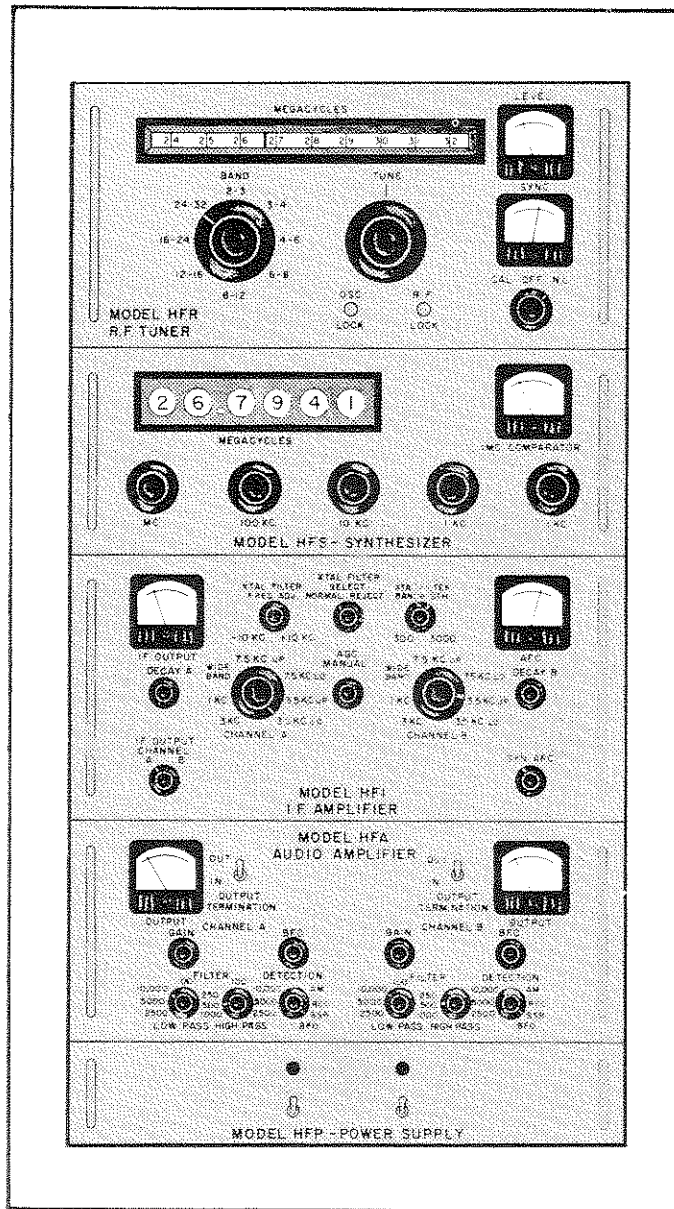
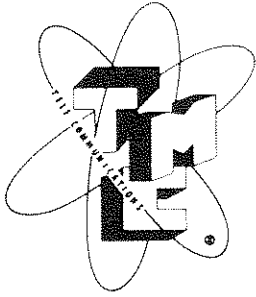


SALES SERVICE BULLETIN NUMBER 229

Sideband Diversity Receiver, Model DDR-5



The TMC Model DDR-5, Sideband Diversity Receiver, was designed to receive Single Sideband signals in dual frequency or space diversity over the frequency range 2 - 32 mcs. The DDR-5 may be used to receive CW, FSK, MCW, Pulse, Phase and other types of signals by means of appropriate adapters. The receiver is provided with a synthesizer controlled by a 1 mc. Standard which provides a stability of 1 part in 10^8 per day. The receiver is also supplied with automatic frequency control which may be disabled when not required.

TECHNICAL SPECIFICATIONS:

| | |
|---------------------------|---|
| MODES OF OPERATION: | SSB, DSB, ISB, Pulse, Phase, CW, FSK and MCW. |
| FREQUENCY RANGE: | 2 to 32 mc in 100 cps steps (AFC Disabled). 2 to 32 mc continuous coverage with AFC. |
| STABILITY (AFC DISABLED): | Synthesizer controlled such that the stability and accuracy is that of the 1 mc internal standard. |
| INTERNAL STANDARD: | 1 mc with a one day stability of 1 part in 10^8 correctable to an external frequency standard (built in comparison device). |
| DELAYED A.F.C.: | Automatically synchronizes to a received signal which is ± 50 cps in error and suppressed 20 db and to remain synchronized for ± 500 cps of drift at a maximum drift rate of 10 cps per sec. |
| TUNING: | Accomplished by means of detented switches and an R.F. tuning control. The signal frequency is to be displayed by digital readout. |
| NOISE FIGURE: | 6 db or better over the band i.e. with a 1μ volt signal and a 7.5 KC band-width the output signal to noise ratio is to be + 15 db or better. |
| INTERMODULATION: | Intermodulation products are down 60 db from the maximum tone in the desired sideband as a result of two signals in the unwanted sideband. |
| A.F. DISTORTION: | Intermodulation products down 40 db through the audio channels. |
| SELECTIVITY: | IF bandwidth at the half power points; <ol style="list-style-type: none">1) 15 KC (2 SSB channels width 7.5 KC)2) 6 KC (2 SSB channels width 3 KC)3) 3 KC (total bandwidth)4) 1 KC (total bandwidth) |
| OUTPUT: | <ol style="list-style-type: none">1) Four 600 ohm balanced and center tapped output terminals per receiver channel.<ol style="list-style-type: none">a) Two independent 0-1 milliwatt output terminals.b) Two independent 0-1 watt output terminals2) Two IF outputs (single ended at 50 ohm) |

OVERALL A.F. RESPONSE: + 3 db from 300 cps to 7,500 cps. Output adjustable from 0 to 1 watt.

IMAGE AND SPURIOUS RESPONSE: 80 db.

A. G. C.: One microvolt to 100 microvolt change in input signal will cause less than ± 1 db change in output voltage. One microvolt to 10,000 microvolt change in input signal will cause less than ± 6 db change in output voltage. The A.G.C. time constant is controlled from the front panel. A.G.C. externally available for diversity operation.

NOSIE LIMITER: Improved noise limiter for AM, SSB, pulse and phase type information.

METERINGS: Input and output signal of receiver sub-units to facilitate trouble-shooting and sensitivity measurements. All audio outputs are metered.

NOTCH FILTER: Redundant tone suppressor.

PHASE DISTORTION: System is capable of receiving pulse, phase and digital type information without seriously degrading intelligence.

HUM LEVEL: Minimum 50 db at 1 watt of modulated output.

INTERNAL POWER SUPPLY: 115 or 230 volts at 50 to 60 cps.

TEMPERATURE: The system will operate from 0°C to $+50^{\circ}\text{C}$.

CALIBRATION: An internally generated alignment signal is available on demand for RF tuning and receiver sensitivity checks.

MOUNTING: Standard Western Electric relay rack.

COMPONENTS & CONSTRUCTION: JAN/MIL wherever practicable.

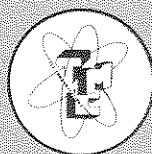
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