

## THE DYNAMIC ALIGNMENT SYSTEM

This system is designed to plug into the Discriminate Audio Processor and provides a "Pink Noise" source for alignment under dynamic conditions. Incorporated in the unit is a "null" circuit for calibration of the compressor input and output to achieve an accurate audio mix. The noise is shaped and bandwidth restricted so as to appear as complex audio to the compressors during alignment.

This unit replaces the utility jumper in the DAP and can be left plugged in with the switches in the "program" position.

### INSTALLATION AND ALIGNMENT

1. Install one short wire jumper on the DAP Mother board. This is the only modification needed (refer to Fig. 1).
2. Read the DAP manual for the initial setup procedures for the DAP, then proceed with the alignment of the DAP using the Dynamic Alignment Card.
3. Remove the utility jumper from its socket in the DAP and plug the D.A.S. card in its place. Plug in DAP AC line cord and turn on DAP power switch.
4. Move switch #1 from "program" to the "test" position. The red L.E.D. will light to indicate that the noise generator is on.
5. Turn the HIGH frequency compressor INPUT control (R3) fully clockwise. This is the normal operating position.
6. Turn the trimpot at the back of the D.A.S. board clockwise until the high frequency meter indicates midway into compression.
7. Adjust the LOW frequency compressor INPUT control (R3) so the low frequency compression meter is at approximately the same point on the scale as the high frequency compression meter. Adjust the MID frequency compressor INPUT control (R3) so the compression meter indicates at the same point as the high and low frequency compression meters.
8. Turn all compressor OUTPUT controls (R2) clockwise to the positions shown: LOW ...3/4 open. MID...3/4 open. HIGH...1/2 open.
9. Adjust the DAP output gain control on the front panel so the VU meter reads "0" (100).
10. Move the D.A.S. switch #2 from "program" to the "null" position. The line output meter will read approximately -15. Note: If a high end frequency boost is used in the Peak Limiter without a corresponding high frequency cut, the line output meter will read approximately -5 in the null.
11. Start with the high frequency compressor and adjust output control (R2) on each compressor card for the lowest deflection on the line output meter.



## THE DYNAMIC ALIGNMENT SYSTEM Cont'd

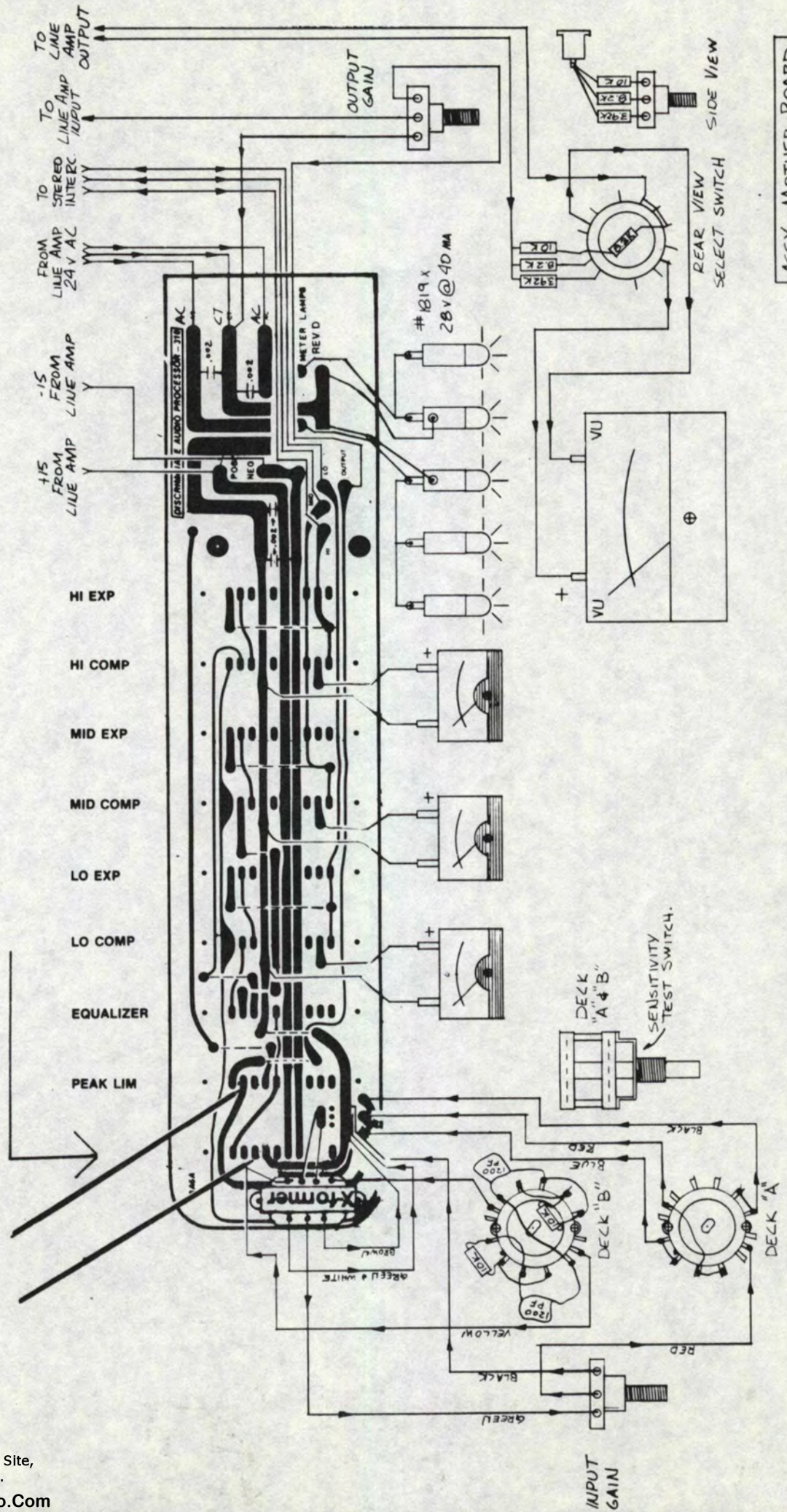
Moving in and out of the null on each compressor will produce an audible change of sound.

The lowest level of sound and lowest level indication on the line output VU meter indicates accurate alignment of the DAP.

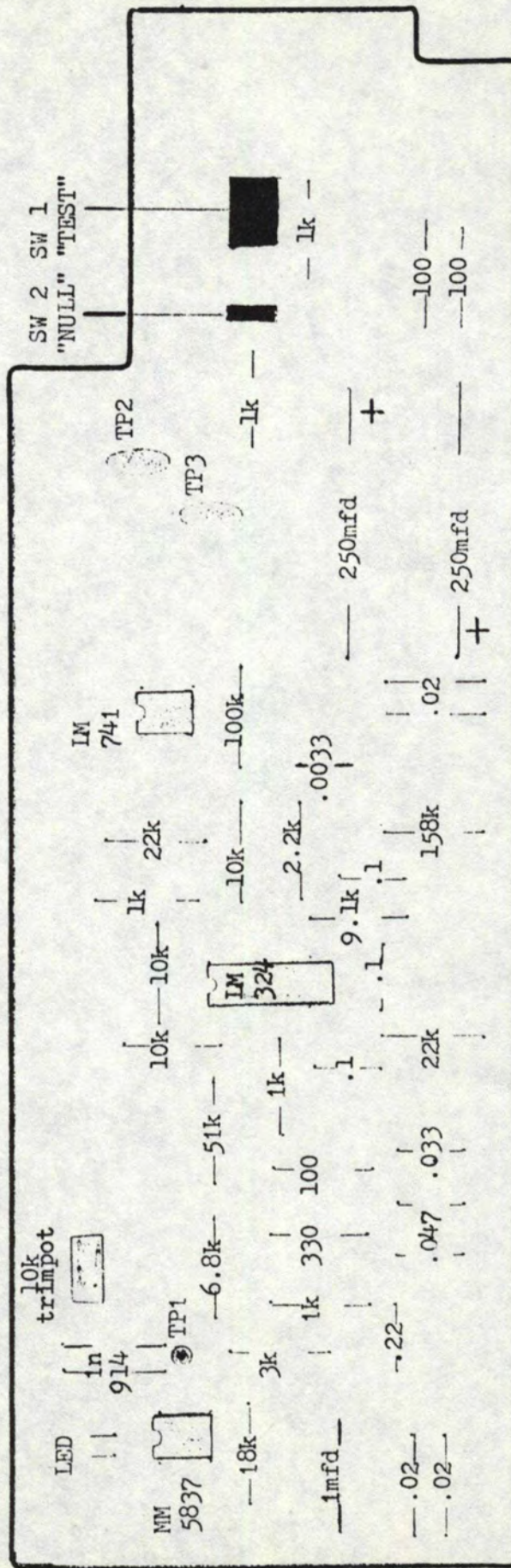
Repeat the adjustments in Step 11 until the null is as deep as possible.

12. Move switch #2 from "null" to "program". Adjust the DAP output gain control so the noise level on the line output VU meter reads "0" (100).
13. Return the D.A.S. switch #1 to the "program" position.

Alignment of the DAP is now complete.

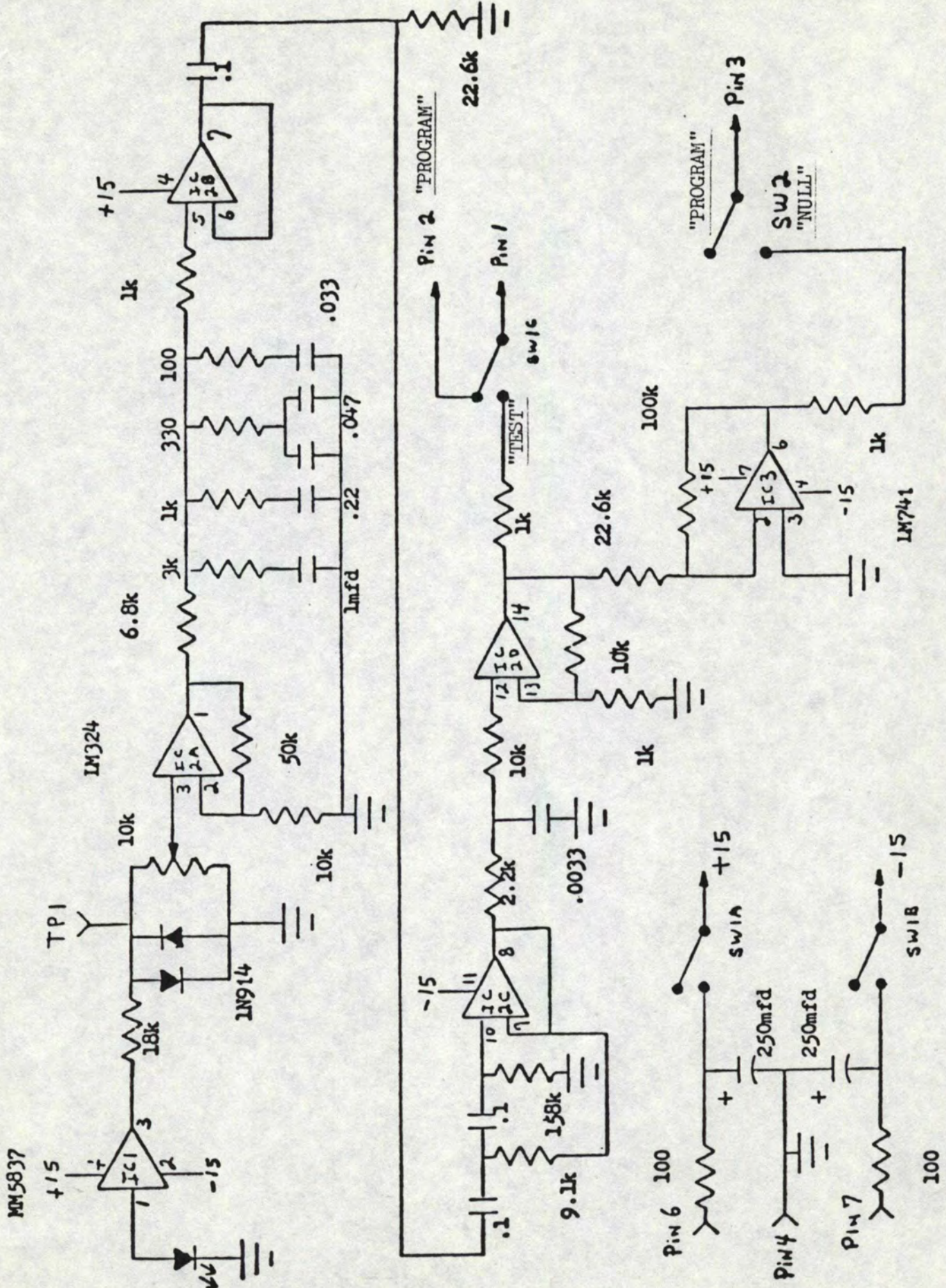


ASSY - MOTHER BOARD	
MODEL NO.	REV.
DAP-310	A
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DORROUGH ELECTRONICS	

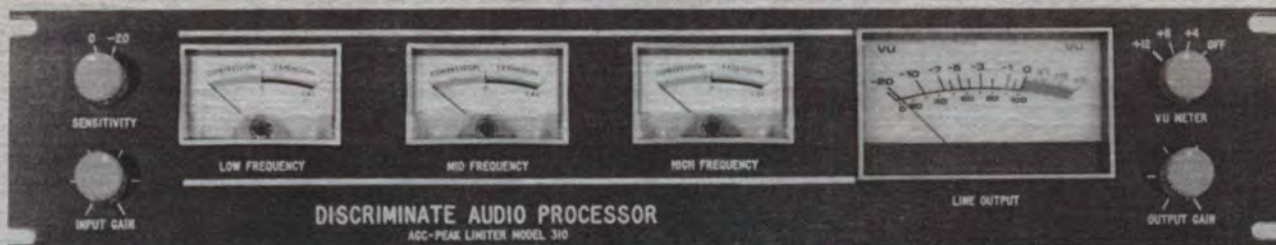


CONGER ELECTRONICS

DAS COMPONENT LAYOUT



DYNAMIC ALIGNMENT SYSTEM



## DORROUGH ELECTRONICS

Dorough Electronics introduced two new additions to the Discriminate Audio Processor at the 1979 NAB Show. The following is a brief description of each new card.

### AM PEAK LIMITER VERSION II

The Am Peak Limiter Version II is offered as a retrofit for use in existing AM Processors. Features of this new board include a high frequency "Brightness" control and a four pole Butterworth low pass filter. The use of this board will maximize the effectiveness of the Discriminate system as the practice of altering the outputs of the Discriminate stages to compensate for deficiencies of antenna systems has an adverse effect upon the AGC range of the DAP, and depending on the extent of misadjustment, the action of the DAP will take on the qualities of a wide band processor.

The use of this new board allows for equalization following the Discriminate stages but prior to the peak limiting action of this device. The arrangement allows for increased intelligibility by increasing high frequency energy without disturbing proper Discriminate channel adjustments. Available for \$100.00

### PINK NOISE GENERATOR

The Pink Noise Generator card allows easy setup of both input and output settings of the three independent limiting channels. This card was designed to fit into the remaining unused edge connector on the left side of the DAP.

The Generator has a three position switch which allows the following functions. Position #1 Off (for normal operation); Position #2 Removes Input (feeds pink noise into the Discriminate channels and is used in setting the three input levels); and Position #3 has the same input feature as position #2 and in addition feeds the output sum in phase opposition so that the three output levels can be nulled for optimum adjustment. These adjustments allow for the output of the DAP to have the spectral distribution as that which appears at its input.

For the Pink Noise Generator contact Conger Electronics, 16949 Knollwood Drive, Granada Hills, California 91344. The card is priced at \$125.00.

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