

## Technical Notes and Specifications

### The Citation

# I

<p>frequency Response: +0 -0.5 db. 5-80.000 cycles per second, Distortion: less than 0.05% at 2 volts. Total Noise: High-level Input: 85 db below rated out put. low-level input: less than 1.5 microvolts referred to input terminals.</p> <p>Rated Output: Main Outputs: 2 volts. Tape Outputs: 0.3 volts.</p> <p>input Sensitivities: High level: 0.2 volts, low level: 2.5 mv. in phono RIAA position; 2.0 mv. in tape head position. Ceramic Phono: 0.1 volt.</p> <p>A.C. Convenience Outlets: Total 4. Three switched; one unswitched.</p> <p>Function Selectee: Six positions: Aux, Tape, Amp, Tuner, Phono 1, Phono 2, Tape Head.</p> <p>Mode Selector! Five positions: Stereo, Blend, A + B. Channel A, Channel B.</p> <p>Blend Control: Acts as crossfeed control In blend position or third channel gain control in stereo position.</p> <p>Equalization Controls: Two separate controls for roll-off and turnover. Roll-Off: 0/78, 4/fRR, 10.5-Old Lon., 12/AES, 14/RIAA, 16/LP. Turnover: Tape. 800/RCA, RIAA, LP, AES, 78.</p> <p>Tone Controls: Professional step-type for each channel.</p> <p>Balance Control! Out of the circuit in the flat position. Zero to Infinity type, frequency Insensitive.</p>	<p>Phasing Switch: To correct for improperly recorded program material or out of phase speakers interchanges Channel A and B for proper orchestra orientation.</p> <p>Channel Reverse Switch: Compensates for Fletcher-Munson effect at low listening levels.</p> <p>Contour Switch: Thret position switch: flat, 15 cycle sub-sonic filter, 75 cycle rumble filter.</p> <p>Low-FreQuency Filter: Five positions incorporated into treble tone controls.</p> <p>High-Frequency Filter: Permits monitoring of tape while recording.</p> <p>Tape Monitor Switch: illuminated rotary A.C. switch-heavy duty</p> <p>Power On/Off Switch: Four main preamplifier outputs. One third channel output. Two tape outputs for recording.</p> <p>Output Receptacles: (Total 9) 4-ECC83/12AX7, 5-ECC81/12AT7 plus 5 silicon diodes.</p> <p>Tube Complement? 74 7/8" W x 12 1/4" D x 6" H.</p> <p>Dimensions: 32 lbs.</p> <p>Shipping Weight: Gold and charcoal brown.</p> <p>Finish: Optional wooden enclosure.</p> <p>Accessories:</p>
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### The Citation

# II

<p>Continuous Power Output! 60 watts per channel. Peak Power Output: 130 watts peaks per channel, Harmonic Distortion: less than 0.5%. 20-20.000 cycles per second at 60 watts. Unmeasurable at normal listening level.</p> <p>intermodulation Distortion.- less than 0.5% at 60 watts. Unmeasurable at normal listening level.</p> <p>Frequency Range: 18-40.000 cycles per second. +0, -1.0 db at 60 watts. 2-80.000 cycles per second. +0, -1.0 db at 1 watt.</p> <p>Sensitivity: 1.5 volt RMS input for 60 watts.</p> <p>Damping Factor: Greater than 18.</p> <p>Feedback: 30 db achieved through multiple loops.</p> <p>Hum and Noise: Better than 90 db below 60 watts.</p> <p>Power Supply: Excellent B + regulation attained through use of low Z silicon diode rectifier supply.</p> <p>Inputs: One input for each channel.</p>	<p>Output Impedance: 4, 8 and 16 ohms.</p> <p>Controls*: 4 D.C. bias adjust potentiometers, 1 for each output tube, plus 2 A.C. balance potentiometers.</p> <p>Convenience Outlet: One A.C. convenience outlet.</p> <p>Fuse: A.C. primary, externally accessible.</p> <p>Special Feature: Bias Meter.</p> <p>Construction: Military-type construction with all components held to tight tolerances.</p> <p>Tube Complement: (Total 10) 6-128Y7A, 4-KT88, plus 4 Silicon Diodes, 1 Selenium Rectifier.</p> <p>Power Consumption: 350 watts.</p> <p>Dimensions: 16 3/8" W x 9" H x 11 1/2" D.</p> <p>Shipping Weight: 71 lbs.</p> <p>Finish: Charcoal brown and gold.</p> <p>Accessories» Metal protective cover.</p>
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### The Citation

# III

<p>Circuits: Nuvistor front-end circuit tuned by two separate electrically and mechanically isolated tuning sections for maximum selectivity at lowest oscillator radiation. This is followed by a factory assembled and adjusted converter and IF sub-assembly consisting of a grounded grid triode RF stage, triode mixer and solid state AFC circuit, and three wide band IF stages. Two 68N5 zero time constant gated beam limiters followed by a wide band Foster-Seeley discriminator Special Citation wide band audio output circuitry for extended frequency response with unmeasurable phase shift.</p>	<p>Sensitivity: 0.65 microvolts for 20 db of quieting. 0.85 microvolts for 30 db of quieting. 240 KC bandwidth: 6 db down.</p> <p>Selectivity</p> <p>Discriminator Peak to Peak Separation: 600 KC ultra linearity. 65 db. IF Rejection: 90 db.</p> <p>Image Rejection: +- 0.5 db. 1-52.000 cycles per second.</p> <p>Frequency Response: Unmeasurable at 30% modulation, less than 0.1% at 100% modulation.</p> <p>Distortion! Dual cascaded gated-beam constant output.</p> <p>limiter: 300 ohms (Balanced). 65 db below 100% modulation.</p> <p>Antenna Input: Within FCC requirements.</p> <p>Hum level! 2 volts at 100% modulation. Adjustable by front panel volume control.</p> <p>Radiation: 1500 ohms, feedback couple.</p> <p>Output Level:</p> <p>Output impedance:</p>
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### The Citation

# IV

<p>Frequency Responso: +0 -0.5 db. 5-80.000 c.p.s. Distortion: Less than .05% at 2 volts. Noise: Hi level: 85 db below rated output, lo level: less than 1.5 microvolts referred to input terminals.</p> <p>Rated Output: 2 volts.</p> <p>Sensitivity: Hi level: 0.2 volts. Lo level: 2.5 mv in phono position.</p> <p>Function Selector: 6 Positions: Aux, Tape Amp, Tuner, Phono- RIAA, Phono-IP, Tape Head</p> <p>Mode Selector: Five Positions. Stereo, Reverse, A + B</p> <p>Blend Control» Channel A, Channel B, Continuously variable. Removed from circuit in zero position.</p> <p>Tone Controls: Variable type for each channel; May be removed completely from circuit by special switch.</p>	<p>Balance Control.- Zero to infinity type.</p> <p>Contour Switch: Compensates for Fletcher-Munson effect at low listening levels.</p> <p>Rumble &amp; Scratch Filters: Non-ringing switched type.</p> <p>Tape Monitor Switch: Permits monitoring of tape while recording.</p> <p>Power On/Off: Illuminated push-button, heavy duty.</p> <p>Output Receptacles: Two main preamp. Output yacks. One center channel output. Two tape outputs for recordings.</p> <p>Tube Complement: Six ECC83/12AX7's, plus 4 semi-conductor rectifiers.</p> <p>Dimensions: 14 7/8" W x 11" D x 5 5/6" H.</p> <p>Shipping weight: 25 lbs</p> <p>Finish: Charcoal brown and gold.</p> <p>Accessories: Optional wooden enclosure.</p>
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### The Citation

# V

<p>Continuous Power Output.- 40 watts per channel. Peak Power Output: 95 watts per channel, Harmonic Distortion: less than 0.5%. 20-20.000 cycles per second at 40 watts. Unmeasurable at normal listening level.</p> <p>intermodulation Distortion: less than 0.5% at 40 watts.</p> <p>Frequency Response: 7-45.000 c.p.s. +0 -1.0 db at 40 watts. 2-80.000 c.p.s. +0 -1.0 db at 1 watt</p> <p>Sensitivity* 1.7 volt RMS.</p> <p>Damping Factor: 15 measured at 16 ohm tap. (IHFM method).</p> <p>Feedback: 22 db.</p> <p>Hum and Noise: Better than 85 db below 40 watts.</p> <p>Power Supply: Excellent B + regulation attained through use of low Z silicon diode rectifier supply.</p> <p>Inputs: One Input for each channel.</p> <p>Output impedance: 4, 8 and 16 ohms.</p>	<p>Controls- D.C. and AC. balance potentiometers. Internal signal supplied for A.C. balance.</p> <p>Fuse: A.C. primary, externally accessible.</p> <p>Special feature* Bias meter with special spring return switch to remove meter from circuit when not needed</p> <p>Construction: Military-type terminal boards. Close tolerance components.</p> <p>Tube Complement- Total 8: 2-128Y7A, 2-6CG7, 4-7581 plus 4 silicon diodes and 1 selenium rectifier.</p> <p>Power Consumption: 250 watts.</p> <p>Dimensions: 13 7/8" W x 5 1/2" H x 1 1/4" D.</p> <p>Shipping Weight: 45 lbs</p> <p>Finish: Gold and charcoal brown.</p> <p>Accessories: Metal protective cage.</p>
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# THE CITATION I

## Stereophonic Preamplifier Control Center



- Separate bass and treble step-type tone controls for each channel. Controls electrically out of the circuit when in the flat position. This eliminates phase shift and transient distortion inherent in all tone controls.
- Special scratch filter contained in treble cut positions for sharp roll-off without ringing.
- Each amplification stage is surrounded with a feedback loop and is flat over an extremely wide range.
- Unmeasurable distortion and phase shift.
- D.C. on all heaters and the use of low noise resistors in the critical places to reduce thermal agitation and hum.
- Anode follower output insures extended low frequency response by including the output coupling condenser in the feedback loop.

- Chassis designed to permit easy accessibility to all connections.
- Preamplifier can be easily installed into a cabinet by merely sliding chassis in from the front. Escutcheon remains fastened to chassis eliminating the need to mount it separately to the front panel.
- Eighteen stages utilizing nine dual triodes.
- Six silicon diodes provide unexcelled B + and filament regulation.
- Separate turnover and roll-off equalization controls for virtually any combination of record or tape playback equalization curves.
- Continuously variable blend control acting as a center channel gain control or as a crossfeed control if a center speaker is not used.
- Zero to infinity balance control offering full range and complete cut-off for either speaker.
- Illuminated Rotary on/off switch.
- Military construction throughout for rigidity and professional appearance.
- Beautifully styled in charcoal brown anti gold.

*The Citation I . . . Price \$164.95*  
*Factory Wired . . . Price \$251.95*  
*Walnut Enclosure, WC1 . . . Price \$30.95*

# the Citation II

## 120 Watt Stereophonic High Fidelity Power Amplifier



- Delivers 60 watts each channel from 18-40,000 c.p.s. with less than 0.5% distortion. Can be operated as 120 watt monophonic amplifier.
- Use of video output pentodes in all low level stages for exceptional wide frequency response and low distortion.
- Output stage consists of two KT88's per channel conservatively operated in fixed bias, distributed load circuit.
- Multiple feedback loops for increased degree of usable feedback (30db overall) to lower distortion without sacrificing stability.
- Power supply consists of four silicon diode rectifiers, choke, heavy duty electrolytics and potted power transformer for superior regulation and long life.

- Extended frequency response. Two octaves above and below the normal range of hearing for smooth transparent sound.
- Absolutely stable with any load.
- Bias Meter to adjust individually the plate current of each KT88 for proper balance and lowest distortion. This insures optimum performance even after aging of the output tubes.
- Output transformers designed to exacting professional specifications.
- High power output at the extreme ends of the frequency range enables the amplifier to effortlessly drive any of today's inefficient speakers at *any* power level. High power rating insures flawless, transparent reproduction at low listening levels.
- Military construction represented by rigid component terminal boards for ease of construction, strength and neat appearance. Special cable harness and components of professional quality.
- Handsomely styled in gold and charcoal brown.

*The Citation II . . . Price \$169.95*  
*Factory Wired . . . Price \$239.95*  
*Metal Enclosure, ACII . . . Price \$7.95*



The citation- III is the world's most sensitive tuner. Designed in the magnificent Citation tradition, this superb instrument offers specifications and performance never before achieved.

- Double-tuned antenna circuit transitionally coupled to first RF stage.
- First RF comprised of Nuvistor for lowest noise figure obtainable.
- Preassembled and factory aligned RF stage, mixer, oscillator, AFC and three IF's assure proper alignment without the need for special instrumentation.
- Tuning gangs specially designed for outstanding selectivity and elimination of stray capacitance and inductance.
- Cathode follower inserted between discriminator and de-emphasis network to provide constant high impedance loading and eliminate distortion.
- Two separate D'Arsonval movement tuning meters for signal strength and center of the channel tuning. Meters are used for the alignment of the front end, discriminator and limiters.
- Wide band IF limiters and discriminator assure excellent capture ratio with virtually non-existent distortion.
- Defcatable AFC with regulated voltage supply to maintain absolute oscillator stability regardless of line voltage variation.
- Front panel volume control.
- Front panel squelch with defeat switch.
- Two 6BN6 gated-beam limiters assure exceptionally high capture ratio, greater quieting, lower distortion and a completely uniform audio output of all signals.
- Local /distance switch.
- Military-type terminal board construction for rigidity, strength, proper lead dress anti professional appearance.
- Audio range 3 octaves above and below range of normal human hearing.
- Special provision to accommodate all multiplex adapters. Front panel is specially designed to accept multiplex operating controls at a future date.
- Magnificently styled in gold and charcoal brown to match all of the Citation instruments.

*The Citation III... Price \$154.95  
 Factory Wired ... Price \$234.95  
 Walnut Enclosure, WCI... Price \$30.95*

# THE CITATION III

Professional  
 FM  
 Tuner



## THE CITATION IV

### Stereophonic Preamplifier Control Center



The NEW CITATION IV is a compact stereophonic pre-amplifier designed in the best Citation tradition. It offers performance and features rivaled only by the famous Citation I.

- Separate bass and treble tone controls for each channel. Controls may be switched out of the circuit completely to eliminate phase shift and transient distortion inherent in all tone controls.
- Each amplification stage is surrounded with a feedback loop and is flat over an extremely wide frequency range.
- Special rumble and scratch filters to effectively remove turntable and record noise without introducing distortion or ringing.

- D.C. on all heaters and the use of low noise resistors in critical places to reduce thermal agitation and hum.
- Distortion and phase shift virtually non-existent at rated output.
- Continuously variable blend control to obtain center "fill" as required. Completely out of the circuit in the zero position.
- Illuminated push-button On/Off switch permits pre-amplifier to be turned on and off without upsetting careful setting of operating controls.
- Third channel amplifier output.
- Separate switches for Tape Monitor and Contour.
- Zero to infinity balance control allows complete cut-off for either speaker.
- Feedback pair output stage for low output impedance with extended frequency response and minimum distortion.
- Military-type terminal board construction for rigid, professional appearance. Phenolic terminal boards are thick and are of the highest quality.
- Beautifully styled in charcoal brown and gold.

*The Citation IV . . . Price \$122.95*  
*Factory Wired . . . Price \$192.95*  
*Walnut Enclosure, WC1. . . Price \$30.95*

## THE CITATION V

### 80 Watt Stereophonic Basic Power Amplifier



THE CITATION V is a smaller version of the powerful Citation II. This magnificent new basic power amplifier has every worthwhile feature required for superb stereophonic reproduction.

- Conservatively rated at 10 watts RMS per channel with 95 watt peaks at less than 0.5% distortion.
- Clips clean without breakup.
- Can be operated as an 80 watt monophonic amplifier.
- Output stage consists of two 7581's per channel operating conservatively in fixed bias, ultra-balance circuit.

- Frequency response extends two octaves above and below the normal range of hearing to insure perfect square wave response at all frequencies.
- Absolutely stable with any type of load.
- Specially designed output transformers with resonant frequency above 200 KC.
- Power supply consists of four silicon diodes (hermetically sealed) and heavy duty electrolytics for superb B<sub>+</sub> regulation and long life. This results in instantaneous recovery time and superb transient response.
- Bias meter to statically and dynamically adjust each pair of 7581 output tubes.
- Maximum power output at the extreme ends of the frequency range enables the amplifier to effortlessly drive any of today's inefficient speakers.
- Military construction represented by rigid component terminal boards for ease of construction, strength and neat appearance.
- Handsomely styled in charcoal brown and gold.

*The Citation V . . . Price \$124.95*  
*Factory Wired . . . Price \$184.95*  
*Metal Enclosure, ACV . . . Price \$7.95*

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