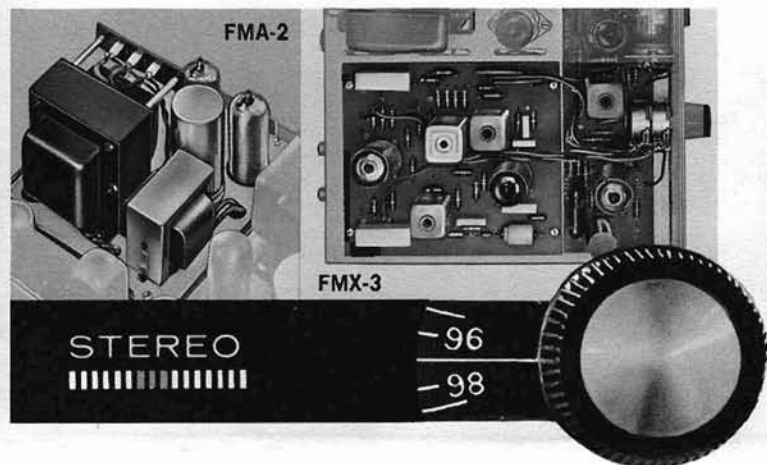


dynakit

- ✓ QUALITY
- ✓ RELIABILITY
- ✓ SIMPLICITY
- ✓ ECONOMY

The DYNATUNER epitomizes the DYNAKIT tradition of the finest quality trouble-free performance at lowest cost. Careful design has evolved an FM tuner of extremely fine performance, including sensitivity for fringe-area use, low noise, non-critical drift-free tuning, and distortion lower than in broadcast monitor equipment.

A combination of high sensitivity (comparable to claims of "less than 1 microvolt"), excellent selectivity and exceptional limiting on the weakest signals provides pleasurable listening from more stations than tuners of ostensibly higher sensitivity rating. The wide-band, drift-free design eliminates AFC circuits, and provides superior multiplex stereo reception with the FMX-3 STEREO MATIC integrator. Careful limiter design achieves outstanding suppression of pulse-type interference, such as ignition noise. The planetary drive tuning system gives smooth, accurate tuning without backlash, and the exclusive reference-grid tuning eye precisely indicates correct tuning.



The FMA-2 is a 10 watt amplifier which uses the space allocated for the multiplex integrator. It converts the tuner into an FM receiver with sufficient power to drive most speakers with excellent transient response and critically damped low frequencies. A patented DYNACO output transformer permits a high feedback factor and less than 1% distortion within 1 db of 10 watts from 30 cps to 15 KC. Frequency response is ± 1 db, 12 cps to 35 KC. The power supply and volume control of the tuner are used, yet the unit may still function independently as a component tuner.

The FMX-3 STEREO MATIC MULTIPLEX INTEGRATOR fits inside the DYNATUNER chassis, converting it to a complete FM stereo tuner of the highest quality, providing 30 db of separation. The effective sensitivity, noise level and low distortion of the tuner are virtually unchanged. You simply tune the station. The STEREO MATIC tuner automatically switches to stereo or mono operation, and the STEREO LIGHT lights up when you are tuned to a stereo broadcast. Effortless stereo is yours, without controls, filter switches, extra boxes or cables. There are no problems with tape recording off-the-air; mono broadcasts come through both low impedance outputs at the same level as stereo; the volume control adjusts both channels; switching is electronic and absolutely silent; construction and alignment are as simple and positive as in the DYNATUNER.

The unique alignment procedure enables simple and rapid achievement of peak performance without any external test equipment. True laboratory alignment is realized in the home — after construction, after aging of parts in use, or after tube replacement. The tuned RF input and the oscillator-mixer use slug-tuned coils for easy alignment of a front end having excellent spurious signal rejection and minimal cross-modulation, so important for stereo. The 4 IF stages function as progressive limiters, and are easily peak-aligned. A truly balanced wide-band discriminator is precisely aligned by a unique bridge-balancing circuit. The tuner is supplied with all coils prealigned to the point where it may be operated immediately on assembly, with optimum results on complete alignment.

For those anxious to complete the tuner with a minimum of effort, a semi-kit is available which includes all of the parts mounted and dip-soldered on the etched boards, and all major components mounted on the chassis.



dynatuner FM TUNER KIT

Sensitivity: 4 μ v IHFM (total noise and distortion 30 db below 100% modulation).
Frequency Response: ± 0.5 db from 10 cps to 40 KC before deemphasis.
Audio Noise Level: 75 db below 100% modulation. **Inputs:** 300 Ω bal.; 75 Ω unbal.
Distortion: at 100% modulation less than 0.5% IM or harmonic from 10 μ v to 0.1 volt.
Controls: tuning, volume, on-off. **Drift:** less than 0.025% — AFC unnecessary.
Discriminator Bandpass: in excess of 900 KC. **Selectivity:** 54 db.
Tube Lineup: ECC85/6AQ8 RF amp, 6AT8A mixer-oscillator, (2) 6BA6 1st and 2nd IF amps, (2) 6AU6 3rd and 4th IF amps, (2) IN542 matched detector diodes, 12AX7 audio, EM84/6FG6 tuning indicator, EZ80/6V4 rectifier. **FMX-3:** ECF80/6BL8 19 KC amp/doubler, 12AX7 audio, EMM801 tuning indicator, (4) IN541 diodes.
FMA-2: 12AX7 amplifier/inverter, (2) EL84/6BQ5 output, (2) silicon rectifiers.
Special Features: front panel volume control separate from on-off switch, switched AC outlet, fuse post. Choice of charcoal brown or bone white baked vinyl finish.
Size: 13" x 8" x 4" high. **Shipping Weight:** 12 pounds. **Power Consumption:** 55 watts.
Prices: FM-1 mono tuner kit \$79.95, semi-kit \$99.95. FM-1/A factory wired \$119.95.
FMA-2 insert amplifier kit \$29.95. FMX-3 multiplex integrator kit \$29.95.
FMX-3 semi-kit \$39.95. PM-4 panel mount kit for all units \$4.95.
FM-2/A factory wired tuner and amplifier (complete receiver) \$169.95.
FM-3/A factory wired stereomatic multiplex tuner \$169.95.

KITS OR FACTORY WIRED AND INDIVIDUALLY TESTED

- Precise alignment of every stage without instruments — optimum performance is always at your fingertips.
- Four IF-limiters, wide-band balanced-bridge discriminator, time-switching multiplex system.
- Logical control simplicity — critical "reference-grid" tuning eye, no drift, no dial cord backlash, no overloading on powerful signals. You just tune the station.
- Automated stereomatic multiplex circuit locks in and signals stereo automatically and silently. Never any problems with tape recording off the air.
- Rapid, foolproof assembly. Etched circuit boards precisely define parts placement, and eliminate the variations which can be so critical in achieving rated tuner performance.
- Self-contained multiplex integrator — included with the FM-3, or add it later to the FM-1.
- Best results under difficult reception conditions.

FM-1 and FM-3: 4 μ v IHF sensitivity (noise and distortion 30 db below 100% modulation); 3 db less in stereo. Frequency response \pm 0.5 db from 10 cps to 40 KC before deemphasis; \pm 0.5 db from 10 cps to 15 KC in stereo. IM or harmonic distortion at 100% modulation less than 0.5% from 10 μ v to 100,000 μ v; less than 1% in stereo (including 19 KC and 38 KC residual). 300 Ω balanced, 75 Ω unbalanced inputs. 2 volts out at low impedance. Audio noise 73 db below 100% modulation. Signal to noise ratio 70 db at 100% modulation. 30 db stereo separation. Capture ratio 5 db. Selectivity (alternate channel) 54 db. Drift less than 0.03%. AM suppression greater than 63 db. Discriminator bandpass in excess of 900 KC. Switched AC outlet, charcoal brown baked vinyl coated cover. 55 watts.

FM-1: 6AQ8, 6AT8A, 6BA6 (2), 6AU6 (2), 12AX7, 1N542 diodes (2), EM84, 6V4. Tuning and volume controls, on-off switch. Panel 13" x 4", 8" deep. 12 pounds.

FM-3: 6AQ8, 6AT8A, 6BA6 (2), 6AU6 (2), 12AX7 (2), 6BL8, 1N542 diodes (2), 1N541 diodes (4), EMM801, 6V4. Tuning control, volume control with stereomatic-mono push-pull switch, on-off switch. Panel 13½" x 4¼", 8" deep. 13 pounds.

FMX-3: Multiplex integrator for FM-1. 6BL8, 12AX7, EMM801, 1N541 diodes (4).

PK-40: Accessory deluxe panel and knob kit with mounting brackets for FM-1. \$9.95.

FM TUNERS

assembled

FM-1/A	Mono tuner	\$114.95
FM-3/A	Stereomatic tuner	159.95

in kit form

FM-1	Mono tuner	78.70
FMX-3	Stereo integrator	31.45
FM-3	Stereomatic tuner	104.95



FM-1



FM-3

THE REMARKABLE DYNATUNER

The Dynatuner's modest exterior conceals an impressive 9 tube, 2 diode circuit (11 tubes and 6 diodes with multiplex) which develops FM's full potential. In low noise, low distortion and effective sensitivity it rivals the finest "monitor" tuners. Verified records of 125 separate stations received with a 9 element outdoor antenna, and 60 stations on a simple indoor folded dipole are available on request.

The Dynatuner evidences several engineering innovations. Its unique design, plus the inherent uniformity of etched circuits, has evolved a unit so non-critical, so accurately reproducible, and so conveniently aligned that you can meet all specifications without instruments. No sections are pre-built or prealigned, yet this circuit provides precise home alignment of every stage from the front end (including dial tracking) through the IFs, discriminator and multiplex circuits using the tuning eye alone. No other design, kit or wired, provides this assurance of sustained performance.

The cathode-coupled tuned RF input and oscillator-mixer use slug-tuned coils for easy alignment. The 4 IF stages function as

progressive limiters (so effective that they limit on noise alone) and provide superior suppression of impulse noise such as auto interference. A balanced wide-band discriminator is critically aligned by a unique bridge-balancing circuit. The exclusive time-division multiplex circuit eliminates troublesome oscillators, and is easily peak-aligned. A front panel volume control facilitates tape recording, and allows direct connection to power amplifiers.

The FM-3 is a multiplex tuner identical to the FM-1 plus FMX-3 in circuitry, with the additional convenience of a "stereomatic-mono" switch on the volume control. With outstanding limiting, superior AM rejection and freedom from cross-modulation, Dynatuners excel in multiplex reception of weak signals and in bad multipath locations. The unique Dynatuner alignment assures that you will achieve maximum sensitivity, lowest distortion and greatest stereo separation at the point of maximum closure of the tuning eye. If you have not experienced the Dynatuner's fully automated stereomatic tuning system, you don't know how enjoyable FM listening can be!

A comprehensive report on the Dynatuner is available on request.