

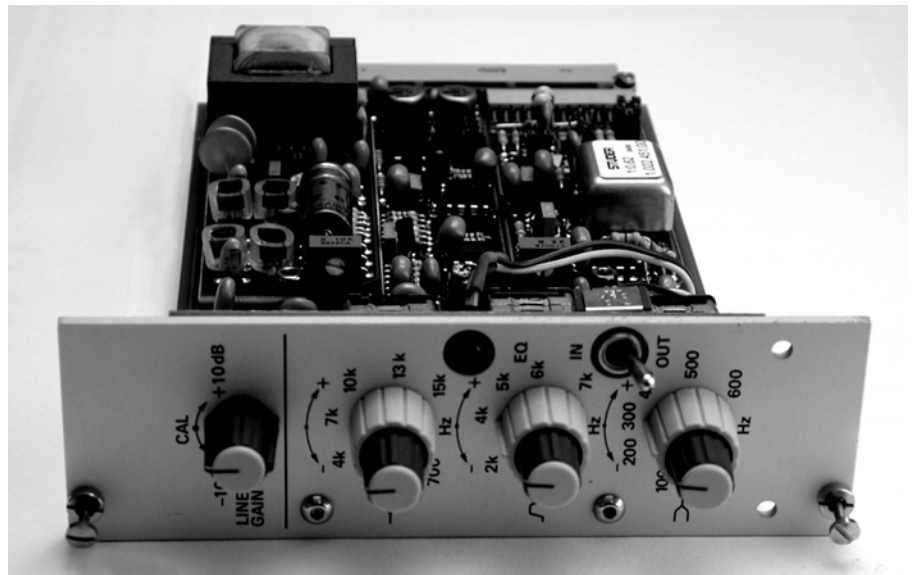
Line Equalizer

1.915.776/777/779

The Line Equalizer Euro-card is the ideal component to cope with situations as inadequate frequency response or excessive level loss on long-haul audio lines. Special effects equalization may be another application.

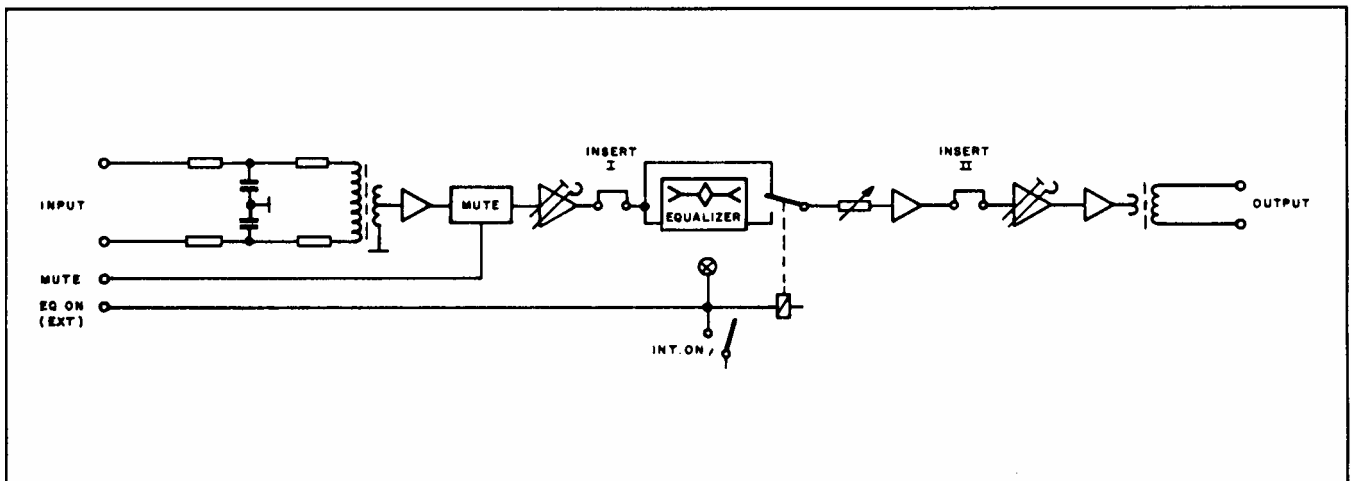
The frequency response can be varied in three bands over a ± 15 dB range, as shown by the respective graphs below. Gain is normally set to unity, with 10 dB of continuously variable gain or attenuation available. Remote controlled muting or bypassing is possible.

The equalizer cards are supplied with a choice of different front panels for either horizontal recessed, vertical recessed, or vertical flush installation into suitable mounting frames.



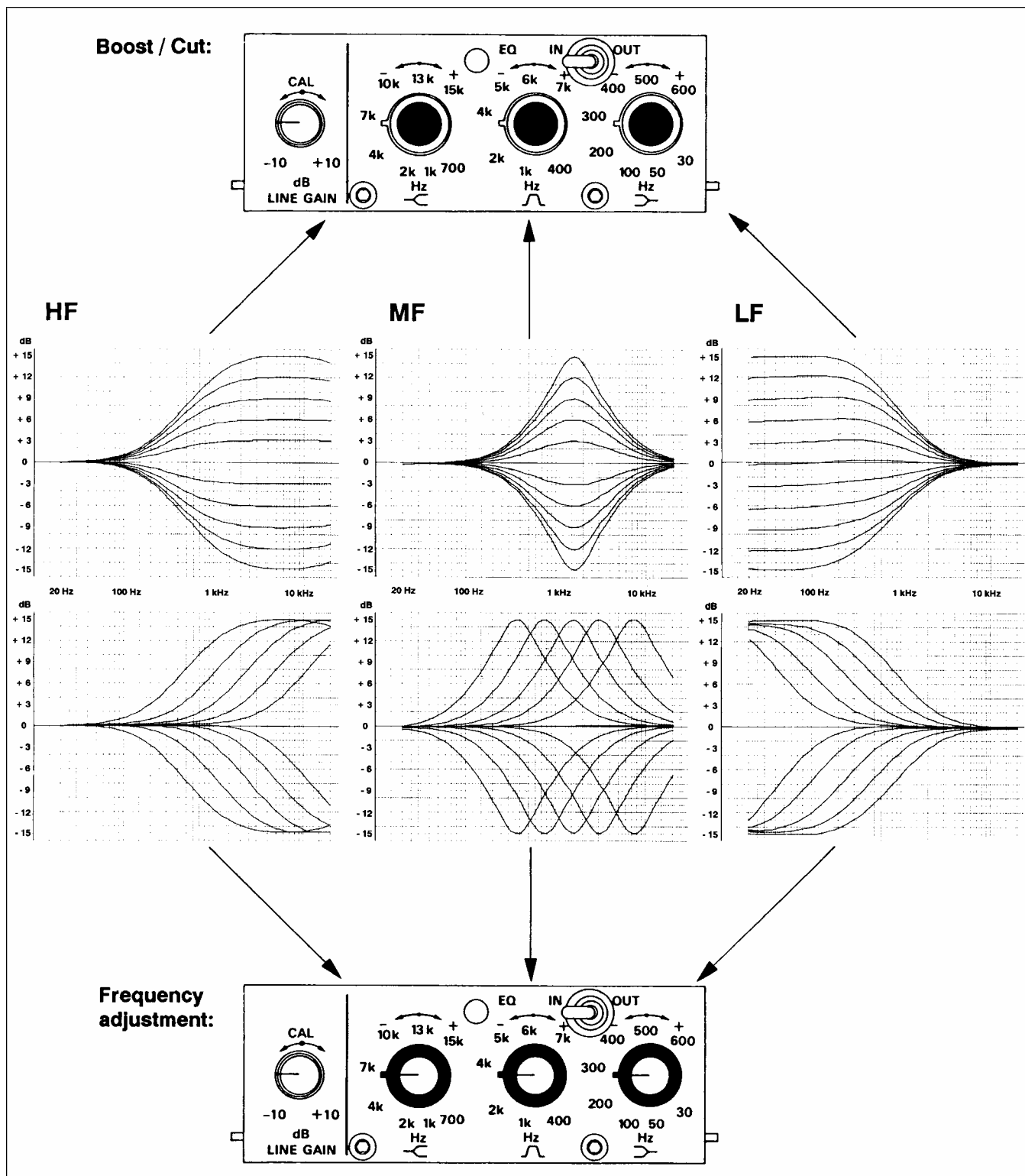
When installed vertically, each equalizer occupies 8 M units.

A 19" mounting frame for three equalizer cards plus the required power supply is described below.



Parametric filter diagrams:

HF shelving equalizer: Treble filter **700 Hz...15 kHz, ± 15 dB**
 MF bell-shaped equalizer: Center frequency **400 Hz...7 kHz, ± 15 dB**; Q approx. 1
 LF shelving equalizer: Bass filter **30 Hz...600 Hz, ± 15 dB**



Technical Specifications

Input:
Impedance **balanced and floating**, with RF filter
Clipping point **> 10 k Ω**
Common mode rejection **+24 dBu** (12.3 V)
> 50 dB, unbalanced to ground

Output:
Minimum permissible load **balanced and floating**
Maximum output level **200 Ω**
Frequency response **+24 dBu** (12.3 V)
THD **± 0.2 dB**, 30 Hz...60 kHz, equalization off
< 0.01%, at nominal level

Equalization: Characteristics **see diagram**, referred to +6 dBu in/out
S/N **> 96 dB**, equalizer off
> 93 dB, equalizer on (linear)

Supply: **± 15 V** (80 mA idling, 170 mA @ +24 dBu into 200 Ω)

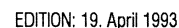
Dimensions: Euro-card **100 \times 160 mm, 8 M units wide**

Ordering Information:

Euro-cards:	<ul style="list-style-type: none">Line equalizer, horizontal, for recessed mounting	1.915.776.xx
	<ul style="list-style-type: none">Line equalizer, vertical, for recessed mounting	1.915.777.xx
	<ul style="list-style-type: none">Line equalizer, vertical, for flush mounting (ELMA)	1.915.779.xx
19" standard product	<ul style="list-style-type: none">Mounting frame (19"/1U) with power supply and front panel, wired for three equalizer cards 1.915.776 (not incl.)	1.918.117.xx

IC 1 - - - IC 4 = 5532 AN

DATE:	40.9.84	20.11.84	40.4.85	30.8.85		VERTICAL	1.915.777
SIGN:	<i>we</i>	<i>we</i>	<i>fr</i>	<i>un</i>		HORIZONTAL	1.945.776
STUDER REGENSDORF ZÜRICH	LINE EQUALIZER BOARD					SC	1.915.775



LINE EQUALIZER

Ad ..POS.. ..REF.No... DESCRIPTION.....MANUFACTURER

C.....1 59.26.0680 68 uF 20% 6.3V SAL
 C.....2 59.26.0680 68 uF 20% 6.3V SAL
 C.....3 59.06.0222 2.2nF 10% 63V PETP
 C.....4 59.26.1220 22 uF 20% 10V SAL
 C.....5 59.26.1220 22 uF 20% 10V SAL
 C.....6 59.26.0680 68 uF 20% 6.3V SAL
 C.....7 59.26.1220 22 uF 20% 10V SAL
 C.....8 59.05.1103 10nF 1% 63V PP
 C.....9 59.12.7123 12nF 1% 63V PS
 C.....10 59.26.0680 68 uF 20% 6.3V SAL

C.....11 59.26.1220 22 uF 20% 10V SAL
 C.....12 59.05.2152 1.5nF 2.5% 160V PP
 C.....13 59.26.0680 68 uF 20% 6.3V SAL
 C.....14 59.26.1220 22 uF 20% 10V SAL
 C.....15 59.32.1101 100pF 10% 400V CE
 C.....16 59.26.0680 68 uF 20% 6.3V SAL
 C.....17 59.26.0680 68 uF 20% 6.3V SAL
 C.....18 59.06.0222 2.2nF 10% 63V PETP
 C.....19 59.26.1220 22 uF 20% 10V SAL
 C.....20 59.05.2153 15nF 2.5% 63V PP

C.....21 59.26.0680 68 uF 20% 6.3V SAL
 C.....22 59.22.3221 220uF 20% 10V EL
 C.....23 59.22.5101 100 uF 20% 25V EL
 C.....24 59.22.5101 100 uF 20% 25V EL

D.....1 50.04.0125 1N4448 any
 D.....2 50.04.0125 1N4448 any

DL.....1 50.04.2111 MV5753 red GI,HP

DLQ.....1 50.99.0126 4N28

IC.....1 50.09.0106 NE5532AN dual op. amp. RA,SIG
 IC.....2 50.09.0106 NE5532AN dual op. amp. RA,SIG
 IC.....3 50.09.0106 NE5532AN dual op. amp. RA,SIG
 IC.....4 50.09.0106 NE5532AN dual op. amp. RA,SIG

J.....1 54.01.0309 13 PIN- CIS 2X
 J.....2 54.01.0021 JUMPER

P.....1 54.01.0020 J-PLUG 6X
 P.....2 54.01.0359 2*16 EURO - PLUG

MP.....1 42.01.0203 GRY UPPER KNOB 3X,4/10
 MP.....2 42.01.0228 GRY KNOB 1X,4/10
 MP.....3 42.01.0250 L-GRY COVER 4X
 MP.....4 1.912.000.03 L-GRY LOWER KNOB 3X,6/13
 MP.....5 1.010.090.49 SCREEN PLATE
 MP.....6 1.915.776.01 FRONT PANEL VERTICAL
 MP.....7 1.915.776.01 FRONT PANEL HORIZONTAL
 MP.....8 1.915.777.01 FRONT PANEL HORIZONTAL
 MP.....9 1.915.777.01 FRONT PANEL VERTICAL

Q.....1 50.03.0350 J 112 N-JFET NS,Mot,Six
 Q.....2 50.03.0350 J 112 N-JFET NS,Mot,Six
 Q.....3 50.03.0436 BC 547 NPN IC>100mA, B>100 any
 Q.....4 50.03.0436 BC 547 NPN IC>100mA, B>100 any
 Q.....5 50.03.0436 BC 547 NPN IC>100mA, B>100 any

R.....1 57.11.4104 100 kOhm 2% 0.25W MF
 R.....2 57.11.4104 100 kOhm 2% 0.25W MF
 R.....3 57.11.4223 22 kOhm 2% 0.25W MF
 R.....4 57.11.4335 3.3 MOhm 2% 0.25W MF
 R.....5 57.11.4121 120 Ohm 2% 0.25W MF
 R.....6 1.010.003.58 4.7 kOhm 20% 1in. variable resistor
 R.....7 57.11.4121 120 Ohm 2% 0.25W MF
 R.....8 57.11.4103 10 kOhm 2% 0.25W MF
 R.....9 57.11.3682 6.8 kOhm 1% 0.25W MF
 R.....10 57.11.3562 5.6 kOhm 1% 0.25W MF

R.....11 57.11.4104 100 kOhm 2% 0.25W MF
 R.....12 57.11.4684 680 kOhm 2% 0.25W MF
 R.....13 57.11.3392 3.9 kOhm 1% 0.25W MF
 R.....14 57.11.3392 100 kOhm 10% neg.log. variable resistor,see R 6
 R.....15 57.11.4561 560 Ohm 2% 0.25W MF
 R.....16 57.11.4103 10 kOhm 2% 0.25W MF
 R.....17 1.010.005.58 4.7 kOhm 20% 1in. variable resistor
 R.....18 57.11.4561 560 Ohm 2% 0.25W MF
 R.....19 57.11.4103 10 kOhm 2% 0.25W MF
 R.....20 57.11.4103 10 kOhm 2% 0.25W MF

R.....21 57.11.4105 1 MOhm 2% 0.25W MF
 R.....22 57.11.4105 1 MOhm 2% 0.25W MF
 R.....23 57.11.3472 4.7 kOhm 1% 0.25W MF
 R.....24 57.11.3512 100 kOhm 10% neg.log. variable resistor,see R17
 R.....25 57.11.3512 5.1 kOhm 1% 0.25W MF
 R.....26 57.11.4103 100 kOhm 10% neg.log. variable resistor,see R17
 R.....27 57.11.4103 10 kOhm 2% 0.25W MF
 R.....28 57.11.4103 10 kOhm 2% 0.25W MF
 R.....29 57.11.4121 120 Ohm 2% 0.25W MF
 R.....30 1.010.003.58 4.7 kOhm 20% 1in. variable resistor

R.....31 57.11.4121 120 Ohm 2% 0.25W MF
 R.....32 57.11.4103 10 kOhm 2% 0.25W MF
 R.....33 57.11.4104 100 kOhm 2% 0.25W MF
 R.....34 57.11.3682 6.8 kOhm 1% 0.25W MF
 R.....35 57.11.3562 5.6 kOhm 1% 0.25W MF
 R.....36 57.11.4103 10 kOhm 2% 0.25W MF
 R.....37 57.11.4684 680 kOhm 2% 0.25W MF
 R.....38 57.11.4223 22 kOhm 2% 0.25W MF
 R.....39 57.11.3472 4.7 kOhm 1% 0.25W MF
 R.....40 57.11.3472 100 kOhm 10% neg.log. variable resistor,see R30

R.....41 57.11.4104 100 kOhm 2% 0.25W MF
 R.....42 57.11.4223 22 kOhm 2% 0.25W MF

Ad ..POS.. ..REF.No... DESCRIPTION.....MANUFACTURER

R.....43 57.11.5335 3.3 MOhm 5% 0.25W MF
 R.....44 57.11.4330 33 Ohm 2% 0.25W MF
 R.....45 57.11.3472 4.7 kOhm 1% 0.25W MF
 R.....46 57.11.3132 1.3 kOhm 1% 0.25W MF
 R.....47 57.11.3472 4.7 kOhm 1% 0.25W MF
 R.....48 57.11.3132 1.3 kOhm 1% 0.25W MF
 R.....49 1.010.001.58 10 kOhm 20% 1in. variable resistor
 R.....50 57.11.4223 22 kOhm 2% 0.25W MF

R.....51 57.11.4104 100 kOhm 2% 0.25W MF
 R.....52 57.11.4104 100 kOhm 2% 0.25W MF
 R.....53 57.11.4272 2.7 kOhm 2% 0.25W MF
 R.....54 57.11.4104 100 kOhm 2% 0.25W MF
 R.....55 57.11.4104 100 kOhm 2% 0.25W MF
 R.....56 57.11.4104 100 kOhm 2% 0.25W MF
 R.....57 57.92.1121 120 mA R-PTC 56V 15 ohm Philips
 R.....58 57.92.1121 120 mA R-PTC 56V 15 ohm Philips
 R.....59 57.11.4102 1 kOhm 2% 0.25W MF
 R.....60 57.11.4102 1 kOhm 2% 0.25W MF

S.....1 55.01.0111 ON-ON SWITCH C & K

V.....1 1.914.501.00 LINE AMPLIFIER St
 V.....2 1.914.502.00 HL. INPUT AMP. (FLOATING) St

XIC.....1 53.03.0166 OIL 8-PIN 4X

1.915.775.00 LINE EQUALIZER - BOARD
 1.915.776.00 LINE EQUALIZER - HORIZONTAL
 1.915.777.00 LINE EQUALIZER - VERTICAL

CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film,
 PE=Polyester, PP=Polypropylen, PS=Polystyrol

MANUFACTURER: Bu=Burndy, Ex=Exar, Fc=Fairchild, GI=General Instrument
 HP=Hewlett Packard, ITT=Intermetall, Mot=Motorola, Nat=National
 (Matsushita), NS=National Semiconductors, Ph=Philips,
 Ra=Raytheon, Sig=Signetics, Six=Siliconix, St=Studer,
 TI=Texas Instrument

1.915.775.00 LINE-EQUALIZER BOARD FRI 84/09/0600
 1.915.775.00 LINE-EQUALIZER BOARD FRI 84/11/2001

END
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