibrated with much improved spec.

MODS

- 1/ Modulation detector rebuilt, now true very fast peak & mean reading.
- 2/ FM squelch (fast shut, slow open).
- 3/ Internal monitor amp & LS added.
- 4/ Rebuilt PSU, it now copes with external 12V operation as well.
- 5/ Broadband mode added, FM & AM detectors widened.
- 6/ HiFi filter set to 30Hz-15kHz @-3dB (sharp M derived HF cut)
- 7/ Comms filter set to 300Hz-3KHz @-3dB
- 8/ Used it for FM deviation up to 900MHz (e.g. UHF radio mics) OK.

NEW SPECIFICATION

Power : 180 - 250V AC, 50 - 100Hz (90 - 125V internal straps)  
 12 - 24V DC @ 200mA  
 Internal battery option (not fitted).  
 With external/internal battery charging & battery check.

RF Inputs 50Ω : 1 - 100mV, or attenuated 10mV - 1V MAX.

Frequency range : 27 - 480MHz (2 x 2 BANDS) (900MHz possible on harmonics)  
 IF Frequency : 600kHz, Scope output , 100mV.  
 IF Bandwidth : AM ± 135kHz @ -3dB  
 FM ± 435kHz @ -3dB

Modulation Detector

Peak Hang time: > 1 Sec to -10%  
 Peak Rise time: < 50uS to -10%  
 AF Bandwidths: Wide Mode 10Hz - 50kHz @ -3dB  
 HiFi Mode 30Hz - 15kHz @ -3dB  
 Comms Switch 300Hz - 3kHz @ -3dB

AF Scope output follows detector bandwidth & range levels.

Monitor LS " " " " " " " " &  
 has volume control & 50uS de-emphasis. Output Power 500mW.

Meter Scales

Set Level MODE : dB scale -12dB to +2dB, cal to 100%  
 AM Modulation RANGE : 3 - 10 - 30 - 100% Modulation depth.  
 FM Modulation RANGE : 3 - 10 - 30 - 100 ±kHz Deviation.

Anyone want further information on it?

See my buls on "Simple Carrier Squelch", "Low Voltage Drop PS", "FM Deviation Calibration", "FM Stereo Radio Principles" "AM Broadcast Radio Principles".

Why don't U send an interesting bul?

73 de John, G8MNY @ GB7CIP