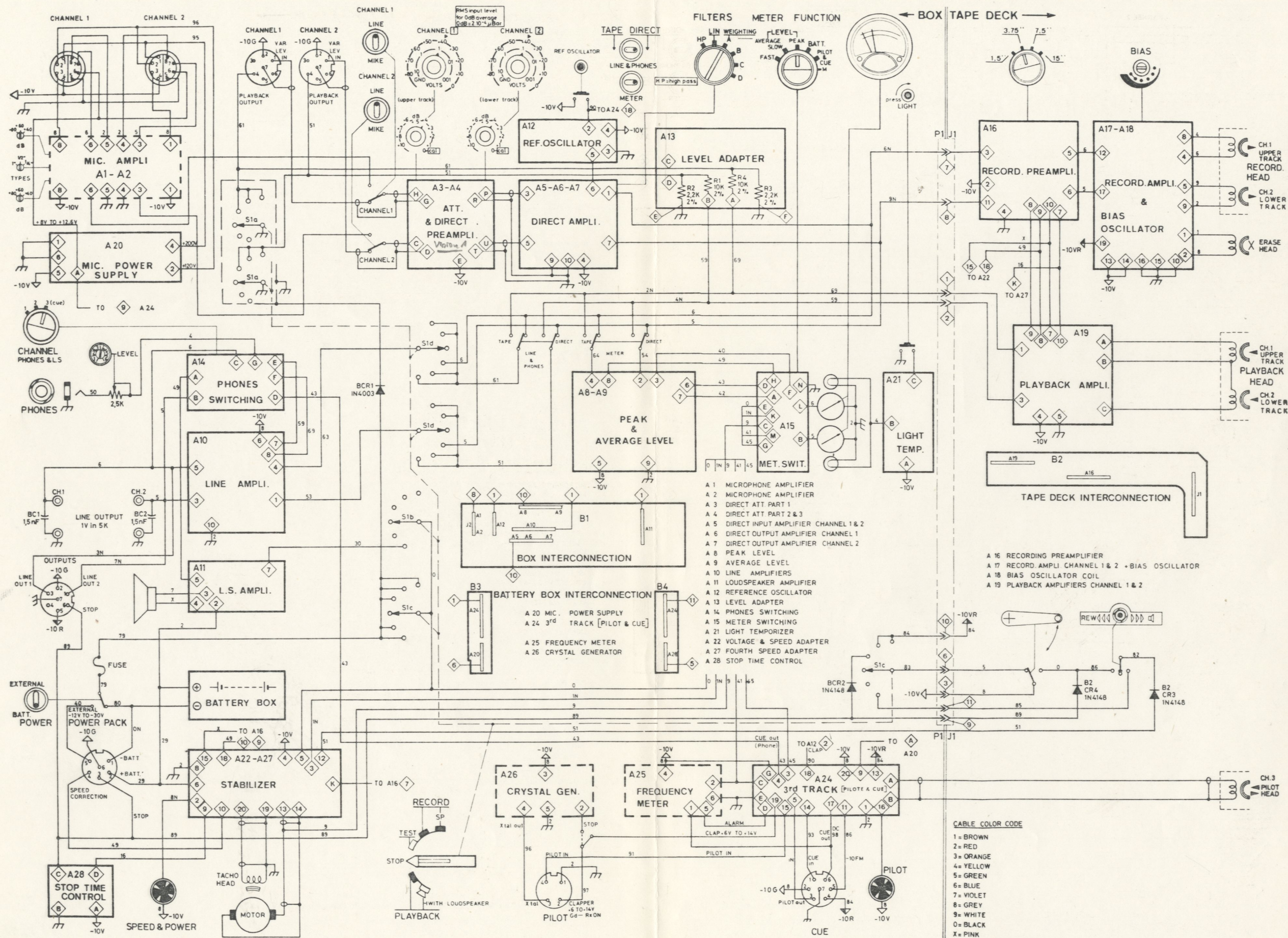
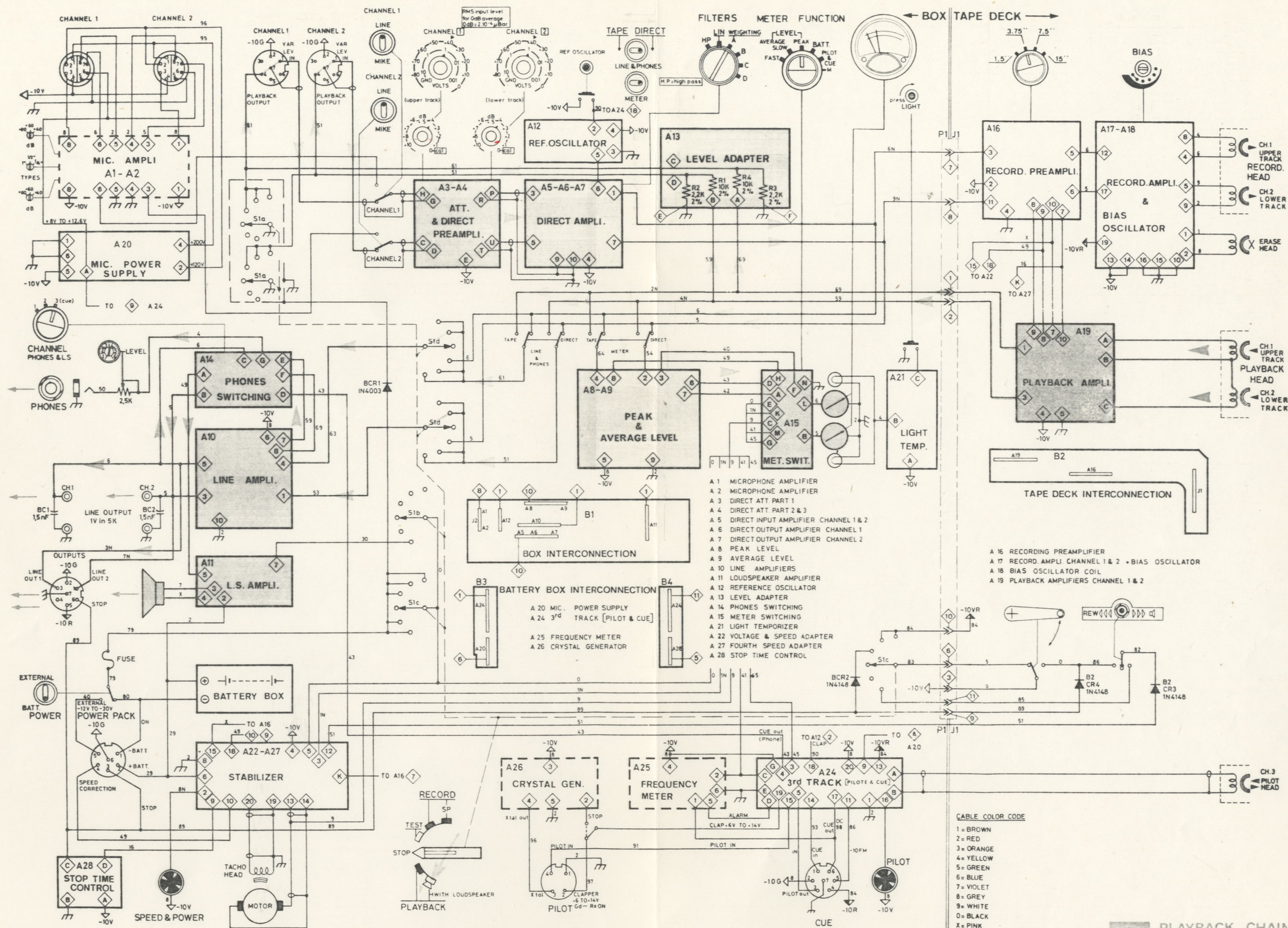
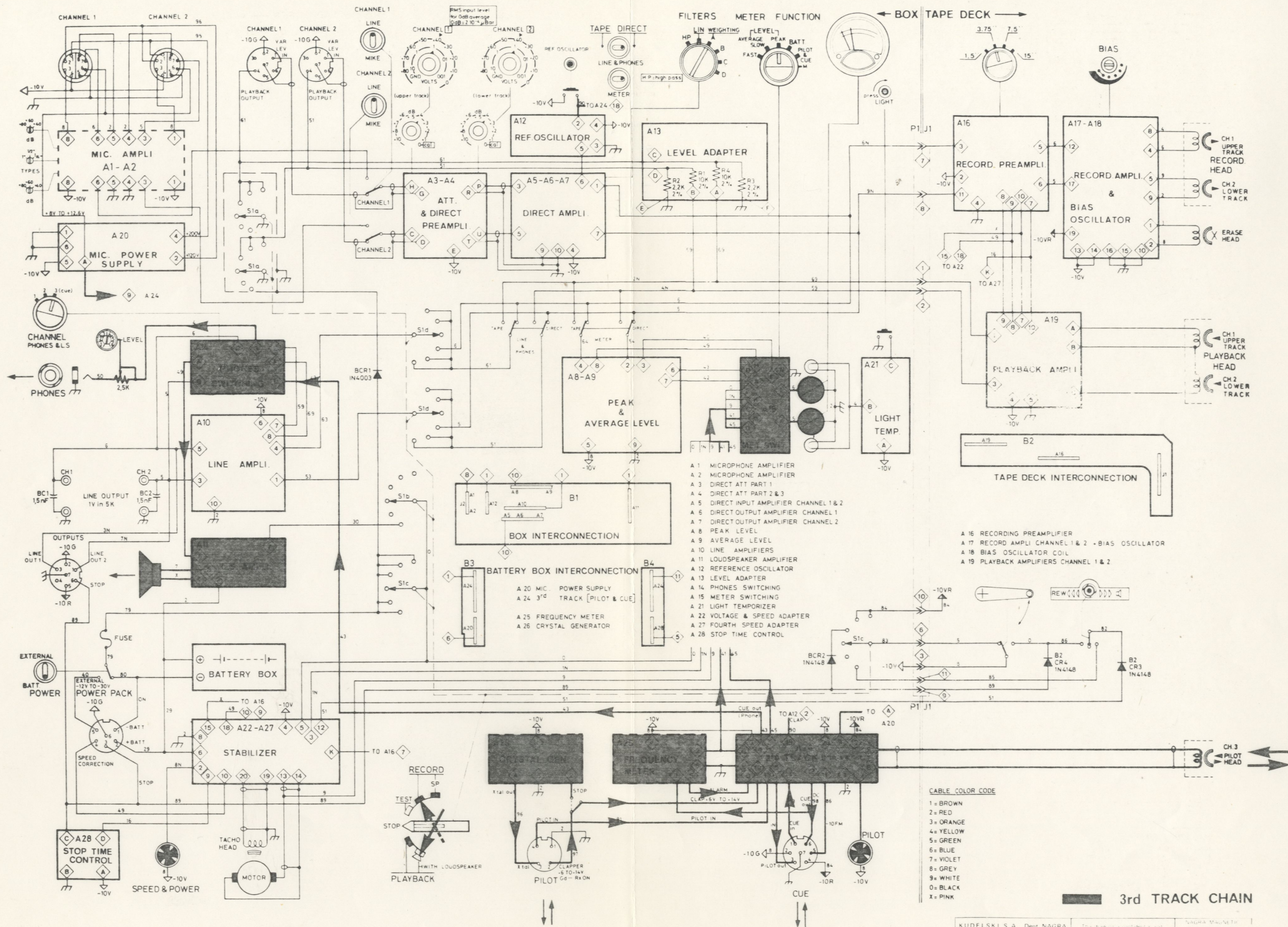


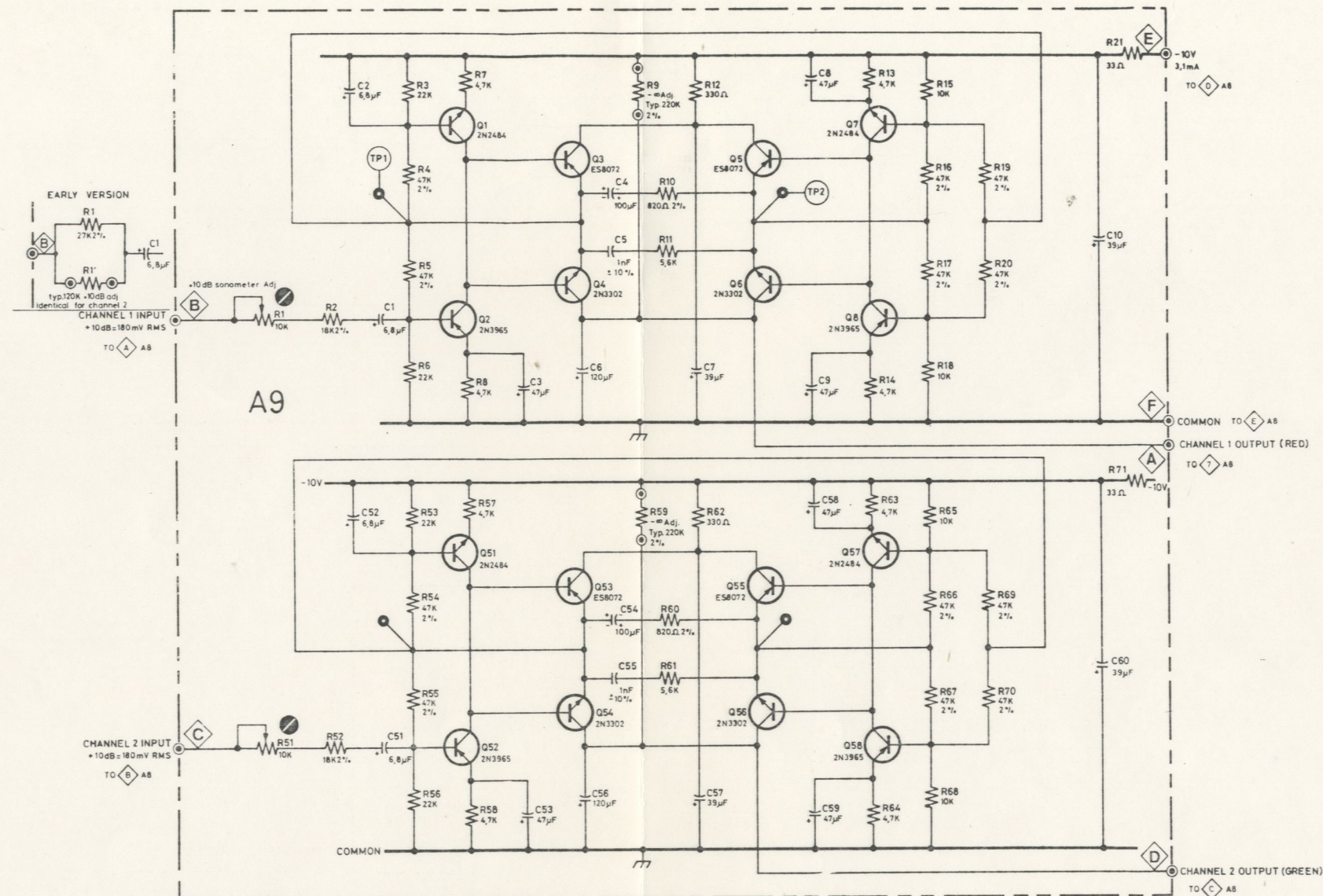






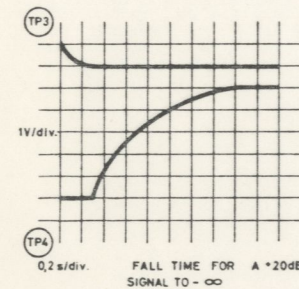
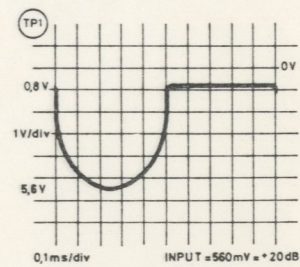
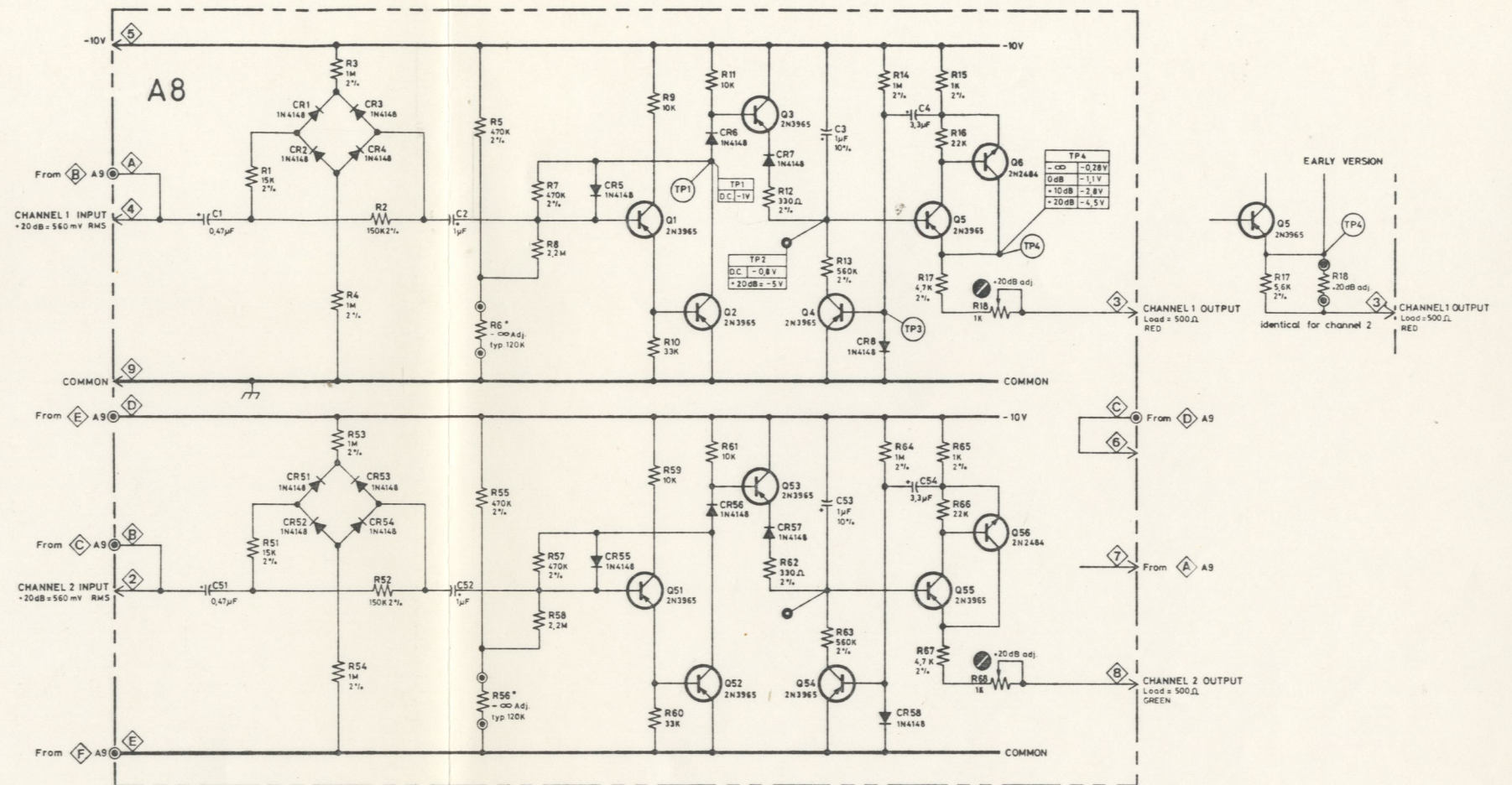


3rd TRACK CHAIN



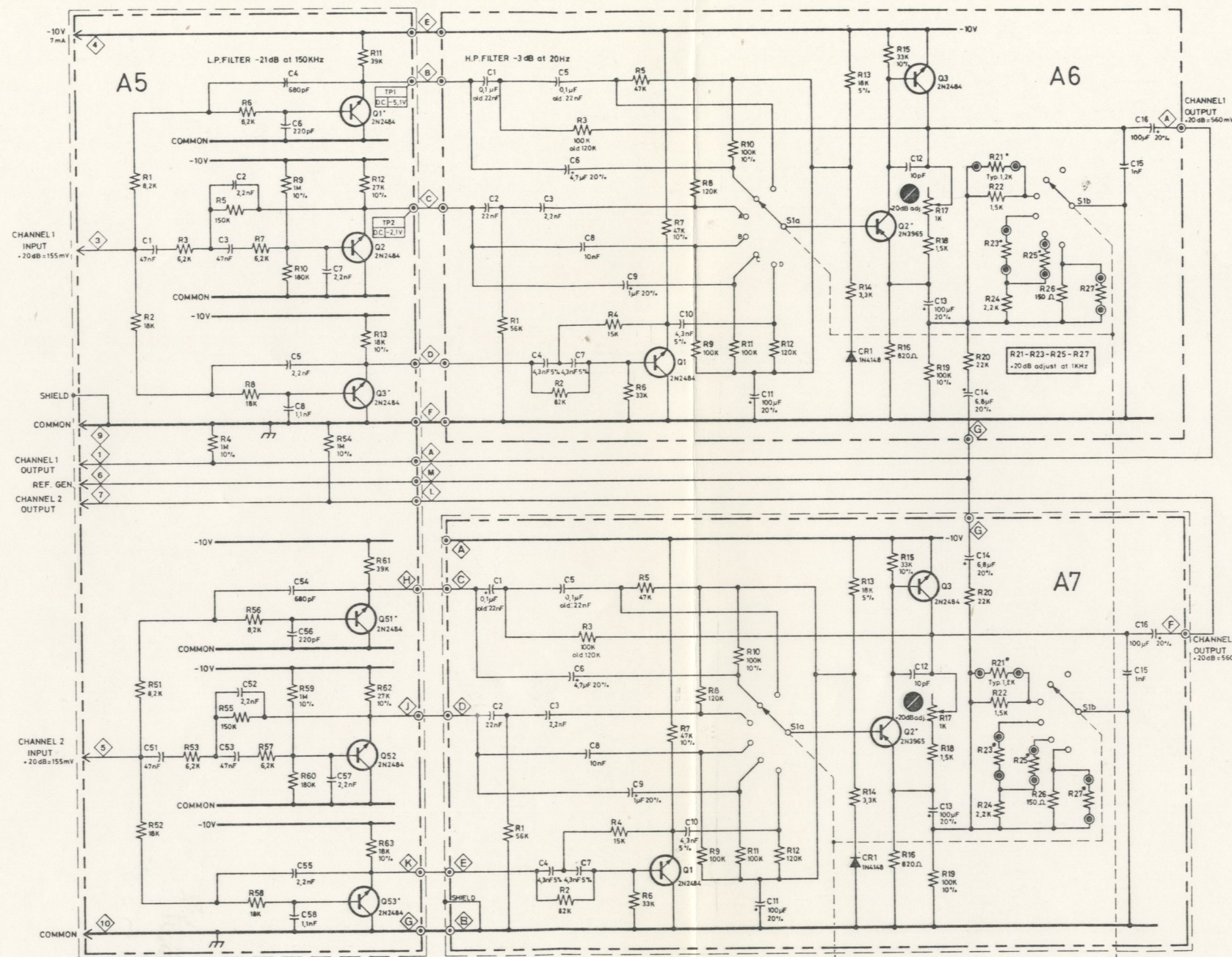
UNLESS SPECIFIED
ALL RESISTORS ALLEN-BRADLEY 1/4 W $\pm 10\%$
ALL CAPACITORS $\pm 20\%$
A.C. MEASUREMENT AT $f = 1\text{KHz}$
MEASURING INSTRUMENT
D.C. Voltmeter 40 000 Ω/V
A.C. Voltmeter
(e.g. Bruel & Kjaer type 2112 or 2506 ± 1615 or equivalent.)
Voltages may vary $\pm 10\%$

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NAGRA IV-SJ	09.01.102.0.00	2.11.72
AVERAGE LEVEL INDICATOR		

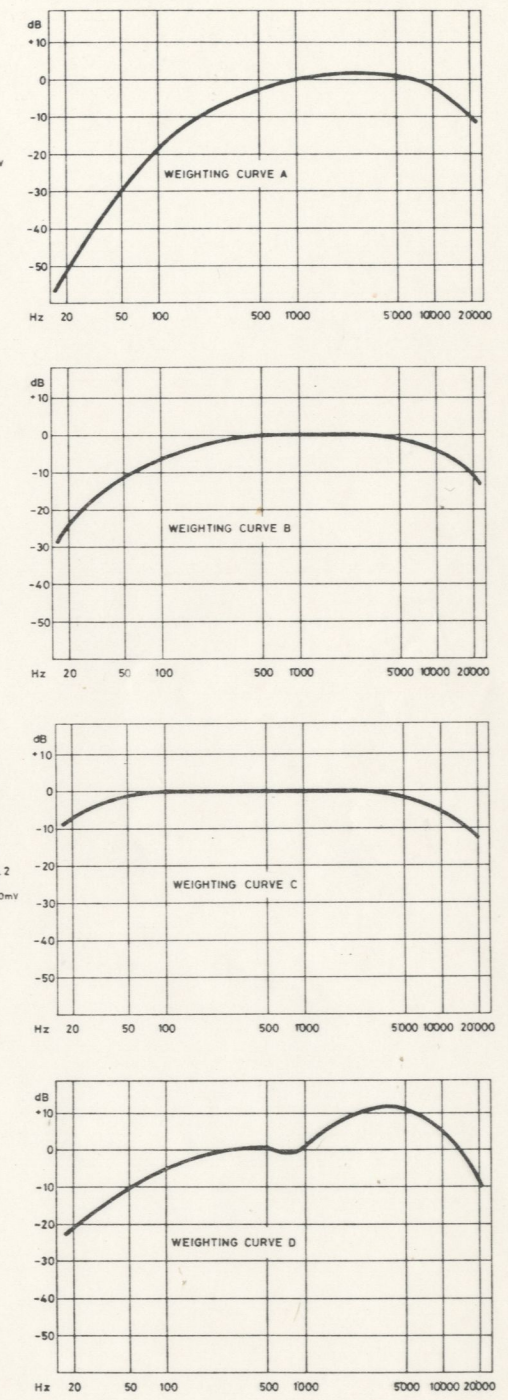
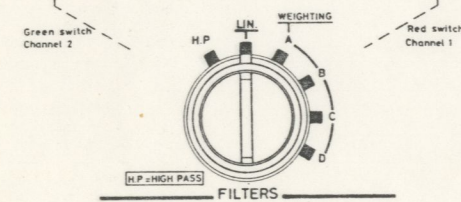


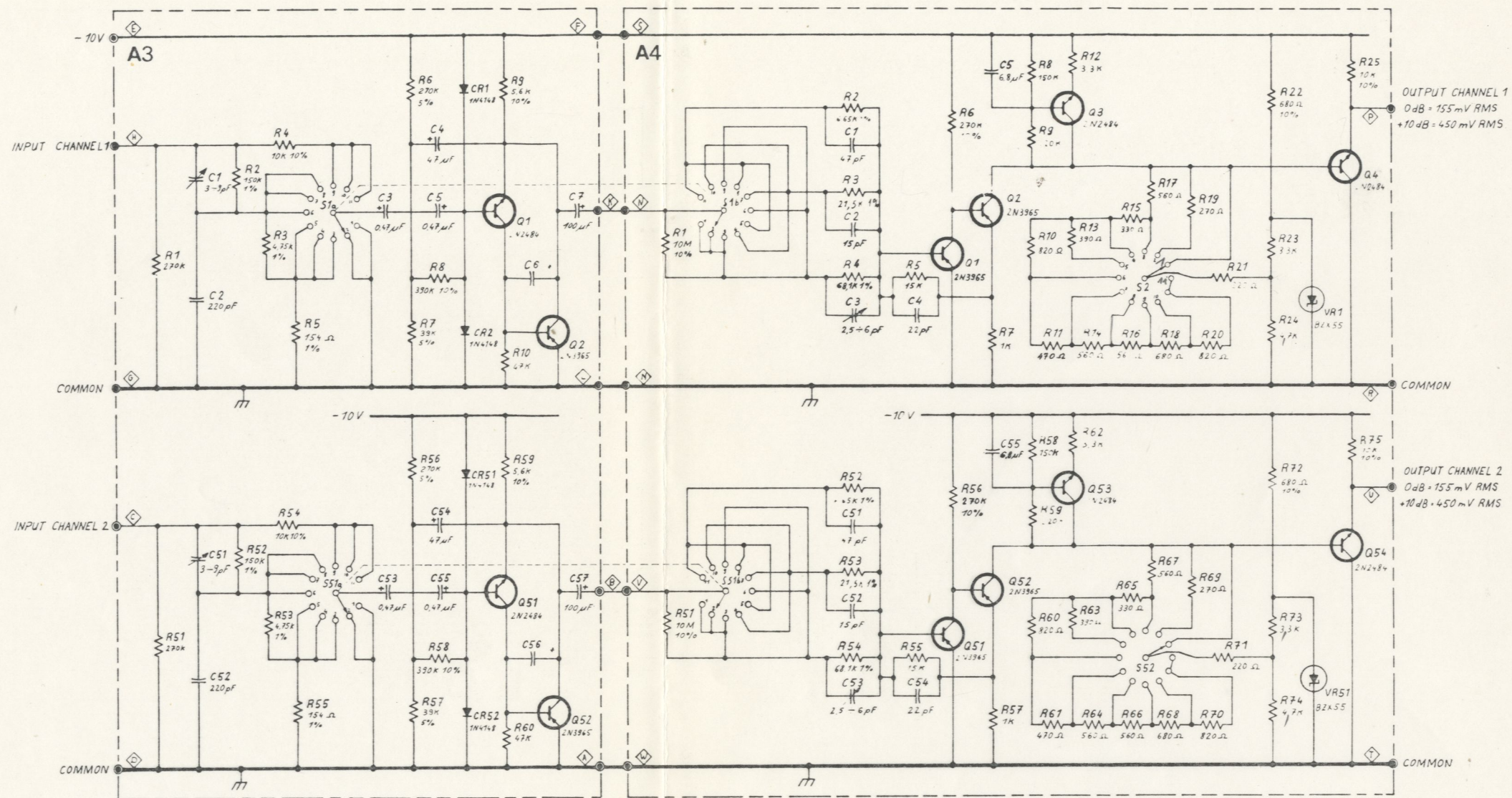
UNLESS SPECIFIED
ALL RESISTORS ALLEN-BRADLEY 1/4W ± 10%
ALL CAPACITORS ± 20%

MEASURING INSTRUMENT
D.C. Voltmeter 40 000 Ω/V
A.C. Voltmeter
(e.g. Brüel & Kjær type 2112 or 2606 * 1615 or equivalent.)
Voltages may vary ± 10%



UNLESS SPECIFIED
ALL RESISTORS OXYDE METAL $\pm 2\%$ 1/4 W
ALL CAPACITORS $\pm 10\%$
A5 = Q1-Q3
A6 = Q2
A7 = Q2
FACTORY SELECTED
MEASURING INSTRUMENT
D.C. Voltmeter 40 000 Ω/V
A.C. Voltmeter
(e.g. Bruel & Kjaer type 2112 or 2606-1615 or equivalent.)
Voltages may vary $\pm 10\%$



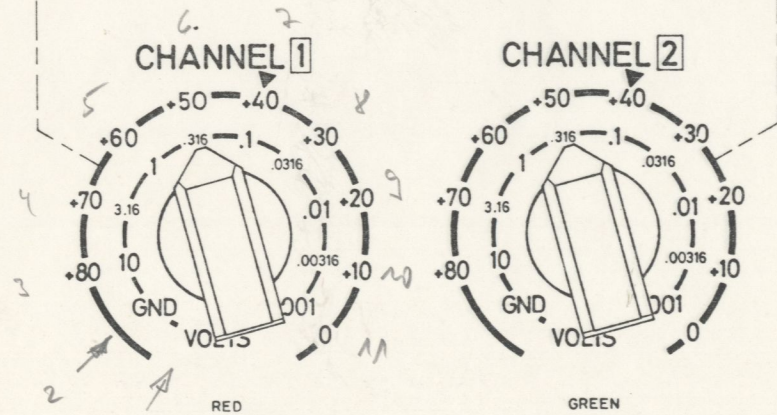
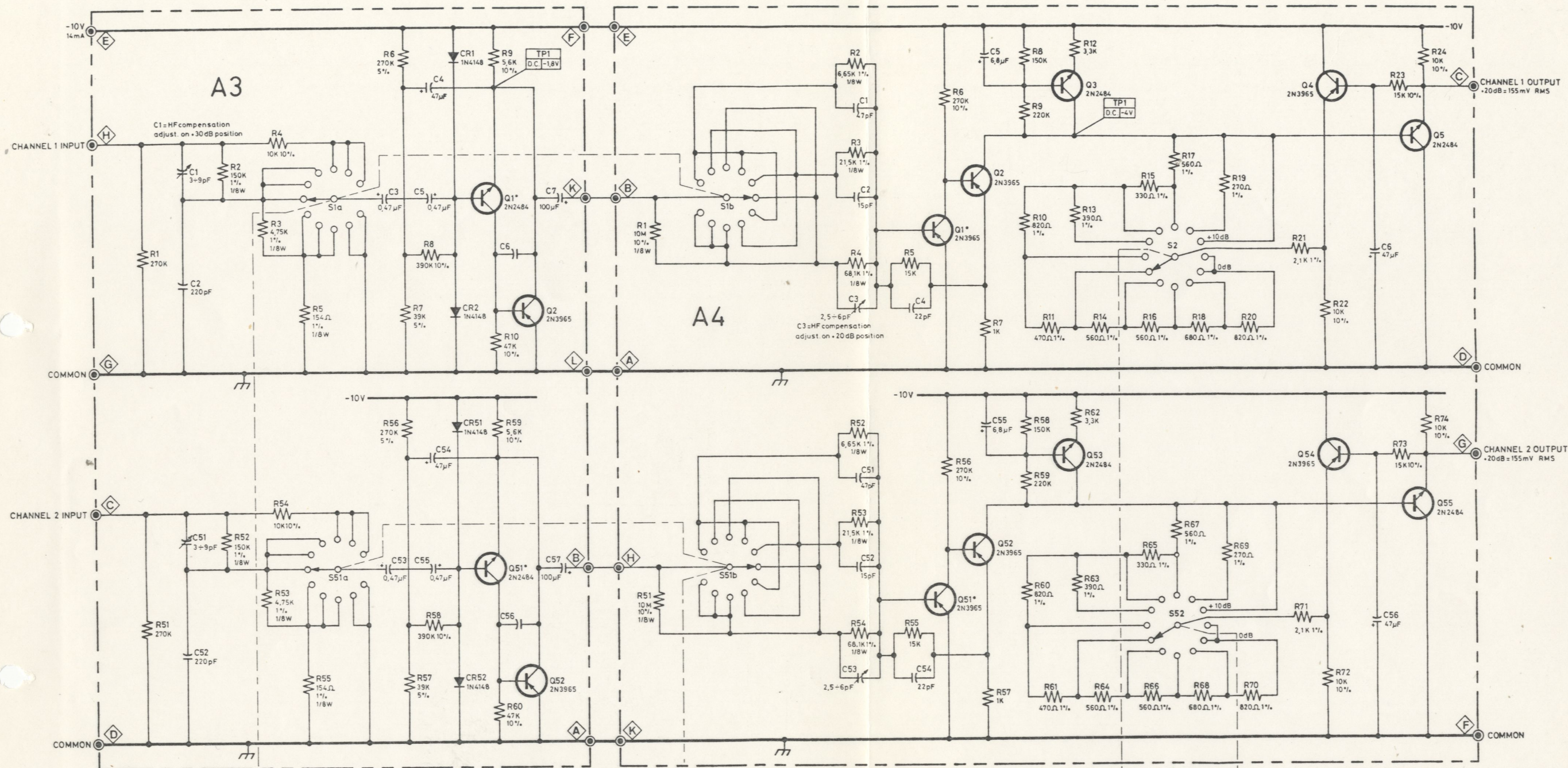


UNLESS SPECIFIED
ALL RESISTORS METAL OXIDE 2% 1/4 W
ALL CAPACITORS ± 10%

Slider Stepping 1, 2 Gain
2 40 dB
4 70 dB
5 60 dB
:

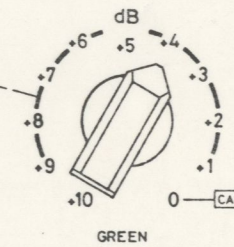
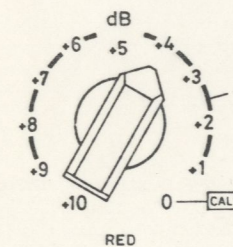
Sr. A3/A4
Version 2

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NAGRA IV-SJ	09.01.115.0.00	10.5.72
ATTENUATOR & DIRECT PREAMPLIFIER (VERSION 1)		

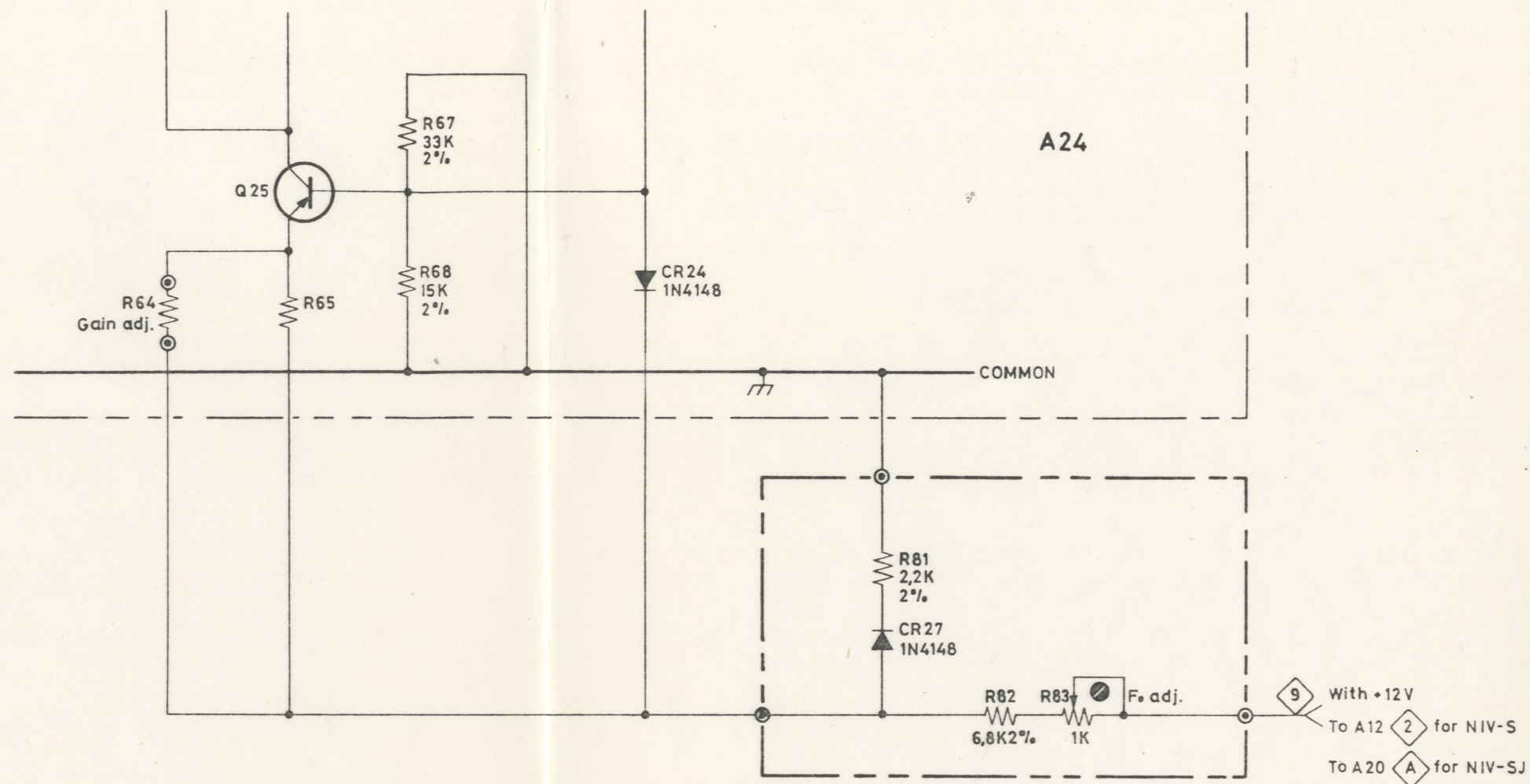


UNLESS SPECIFIED
ALL RESISTORS METAL OXIDE 1/4W ± 2%
ALL CAPACITORS ± 20%
Q1* Q51 (2x) FACTORY SELECTED

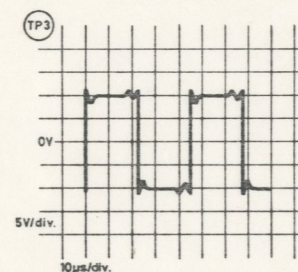
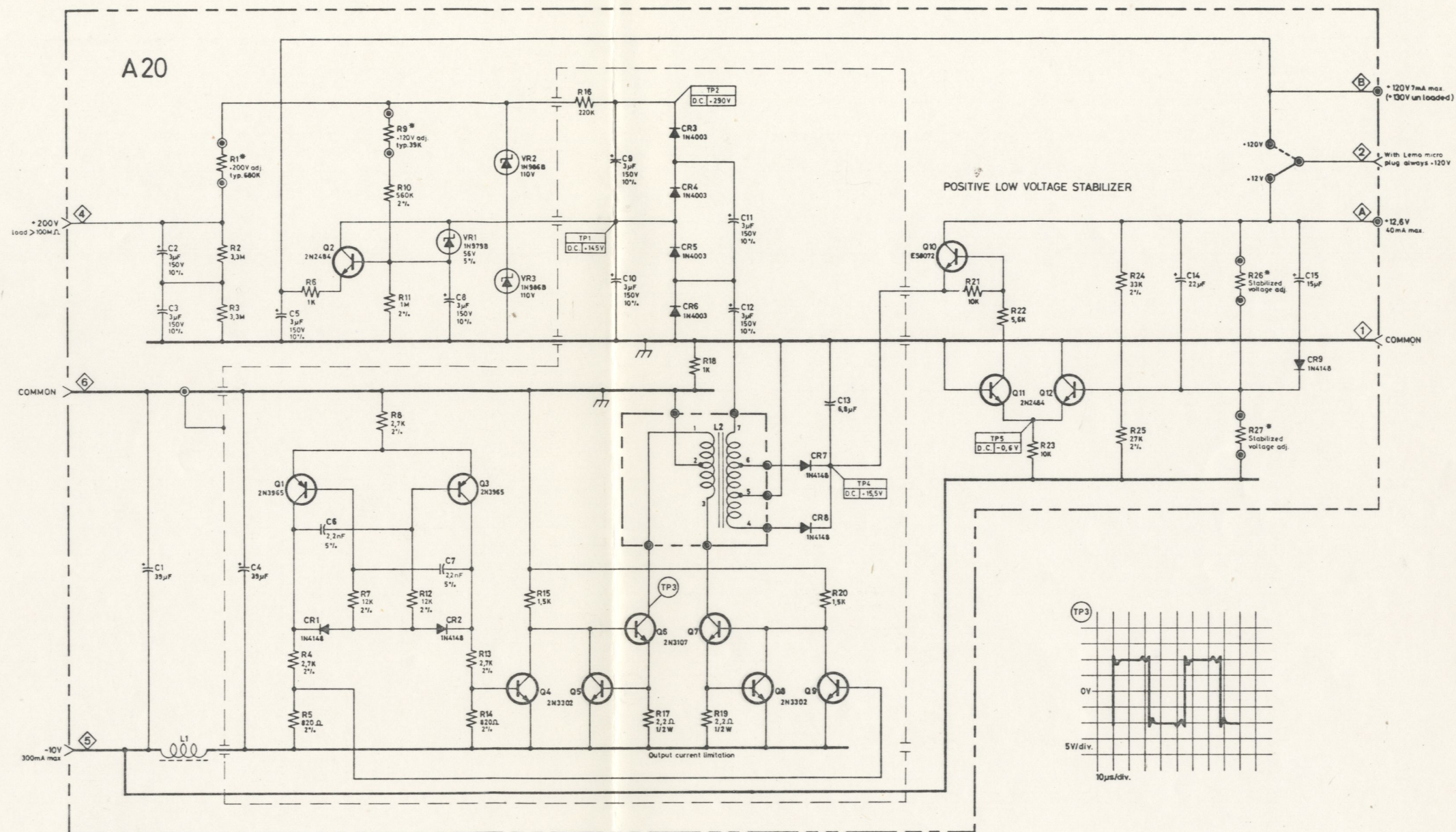
MEASURING INSTRUMENT
D.C. Voltmeter 40 000 Ω/V
A.C. Voltmeter
(e.g. Bruel & Kjaer type 2112 or 2606 + 1615 or equivalent.)
Voltages may vary ± 10%

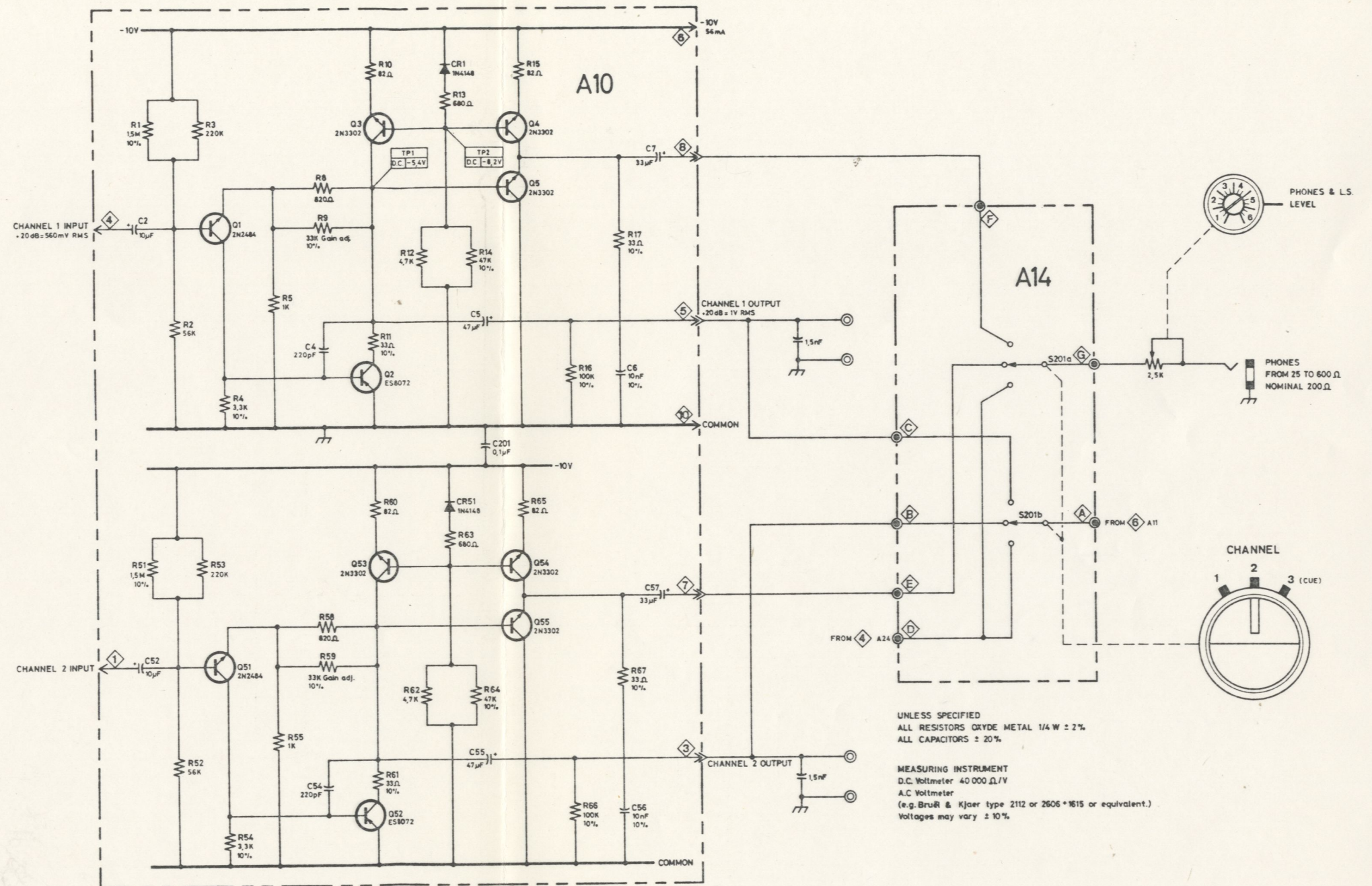


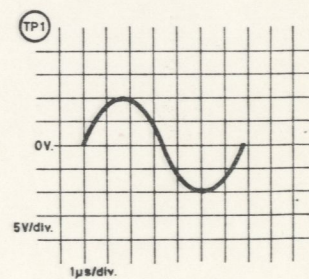
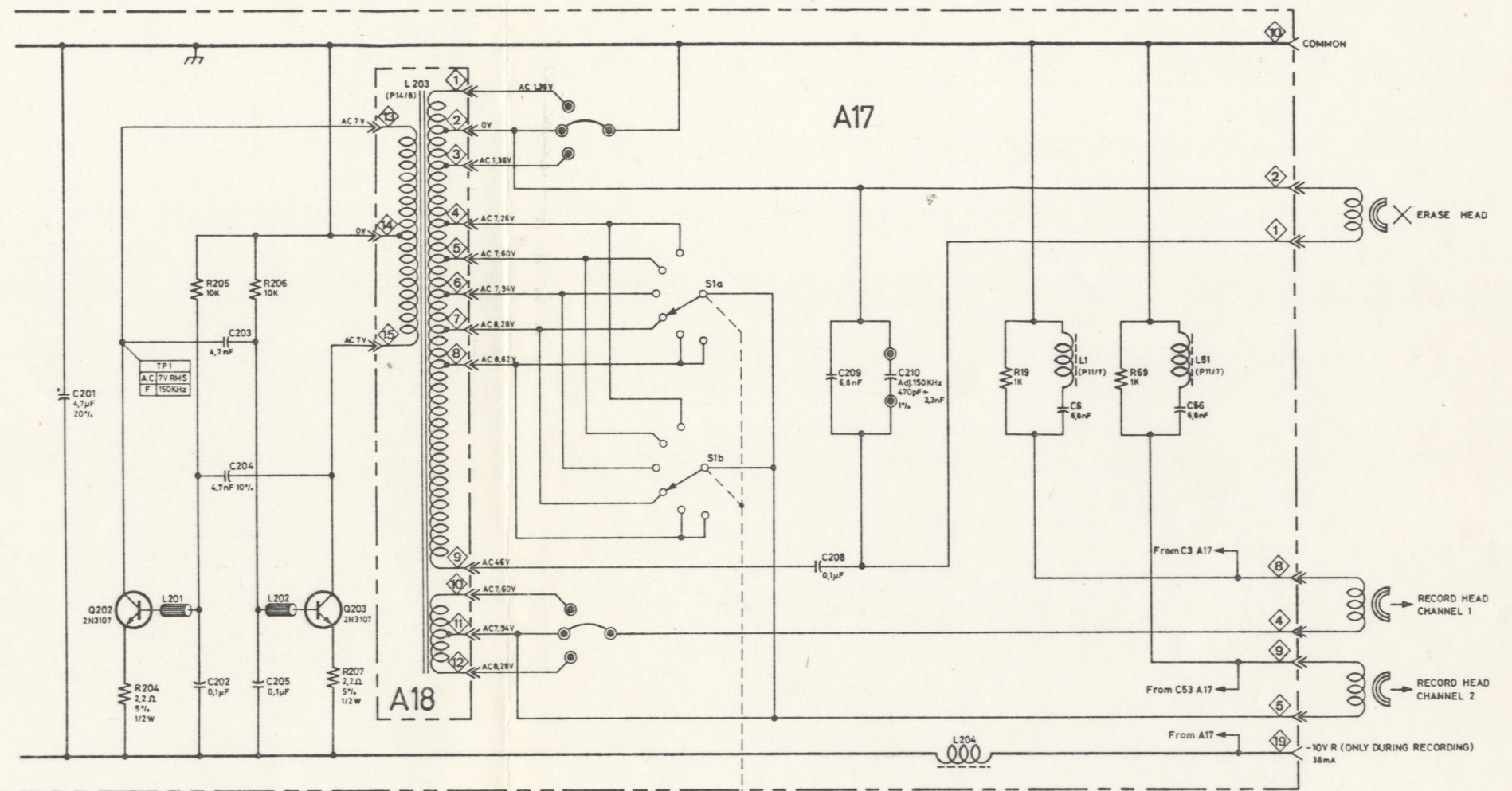
KUDELSKI S.A. Dept. NAGRA CH-1033 CHESEAUX Switzerland	This drawing is confidential and may not be divulged in whole or in part to a third party	NAGRA MAGNETIC RECORDERS INC. 33 West 44th Street NEW YORK, N.Y. 10036
NAGRA IV-SJ	09.01.115.0.00	20.11.72
ATTENUATOR & DIRECT PREAMPLIFIER (VERSION 2)		



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NAGRA IV-SJ	09.01.124.0.00	27.3.73
CUE D.C. ADAPTER		



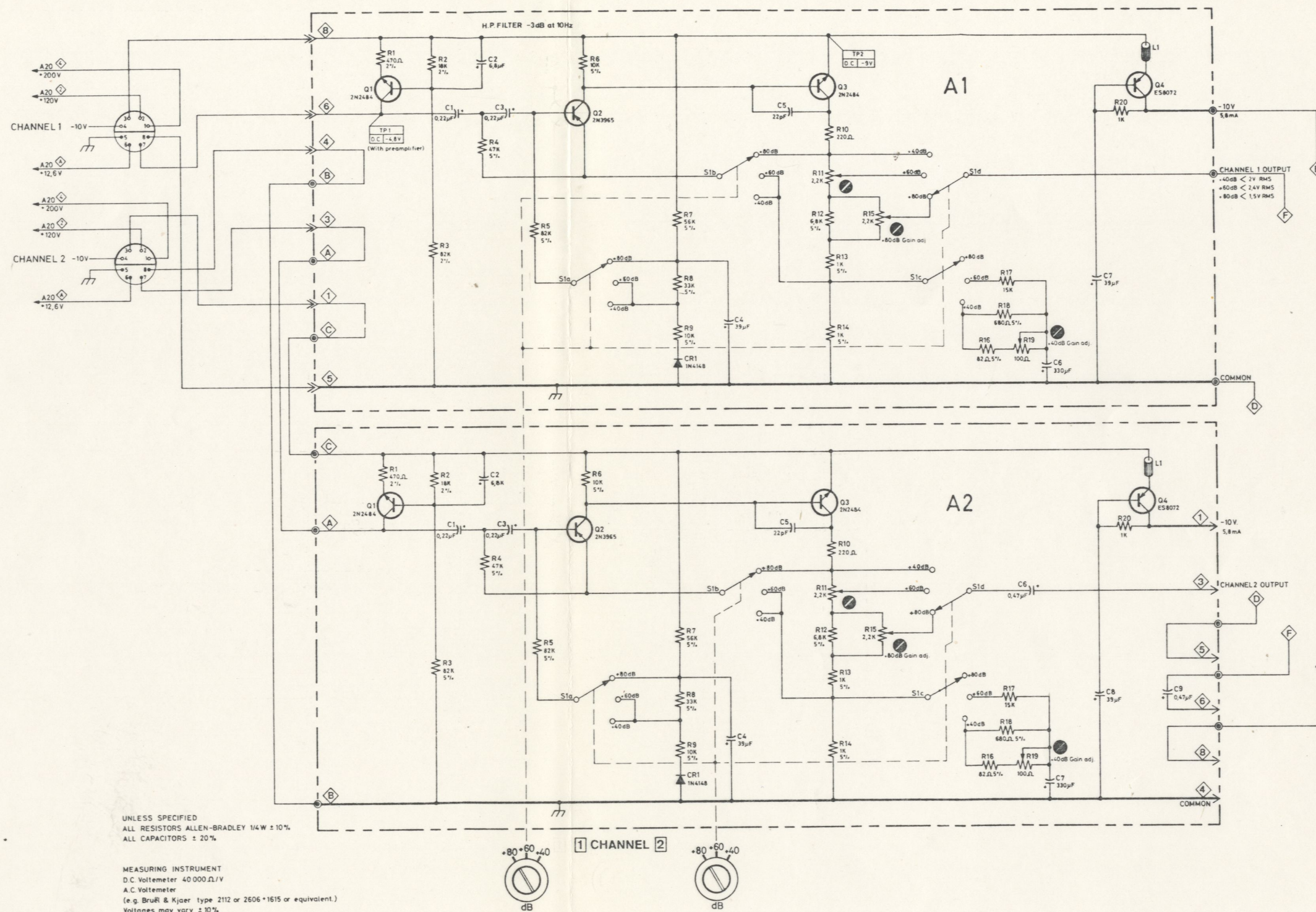




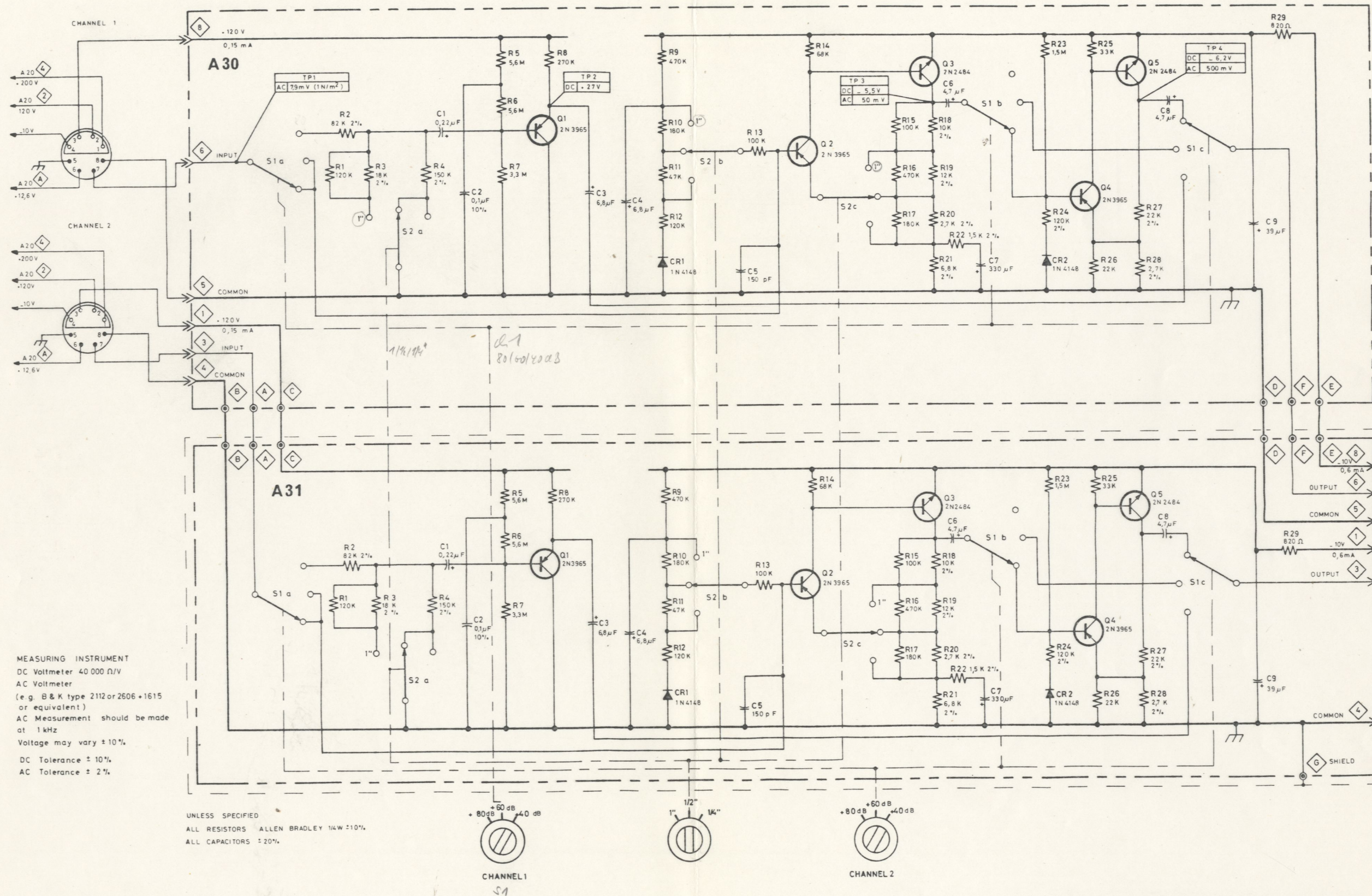
UNLESS SPECIFIED
ALL RESISTORS ALLEN-BRADLEY 1/4 W ± 10%
ALL CAPACITORS ± 10%

MEASURING INSTRUMENT
D.C. Voltmeter 40 000 Ω/V
A.C. Voltmeter
(e.g. Bruël & Kjaer type 2112 or 2606 * 1615 or equivalent.)
Voltages may vary ± 10%

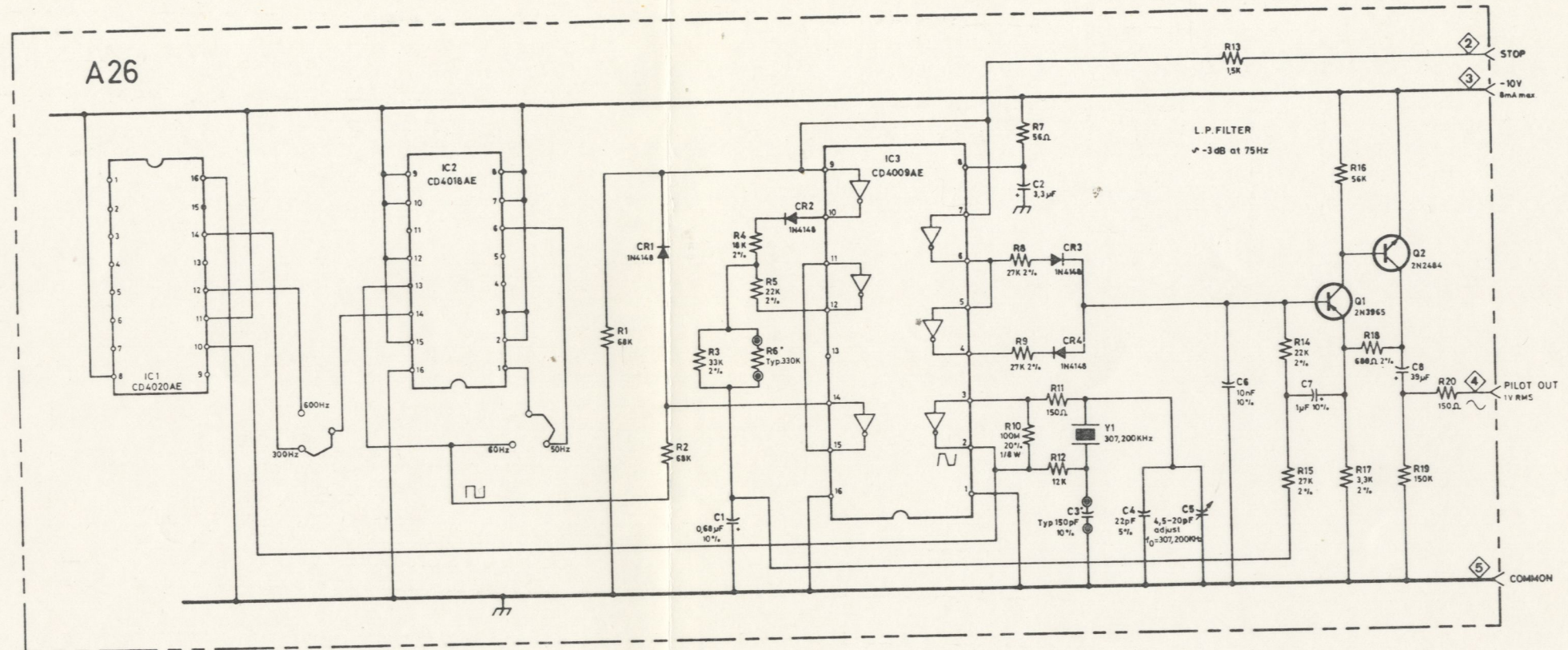
KUDELSKI S.A. Dept. NAGRA CH-1033 CHESEAUX Switzerland	This drawing is confidential and may not be divulged in whole or in part to a third party	NAGRA MAGNETIC RECORDERS INC. 19 West 44th Street NEW YORK, N.Y. 10 036
NAGRA IV-SJ	09.01.160.0.00	23.11.72
BIAS OSCILLATOR		



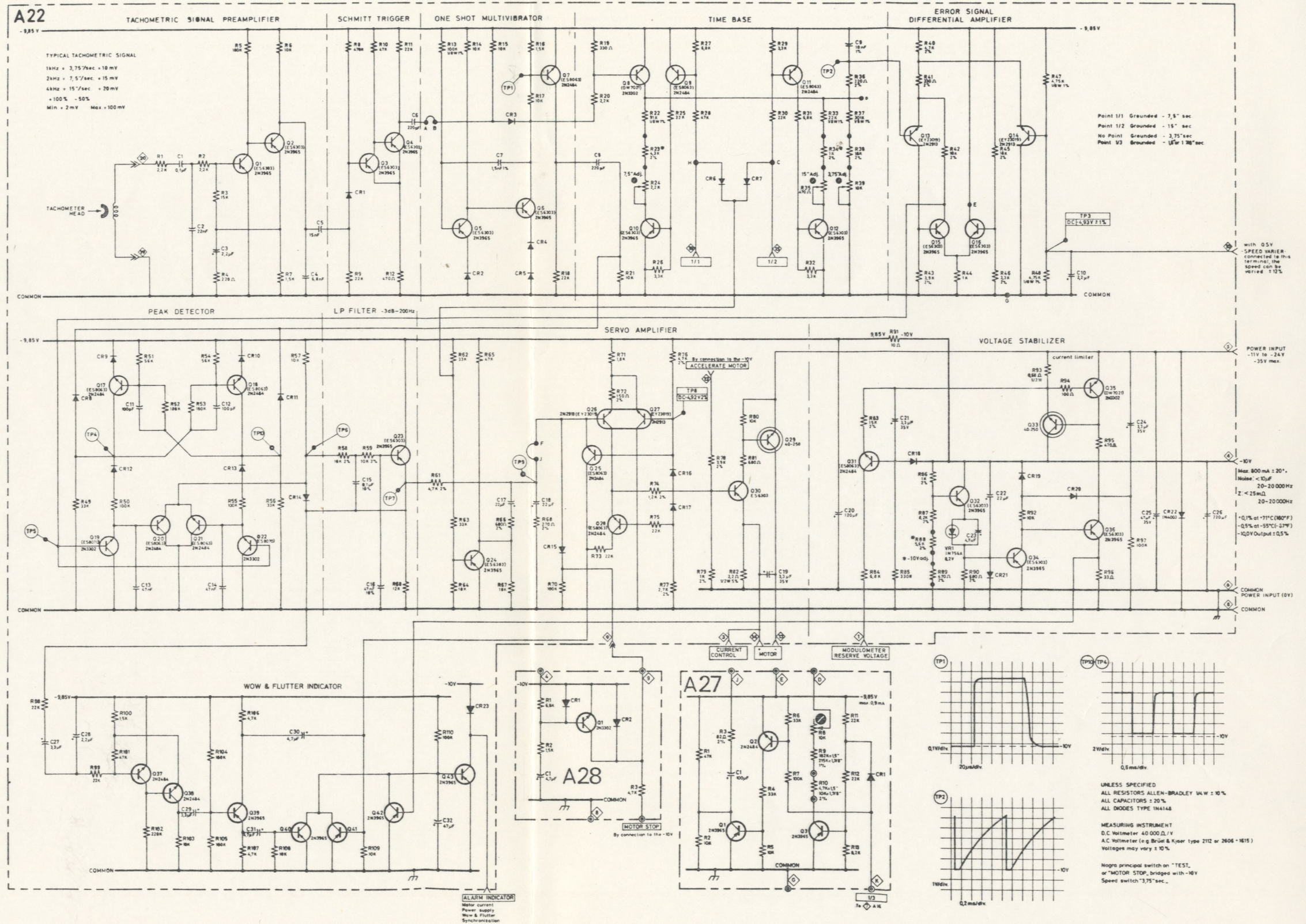
KUDELSKI S.A. Dept. NAGRA CH-1033 CHESEAUX Switzerland	This drawing is confidential and may not be divulged in whole or in part to a third party	NAGRA MAGNETIC RECORDERS INC. 18 West 44th Street NEW YORK, N.Y. 10 036
NAGRA IV-SJ	09.01.165.0.00	15.2.73
MICROPHONE AMPLIFIER QSJA-SK		



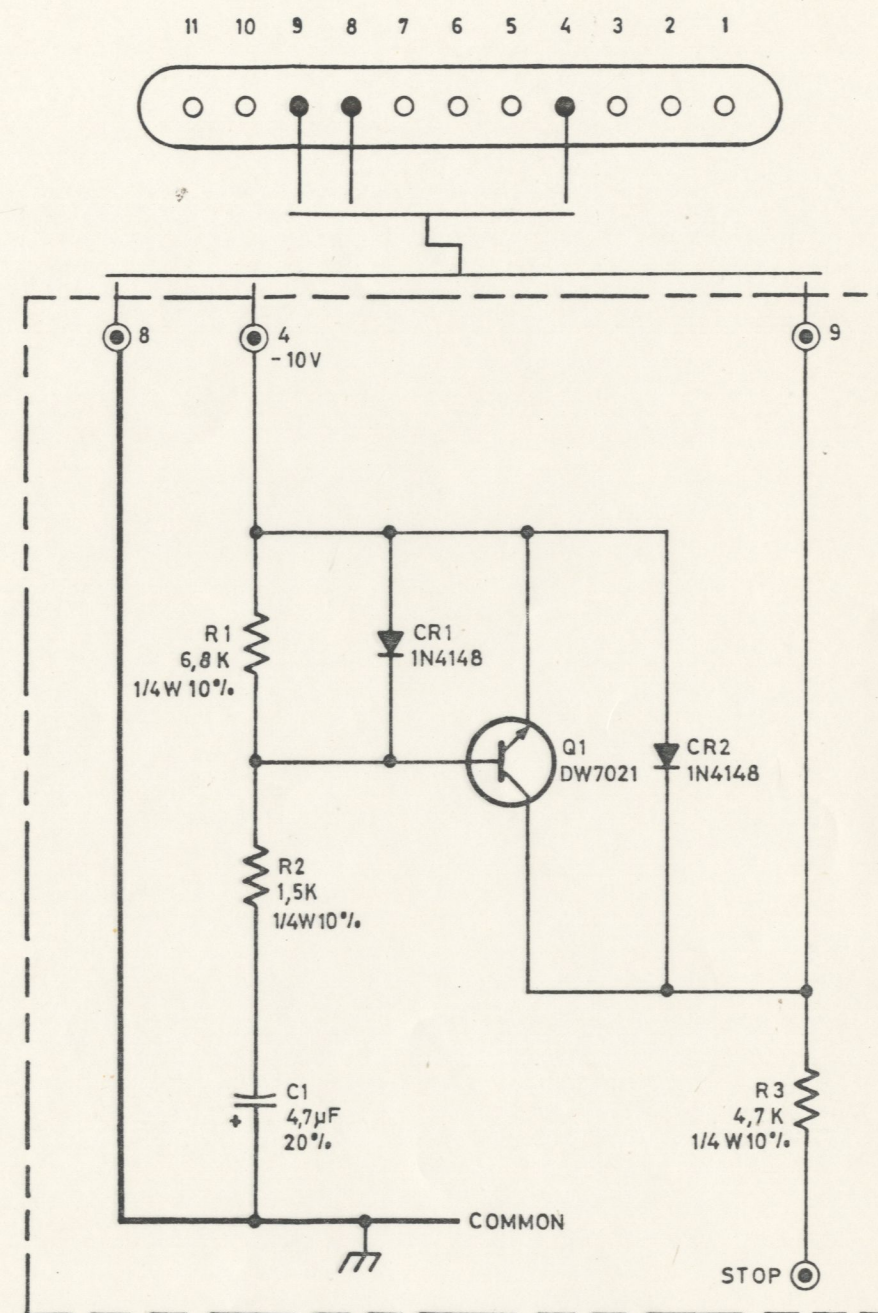
KUDELSKI S.A. Dept. NAGRA CH-1033 CHESEAUX Switzerland	This drawing is confidential and may not be divulged in whole or in part to a third party	NAGRA MAGNETIC RECORDERS INC. 19 West 44th Street NEW YORK, N.Y. 10 036
NAGRA IV-SJ	09.01.170.0.00	2.7.73
MICROPHONE AMPLIFIER QSJA-BK		



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NAGRA IV-SJ	09.04.699.0.00	20.12.72
CRYSTAL PILOT GENERATOR		



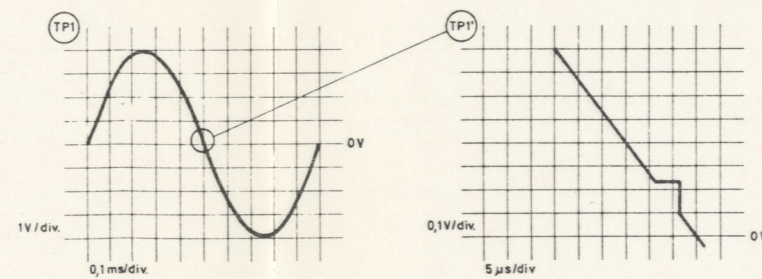
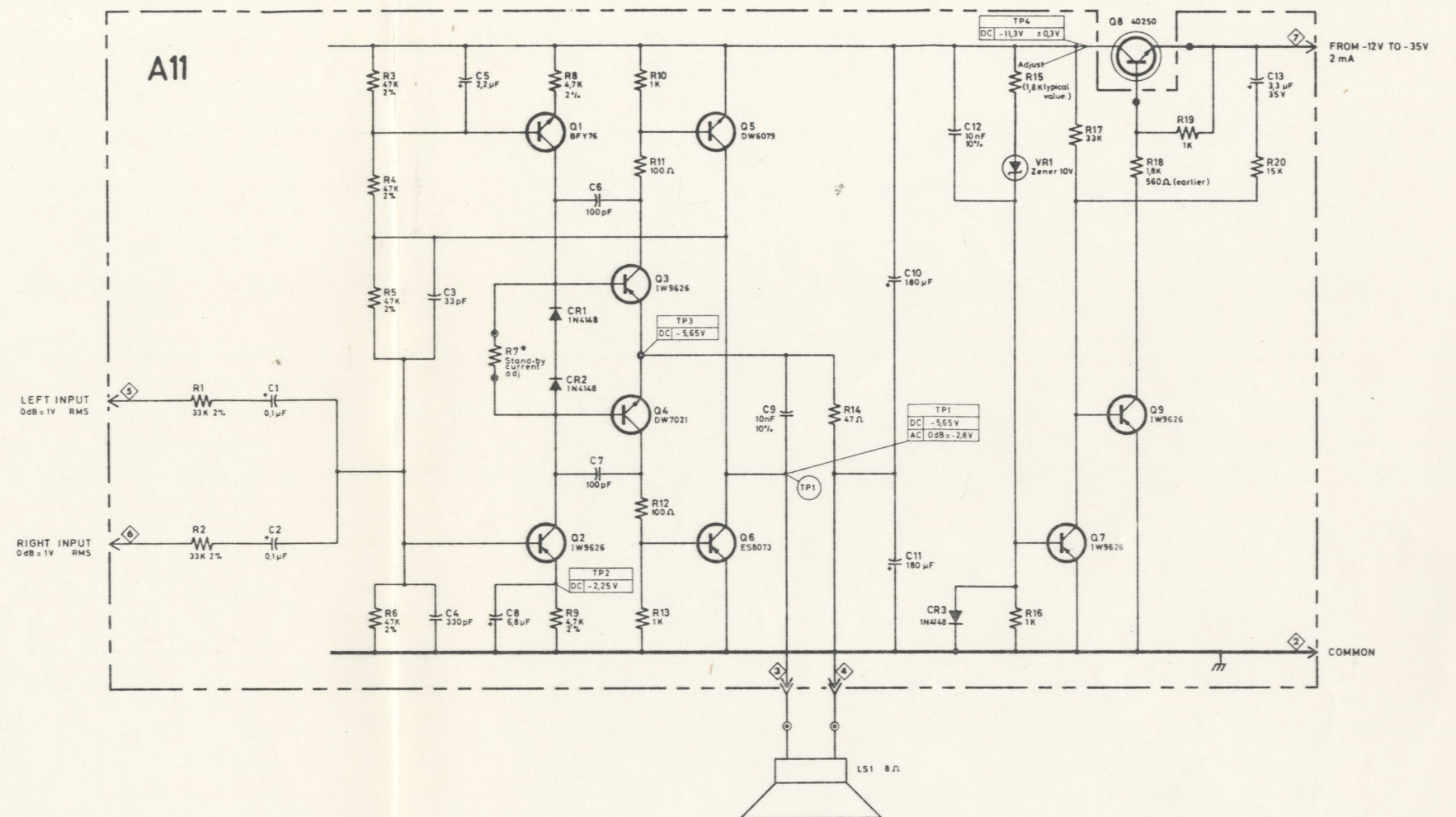
STABILIZER PLUG A28



R3 in circuit STOP TIME CONTROL takes place of R69 in circuit VOLTAGE & SPEED STABILIZER, i.e. R69 is replaced by a bridge.

FOR SPEED 1,5" ONLY

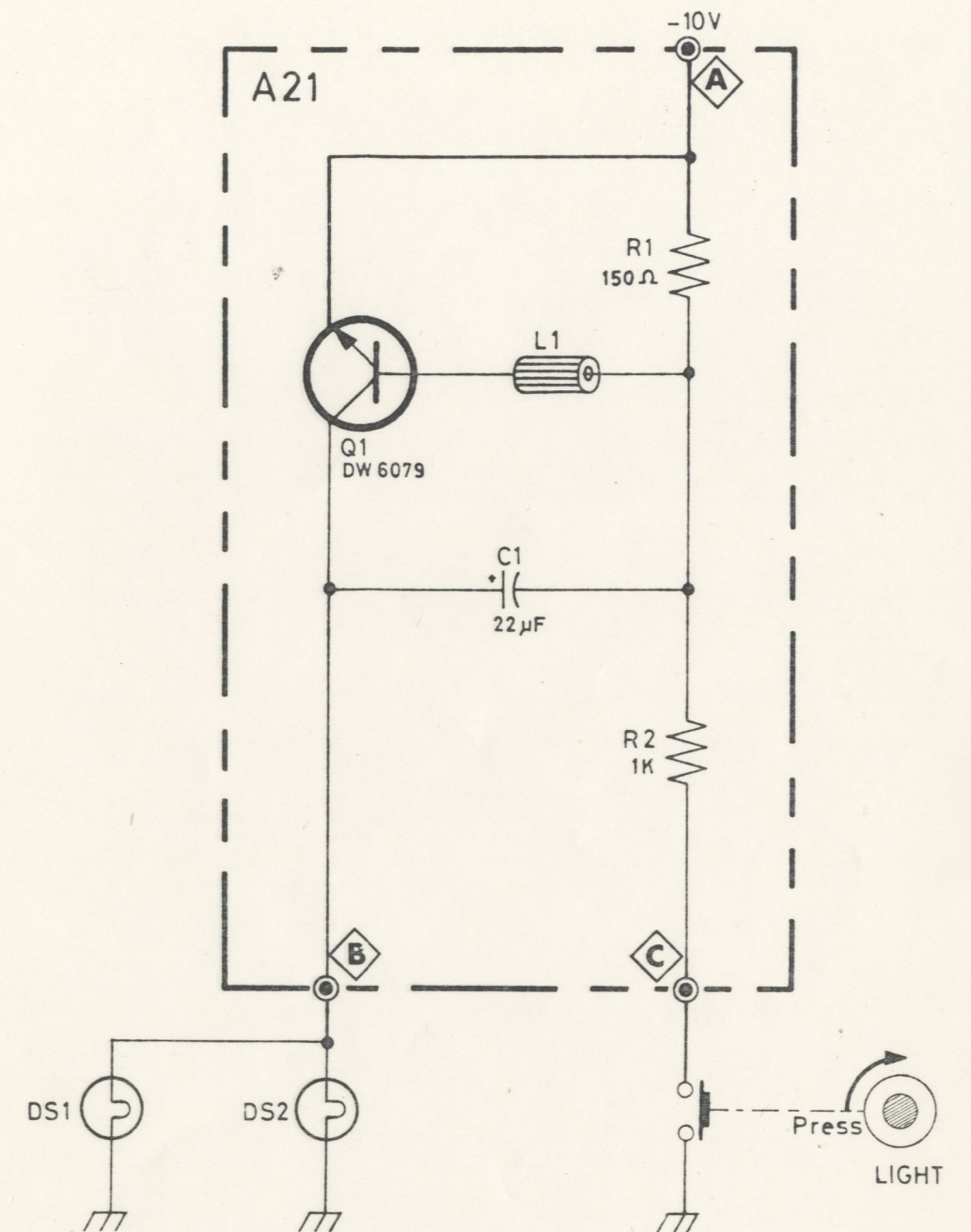
KUDELSKI S. A. Dept. NAGRA CH-1033 CHESEAUX Switzerland	This drawing is confidential and may not be divulged in whole or in part to a third party	NAGRA MAGNETIC RECORDERS INC 19 West 44th Street NEW YORK, N.Y. 10 036
NAGRA IV-SJ	09.04.768.0.00	20.1.72
STOP TIME CONTROL		



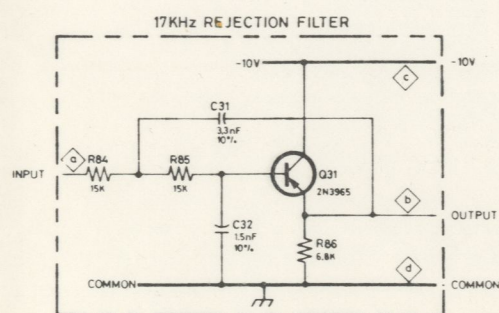
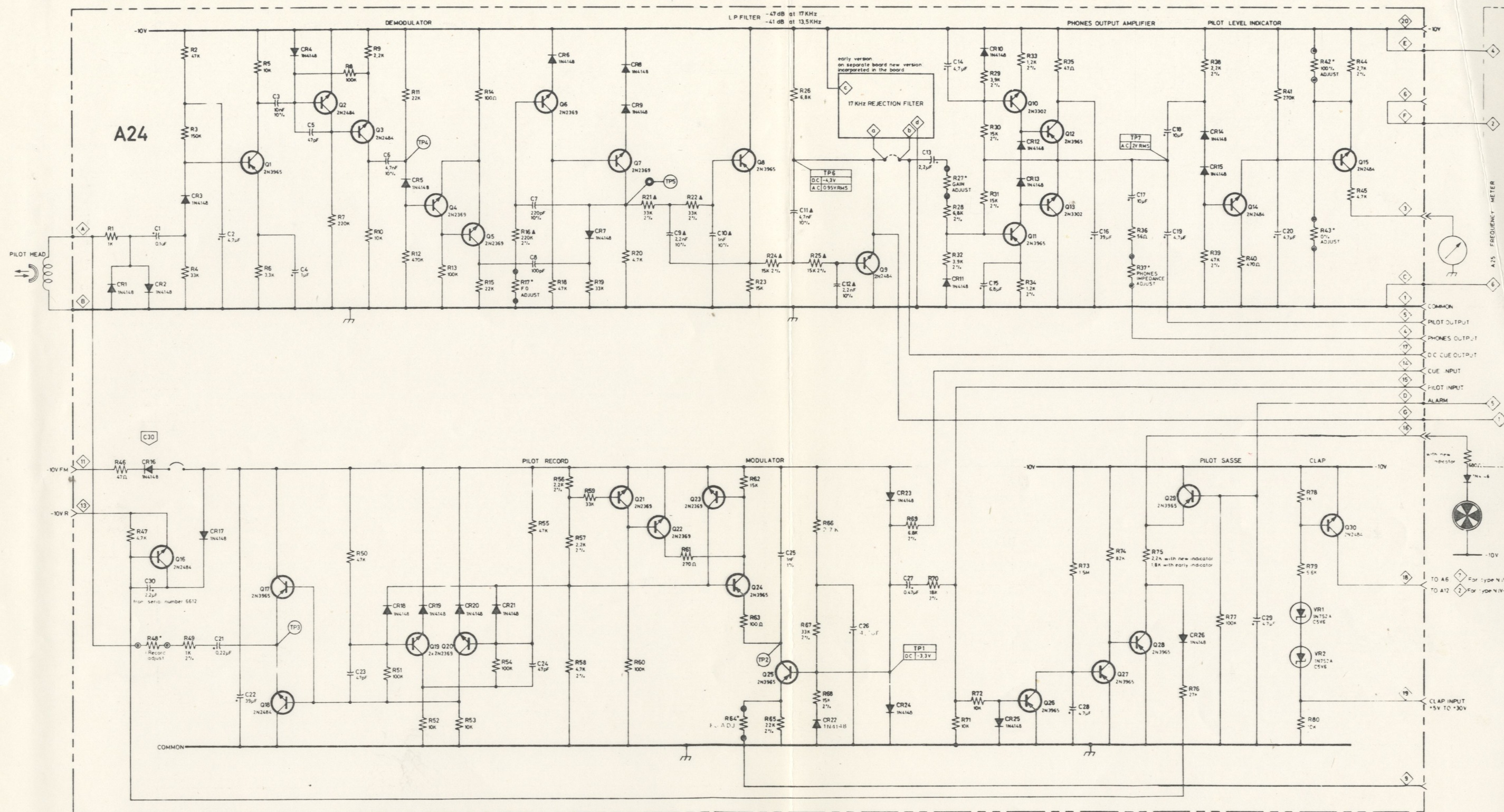
MEASURING INSTRUMENTS
D.C. VOLTMETER 40'000 Ω/V
A.C. VOLTMETER
(e.g. Brüel & Kjær type 2112 or 2606 + 1615
or equivalent)
Voltages may vary ± 10%
A.C. MEASUREMENT SHOULD BE MADE AT 1kHz

UNLESS SPECIFIED
ALL RESISTORS ALLEN BRADLEY 1/4W ± 10%
ALL CAPACITORS ± 20%

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NAGRA IV-SJ		09.06.750.0.00 7.6.71
L.S. AMPLIFIER		

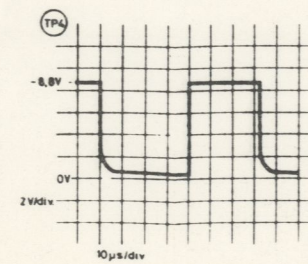
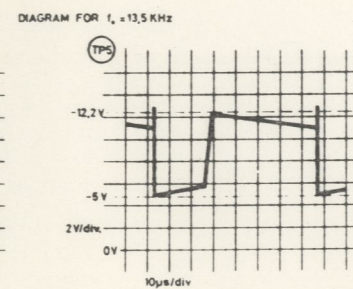
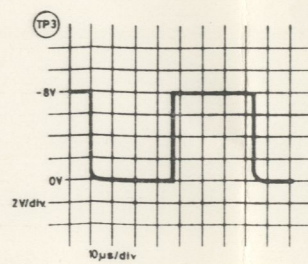
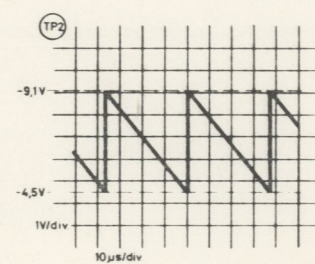


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NAGRA IV-SJ	09.06.755.0.00	5.7.71
LIGHT TEMPORIZER		



A MODIFICATION FOR PILOT VERSION 17KHz

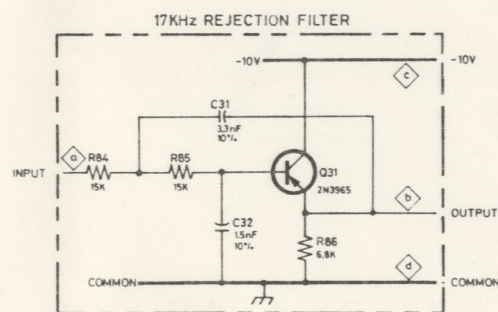
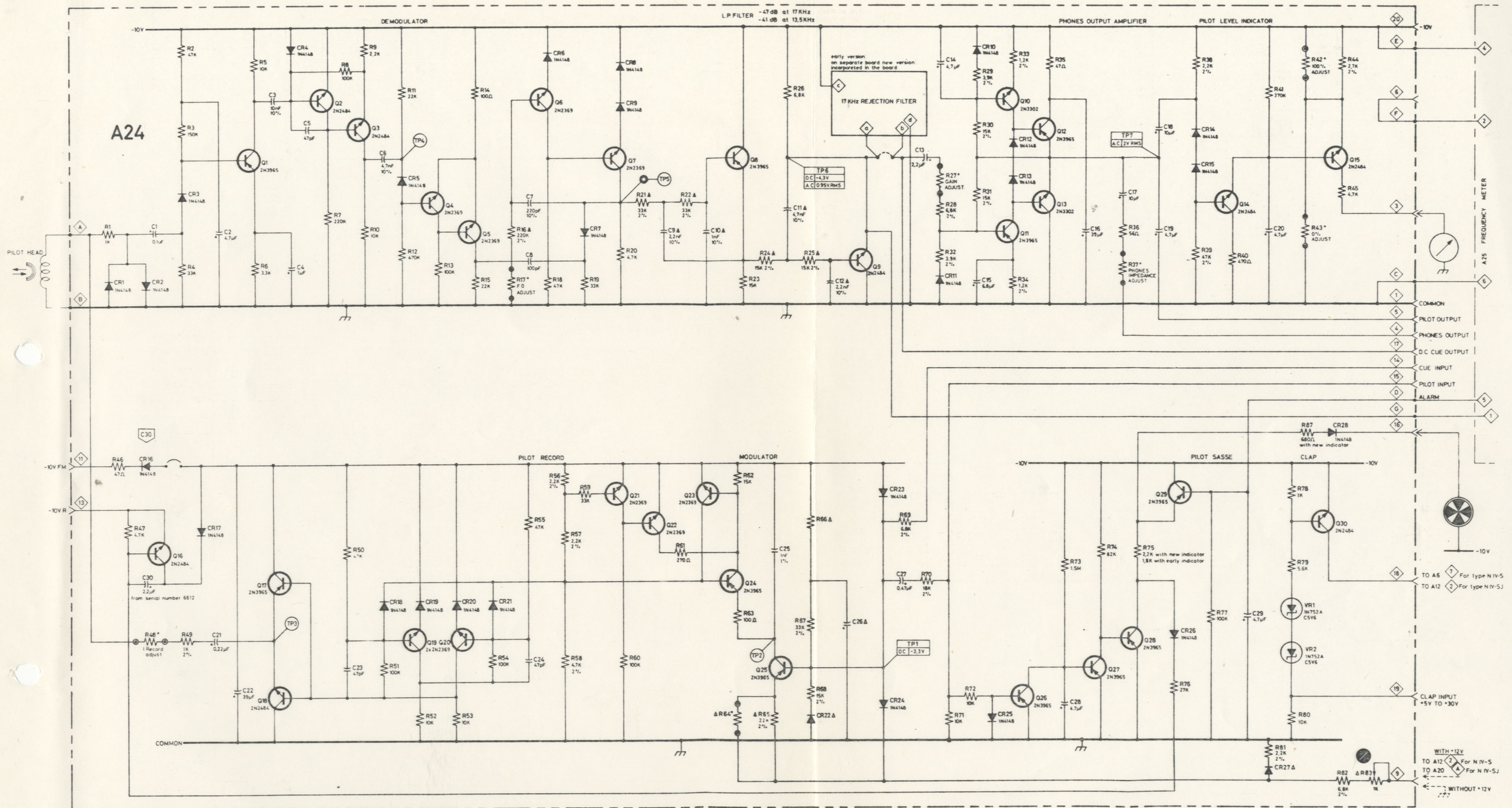
C9	1nF 10%	R16	180K 2%
C10	470pF 10%	R21	39K 2%
C11	2.2nF 10%	R22	39K 2%
C12	1nF 10%	R24	18K 2%
		R25	18K 2%
		R65	18K 2%



UNLESS SPECIFIED
ALL RESISTORS ALLEN-BRADLEY 1/4 W ± 10%
ALL CAPACITORS ± 20%

A.C. MEASUREMENT FOR $A_1 = \pm 40\%$
D.C. MEASUREMENT FOR $I_0 = 13.5\text{KHz N IV-S}$ AND $I_0 = 17\text{KHz N IV-SJ}$

MEASURING INSTRUMENT
D.C. Voltmeter 40 000Ω/V
A.C. Voltmeter (e.g. Bruhl & Kjaer type 2112 or 2606-1615 or equivalent)
Voltages may vary ± 10%



Δ MODIFICATION FOR CUE/O	
WITHOUT *12V (with common)	WITH *12V (without common)
CR22 1N4148	CR22 BRIDGED
CR27 BRIDGED	CR27 1N4148
C26 4.7μF	C26 BRIDGED
R64 F ₀ ADJUST	R64 GAIN ADJUST
R66 2.7K	R66 SUPPRESSED
	R63 F ₀ ADJUST

Δ MODIFICATION FOR PILOT VERSION 17KHz	
C9 1nF 10%	R16 180K 2%
C10 470pF 10%	R21 39K 2%
C11 2.2nF 10%	R22 39K 2%
C12 1nF 10%	R24 18K 2%
	R25 18K 2%
	R65 18K 2%

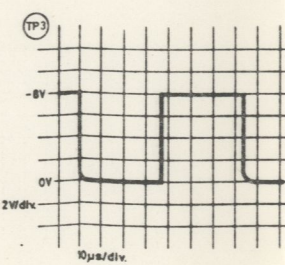
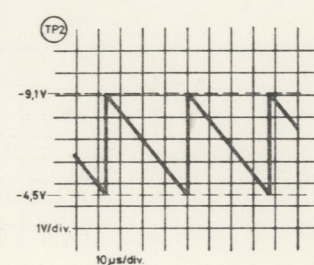
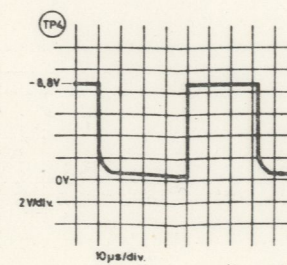
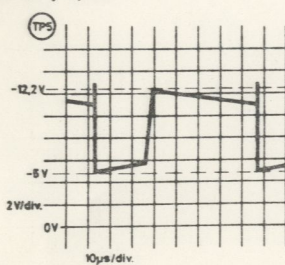


DIAGRAM FOR f₀ = 13.5KHz



UNLESS SPECIFIED
ALL RESISTORS ALLEN-BRADLEY 1/4 W ± 10%
ALL CAPACITORS ± 20%

A.C. MEASUREMENT FOR $\frac{A_1}{f_0} = \pm 40\%$
D.C. MEASUREMENT FOR $f_0 = 13.5\text{KHz}$ N IV-S AND $f_0 = 17\text{KHz}$ N IV-SJ

MEASURING INSTRUMENT
D.C. Voltmeter 40,000Ω/V
A.C. Voltmeter (e.g. Bruhl & Kjaer type 2112 or 2606 ± 1615 or equivalent)
Voltages may vary ± 10%