


NOTES:

1. Thie cireuth tort wiv IC-18801
 board Hetgel
2. All remindirs in ohma, capacitors in mod unless otherwise specified.
3. Input setmetor thown in mono 1 (lufl ccw) looking from tront panel.
4. Tape Monitors 1 and 2 olvolu inactive (out).
5. Lo Fiher shown initectre bouth.
6. Loudness switch thown inmerne foul)
7. Eetance control shomps in nerpit vonition.
8. Pangrama shown in mono prestion.
9. Tone Canoel swith shown in cancel (in) position.
10. HI Fiver shown inactive leaty)
11. Gutpen Attenuator shown la 0 ots powition.
12. Setremptic-deatgnations ane Hofthpex

Parta cermmon to both chimol/ 1 -2t (Phino Board), 30-58 (Main Board), 60-99
 and rightebimen.
14. In eaty unith the Belance eontrol (R3OA, B) was 500 K , the Panporama control (R31ABSA) wes IM:
15. R139/239 bne R740/240 mey be mounted tither on the PC board or on the step attimuator.



$$
\cdots---\cdots-\cdots-\cdots-\cdots-\cdots-\cdots
$$



## WOTES:

- THIS BOARD H9627 (415O) STARTS \$/N $184 O 1, ~ A N D ~ A P P L E S ~ T O ~ S C H E ~$ MATICS M-2G2 ANO M-262A.
- PHONO BOARD \#M6OY STARTS S/N TV2OH AND AYPuEESTO SCHEMATCS MI-262 AND M-262A.
- ALL RESISTORS IN OHMS. ALL CAPACTOMS IN MFO UNEESS OTHERWEE INDICATED.
- VAUUES GVEN FOR LEFT CHANNEL ONEY: GIGHT CHANNEL TDENTICAE
— FOU SIDE SHOWN
- COMPONENTS COMMON TO झOTH CHANNELS ARE NUMEERED $30-59$.
 हुलHT CHANMEL.


## FREQUENCY RESPONSE

## PHASE RESPONSE

HUM AND NOISE

DISTORTION IM
DISTORTION THD

INPUTS
INPUT GAIN \& IMPEDANCE

PHONO INPUT OVERLOAD
MAIN OUTPUTS

PHONO OUTPUT \& IMPEDANCE

MONITOR OUTPUT

VOLUME CONTROL
LOUDNESS COMPENSATION

PANORAMA CONTROL

TONE CONTROLS

## MUTING

FILTERS

AC OUTLETS
POWER REQUIREMENTS
SEMICONDUCTOR COMPLEMENT

DIMENSIONS
WEIGHT

Hi-level: $\pm 0.6 \mathrm{~dB} 3 \mathrm{~Hz}-100 \mathrm{KHz}$ with hi-impedance load, $\pm 0.1 \mathrm{~dB} 10 \mathrm{~Hz}-$ 20 KHz with IHF load; Phono: $\pm 0.5 \mathrm{~dB}$ of RIAA
Hi-level: typically $+I^{\circ}$ to $-12^{\circ} 20 \mathrm{~Hz}-20 \mathrm{KHz}$ with IHF load; Phono: typically $\pm 5^{\circ} 20 \mathrm{~Hz}-20 \mathrm{KHz}$ additional phase shift
$20 \mathrm{~Hz}-20 \mathrm{KHz}$ inputs shorted; Hi-level: 95dB below rated output (typically 105dB with IHF "A" weighted measurement); Phono: 85dB below 10 mV input (typically $0.3 \mu \mathrm{~V}$ input noise)

Less than $.002 \%$ at rated outputwith IHF load (typically under 0.001\%) Less than $.0005 \%$ @ 1 KHz , max. . $05 \% 20 \mathrm{~Hz}-20 \mathrm{KHz}$ at rated output with IHF load
Six hi-level inputs (1 tuner, 3 auxiliary, 2 tape), twoequalized phonos
Hi-level: $20.8 \mathrm{~dB} \pm 0.2 \mathrm{~dB}, 100 \mathrm{~K}$ ohms nominal ( 25 K ohms volume max.); Phono: 50-70dB (adjustable) 47K ohms. Sensitivity: < 1mV @ 1 KHz for rated output at maximum gain
$33-330 \mathrm{mV}$ at 1 KHz , depending on gain (>100mV when set to 60 dB total preamp gain)
12 V maximum before overload, 2.5 V rated, 600 ohms output impedance. Switched 0db to -1OdB pad affects both sets of outputs
(Available at tape out jacks with input selector in phono) 600 ohms with typical maximum output of 11 V RMS at 1 KHz into hi-impedance load
Stereo, 3 circuit $1 / 4^{\prime \prime}$ phone output, ahead of 0 dB to -10 dB pad; output impedance 2.2 K ohms each channel
Precision switched attenuator of 58 dB (and off) dynamic range with calibrated tracking within $\pm 0.2 \mathrm{~dB}$
New wide-range design for excellent simulation of I.S.O. curves down to 60 phons; with exclusive dual R/C bass-boost coordinated with volume attenuator
Unique, continuously-variable control for infinite adjustment from stereo to mono to stereo-reverse; replaces conventional stereo-mode switches and blend controls with an intuitive control of stereo spatial dimension

Continuously variable $\pm 15 \mathrm{~dB}$ at 30 Hz and 15 KHz , cancel switch bypasses independent bass and treble control settings to give instant true-flat response in both channels
Uses reed relay - removes turn-on transients from IC-150A output, thus protecting speakers
Rumble: -3dB at 24 Hz with 6 dB per-octave cut-off (volume attenuator at -20 ), Scratch: -3 dB at 5 KHz with 12dB-per-octave cut-off

Five switched with 25A switch, one unswitched
About 2 watts at 120 v or $240 \mathrm{v} 50-400 \mathrm{~Hz}$ AC
Five integrated circuits (equivalent to 89 bipolar transistors, 3 zeners, 12 diodes and 25 FETS) for a total of 96 bipolar transistors, 26 FETS, 4 zeners and 22 diodes
$51 / 4 " \mathrm{H} \times 17^{\prime \prime} \mathrm{W}$; $81 / 8^{\prime \prime}$ behind panel
10 lbs., with walnut cabinet 20 lbs.

| Schematic | Description | Crown Part \# | Other Information |
| :---: | :---: | :---: | :---: |
|  | MAIN MODULE | 41681 |  |
|  | Main PC Board | 9627 |  |
|  | Switches |  |  |
| $\begin{aligned} & \text { SW30A,B,C,D } \\ & \text { SW31A,B,C,D } \end{aligned}$ | 4 PDT Latching PB | 3226 | Loudness Control Tone Cancel |
|  | Integrated Circuits |  |  |
| IC 130, 230 | LF 356H FET-Op Amp | 4127 |  |
| IC 30 | RC 4195 | 3825 |  |
|  | Relay |  |  |
| K30 | 5K ohms, DPDT, NC, reed | 3496 |  |
|  | Coil |  |  |
| L130, 230 | 12 mhy | 1661 |  |
|  | Diodes |  |  |
| D30, 32 | 1N4148 | 3181 |  |
| D33,34 |  |  |  |
| D35,36 |  |  |  |
| D31 | IN961B, loV, zener | 3549 |  |
| D37,38 | IN4003 | 2851 |  |
|  | Transistors |  |  |
| Q30 | 2N3859A, selected | 2961 |  |
| Q31 | 2N5459, NCH, JFET | 3053 |  |
|  | Capacitors |  |  |
| C130, 230 | . 082 MF 100V | 4133 |  |
| C131,231 | . 47 MF 100V | 4119 |  |
| C133,233 |  |  |  |
| C134,234 |  |  |  |
| C132, 232 | . 047 MF 200V mylar | 3978 |  |
| C135, 235 | 25 MF 15V NP vertical | 3186 |  |
| C136,236 | . 0015 MF 200V filmatic | 3089 |  |
| C137,237 | . 015 MF 200V filmatic | 3288 |  |
| C138,238 | . 068 MF 200V filmatic | 3190 |  |
| C30 | . 22 MF 100V filmatic | 3218 |  |
| C31, 34,35 | 5 MF 30V vertical | 4026 |  |
| C32,33 | 250 MF 35V vertical | 3787 |  |

