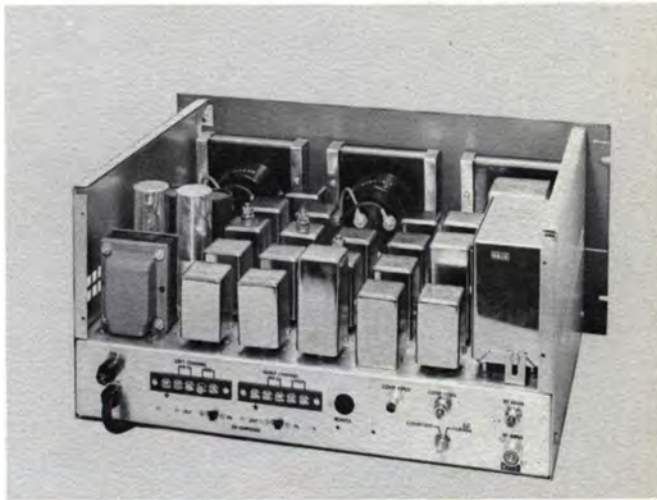


McMartin

TBM-4500A TRANSISTORIZED FM STEREO MONITOR



FEATURES

- All silicon solid state
- All metering functions on one switch
- Direct meter reading of separation and crosstalk
- Switched wide-band composite output jack
- Fully "plug-in" modular design
- Simultaneous reading of TOTAL, right and left modulation

DESCRIPTION

The new McMartin TBM-4500A all silicon solid state stereo monitor is a completely self-contained unit for measurement of all modulation characteristics of FM stereo.

Three modulation meters feature simultaneous readings of left, right and TOTAL modulation.

All meter functions are controlled by one switch. These functions are: RF input pilot injection, (L+R) main channel modulation, (L-R) stereo sub-channel modulation, internal phasing of 19 and 38 kHz, 38 kHz suppressed carrier, AM-S/N, and FM-S/N. In addition the TBM-4500A also measures separation between the left and right channels at better than -46db and crosstalk between main and stereo sub-channels at better than -50db. Visual proof of these readings can be obtained through the use of a wide-band oscilloscope connected to the composite output jack which is switched with the function switch.

The meters conform to FCC requirements and are protected against severe overload. When no stereo is broadcast, all meters will read identically.

Pilot injection can be monitored at any time without affecting

modulation metering. A pilot light indicator on the front panel indicates when the 19 kHz pilot is on. A high speed peak indicating light located on the front panel is adjustable from 50-120% modulation.

The circuit design allows highly accurate monitoring capability of stereo while simultaneously transmitting an SCA multiplex signal. The front panel phasing control allows for an internal adjustment of the 19 and 38 kHz circuits for precise zero crossing in the monitor. A rear chassis composite-normal function switch allows direct monitoring of a stereo generator, bypassing the exciter and P. A. of the transmitter. This is very helpful in pin-pointing trouble in the system. The input level is also adjustable from 0.35 volts to 1.5 volts RMS. "Remoting" provisions are made for metering by use of the metering kit, RM-M45, which also included remoting at the high speed peak indicator, and pilot indicator light.

The McMartin TBM-3005 frequency counter should be used with the TBM-4500A for measuring of the 19 kHz pilot by connecting directly through the composite output jack.

The name McMARTIN is your guarantee of quality and reliability.

If You Didn't Get This From My Site,
Then It Was Stolen From...

www.SteamPoweredRadio.Com

BROADCAST AUDIO BACKGROUND MUSIC

SPECIFICATIONS

Inputs:

RF Input

Impedance50 ohms unbalanced
Sensitivity0.1 to 1 watt

Composite Input

Impedance50K ohms
Sensitivity1 to 1.5 Volts Peak to Peak

Modulation Meters

Left or Right

Accuracy±0.5db
Frequency Response30-15,000 Hz ±0.5db
Meter characteristic meets FCC requirements

Total

Accuracy±0.5db
Frequency Response30-75,000 Hz
Meter characteristic meets FCC requirements

Outputs—Left & Right

Audio output for monitoring circuits

Source Impedance600 ohm balanced
Level+4dbm @ 100% modulation at 400 Hz
DistortionLess than 1% (50-15,000 Hz)

Audio output for distortion measurement

Impedance10K or greater
Level8 Volts @ 100% modulation at 400 Hz
Frequency Response30-15,000 Hz ±0.5db

Distortion

Monaural0.25% (30-15,000 Hz)
Stereo0.5% (30-15,000 Hz)
Noise Level-66db below 100% modulation at 400 Hz

Stereo phones output

Impedance20K ohms
Level2.0 volts

Composite Output

Source Impedance300 ohms
Level0.30 volts Peak to Peak
Frequency Response50-100,000 Hz ±0.2db

Pilot Injection Circuit

Accuracy±0.5%
Meter Indication6-12%
IndicatorPilot Lamp (operates at 6% injection or higher)

Peak Flasher

Peak flasher meets FCC requirements Peak light adjustable to read positive or negative peaks from 50% to 100% modulation.

Separation

Left into right (50-15,000 Hz) 35db or better
Right into left (50-15,000 Hz) 35db or better
67 kHz into either channel...-60db or better

NOTE: SEPARATION CAN BE MEASURED INTERNALLY DOWN TO -70 db.

Measurement of Suppressed 38kHz carrier

Modulated 100% with frequencies above 5 kHz Better than 46db
No modulation Better than 55db

Cross Talk

Main to stereo sub46db or better
Stereo sub channel to main...46db or better
67 kHz into main or stereo...66db or better

Transistors45 total.

Types:
14—SE-4001
3—SE-4863A
5—SF-4863A
9—2N2102
5—2N3053
5—40245
1—40247
3—40328

Diodes21 total.

Types:
9—1N3604
1—1N51
3—OMC-548
2—CER-71
3—24V Zener
2—36V Zener
1—90V Zener

Fuse0.5 amp. slo-blo

Power Requirements105-125 volts AC, 50/60 Hz 45 watts

Ambient Temperature Range...10-50° C

Dimensions

WidthStandard 19 inch rack panel mount
Height8 1/4 inches
Depth14 inches overall
Weight25 pounds

FinishMcMartin blue and brushed aluminum

OPTIONAL AND ACCESSORY EQUIPMENT

RM-M45 Remote metering kit, contains rack panel assembly, left and right remote meters, pilot remote indicator light, and peak indicator light.

www.SteamPoweredRadio.Com

McMartin

INDUSTRIES, INCORPORATED

605 N. 13TH STREET OMAHA, NEBRASKA 68102 TELEPHONE (402) 342-2753

PRINTED IN U.S.A.