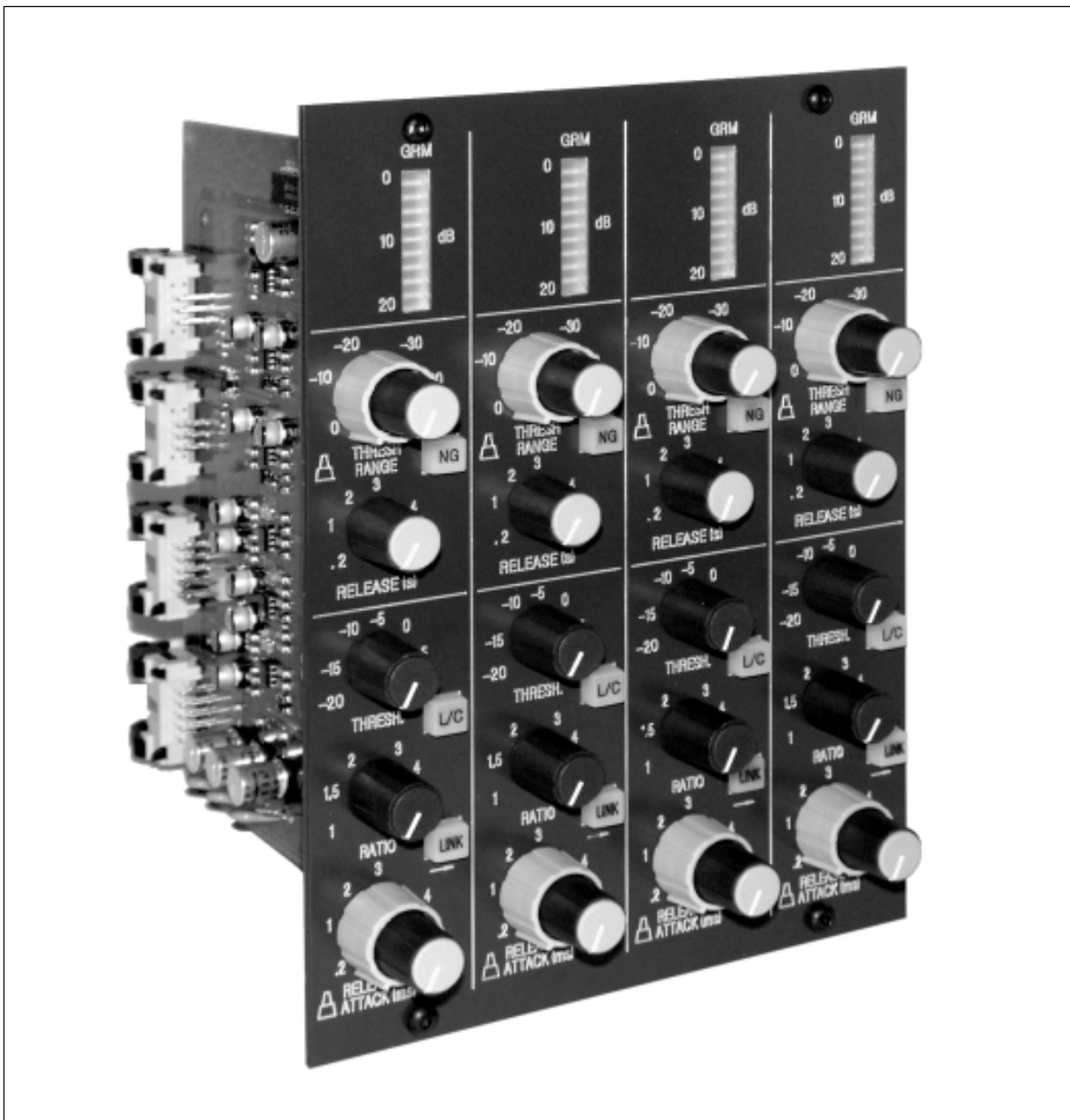


Studer 928

Limiter/Compressor/Noise Gate Module – Product Information



Studer 928 Limiter/Compressor/Noise Gate Module

General

The 4-channel Limiter/Compressor/Noise Gate module (1.913.325.xx) can be installed in the meter panel of the Studer 928 analog mixing consoles. The module function is in line with the four corresponding input channels below it.

Main Applications

- The Limiter/Compressor section allows compressing the dynamic range and limiting the maximum level by an adjustable limiter threshold value. Attack and decay times are also adjustable; the decay character-

istic is additionally determined by the program content to avoid unwanted pumping effects.

- The Noise Gate section reduces the residual noise of a connected source during program intermissions by reducing the gain of the channel, if the source signal is below a preset value. For instance, in drum and bass recordings a noise gate is used to produce a dry sound with high presence character.

The Limiter/Compressor/Noise Gate module controls the VCAs in the input channels, resulting in a high S/N ratio with minimum distortion.

Operating Elements

GRM

Gain reduction meter, indicates the gain reduction in the Limiter/Compressor/Noise Gate signal path in dB.

Noise Gate Section

NG

Key to activate the Noise Gate function.

THRESH.

Noise Gate threshold, adjustable from 0 to -50 dB.

RANGE

Noise Gate gain reduction, adjustable from 0 to -50 dB.

RELEASE (s)

Time between the undershooting of the Noise Gate threshold and the start of the Noise Gate action. Adjustable from 0.2 to 5 s.

Limiter/Compressor Section

L / C

Key to activate the Limiter/Compressor function.

LINK →

Control voltage coupling with the adjacent Limiter/Compressor/Noise Gate unit at the right-hand side. The higher voltage of either one controls both units.

Main application of this feature is processing a stereo signal connected to two mono channels (e.g. two microphones). With the control voltages of these two channels linked, the localization of sound sources within the stereo image remains stable.

THRESH.

Compressor threshold, adjustable from -20 to +10 dB.

RATIO

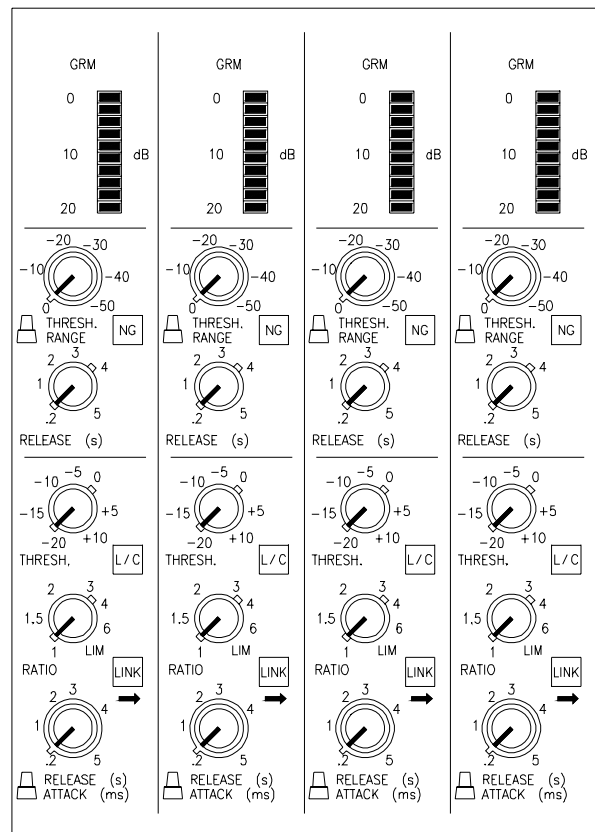
Compression ratio, adjustable from 1:1 (no compression effect) to 20:1 (limiting effect).

ATTACK (ms)

Compressor attack time, adjustable from 0.2 to 5 ms.

RELEASE (s)

Compressor release time. The scale refers to a static 6 dB gain reduction and the LIM setting of the RATIO control. The actual release time is program dependent and optimized, thus differences to the control position may occur.



Specifications:

Audio:

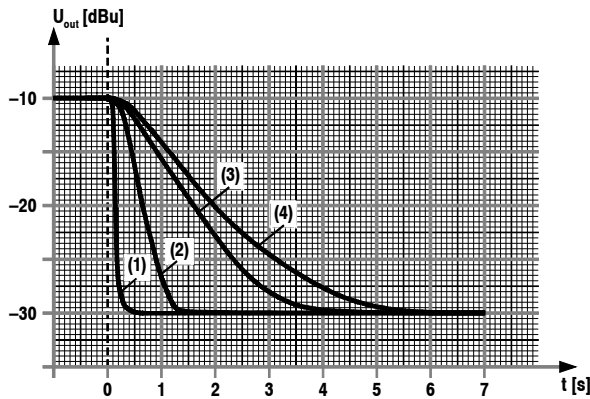
No audio signal is processed within the Limiter/Compressor/Noise Gate module, but only the control signal for the input channel's VCAs. In this way, the distortion, S/N, and frequency response performance remains the same as without the Limiter/Compressor/Noise Gate module.

Current Consumption:

Maximum current consumption of the Limiter/Compressor/Noise Gate Module per channel is: +15 V: 70 mA / -15 V: 60 mA / 5 V: 100 mA

Studer 928 Limiter/Compressor/Noise Gate Module

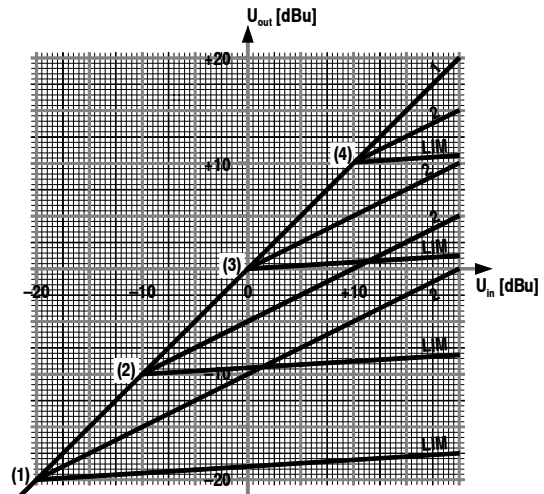
Noise Gate Release Time



Above: Four different noise gate RELEASE time settings (1: min.; 2: 1 s; 3: 3 s; 4: max.) at a THRESH. setting of -10 dB and a Noise Gate gain reduction RANGE setting of -20 dB.

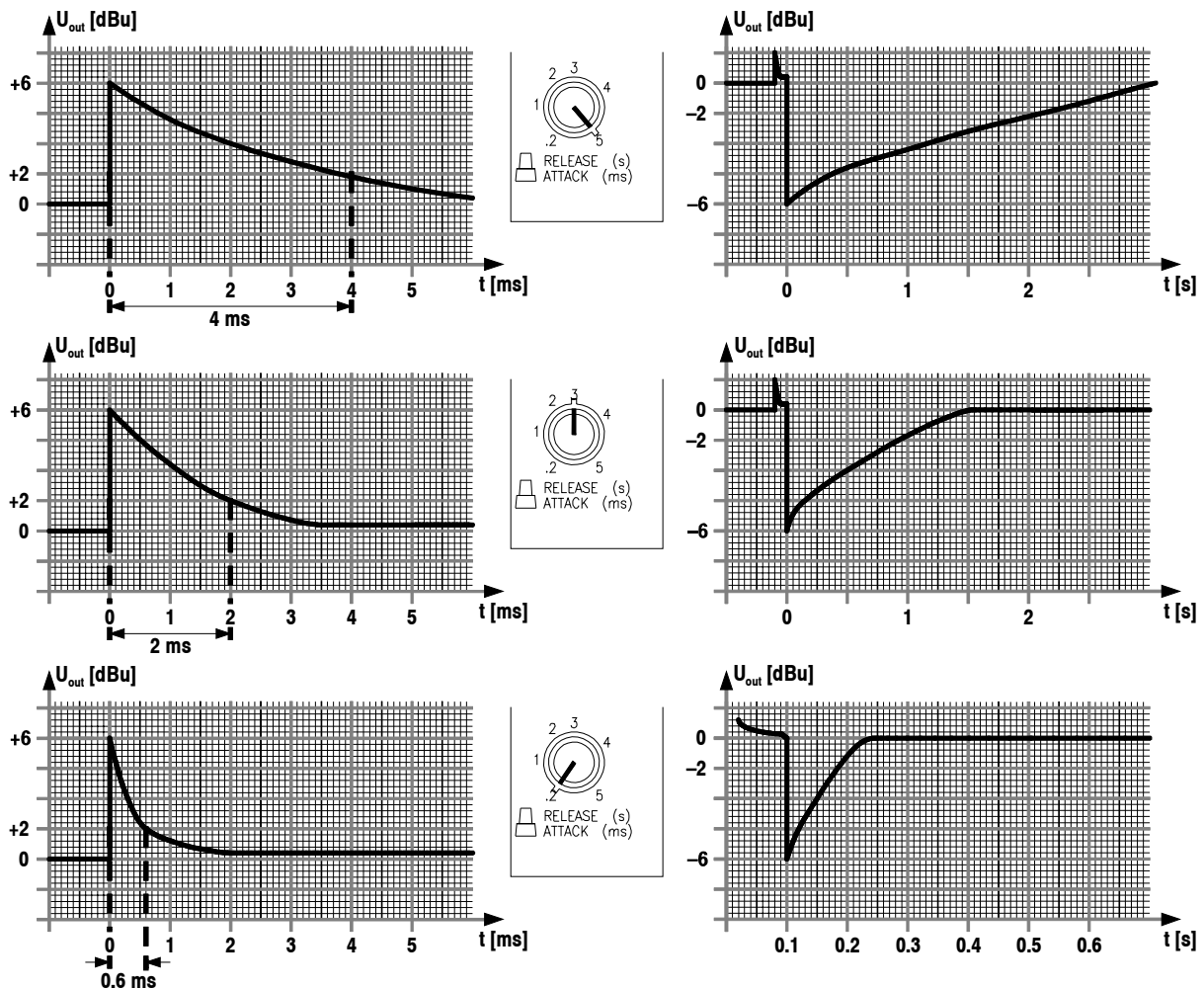
Right: Four different compressor THRES. settings (1: -20 dBu; 2: -10 dBu; 3: 0 dBu; 4: $+10$ dBu), with compression RATIO settings of 1 (no compression), 2 (moderate compression) and LIM (maximum compression, limiter effect).

Limiter/Compressor: Threshold Range



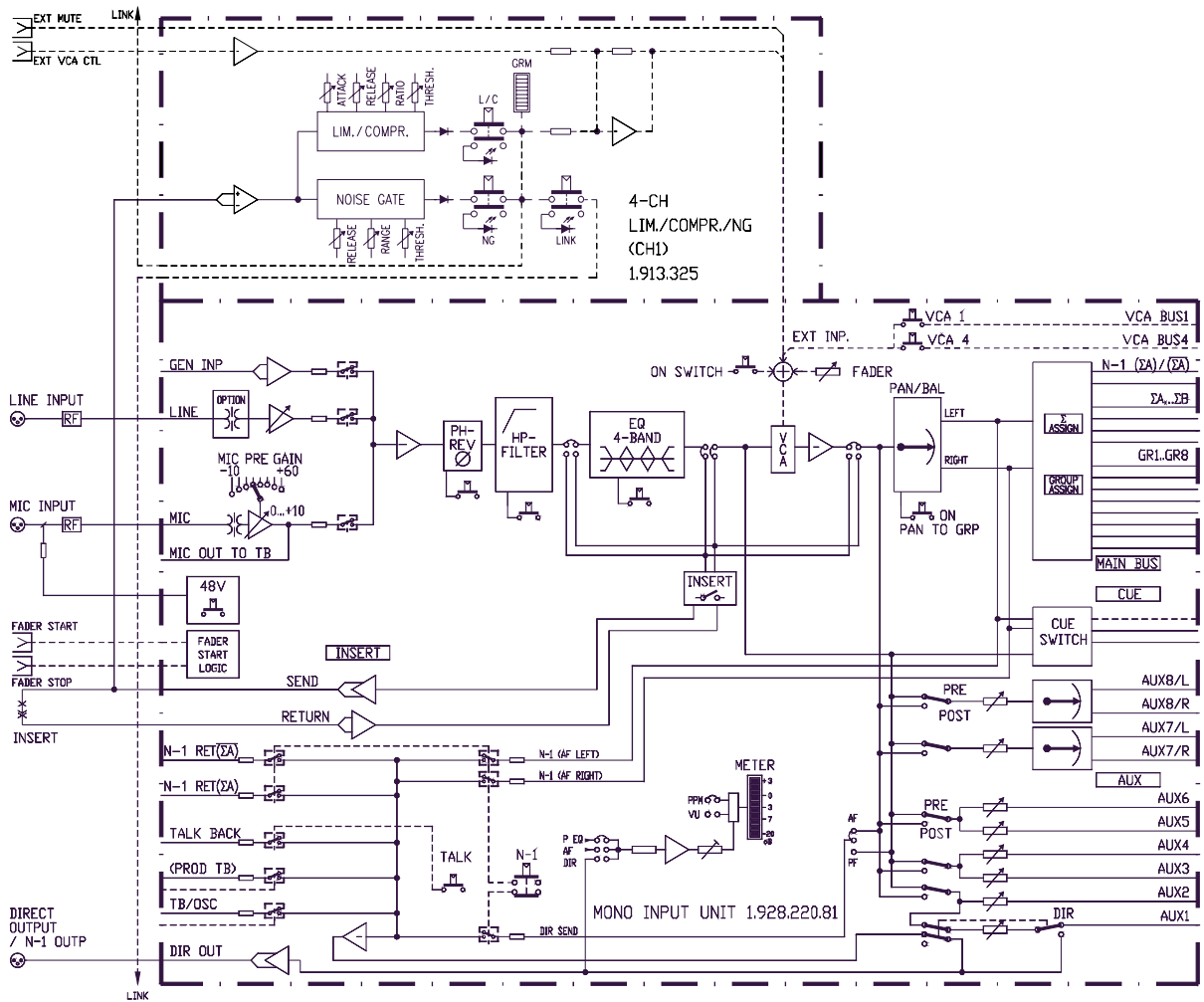
Limiter/Compressor: Attack/Release Time

Limiter/Compressor characteristics at three different ATTACK and RELEASE time settings; the exciting signal is a level change from 0 dBu to $+10$ dBu for 100 ms, and back to 0 dBu.



Studer 928 Limiter/Compressor/Noise Gate Module

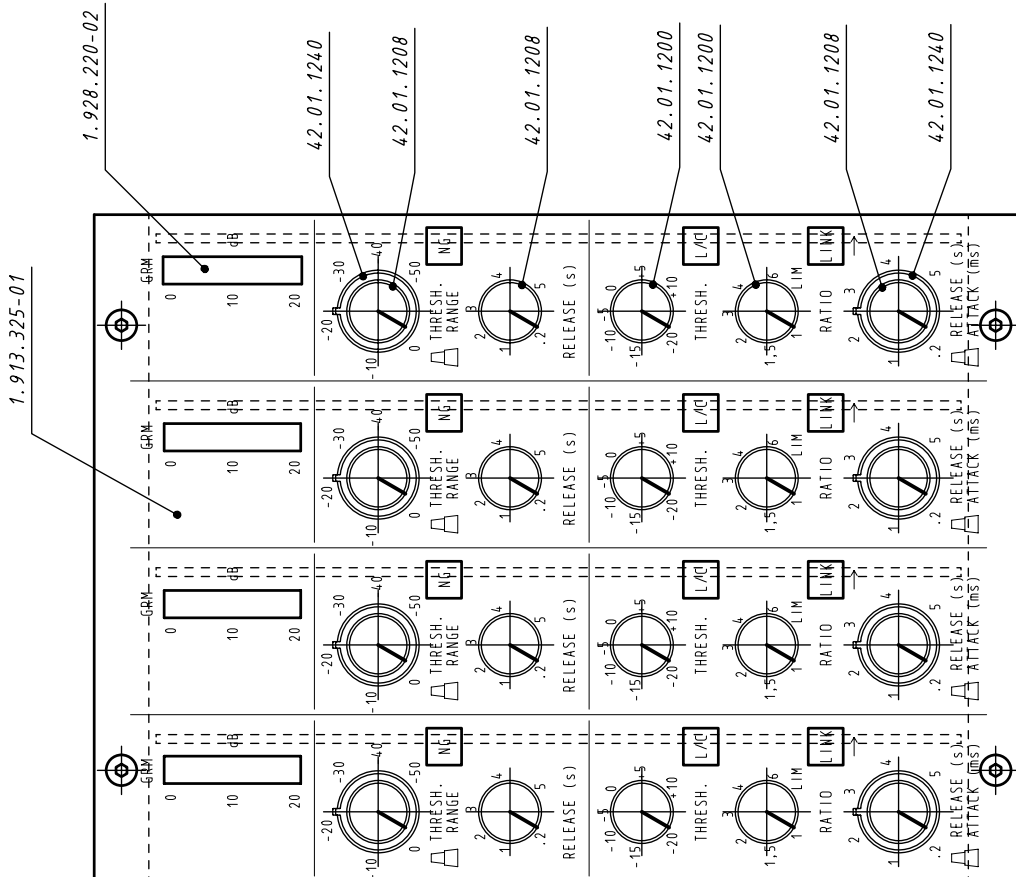
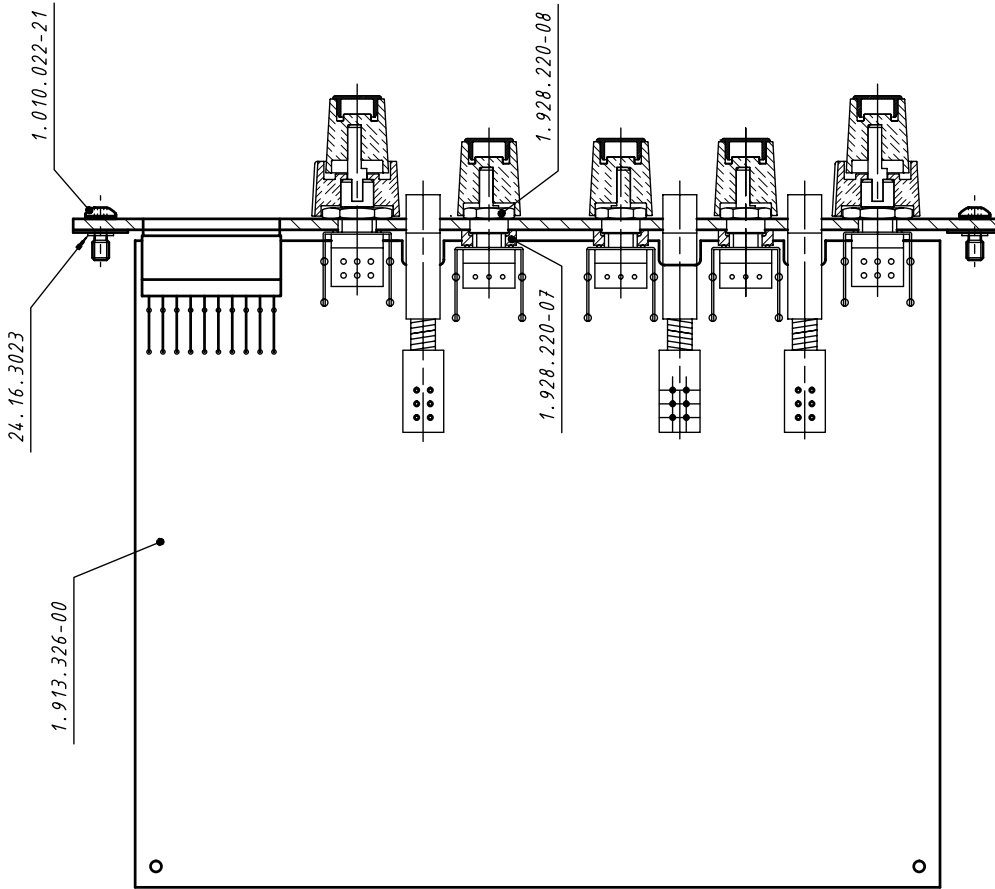
Block Diagram Limiter/Compressor/Noise Gate Module with Mono Input Unit (only one channel shown)



STUDER
professional audio equipment

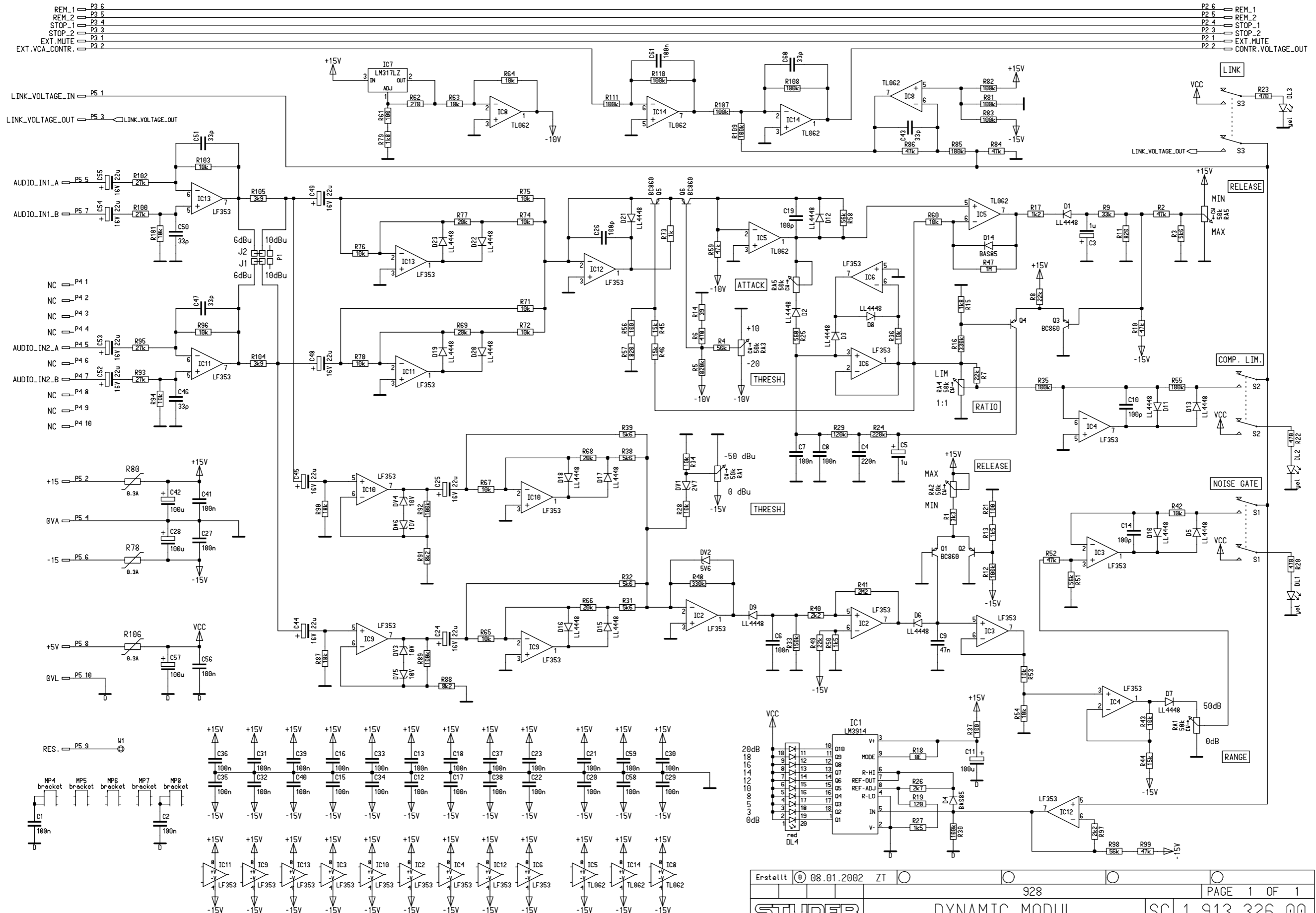
H A Harman International Company

4-Channel Dynamics Module 1.913.325

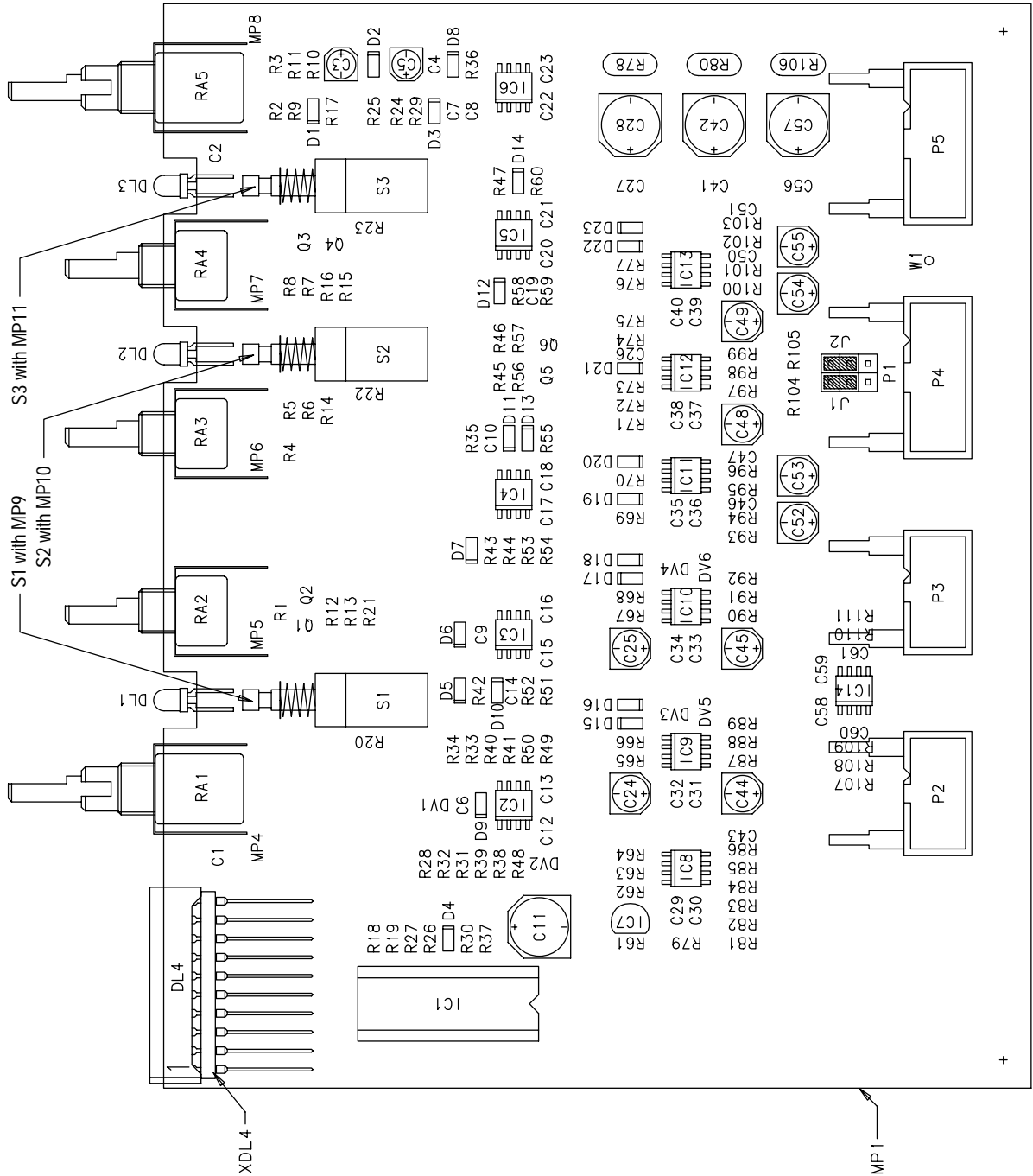


Accompanying documents: Zugehörige Unterlagen:		General Tolerance: Freimasstoleranz:	Scale: Massstab:	28.01.02 Date	HM	HM	HM	HM	HM
Substitute for: Ersatz für:		Replaced by: Ersetzt durch:		28.01.02 Date	HM	HM	HM	HM	HM
STUDER REGENSDORF		4 CH Dynamic Module			28.01.02 Date	HM	HM	HM	HM
Description: Benennung:		4 CH Dynamic Module			28.01.02 Date	HM	HM	HM	HM
Original Size: Originalformat:		A3			28.01.02 Date	HM	HM	HM	HM
Page: Seite:		1/1			28.01.02 Date	HM	HM	HM	HM
Number: Nummer:		Z 1.913.325-00			28.01.02 Date	HM	HM	HM	HM
Index					28.01.02 Date	HM	HM	HM	HM

Dynamics Module 1.913.326.00



Dynamics Module 1.913.326.00



Accompanying documents: Zugehörige Unterlagen: PL	General tolerance: Freimasstoleranz:	Scale: Maßstab:	Edition Ausgabe	08.01.2002	ZT	ML	HW	⊙
Substitute for: Ersatz fuer:			Date Datum	08.01.2002	Visa Gez.	Checked Gepr.	Seen Ges.	Index
STUDER REGENSDORF	Number: Benennung:	DYNAMIC MODUL, ESE		Page: Seite:	1 / 1		Number: Number:	1.913.326.00

DYNAMICS MODULE 1.913.326.00 (0)

Page: 2 of 2

Idx. Pos.	Part No.	Qty.	Type/Val.	Description	Idx. Pos.	Part No.	Qty.	Type/Val.	Description
0 R 43	57.60.1103	1 pce	10k	MF, 1%, 0204, E24					
0 R 44	57.60.1153	1 pce	15k	MF, 1%, 0204, E24					
0 R 45	57.60.1153	1 pce	15k	MF, 1%, 0204, E24					
0 R 46	57.60.1153	1 pce	15k	MF, 1%, 0204, E24					
0 R 47	57.60.1105	1 pce	1M	MF, 1%, 0204, E24					
0 R 48	57.60.1334	1 pce	330k	MF, 1%, 0204, E24					
0 R 49	57.60.1223	1 pce	22k	MF, 1%, 0204, E24					
0 R 50	57.60.1152	1 pce	1k5	MF, 1%, 0204, E24					
0 R 51	57.60.1563	1 pce	56k	MF, 1%, 0204, E24					
0 R 52	57.60.1473	1 pce	47k	MF, 1%, 0204, E24					
0 R 53	57.60.1103	1 pce	10k	MF, 1%, 0204, E24					
0 R 54	57.60.1103	1 pce	10k	MF, 1%, 0204, E24					
0 R 55	57.60.1104	1 pce	100k	MF, 1%, 0204, E24					
0 R 56	57.60.1101	1 pce	100R	MF, 1%, 0204, E24					
0 R 57	57.60.1821	1 pce	820R	MF, 1%, 0204, E24					
0 R 58	57.60.1563	1 pce	56k	MF, 1%, 0204, E24					
0 R 59	57.60.1473	1 pce	47k	MF, 1%, 0204, E24					
0 R 60	57.60.1103	1 pce	10k	MF, 1%, 0204, E24					
0 R 61	57.60.1101	1 pce	100R	MF, 1%, 0204, E24					
0 R 62	57.60.1271	1 pce	270R	MF, 1%, 0204, E24					
0 R 63	57.60.1103	1 pce	10k	MF, 1%, 0204, E24					
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0 R 70	not used	1 pce	10k	MF, 1%, 0204, E24					
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0 R 72	not used	1 pce	10k	MF, 1%, 0204, E24					
0 R 73	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24					
0 R 74	57.60.1103	1 pce	10k	MF, 1%, 0204, E24					
0 R 75	57.60.1103	1 pce	10k	MF, 1%, 0204, E24					
0 R 76	57.60.1103	1 pce	10k	MF, 1%, 0204, E24					
0 R 77	57.60.1203	1 pce	20k	MF, 1%, 0204, E24					
0 R 78	57.92.7012	1 pce	0.3A	PTC 60V					
0 R 79	57.60.1182	1 pce	1k8	MF, 1%, 0204, E24					
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0 R 94	not used	1 pce	10k	MF, 1%, 0204, E24					
0 R 95	not used	1 pce	27k	MF, 1%, 0204, E24					
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0 R 97	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24					
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0 R 103	57.60.1103	1 pce	10k	MF, 1%, 0204, E24					
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0 R 106	57.92.7012	1 pce	0.3A	PTC 60V					
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0 R 109	57.60.1104	1 pce	100k	MF, 1%, 0204, E24					
0 R 110	57.60.1104	1 pce	100k	MF, 1%, 0204, E24					
0 R 111	57.60.1104	1 pce	100k	MF, 1%, 0204, E24					
0 RA 1	58.20.6701	1 pce	2*50k lin	2*R, Doppelachse					
0 RA 2	58.20.6503	1 pce	50k lin	1*R					
0 RA 3	58.20.6503	1 pce	50k lin	1*R					
0 RA 4	58.20.6503	1 pce	50k lin	1*R					
0 RA 5	58.20.6701	1 pce	2*50k lin	2*R, Doppelachse					
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0 S 2	55.15.0931	1 pce	2*u	rastend					
0 S 3	55.15.0931	1 pce	2*u	rastend					
0 XDL 4	53.03.0185	1 pce	20p	DIL 0.3", löt, winkel					

End of List

