M-520 SPECIFICATIONS

1. 20-Input/8-PGM Output/2-Monitor Output (x2)/ 4-AUX Output/16-Tape Monitor/8-Balanced Amp:

2. Input Selector:

Channels 1,2	MIC/INSTrument/TAPE
Channels 3,4	MIC/PHONO/TAPE
Channels 5–16	MIC/LINE/TAPE
Channel 17	MIC/LINE/2TR A (L)
Channel 18	MIC/LINE/2TR A (R)
Channel 19	MIC/LINE/2TR B (L)
Channel 20	MIC/LINE/2TR B (R)

3. Mic Input (Low Impedance) – channels 1–20:

Mic Impedance	200 to 600 ohms nominal (matched for mics of 600 ohms or less)
Input Impedance	2k ohms, balanced, XLR type equivalent
Nominal Input Level	–60dBV (1mV)
Minimum Input Level	–70dBV (0.3mV), MIC TRIM to max.
Maximum Input Level	+18dBV (8V), MIC ATT to 30dB, MIC TRIM to min.

4. Instrument Input – channels 1,2:

Input Impedance	100k ohms
Nominal Input Level	–50dBV (3mV)
Maximum Input Level	+10 dBV (3.15V), TAPE TRIM to min.
Minimum Input Level	–58dBV (1.3mV) TAPE TRIM to max.

5. Tape Input (TAPE – channels 1–16, 2TR A/B – channels 17–20):

Input Impedance	47k ohms
Nominal Input Level	–10dBV (0.3V)
Maximum Input Level	+18dBV (8V)

6. Phono Input – channels 3,4:

Input Impedance	47k ohms
Nominal Input Level	–54dBV (2mV) at 1kHz
Minimum Input Level	–62dBV (0.8mV) at 1kHz, TAPE TRIM to max.
Maximum Input level	–25dBV (56mV) at 1kHz, TAPE TRIM to min.

7. Line Input – channels 5–20:

Input Impedance	100k ohms
Nominal Input Level	–10dBV (0.3V)
Maximum Input Level	+18dBV (8V)

8. PGM/AUX 1, 2, 3, 4 Output:

Output Impedance	100 ohms
Minimum Load Impedance	2k ohms
Nominal Load Impedance	10k ohms
Nominal Output Level	–10dBV (0.3V)
Maximum Output Level	+18dBV (8V)

9. Stereo Master A/B Output:

Output Impedancee	100 ohms
Minimum Load Impedance	2k ohms
Nominal Load Impedance	10k ohms
Nominal Output Level	–10dBV (0.3V)
Maximum Output Level	+18dBV (8V)

10. Balanced Amp Input [Separate type]:

Input Impedance	22k ohms
Nominal Input Level	–10dBV (0.3V)
Maximum Input Level	+15dBV (5.6V)

11. Balanced Amp Output [Separate type]:

Nominal Load Impedance	600 ohm, balanced
Nominal Output Level	+4dBm (1.23V)/+8dBm (1.95V) switchable
Maximum Output Level	+28dBm (19.5V)

12. Direct Output:

Output Impedance	100 ohms
Minimum Load Impedance	2k ohms
Nominal Load Impedance	10k ohms
Nominal Output Level	–10dBV (0.3V)
Maximum Output Level	+18dBV (8V)

13. Access Send Output (Input 1–12/Buss 1–8):

Output Impedance	100 ohms
Minimum Load Impedance	2k ohms
Nominal Load Impedance	10k ohms
Nominal Output Level	–10dBV (0.3V)
Maximum Output Level	+18dBV (8V)

14. Access Receive Input (Input 1–20):

Input Impedance	220k ohms
Nominal Input Level	–10dBV (0.3V)
Maximum Input Level	+18dBV (8V)

15. Access Receive Input (Buss 1 – 8):

Input Impedance	22k ohms
Nominal Input Level	–10dBV (0.3V)
Maximum Input Level	+18dBV (8V)

16. Program Sub Input:

Input Impedance	22k ohms
Nominal Input Level	–10dBV (0.3V)
Maximum Input Level	+18dBV (8V)

17. Aux Sub Input:

Input Impedance	22k ohms
Nominal Input Level	–10dBV (0.3V)
Maximum Input Level	+18dBV (8V)

18. Monitor Sub Input:

Input Impedance	22k ohms
Nominal Input Level	–10dBV (0.3V)
Maximum Input Level	+18dBV (8V)

19. Spare Sub Input:

Input Impedance	100k ohms
Nominal Input Level	–10dBV (0.3V)
Maximum Input Level	+18dBV (8V)

20. Oscillator Output:

Frequency	40Hz/1kHz/10kHz switchable
Output Impedance	470 ohms
Nominal Output Level	–10dBV (0.3V)

21. Headphones Output:

Nominal Load Impedance	8 ohms
Maximum Output Power	Greater than 100mW, 8 ohms

22. Frequency Response: Line Input to –

PGM Output	20Hz – 20kHz ± 1dB (Reference 30kHz $^{+1}_{-2}$dB)
Aux Output	20Hz – 20kHz ±1dB (Reference 30kHz $^{+1}_{-2}$dB)
Mon Output	20Hz – 20kHz ±1dB (Reference 30kHz $^{+1}_{-2}$dB)
Headphones Output	50Hz – 20kHz ±2dB (Reference 30kHz ±3dB)

23. Equalizer:

Type	Sweep
Level	Boost/Cut ±15dB
Frequency (Low)	50Hz to 500Hz
(Middle)	100Hz to 5kHz
(High)	2.5kHz to 15kHz

24. Signal to Noise Ratio (at nominal input levels, EQ out, UNWTD/"A" WTD):

1 line to 1 PGM output	86dB/87dB
16 lines to 1 PGM output	73dB/75dB
1 line to access send	90dB/92dB
1 line to direct output	88dB/90dB
1 tape to 1 PGM output	86dB/87dB
16 tape to 1 PGM output	73dB/75dB
1 tape to access send	90dB/92dB
1 tape to direct output	88dB/90dB
1 mic to 1 PGM output	68dB/70dB (150 ohm source)
20 mic to 1 PGM output	50dB/55dB (150 ohm source)
1 mic to access send	68dB/70dB (150 ohm source)
1 mic to direct output	68dB/70dB (150 ohm source)
1 inst to 1 PGM output	72dB/74dB
1 phono to 1 PGM output	65dB/68dB
Balanced output	90dB/95dB

25. Cross Talk: Better than 70dB (1kHz, nominal input level) Better than 60dB (15kHz, nominal input level)

26. Total Harmonic Distortion (THD):

1 mic input to 1 PGM output	0.025% (at 1kHz, EQ OUT, nominal input level above 50dB and MIC ATT 30dB on, with 30kHz L.P.F. and 400Hz H.P.F. connected)
1 line input to 1 PGM output	0.02% (at 1kHz, EQ OUT, nominal input level , with 30kHz L.P.F. and 400Hz H.P.F. connected)

27. Intermodulation Distortion (IMD), (SMPTE Method):

1 mic input to 1 PGM output	0.06% (EQ OUT, nominal input level above 50dB and MIC ATT 30dB on)
1 line input ot 1 PGM output	0.045% (EQ OUT, nominal input level)

28. Fader Attenuation:	80dB or more
29. Overload Indicator:	25dB above nominal input level
30. Peak Indicator:	10dB above nominal output level
31. Dimensions (W x H x D):	1082 x 240 x 798 mm (42-15/16" x 9-7/16" x 31-7/16")
32. Weight:	47kg (103-10/16 lbs) net
33. Power Requirements:	100/120/220/240V AC, 50/60Hz, 90W (General Export Model) 120V AC, 60Hz, 95W (U.S.A./Canada Model) 220V AC, 50Hz, 95W (Europe Model) 240V AC, 50Hz, 95W (U.K./Australia Model)

In these specifications, 0dBV is referenced to 1.0 volt, actual voltage levels are also given in parenthesis. To calculate the 0dB/0.775 volt reference level (i.e., 0dBm in a 600 ohm circuit) add 2.2dB to the listed value; i.e., –10dB re: 1V/–7.8dB re: 0.775V. Changes in specifications or features may be made without notice or obligation.