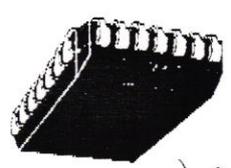


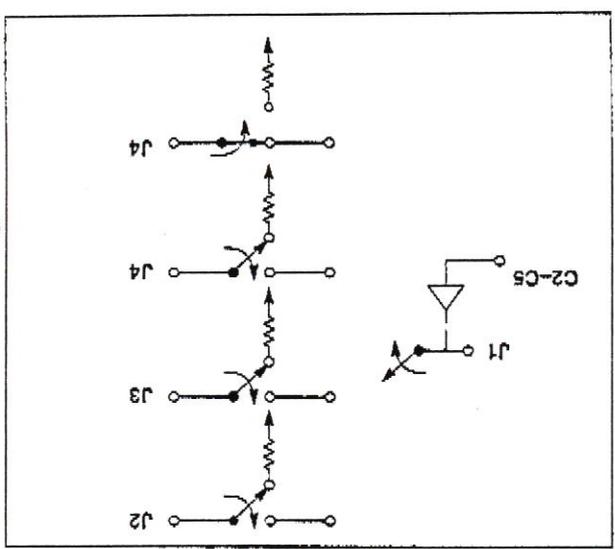


FET SP4T Non-Reflective Switch With Integral Driver In PLCC 28 Package DC-3 GHz

AK002M4-47



North Brattle
on 11.20.95
407-411



Operating Characteristics at 25°C

| | | | |
|--|--|--|-------------|
| Impedance | | 50 Ohms Nominal | |
| Switching Characteristics | | RISE, FALL (10/90% or 90/10% RF) | 15 ns Typ |
| | | ON, OFF (50% CTL to 90/10% RF) | 35 ns Typ |
| Video Feedthru ² | | | 30 mV Typ |
| Input Power for 1 dB Compression | | 0.5-3 GHz | +24 dBm Typ |
| | | 0.001 GHz | +16 dBm Typ |
| Intermodulation Intercept Point for two-tone input power up to +13 dBm | | Intercept Points | IP2 IP3 |
| | | 0.5-2 GHz +68 | +40 dBm Typ |
| | | 0.001 GHz +57 | +29 dBm Typ |
| Logic Drives (Volts) | | Min | Max |
| Low (0) | | 0 | 0.5 Volts |
| High (1) | | 4 | 5 Volts |
| Bias Voltage | | +5V ± 0.5V @ 3 mA Typ | |
| | | -4V ± 0.25V @ 12 mA Typ ^{3,4} | |

4. Current increases from 12 mA to 16 mA @ +85°C.

- ### Features
- Integral Driver +5V, -4V Bias Supplies; CMOS and TTL Compatible
 - Low DC Power Consumption - 20 mW per Arm
 - 28 Lead Plastic Chip Carrier (PLCC)
 - Individual TTL Control for Each Port
 - Non-Reflective
 - Base Station Switch Matrix Applications

Description

The AK002M4-47 is a SP4T non-reflective FET MMIC switch. The switch consists of a GaAs SP4T chip and an integral driver. This unit is used in telecommunication applications (e.g. base station switch matrices) and requires 4 lines of control logic.

| | | | | |
|-----------------------------|--------------|-------|-----|-----|
| Insertion Loss ¹ | DC - 0.5 GHz | 1.1 | dB | Max |
| | DC - 1 GHz | 1.4 | dB | Max |
| | DC - 2 GHz | 1.6 | dB | Max |
| | DC - 3 GHz | 2.1 | dB | Max |
| Isolation | DC - 0.5 GHz | 48 | dB | Min |
| | DC - 1 GHz | 42 | dB | Min |
| | DC - 2 GHz | 33 | dB | Min |
| | DC - 3 GHz | 27 | dB | Min |
| VSWR (I/O) | DC - 0.5 GHz | 1.3:1 | Max | |
| | DC - 1 GHz | 1.5:1 | Max | |
| | DC - 3 GHz | 1.7:1 | Max | |

Electrical Specifications at 25°C

1. Insertion loss changes by 0.003 dB/°C
2. Measured in 500 MHz bandwidth with 1 ns risetime pulse.
3. Bias voltage and ground must be connected before TTL voltage is applied to avoid irreversible damage to the device. Consult factory for application notes.
4. Current increases from 12 mA to 16 mA @ +85°C.

Datum: 21-NOV-1995/D.Loos

F 447 / Schnelle Schotky-Messung
FG 447 120 / Schaltmatrix-Control

Remote-Buchsen-Belegung

25 polige Cannon-Buchse:

| Pin | Bezeichnung | Signal-Zustand |
|-----|------------------------|----------------|
| 1 | Netzkarde Pin 10 | |
| 2 | Status/NT | H=Bin / L=Aus |
| 3 | GND/ In-Extern | |
| 4 | GND-EXT | |
| 5 | STATUS-REM/MAN* | H=MAN* / L=REM |
| 6 | Matrix H / Bit 2.0 | |
| 7 | Matrix G / Bit 2.0 | |
| 8 | Matrix F / Bit 2.0 | |
| 9 | Matrix E / Bit 2.0 | |
| 10 | Matrix D / Bit 2.0 | |
| 11 | Matrix C / Bit 2.0 | |
| 12 | Matrix B / Bit 2.0 | |
| 13 | Matrix A / Bit 2.0 | |
| 14 | Netzkarde Pin 12 | |
| 15 | +5- +24 Volt/In-Extern | Ein/Netzkarde |
| 16 | +5V-EXT | |
| 17 | REM/CLK | |
| 18 | Matrix H / Bit 2.1 | |
| 19 | Matrix G / Bit 2.1 | |
| 20 | Matrix F / Bit 2.1 | |
| 21 | Matrix E / Bit 2.1 | |
| 22 | Matrix D / Bit 2.1 | |
| 23 | Matrix C / Bit 2.1 | |
| 24 | Matrix B / Bit 2.1 | |
| 25 | Matrix A / Bit 2.1 | |

Datum: 21-NOV-1995/D.Loos

F 447 / Schnelle Schotky-Messung

FG 447 120 /Schaltmatrix-Control

VG2 - Stecker-Belegung

VG1/64 pol. Messerleiste:

| Pin | a | c |
|-----|-----|-----|
| 1 | - | - |
| 2 | - | - |
| 3 | - | - |
| 4 | - | - |
| 5 | - | - |
| 6 | - | - |
| 7 | - | - |
| 8 | - | - |
| 9 | - | - |
| 10 | - | - |
| 11 | - | - |
| 12 | - | - |
| 13 | - | - |
| 14 | - | - |
| 15 | - | - |
| 16 | - | - |
| 17 | - | - |
| 18 | /YC | /XC |
| 19 | - | - |
| 20 | /YD | /XD |
| 21 | - | - |
| 22 | /XB | /YB |
| 23 | - | - |
| 24 | /XA | /YA |
| 25 | - | - |
| 26 | /XF | /YF |
| 27 | - | - |
| 28 | /XE | /YE |
| 29 | - | - |
| 30 | /YG | /XG |
| 31 | - | - |
| 32 | /YH | /XH |

Datum: 21-NOV-1995/D.Loos

F 447 / Schnelle Schotky-Messung

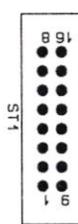
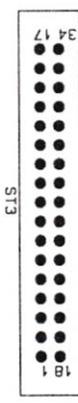
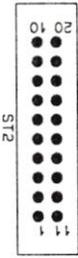
FG 447 120 / Schaltmatrix-Control

VG1 - Stecker-Belegung

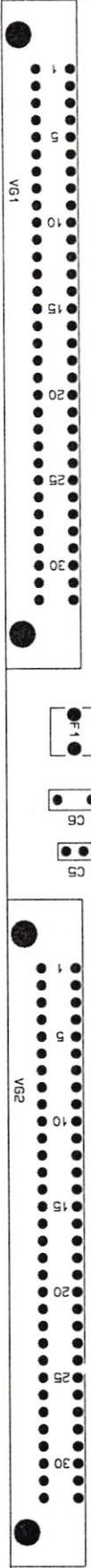
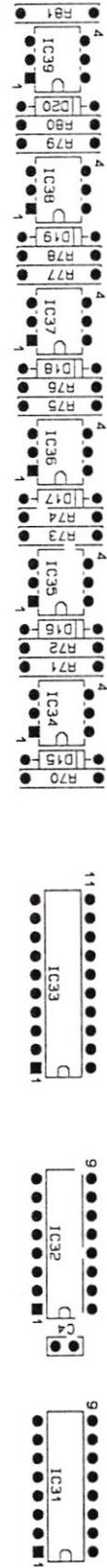
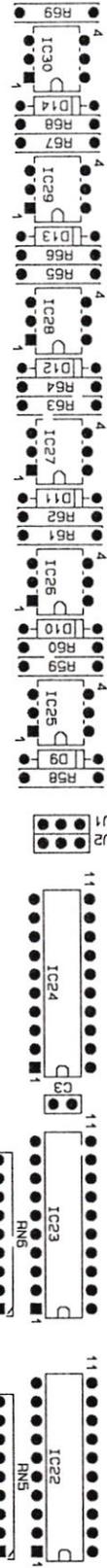
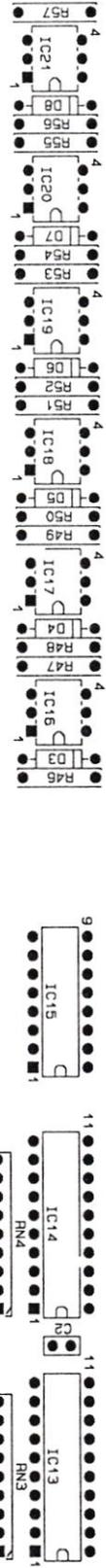
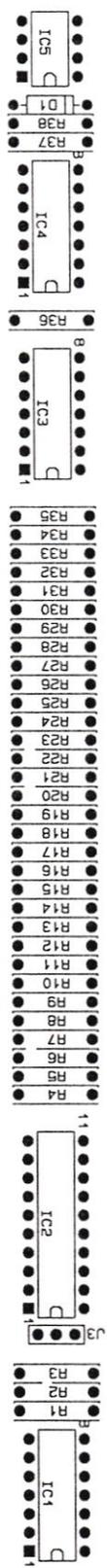
VG1/64 pol. Messerleiste:

| Pin | a | c |
|-----|------------|-----------------|
| 1 | - | - |
| 2 | - | STATUS/NT |
| 3 | +5/CONTROL | +5-GND |
| 4 | GND | GND |
| 5 | - | - |
| 6 | +5V | +5V |
| 7 | - | - |
| 8 | INXA | INXB |
| 9 | -5/CONTROL | -5-GND |
| 10 | INXB | INYB |
| 11 | - | - |
| 12 | INXC | INYC |
| 13 | - | - |
| 14 | INXD | INYD |
| 15 | - | - |
| 16 | REM/CLOCK | STATUS-REM/MAN* |
| 17 | - | - |
| 18 | INXE | INYE |
| 19 | - | - |
| 20 | INXF | INXF |
| 21 | - | - |
| 22 | INXG | INYG |
| 23 | - | - |
| 24 | INXH | INXH |
| 25 | - | - |
| 26 | - | - |
| 27 | - | - |
| 28 | - | - |
| 29 | - | - |
| 30 | +5V-EXT | +5V-EXT |
| 31 | - | - |
| 32 | GND-EXT | GND-EXT |

L=Aus



GSI/GL FG 447.120 LS

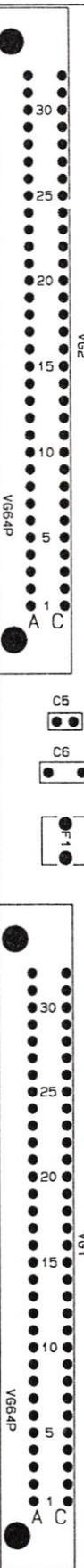
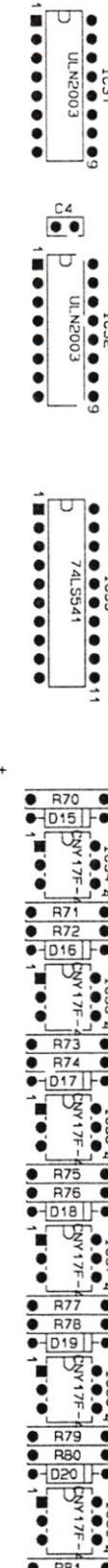
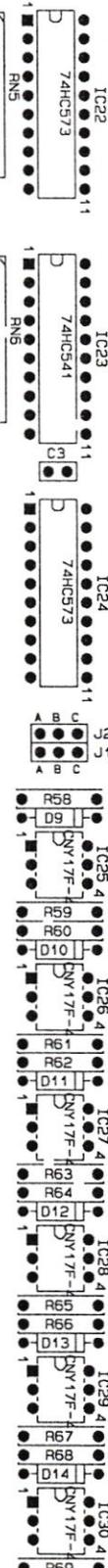
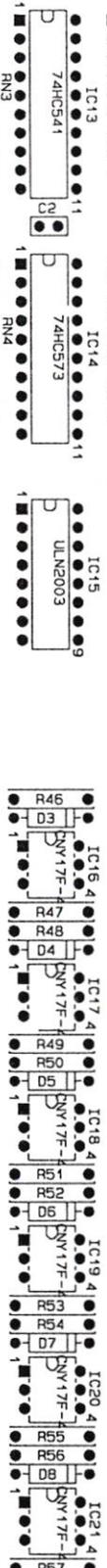
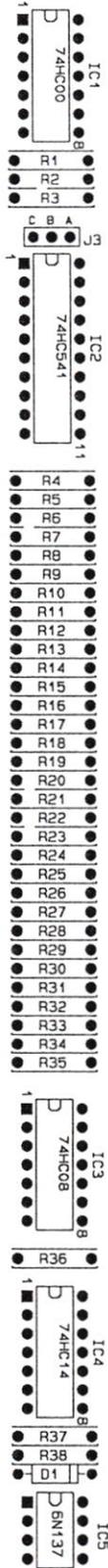
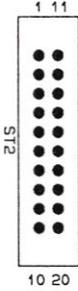
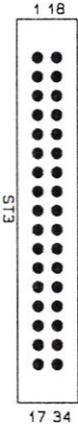
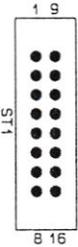


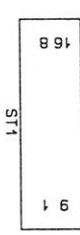
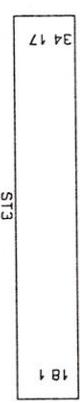
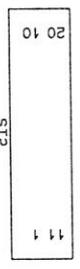
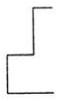
GSI CONKON2

CON

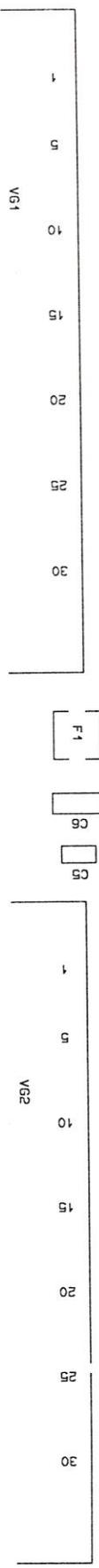
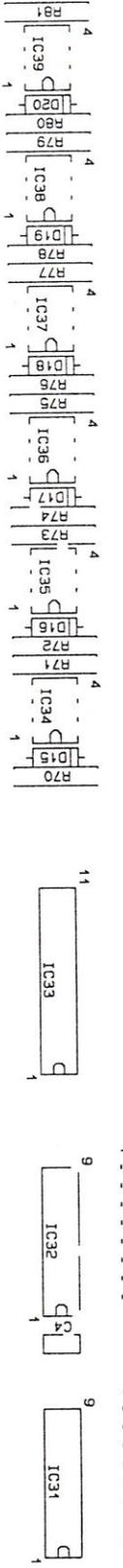
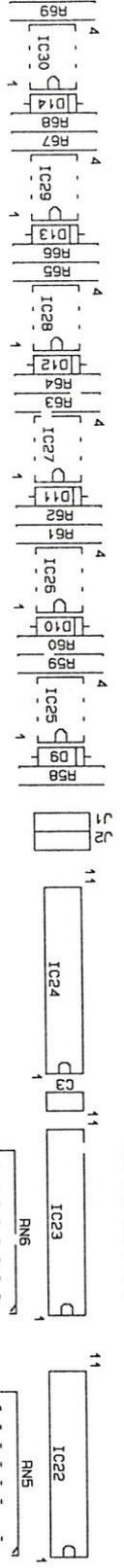
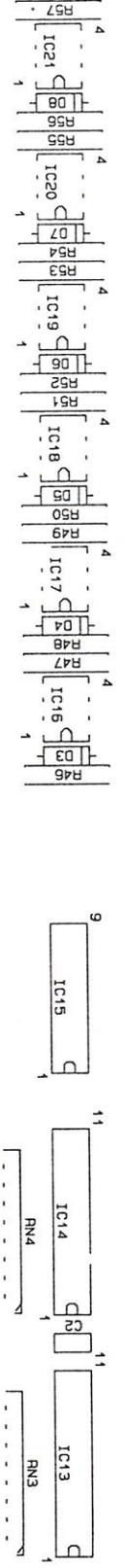
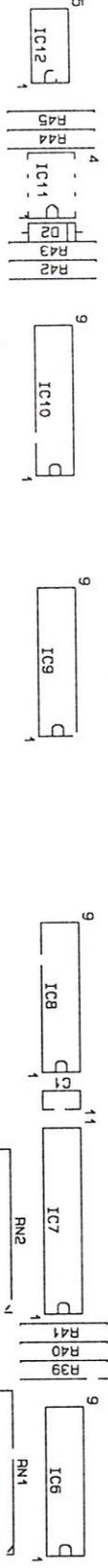
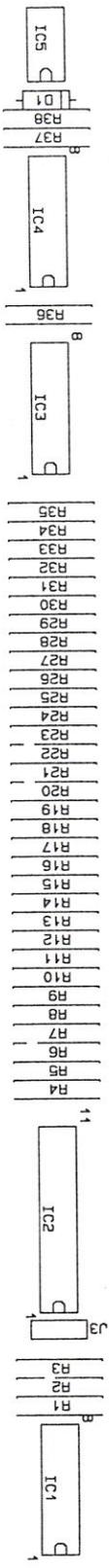
FG 447.120

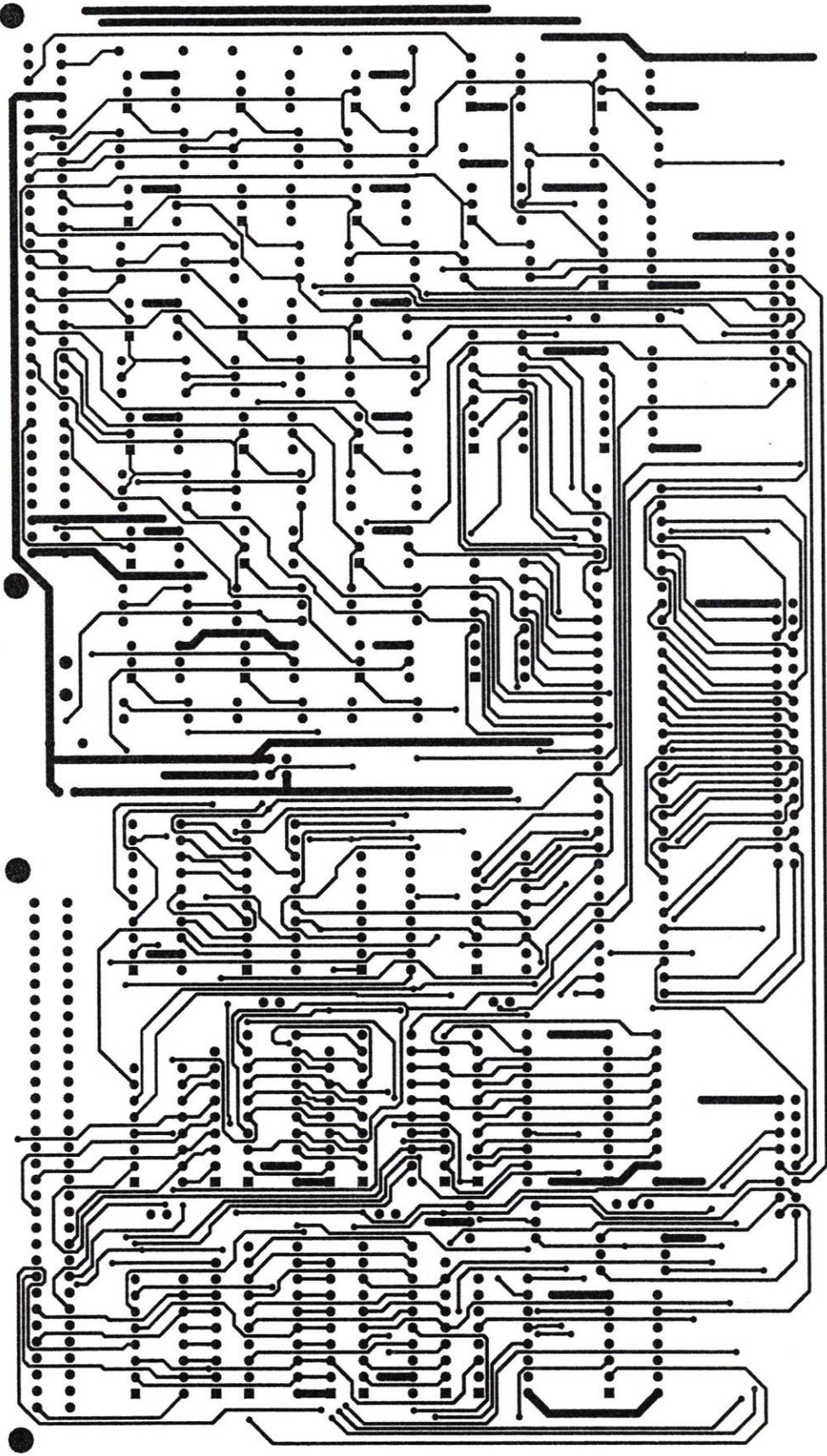
GS1/GL FG 447.120 BS





GSI/GL FG 447.120 LS

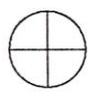


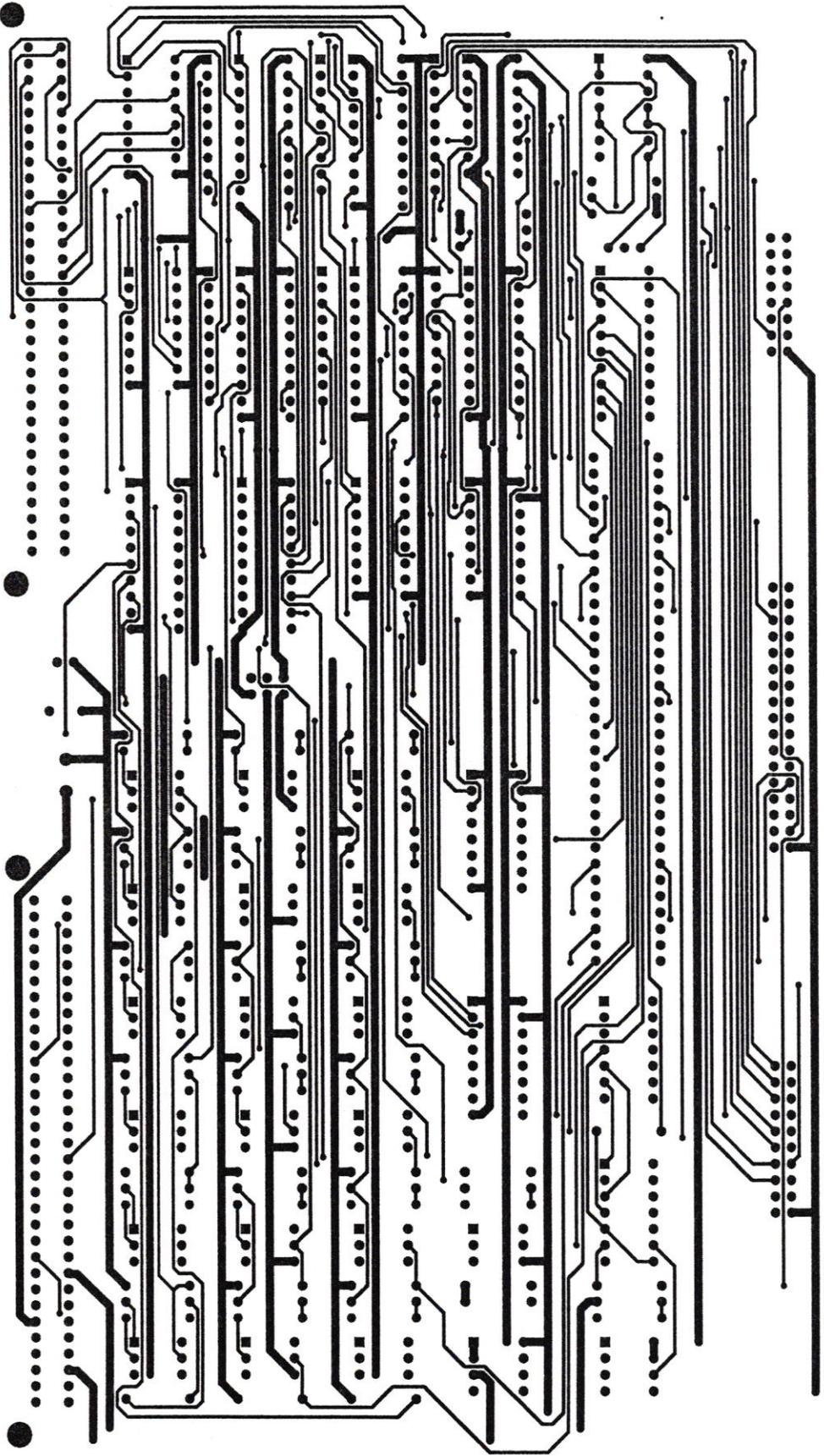


GSI CONL2

CON

FG 447.120

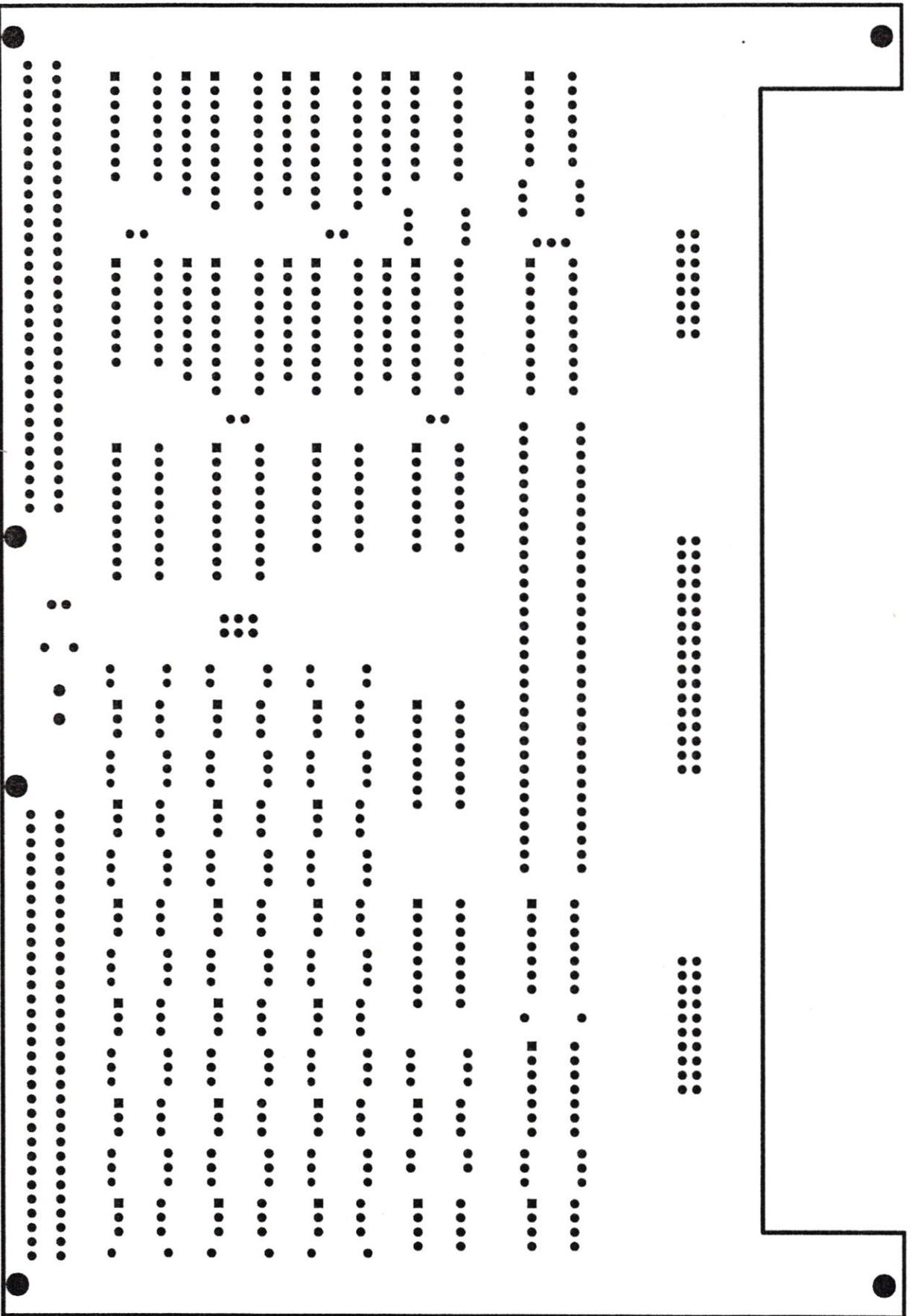




651 CONL 1

CON

FG 447.120



E L E K T R . S T U E C K L I S T E

*RM: 1 EINHEIT = 2.54MM

| ST. | BAUTEIL-BEZEICHNUNG | WERT/TYP | RM | HERSTELLER | LG-NR. | BEMERKUNGEN | AUFRUF-NAME |
|-----|-------------------------|--------------|----|------------|--------|--|-------------|
| | R29, R30, R31, R32, R33 | | | | | | |
| | R34, R35, R36, R42 | | | | | | |
| 19 | R43, R46, R48, R50, R52 | 470R | 4 | | 10 117 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 470R*J |
| | R54, R56, R58, R60, R62 | | | | | | |
| | R64, R66, R68, R70, R72 | | | | | | |
| | R74, R76, R78, R80 | | | | | | |
| 19 | R44, R47, R49, R51, R53 | 4K7 | 4 | | 10 063 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 4K7*J |
| | R55, R57, R59, R61, R63 | | | | | | |
| | R65, R67, R69, R71, R73 | | | | | | |
| | R75, R77, R79, R81 | | | | | | |
| 6 | RN1, RN2, RN3, RN4 | 8X10K | | | 10 798 | 8 WIDERSTAENDE IM SIL-9-GEHAEUSE | 8X10K*31 |
| | RN5, RN6 | | | | | | |
| 1 | ST1 | ST-3599-6002 | 3M | | 14 754 | 3M3599-6002 16POL PIN GERADE LOETST. 1-8, 9-16 O. BB | ST16P*C1 |
| 1 | ST2 | ST-3592-6002 | 3M | | 14 755 | 3M3592-6002 20POL PIN GERADE LOETST. 1-10, 11-20 | ST20P*C1 |
| 1 | ST3 | ST-3594-6002 | 3M | | 14 757 | 3M3594-6002 34POL PIN GERADE LOETST. 1-17, 18-34 | ST34P*C1 |
| 2 | VG1, VG2 | VG64P | | | 14 558 | 64-POL. VG-STECKERLISTE MIT BEF. BOHRUNGEN | VG64P |
| 1 | LEITERPLATTE | FG 447.120 | | | | | |

GS1
DARMSTADT

BEZ.: SCHALTMADRIX - CONTROL

NUMMER: FG 447.120

BEARB.: LOOS

DATUM: 28. Nov. 1995

BLATT: 3 VON 3

E L E K T R . S T U E C K L I S T E

*RM: 1 EINHEIT = 2.54MM

| ST. | BAUTEIL-BEZEICHNUNG | WERT/TYP | RM | HERSTELLER | LG-NR. | BEMERKUNGEN | AUFGRUF-NAHME |
|-----|-----------------------------|--------------|----|------------|--------|---|---------------|
| 3 | IC2, IC13, IC23 | 74HC541 | | | 13 729 | 8 NICHINVERT. BUSTREIBER TRI-STATE | 74HC541 |
| 4 | IC7, IC14, IC22, IC24 | 74HC573 | | | 13 732 | OCTAL 3-STATE NONINVERTING D-TYPE TRANSPARENT LATCH | 74HC573 |
| 1 | IC33 | 74LS541 | | | | 8 NICHINVERT. BUSTREIBER TRI-STATE | 74LS541 |
| 1 | IC12 | MAX690 | | MAXIM | ELEX | PRECISION VOLTAGE MONITOR | MAX690 |
| 3 | IC15, IC31, IC32 | ULN2003 | | | 13 305 | 7 DARLINGTON-TREIBER | ULN2003A |
| 3 | KURZSCHL.-BU | | | COMATEL | 16 009 | KURZSCHLUSSBUCHSE ISOLIERT MIT OFFENUNG F. PRUEFCL | |
| | J1, J2, J3 | WW-L. ZUSCHN | | | 16 080 | COMATEL 385.0358.120.400 WW-LEISTE ZUSCHN. 1X3PINS | JU1X3*B2 |
| 19 | IC11, IC16, IC17, IC18 | CNY17F-4 | | SIEMENS | 13 822 | OPTOKOPLER CNY17F-4 BEST.-NR.: Q62703-N54 | CNY17F-4 |
| | IC19, IC20, IC21, IC25 | | | | | | |
| | IC26, IC27, IC28, IC29 | | | | | | |
| | IC30, IC34, IC35, IC36 | | | | | | |
| | IC37, IC38, IC39 | | | | | | |
| 4 | R2, R3, R39, R40 | 10K | 4 | | 10 071 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 10K*J4 |
| 1 | R45 | 1K0 | 4 | | 10 047 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 1K0*J4 |
| 1 | R38 | 1K2 | 3 | | 10 049 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 1K2*J |
| 6 | R1, R18, R20, R26, R37, R41 | 2K2 | 4 | | 10 055 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 2K2*J |
| 31 | R4, R5, R6, R7, R8, R9, R10 | 2K7 | 4 | | 10 057 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 2K7*J |
| | R11, R12, R13, R14, R15 | | | | | | |
| | R16, R17, R19, R21, R22 | | | | | | |
| | R23, R24, R25, R27, R28 | | | | | | |

GS1
DARMSTADT

BEZ.:
SCHALTMATRIX - CONTROL

NUMBER:
FG 447.120

BEARB.:
LOOS

DATUM
28. Nov. 1995

BLATT
2 VON 3

E L E K T R . S T U E C K L I S T E

*RM: 1 EINHEIT = 2.54MM

| ST. | BAUTEIL-BEZEICHNUNG | WERT/TYP | RM | HERSTELLER | IG-NR. | BEMERKUNGEN | AUFRUF-NAHME |
|-----|----------------------------|----------|----|------------|--------|--|--------------|
| 3 | | DIP14*D1 | | | 13 322 | CAB/DALEKTRON 110-91-314 DUAL-IN-LINE ZUM LOETEN | |
| 7 | | DIP16*D1 | | | 13 323 | CAB/DALEKTRON 110-91-316 DUAL-IN-LINE ZUM LOETEN | |
| 8 | | DIP20*D1 | | | 13 220 | CAB/DALEKTRON 110-91-320 DUAL-IN-LINE ZUM LOETEN | |
| 1 | | DIP8*D1 | | | 13 137 | CAB/DALEKTRON 110-91-308 DUAL-IN-LINE ZUM LOETEN | |
| 2 | LEITERPLATTENHALTER | | | | 14 471 | FUER FRONTPLATTENBEFESTIGUNG | |
| 4 | MUTTERN | M2, 5 | | | 62 545 | BEF. VG-LEISTE | |
| 4 | ZYLINDERKOPFSCHRAUBEN | M2, 5X10 | | | 62 440 | BEF. VG-LEISTE | |
| 5 | C1, C2, C3, C4, C5 | 100N | 1 | UNION CARB | 11 096 | Union Carbide C320C104K1R5CA stehend Vielschicht-K | 100N*A |
| 1 | C6 | 22U | 2 | STC | 11 326 | TANTAL-TROPFEN-KONDENSATOR 35V, RM=5.08 | 22U*TANA |
| 20 | D1, D2, D3, D4, D5, D6, D7 | 1N4151 | 4 | | 13 001 | DIODE 1N4151, DO-35, RM=10.16MM | 1N4151 |
| | D8, D9, D10, D11, D12, D13 | | | | | | |
| | D14, D15, D16, D17, D18 | | | | | | |
| | D19, D20 | | | | | | |
| 1 | MICRO-HALTER | | | WICKMANN | 17 007 | MICRO-FUSE HALTER SENKRECHT NR 19556 | |
| 1 | F1 | 3A0 | | | 17 031 | MICRO-FUSE SICHERUNG MIT HALTER STEHEND | F3A0*30003 |
| 1 | IC5 | 6N137 | | | 13 168 | OPTOKOPLER | 6N137 |
| 1 | IC1 | 74HC00 | | | 13 605 | 4 NAND-GATTER MIT JE 2 EINGANGEN | 74HC00 |
| 1 | IC3 | 74HC08 | | | 13 608 | 4 AND-GATTER MIT JE 2 EINGANGEN (MINI DIP) | 74HC08 |
| 4 | IC6, IC8, IC9, IC10 | 74HC139 | | | 13 615 | ZWEI 2-BIT BINAERDEKODER/DEMULTIPLIKER (2 ZU 4) | 74HC139 |
| 1 | IC4 | 74HC14 | | | 13 609 | SECHS INVERTIERENDE SCHMITT-TRIGGER | 74HC14 |

BEZ. :

NUMMER :

BEARB. :

GSI
DARMSTADT

SCHALTMATRIX - CONTROL

FG 447.120

LOOS

28. NOV. 1995

BLATT
1 VON 3

E L E K T R . S T U E C K L I S T E

*RM: 1 EINHEIT = 2.54MM

| ST. | BAUTEIL-BEZEICHNUNG | WERT/TYP | RM | HERSTELLER | LG-NR. | BEMERKUNGEN | AUFRUF-NAHME |
|-----|------------------------------|----------|----|--------------|--------|--|--------------|
| 1 | IC4 | 74HC14 | | | 13 609 | SECHS INVERTIERENDE SCHMITT-TRIGGER | 74HC14 |
| 4 | IC2, IC13, IC23, <u>IC33</u> | 74HC541 | | | 13 729 | 8 NICHINVERT. BUSSTREIBER TRI-STATE | 74HC541 |
| 4 | IC7, IC14, IC22, IC24 | 74HC573 | | | 13 732 | OCTAL 3-STATE NONINVERTING D-TYPE TRANSPARENT IATC | 74HC573 |
| 1 | <u>IC33</u> | 74LS541 | | | 8 | NICHINVERT. BUSSTREIBER TRI-STATE | 74LS541 |
| 1 | IC12 | MAX690 | | MAXIM | ELEX | PRECISION VOLTAGE MONITOR | MAX690 |
| 3 | IC15, IC31, IC32 | ULN2003 | | | 13 305 | 7 DARLINGTON-TREIBER | ULN2003A |
| 4 | KURZSCHL.-BU | | | COMATEL | 16 009 | KURZSCHLUSSBUCHSE ISOLIERT MIT OEFFNUNG F. PRUEFCL | |
| | J1, J2, J3, J4 | | | WM-L. ZUSCHN | 16 080 | COMATEL 385.0358.120.400 WM-LEISTE ZUSCHN. 1X3PINS | JU1X3*B2 |
| 19 | IC11, IC16, IC17, IC18 | CNY17F-4 | | SIEMENS | 13 822 | OPTOKOPLER CNY17F-4 BEST.-NR.: Q62703-N54 | CNY17F-4 |
| | IC19, IC20, IC21, IC25 | | | | | | |
| | IC26, IC27, IC28, IC29 | | | | | | |
| | IC30, IC34, IC35, IC36 | | | | | | |
| | IC37, IC38, IC39 | | | | | | |
| 4 | R2, R3, R39, R40 | 10K | 4 | | 10 071 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 10K*J4 |
| 1 | R45 | 1K0 | 4 | | 10 047 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 1K0*J4 |
| 1 | R38 | 1K2 | 3 | | 10 049 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 1K2*J |
| 6 | R1, R18, R20, R26, R37, R41 | 2K2 | 4 | | 10 055 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 2K2*J |
| 31 | R4, R5, R6, R7, R8, R9, R10 | 2K7 | 4 | | 10 057 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 2K7*J |
| | R11, R12, R13, R14, R15 | | | | | | |
| | R16, R17, R19, R21, R22 | | | | | | |

GSI
 DARMSTADT

BEZ.: _____
 CON - SCHALTMATRIX-CONTROL

NUMMER: _____
 FG 447.121

BEARB.: _____
 LOOS

DATUM
 23. Jan. 1996

BLATT
 2 VON 3

E L E K T R . S T U E C K L I S T E

*RM: 1 EINHEIT = 2.54MM

| ST. | BAUTEIL-BEZEICHNUNG | WERT/TYP | RM | HERSTELLER | LG-NR. | BEMERKUNGEN | AUFRUF-NAHME |
|-----|-------------------------|----------------|----|------------|--------------|--|--------------|
| | R23, R24, R25, R27, R28 | | | | | | |
| | R29, R30, R31, R32, R33 | | | | | | |
| | R34, R35, R36, R42 | | | | | | |
| 19 | R43, R46, R48, R50, R52 | 470R | 4 | | 10 117 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 470R*J |
| | R54, R56, R58, R60, R62 | | | | | | |
| | R64, R66, R68, R70, R72 | | | | | | |
| | R74, R76, R78, R80 | | | | | | |
| 19 | R44, R47, R49, R51, R53 | 4K7 | 4 | | 10 063 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 4K7*J |
| | R55, R57, R59, R61, R63 | | | | | | |
| | R65, R67, R69, R71, R73 | | | | | | |
| | R75, R77, R79, R81 | | | | | | |
| 6 | RN1, RN2, RN3 | 8X10K | | | 10 798 | 8 WIDERSTAENDE IM SIL-9-GEHAEUSE | 8X10K*31 |
| | RN4, RN5, RN6 | | | | | | |
| 1 | ST1 | 3599-6002 | 3M | | 14 754 | 3M3599-6002 16POL PIN GERADE LOETST. 1-8,9-16 O.BB | ST16P*C1 |
| 1 | ST2 | 3592-6002 | 3M | | 14 755 | 3M3592-6002 20POL PIN GERADE LOETST. 1-10,11-20 | ST20P*C1 |
| 1 | ST3 | 3594-6002 | 3M | | 14 757 | 3M3594-6002 34POL PIN GERADE LOETST. 1-17,18-34 | ST34P*C1 |
| 2 | VG1, VG2 | VG64P | | | 14 558 | 64-POL.VG-STECKERLEISTE MIT BEF. BOHRUNGEN | VG64P |
| 19 | <i>Jc-Socher</i> | <i>20P6*DM</i> | | | <i>13232</i> | | |
| 1 | LEITERPLATTE | FG 447.121 | | | | | |

GSI DARMSTADT
 BEZ.:
 CON - SCHALTMATRIX-CONTROL
 NUMMER:
 FG 447.121
 BEARB.:
 LOOS
 DATUM
 23. Jan. 1996
 BLATT
 3 VON 3

E L E K T R . S T U E C K L I S T E

*RM: 1 EINHEIT = 2.54MM

| ST. | BAUTEIL-BEZEICHNUNG | WERT/TYP | RM | HERSTELLER | LG-NR. | BEMERKUNGEN | AUFRUF-NAHME |
|----------|--------------------------------|----------|----|------------|--------|--|--------------|
| 3 | <i>IC-Soekke C</i> DIP14*D1 | DIP14*D1 | | | 13 322 | CAB/DALEKTRON 110-91-314 DUAL-IN-LINE ZUM LOETEN | |
| 7 | DIP16*D1 | DIP16*D1 | | | 13 323 | CAB/DALEKTRON 110-91-316 DUAL-IN-LINE ZUM LOETEN | |
| 8 | DIP20*D1 | DIP20*D1 | | | 13 220 | CAB/DALEKTRON 110-91-320 DUAL-IN-LINE ZUM LOETEN | |
| 2 | DIP8*D1 | DIP8*D1 | | | 13 137 | CAB/DALEKTRON 110-91-308 DUAL-IN-LINE ZUM LOETEN | |
| 2 | LEITERPLATTENHALTER | | | | 14 471 | FUER FRONTPLATTENBEFESTIGUNG | |
| 4 | MUTTERN | M2, 5 | | | 62 545 | BEF. VG-LEISTE | |
| 4 | ZYLINDERKOPFSCHRAUBEN | M2, 5X10 | | | 62 440 | BEF. VG-LEISTE | |
| 5 | C1, C2, C3, C4, C5 | 100N | 1 | UNION CARB | 11 096 | Union Carbide C320C104K1R5CA stehend Vielschicht-K | 100N*A |
| 1 | C7 | 100N | 1 | U-CAR | 11 096 | KERAMIK-VIELSCHICHT RASTER 2,54 | 100N*KERA |
| 1 | C6 | 22U | 2 | STC | 11 326 | TANTAL-TROPFEN-KONDENSATOR 35V, RM=5.08 | 22U*TANA |
| 20 | D1, D2, D3, D4, D5, D6, D7 | 1N4151 | 4 | | 13 001 | DIODE 1N4151, DO-35, RM=10.16MM | 1N4151 |
| | D8, D9, D10, D11, D12, D13 | | | | | | |
| | D14, D15, D16, D17, D18 | | | | | | |
| | D19, D20 | | | | | | |
| 1 | MICRO-HALTER | | | WICKMANN | 17 007 | MICRO-FUSE HALTER SENKRECHT NR 19556 | |
| 1 | F1 | 3A0 | | | 17 031 | MICRO-FUSE SICHERUNG MIT HALTER STEHEND | F3A0*30003 |
| 1 | IC5 | 6N137 | | | 13 168 | OPTOKOPLER | 6N137 |
| 1 | IC1 | 74HC00 | | | 13 605 | 4 NAND-GATTER MIT JE 2 EINGAENGEN | 74HC00 |
| 1 | IC3 | 74HC08 | | | 13 608 | 4 AND-GATTER MIT JE 2 EINGAENGEN (MINI DIP) | 74HC08 |
| 4 | IC6, IC8, IC9, IC10 | 74HC139 | | | 13 615 | ZWEI 2-BIT BINARDEKODER/DEMULTIPLIKER (2 ZU 4) | 74HC139 |

BEZ.: GSI
 DARMSTADT
 CON - SCHALTMATRIX-CONTROL
 NUMMER: FG 447.121
 BEARB.: LOOS
 DATUM: 23. Jan. 1996
 BLATT: 1 VON 3

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| Stück | Bauteil-Bezeichnung | Wert / Typ | Bauform | Rastermaß | Hersteller Lieferant | GSI-Lager-Nr. oder Firmen-Bestell-Nr. | Bemerkungen |
|-------|---------------------|------------|---------|-----------|----------------------|---------------------------------------|-----------------------------------|
| 1 | Schirmbaugruppe | GHE/14TE | | | Schroff | 20810-470 | Früherer mod. 470 nach FH 472-220 |
| 1 | Plü-Griff | 14TE | | | " | 2809-290 | |
| 33 | Led | grün | | | | Lg. 13820 | |
| 3 | " | gelb | | | | Lg. 13820 | |
| 1 | " | rot | | | | Lg. 13819 | |
| 16 | Kippachse | 1x11M | | | CH | Lg. 15070 | |
| 1 | " | 2x11M | | | CH | Lg. 15071 | |
| 1 | Taster | 1x11H | | | CH | Lg. 15014 | |
| 37 | Led-Färbung | 3mm | | | | Lg. 14574 | Zubehör Led's |
| 1 | Postenverbindung | 16pol | | | | Lg. 14575 | |
| 1 | " | 20 pol | | | | Lg. 14576 | |
| 1 | " | 34 pol | | | | | |
| | Schraubtastband | | | | | | |
| | Silberdraht | Ø 1mm | | | | | |
| | Flackhaibel | 34 pol | | | | | |
| | Kabelbinde | klein | | | | | |

GSI
 DARMSTADT
 Name: _____
 Tag: _____
 Bearb: 24.01.96 Loos, D
 Gepr: _____
 Norm: _____
 CON-Schaetmatix-Controll
 Frontplatte
 Bich-Nr. 1
 Bichanzon 1
 FG 477 121
 Ersetzt durch _____
 Elektr. Stückliste

E L E K T R . S T U E C K L I S T E

*RM: 1 EINHEIT = 2.54MM

| ST. | BAUTEIL-BEZEICHNUNG | WERT/TYP | RM | HERSTELLER | LG-NR. | BEMERKUNGEN | AUFRUF-NAHME |
|-----|-------------------------|------------|----|------------|--------|--|--------------|
| | R23, R24, R25, R27, R28 | | | | | | |
| | R29, R30, R31, R32, R33 | | | | | | |
| | R34, R35, R36, R42 | | | | | | |
| 19 | R43, R46, R48, R50, R52 | 470R | 4 | | 10 117 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 470R*J |
| | R54, R56, R58, R60, R62 | | | | | | |
| | R64, R66, R68, R70, R72 | | | | | | |
| | R74, R76, R78, R80 | | | | | | |
| 19 | R44, R47, R49, R51, R53 | 4K7 | 4 | | 10 063 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 4K7*J |
| | R55, R57, R59, R61, R63 | | | | | | |
| | R65, R67, R69, R71, R73 | | | | | | |
| | R75, R77, R79, R81 | | | | | | |
| 6 | RN1, RN2, RN3 | 8X10K | | | 10 798 | 8 WIDERSTAEENDE IM SIL-9-GEHAEUSE | 8X10K*31 |
| | RN4, RN5, RN6 | | | | | | |
| 1 | ST1 | 3599-6002 | 3M | | 14 754 | 3M3599-6002 16POL PIN GERADE LOETST. 1-8,9-16 O.BB | ST16P*C1 |
| 1 | ST2 | 3592-6002 | 3M | | 14 755 | 3M3592-6002 20POL PIN GERADE LOETST. 1-10,11-20 | ST20P*C1 |
| 1 | ST3 | 3594-6002 | 3M | | 14 757 | 3M3594-6002 34POL PIN GERADE LOETST. 1-17,18-34 | ST34P*C1 |
| 2 | VG1, VG2 | VG64P | | | 14 558 | 64-POL.VG-STECKERLEISTE MIT BEF. BOHRUNGEN | VG64P |
| 1 | LEITERPLATTE | FG 447.121 | | | | | |

GSI BEZ.:
 DARMSTADT CON - SCHALTMATRIX-CONTROL FG 447.121
 NUMMER: FG 447.121
 BEARB.:
 LOOS
 DATUM: 23. Jan. 1996
 BLATT: 3 VON 3

E L E K T R . S T U E C K L I S T E

*RM: 1 EINHEIT = 2.54MM

| ST. | BAUTEIL-BEZEICHNUNG | WERT/TYP | RM | HERSTELLER | Lg-NR. | BEMERKUNGEN | AUFRUF-NAME |
|-----|-----------------------------|--------------|----|------------|--------|--|-------------|
| 4 | IC6, IC8, IC9, IC10 | 74HC139 | | | 13 615 | ZWEI 2-BIT BINARDEKODER/DEMULTIPLIKER (2 ZU 4) | 74HC139 |
| 1 | IC4 | 74HC14 | | | 13 609 | SECHS INVERTIERENDE SCHMITT-TRIGGER | 74HC14 |
| 4 | IC2, IC13, IC23, IC33 | 74HC541 | | | 13 729 | 8 NICHTINVERT. BUSTREIBER TRI-STATE | 74HC541 |
| 4 | IC7, IC14, IC22, IC24 | 74HC573 | | | 13 732 | OCTAL 3-STATE NONINVERTING D-TYPE TRANSPARENT LATC | 74HC573 |
| 1 | IC12 | MAX690 | | MAXIM | ELEX | PRECISION VOLTAGE MONITOR | MAX690 |
| 3 | IC15, IC31, IC32 | ULN2003 | | | 13 305 | 7 DARLINGTON-TREIBER | ULN2003A |
| 4 | KURZSCHL.-BU | | | COMATEL | 16 009 | KURZSCHLUSSBUCHSE ISOLIERT MIT OFFENUNG F. PRUEFCL | |
| | J1, J2, J3, J4 | WW-L. ZUSCHN | | | 16 080 | COMATEL 385.0358.120.400 WW-LEISTE ZUSCHN. 1X3PINS | JU1X3*B2 |
| 19 | IC11, IC16, IC17, IC18 | CNY17F-4 | | SIEMENS | 13 822 | OPTOKOPLER CNY17F-4 BEST.-NR.: Q62703-N54 | CNY17F-4 |
| | IC19, IC20, IC21, IC25 | | | | | | |
| | IC26, IC27, IC28, IC29 | | | | | | |
| | IC30, IC34, IC35, IC36 | | | | | | |
| | IC37, IC38, IC39 | | | | | | |
| 4 | R2, R3, R39, R40 | 10K | | | 10 071 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 10K*J4 |
| 1 | R45 | 1K0 | | | 10 047 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 1K0*J4 |
| 1 | R38 | 330R | | | 10 037 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 330R*J |
| 6 | R1, R18, R20, R26, R37, R41 | 2K2 | | | 10 055 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 2K2*J |
| 31 | R4, R5, R6, R7, R8, R9, R10 | 2K7 | | | 10 057 | METALLSCHICHTWIDERSTAND, 0.6W/1% RASTER=4 | 2K7*J |
| | R11, R12, R13, R14, R15 | | | | | | |
| | R16, R17, R19, R21, R22 | | | | | | |

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CON - SCHALTMATRIX-CONTROL

FG 447.121

LOOS

23. Jan. 1996

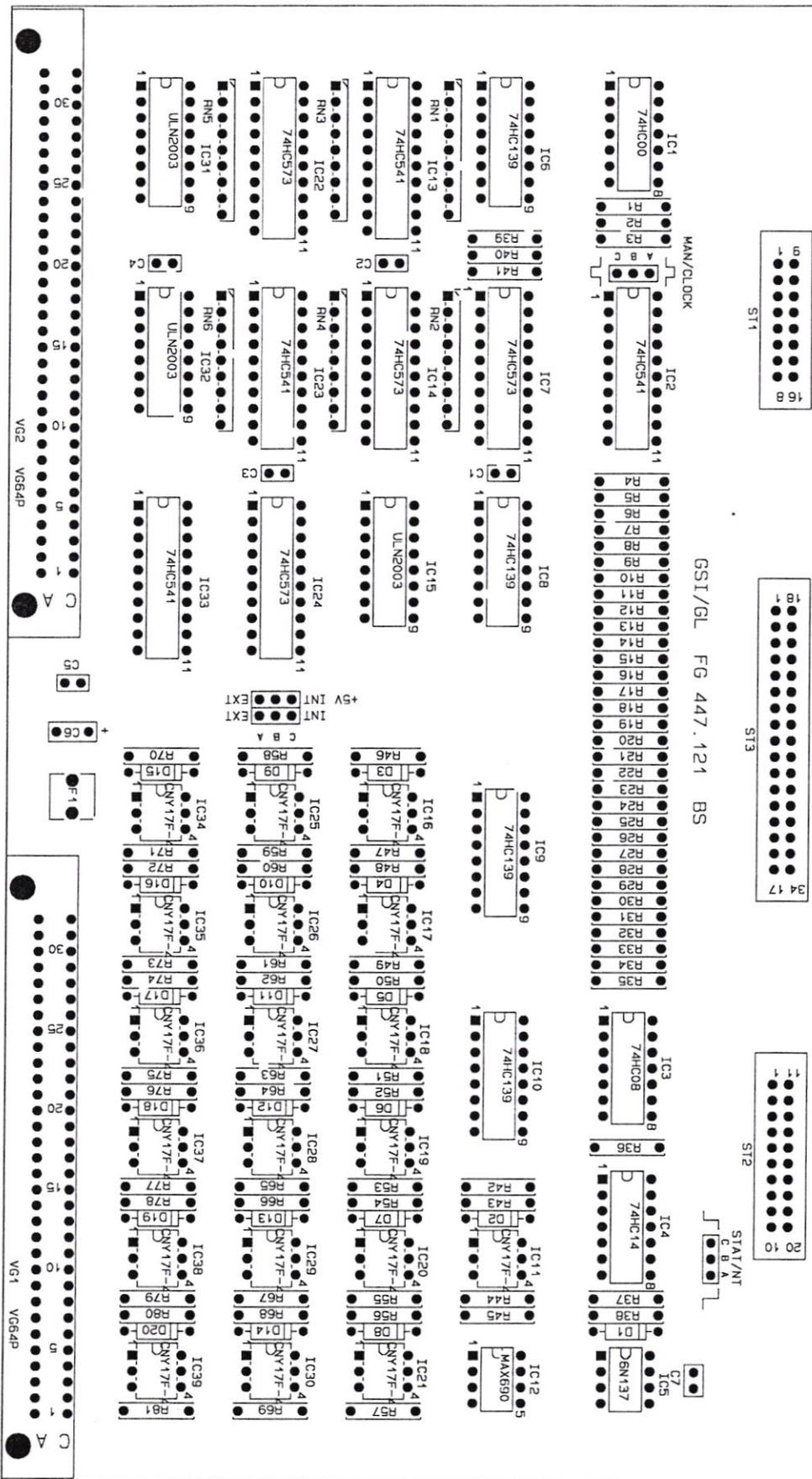
2 VON 3

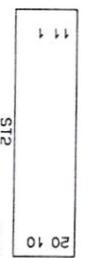
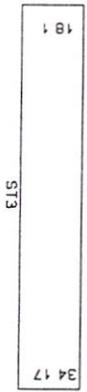
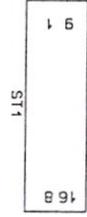
E L E K T R . S T U E C K L I S T E

*RM: 1 EINHEIT = 2.54MM

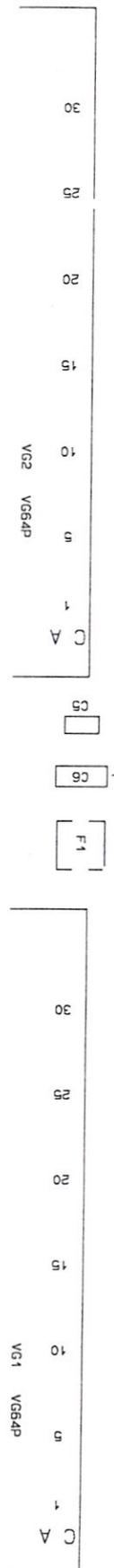
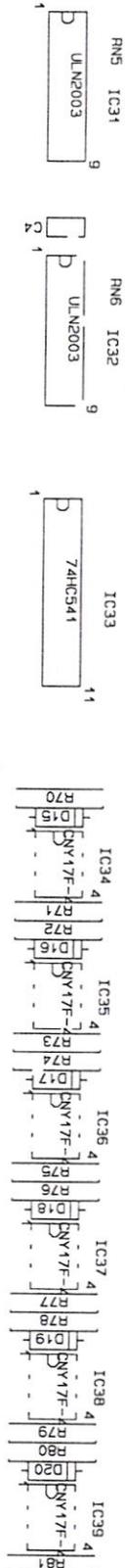
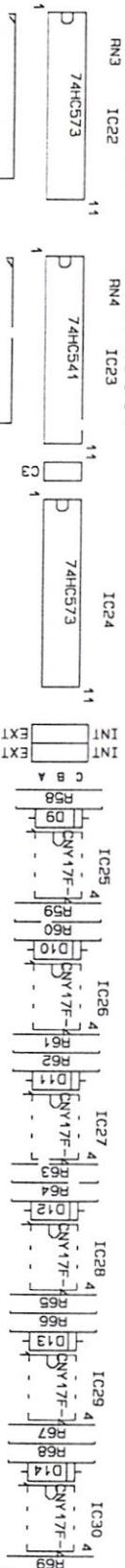
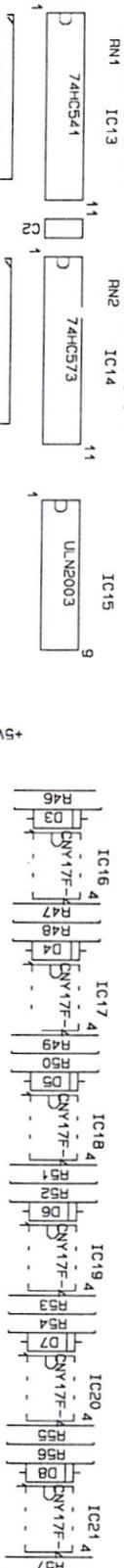
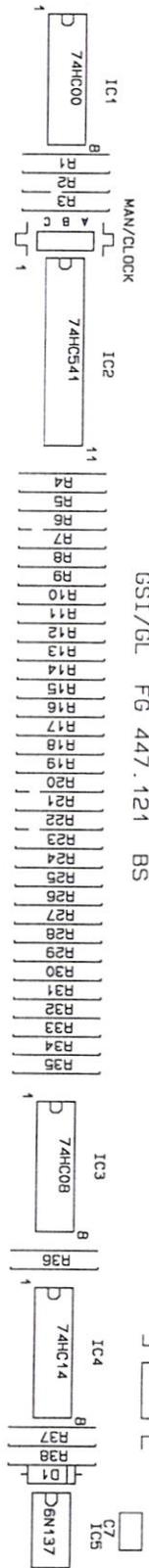
| ST. | BAUTEIL-BEZEICHNUNG | WERT/TYP | RM | HERSTELLER | LG-NR. | BEMERKUNGEN | AUFRUF-NAHME |
|-----|-----------------------|----------|----|------------|--------|--|--------------|
| 19 | 6 POL. IC-SOCKEL | DIP6*D1 | | | 13 232 | CAB/DALEKTRON 110-91-306 DUAL-IN-LINE ZUM LOETTEN | |
| 2 | 8 POL. IC-SOCKEL | DIP8*D1 | | | 13 137 | CAB/DALEKTRON 110-91-308 DUAL-IN-LINE ZUM LOETTEN | |
| 3 | 14POL. IC-SOCKEL | DIP14*D1 | | | 13 322 | CAB/DALEKTRON 110-91-314 DUAL-IN-LINE ZUM LOETTEN | |
| 7 | 16POL. IC-SOCKEL | DIP16*D1 | | | 13 323 | CAB/DALEKTRON 110-91-316 DUAL-IN-LINE ZUM LOETTEN | |
| 8 | 20POL. IC-SOCKEL | DIP20*D1 | | | 13 220 | CAB/DALEKTRON 110-91-320 DUAL-IN-LINE ZUM LOETTEN | |
| 2 | LEITERPLATTENHALTER | | | | 14 471 | FUER FRONTPLATTENBEFESTIGUNG | |
| 4 | MUTTERN | M2,5 | | | 62 545 | BEF. VG-LEISTE | |
| 4 | ZYLINDERKOPFSCHRAUBEN | M2,5X10 | | | 62 440 | BEF. VG-LEISTE | |
| 5 | C1,C2,C3,C4,C5 | 100N | 1 | UNION CARB | 11 096 | Union Carbide C320C104K1R5CA stehend Vielschicht-K | 100N*A |
| 1 | C7 | 100N | 1 | U-CAR | 11 096 | KERAMIK-VIELSCHICHT RASTER 2,54 | 100N*KERA |
| 1 | C6 | 22U | 2 | STC | 11 326 | TANTAL-TROPFEN-KONDENSATOR 35V, RM=5.08 | 22U*TANA |
| 20 | D1,D2,D3,D4,D5,D6,D7 | 1N4151 | 4 | | 13 001 | DIODE 1N4151, DO-35, RM=10.16MM | 1N4151 |
| | D8,D9,D10,D11,D12,D13 | | | | | | |
| | D14,D15,D16,D17,D18 | | | | | | |
| | D19,D20 | | | | | | |
| 1 | MICRO-HALTER | | | WICKMANN | 17 007 | MICRO-FUSE HALTER SENKRECHT NR 19556 | |
| 1 | F1 | 3A0 | | | 17 031 | MICRO-FUSE SICHERUNG MIT HALTER STEHEND | F3A0*30003 |
| 1 | ICS5 | 6N137 | | | 13 168 | OPTOKOPPLER | 6N137 |
| 1 | IC1 | 74HC00 | | | 13 605 | 4 NAND-GATTER MIT JE 2 EINGANGEN | 74HC00 |
| 1 | IC3 | 74HC08 | | | 13 608 | 4 AND-GATTER MIT JE 2 EINGANGEN (MINI DIP) | 74HC08 |

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 BEZ.:
 CON - SCHALTMATRIX-CONTROL
 FG 447.121
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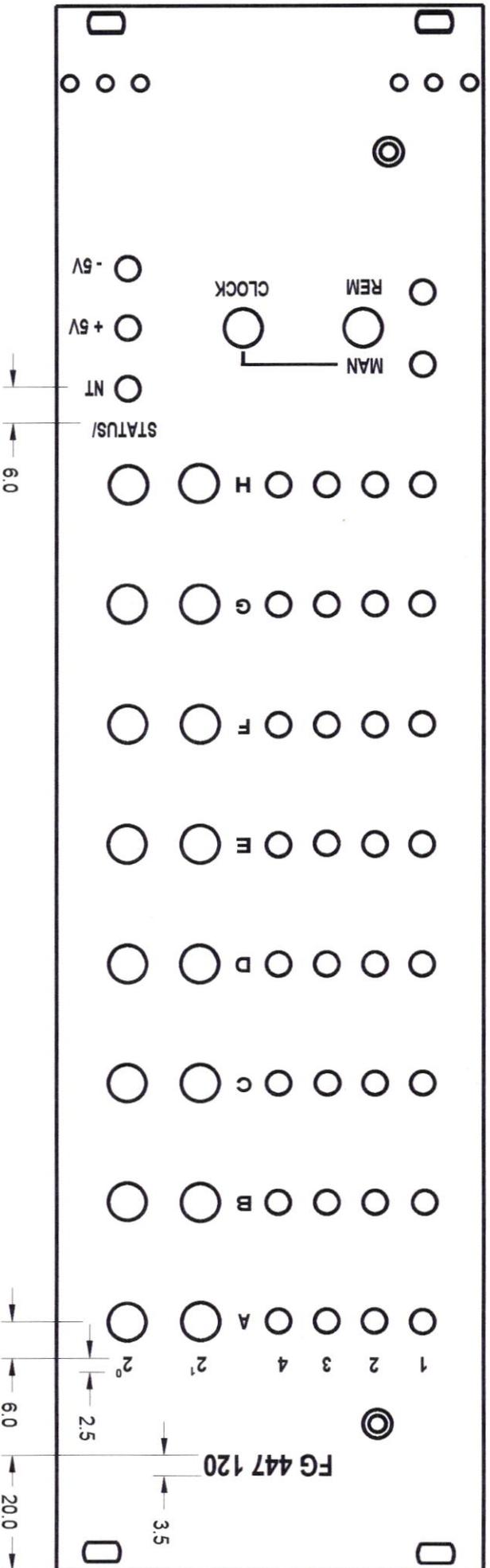
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24-JAN-1996 LOOS

CON

FG 447.121



| | | | | | | | |
|--|--|----------|--|-----------------|--|-----------|--|
| Zust. | | Änderung | | Datum | | Name | |
| | | | | | | | |
| G S I DARMSTADT | | | | Datum | | Name | |
| | | | | Bearb. 2.1.1996 | | J. Heider | |
| FM 447 120 020 Gravurplan | | | | Gepr. | | Norm | |
| | | | | | | | |
| Schaltmatrix - Control | | | | Maßstab 1:1 | | | |
| Teilfrontplatte 6 HE / 14 TE | | | | | | | |
| | | | | Blatt | | 1 | |
| | | | | 1 | | 1 BL. | |

Gravur :
 senkrechte Mittelschritt 2,5 und 3,5 mm hoch
 (nur Großbuchstaben).

MATERIALAUFNAHMESCHEIN

Kostenstelle 621000 entnimmt folgendes Material für

Mengeninhalt:
 1 = Stück 4 = kg
 2 = l 5 = m²
 3 = m³ 6 = m

| | |
|-----------|----------|
| Beleg-Nr. | 14 - 18 |
| | 7 |

Vom Lager auszufüllen
 ME gelieferte Menge 47 - 51 52-54
 45

| Mat.-Schl. | Mat. Schl. | angeforderte Menge | Materiell-Bezeichnung |
|------------|------------|--------------------|-----------------------|
| 68370 | 10798 | | RNetzwerk 8x10K |
| | 14754 | | Pfostenlecker 16pc |
| | 14755 | | " 20pc |
| | 14757 | | " 34pc |
| | 14558 | | VG-Leiste 64pc |

| | | | |
|---|--|-----------------------|----------------|
| 1 = Neuell und Material zur Erweiterung 2 = Neuell und Material zum Einbau in einer bestehenden Anlage 3 = Ersatzteil | 4 = neuas selbständig nutzbares Gerät 5 = Verbrauchsmaterial u. Betriebsstoffe 6 = Reparatur 9 = Austauschgerät | geprüft: | geprüft: |
| SA Bel.-Ber. 11-12 | Datum 19-20 | Lager-Kost. Schl. WKZ | Aussteller: 59 |
| 8-10 | 27 - 31 | 37-38 | 44 55 |
| 100 | 89100 | 10 | 1 |
| 60 | | | |

MATERIALENTNAHMESCHEIN

Kostenstelle 62100 entnimmt folgendes Material für

Mengeinhalt:
 1 - Stück 4 - kg
 2 - l 5 - m²
 3 - m³ 6 - m

Beleg-Nr. 13
 14 - 18

Vom Lager auszufüllen
 ME gelieferte Menge
 45 47 - 51 52-54

68370 17007
 Mat.-Schl. 39 - 43
 angeforderte Menge

| | | | | |
|-------|-----------------------------|--|--|--|
| 17031 | S: 3H | | | |
| 13168 | Optokopier G1137 | | | |
| 13605 | 74HC00 | | | |
| 13608 | 74HC08 | | | |
| 13645 | 74HC139 | | | |
| 13609 | 74HC14 | | | |
| 13729 | 74HC541 | | | |
| 13732 | 74HC573 | | | |
| | MAX 690 | | | |
| 13305 | MLN2003 | | | |
| 16009 | Kürzschluss-Büchse (Jumper) | | | |
| 16080 | WW-Leiste | | | |
| 13822 | Opto-Koppel CNY17F-4 | | | |
| 10071 | NO-derstand 10K | | | |
| 10047 | " | | | |
| 10049 | " | | | |
| 10055 | " | | | |
| 10057 | " | | | |
| 10117 | " | | | |
| 10063 | " | | | |

1 = Neuzeit und Material zur Erweiterung
 2 = Neuzeit und Material zum Einbau in
 eine in Bau befindliche Anlage
 3 = Ersatzteil
 4 = neu selbständig nutzbares Gerät
 5 = Verbrauchsmaterial u. Betriebsstoffe
 6 = Reparatur
 9 = Austauschgerät

geprüft: _____

Empfänger: _____

geprüft: _____

genehmigt: _____

SA 8-10 11-12 21
 Datum 19-20 26
 Lager-Kost. 27 - 31
 Schl. WKZ 37-38 44 55 59
 Aussteller: _____

100 60
 89100 10 1

| | | | | | | | | | |
|--|-----------|-------|-------------|-----------|-------------|-----------------------|----|----|----|
| 100 | 60 | 21 | 26 | 27 | 31 | 37-38 | 44 | 55 | 59 |
| SA | Bel.-Ber. | Datum | Lager-Kost. | Schl. WKZ | Aussteller: | Genehmigt: <i>Los</i> | | | |
| 8-10 | 11-12 | 19-20 | | | | Empfänger: | | | |
| 1 = Neuill und Material zur Erweiterung 2 = Neuill und Material zum Einbau in eine in Bau befindliche Anlage 3 = Ersatzteil 4 = neues selbständig nutzbares Gerät 5 = Verbrauchsmaterial u. Betriebsstoffe 6 = Reparatur 9 = Austauschgerät | | | | | | | | | |
| geprüft: | | | | | gezeichnet: | | | | |

| Material-Bezeichnung | Menge | angeforderte Nr. | Mat. Schl. | Kostenstelle bzw. Kostensammel-Nr. | Vom Lager auszufüllen | gelieferte Menge |
|----------------------|-------|------------------|------------|------------------------------------|-----------------------|------------------|
| 68370 10798 | 4.2 | | 39 - 43 | | 45 | 47 - 51 52-54 |
| R-Netzwerk 8 x 10V | 7 | | | | | |
| Protokollbuch 16 pol | 7 | | | | | |
| " | 7 | | | | | |
| " | 7 | | | | | |
| " | 7 | | | | | |
| VG-Leiste 64 pol | 7 | | | | | |

Mengeneinheit:
 1 = Stück 4 = kg
 2 = l 5 = m²
 3 = m³ 6 = m

MATERIALENTNAHMESCHEIN
 Kostenstelle 62100 entnimmt folgendes Material für

GS1

F 447 121

| | |
|-----------|---------|
| 13 | 7 |
| Beleg-Nr. | 14 - 18 |

| | | | | | | | | |
|---|-----------|-----------|-------------|-----------|-------------|-------|---------------------------|------------|
| 100 | 60 | 814 01 96 | 89100 | 10 | 1 | 10050 | Genehmigt: <i>Loos</i> | Empfänger: |
| SA | Bal.-Ber. | Datum | Lager-Kost. | Schl. WKZ | Aussteller: | 59 | | |
| 8-10 | 11-12 | 21 | 27 - 31 | 37-38 | 44 | 55 | geprüft: | geprüft: |
| 1 = Neuill und Material zur Erweiterung 2 = Neuill und Material zum Einbau in eine in Bau befindliche Anlage 3 = Ersatzteil 4 = neuem selbständig nutzbares Gerät 5 = Verbrauchsmaterial u. Betriebsstoffe 6 = Reparatur 9 = Austauschgerät | | | | | | | | |

| ME | gelieferte Menge | 32 - 36 | 39 - 43 | Material-Nr. | Menge | Material-Bezeichnung |
|----|------------------|---------|---------|--------------|-------|-------------------------------|
| | | 68370 | 13821 | 231 | | Led grün |
| | | | 13820 | 21 | | Led gelb |
| | | | 13819 | 7 | | Led rot |
| | | | 15070 | 112 | | Schalter 11x11H |
| | | | 15071 | 7 | | " 2x " |
| | | | 15014 | 7 | | Taster 11x11H |
| | | | | 259 | | Led-Fassung 3mm |
| | | | 14574 | 7 | | Pfostenverbinder 16pol |
| | | | 14575 | 7 | | " 20 pol |
| | | | 14576 | 7 | | " 34 pol |
| | | | 13322 | 21 | | DIP-Sockel 14pol |
| | | | 13323 | 49 | | " 16 pol |
| | | | 13220 | 56 | | " 20 pol |
| | | | 13137 | 14 | | " 8 pol |
| | | | 13232 | 133 | | " 6 pol |
| | | | 14471 | 14 | | Leiterplatten-Karten |
| | | | 62545 | 28 | | Platten 11x5 |
| | | | 62440 | 28 | | Zylinderkopfdruckboe 112,5x10 |
| | | | 11096 | 42 | | Kondens. 100nF |
| | | | 11326 | 7 | | Tantal 22µF |
| | | | 13001 | 140 | | Diode 1N4151 |

MATERIALENTNAHMESCHEIN

Kostenstelle 62100 entnimmt folgendes Material für

Mengeneinheit:
 1 - Stück 4 - kg
 2 - l 5 - m²
 3 - m³ 6 - m

Vom Lager auszufüllen
 ME gelieferte Menge
 45 47 - 51 52-54

| | |
|-----------|---------|
| 13 | 7 |
| Beleg-Nr. | 14 - 18 |

F 447 221



Gesellschaft für Schwerionenforschung mbH
Darmstadt

Anforderer *HR. G. LANGER*

Ges. für Schwerionenforschung mbH - Postfach 110552 - D-64220 Darmstadt

SLS GmbH
Schydio Leiterplatten-Service
Am Ohlenberg 12

Postfach 11 05 52
D-64220 Darmstadt
Telefon-(061 51)-859-0
Durchwahl 359
Teletax (061 51)-359-785
Telex-0419593
Stückgut-Nr. 1471

64390 Erzhhausen

Ihre Zeichen: _____ Unsere Zeichen: _____
Ihre Nachricht: _____ **X** **HH**

Tag: **25.01.96**

Bitte auf Sendungen, Versandpapieren und Korrespondenz stets angeben!

340 Abruf zur Bestellung Nr.1/01920/95

Interne Best. Nr. _____ vom **12.10.95** **1/10604/95** Liefertermin **14.02.96**

Wir rufen aus unserer oben genannten Bestellung zur Lieferung ab:

- Interne Vermerke**
- 1 - Neuzeit zur Erweiterung einer bestehenden Anlage
 - 2 - Neuzeit zum Einbau in eine im Bau befindliche Anlage
 - 3 - Ersatzteil
 - 4 - neues selbständig nutzbares Gerät
 - 5 - Verbrauchsmaterial und Betriebsstoffe
 - 6 - Reparatur
 - 9 - Austauschgerät
- anfordernde Kostenstelle _____
81100

| Menge | Einh. | Herstellung und Lieferung von Leiterplatten nach Info. mit Filmerstellung | Preis | Nr. (s.o.) | zu belastende Kostenstelle bzw. Kostensammelnr. | F A Konto |
|-------|-------|---|--------------------------------|------------|---|-----------|
| 7 | Stück | Pos. 1 (CON) Version FG 447.121 | NK. 104.05 DM FK. 540.00 DM | 4 | 68370 | |

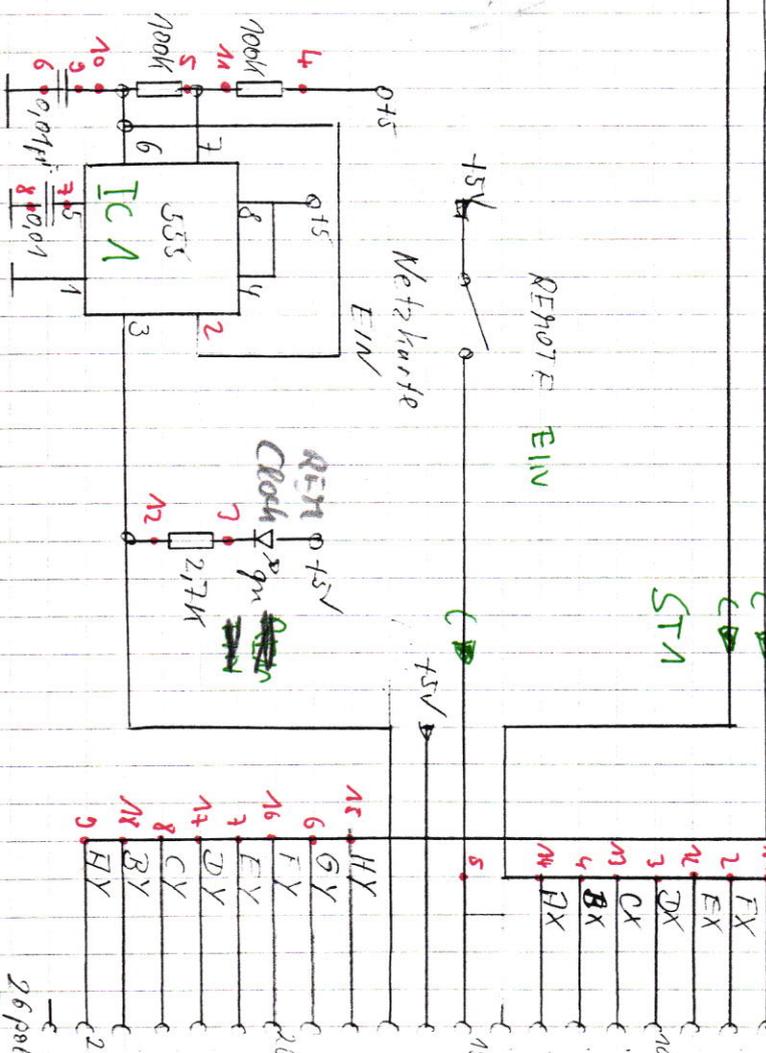
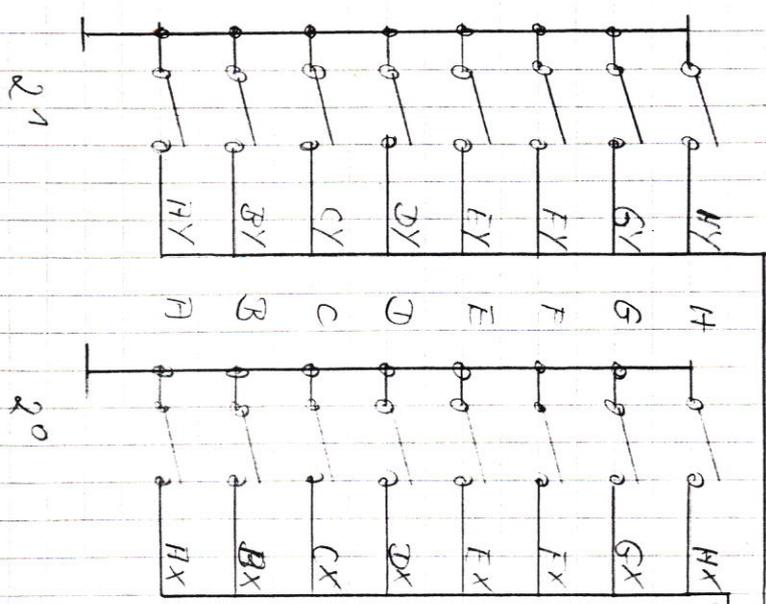
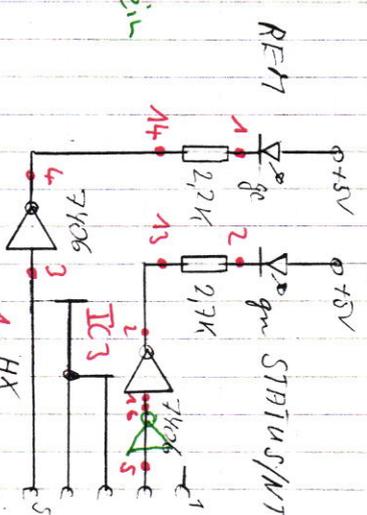
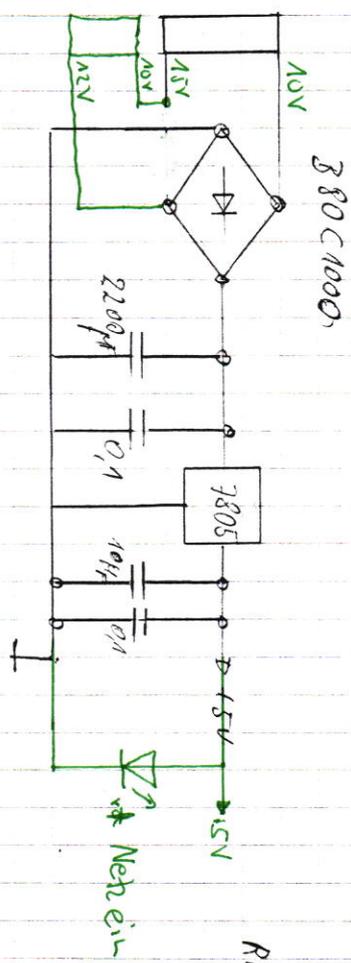
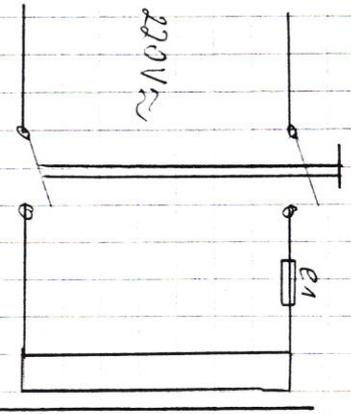
Anlage: Info. Film-Herstellung
Info. Platinen-Herstellung
1 Diskette (CON) FG 447.121
8 Perplot

Haus-/Lieferadresse: Planckstraße 1, D - 64 291 Darmstadt

H. Hamwald
H. Hamwald

Remote Testbox für Schaltmatrix - (Onthor
 FG 447 200

1025
 23.04.96

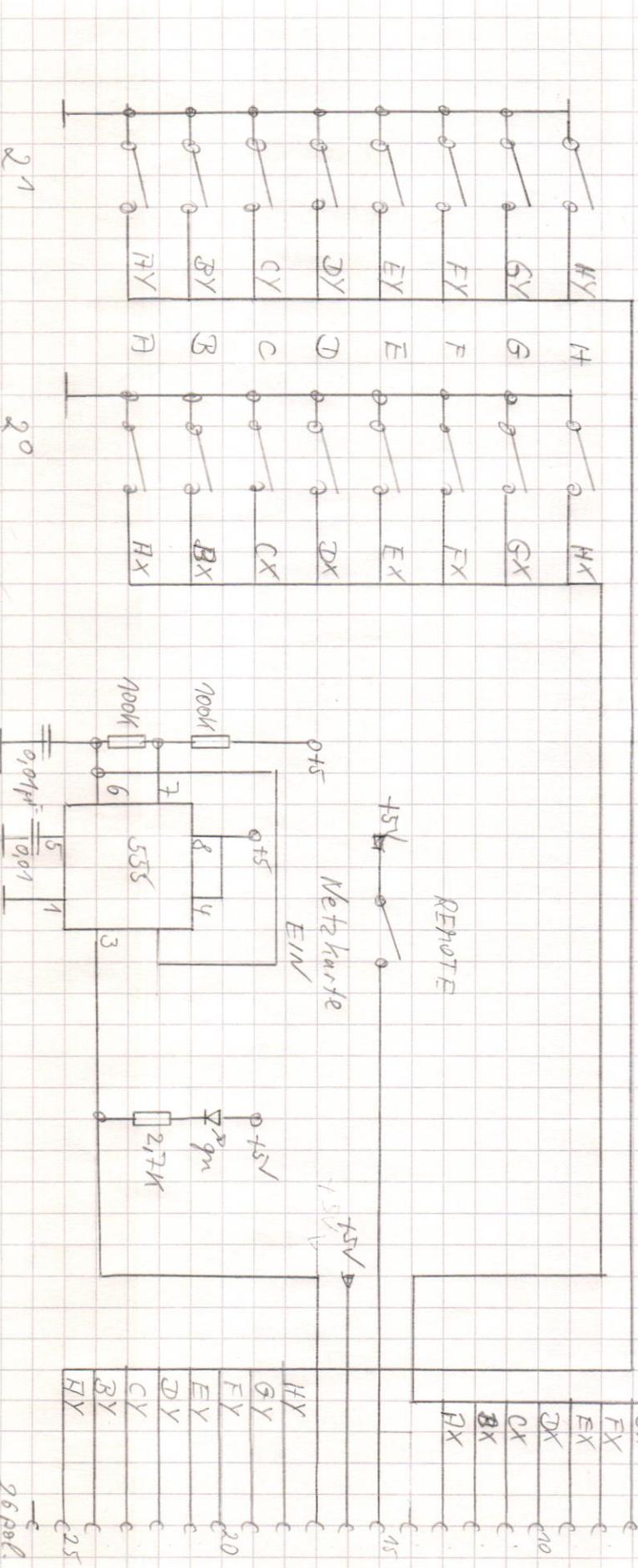
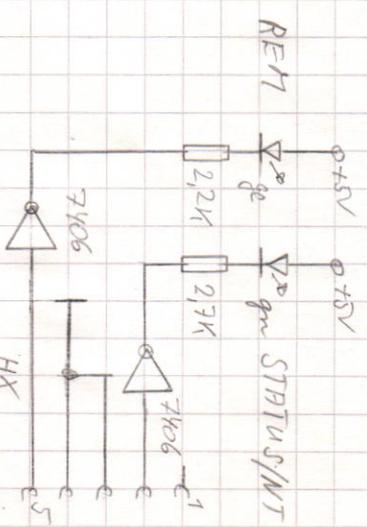
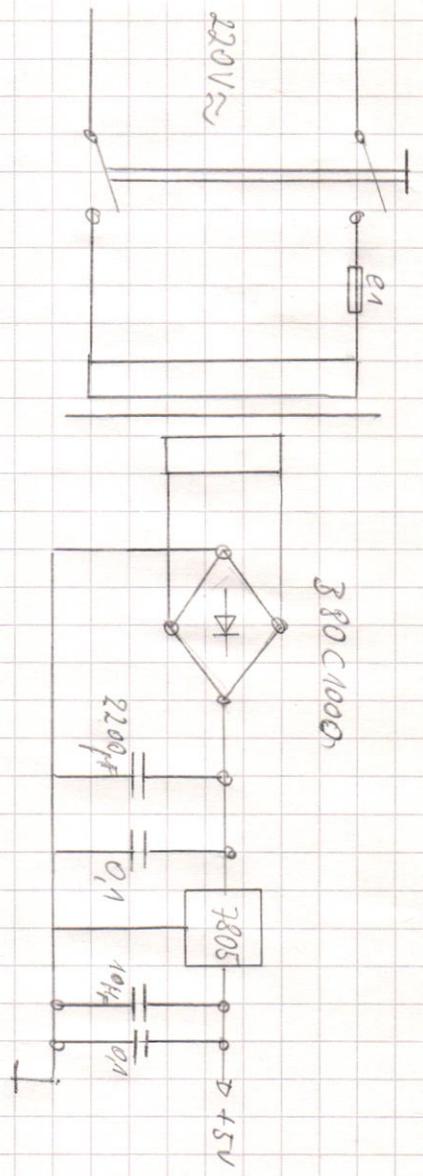


→ 25pol.
 cannot Buchse

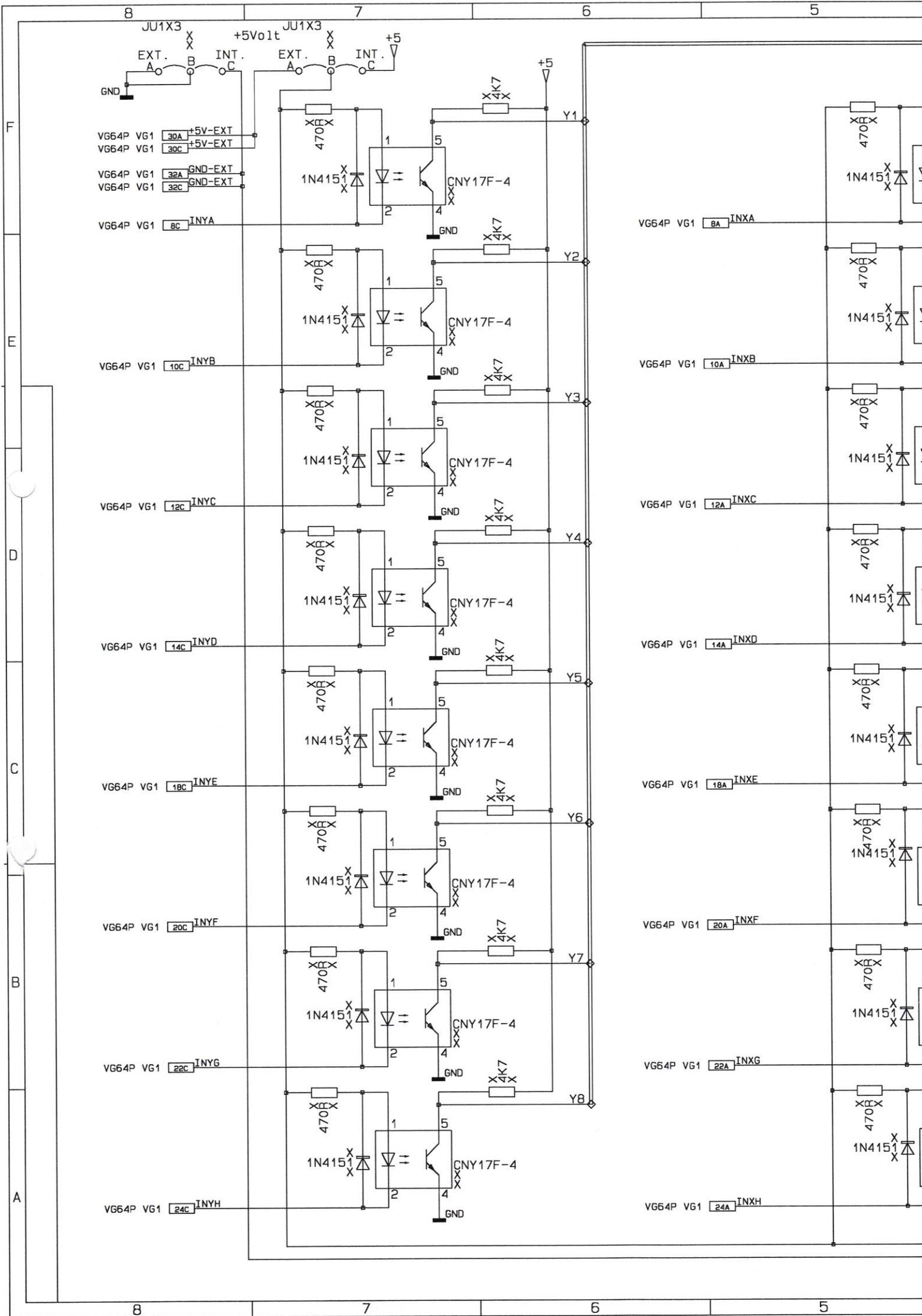
26pol. Pin 1 Pin 16
 ST2 (200 ppc 1)

Remote -) Testbox für Schaltermatrix - Control
 FG 447 200

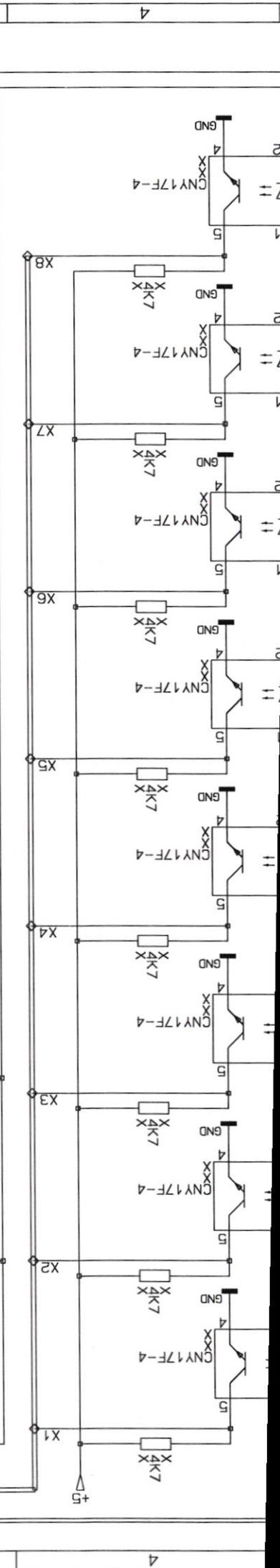
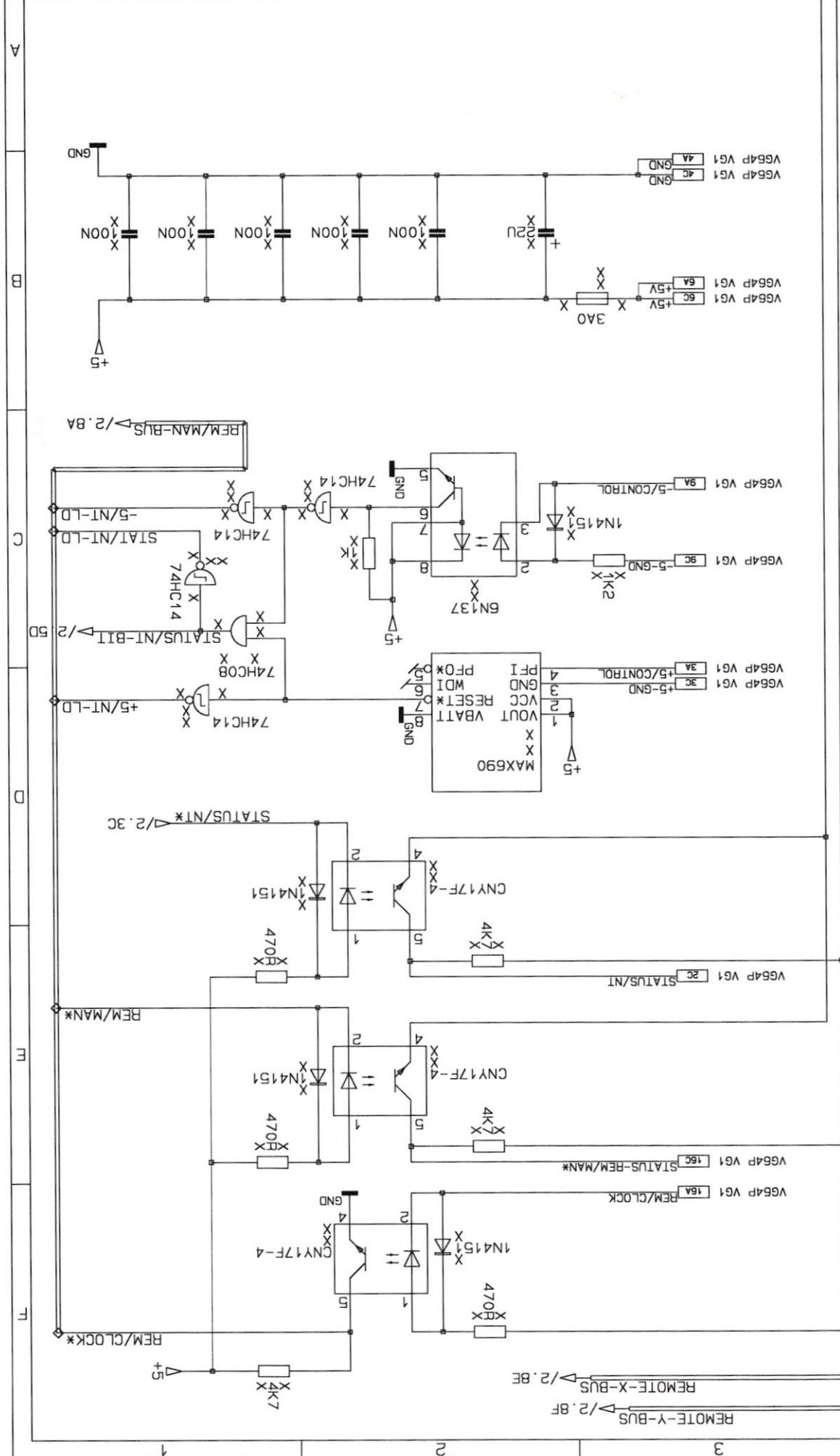
1005
 23.04.96

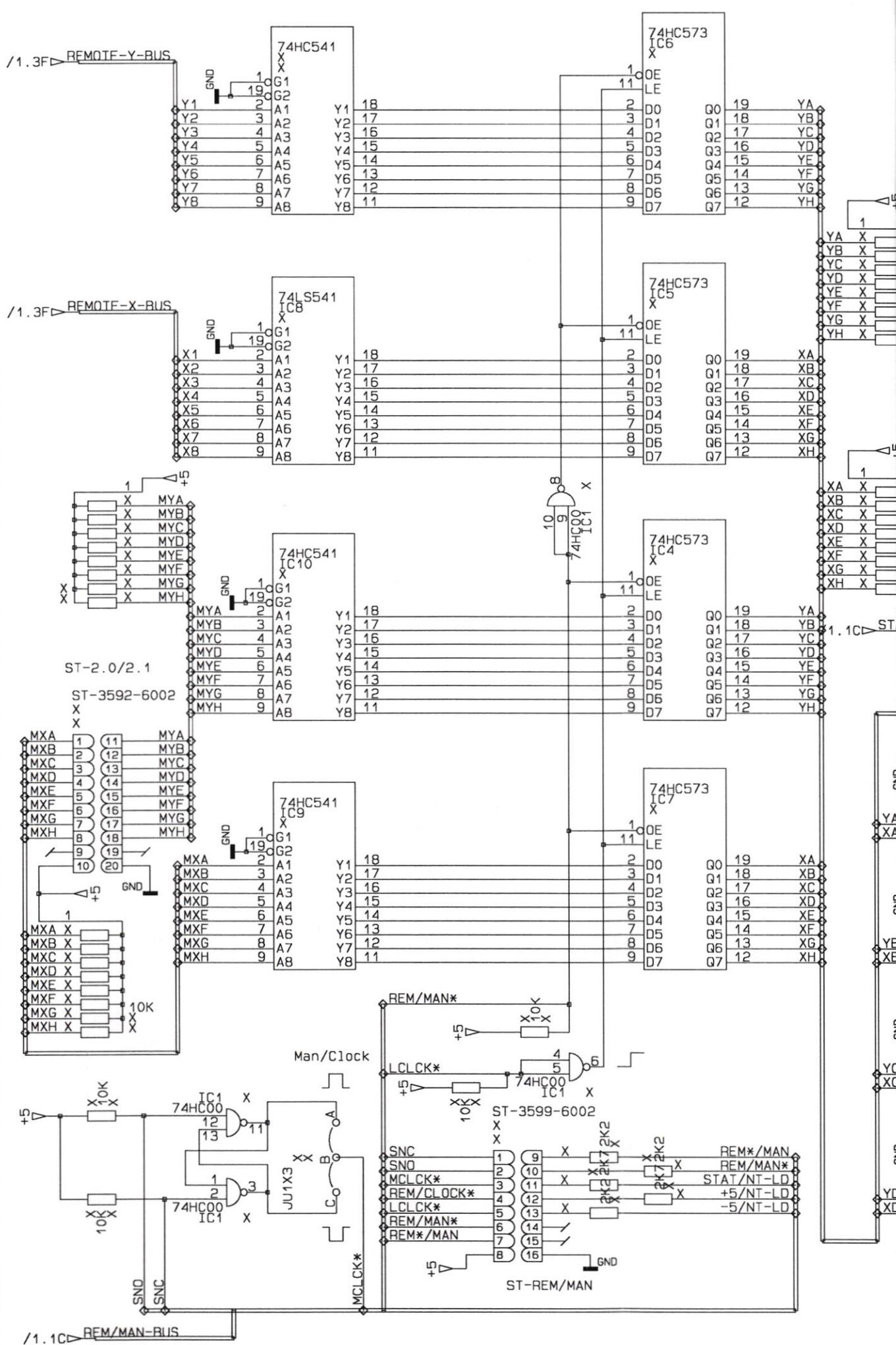


26pol. Pin Reihe
 (Doppelpol 13x13)

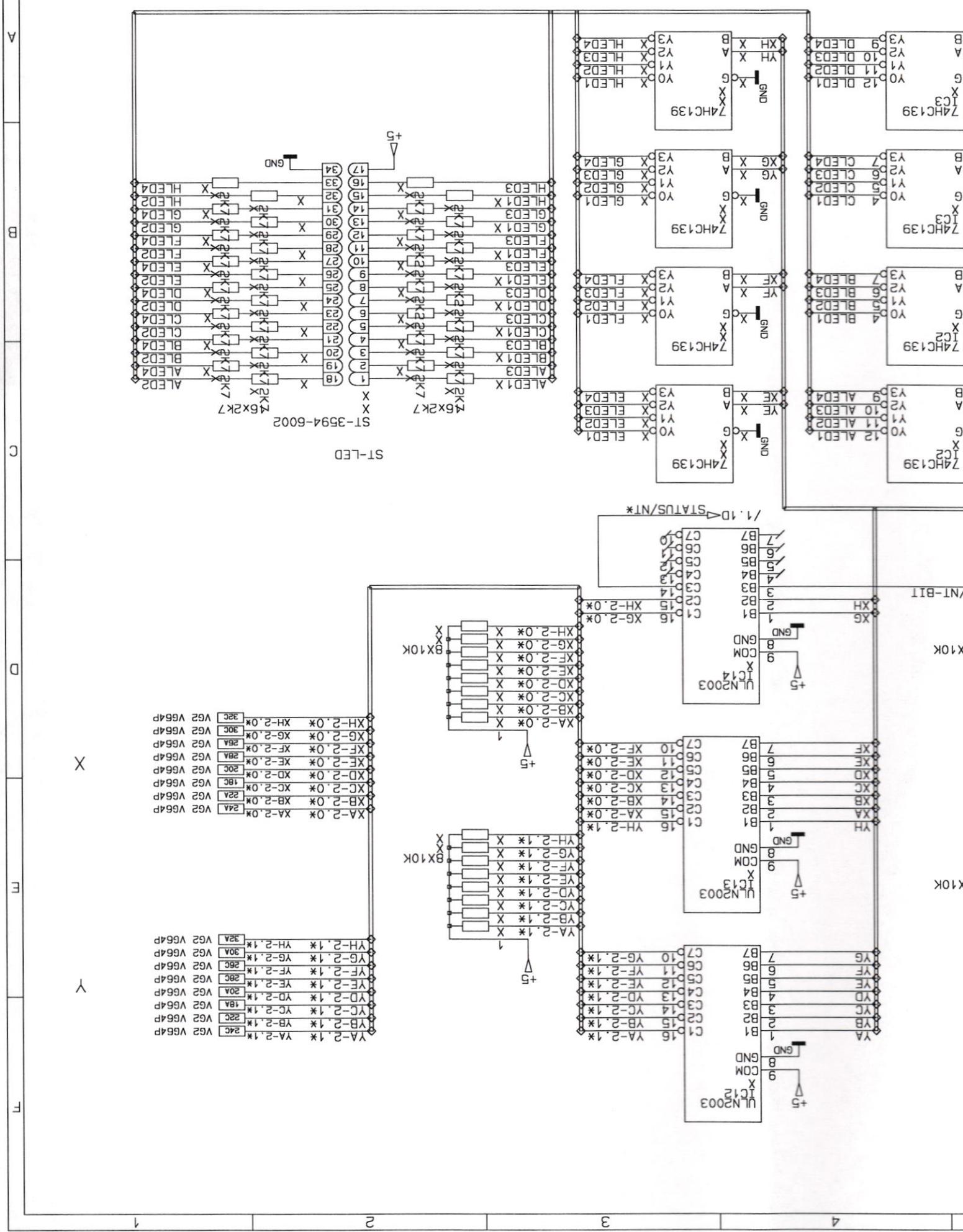


| | | | | | | | | |
|---------|----------------------|--|------------|--------|-----------|------------------|------|--|
| MASSTAB | CON | | ENTW. | D.LOOS | 13-NOV-95 | DATE | NAME | |
| | | | BEARB. | X | X | | | |
| | | | GEPR. | X | | | | |
| BLATT | SCHALTMATRIX-CONTROL | | IN-/OUTPUT | | | VERS. F6 447 120 | | |
| VON | 2 | | | | | | | |



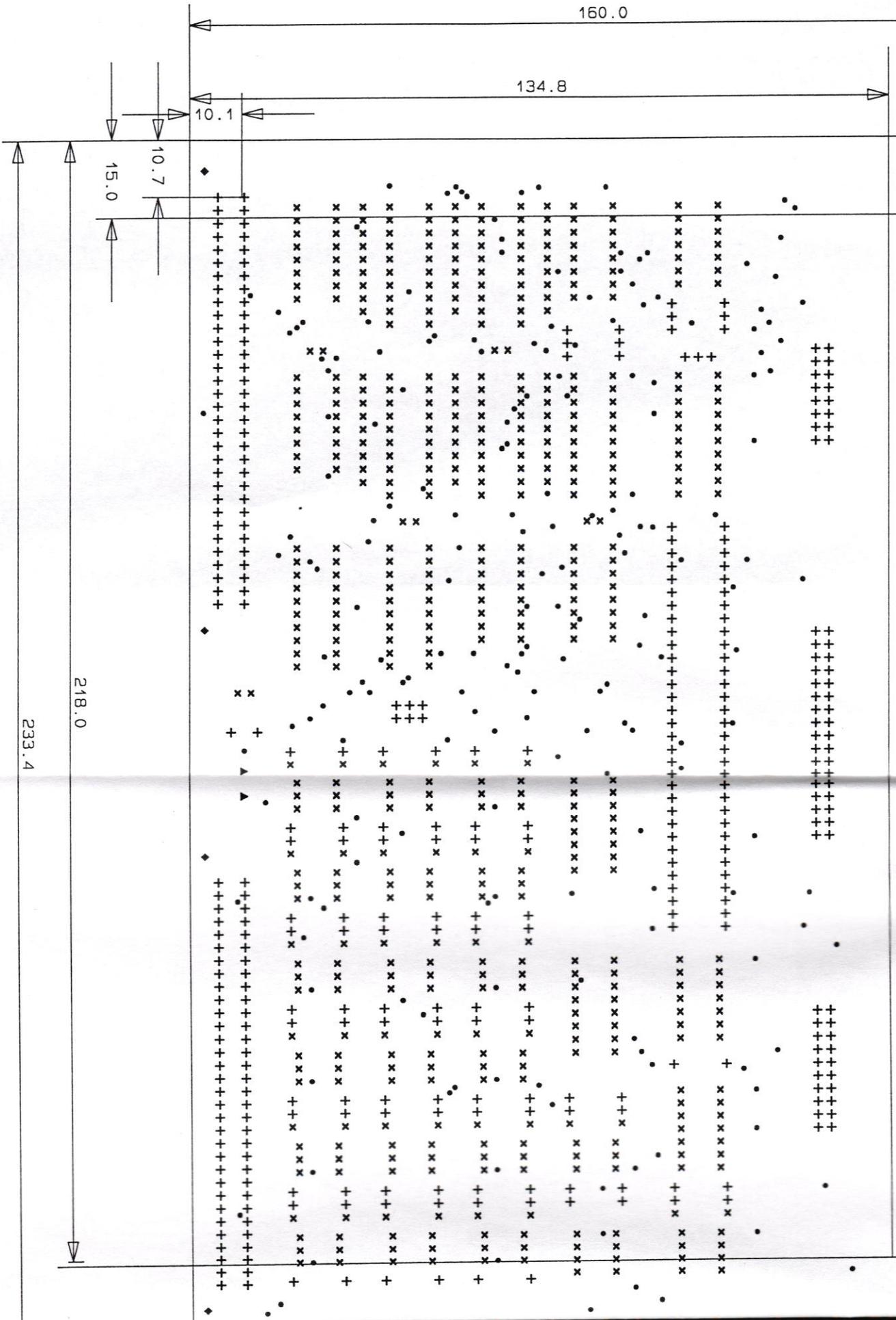


| | | |
|----------------------------|--------|------------|
| GSI - DARMSTADT | BEARB. | X |
| | ENTW. | D.L005 |
| VERS. | DATE | 15-NOV-95 |
| Remote/Manuell Umschaltung | NAME | |
| SCHALTMATRIX-CONTROL | BEARB. | X |
| CON | ENTW. | D.L005 |
| MASSSTAB | DATE | 15-NOV-95 |
| BLATT | VERS. | FG 447 120 |
| VON | | 2 |
| 2 | | |

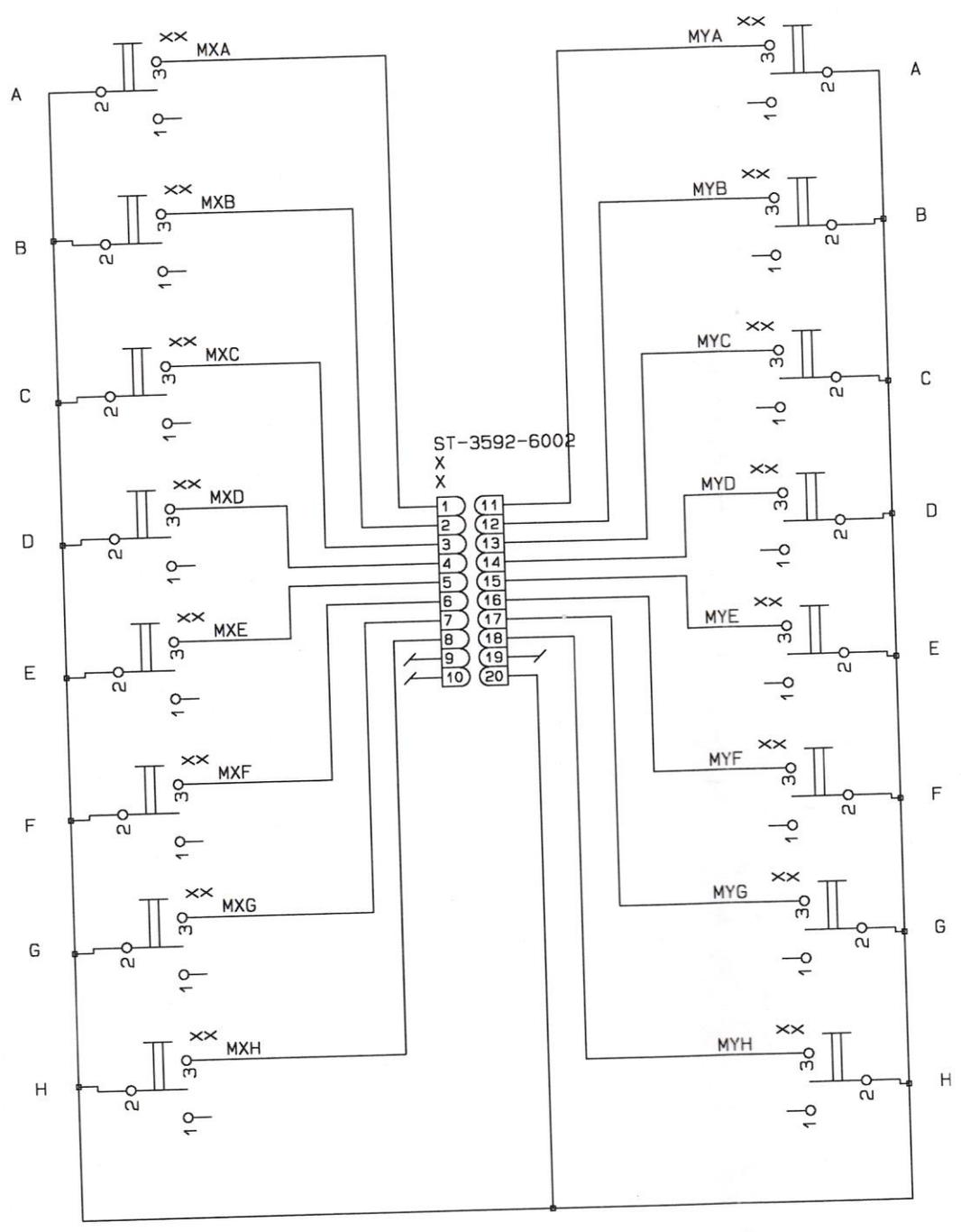


| | | | |
|---------|-----|-----|-------|
| YA-2.1* | 24C | V62 | V664P |
| YB-2.1* | 28C | V62 | V664P |
| YC-2.1* | 18A | V62 | V664P |
| YD-2.1* | 30A | V62 | V664P |
| YE-2.1* | 28C | V62 | V664P |
| YF-2.1* | 26C | V62 | V664P |
| YG-2.1* | 30A | V62 | V664P |
| YH-2.1* | 32A | V62 | V664P |
| XA-2.0* | 24A | V62 | V664P |
| XB-2.0* | 22A | V62 | V664P |
| XC-2.0* | 18C | V62 | V664P |
| XD-2.0* | 20C | V62 | V664P |
| XE-2.0* | 28A | V62 | V664P |
| XF-2.0* | 26A | V62 | V664P |
| XG-2.0* | 30C | V62 | V664P |
| XH-2.0* | 32C | V62 | V664P |

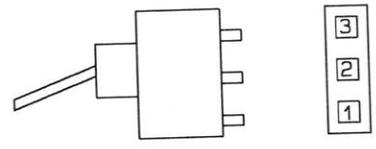
6SI CONBLS
29-NOV-1995 L005
CON
FG 447.120
Bohrkontrollfilm mit Masszeichnung fuer die Platine CON



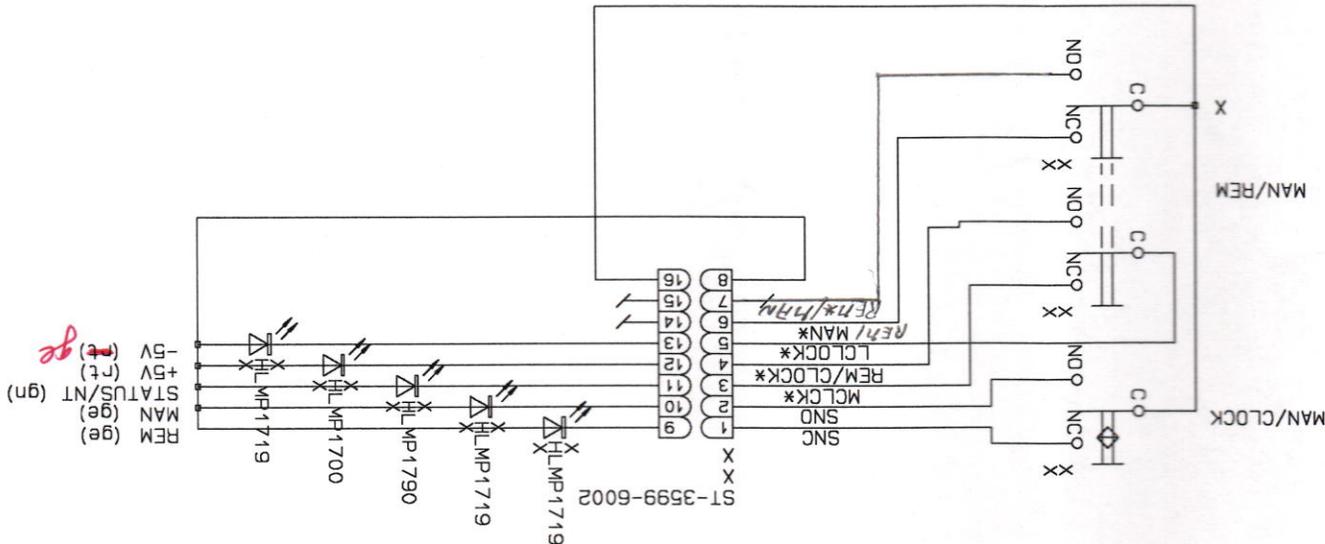
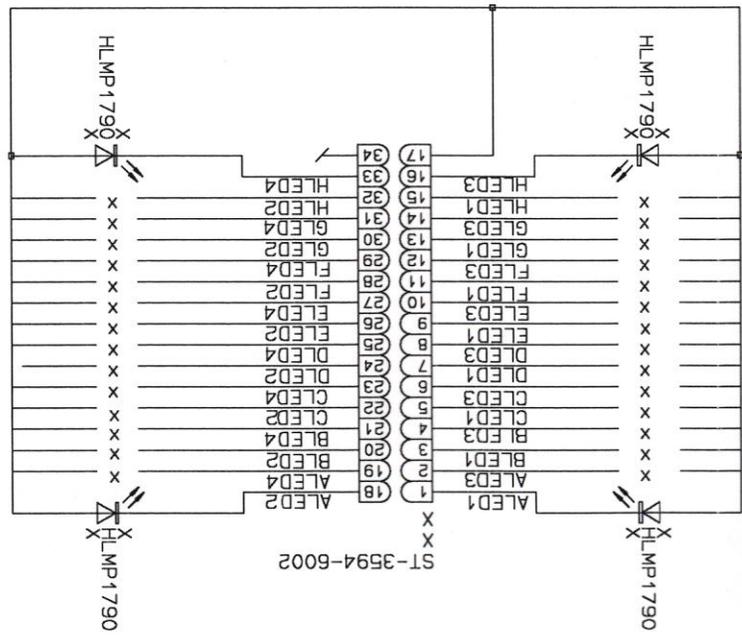
2.0 Bit 2.1



CK-SERIE 7000

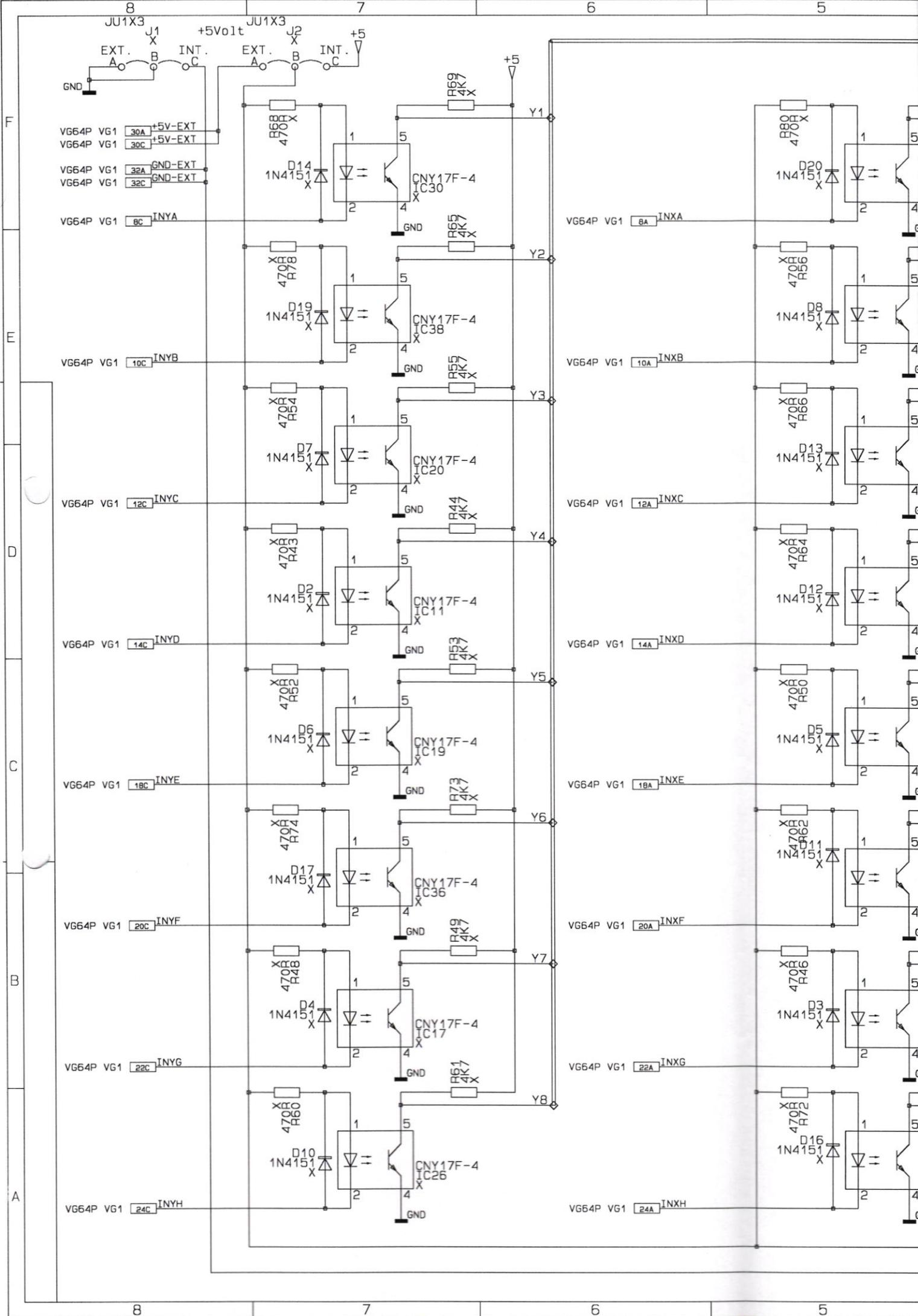


| | | | | | |
|---------------|----------------------|------------------------|------------------|--------|-------------------|
| MASSTAB | CON | ENTW. D. LOOS | 17-NOV-95 | DATE | NAME |
| | | BEARB. X | X | BEARB. | GS I - DARMSSTADT |
| BLATT 3 VON 3 | SCHALTMATRIX-CONTROL | VERDÄHTUNG FRONTPLATTE | VERG. FG 447 120 | VERG. | |

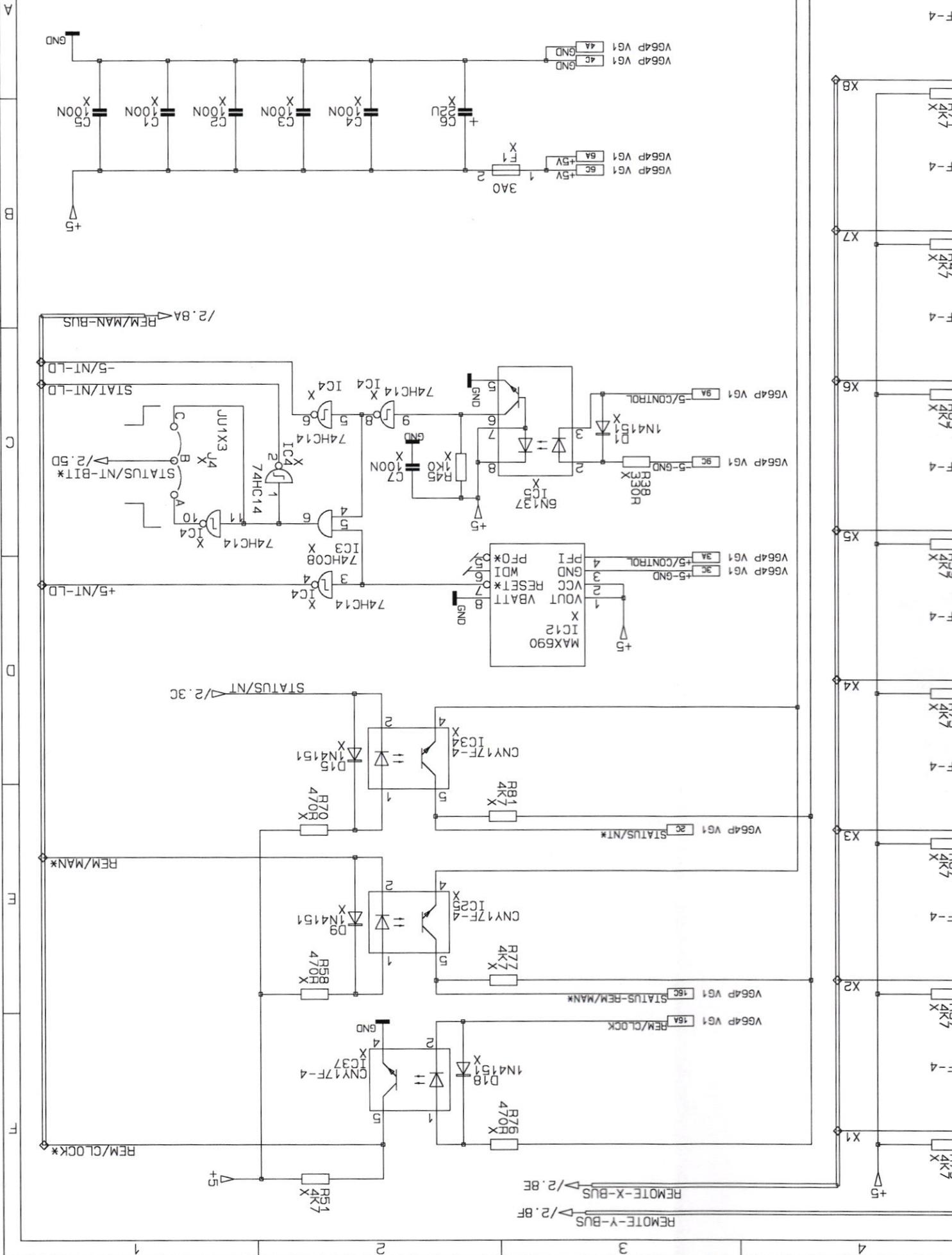


A
B
C
D
E
F

1 2 3 4



| | | | |
|----------------------|-----------|------------|------------|
| GSI - DARMSSTADT | | VERS. | FG_447.121 |
| GSI - DARMSSTADT | | IN-/OUTPUT | |
| SCHALTMATRIX-CONTROL | | BLATT | 1 |
| CON | | VON | 2 |
| NAME | DATUM | ENTW. | D.LOOS |
| BEARB. | 23-JAN-96 | LANGER | |
| GEPR. | | | |



F

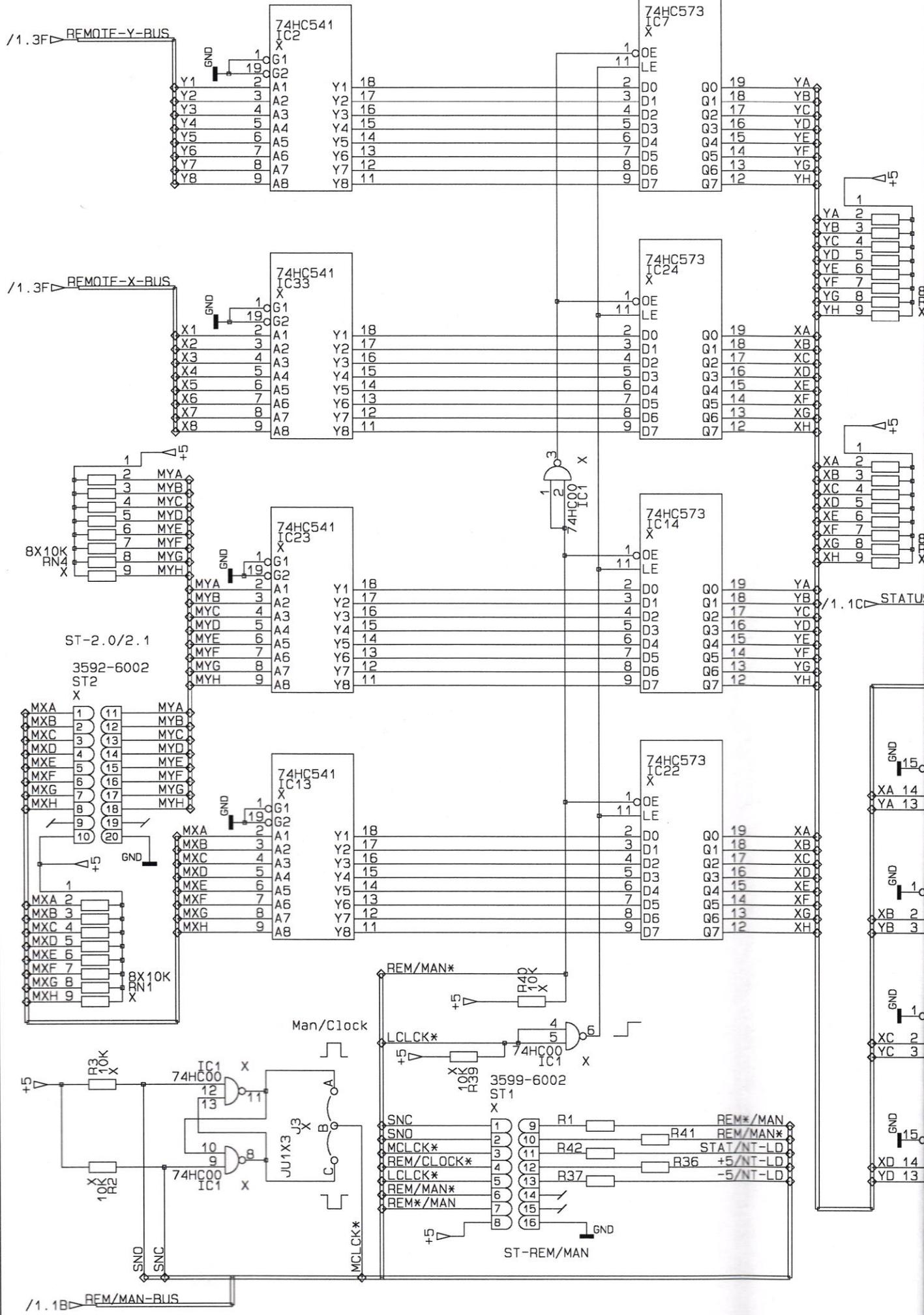
E

D

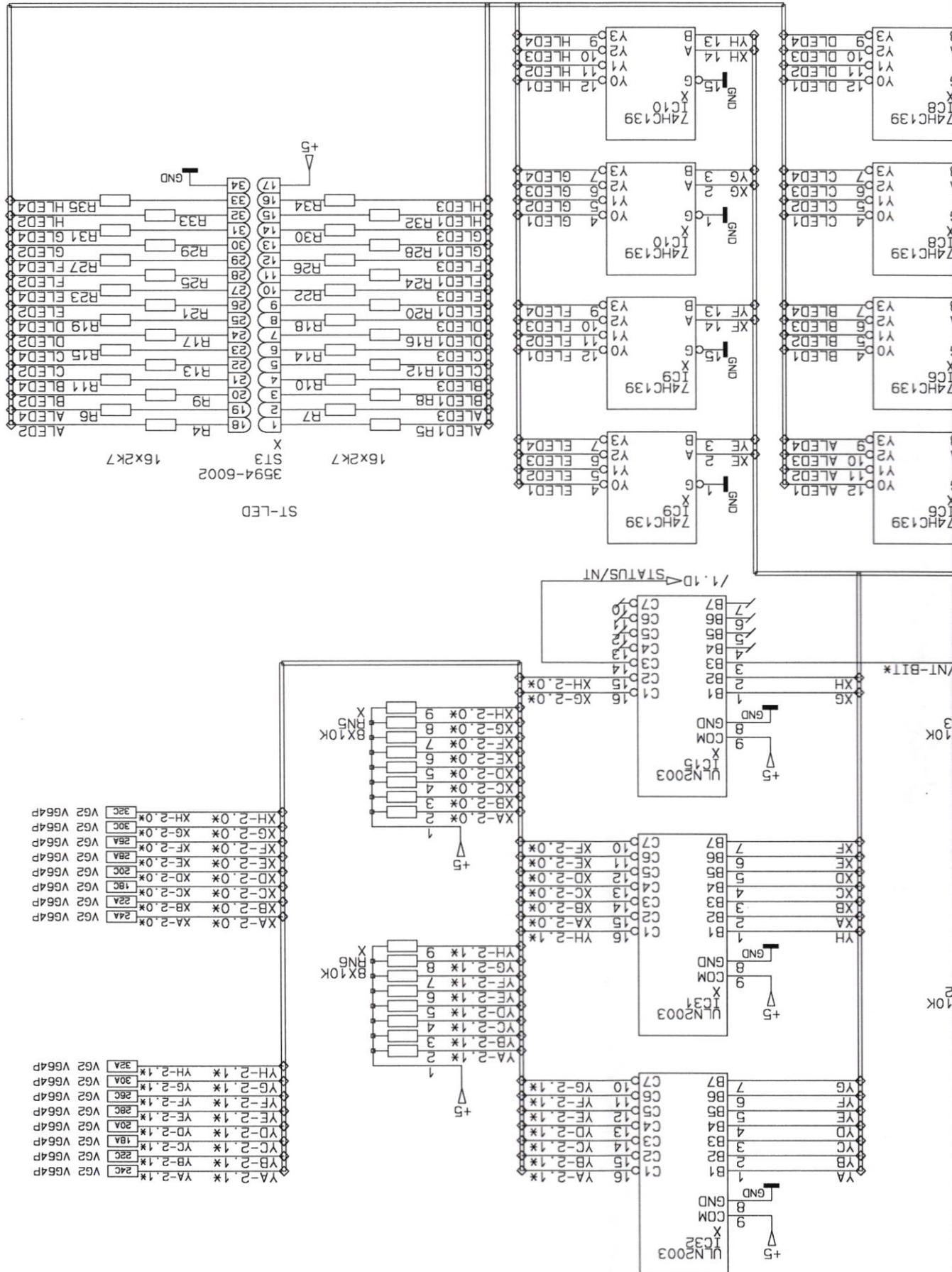
C

B

A



| | | |
|----------------------------|------------------|---------------|
| VERS. FG_447.121 | GSI - DARMSSTADT | |
| | BEARB. X | GEPR. |
| Remote/Manuell Umschaltung | D. LOOS | ENTW. D. LOOS |
| SCHALTMATRIX-CONTROL | 15-NOV-95 | DATUM |
| CON | NAME | |
| MASSSTAB | | |
| BLATT 2 | | |
| VON 2 | | |



A

B

C

D

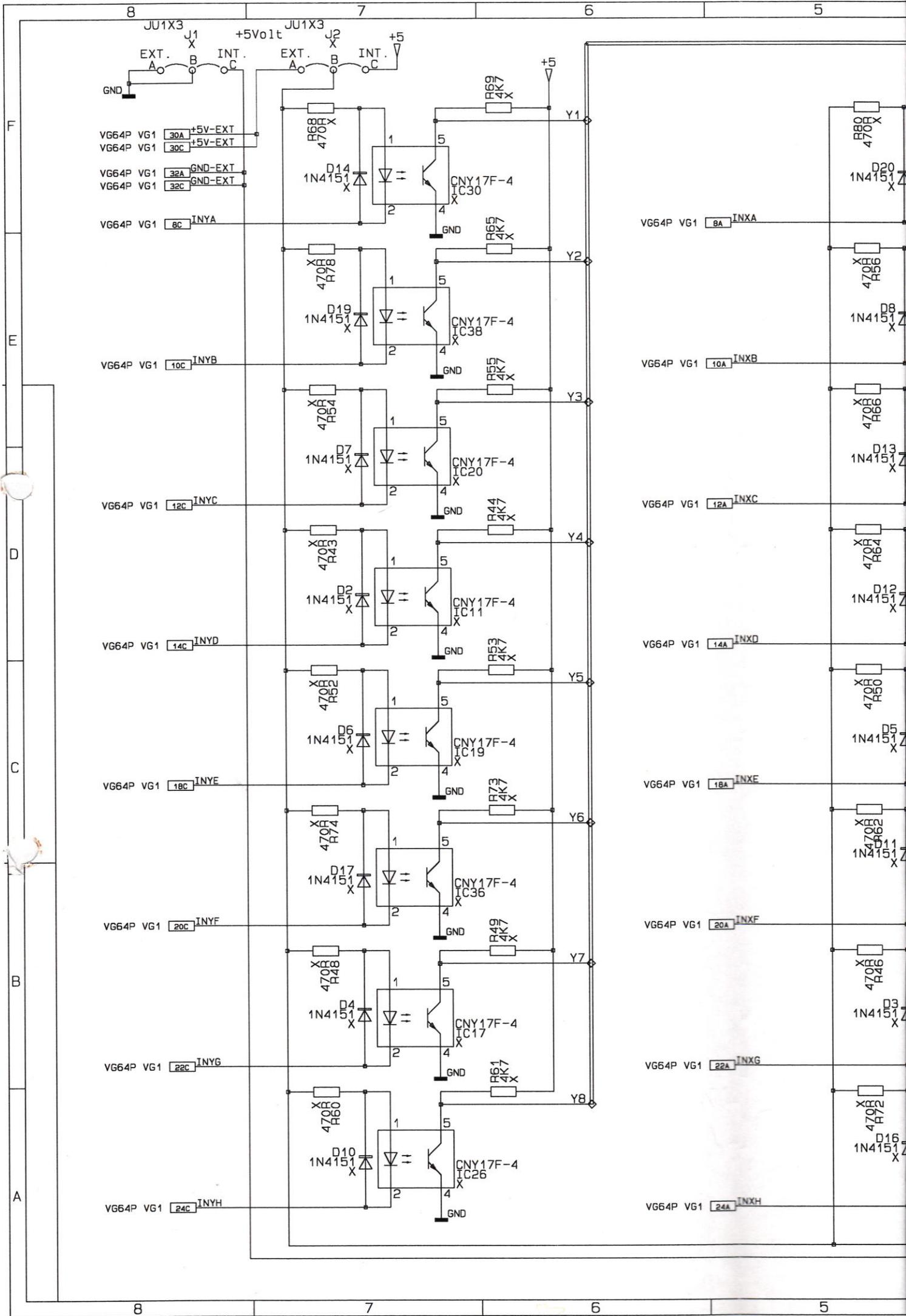
E

F

| | | | | |
|-----|-----|-------|---------|---------|
| 24A | VG2 | VG64P | XA-2.0* | XA-2.0* |
| 24A | VG2 | VG64P | XB-2.0* | XB-2.0* |
| 18C | VG2 | VG64P | XC-2.0* | XC-2.0* |
| 20C | VG2 | VG64P | XD-2.0* | XD-2.0* |
| 28A | VG2 | VG64P | XE-2.0* | XE-2.0* |
| 28A | VG2 | VG64P | XF-2.0* | XF-2.0* |
| 30C | VG2 | VG64P | XG-2.0* | XG-2.0* |
| 30C | VG2 | VG64P | XH-2.0* | XH-2.0* |
| 24A | VG2 | VG64P | YA-2.1* | YA-2.1* |
| 24C | VG2 | VG64P | YB-2.1* | YB-2.1* |
| 18A | VG2 | VG64P | YC-2.1* | YC-2.1* |
| 20A | VG2 | VG64P | YD-2.1* | YD-2.1* |
| 28C | VG2 | VG64P | YE-2.1* | YE-2.1* |
| 28C | VG2 | VG64P | YF-2.1* | YF-2.1* |
| 30A | VG2 | VG64P | YG-2.1* | YG-2.1* |
| 30A | VG2 | VG64P | YH-2.1* | YH-2.1* |

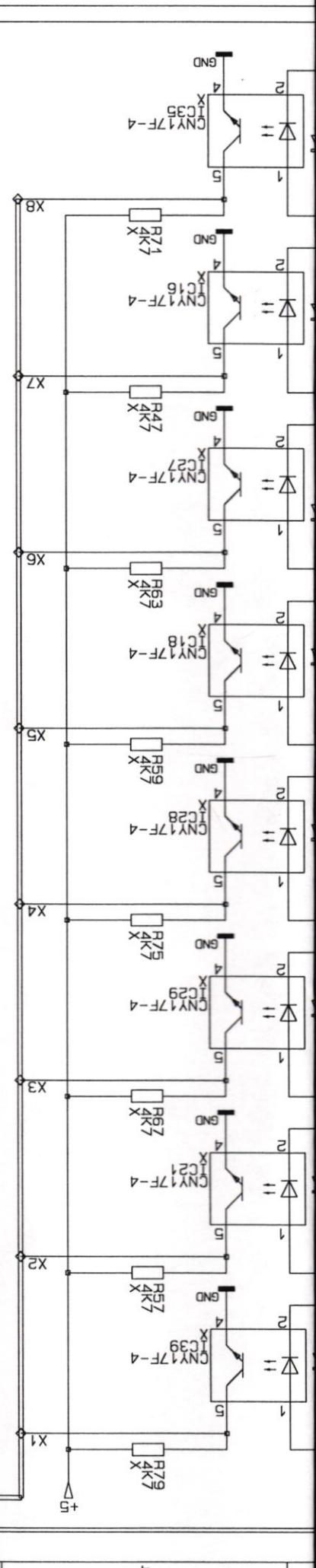
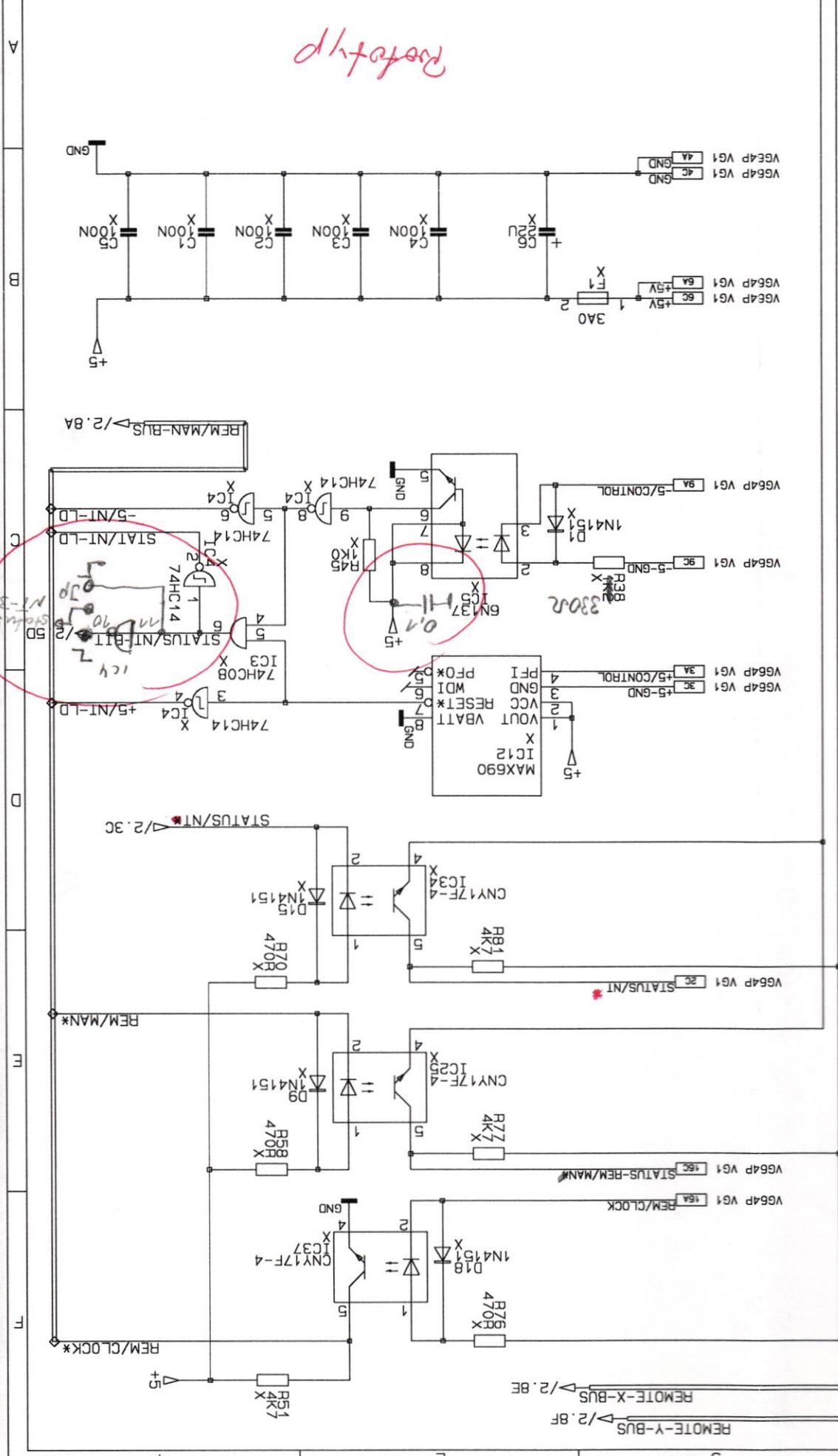
| | | | |
|----|-----|--------|--------|
| 18 | R4 | ALED2 | ALED4 |
| 19 | R9 | BLEED2 | BLEED4 |
| 20 | R10 | BLEED3 | BLEED4 |
| 21 | R11 | BLEED4 | CLED4 |
| 22 | R13 | CLED2 | CLED4 |
| 23 | R15 | CLED4 | DLED2 |
| 24 | R17 | DLED2 | DLED4 |
| 25 | R19 | DLED4 | ELED2 |
| 26 | R21 | ELED2 | ELED4 |
| 27 | R23 | ELED4 | FLED2 |
| 28 | R25 | FLED2 | FLED4 |
| 29 | R27 | FLED4 | GLED2 |
| 30 | R29 | GLED2 | GLED4 |
| 31 | R31 | GLED4 | HLED2 |
| 32 | R33 | HLED2 | HLED4 |
| 33 | R35 | HLED4 | |

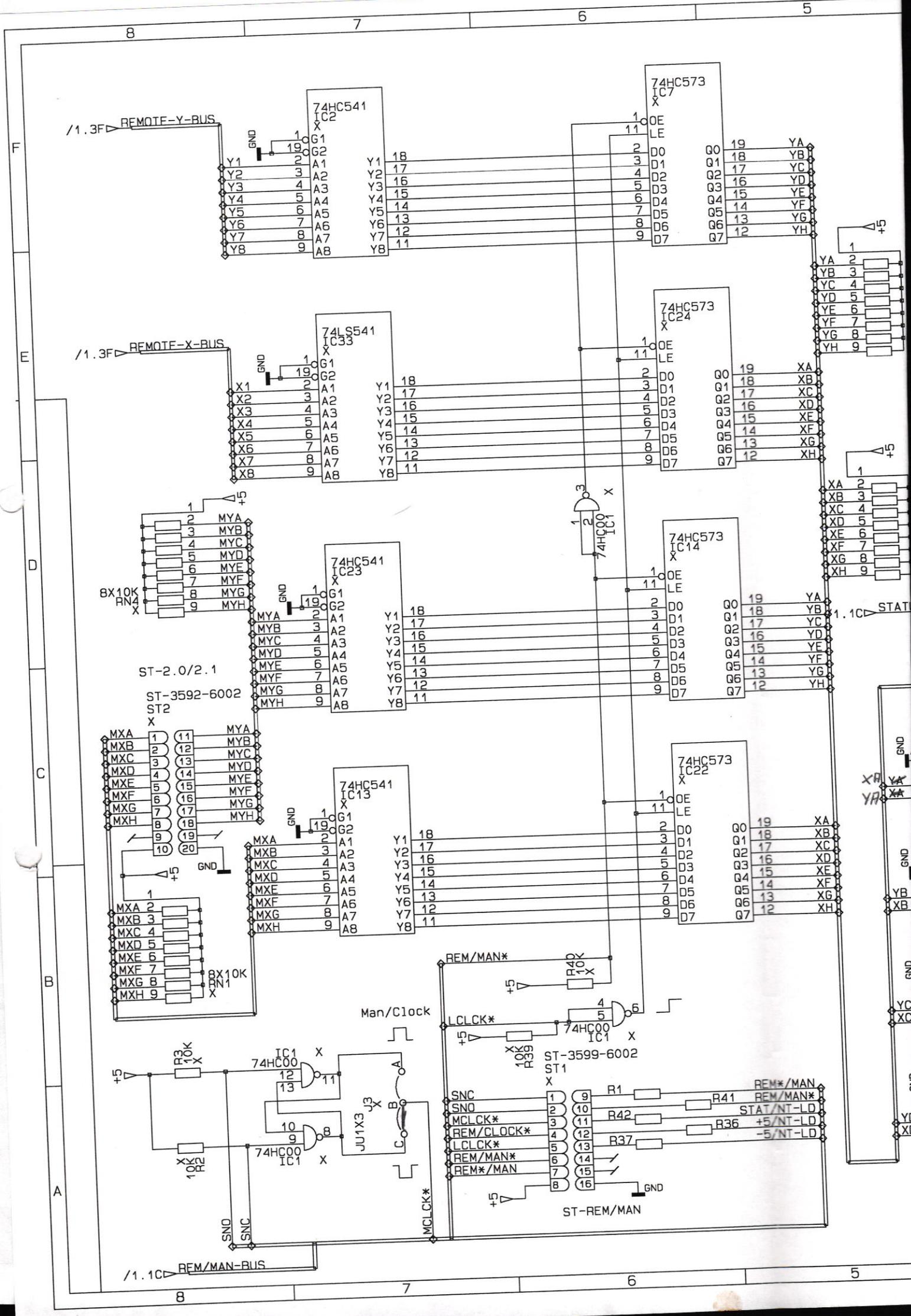
| | | | |
|---|---------|---|---------|
| 1 | XA-2.0* | 1 | YA-2.1* |
| 2 | XB-2.0* | 2 | YB-2.1* |
| 3 | XC-2.0* | 3 | YC-2.1* |
| 4 | XD-2.0* | 4 | YD-2.1* |
| 5 | XE-2.0* | 5 | YE-2.1* |
| 6 | XF-2.0* | 6 | YF-2.1* |
| 7 | XG-2.0* | 7 | YG-2.1* |
| 8 | XH-2.0* | 8 | YH-2.1* |
| 9 | | 9 | |



| | | | |
|----------------------|--|------------------------|--|
| VERS. FG 447 120 | | GSI - DARMSTADT | |
| IN-/OUTPUT | | GPR. | |
| SCHALTMATRIX-CONTROL | | BEARB. X | |
| CON | | ENTM. D.LOOS 13-NOV-95 | |
| MASSTAB | | NAME DATUM | |

Prototyp





/1.3F REMOTE-Y-BUS

/1.3F REMOTE-X-BUS

BX10K RN4 X

ST-2.0/2.1

ST-3592-6002

ST2 X

MXA 1
 MXB 2
 MXC 3
 MXD 4
 MXE 5
 MXF 6
 MXG 7
 MXH 8
 MXI 9
 MXJ 10
 MYA 11
 MYB 12
 MYC 13
 MYD 14
 MYE 15
 MYF 16
 MYG 17
 MYH 18
 MYI 19
 MYJ 20

MXA 2
 MXB 3
 MXC 4
 MXD 5
 MXE 6
 MXF 7
 MXG 8
 MXH 9
 BX10K RN1 X

R3 10K X

R2 10K X

/1.1C REM/MAN-BUS

Man/Clock

REM/MAN* R40 10K X

LCLCK* R39 10K X

ST-3599-6002 ST1 X

SNC 1 R1

SNO 2 R41

MCLCK* 3 R42

REM/CLOCK* 4 R36

LCLCK* 5 R37

REM/MAN* 6

REM*/MAN 7

ST-REM/MAN

REM*/MAN

STAT/NT-LD

+5/NT-LD

-5/NT-LD

1.1C STAT

XA YA

YB YC

YC XC

YD XD

YE YE

YF YF

YG YG

YH YH

YB YB

YC YC

YD YD

YE YE

YF YF

YG YG

YH YH

YB YB

YC YC

YD YD

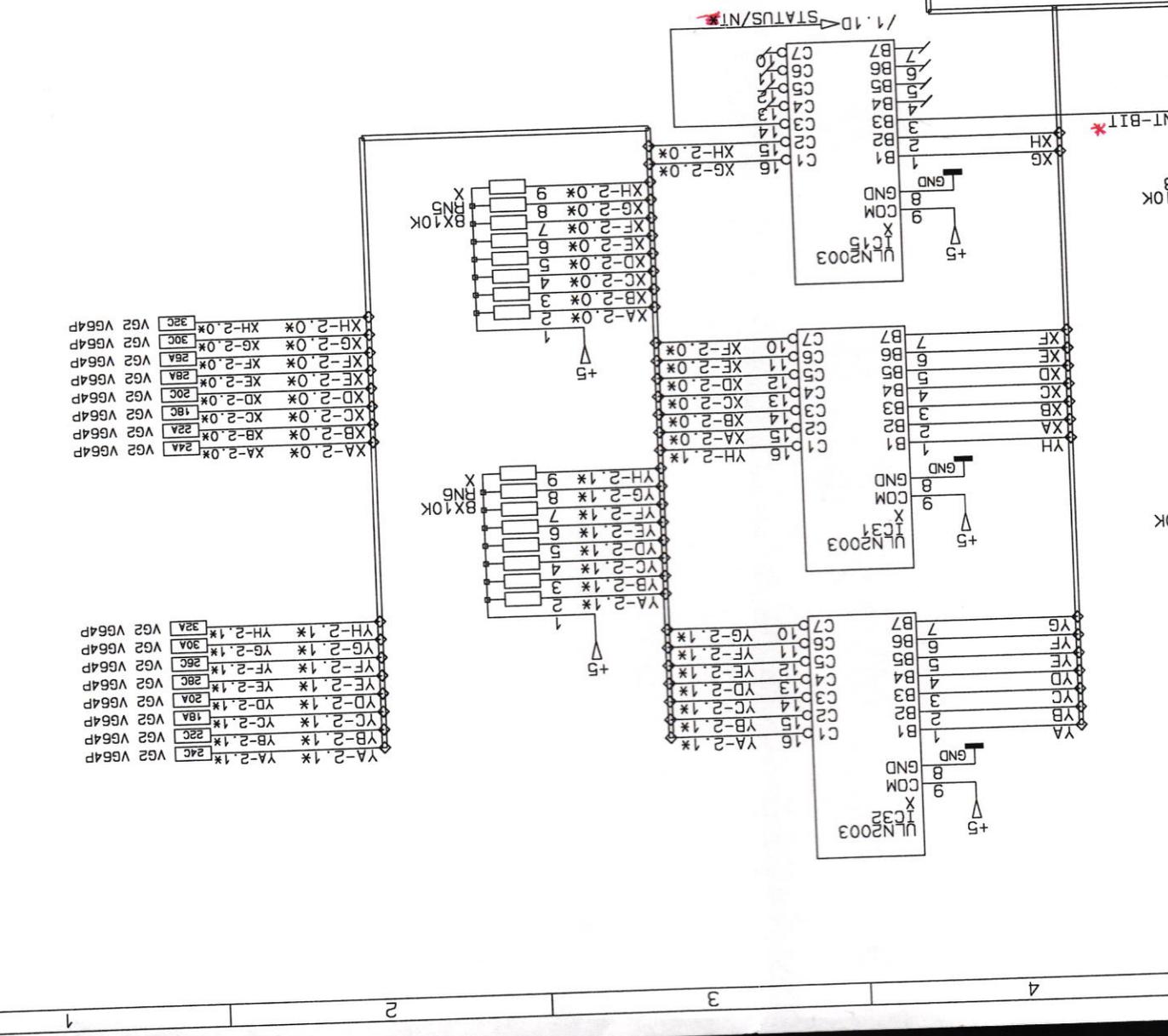
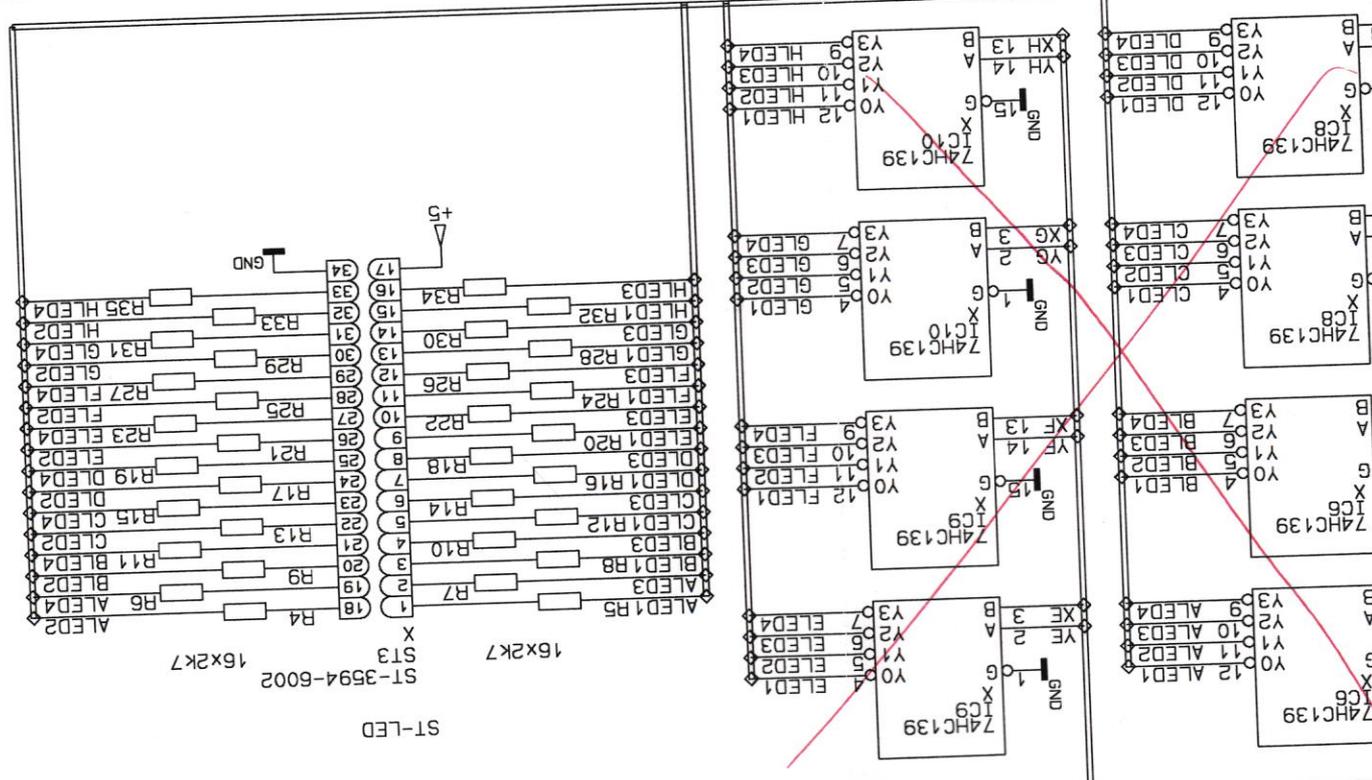
YE YE

YF YF

YG YG

YH YH

| | | | | | |
|---------|----------------------------|--|------------------|---------|-----------|
| MASSTAB | CON | | ENTW. | D. LOOS | 15-NOV-95 |
| | SCHALTMATRIX-CONTROL | | BEARB. | X | X |
| BLATT | Remote/Manuell Umschaltung | | GEPR. | | |
| VON | 2 | | GSI - DARMSTADT | | |
| ZU | 2 | | VERS. FG 447 120 | | |



| | | | | |
|-----|-----|-------|---------|---------|
| 24A | VG2 | VG64P | XA-2.0* | XA-2.0* |
| 24B | VG2 | VG64P | XB-2.0* | XB-2.0* |
| 24C | VG2 | VG64P | XC-2.0* | XC-2.0* |
| 24D | VG2 | VG64P | XD-2.0* | XD-2.0* |
| 24E | VG2 | VG64P | XE-2.0* | XE-2.0* |
| 24F | VG2 | VG64P | XF-2.0* | XF-2.0* |
| 24G | VG2 | VG64P | XG-2.0* | XG-2.0* |
| 24H | VG2 | VG64P | XH-2.0* | XH-2.0* |
| 24I | VG2 | VG64P | YA-2.1* | YA-2.1* |
| 24J | VG2 | VG64P | YB-2.1* | YB-2.1* |
| 24K | VG2 | VG64P | YC-2.1* | YC-2.1* |
| 24L | VG2 | VG64P | YD-2.1* | YD-2.1* |
| 24M | VG2 | VG64P | YE-2.1* | YE-2.1* |
| 24N | VG2 | VG64P | YF-2.1* | YF-2.1* |
| 24O | VG2 | VG64P | YG-2.1* | YG-2.1* |
| 24P | VG2 | VG64P | YH-2.1* | YH-2.1* |