

# McIntosh

# MPA 4

The MPI 4 is a laboratory-grade instrument. It continuously monitors the quality of the performance of a stereo system. It can sample and display signals from the tuner, preamplifier and power amplifier without re-connecting cables.

As a tuning aid exact FM station selection and precise tuning is seen. Displays of FM are signal strength, modulation percentage and multipath interference; of audio signals are stereo balance, amplitude, phase and channel separation. Output power of the power amplifier can be seen at any instant during program performance, or stored to develop a trend over several minutes. With the addition of test records, the MPI 4 can show compliance and trackability of a phono pickup, frequency response of the preamplifier and power amplifier, audio distortion and stereo speaker balance. In the dual trace mode, the left and right stereo channels appear simultaneously and separately on the screen for direct comparison.

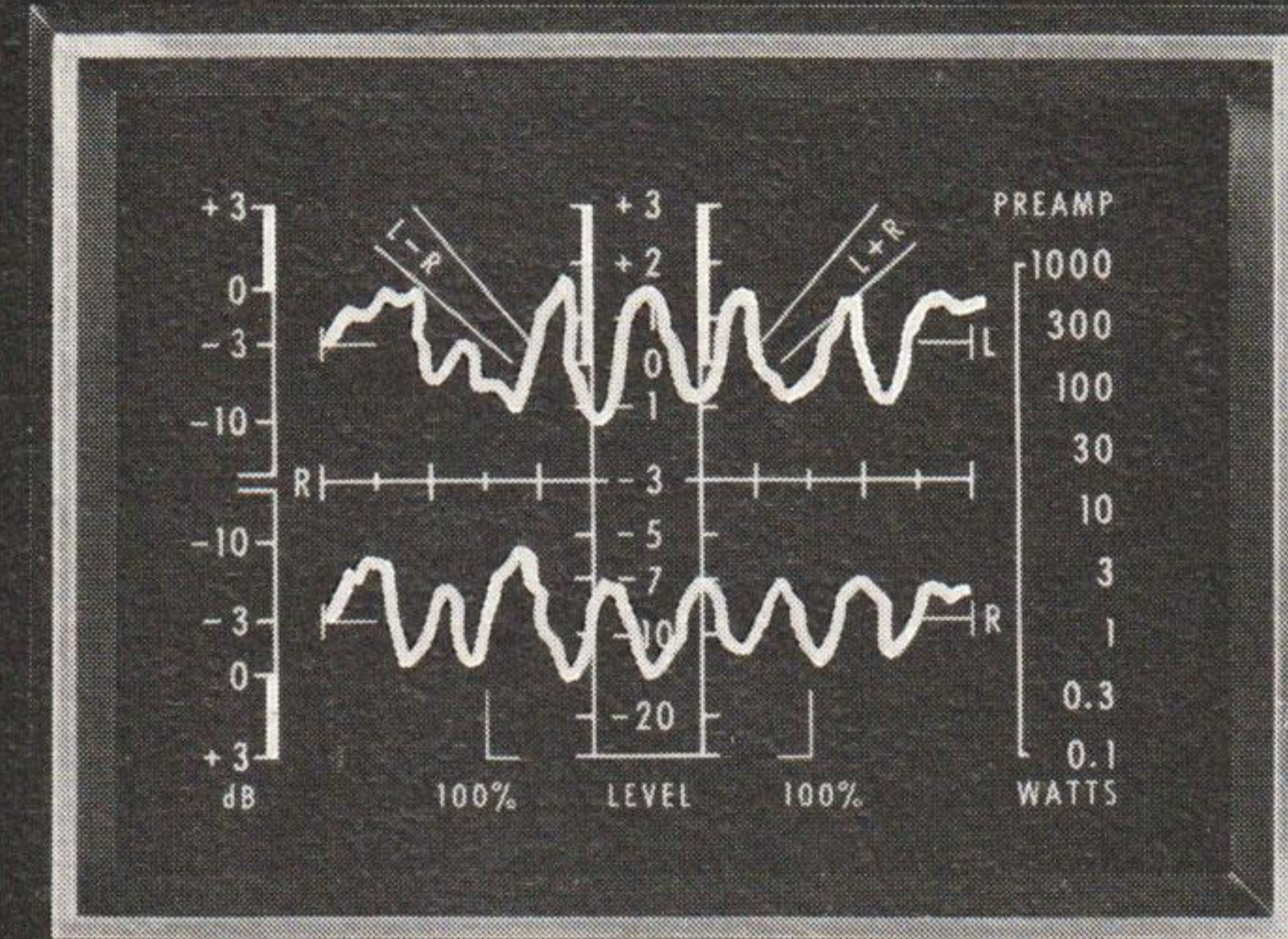
In short, the MPI 4 is a professional measuring instrument that assures you continuously that your system is performing as expected. You never again need to wonder about the performance of your stereo.

## MAXIMUM PERFORMANCE INDICATOR



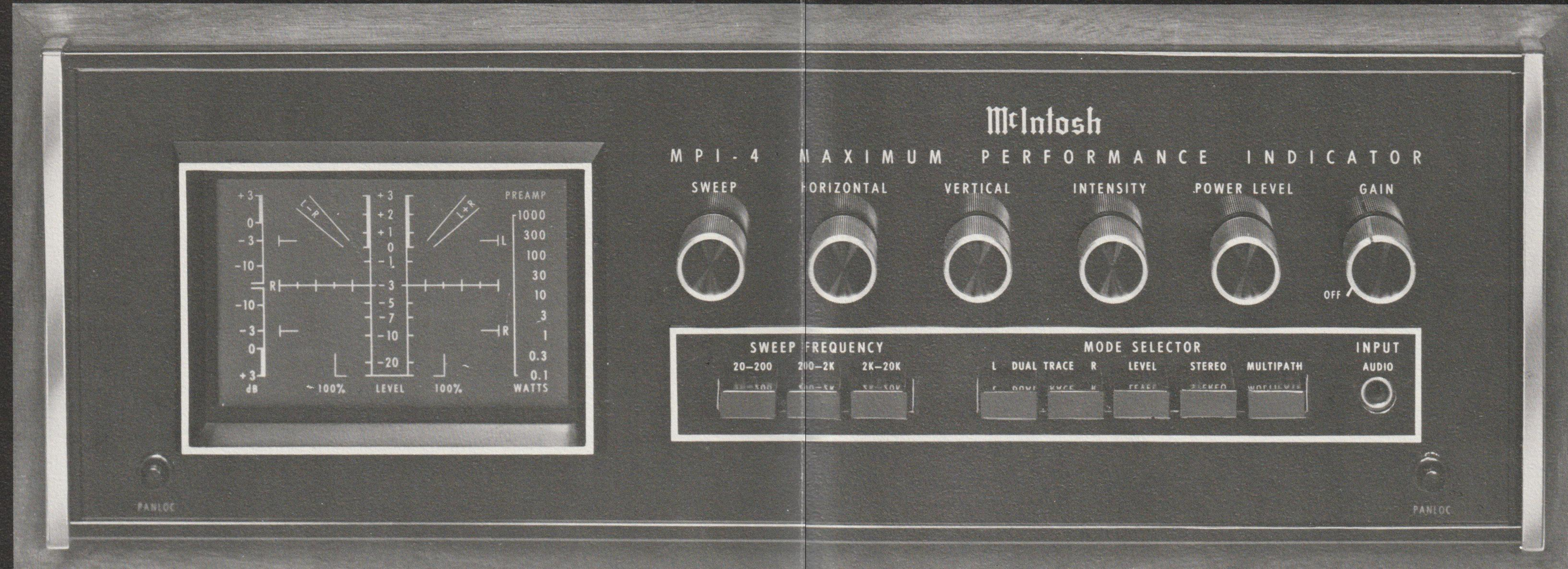
# The MPI 4 helps you

- maximum performance from your stereo system
- "once in a lifetime" programs flawlessly recorded
- better FM reception
- a view of the separation provided on any signal source
- a measurement of the performance of the phono cartridge
- absolute balance of your stereo channels from phono cartridge to speakers
- an accurate measurement of power output

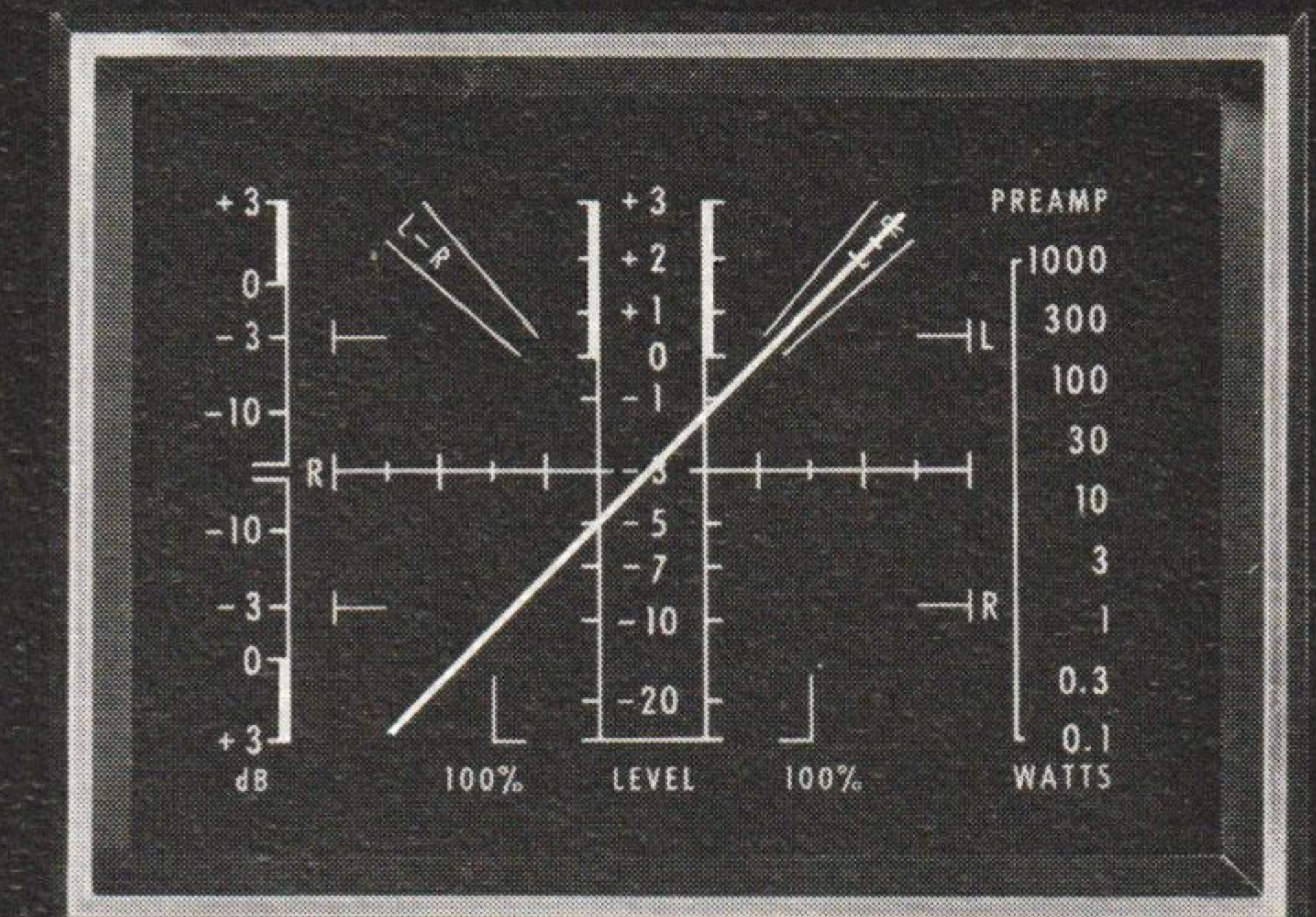


## DUAL TRACE

Each channel of stereo signal is displayed individually in the dual trace mode of operation. Comparison of the signals assists in comparison of recordings, the quality of stereo information in the source and much other valuable information.

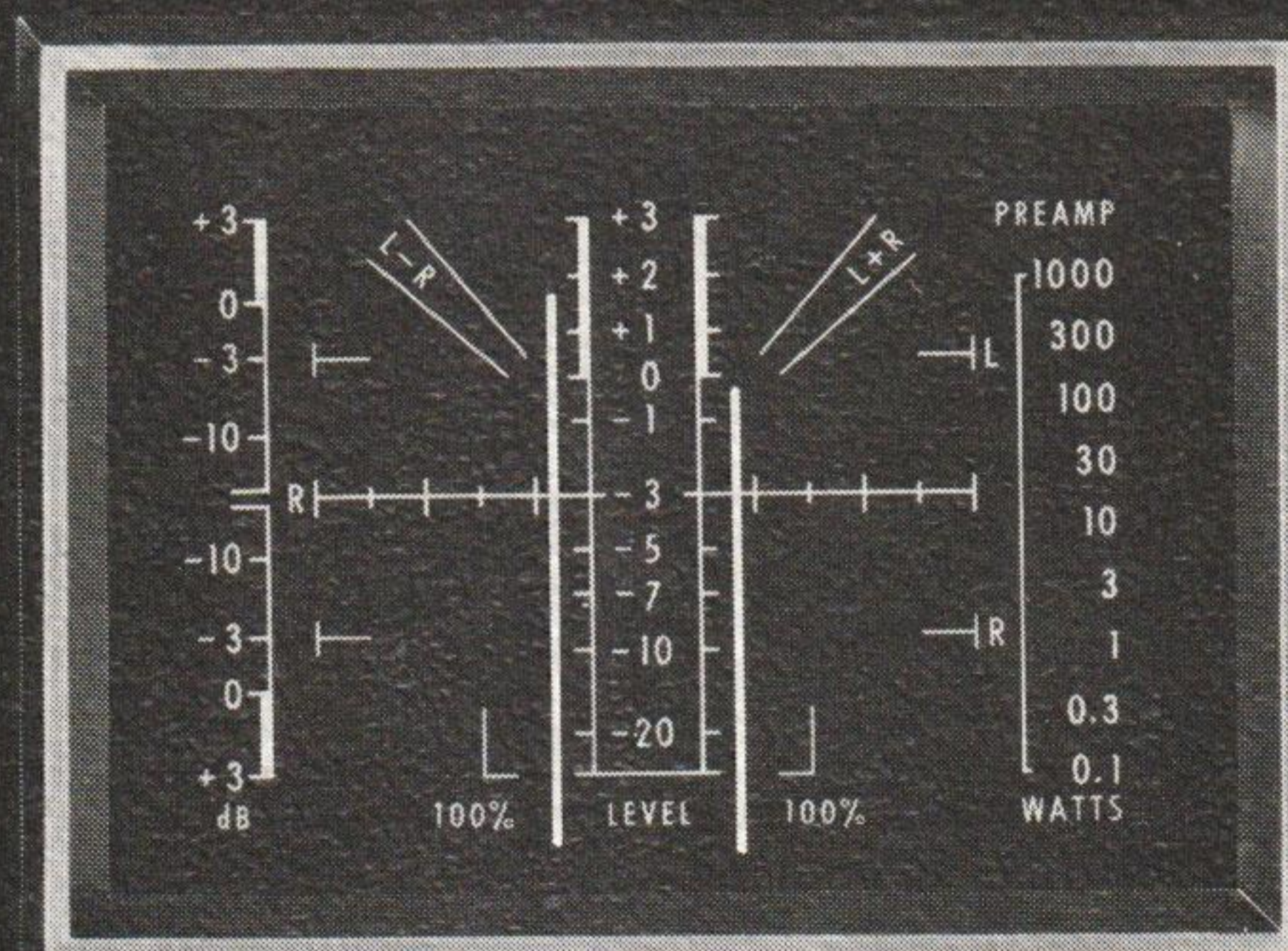


\$599.00 Cabinet \$29.00



## PHASE

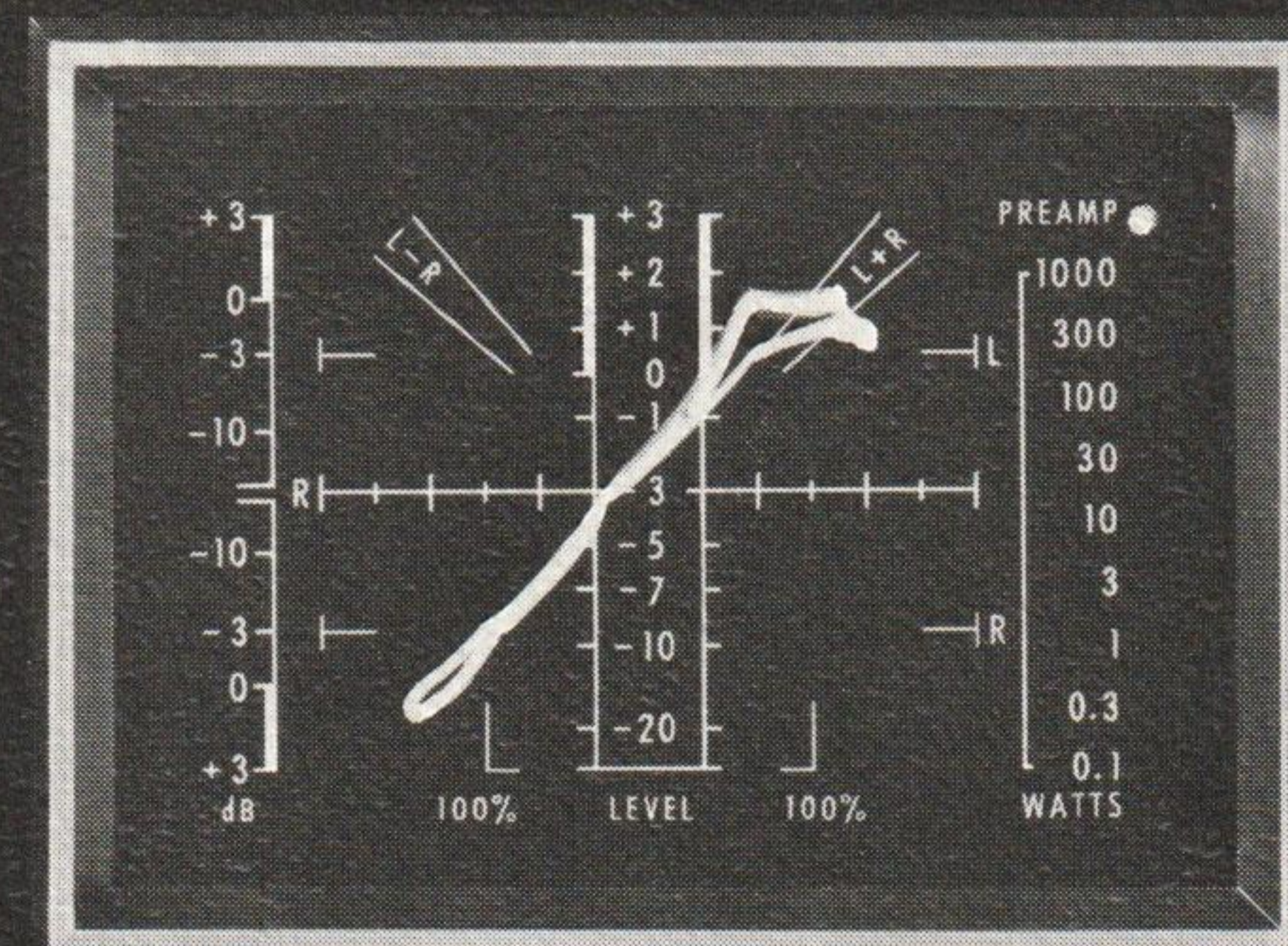
Program material that is 'out of phase' sounds unnatural and thin; 'in phase' sounds alive and rich. Occasionally a program source will be 'out of phase.' On the MPI 4 you can see the phase relationship so you can correct the condition.



## LEVEL

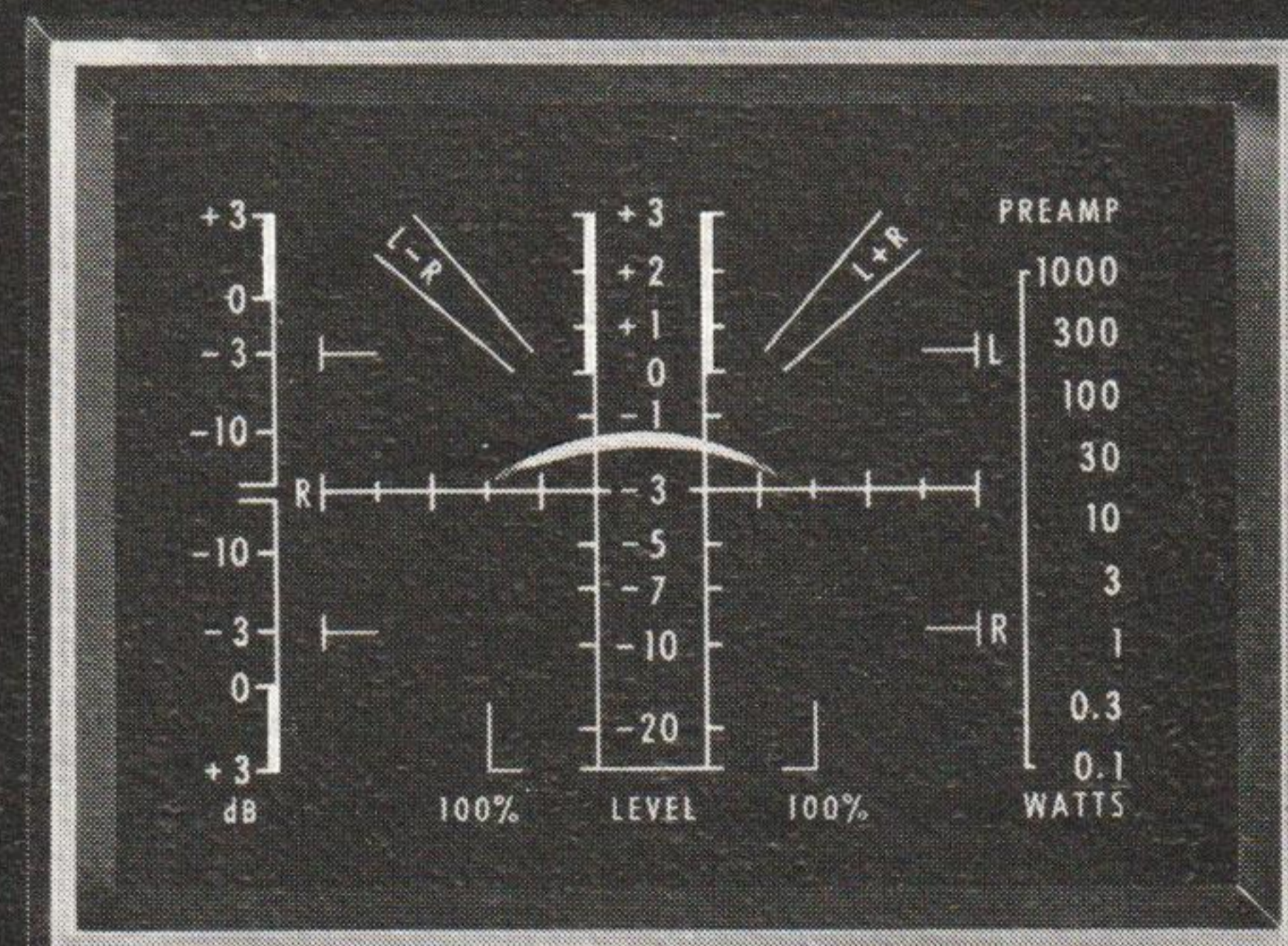
The audio level of stereo signals is displayed as two vertical columns on the screen. The height of each column is determined by the power or amplitude of the input signal.

Action can be stopped and held to permit close comparison between the highest levels attained by left and right channels.



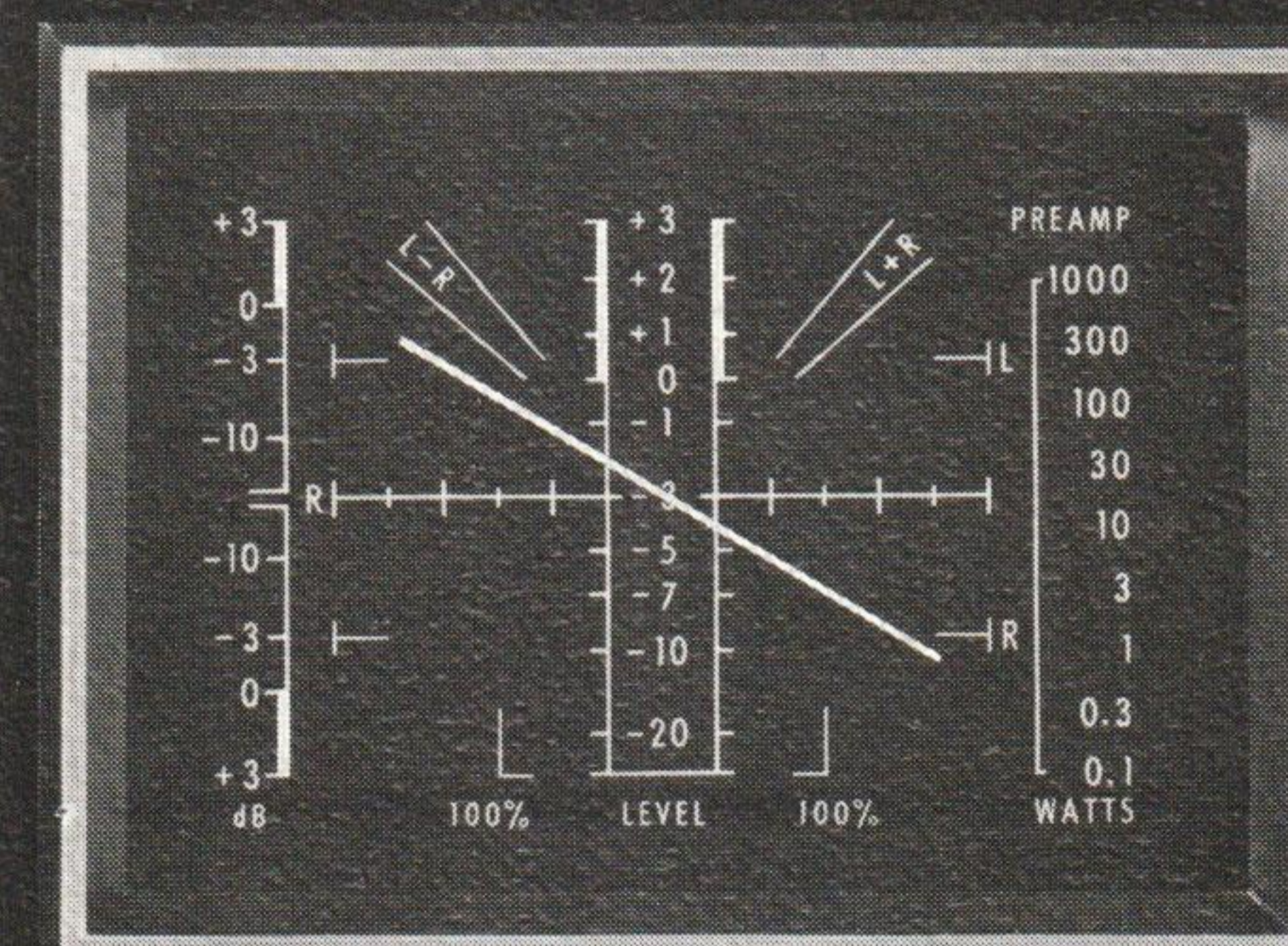
## PHONO CARTRIDGE CALIBRATION

You will protect your record investment, extend the life of your records, and reduce needle wear when the turntable is properly set up. With the aid of test recordings the MPI 4 will assist in this proper set up. The display assists in properly adjusting for proper tracking force, best tracing vs tracking force, anti-skate, proper phasing, and channel separation.



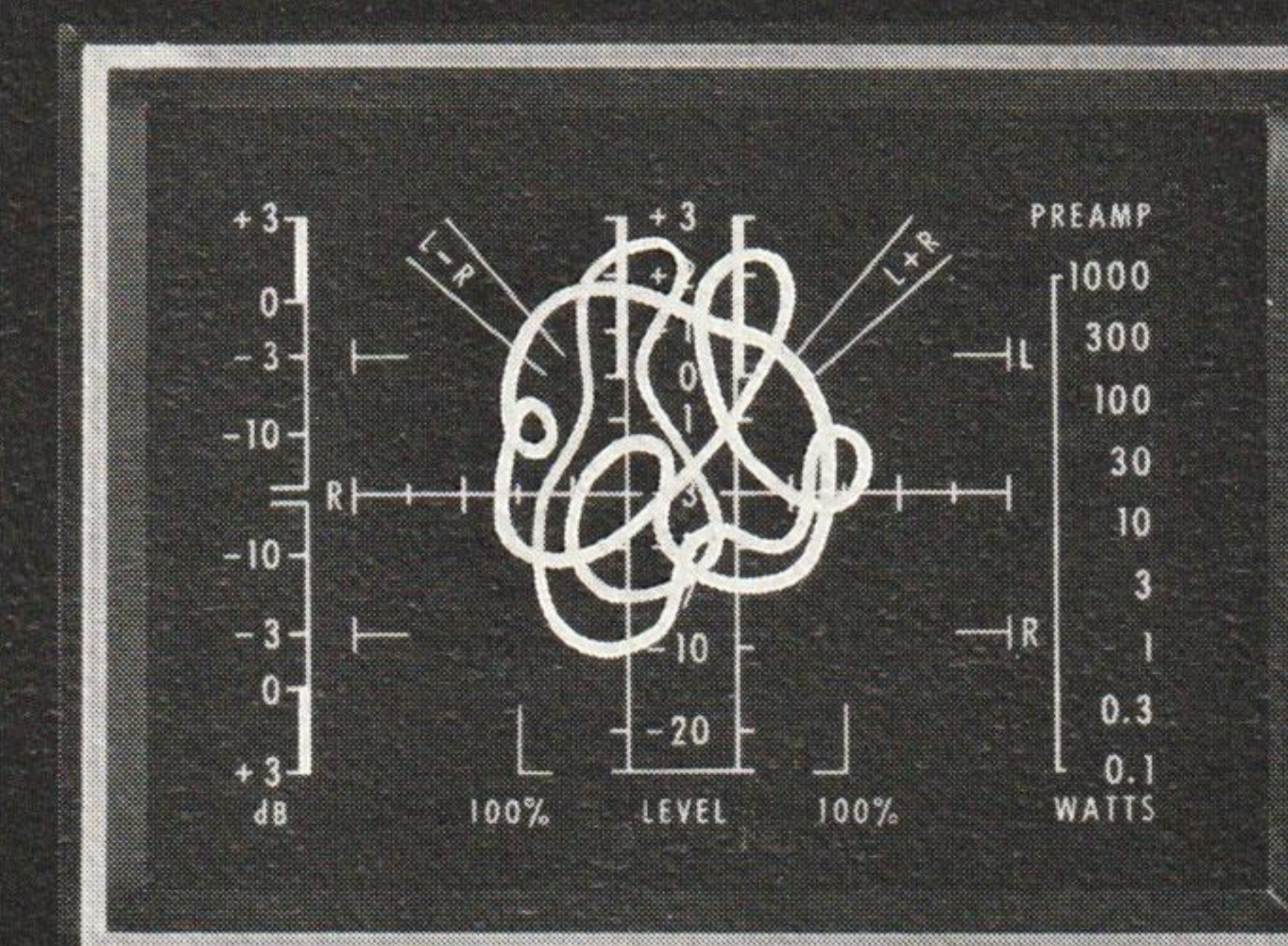
## FM TUNING

You'll see signal strength, center channel FM tuning and a reference for multipath distortion elimination. The image is a display of the tuner IF curve. Signal strength is the vertical axis. Horizontal center is the center of the detector and IF curves. Proper tuning gives minimum distortion and maximum listening pleasure on all kinds of FM broadcasts.



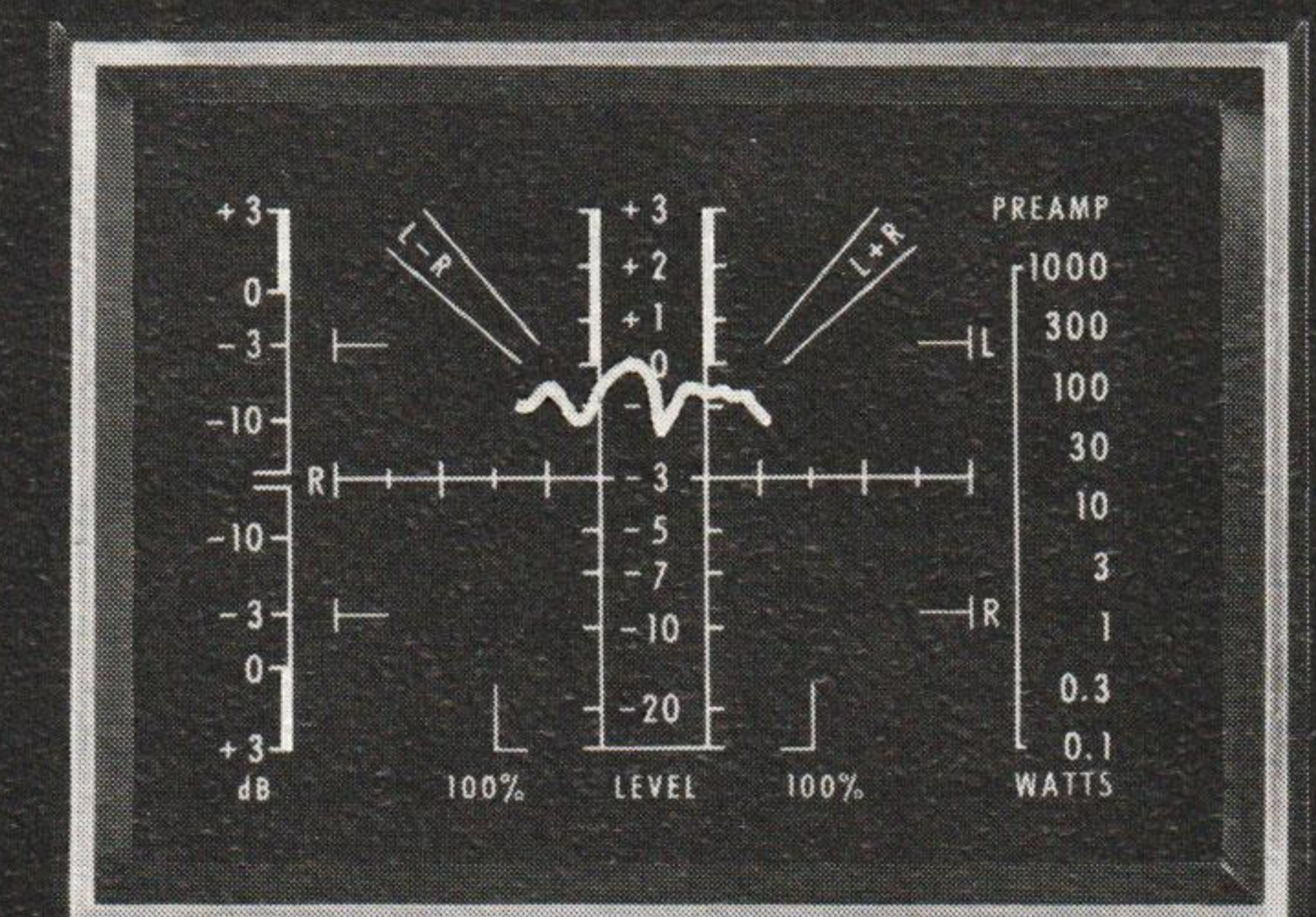
## BALANCE

Accurate system balance assures you of full stereo pleasure. The MPI 4 gives you a visual indication of the balance of your stereo system. You can check and correct the output balance of your stereo phono cartridge, tape recorder, tuner, or any part of your stereo system. You will know when your stereo system is in balance when you use an MPI 4.



## CHANNEL SEPARATION

The MPI 4 shows the stereo separation from all stereo program material. The display changes position and shape with the program material to permit interpretation of what the display means to your listening enjoyment. You see what makes a good stereo record sound good. You will know why your records sound the way they do.



## MULTIPATH DISPLAY

Multipath reception deprives you of FM listening enjoyment in several ways:

- noise level increase
- distortion is introduced into the program material
- stereo separation is reduced
- the stereo effect may be completely lost
- stereo indicators may fail to function

# MPI 4 Performance Limits

## Our Promise to You

Performance Limits are the maximum deviation from perfection permitted for a McIntosh instrument. We promise you that your MPI 4 must be capable of performance at or exceeding these limits or you get your money back. McIntosh is the only manufacturer that makes this guarantee.

### MULTIPATH

Sensitivity: 100 mV/cm  
Frequency Response: DC to 50,000 Hz (-3 dB)  
Input Impedance: 250,000 ohms  
Signal Strength Polarity: Selectable positive or negative

### STEREO

Sensitivity-L (Vertical Amp.): 1.75 mV RMS/cm (5 mV P-P/cm)  
-R (Horizontal Amp.): 1.75 mV RMS/cm (5 mV P-P/cm)  
Frequency Response: 5 Hz to 50,000 Hz (-3 dB)  
Input Impedance: 250,000 ohms

### POWER LEVEL

Sensitivity: 0.1 to 1000 watts continuous for full scale indication (+3 dB) in 9 calibrated steps  
Frequency Response: 5 Hz to 100,000 Hz (-3 dB)  
Input Impedance: 75,000 ohms  
Calibration: For bridging 4, 8 or 16 ohm speaker loads

### PREAMP LEVEL

Sensitivity: 15 mV RMS for +3 dB indication  
Frequency Response: 5 Hz to 50,000 Hz  
Input Impedance: 250,000 ohms

### SWEEP

Display modes: Left, right, or both (dual trace)  
Sensitivity: 1.6 mV RMS/cm (4.5 mV P-P/cm)  
Frequency Response: 5 Hz to 50,000 Hz (-3 dB)  
Input Impedance: 250,000 ohms  
Sweep Frequency: 20 Hz to 20,000 Hz in 3 decade ranges  
Sweep Expansion: 0.25X to 5X  
Sweep Trigger: The sweep is triggered only in the presence of an input signal  
In the single trace mode it is triggered by the displayed waveform  
In the dual trace mode the trigger is selectable: Left channel, right channel, or line frequency

### LEVEL INDICATION

Normal: 250  $\mu$ s rise time  
500 ms decay time  
Peak: 500 ms rise time  
25 sec decay time  
Reset: Manual

### LOW PASS FILTER

16,000 Hz L F Filter for stereo and sweep modes  
19,000 Hz and 35,000 Hz rejected by at least 30 dB

### RETICLE LIGHTING

Selectable: On-Off

### CATHODE RAY TUBE

3 inch tube, calibrated 5 x 6 cm  
1000 volt accelerating potential

### AUTOMATIC INTENSITY CONTROL

In the absence of a horizontal signal, the intensity is reduced to prevent phosphor damage

### SEMICONDUCTOR COMPLEMENT

2 integrated circuits  
23 transistors  
10 light emitting diodes  
29 diodes

### POWER SUPPLIES

Regulated to give equivalent performance for line voltages of 100 to 135 volts

### POWER REQUIREMENTS

120 volts, 50/60 Hz, 50 watts

### SIZE:

Front panel measures 16 inches wide (40.65 cm) by 5-7/16 inches high (13.8 cm). Chassis measures 15 inches wide (38.1 cm) by 5 inches high (12.7 cm) by 13 inches deep (33.1 cm) including PANLOC mounting brackets and back panel connectors. Knob clearance required is 1-1/2 inches (3.85 cm) in front of the mounting panel

### FINISH:

Front panel is anodized gold and black with special gold/teal nomenclature illumination. Chassis is black

### MOUNTING:

Exclusive McIntosh developed professional PANLOC

### WEIGHT:

21 pounds (9.55 kg) net, 33 pounds (15 kg) in shipping carton

## YOU SHOULD OWN McINTOSH BECAUSE

- McIntosh instruments are designed and manufactured for long life.
- McIntosh instruments have always been designed for long life with low maintenance costs and high quality performance. McIntosh instruments have been and are the LABORATORY STANDARD for the world. Until 1949 the performance requirements for a McIntosh had long been an engineering dream. They became a reality with the introduction of the first McIntosh amplifier. Through all these years McIntosh has produced instruments that have exceptionally long life. Regardless of age, most McIntosh instruments are still in use today. Amplifier clinics held all over North America have shown that most of the McIntosh instruments ever manufactured are still in service today and still meet or exceed original exacting requirements for performance that were required of them when new.
- Used McIntosh instruments enjoy the highest resale value in this field. Retailers report that customers are constantly searching for used McIntosh instruments. A McIntosh does not remain on the "Used" display long. You'll get more when you trade-in your McIntosh assuring you of maximum return on your investment.

- McIntosh dedication, not only to improvements, but also to fundamentals, has justified many patents on refinements as well as basic circuit structures.
- The size of the McIntosh investment in professional testing instruments bears eloquent testimony to the commitment to acquire knowledge for the benefit of our customers. On a percentage basis McIntosh probably invests more of its sales dollars in testing facilities than anyone else in a like business. As new testing instruments are produced that update the McIntosh ability to know, McIntosh invests in them . . . wave form analyzers—real time analyzers—low distortion signal generators, etc. Only through this impressive investment, through continuous testing and research, through product analysis, and endless measurement can McIntosh promise and deliver to you reliability, long life, performance, highest value, and freedom from service.
- Since its beginning in 1949, McIntosh Laboratory has had the same ownership and management. McIntosh is the only company in this industry that has had this kind of history. McIntosh has been and is still dedicated to the best possible values.
- Doesn't it make good sense to deal with a company that wants to do as much for you as it possibly can?

Franchised Dealer:

# McIntosh

Laboratory Inc.

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Phone area 607 723-3512