

CONTENTS

	PAGE
1. INTRODUCTION	2
2. FEEDBACK FORM	3
3. MODIFICATION INSTRUCTIONS	4

1. INTRODUCTION

This SI 142/90 contains information about modifications that have to be done on the D820-48. This set of modifications has been named Version 1.0 .

The modifications are divided in two categories:

TOP URGENT - has to be done on every machine in your area,

FOR YOUR INFORMATION - to keep you up to date with the latest developments regarding the D820-48; such modifications need not be done on the older machines.

The material needed to do these modifications (mainly software - PROMs and EPROMs) will be supplied to you by STUDER INTERNATIONAL in the quantities required.

To enable us at STUDER INTERNATIONAL to get some feedback concerning the completion of important modifications, we ask you to fill in the so-called FEEDBACK FORM included in this SI and send it back to us. In this way, we can provide optimal assistance for trouble-shooting and so on.

3. MODIFICATION INSTRUCTIONS

1. READ UNIT CUE TRACKS 1.862.723.00

TOP URGENT

The connections from pins 8 & 9 of IC 26 (4053) to ground are missing; they must be added.

Note: On the PCB with index nr. .81 , the modification is already done.

→ Machine # 1002 must be checked, all others should be ok !

2. RT BOARD 1.862.657.20 → 1.862.657.22

TOP URGENT

a) To allow for exact RT-RT synchronization, the following wire link has to be added:

- on the soldering side, add a wire between pin 12 of IC 49 and pin 5 of IC 58.

→ Machine # 1005 must be checked, all others should be ok !

b) Software change due to misinterpretation of big RT addresses;

- software IC 48 becomes 1.862.958.22
software IC 67 becomes 1.862.959.22

Note: with these two modifications the index nr. of the PCB becomes .22 .

3. AES/EBU INTERFACE 1.862.664.20 → 1.862.664.21

TOP URGENT

a) Software change due to a fault in the routing of channel 47 to the AES/EBU output;

- software IC 5 becomes 1.862.860.21
software IC 56 becomes 1.862.856.21
software IC 57 becomes 1.862.870.21

b) de-coupling of AES input and AES output;

- Add a wire link from IC 5 Pin 19 to testpoint TP 9 (signal AES-REF). Pin 19 of IC 5 has to be taken out of the socket for this purpose. (IC 5 = PROM with software 1.862.860.21)

→ Machines #1002..1010 must be modified, all machines above #1011 are ok !

4. CHANNEL REMOTE CONTROL 1.328.600.00 **TOP URGENT**
 CR REMBUS μ P BOARD 1.328.602.20 \rightarrow 1.328.602.21
 AUTOLOCATOR (TAPE DECK CONTROLLER) 1.328.610.00
AL REMBUS μ P BOARD 1.328.612.20 \rightarrow 1.328.612.21

When pressing certain keys, additional functions (Key-codes) may be triggered sporadically, for example:

"Input / Repro" ==> "Safe / Ready"
 "Rewind" ==> "Crossfade Time"

a) CR Rembus μ P Board 1.328.602.20

Solder two pull-up resistors each (10 k Ω , 57.11.3103) to the following IC's:

IC 20 , R 40/41	}	
IC 40 , R 42/43	}	from pins 38 & 39 to + 5V
IC 60 , R 44/45	}	
IC 80 , R 46/47	}	

Refer to attached drawing.

With this modification, the index nr. of the CR Rembus Board becomes .21 : 1.328.602.21 .

b) AL Rembus μ P Board 1.328.612.20

Add two wire bridges as described below:

IC 8 to RZ 6	}	Pin 39 (IC) to pin 2 (RZ)
IC 9 to RZ 7	}	PIN 38 (IC) to pin 3 (RZ)
IC 5 to RZ 3	}	

Refer to the attached drawing.

With this modification, the index nr. of the AL Rembus Board becomes .21 : 1.328.612.21 .

\rightarrow These modifications must be done on all units delivered before August 13th, 1990 !

5. SSTC Board 1.862.659.21 \rightarrow 1.862.659.22 **TOP URGENT**

When using external Varispeed (from the SYNCHRONIZER or PARALLEL REMOTE port), the Clock Board is unable to lock to the incoming varispeed signal, because the signal SS-RFNT / SS-IRFNT coming from the SSTC-Board 1.862.659.21 is disturbed.

A capacitor (2.7 nF) across pin 9 and pin 8 (Ground) of IC 13 (26 LS 31) suppresses the disturbance.

The index nr. of the SSTC Board becomes .22 : 1.862.659.22 .

\rightarrow Machines #1001..1011 & 1015 must be modified !

6. MAPRO Board 1.862.652.20 → 1.862.652.21

TOP URGENT

Expansion of the DSP software.

- software IC 25,45,65,85,105,125,145,165 becomes 1.862.913.21
- software IC 26,46,66,86,106,126,146,166 becomes 1.862.914.21

As these IC's are PLCC devices, be very careful not to damage the sockets when taking them out. We found that the best tool to do this is actually a metal scribe.

→ Machines #1002, 1003, 1005, 1008 must be modified !

7. CUE MODULATOR 1.862.861.20

TOP URGENT

Partial misbehaviour when receiving the CP-Reset.

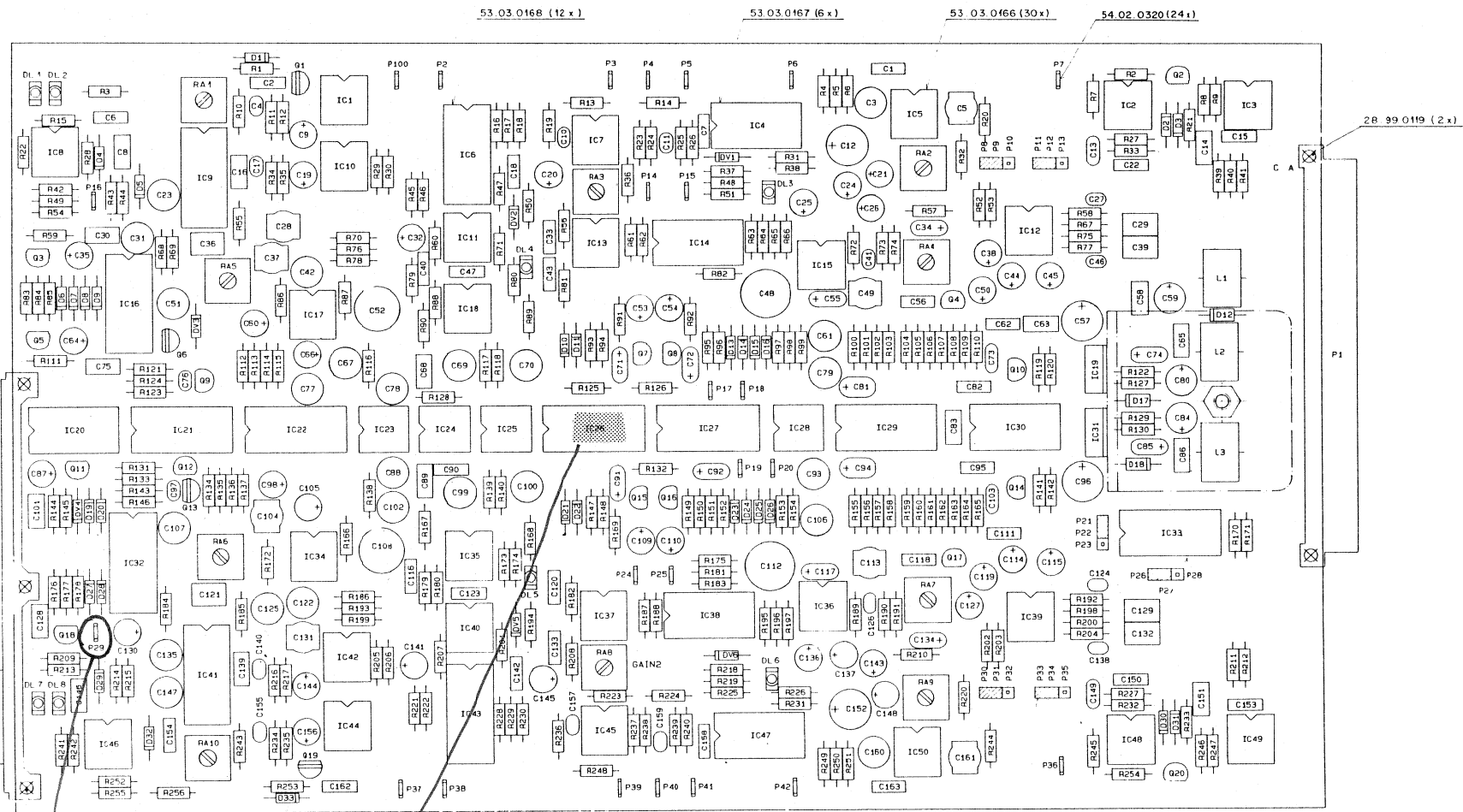
- On the component side:

R 6 10k becomes 15k (57.11.3153),
R 14 3.9k becomes 4.7k (57.11.3472),
Add C 233 47 uF (59.22.3470) in parallel to R 14.

- On the soldering side:

Add a resistor R 210 10k (57.11.3103) between Pin 6 and +5V
(C 06) of IC 01.
Add a capacitor C 232 0.1 uF (59.06.0104) in parallel to R14
(see schematic).

→ Machines #1001, 1002, 1003, 1005, 1008 must be modified !



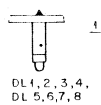
READ UNIT CUE TRACKS
 1.862.723-00

Bestückungshöhe
 1.5 + 2.5 Lötstellenhöhe

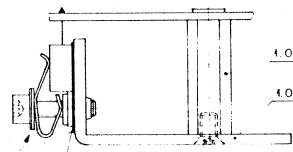
1.862.723-01
 1.010.096-49
 1.010.006-33
 (2 x)

GND

check whether pins 8 & 9
 are connected to ground!



1.040.012-50 (8 x)

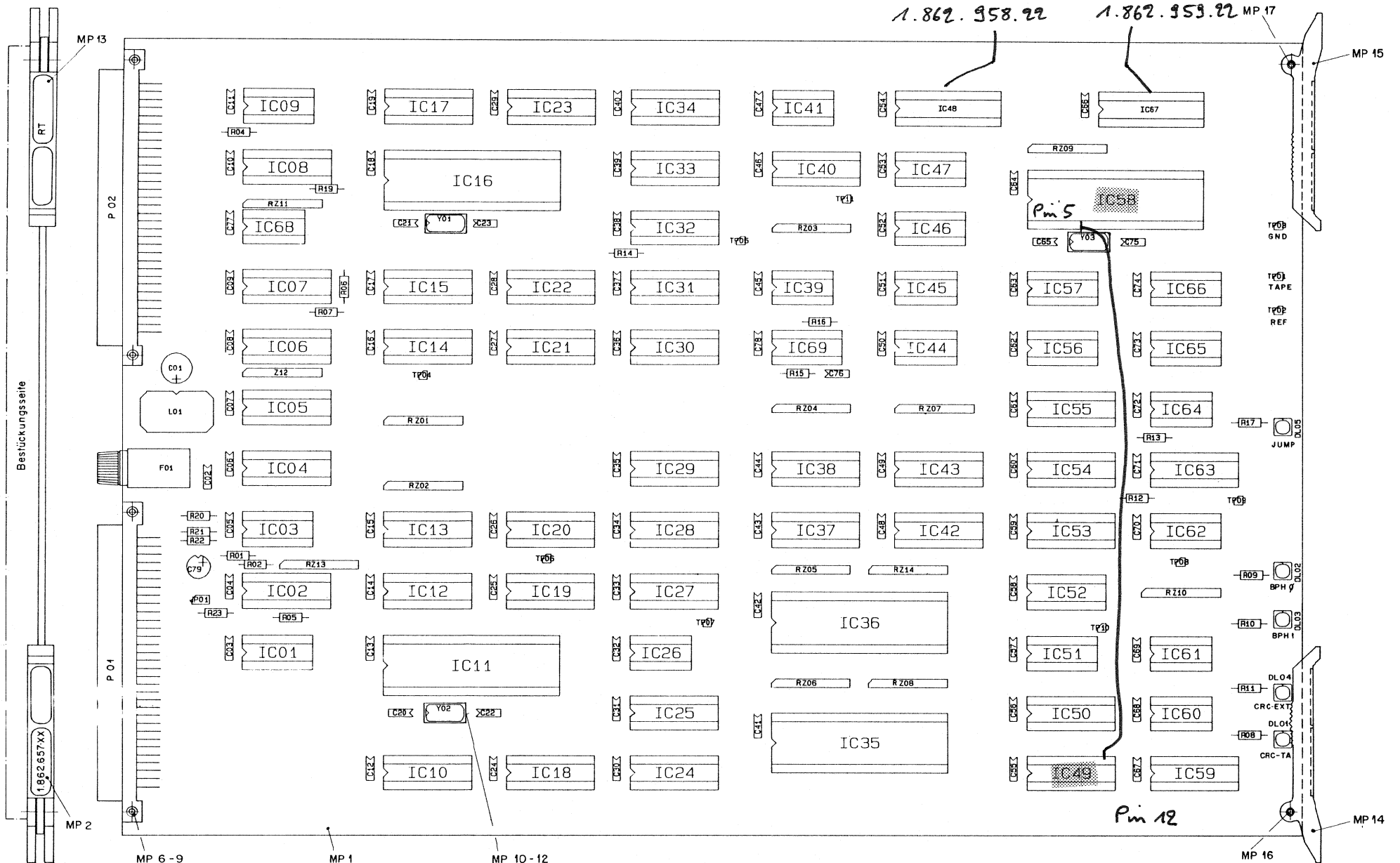


21.53.0357 (2 x)
 37.04.0104 (4 x)
 1.010.006-50 (2 x)
 50.20.0404 (2 x)

30.20.0313

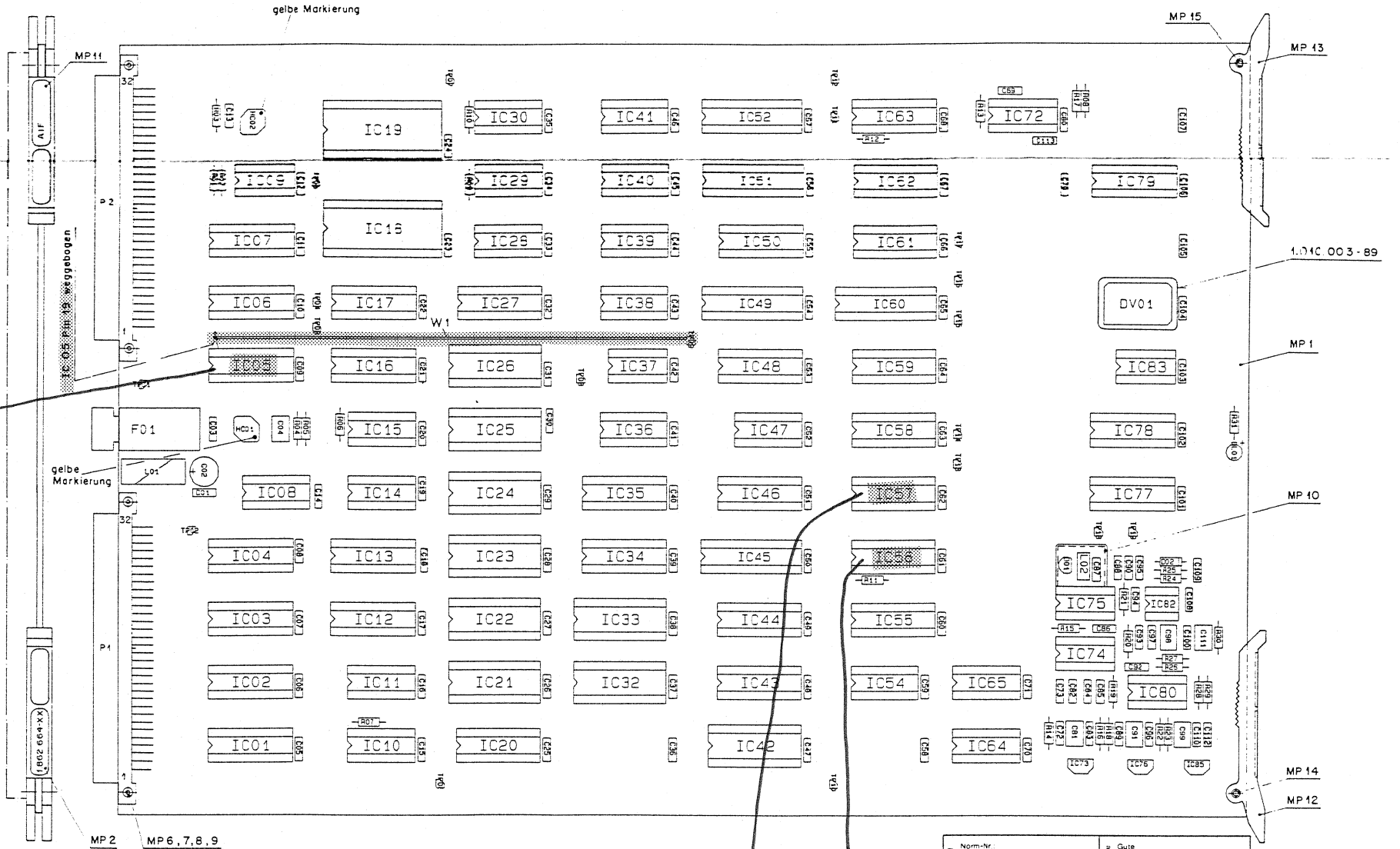
Warnschild - ESE 43.01.0108
 aufgeklebt nach Fabrikationsmuster.

Agencja	Z. techn.	1998
Instytut	Inst.	
Adresacja	Inst.	12785
Zagraniczna	Inst.	12785
PL, BV 632, BV 640	Inst.	2.1
Instytut	Inst.	
STUWER REGENSCHOFF ZÜRICH		READ UNIT CUE TRACKS
		ESE



Werkstoff Norm-Nr DIN-Bez Abmessung	Gute		Änderung
	Oberflächliche Beh		
Zugehörige Ufiterlagen PL, BV 640	Freimasstoleranz	Mafstab 4,3:1	28.8.89
Ersatz für	Ersetzt durch	Kopie für	Datum Gez Gespr Ges Indt
BENENNUNG STUOER REGENSDORF ZÜRICH		REFERENCE TRACK ESE	
Nummer		1.862.657-20	

1.862.860.21



Schilder MP 2, 3, 4, 5 und MP 11
aufgeklebt nach Fabrikationsmuster.

IC Sockel nach PL bestückt
z.B. XIC 05 = Sockel von IC 05

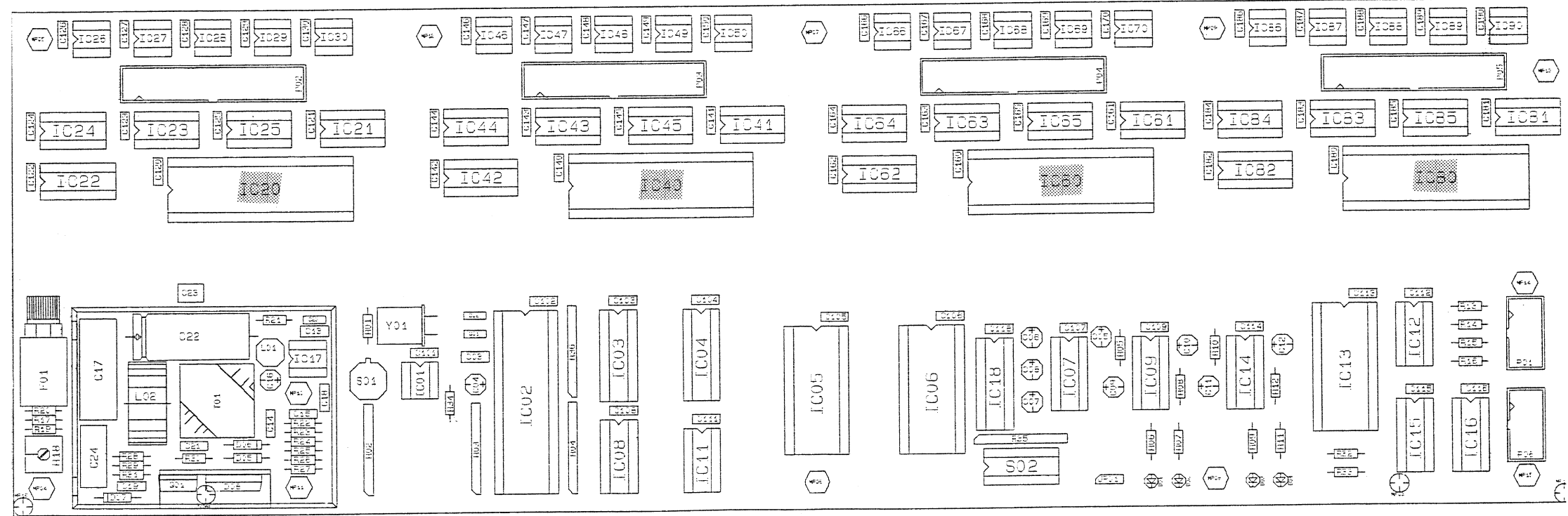
1.862.856.21

1.862.870.21

Norm-Nr.:		Gute	
DIN-Bez.:		Ben.	
Abmessung			
Zugehörige Unterlagen	Fremdasozieranz	Maßstab	Ausgabe
PL, BV 640	=	1,3 : 1	49.6.90 <i>[Signature]</i>
Ersatz für	Ersetzt durch	Kode für	Datum
			Gez. Gebr. Ges. No.
STUDEF REGENSDORF ZÜRICH		AES INTERFACE ESE	
Bezeichnung		Nummer	
		1.862.664-21	

CHANNEL REMOTE CONTROL

IR REMBUS + PROC.



Connect pins 38 & 39 of ICs 20, 40, 60, 80 to 5V via a 10kΩ Pull-up resistor
(8279) (to be added)

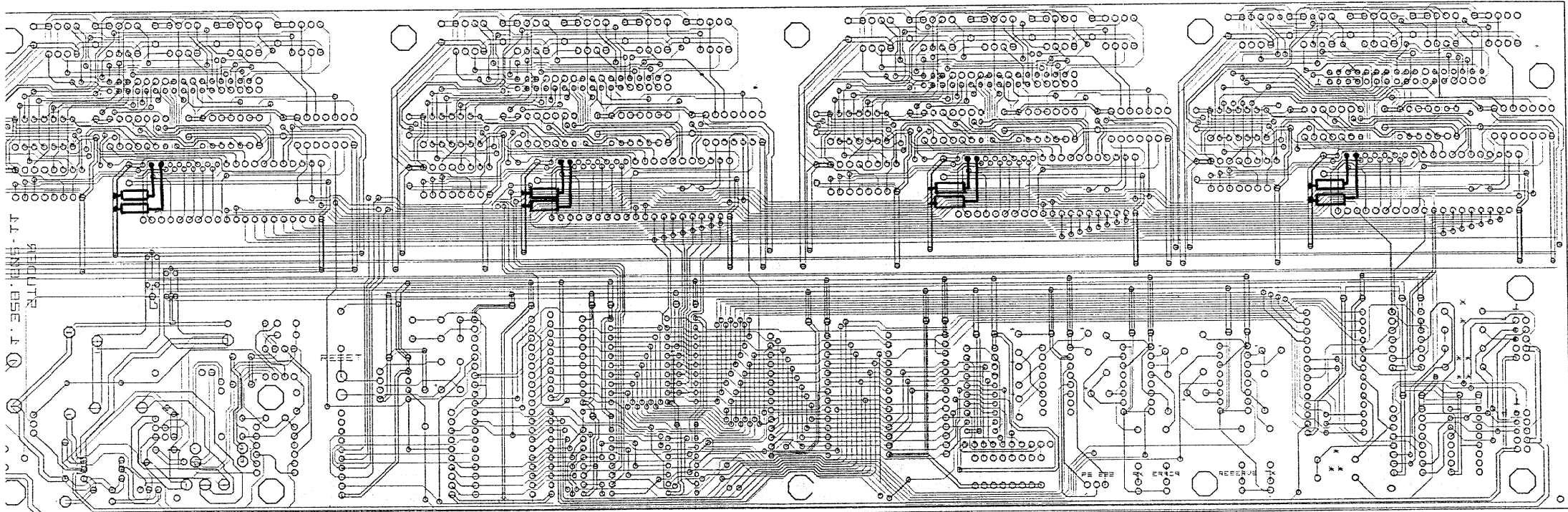
CHANNEL REMOTE CONTROL

view from component side

03 07 99 LAR

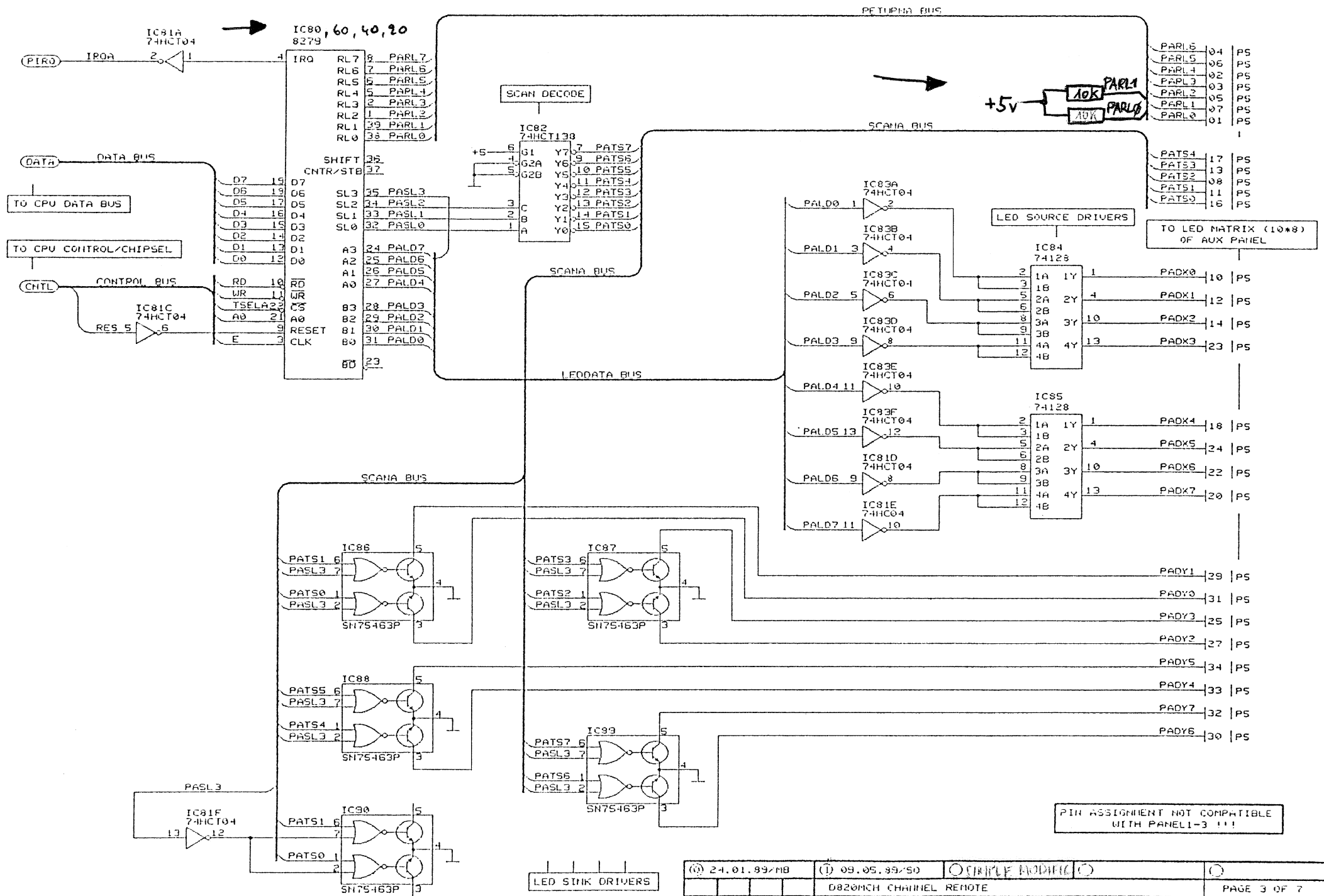
1.328.602-11

2 REMBUS + PROC.



1.328.602-20 CR REMBUS + PROCESSOR

→ Add resistors (8 × 10kΩ) on soldering side



PARL6	04	PS
PARL5	06	PS
PARL4	02	PS
PARL3	03	PS
PARL2	05	PS
PARL1	07	PS
PARL0	01	PS

PATS4	17	PS
PATS3	13	PS
PATS2	08	PS
PATS1	11	PS
PATS0	16	PS

PADx0	10	PS
PADx1	12	PS
PADx2	14	PS
PADx3	23	PS

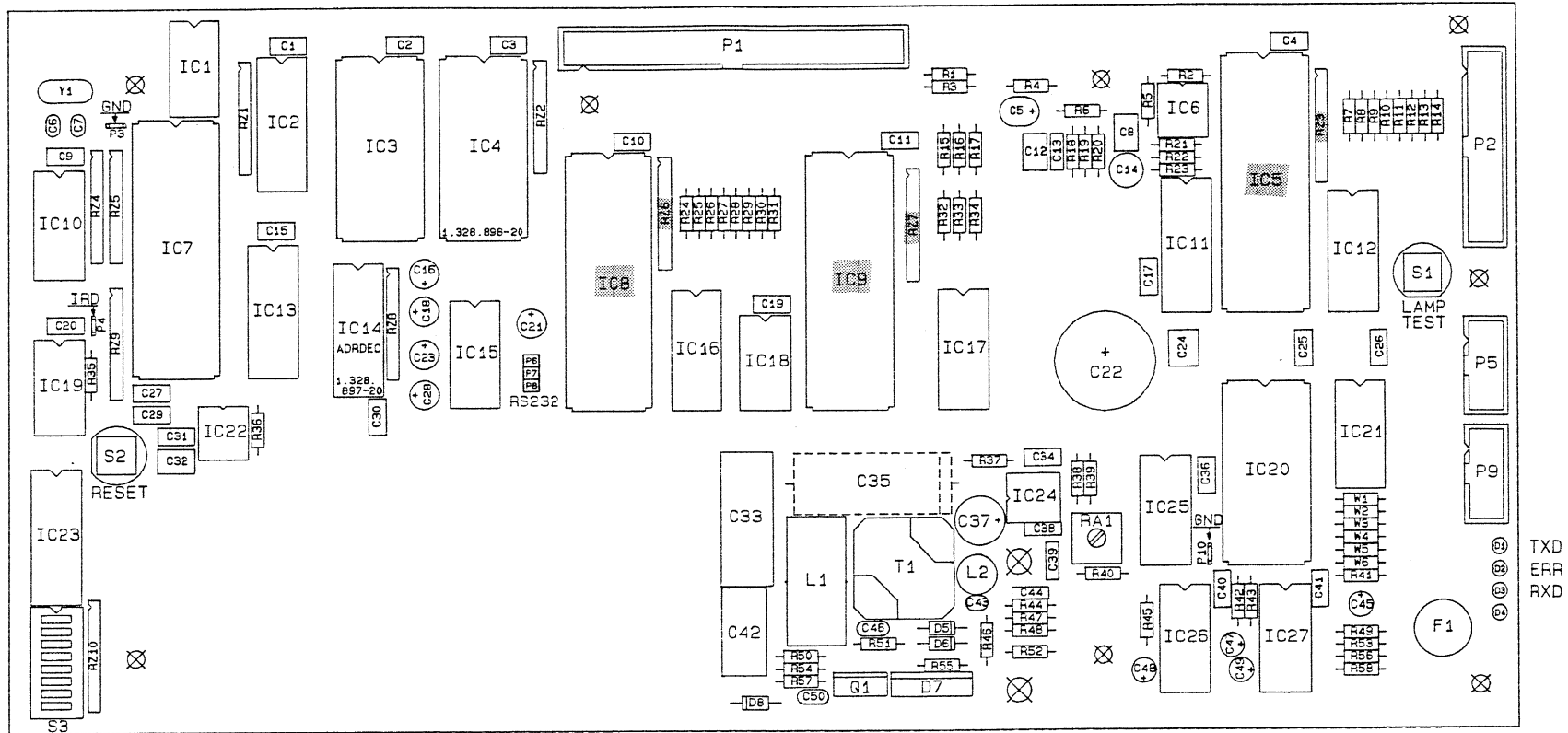
PADx4	18	PS
PADx5	24	PS
PADx6	22	PS
PADx7	20	PS

PADy1	29	PS
PADy0	31	PS
PADy3	25	PS
PADy2	27	PS

PADy4	34	PS
PADy7	32	PS
PADy6	30	PS

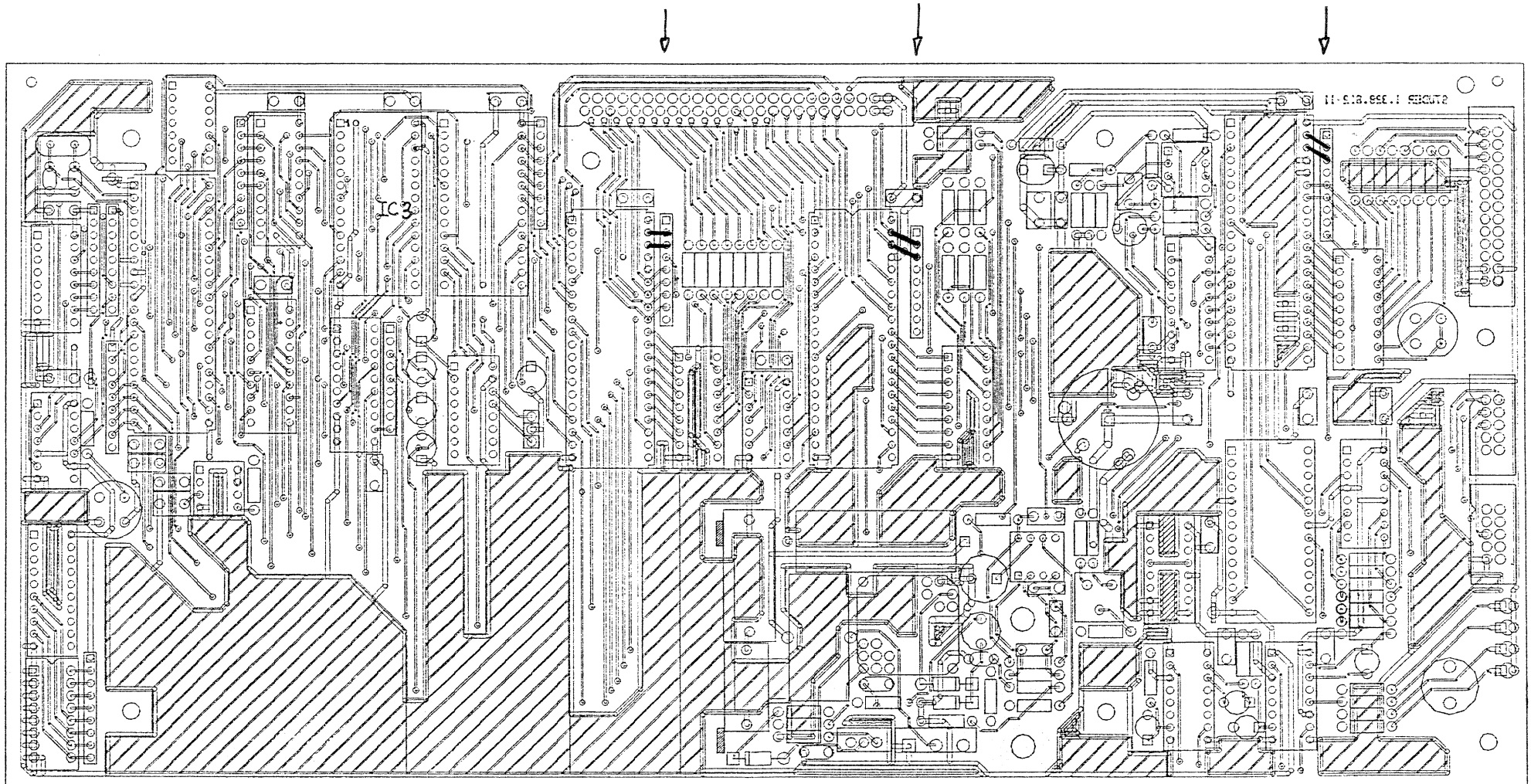
PIN ASSIGNMENT NOT COMPATIBLE WITH PANEL-3 !!!

TAPE DECK CONTROLLER



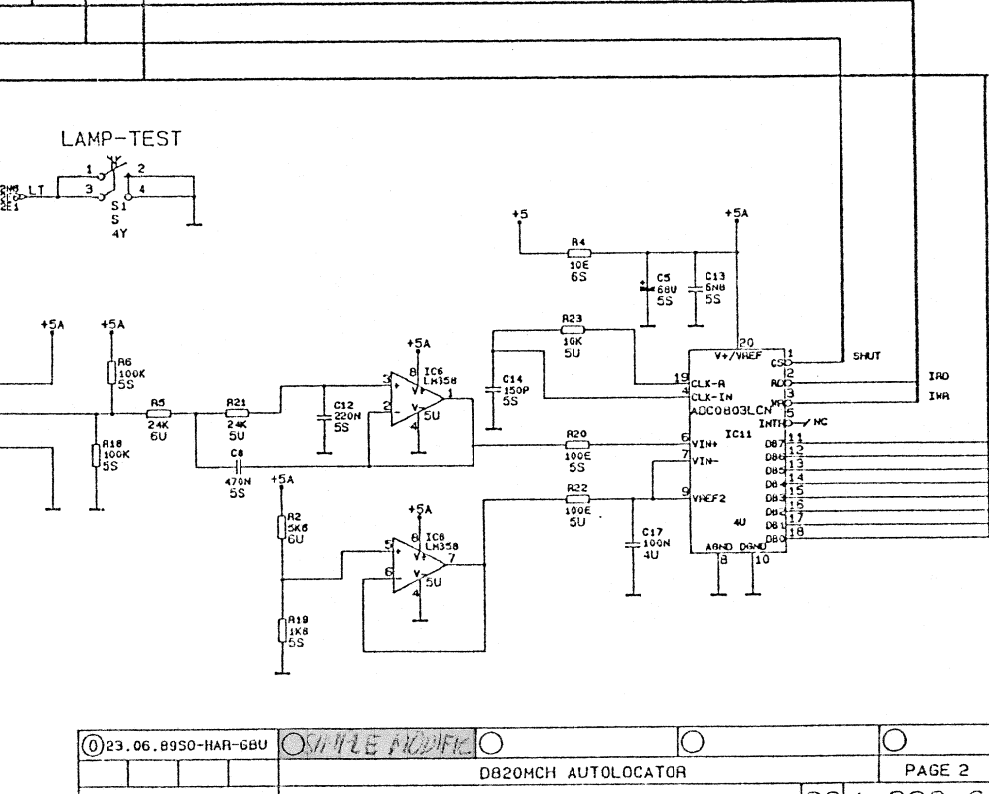
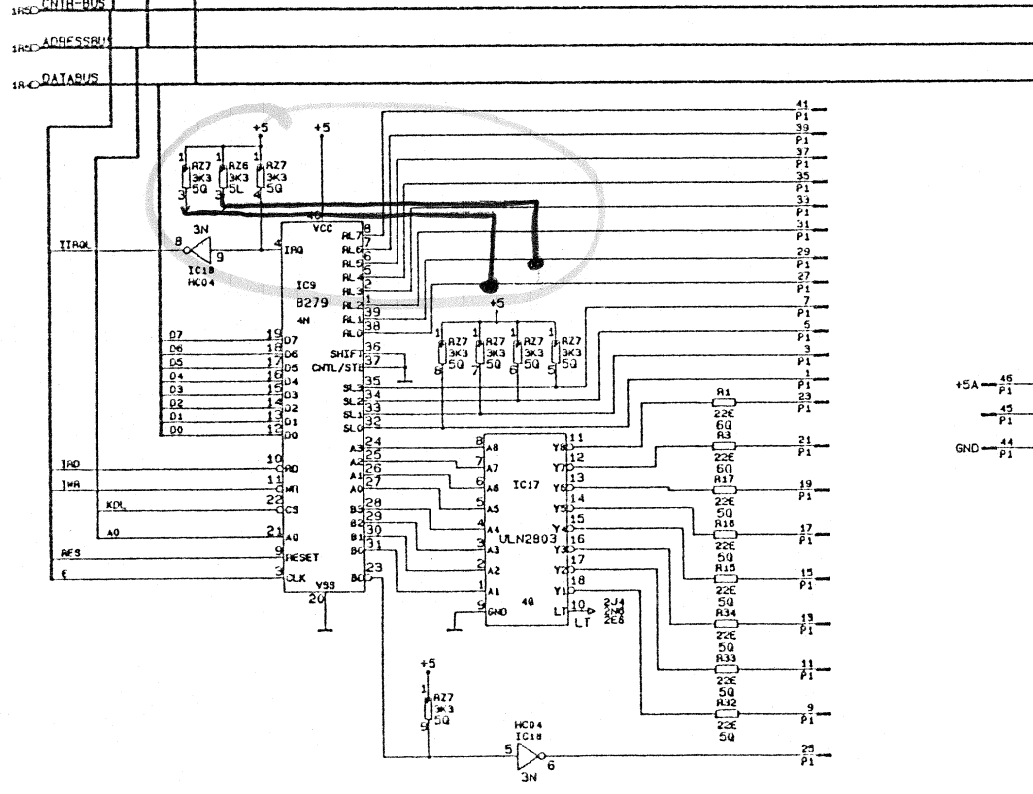
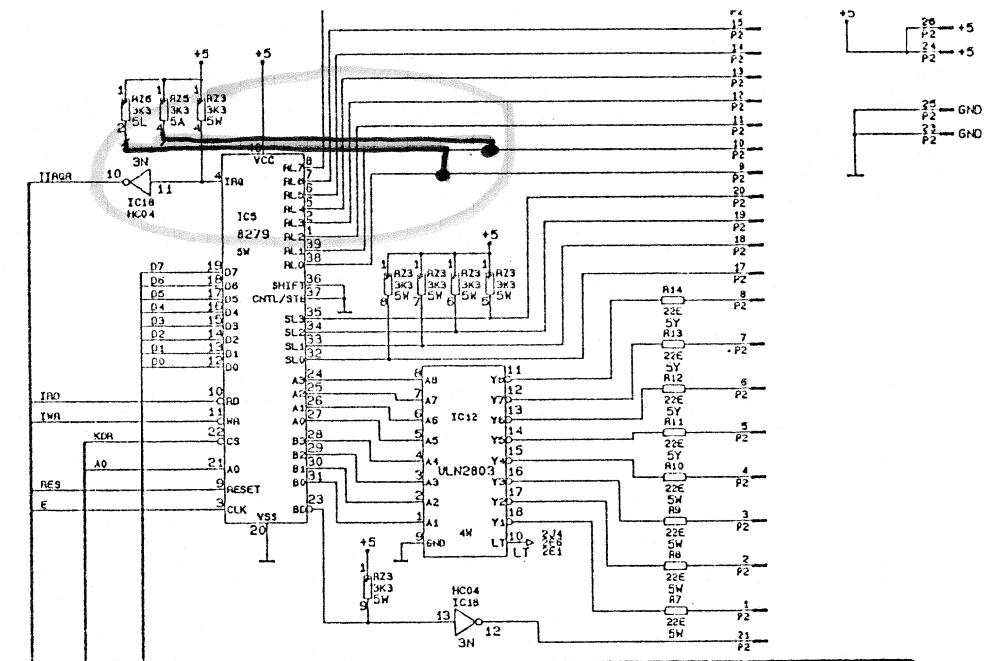
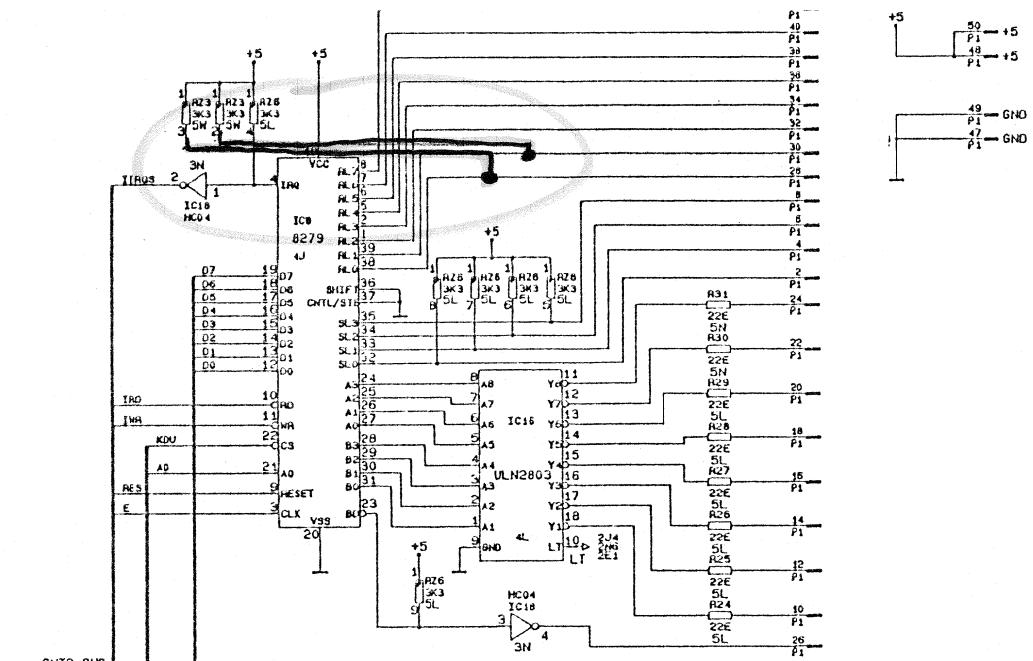
Connect pins 38 & 39 of ICs 5, 8, 9 to pins 2 & 3 of RZ 3, 6, 7 respectively
(8279)

TAPE DECK CONTROLLER : View from component side



1.328.612-20 .AL Rembus + μ P

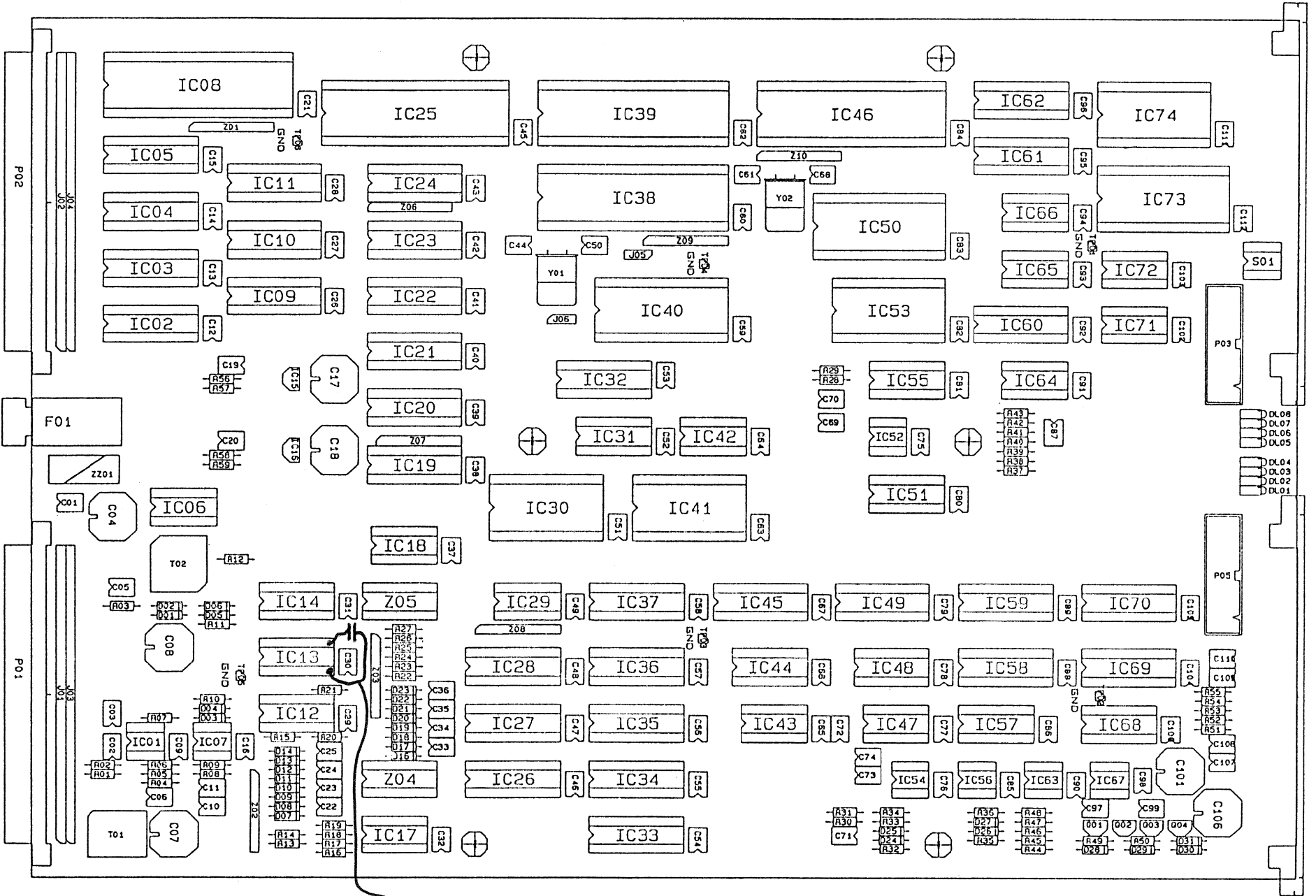
→ Add wires on soldering side !



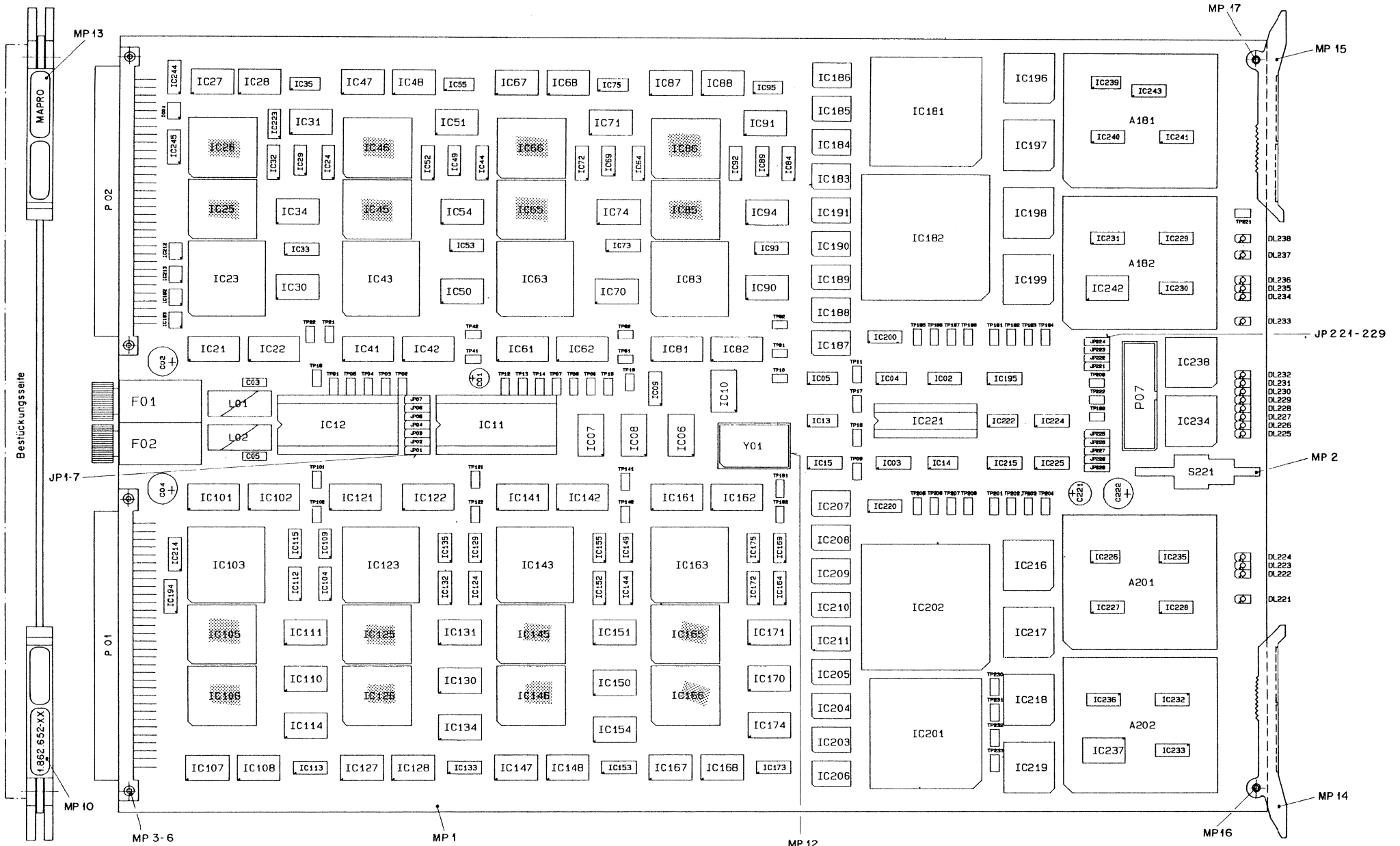
21

SSTC BOARD
BESTUECKUNGSPLAN

1.862.659-00



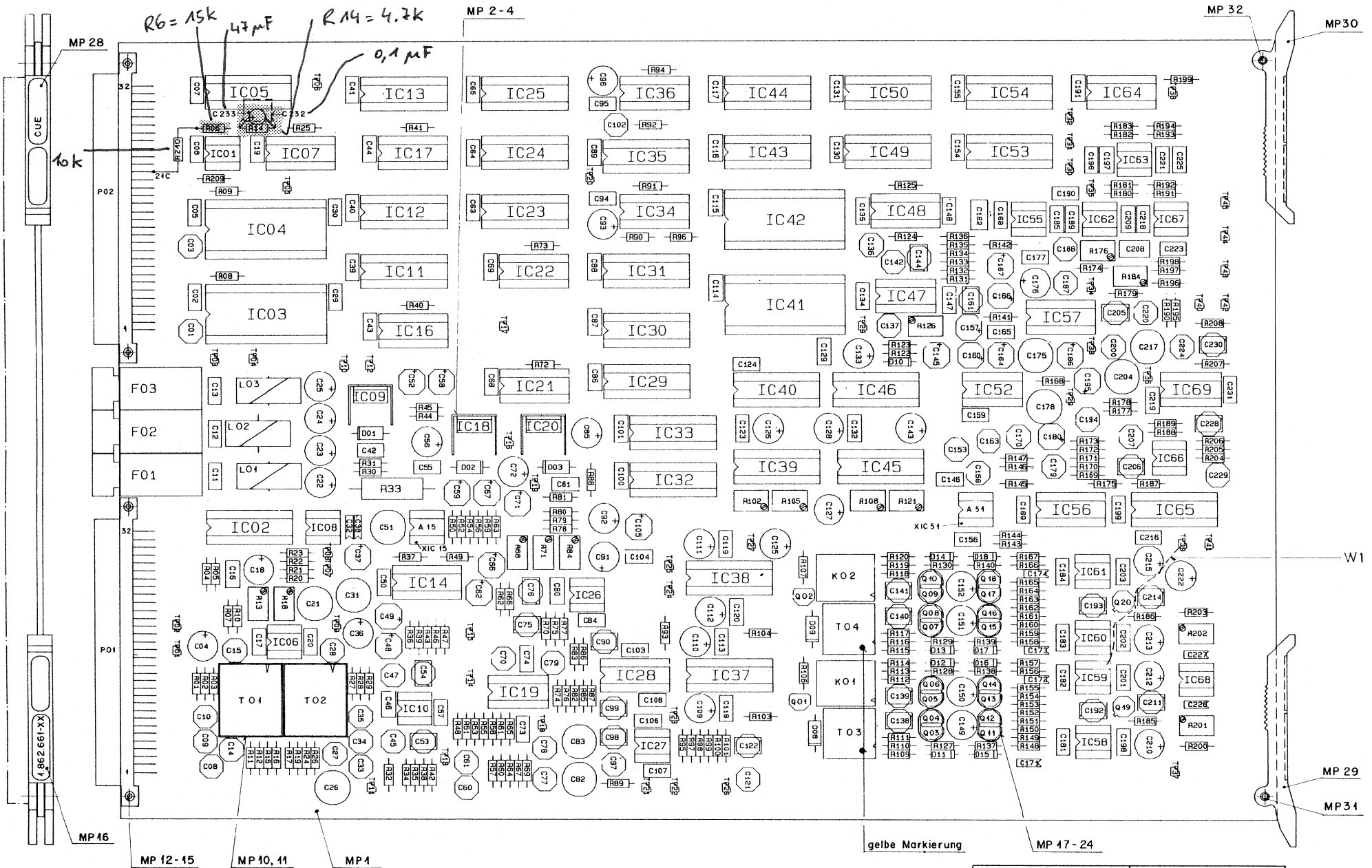
(add capacitor on the soldering side)
2n7F



Schilder MP 7-11,13
aufgeklebt nach Fabrikationsmuster

IC Sockel nach PL bestückt
Z. B. XIC 11 = Sockel von IC 11

Werkstoff	Norm-Nr	Oberfläche		Gute	Änderung
	DIN-Bez	Beh			
Zugehörige Unterlagen	Abmessung	Freimasstoleranz	Maßstab	Ausgabe	
	PL, BV 640		1,3 : 1	298.89	4.11
Ersatz für	Ersetzt durch		Datum		Gez. Gepr. Ges. Inde
Stüder REGENSDORF ZÜRICH		MCH AUDIO PROCESSOR ESE		Kopie für	
Serien-Nr		1.862.652-20		Nummer	



C 232 auf Lötseite

Schilder MP 5, 6, 7, 8, 9
aufgeklebt nach Fabrikationsmuster.

IC-Sockel nach PL bestückt
z. B. XIC 13 = Sockel von IC 13.

Werkstoff: DIN Bez Abmessung	Norm-Nr DIN Bez Abmessung		Oberfläche: Beh	Änderung
	Zugehörige Unterlagen PL, BV 640	Freimaßtoleranz 1,3:1		
Ersatz für	Ersetzt durch		Kopie für	Nummer 4.862.661-20
STUDER REGENSDORF ZÜRICH	CUE-MODULATOR ESE			Datum 26.6.90