

dbx

Model 905

Instructions

The Model 905 Parametric Equalizer

offers a unique degree of equalization flexibility in a high-density format without sacrificing true, fully parametric operation of all three filter bands. The overlapping bands each offer control of frequency, bandwidth (Q), and up to 15 dB of reciprocal cut or boost to provide exact, complementary filter action for most equalization needs. For problem situations requiring the removal of spurious signals, each of the bands can be independently switched into "infinite notch" mode without affecting the operation of the others. In situations where a shelving equalizer will produce better results than a peaking one, the 905's high and low bands can be independently switched from peaking to shelving operation. The entire unit may be switch-bypassed for instant before/after comparisons. The 905 is the complete equalizer package right at your fingertips.

Three bands of EQ in one package permit exceptional flexibility, allow precise shaping of frequency curve Each band has controls for reciprocal boost/cut (up to 15 dB), bandwidth (Q), and frequency center "Infinite" notch switch on each band lets you remove unwanted narrow-band signals without affecting adjacent frequency information Peak/shelf switch on high and low bands gives great flexibility in shaping the ends of the curve Panel layout allows easy access to all critical controls Multipoint overload sensing helps you eliminate clipping by showing when overload occurs at any point in the unit.

OVER
LED LIGHTS TO INDICATE
CLIPPING AT ANY KEY CIRCUIT
POINT

FREQ
ADJUSTS CENTER FREQUENCY
OF FILTER:
HI: 800-20K
MID: 200-5K
LOW: 20-500

CUT/BOOST
SETS AMOUNT OF GAIN OR
ATTENUATION AT FILTER'S
CENTER FREQUENCY. WHEN
ROTATED FULLY COUNTER-
CLOCKWISE TO MAXIMUM
CUT, FILTER SWITCHES TO
"INFINITE" NOTCH MODE.

Input impedance: balanced = 25 k-ohms, unbalanced = 18.5 k-ohms
Output impedance: 22 ohms, designed to drive 600 ohms or more
Maximum input level: +24 dBm
Maximum output level: +24 dBm into 600 ohms or more

Frequency response: 20 Hz-20 kHz, +0, -1 dB
Total harmonic distortion (THD): under any boost or cut condition, less than 0.03% at 1 kHz
Equivalent input noise: -88 dBm, 20 Hz-20 kHz bandwidth, unweighted

Filter type: each band symmetrical peak/dip; each switchable to notch mode; high and low bands switchable to symmetrical shelving

Center frequencies: low band = 20-500 Hz; middle band = 200-5 kHz; high band = 800-20 kHz
Range: ± 15 dB, peak or shelved

Notch attenuation: more than 40 dB at maximum Q, greater at minimum Qs (typically -70 dB)

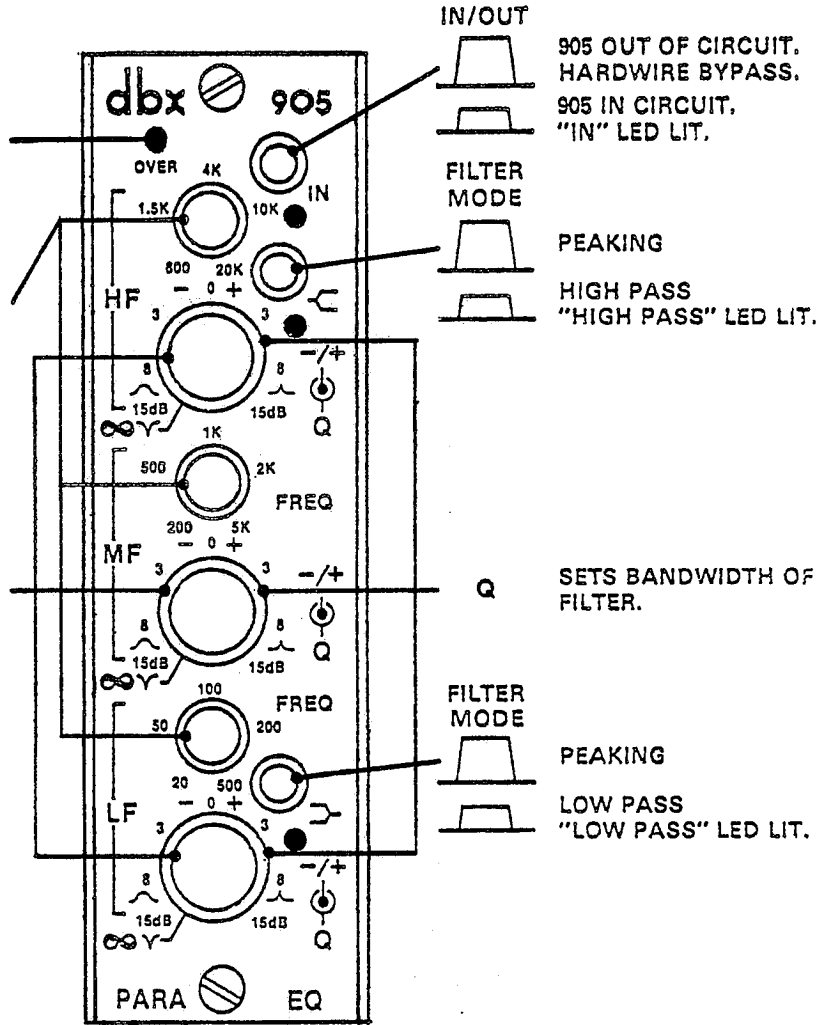
Controls: FREQUENCY, Q, boost/cut (each band)

Switches: IN/Out, Shelving (two bands), "Infinite" notch (all bands)

Metering: LED overload indicator, monitors all critical circuitry points

Power requirements: ± 15 V regulated at 100 mA, ± 24 V unregulated at 30 mA

Dimensions: 5 1/4" h by 1 1/2" w; card depth 9 1/2"



905 OUT OF CIRCUIT.
HARDWIRE BYPASS.
905 IN CIRCUIT.
"IN" LED LIT.

FILTER
MODE

PEAKING

HIGH PASS
"HIGH PASS" LED LIT.

SETS BANDWIDTH OF
FILTER.

FILTER
MODE

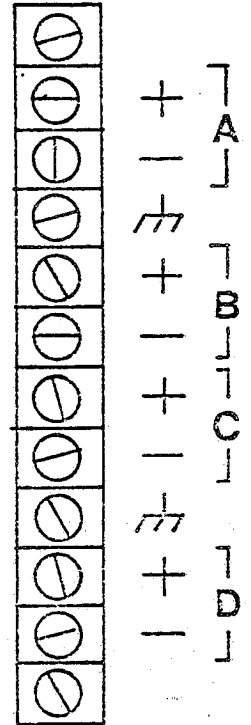
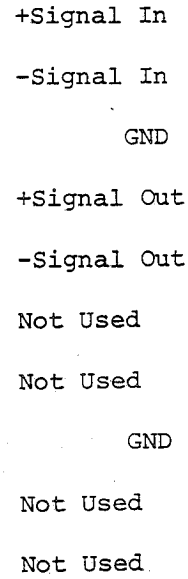
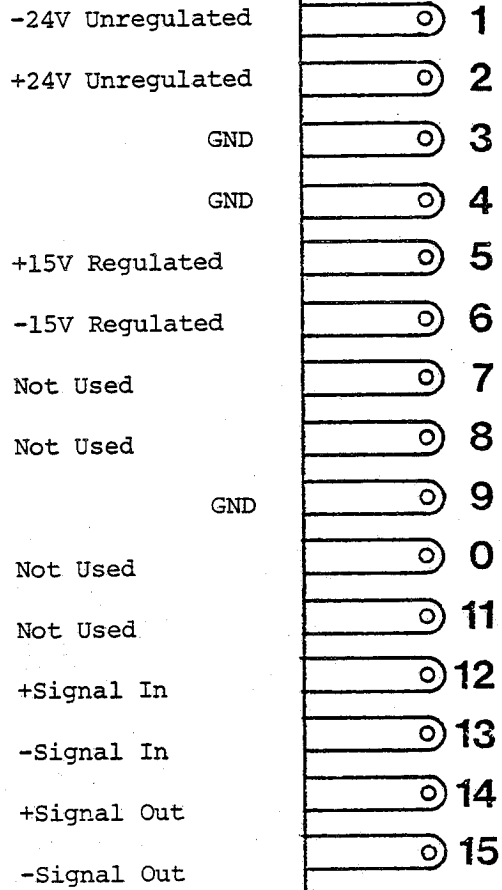
PEAKING

LOW PASS
"LOW PASS" LED LIT.



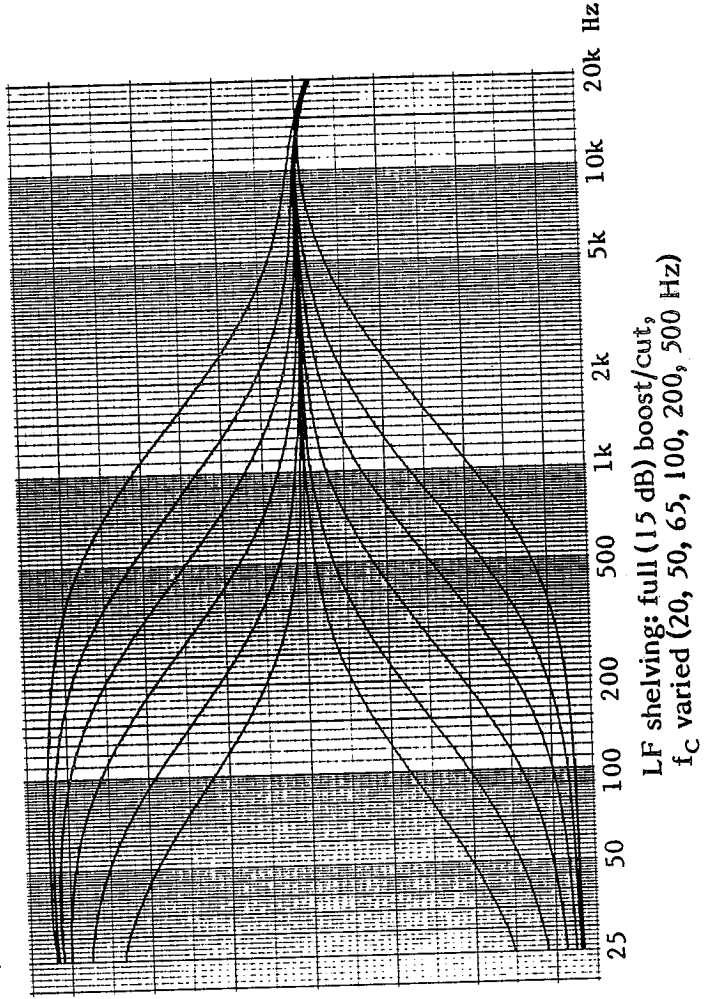
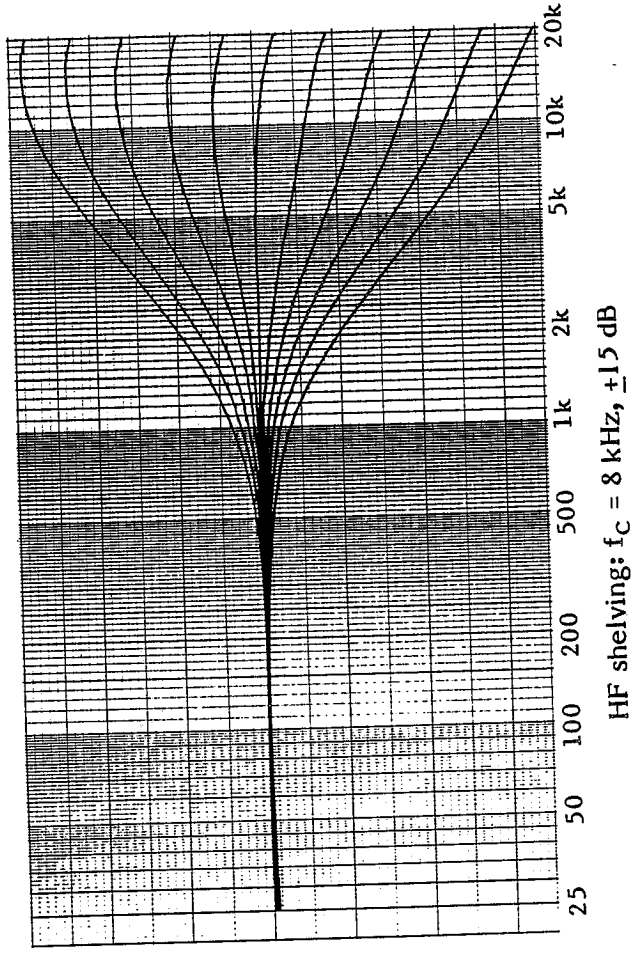
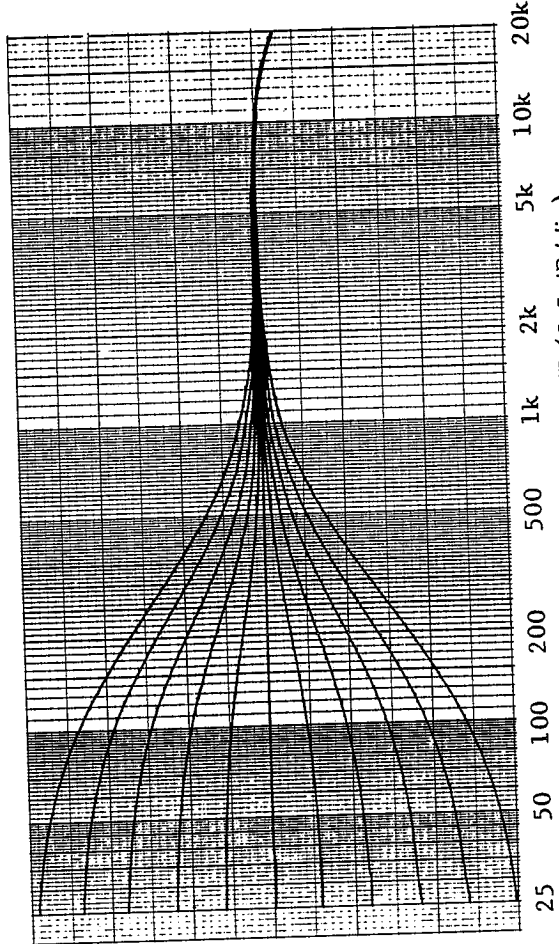
PC Card Edge
Connection

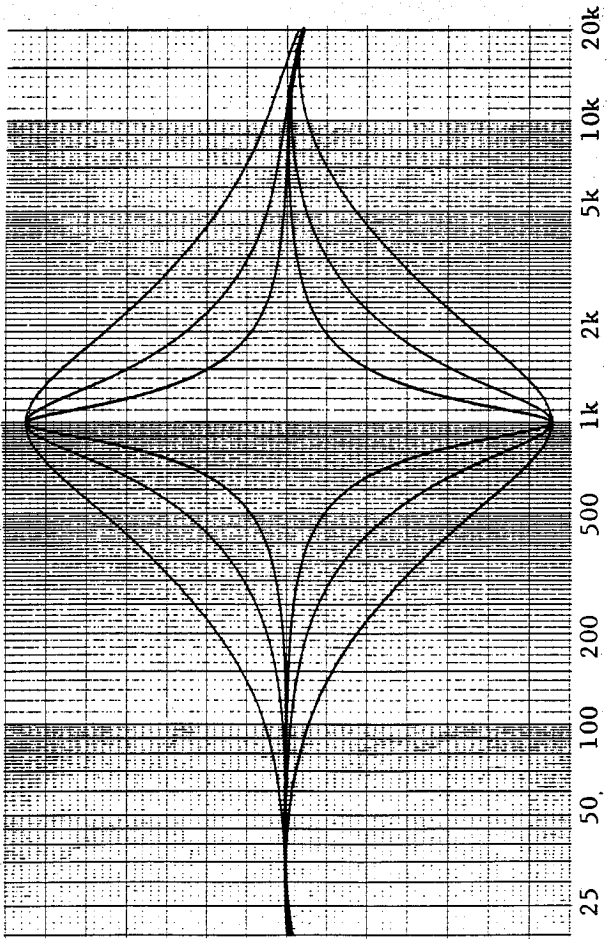
F-900 Frame
Connections
(900A also)



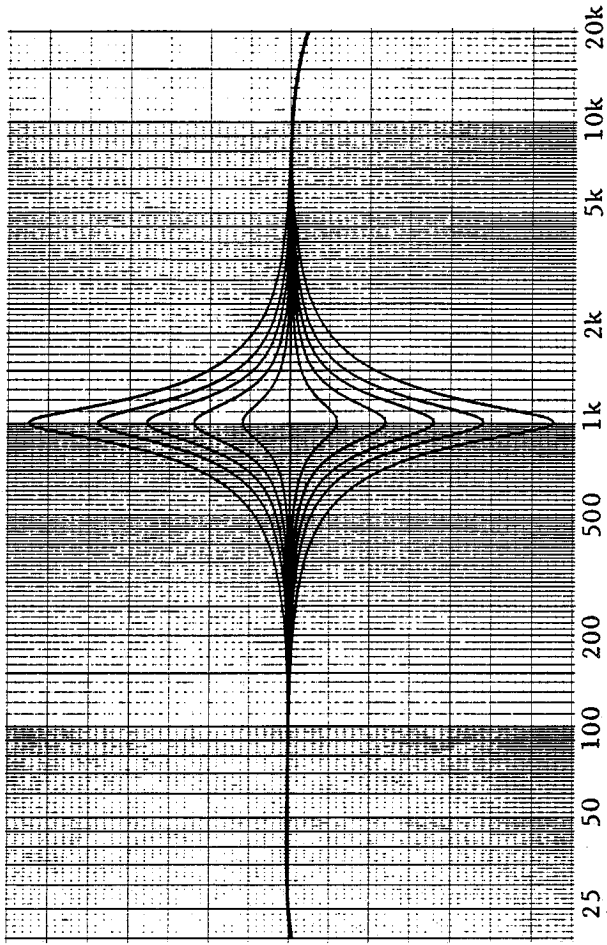
dbx
71 Chapel St.
Newton, Mass. 02195
(617) 964-3210
Telex 92-2522

No equalizer has greater precision and flexibility than the dbx 905 module, as can be seen from the following frequency curves produced by an actual module.

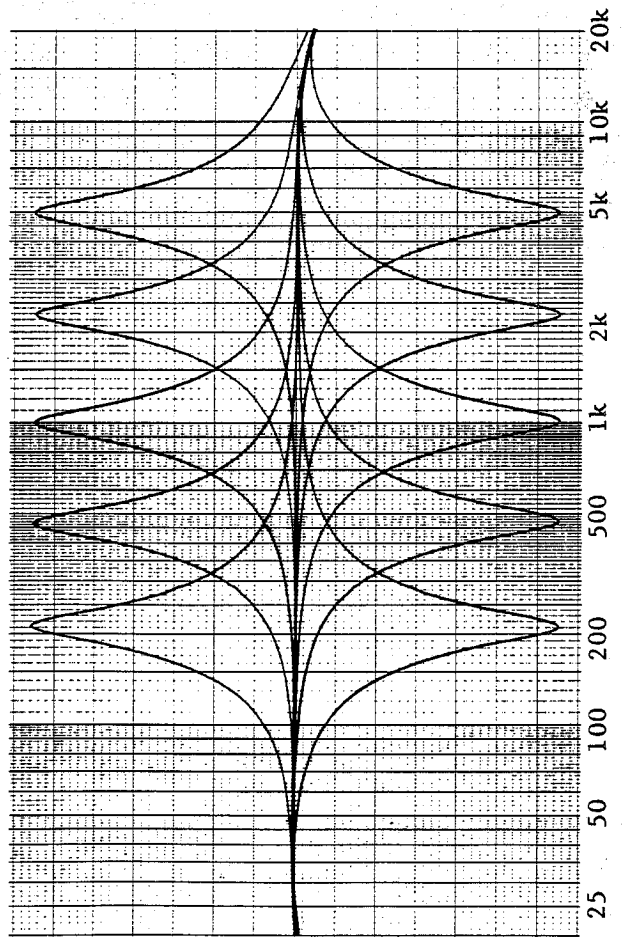




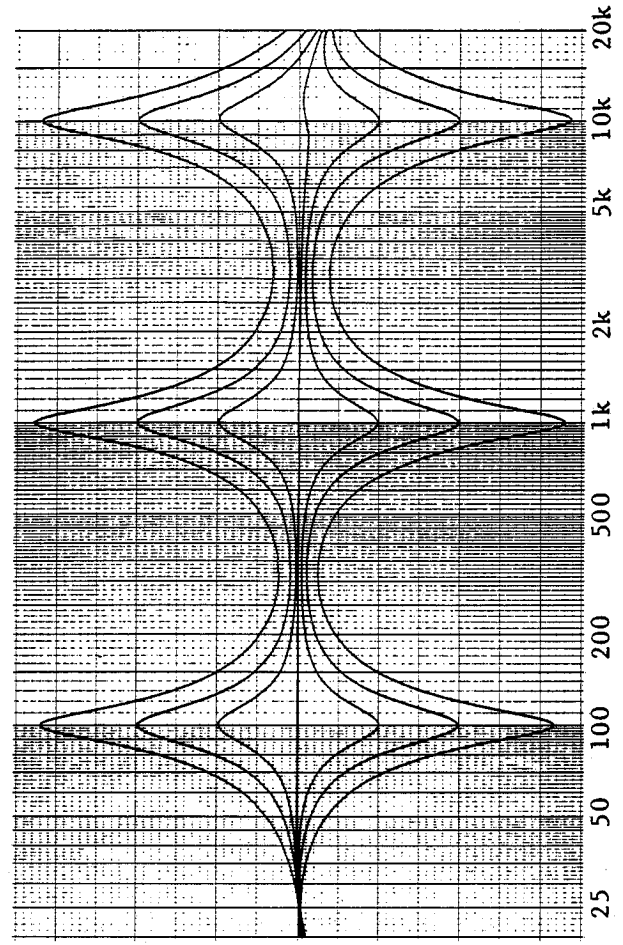
$F_c = 1$ kHz, full boost/cut, Q varied
(Q range is 8 to 0.7)



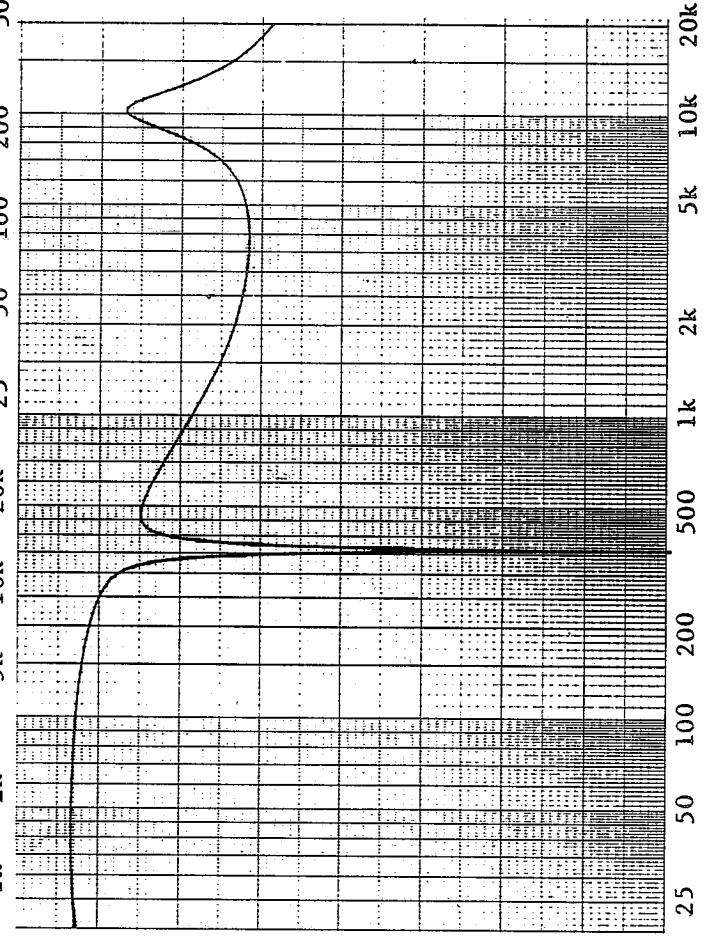
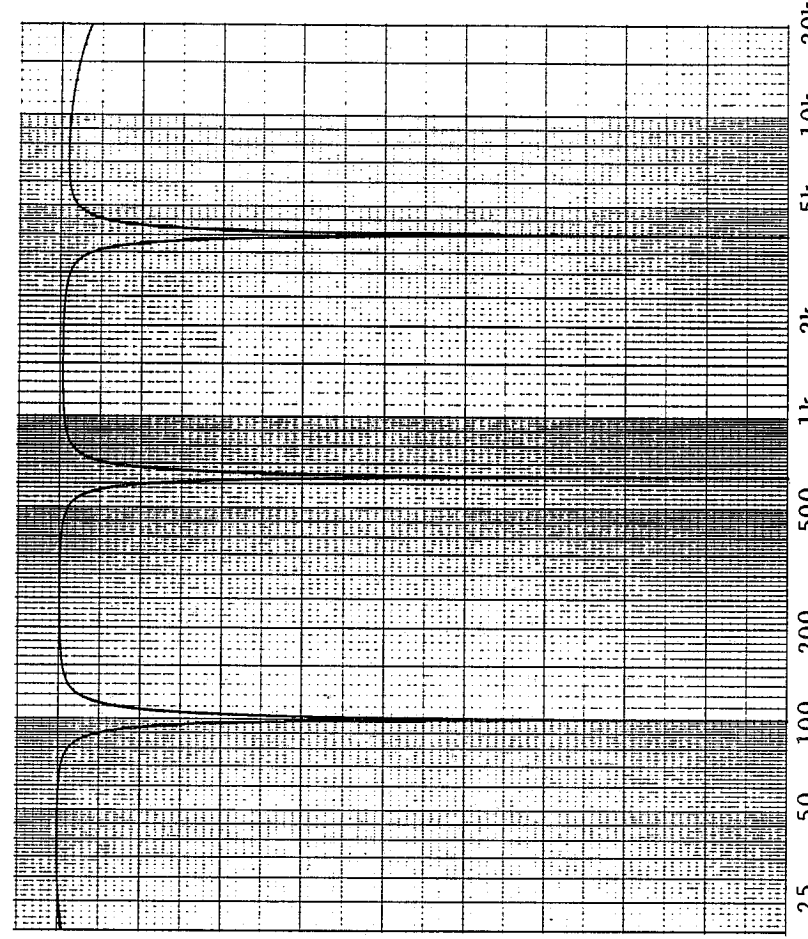
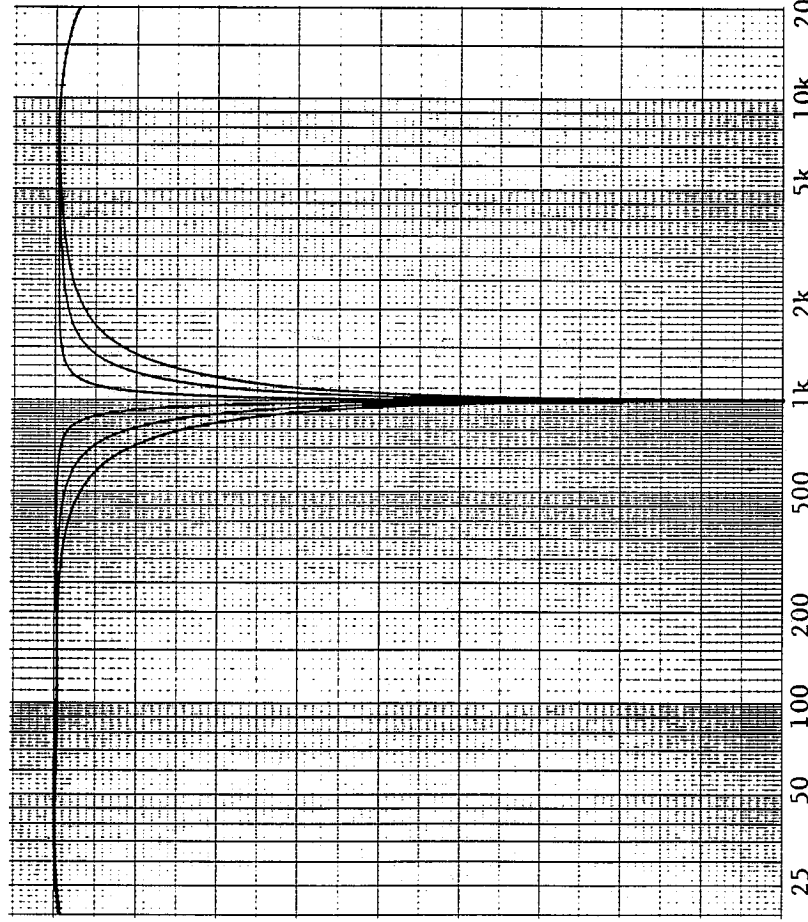
$F_c = 1$ kHz, maximum Q, boost/cut varied



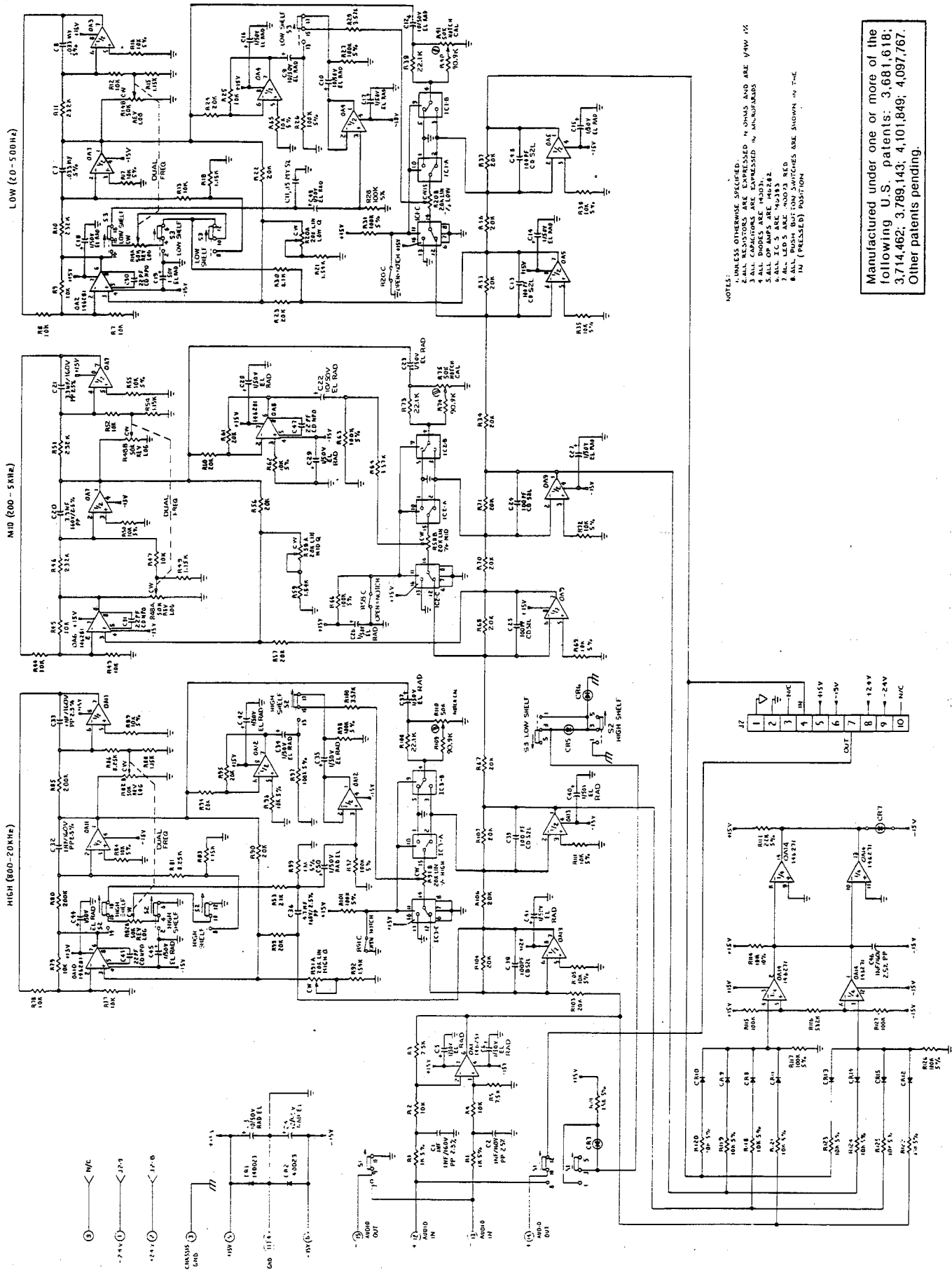
Maximum Q, full boost/cut, MF f_c varied



LF, MF, HF, maximum Q, boost/cut varied

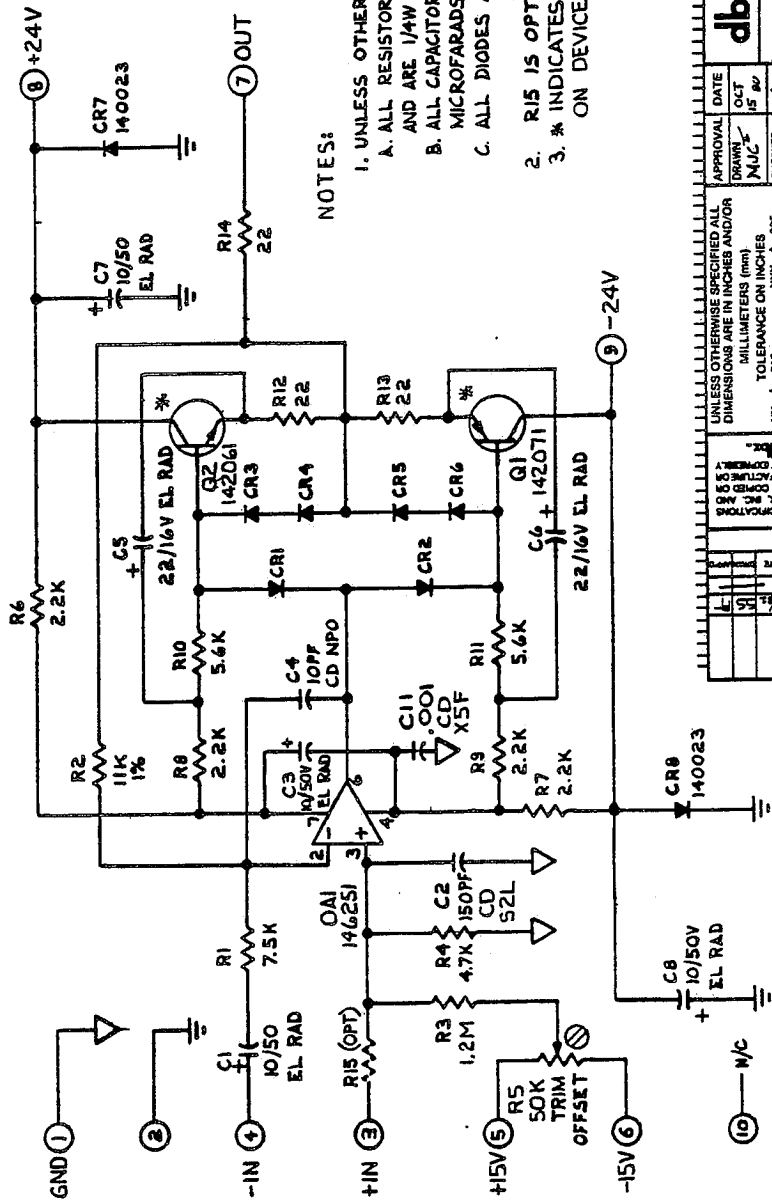


dbx MODEL 905 PARAMETRIC EQUALIZER SCHEMATIC



- NOTES:
1. UNLESS OTHERWISE SPECIFIED.
 2. ALL RESISTORS ARE EXPRESSED IN OHMS AND ARE 1/4W 1%.
 3. ALL CAPACITORS ARE EXPRESSED IN MICROFARADS.
 4. ALL DIODES ARE 1N4001.
 5. ALL OP AMPS ARE 1428Z.
 6. ALL LOGS ARE 40233.
 7. ALL LOGS ARE 40233.
 8. ALL PUSH-BUTTON SWITCHES ARE SHOWN IN THE
 9. IN (PRESSED) POSITION.

Manufactured under one or more of the following U.S. patents: 3,681,618; 3,714,462; 3,789,143; 4,101,849; 4,097,767. Other patents pending.



NOTES:

1. UNLESS OTHERWISE SPECIFIED
 - A. ALL RESISTORS ARE EXPRESSED IN OHMS AND ARE 1/4W 5%.
 - B. ALL CAPACITORS ARE EXPRESSED IN MICROFARADS.
 - C. ALL DIODES ARE 140031.
2. R15 IS OPTIONAL
3. * INDICATES HEATSINK IS REQUIRED ON DEVICE (Q1 AND Q2).

900 SERIES USED ON

APPROVAL	DATE	900 SERIES USED ON
DRAWN	OCT 15 1961	dbx inc Newton, Ma.
CHECKED	1/26/61	OUTPUT CARD
PROJ. ENG.	1/11/61	900 SERIES
CLERK	1/11/61	SCALE: 1 OF 1
RELEASED	1/26/61	SIZE NUMBER B 340381

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AND/OR MILLIMETERS (mm)

JCT ± .016 TOLERANCE ON INCHES .006

TOLERANCE ON MILLIMETERS (mm) .150 ± .38 (mm) (.005) ± .15 (mm)

ANGLES ± 1/2° FRACTIONS ± 1/32

APPROVED FOR PRODUCTION TOOLING DATE

REV	DESCRIPTION	DATE
D1	REL AT REV 01	1/26/61
D2	PER ECO 702	1/26/61

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