

**A810 – Conversion to Amorphous Heads 1.318. ...**

*No A810 tape recorder ever left the production line with built-in amorphous heads.* This head core material was introduced after the end of A810 production.

However, on several customer’s demands, Studer manufactured corresponding sound heads and published the following conversion instructions.

**Modification**

**Materials:**

- 1 Record Head 0.75 mm **1.318.630.00** or 2 mm **1.318.620.00**
- 1 Repro Head 0.75 mm **1.318.636.00** or 2 mm **1.318.626.00**
- 1 Repro Preamp **1.810.717.81**
- 2 Adaptation PCB **1.820.741.00**

For soundhead replacement and adjustment, please refer to the A810 operating and service manual.

Since the PCBs mentioned above are no more available, instead of replacing the PCBs, the ones existing in the recorder have to be modified accordingly. Please remember to update the labels of the modified PCBs to the correct part number for correct identification of the PCBs later.

**Procedures:**

- **Repro Preamp 1.810.717.81:**  
Starting from a Repro Preamp 1.810.711.81, modify the following components:  
**C1, C10** – from 100 pF to **56 pF, 5%** each  
**R10, R11** – from 62 kΩ to **36 kΩ, 1%** each  
**Add D2 and D3 (1N4448)** – refer to the circuit diagrams and the component layout drawings on the following pages.
- **Adaptation PCB 1.820.741.00** (plugged to the Record Amplifier):  
Starting from an Adaptation PCB 1.820.740.81, modify the following components:  
**C100** – from 22 nF to **6.8 nF, 5%**  
**C103** – from 33 nF to **22 nF, 5%**  
**R100** – from 2.2 kΩ to **4.7 kΩ, 2%**  
**R103** – from 9.1 kΩ to **6.8 kΩ, 2%**  
**R107** – from 560 Ω to **1.0 kΩ, 2%**  
Refer to the circuit diagrams and the component layout drawings on the following pages.

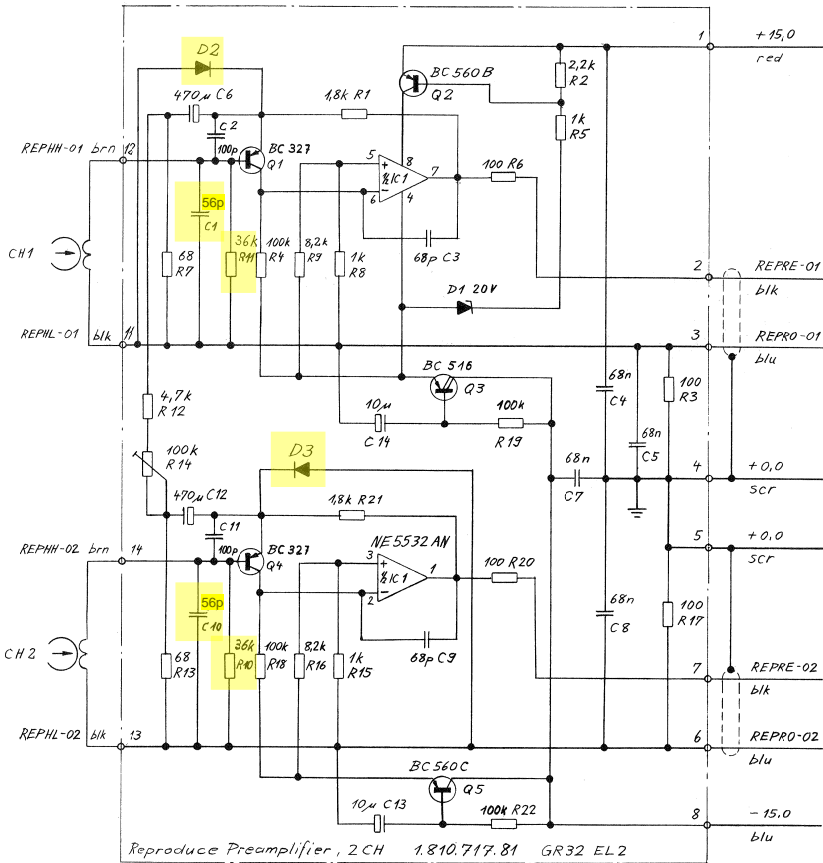
**EQ Values:**

After successful modification, set the corresponding EQ values according to the table below.

Tape Speed	3.75 ips 9,5 cm/s	7.5 ips 19 cm/s		15 ips 38 cm/s		30 ips 76 cm/s
EQ Std.	CCIR/NAB	CCIR	NAB	CCIR	NAB	CCIR/NAB
Repro	AE	82	68	44	68	29
Record	BB	A9	BE	C6	A5	D5
Sync	00	85	70	44	68	29

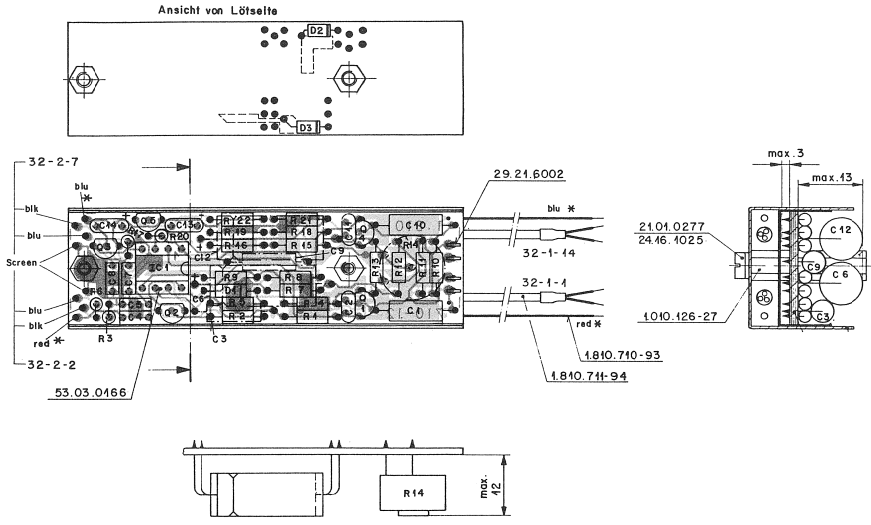
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REPRODUCE PREAMPLIFIER 2CH 1.810.717.81 GR32 EL06



8.2.90	Gämperte	A 810 Audio Section	Part of GR 32
STUDER	Reproduce Preamplifier 2 CH	SC 1.810.717-81	PAGE 1 OF 1

REPRODUCE PREAMPLIFIER 2CH 1.810.717.81



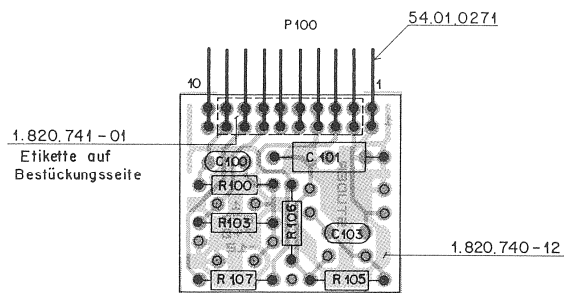
IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
C.	0001	59.04.9560	56 pF	St, PP	
C.	0002	59.99.0522	100 pF	Ca	
C.	0003	59.04.9880	68 pF	PP	
C.	0004	59.99.0205	68 pF	Ca	
C.	0005	59.99.0205	68 nF	Ca	
C.	0006	59.99.1104	470 nF	105 Grad C., 6.3V, El	
C.	0007	59.99.0205	68 nF	Ca	
C.	0008	59.99.0205	68 nF	Ca	
C.	0009	59.04.9880	68 pF	PP	
C.	0010	59.04.9560	56 pF	St, PP	
C.	0011	59.99.0522	100 pF	Ca	
C.	0012	59.25.1471	470 nF	6V, El	Ph
C.	0013	59.26.2100	10 nF	16V, Sal	Ph
C.	0014	59.26.2100	10 nF	16V, Sal	Ph
D.	0001	50.04.1109	20 V Z	BX83C 20, BX83C 20, ZFD 20	ITT,Sw
D.	0002	50.04.0125	184440		Fe,ITT,Ph,See,IT
D.	0003	50.04.0125	184440		Fe,ITT,Ph,See,IT
IC.	0001	50.09.0106	82532AR	XR532AR, 532AR	Ex,Pa,Sig
Q.	0001	50.03.0025	BC237		Si
Q.	0002	50.03.0015	BC237B	BC231B, BC257B, BC560B	ITT,Not,Ph,IT,IT
Q.	0003	50.03.0448	BC516		Si,IT
Q.	0004	50.03.0025	BC237		Si
Q.	0005	50.03.0496	BC560C		Not,Ph,Si,IT
R.	0001	57.11.3182	1.8 kOhm		
R.	0002	57.11.3122	2.2 kOhm		
R.	0003	57.11.3101	100 Ohm		
R.	0004	57.11.3104	100 kOhm		
R.	0005	57.11.3102	1 kOhm		
R.	0006	57.11.3101	100 Ohm		
R.	0007	57.11.3080	68 Ohm		
R.	0008	57.11.3102	1 kOhm		
R.	0009	57.11.3122	2.2 kOhm		
R.	0010	57.11.3080	36 kOhm		1%

IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
R.	0011	57.11.3363	36 kOhm	1%	
R.	0012	57.11.3472	4.7 kOhm		
R.	0013	57.11.3680	68 Ohm		
R.	0014	56.01.4104	100 kOhm	see note 1	
R.	0015	57.11.3102	1 kOhm		
R.	0016	57.11.3682	6.2 kOhm		
R.	0017	57.11.3101	100 Ohm		
R.	0018	57.11.3104	100 kOhm		
R.	0019	57.11.3104	100 kOhm		
R.	0020	57.11.3101	100 Ohm		
R.	0021	57.11.3102	1.8 kOhm		
R.	0022	57.11.3104	100 kOhm		

Modify components to these values

Note 1 - 100 kOhm Potentiometer, 1log, 10X  
 Allen Bradley Mc. 38 104 A  
 Ca=Ceramic, El=Electrolytic, PP=Polypropylen, Sal=Solid aluminium  
 MANUFACTURER: Ex=Exar, ITT=ITT,Not=Not,Ph=Philips, Pa=Raytheon, See=Seeconer, Si=Siemens, Sig=Signetics, IT=Telefunken, TI=Texas Instruments

## ADAPTATION BOARD 1.820.741.00



IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	C..0100	59.06.5682	6.8 nF	5%	
	C..0101	59.04.8221	220 pF	5%	
	C..0102		not used		
	C..0103	59.06.5223	22 nF	5%	
	C..0104		not used		
	C..0105		not used		
	F..0100	54.01.0271	10 cont.	AMP-Nr. 163.740-B	
	R..0100	57.11.4472	4.7 kOhm	2%	
	R..0101		not used		
	R..0102		not used		
	R..0103	57.11.4682	6.8 kOhm	2%	
	R..0104		not used		
	R..0105	57.11.3432	4.3 kOhm	1%	
	R..0106	57.11.3432	4.3 kOhm	1%	
	R..0107	57.11.4102	1.0 kOhm	2%	

Modify components to **these values**