

MULTIPLE BANDWIDTH TELEMETRY RECEIVER NEMS-CLARKE 1455

Designed to provide a selectable bandwidth capability for PCM Telemetry, the 1455 approaches being the "universal" telemetry receiver. IF/Demodulator Modules inserted through an opening in the front panel are available in bandwidths ranging from 100kc to 1.5mc. Each module contains 3 independent demodulators with characteristics adjusted to the particular IF bandwidth. They are a Foster-Seeley Discriminator, a Phase-Lock Detector, and an AM envelope detector, each of which may be selected by a front panel switch.



As a further refinement in signal-to-noise ratio enhancement, the video amplifier incorporates a video bandwidth filter having a 6db per octave roll-off adjustable from 20kc to 1.2mc by means of a front panel switch. Thus this receiver is capable of receiving any known type of telemetry signal. Other features offered are a 5mc pre-detection recording output and playback input terminals, an integral VFO, and a crystal controlled tuning unit automatically actuated by a micro-switch on the crystal socket.

The modulation sensitivity and deviation meter scales in each module provide output voltages and meter deflections which are essentially the same percentage of bandwidth in all modules. Thus, in changing bandwidths, no level adjustments need be made in using subsequent auxiliary equipment. Available as an accessory unit is the Nems-Clarke IFC-1400 Predetection Converter which permits use of the 1455 with stationary-head instrumentation tape recorders.

SPECIFICATIONS

Type Reception — AM-FM.

Tuning Range — 215-260mc.

Noise Figure — Less than 8db.

First IF — 30mc.

Second IF — 5mc.

IF Bandwidth — (Determined by plug-in modules, Type IFM)*

First Local Oscillator — VFO and Crystal Control (Frequency determined by plug-in crystal-oven assemblies, Type CO-400)*

Second Local Oscillator — Tunable, $\pm 150\%$

Video Filter — 6 positions: 20, 50, 100, 300, 500kc; 1.25mc (6db/octave)

Meters — Tuning and VU

Outputs: Video — 5cps to 1.5mc.

Spectrum Display — 30mc.

Signal Strength .0 to minus 15 VDC

Pre-Detector Recorder — 5mc

Inputs: RF — 50 ohms.

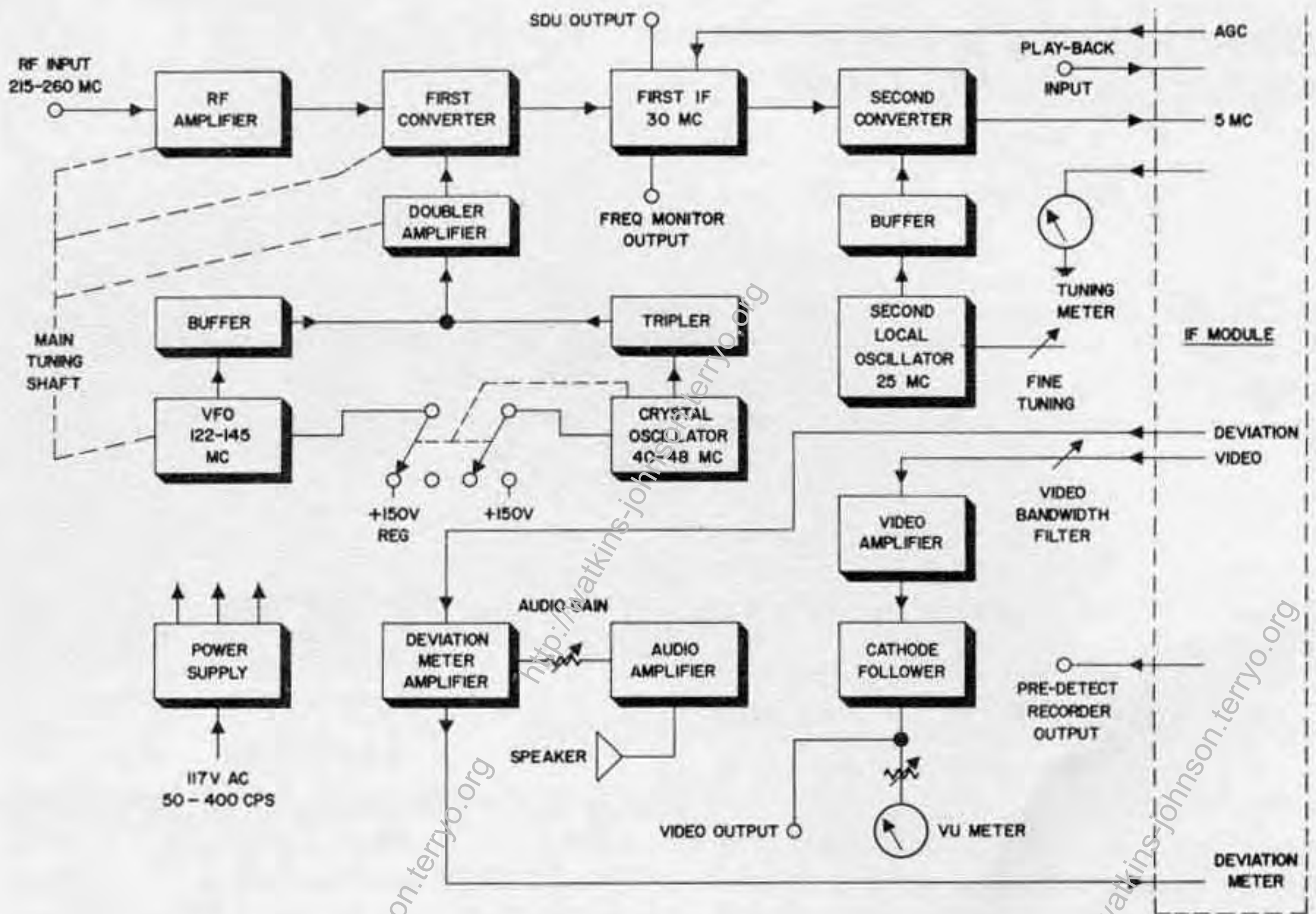
Pre-Detection Playback — 50 ohms.

Power Supply — 117v ac, 50- 400cps.

Panel Size — 19 × 8¾ inches.

*(Without plug-in crystal oven assemblies, or IF Modules which must be ordered separately)

Price: \$1,500.00



IF/DEMODULATOR MODULE AM-FM NEMS-CLARKE 1455

For Nems-Clarke 1455 Multiple Bandwidth Telemetry Receivers

The IF/Demodulator plug-in modules determine the operating IF bandwidth of the Nems-Clarke 1455 Telemetry Receiver. All modules have AM envelope detector and conventional Foster-Seeley FM discriminator and FM Phase-Lock detector. The convenience offered by these plug-in modules makes possible the use of only one receiver in handling any type of signal used in the 215-260mc telemetering band.

Each module has its own signal strength meter and deviation meter, video gain control, and predetection recording and playback switch.

SPECIFICATIONS

- Bandwidth designated* — measured at 3db points.
- Shape Factor* — no greater than 2.5.
- Demodulators* — AM envelope detector Foster-Seeley FM discriminator FM Phase-Lock detector
- Sensitivity* — 3v peak-to-peak video output for deviation equal to 1/5 of bandwidth.
- Deviation Meter* — Full scale deflection corresponds to a deviation of 1/2 of IF bandwidth.
- Signal Strength Meter* — 200K μ v full scale deflection.



IF/DEMODULATOR MODULES

TYPE IFM-100	100kc bandwidth
TYPE IFM-200	200kc bandwidth
TYPE IFM-300	300kc bandwidth
TYPE IFM-500	500kc bandwidth
TYPE IFM-750	750kc bandwidth
TYPE IFM-1000	1.0mc bandwidth
TYPE IFM-1500	1.5mc bandwidth

Price: \$800.00