

FAIRCHILD MIXING CARD

MODEL 692MNNL

INSTRUCTION MANUAL

692MNNLIB/969

FAIRCHILD MODEL 692 MNNL

INTEGRA II MIXING CARD

GENERAL

In order to provide facility to mix up to 16 inputs into one buss conveniently and without gain loss, a new card has been designed by FAIRCHILD complementing the Integra II equipment series. This mixing card consists of passive mixing network followed by the amplifier making up the lost gain and also providing additional gain up to 20 db. Mixing network is bridging type with terminated input so that any input sees termination of 600 ohms. This is done for the following reason: termination of the mixing network on the input keeps the impedance of the complete circuit constant regardless of the number of input channels switched in and regardless of their impedances. This sort of mixing network permits use of single pole single throw switches to be used when delegating signal into the mixing net. There is no need for dummy load resistors to be switched in nor need to match the impedances. Any source impedance from 0-600 ohms can be safely connected into any one of the 16 inputs.

Amplifier fed from the mix network is a direct coupled amplifier, class AB, with the output circuit capable of delivering 18 dbm of power into 600 ohm load. Input impedance of the amplifier is very high while the output impedance is very low. Recommended load impedance should not be less than 150 ohms, inductive or resistive. If transformer is used on the output, it can be strapped as a step-up transformer with primary adjusted for 150 ohms and secondary for 600 ohms or higher. In this case one can obtain up to 21 dbm output. Gain of the amplifier is continuously adjustable over the range of at least 20 db by means of the feedback pot located on the PC card.

Application of the card, aside from use in ordinary mixing networks, extends to situations where one desires to monitor up to 16 channels by mixing them into single channel while preserving the separation between the channels of at least 70 db. In this case the input load resistor to the mixing inputs should be left out.

SPECIFICATIONS

Number of inputs	16 or less (additional inputs can be added if using 962 MXB card) feeding the 692 MNNL amplifier input
Input impedance	600 ohms (accepts any source impedance of 600 ohms or lower). 150K when the load resistor is left out
Output impedance	2 ohms (recommended maximum load 150 ohms or higher, inductive or resistive)
Interchannel separation	70 db or better
Gain	Unity or up to 25 db adjustable
Frequency response	± .5db 20-20 KHZ
Distortion THD	.3% at maximum output of 18 dbm .15% at line level output (4 dbm)
Noise	75 db below line level measured on the wide band basis (unity gain)
Power requirements	24 VDC at 6 mA (ripple not to exceed .5 VRMS)

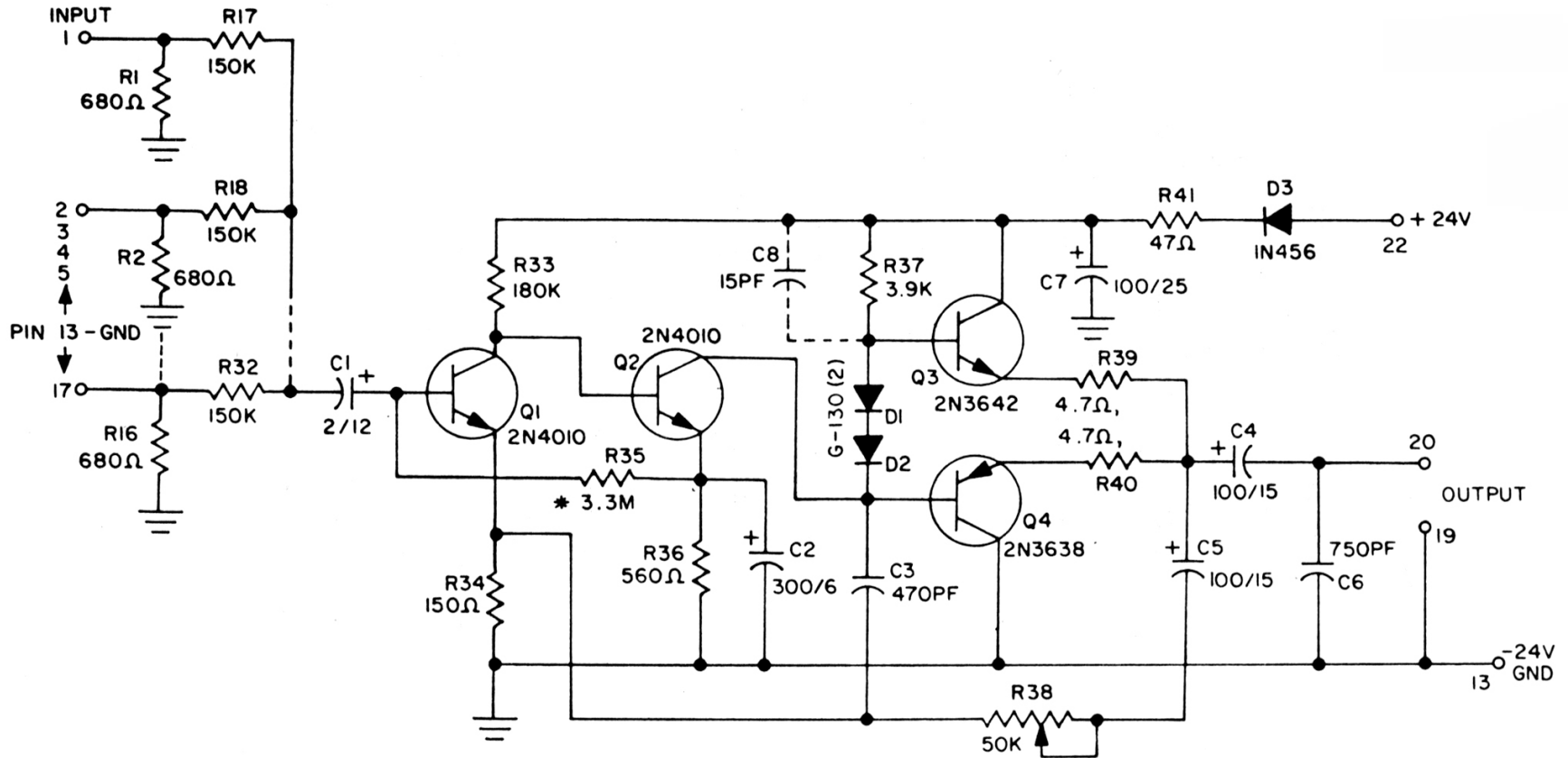
MOUNTING

692MNNL board can be mounted along with other Integra II cards in the FAIRCHILD 692RM card rack or individually in the 692SCH single card holder in conjunction with the 662 RM taking 1½ inches in the 5¼ inch rack.

Since there are no inductive components in the 692 MNNL circuit, mounting of the card is not restricted to hum-free areas but can be used in the vicinity of comparatively strong magnetic fields.

ATTACHMENTS

Drawings A96442 & A96297



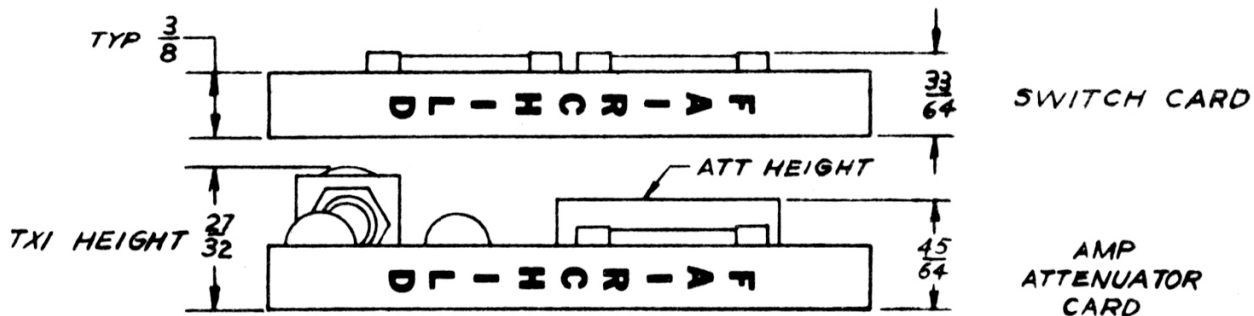
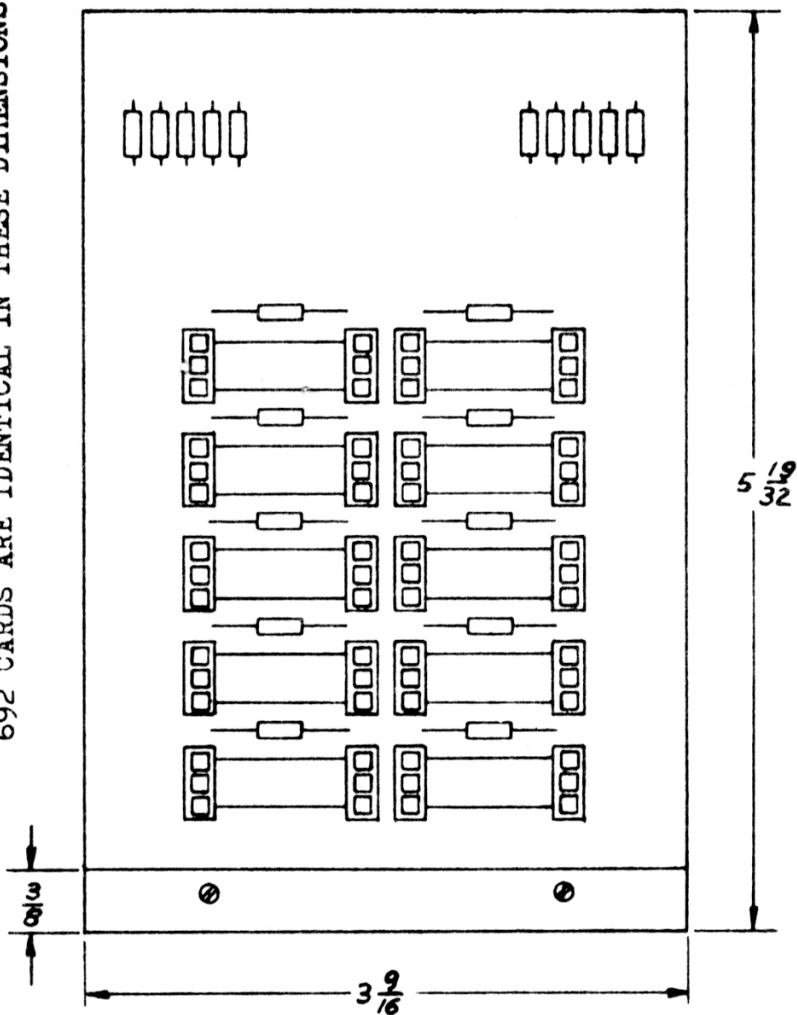
NOTES:

- UNLESS OTHERWISE SPECIFIED-
- ALL RESISTORS 1/4W, 10%
- ALL CAPACITORS IN MFD.
- *-TO BE SELECTED

692M.N.N.L. SCHEMATIC

INTEGRA II PC BOARD MOUNTING DIMENSIONS

AUDIO SWITCHER CARD USED AS AN
EXAMPLE FOR LENGTH & WIDTH. ALL
692 CARDS ARE IDENTICAL IN THESE DIMENSIONS.



A-96297