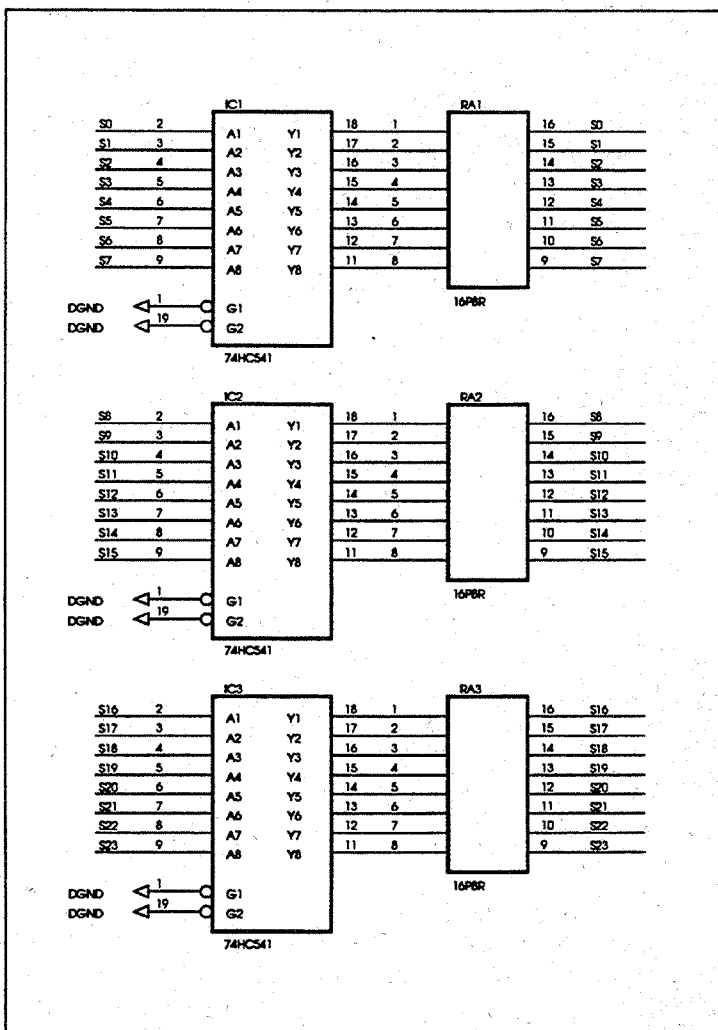


SERVICE MANUAL



TC2290

DYNAMIC DIGITAL DELAY



t.c. electronic

Sindalsvej 34
8240 Risskov
Denmark

tel: +45 217599
fax: +45 217598

TC2290 SERVICE MANUAL INDEX:

CONTENTS:

1. MECHANICAL ASSEMBLING.
2. BLOCKDIAGRAMS.
3. DIAGRAMS.
4. PARTSLIST.
5. COMPONENT LAYOUT.

OPTIONS DIAGRAMS:

1. TCO050 REMOTE CONTROL.
2. TCO144 SERIAL REMOTE CONTROL.
3. FAST TRIGGER.
4. MExx MEMORY EXPANSION.
5. SA02 SAMPLING OPTION.

1 : CHANGING THE 2290's MAINPRINT

- a) Remove the 5 nuts from the top cover and 5 from the lower cover , to remove these covers.
- b) Disconnect the CONVERTER-P.C.B. by positioning the 2290 vertical on the back-plate , and press the white stacks together one by one with a flatnose pliers, so that they are loosened. Turn the 2290 down again before pressing the stacks through the holes !
- c) Disconnect the transformer-cable , the front-cable , the input gain-cable and the External Effects -cable.
- d) Unscrew the front by loosening the four "Unbraco"-screws, and remove it. Unscrew the two cooling plates at the sides, with a "star"-screwdriver , from the outside (4 screws).
- e) Loosen the four screws in the middle of the XLR's (from the back of the 2290) with a small screwdriver - one quarter of a turn counterclockwise.
- f) The mainprint can now be removed from the frame by pulling it out of the XLR-housings.

2 : DISASSEMBLING THE FRONT (New type -Jan.1989)

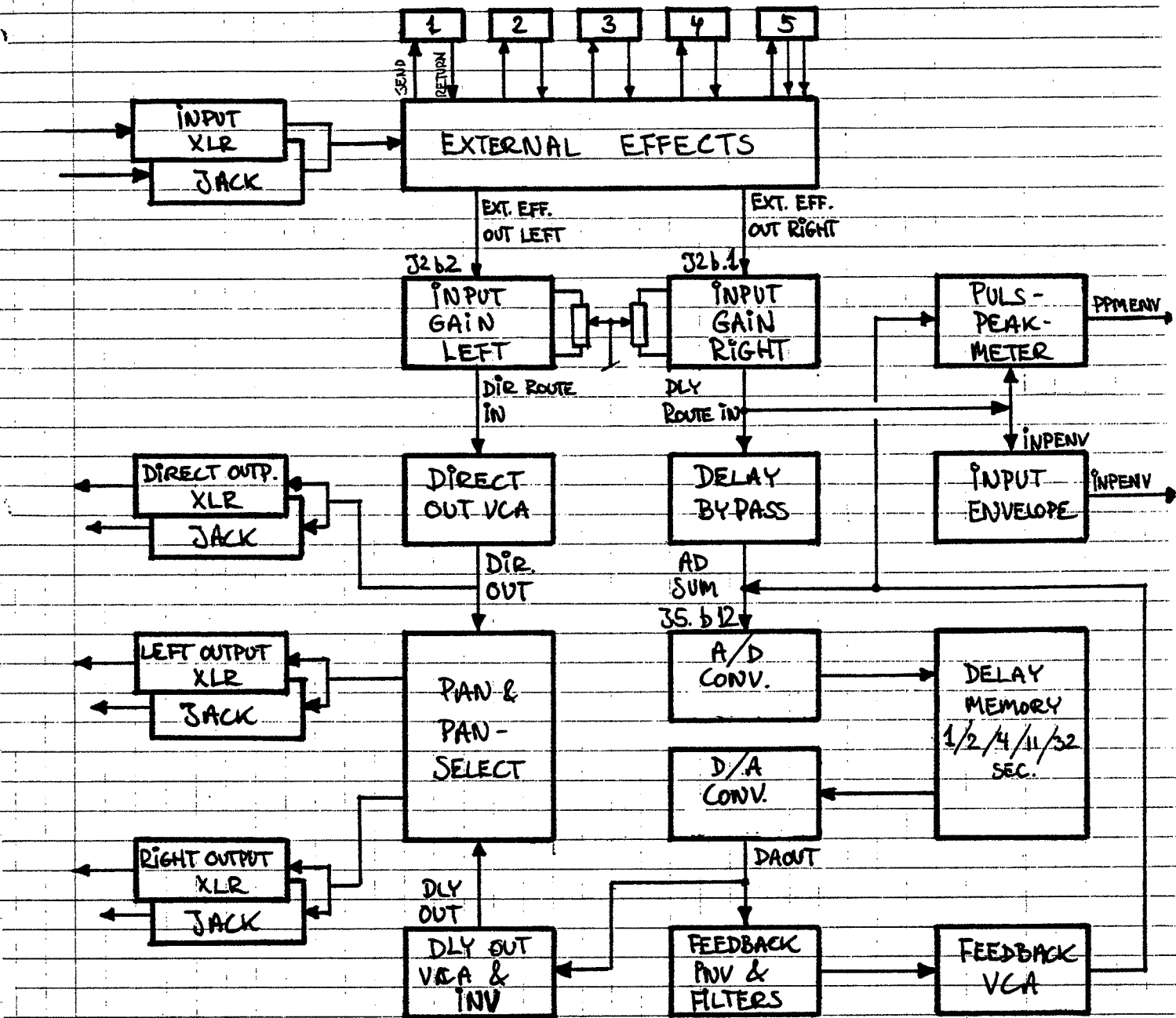
- a) Remove the front as mentioned above under d).
- b) Turn the input gain -knob down (C.C.W) and loosen the 1,5 mm "unbraco" screw from the bottom.
- c) Unscrew the 2 mm unbraco - screw in the middle of the front. Remove the knob.
Lift the frontplate of the LED's.
(Notice the brass spacer in the middle).
- d) The printet circuit board can now be lifted out of the housing (it might be resisting a bit). The "old" type has a screw on the back which must be removed, and 12 stacks which must be pressed together with a flatnose pliers, to enable the pcb. to be lifted out.

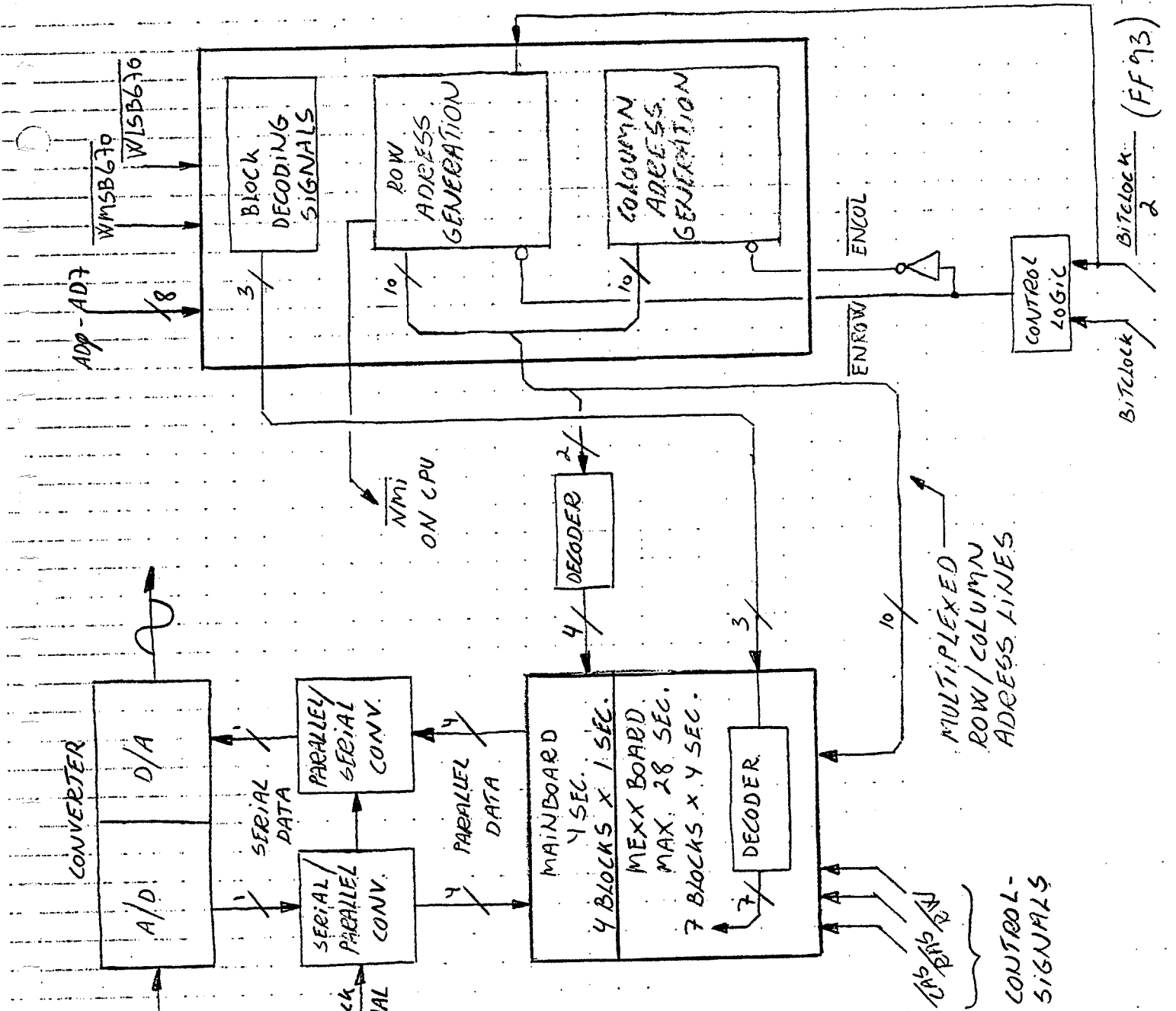
3 : ASSEMBLING THE FRONT: (New type)

- a) Put the P.C.B. down into the housing and adjust it so that the hole in the middle, is directly over the one in the spacer, mounted in the housing.
- b) Place the brass spacer on the p.c.b. over the one mounted from the back of the housing.
- c) Take the frontplate and insert the "unbraco" screw in the middle hole, and make it hit the hole in the brass spacer. Then gently press the frontplate down over the LED's. Start at the left side and make them fit the holes one by one towards the right side. It might be necessary to adjust the LED's vertical positions to make this possible.
- d) When the frontplate fits the LED's, tighten the "unbraco" screw.

BLOKDIAGRAM TC 2290

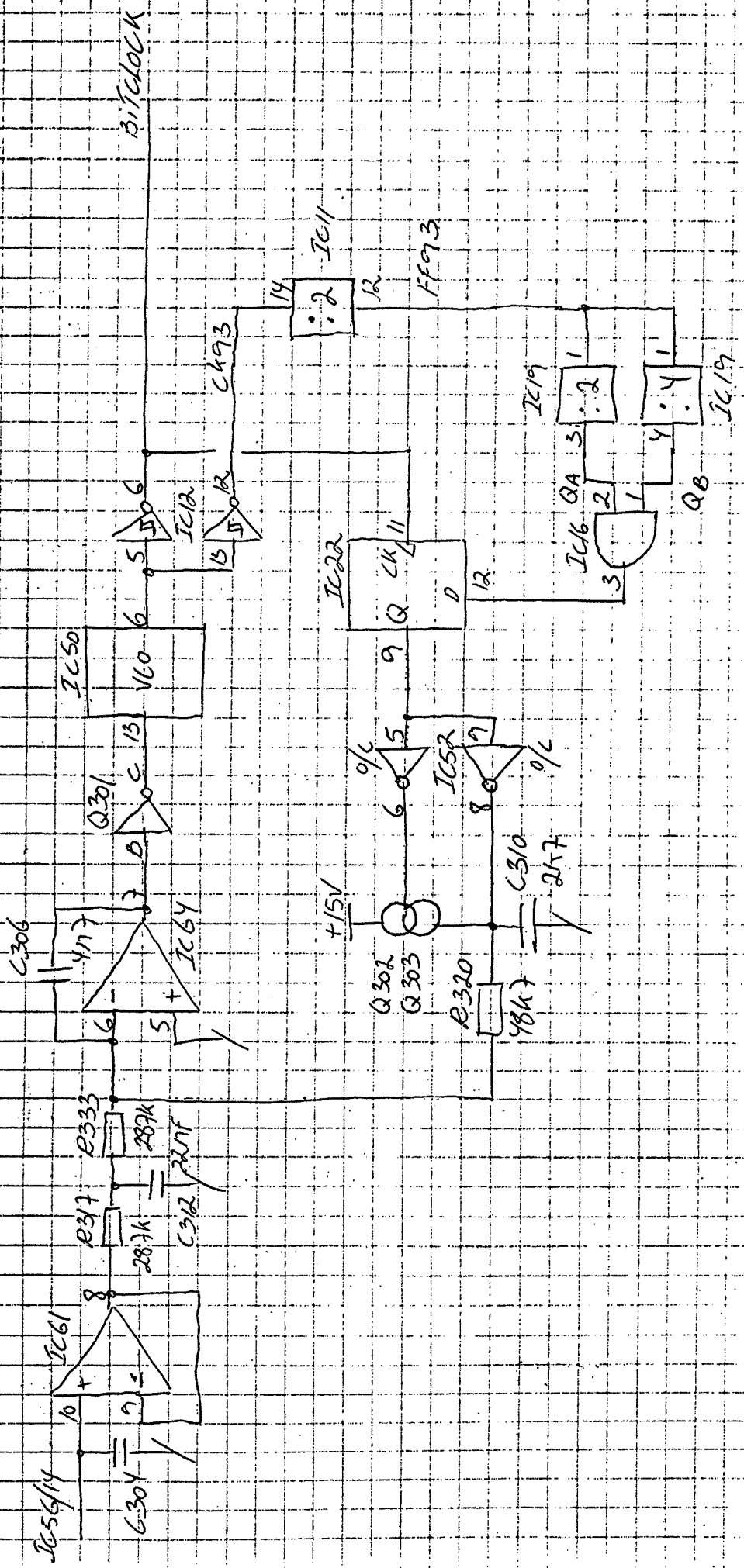
MBP JULI 87





Block Diagram
 2290
 NEXT ADDRESS SECTION
 890309/PAT

(FF93)



VCO-SERVO 22P10

PAY / 880621

MODULE/LABEL -CHART FOR TC 2290 :

* = INVERTED

| MODULE/LABEL -NAME: | OUTPUT AT SHEET | OUTPUT CONNECTION | INPUT AT SHEET: | INPUT CONNECTION |
|------------------------|-----------------------|----------------------------|-----------------------|-----------------------------|
| +5APEDAL (TC-LINK) | 7 | Q704 EMIT. (5V SUPPLY) | 4 | TC-LINK JACK P.2 |
| +5V SENSE | 2 | J5 P.6 | 7 | R719 (AT IC 63) |
| A1 | 1 | IC6 P.16 | 1 | IC2P.9 + IC3P.9 + IC4P.35 |
| A1 | 1 | - | 2 | IC 26,27,28,29 P.14 |
| AD0 THROUGH AD7 | 1 | IC1 P.37-30 | 2 | IC29 + IC28 (SHEET 2) |
| ADINT | 8 | SHEET NOT RELEASED | 6 | J5 P.15 + J8 P.3 |
| ADSERIN | 2 | J5 P.1 + IC25 P.7 | 8 | SHEET NOT RELEASED |
| ADSEROUT | 8 | SHEET NOT RELEASED | 2 | J5 P.4 + IC24 P.2 & P.3 |
| ADSTEP | 8 | SHEET NOT RELEASED | 6 | J5 P.13 + J8 P.4 |
| ADSUM | 6 | IC79 P.14 + J5 P.12 | 8 | SHEET NOT RELEASED |
| ADSUM* (ANALOG GND) | 6 | IC79 P.12 + J5 P.11 | 8 | SHEET NOT RELEASED |
| APEDAL | 4 | R412 + C402 | 3 | IC60 P.9 |
| APEDAL | 4 | - | 4 | CVIN/PEDAL-JACK P.3 |
| BITCLOCK | 3 | IC12 P.12 | 2 | IC23 P.10 |
| BITCLOCK | 2 | J5 P.3 + J7 P.35 | 2 | IC24P.10 + IC22P.3 & P.11 |
| CA2 | 1 | IC4 P.39 | 3 | IC8 P.15 |
| CAS0* | 2 | IC7 P.12 | 2A | IC 30,31,32,33 P.15 |
| CAS1* | 2 | IC7 P.11 | 2A | IC 34,35,36,37 P.15 |
| CAS2* | 2 | IC7 P.10 | 2A | IC 38,39,40,41 P.15 |
| CAS3* | 2 | IC7 P.9 | 2A | IC 42,43,44,45 P.15 |
| CASTIME | 2 | IC16 P.6 | 2 | IC14 P.5 |
| CASTIME | 2 | J6 P.31 + J7 P.33 | M | MEMORY PCB ME11 OR ME00 |
| CB2 | 1 | IC4 P.19 | 3 | R307 (TO IC51 P.5) |
| CK93 | 3 | IC12 P.6 | 1 | IC11 P.14 |
| CMP710 | 8 | SHEET NOT RELEASED | 2 | IC25 P.4 & P.5 |
| DAOUT | 8 | SHEET NOT RELEASED | 6 | J5 P.14 + C624 PLUS + R604 |
| DASERIN | 2 | IC23 P.12 (J5 P.5) | 8 | SHEET NOT RELEASED |
| DIR OUT | 6 | IC78 P.8 | 5 | R528 + R533 + R551 |
| DIR ROUTE IN | 5 | IC82 P.7 | 6 | C608 PLUS |
| DIRVCA | 3 | IC56 P.1 | 6 | IC78 P.5 |
| DISPLAY OFF | 1 | IC4 P.5 | 1 | IC52 P.13 |
| DISPLAY OFF | 1 | IC4 P.5 | 3 | R302 AT Q304-BASIS |
| DISPLAY OFF* | 1 | IC52 P.12 | 3 | IC54 P.6 |
| DLY OUT | 6 | IC78 P.14 | 5 | C515 PLUS + R536 |
| DLY ROUTE IN | 5 | IC82 P.14 | 6 | IC74 P.5 + R636 |
| DLYINV | 3 | IC58 P.9 | 6 | IC75 P.11 |
| DLYVCA1 | 3 | IC56 P.2 | 6 | IC61 P.12 |
| DLYVCA2 | 3 | IC56 P.4 | 6 | J8 P.2 |
| DMUX0 | 1 | IC4 P.2 | 3&10 | IC54P.10 + IC8P.14 + J1P.13 |
| DMUX1 | 1 | IC4 P.3 | 3&10 | IC54P.9 + IC8P.13 + J1P.12 |
| DMUX2 | 1 | IC4 P.4 | 3&10 | IC56 P.9 + J1 P.11 |
| EN SLAVE VCO* | F1 | SHEET NOT INCLUDED | 2 | J7 P.21 + IC22 P.10 |
| ENABLE MAIN MEMORY | M | J6 P.30 | 2 | IC14 P.4 + RA301 P.4 |
| ENCOL* | 2 | IC14 P.11 | 2 | IC21P.15+IC27P.11+IC28P.11 |
| ENROW* | 2 | IC13 P.8 | 2 | IC20P.1 & P.15 + IC21 P.1 |
| EXT EFF IN | 5 | IC83 P.7 + J2 P.12 | 9 | SEE EXT. EFF. SHEET |
| EXT EFF OUT L | 9 | J2 P.2 (SEE EXT EFF SHEET) | 5 | IC82 P.3 |
| EXT EFF OUT R | 9 | J2 P.1 (SEE EXT EFF SHEET) | 5 | IC82 P.10 |
| EXTEFFCNL1 THROUGH 5 | 3 | IC59 + J2 P.8 THROUGH 4 | 9 | SEE EXT.EFF. SHEET |

PRINTED CIRCUIT BOARDS CONNECTED TO THE MAINPRINT :

SHEETS INCLUDED : 9 = EXTERNAL EFFECTS AND 10 = FRONTSHEETS EXCLUDED : 8 = CONVERTER , M_ = MEMORY EXP. ME11 OR ME00

F1 OR F2 = FAST TRIG SHEET 1 OR 2

S2 = SAMPLING OPTION 02

MODULE/LABEL -CHART FOR TC 2290 :

| MODULE/LABEL -NAME: | OUTPUT AT SHEET | OUTPUT CONNECTION | INPUT AT SHEET: | INPUT CONNECTION |
|------------------------|-----------------------|---------------------------|-----------------------|----------------------------|
| FAST6 | 2 | IC19 P.8 | 2 | IC21 P.10 + IC18 P.9 |
| FAST6 (FATR-W7) | 2 | - | 1 | FATR PCB. P.4 (FATR-W7) |
| FATR-W1 | 1 | FATR.P.C.BOARD P.1 | 6 | IC74 P.9 |
| FATR-W2 (DLYROUTEIN) | 6 | IC74 P.5 | 1 | FATR PCB. P.8 |
| FATR-W2 (DLYROUTEIN) | 5 | IC82 P.14 | 1 | FATR PCB. P.6 |
| FATR-W3 (ANALOG GND) | 1 | P.W.TRACK ABOVE R554 | 1 | FATR PCB. P.2 |
| FATR-W4 (ANALOG GND) | 1 | P.W.TRACK ABOVE R554 | 1 | FATR PCB. P.7 |
| FATR-W5 | 1 | FATR PCB. P.3 | 1 | IC12 P.1 |
| FATR-W6 (DIGITAL GND) | 1 | IC12 P.7 | 1 | FATR PCB. P.6 |
| FATR-W7 (FAST6) | 2 | IC19 P.8 | 1 | FATR PCB. P.4 |
| FBKINV | 3 | IC59 P.2 | 6 | IC75 P.10 |
| FBKVCA | 3 | IC56 P.12 | 6 | IC79 P.5 |
| FF93 | 1 | IC11 P.12 | 2 | IC22 P.2 + IC13 P.13 |
| FF93 | 1 | IC12 P.12 | 2 | IC16 P.5 + IC19 P.1 |
| GAINPOT L | 5 | J3 P.1 | 5 | C506 MINUS |
| GAINPOT R | 5 | J3 P.2 | 5 | C511 MINUS |
| GND SENSE | 2 | J5 P.7 | 7 | R704 (AT IC63) |
| GND SENSE | 2 | J5 P.7 | 7 | R704 (AT IC63 P.10) |
| HFO | 3 | IC58 P.19 | 6 | IC76 P.10 |
| HF1 | 3 | IC58 P.18 | 6 | IC76 P.9 |
| INMUTE | 3 | IC58 P.6 | 6 | IC74 P.10 |
| INPENV | 6 | R653 (FROM IC74 P.14) | 3 | IC54 P.11 |
| KEYROW0 | 10 | J1 P.6 | 1 | IC1 P.13 |
| KEYROW1 | - | J1 P.5 | 1 | IC1 P.14 |
| KEYROW2 | - | J1 P.4 | 1 | IC1 P.15 |
| KEYROW3 | - | J1 P.3 | 1 | IC1 P.16 |
| KEYROW4 | - | J1 P.2 | 1 | IC1 P.17 |
| KEYROW5 | - | J1 P.1 | 1 | IC1 P.18 |
| LEARNKEY* | 3 | J1 P.9 | 1 | IC16 P.10 |
| LEARNKEY* | 4 | COLLECTOR Q403 | 10 | LEARN SWITCH K42 ON FRONT |
| LFO | 3 | IC58 P.15 | 6 | IC75 P.9 |
| LF1 | 3 | IC58 P.12 | 6 | IC76 P.11 |
| LKDN | 2 | IC18 P.2 | 1 | IC16 P.9 |
| MIDIRXD | 4 | IC62 P.4 | 1 | IC5 P.2 |
| MIDITXD | 1 | IC5 P.6 | 4 | Q404 BASIS |
| MUTEREF | 7 | R711 + R718 | 6 | IC74 P.11 |
| NEXTADR* | 1 | IC4 P.6 | 2 | IC19P.2 & P.12 |
| NXAM0 | 2 | IC18 P.10 + J7 P.38 | 2 | IC13 P.5 + IC25 P.14 |
| NXAM1 | 2 | IC18 P.7 +J7 P.37 | 2 | IC25 P.2 |
| NXAS0 | 1 | IC1 P.19 | 2 | IC18 P.12 |
| NXAS1 | 1 | IC1 P.20 | 2 | IC18 P.5 |
| PA5 | 3 | IC60 P.14 | 1 | IC4 P.7 |
| PA6 | 3 | IC60 P.2 | 1 | IC4 P.8 |
| PA7 | 3 | IC60 P.1 | 1 | IC4 P.9 |
| PANVCA | 3 | IC56 P.15 | 5 | IC61 P.3 |
| P80 THROUGH P87 | 1 | IC4 P.10 THROUGH P.17 | 3 | IC53/IC58/IC59/J1 (SHEET3) |
| PITCH | 3 | IC56 P.5 | 3 | R322 + C305 |
| POTMUX | 10 | NOT CONNECTED | 3 | IC60 P.5 +J1 P.15 |
| PFMENV | 6 | R648+R649 (FROM IC74 P.2) | 3 | IC53 P.14 & P.15 |
| PSDIR | 3 | IC58 P.2 | 5 | IC77 P.10 + CATHODE D505 |
| PSDLY | 3 | IC58 P.5 | 5 | IC77 P.9 + R578 |

MODULE/LABEL -CHART FOR TC 2290 :

| MODULE/LABEL -NAME: | OUTPUT AT SHEET | OUTPUT CONNECTION | INPUT AT SHEET: | INPUT CONNECTION |
|------------------------|-----------------------|---------------------------|-----------------------|------------------------------|
| RAS | 2 | IC22 P.6 + J7 P.34 | 2 | IC13P.12+ IC14P.9+ IC16P.4 |
| RAS* | 2 | IC22 P.5 | 2 | RA202 P.7 |
| RAS* | 2 | J6 P.4 | 2 | IC25 P.6 + IC13 P.1 |
| RESET* | 1 | IC51 P.10 + J7 P.28 | 1 | IC1P.6 + IC51P.9 + IC4 P.34 |
| RESET* | 1 | - | 2 | IC18 P.1 |
| RESET* | 1 | - | 3 | IC59 P.1 |
| RRAS* (SEE RAS*) | 2 | RA202 P.8 (IC22 P.5) | 2A | IC30 - IC42 |
| RSRA0 THROUGH RSRAS | 2 | IC 20,21,27,28(RA201,202) | 2A | IC 30 - IC 42 |
| RW* (SEE W*) | 2 | RA202 P.2 (IC 13 P.6) | 2A | IC30 - IC42 |
| RWSEL | 2 | IC19 P.3 + J7 P.36 | 2 | IC 26,27,28,29 P.5 |
| RWSEL | 2 | - | 2 | IC13P.4 + IC16P.2 + IC14P.10 |
| S&H STROBE* | 3 | IC51 P.12 | 1 | IC4 P.18 |
| S&H STROBE* | 3 | - | 3 | IC56 P.6 |
| SELTAPE | 1 | IC5 P.5 | 4 | IC52 P.1 + IC52 P.3 |
| SERVO RAMP* | 2 | IC22 P.9 (RA301 P.9) | 3 | IC52 P.5 & P.9 |
| SLOW ON (SEE DISPL.) | 3 | Q304 COLLECTOR (J1 P.14) | 10 | IC4 P.3 (AT FRONT PCB) |
| SRD0 | 2A | IC 33,37,41,45 P.14 | 2 | IC 23 P.4 + IC24 P.4 |
| SRD1 | 2A | IC 32,36,40,44 P.14 | 2 | IC23 P.5 + IC24 P.5 |
| SRD2 | 2A | IC 31,35,39,43 P.14 | 2 | IC23 P.6 + IC24 P.6 |
| SRD3 | 2A | IL 30,34,38,42 P.14 | 2 | IC23 P.7 + IC24 P.7 |
| SRI0 | 2 | IC24 P.15 | 2A | IC 33,37,41,45 P.2 |
| SRI1 | 2 | IC24 P.14 | 2A | IC 32,36,40,44 P.2 |
| SRI2 | 2 | IC24 P.13 | 2A | IC 31,35,39,43 P.2 |
| SRI3 | 2 | IC24 P.12 | 2A | IC 30,34,38,42 P.2 |
| SRS0 - SRS3 | 2 | IC26 P.6,7,9,10 | M | MEMORY PCB. ME11 OR ME00 |
| STROBE4511* | 3 | IC8 P.11 + J1 P.7 | 10 | FRONT PCB:IC1 + IC2 P.5 |
| SWPEDAL | 4 | R413 + C403 | 3 | IC54 P.12 |
| SWPEDAL | 4 | - | 4 | ASSIGNSWITCH - JACK P.3 |
| TPRXD | 4 | IC51 P.4 | 1 | IC1 P.11 |
| TPTXD | 1 | IC1 P.12 | 4 | R415/R422 |
| VCOIN | F2 | SHEET NOT INCLUDED | 3 | IC50 P.13 + J7 P.19 |
| W* | 2 | IC13 P.6 | 2 | RA202 P.1 + ME11/ME00 SH. |
| WLSB670* | 1 | IC10 P.12 | 2 | IC29 P.12 + IC28 P.12 |
| WMSB670* | 1 | IC10 P.13 | 2 | IC27 P.12 + IC26 P.12 |

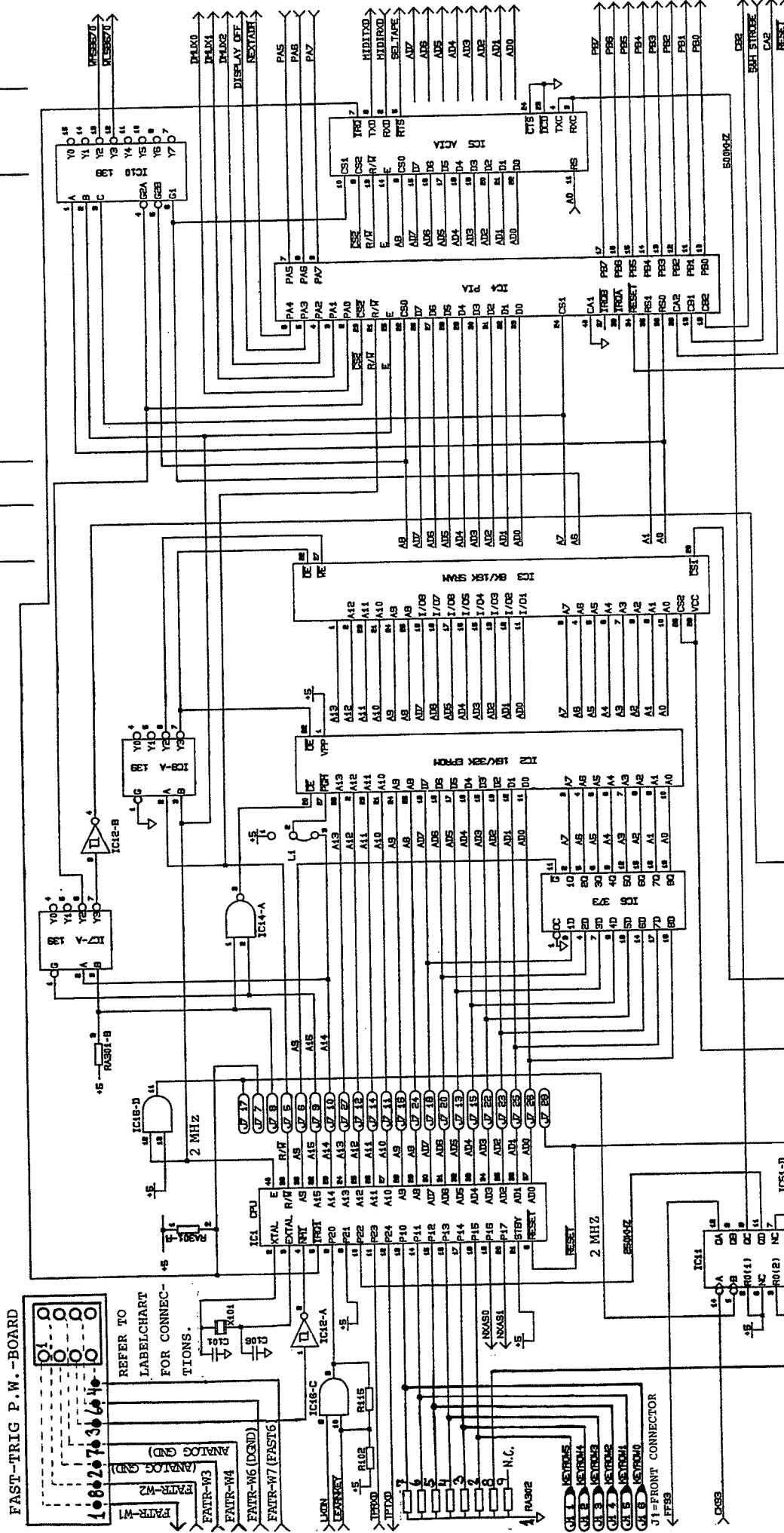
MAIN CONNECTORS:

| | | |
|------------------------|----------------------------|-----------------|
| J1 = FRONT | (25 pin SIL) | 3 & 10 |
| J2 = EXTERNAL EFFECTS | (12 pin SIL) | 3 , 5 & 9 |
| J3 = INPUT GAIN POT. | (4 pin SIL) | 5 |
| J4 = TRANSFORMER | (5 pin SIL) | 7 & 7A |
| J5 = CONVERTER | (15 pin SIL) | 2 , 6 & 8 |
| J6 = MEMORY EXPANSIONS | (40 pin SIL) | 2 , M1 or M0 |
| J7 = OPTIONS | (40 pin SIL) | 2 , 3 , 7 & FT1 |
| J8 = SAMPLING OPTIONS | (8 pin SIL) | 6 & S2 |
| J9 = FAST TRIG OPTION | (8 pin DIL & 14 pin DIL) | 1 , 2 & FT2 |

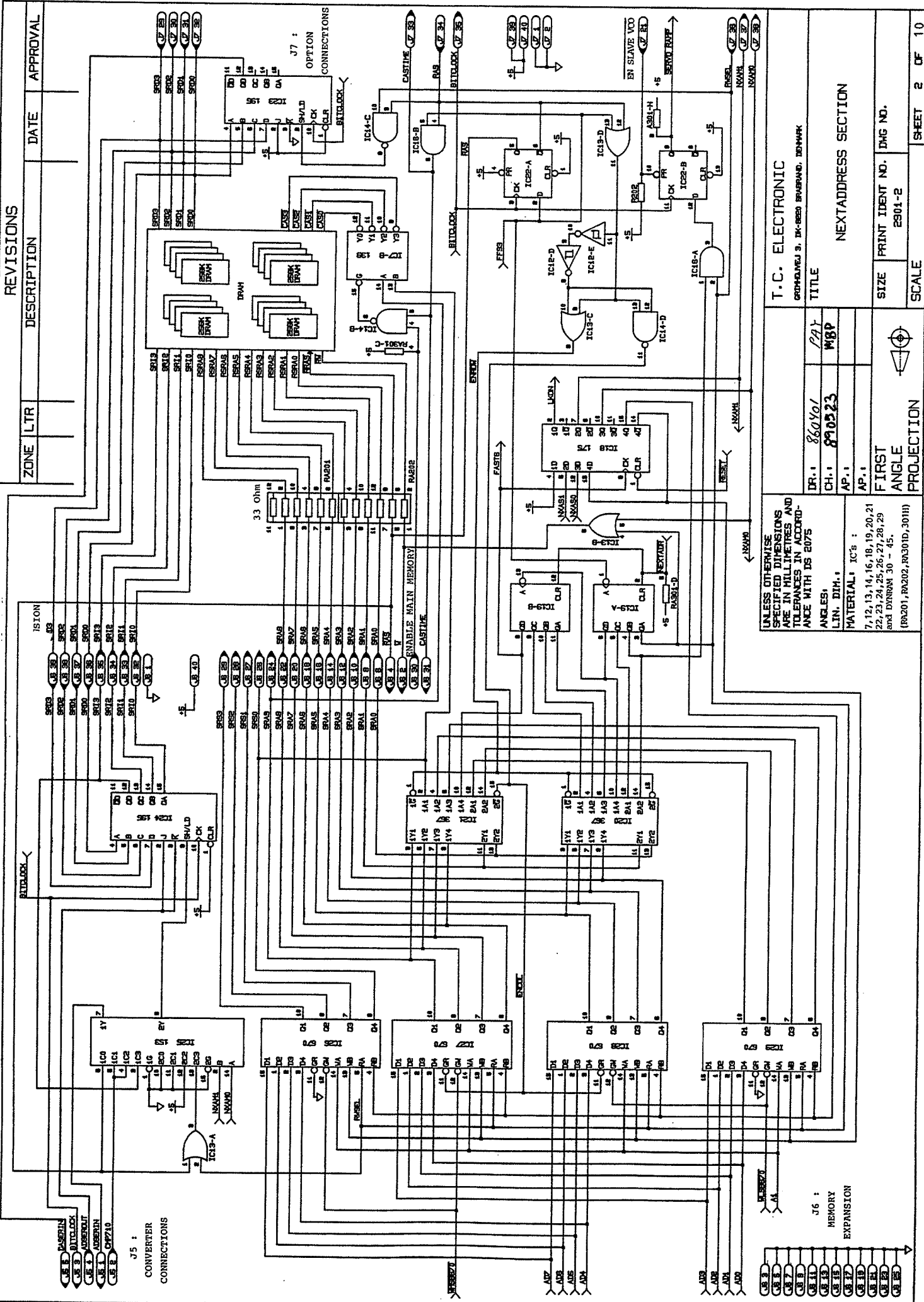
SHEET:

REVISIONS

| ZONE | LTR | DESCRIPTION | DATE | APPROVAL |
|------|-----|-------------|------|----------|
| | | | | |



| | | | |
|--|----------------------------|------------------------------|--|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES AND TOLERANCES IN ACCORDANCE WITH IS 2075 | | T.C. ELECTRONIC | |
| ANGLES: | LIN. DIM.: | DR.: 260401 | TITLE |
| MATERIAL: | IC'S : | CH.: 270523 | CPU SECTION |
| 11, 12, 14, 16, 51, 52 | 1, 2, 3, 4, 5, 6, 7, 8, 10 | AP.1 | GRIPHAJVEJ 3, DK-6220 BRUGAND, DENMARK |
| FIRST ANGLE PROJECTION | | SIZE PRINT IDENT NO. DWG NO. | |
| SCALE | | 2901-2 | |
| SHEET 1 OF 10 | | | |



| REVISIONS | DESCRIPTION | DATE | APPROVAL |
|-----------|-------------|------|----------|
| ZONE | LTR | | |

| | | | |
|---|-----------------|--------------------------|--|
| T.C. ELECTRONIC | | APPROVED BY: [Signature] | |
| TITLE | | | |
| DR.: | 860401 | PAY | |
| CH.: | 890223 | MBP | |
| AP.: | | | |
| AP.: | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH IS 2075 | | | |
| ANGLES: 1/16, 1/8, 1/4, 1/2, 3/4, 1, 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10, 12, 15, 20, 25, 30, 35, 40, 45, 60, 75, 90, 105, 120, 135, 150, 165, 180 | | | |
| MATERIAL: IC's: 7412, 7413, 7414, 7416, 7418, 7419, 7420, 7421, 7422, 7423, 7424, 7425, 7426, 7427, 7428, 7429 and DIBROM 30 - 45. | | | |
| FIRST ANGLE PROJECTION | | | |
| SIZE | PRINT IDENT NO. | DWG NO. | |
| SCALE | 2801-2 | | |

NEXT ADDRESS SECTION
 ENABLER MAIN MEMORY
 CASTIME (J7, J8)
 BITLOCK (J7, J8)
 EN SLAVE VCC (J7, J8)
 SERVO RUFF (J7, J8)

REVISIONS

ZONE LTR

DESCRIPTION

DATE

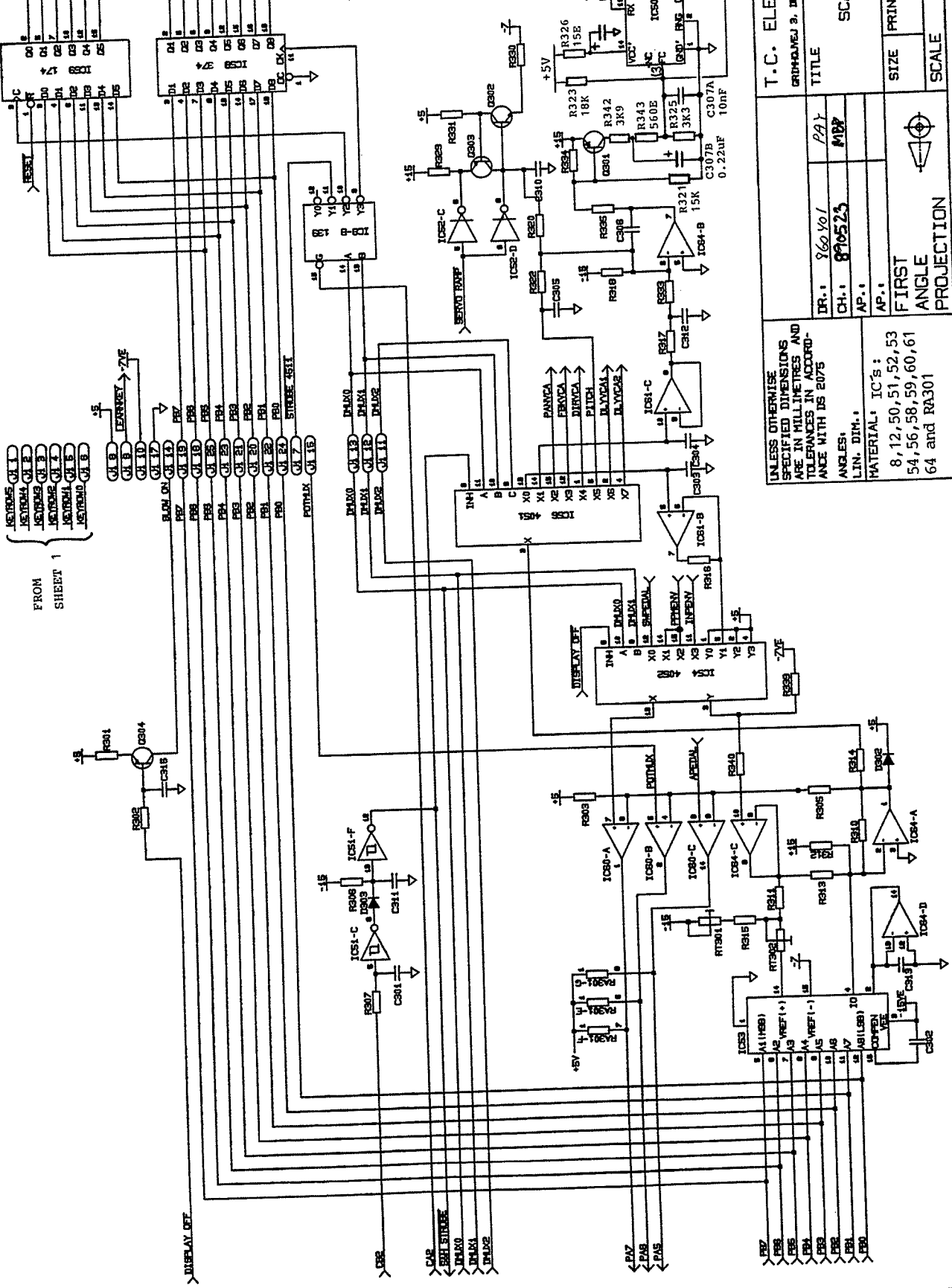
APPROVAL

J1:
FRONT
CONNECTIONS

FROM
SHEET 1

- KEYPAD CH 1
- KEYPAD CH 2
- KEYPAD CH 3
- KEYPAD CH 4
- KEYPAD CH 5
- KEYPAD CH 6
- KEYPAD CH 7
- KEYPAD CH 8

- CH 8
- CH 9
- CH 10
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- CH 94
- CH 95
- CH 96
- CH 97
- CH 98
- CH 99
- CH 100



UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH IS 2075

ANGLES:
LIN. DIM.:
MATERIAL: IC's:
8, 12, 50, 51, 52, 53
54, 56, 58, 59, 60, 61
64 and RA301

T.C. ELECTRONIC
ORINDMEJ 9, DK-8620 BRUNSBORG, DENMARK

TITLE
SCAN & REFRESH I/O

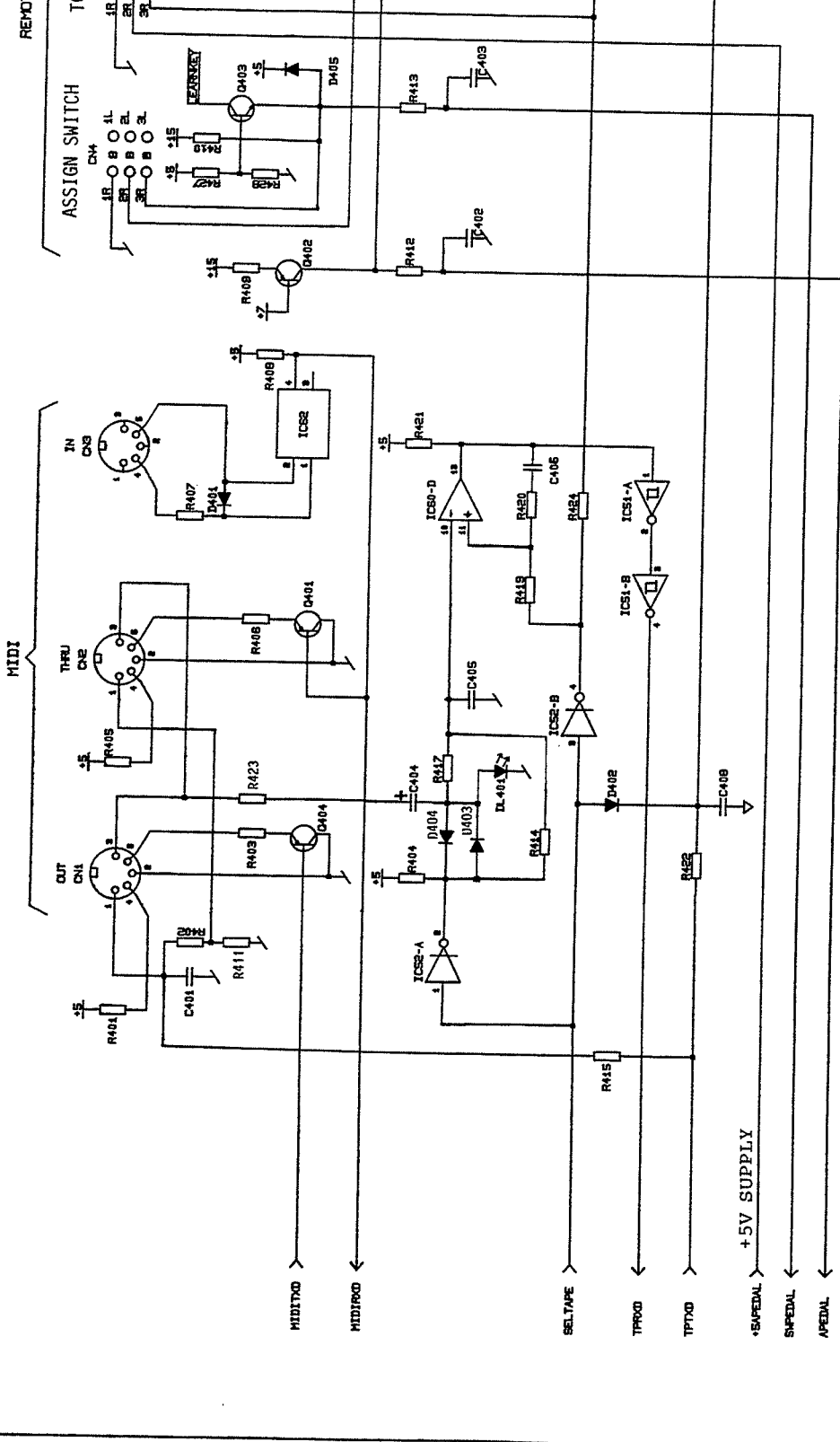
DR.: 860 YOI
CH.: 870523
AP.:
AP.:
FIRST ANGLE
PROJECTION

SIZE
2904-2

SCALE
SHEET 3 OF 10

| REVISIONS | | |
|-----------|-----|-------------|
| ZONE | LTR | DESCRIPTION |
| | | |
| | | |
| | | |

| DATE | APPROVAL |
|------|----------|
| | |
| | |
| | |



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES AND TOLERANCES IN ACCORDANCE WITH BS 2075

DR. 1: 26.10.01
 CH. 1: 890523
 AP. 1: AP. 1

IC3 :
 51, 52, 60, 62

T.C. ELECTRONIC
 ØSTERHØJVEJ 9, DK-2820 BRØNØR, DENMARK

TITLE
 COMMUNICATION INTERFACE SECTION

SCALE
 FIRST ANGLE PROJECTION

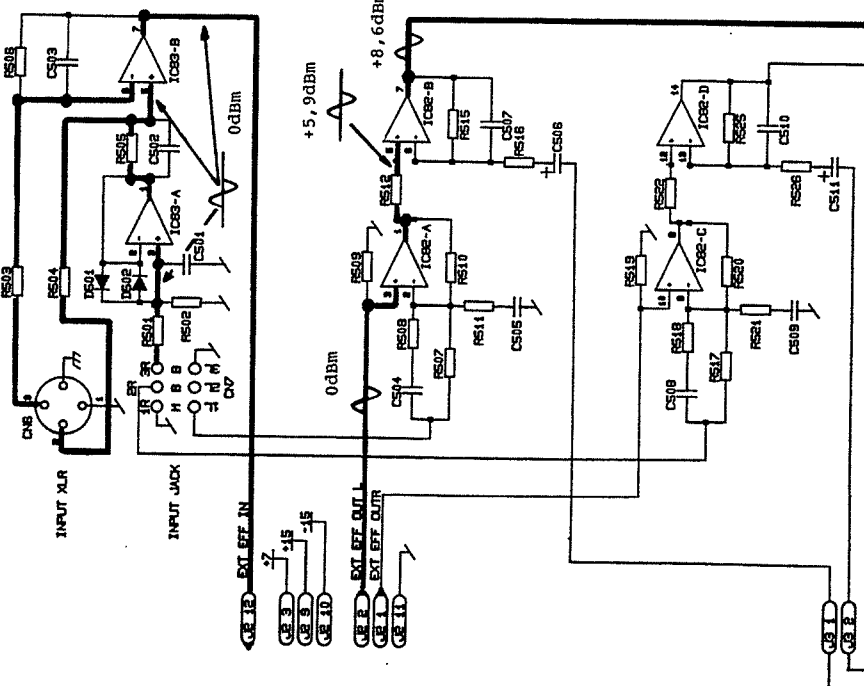
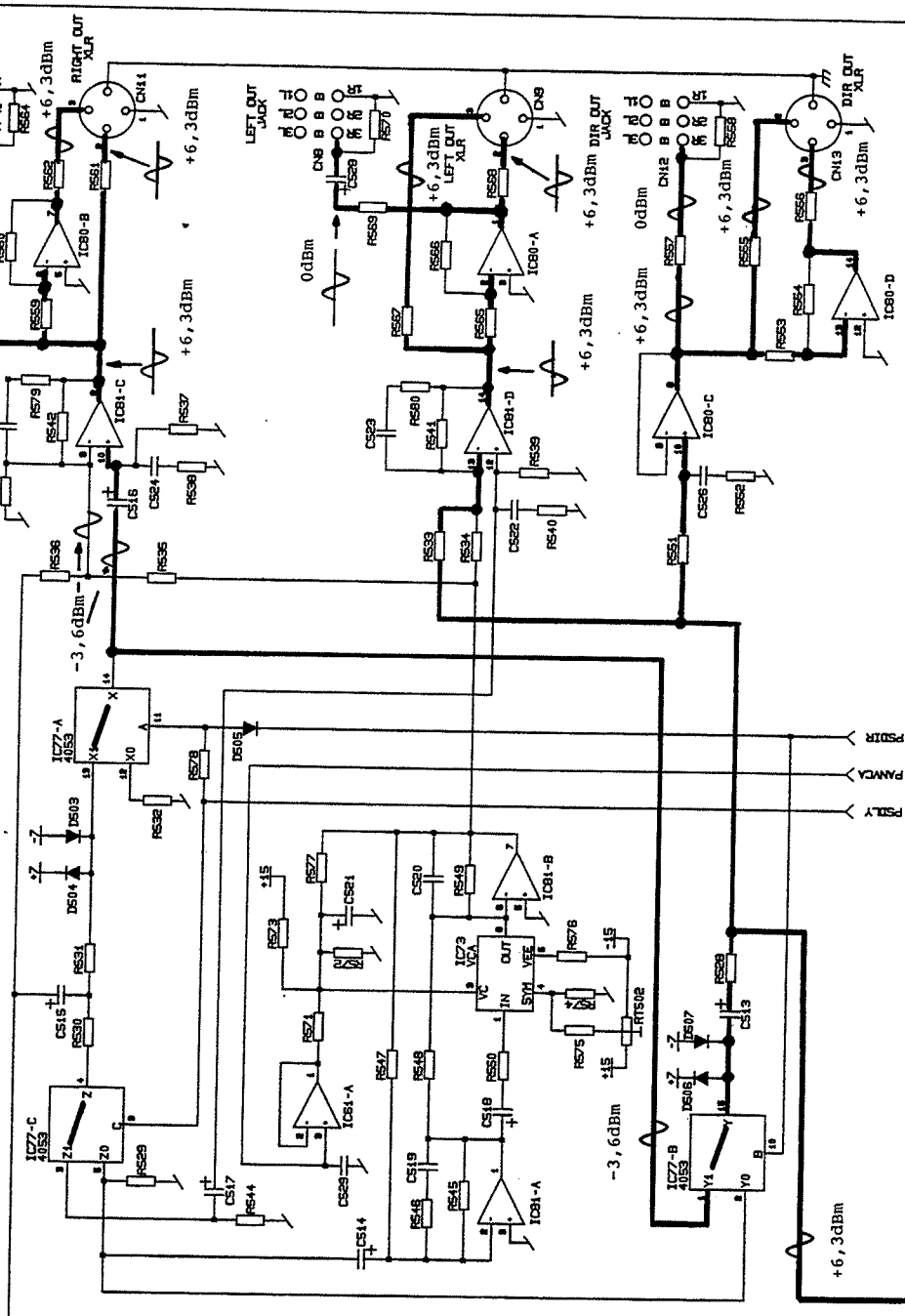
SIZE
 PRINT IDENT NO. R901-2
 DNG NO.

SHEET 4 OF 10

REVISIONS

| ZONE | LTR | DESCRIPTION | DATE | APPROVAL |
|------|-----|-------------|------|----------|
| | | | | |

- CONDITIONS:
- 1: Signalpath shown is for the DIR-signal.
 - 2: DIR/DLY PAN+MOD=OFF.
 - 3: Phases shown are related to input.
 - 4: Input gain potmeter=fully CCW.
 - 5: DIRVOL=99, DLYVOL=00, DIR+DLYVOL=99, FDBVOL=00.
 - 6: Input-signal: 1kHz/0dBm/sinus/jackinput.



With -10dBm/1kHz/sinus at jackinp. check:
 CW: IC82 p.7=+18,5 dBm.
 CCW: IC82 p.7=-1,5 dBm.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES AND TOLERANCES IN ACCORDANCE WITH IS 2075

DR.: 860401
 CH.: 870523
 AP.1
 AP.1

IC's :
 61,73,77,80,81
 82 and 83

T.C. ELECTRONIC
 GRIMHOLMEJ 9. DK-8250 BRABRAND, DENMARK

TITLE

IN/OUT SECTION
 DIRECT SIGNAL PATH

SIZE
 2901-2

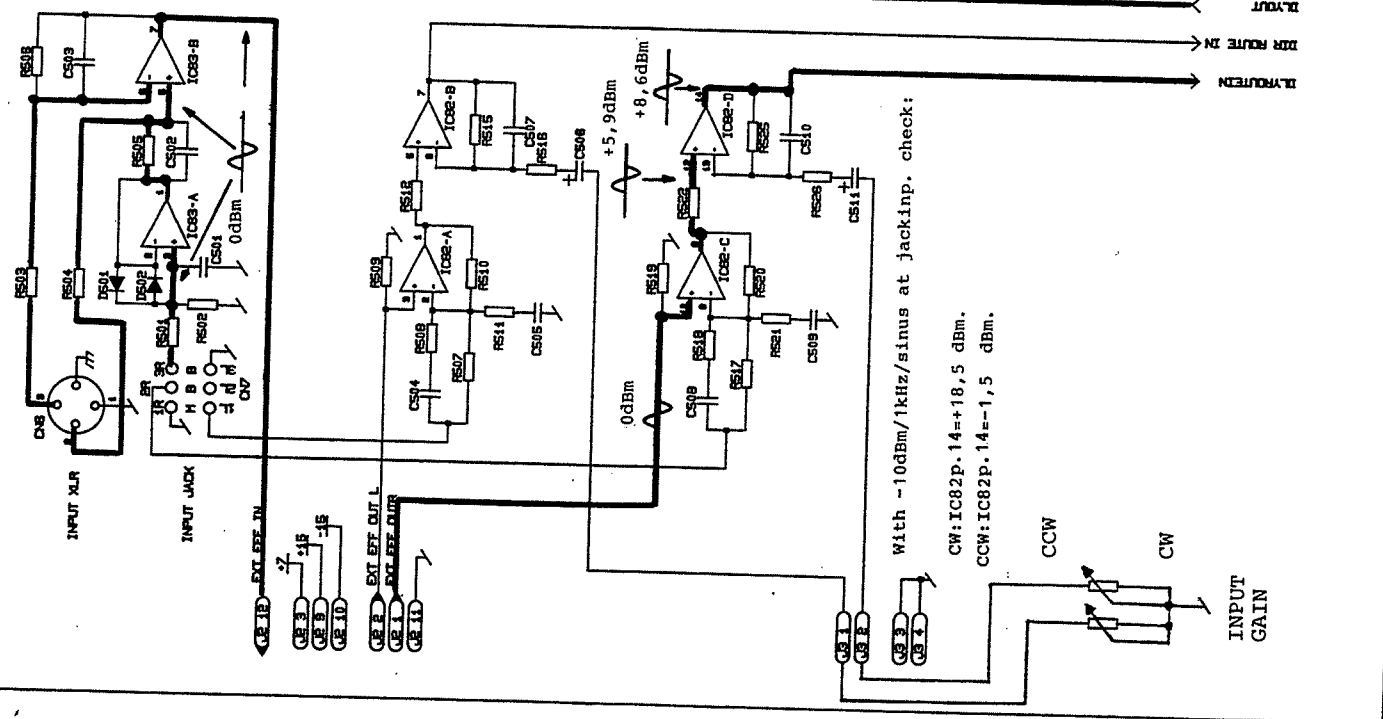
SCALE

SHEET SA OF 8

REVISIONS

| ZONE | LTR | DESCRIPTION | DATE | APPROVAL |
|------|-----|-------------|------|----------|
| | | | | |

- CONDITIONS:
- 1: Signalpath shown is for the DIR-signal.
 - 2: DIR/DLY PAN+MOD=OFF.
 - 3: Phases shown are related to input.
 - 4: Input gain potmeter=fully CCW.
 - 5: DIRVOL=00, DLYVOL=99, DIR+DLYVOL=99, FDBVOL=00.
 - 6: Input-signal: 1kHz/0dBm/sinusus/jackinput.



With -10dBm/1kHz/sinus at jackinput. check:
 CW: IC82p.14=+18,5 dBm.
 CCW: IC82p.14=-1,5 dBm.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES AND TOLERANCES IN ADDITION WITH DS 2075

ANGLES:
 L.I.N. DIM.:
 MATERIAL:
 IC's:
 61, 73, 77, 80, 81
 82 and 83

T.C. ELECTRONIC
 GRIMHOJVEJ 9, DK-8220 BRABRAND, DENMARK

TITLE
 IN/OUT SECTION
 DELAY SIGNAL PATH

SIZE PRINT IDENT NO. DIMG NO.
 2904-2

SCALE

NOTES:

Signalpath when DIR-signal is PAN'orated.

PSDIR=LO |

PSDLY=HI |

DIRVOL=99, DLYVOL=00, PANVOL=0-99 |

NOTES:

Signalpath when DLY-signal is PAN'orated.

PSDIR=HI |

PSDLY=LO |

DIRVOL=00, DLYVOL=99, PANVOL=0-99 |

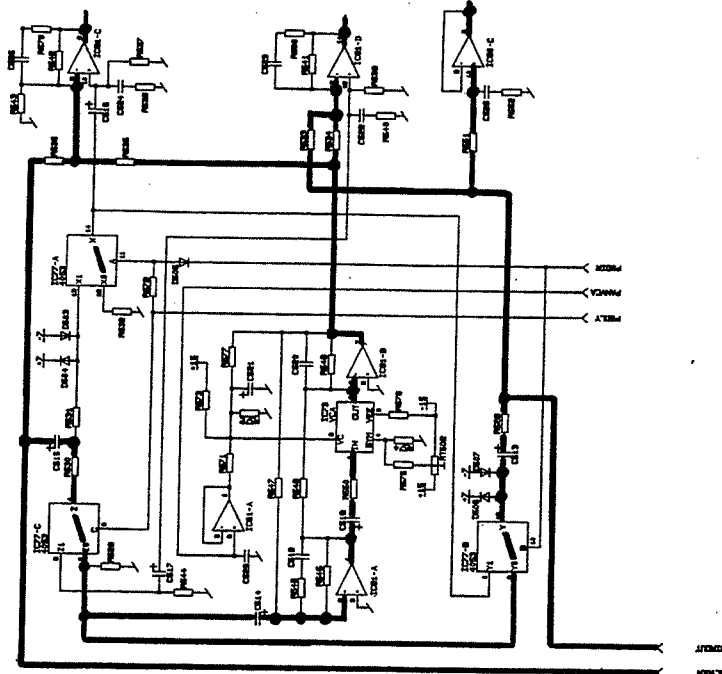
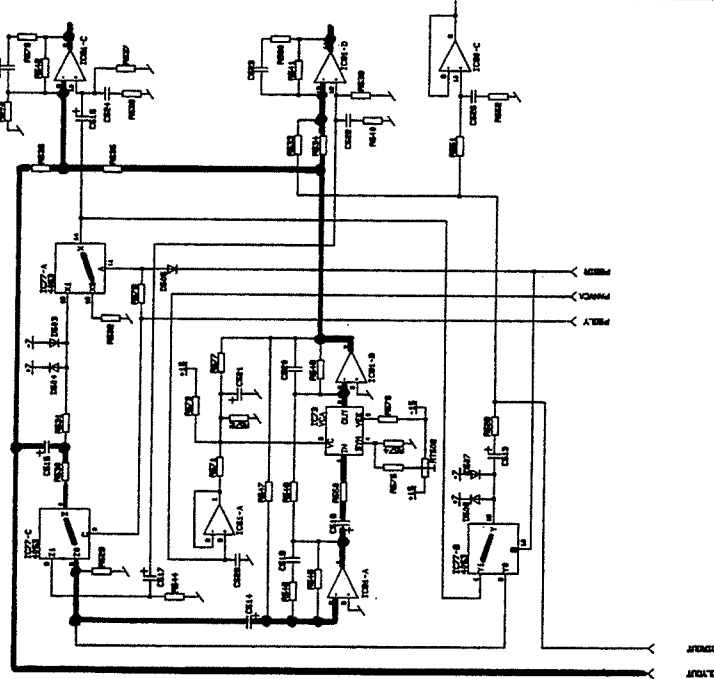
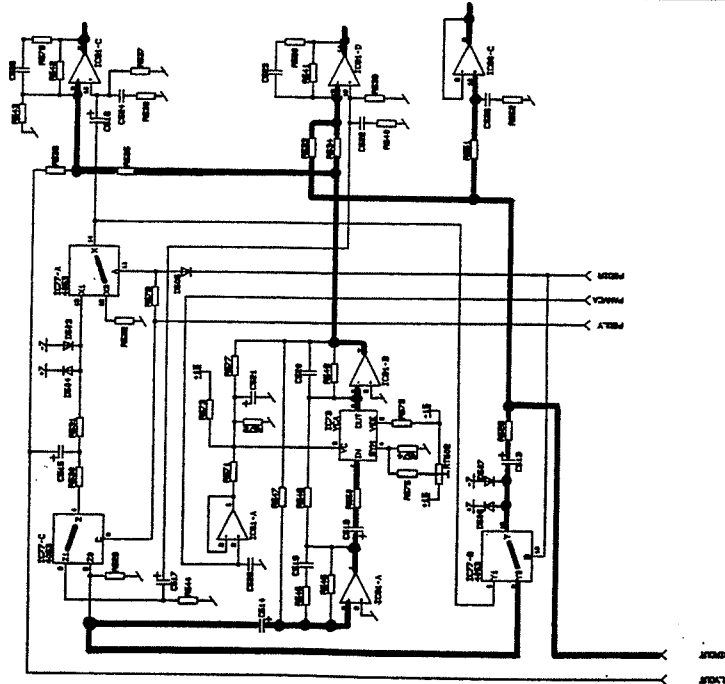
NOTES:

Signalpath when DIR+DLY-signal is PAN'orated.

PSDIR=LO |

PSDLY=LO |

DIRVOL=99, DLYVOL=99, PANVOL=0-99 |



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES AND TOLERANCES IN ACCORDANCE WITH DS 2075

ANGLES

LIN. DIM.

MATERIAL

IC's :

61,73,77,80,81

PAY/890406

T.C. ELECTRONIC

GRINDVALEJ 3, DK-8800 BOURNAND, DENMARK

DR.: 190523

CH.: PAY

AP.: |

AP.: |

AP.: |

AP.: |

AP.: |

AP.: |

AP.: |

AP.: |

FIRST ANGLE PROJECTION

SIZE

PRINT IDENT NO. 2804-2

SCALE

SHEET 5C OF 10

PAN-SECTION.

TITLE

NOTES:

Signalpath when DIR-signal is PAN'orated.

PSDIR=LO

PSDLY=HI

DIRVOL=99, DLYVOL=00, PANVOL=0-99

NOTES:

Signalpath when DLY-signal is PAN'orated.

PSDIR=HI

PSDLY=LO

DIRVOL=00, DLYVOL=99, PANVOL=0-99

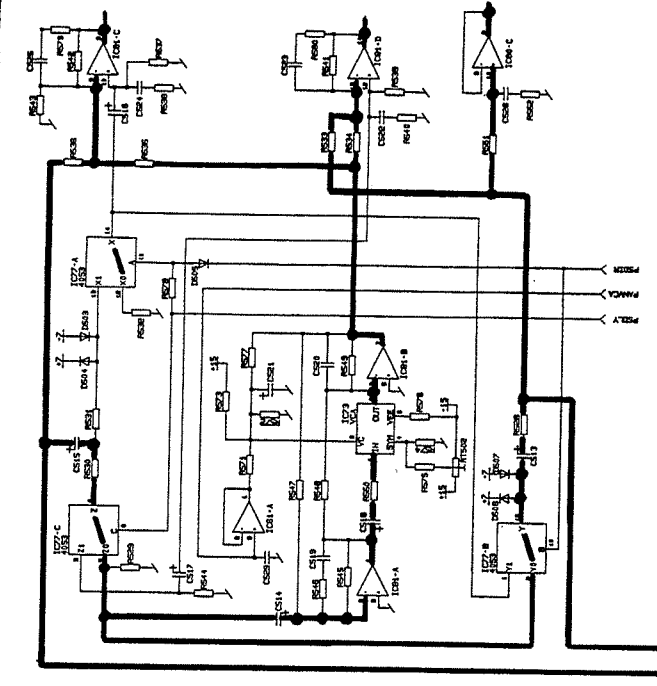
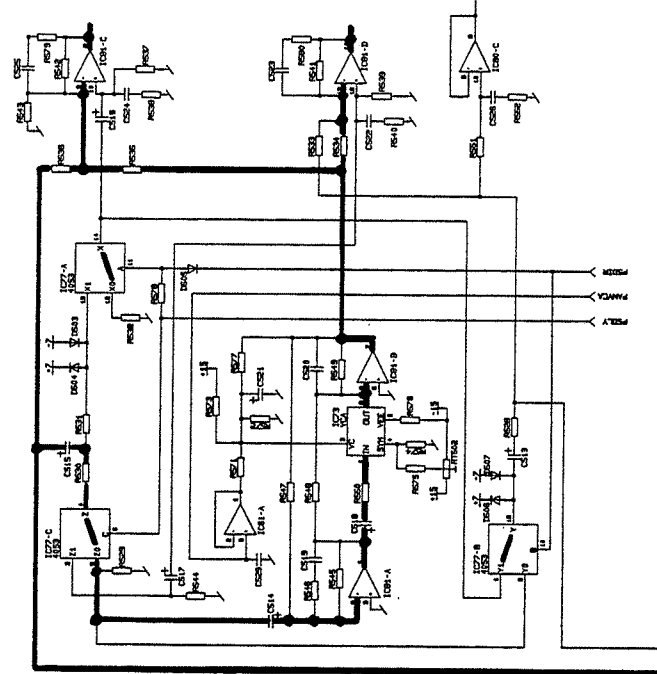
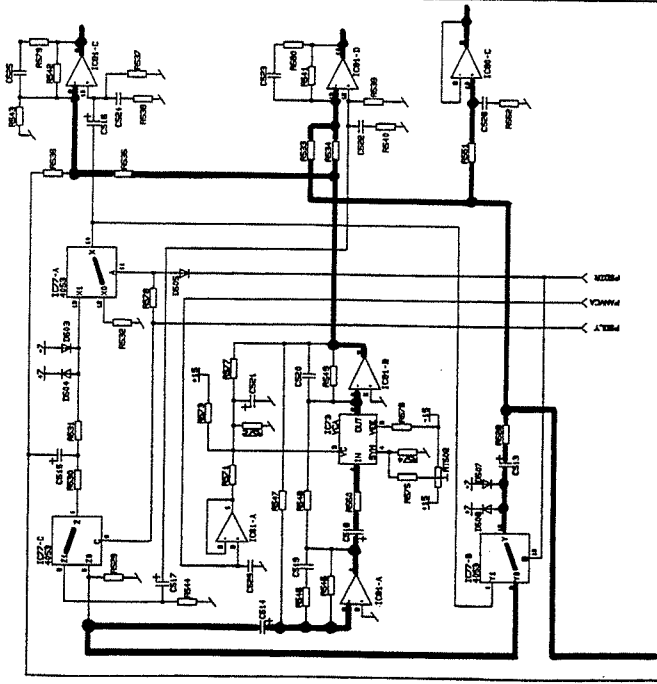
NOTES:

Signalpath when DIR+DLY-signal is PAN'orated.

PSDIR=LO

PSDLY=LO

DIRVOL=99, DLYVOL=99, PANVOL=0-99



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES AND TOLERANCES IN ACCORDANCE WITH DS 2075

ANGLES:
LIN. DIM.:
MATERIAL: IC's :
61,73,77,80,81

PAY/890406

DR.: J90525
CH.:
AP.:
AP.:

FIRST ANGLE PROJECTION

T.C. ELECTRONIC

GRIND/VEJ 9, DK-8220 BRASRAD, DENMARK

TITLE

PAN-SECTION.

SIZE PRINT IDENT NO. IMG NO.

2901-2

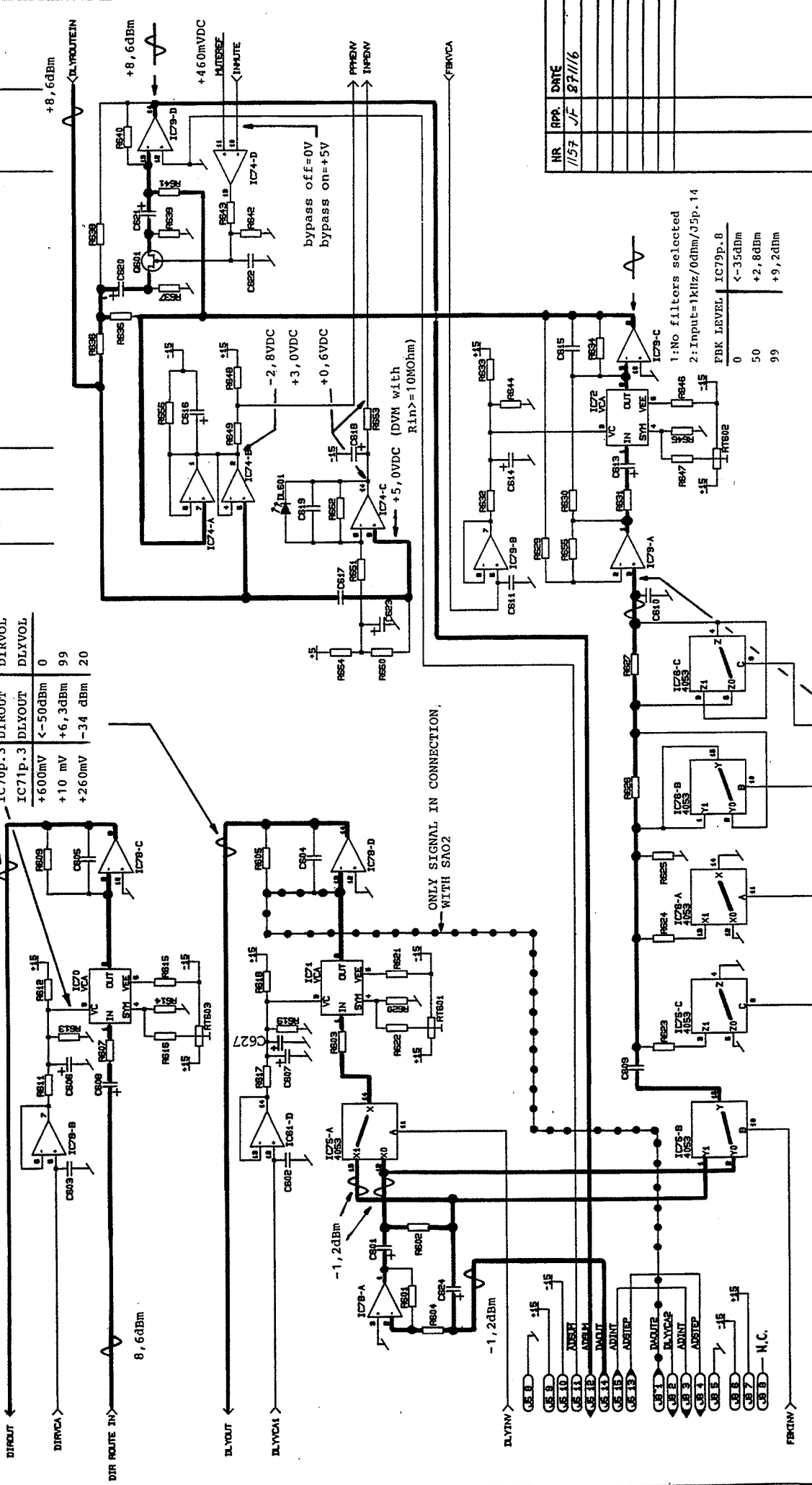
SCALE

SHEET SC OF 10

REVISIONS

| ZONE | LTR | DESCRIPTION | DATE | APPROVAL |
|------|-----|-------------|------|----------|
| | | | | |

| DIRVOL | DIRROUT | DIRVOLA | DIRVOLT |
|--------|---------|----------|----------|
| 0 | IC70p.3 | IC71p.3 | IC70p.3 |
| 99 | <-50dBm | <-50dBm | <-50dBm |
| 20 | +10 mV | +6, 3dBm | +6, 3dBm |
| | +260mV | -34 dBm | -34 dBm |



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES AND TOLERANCES IN ACCORDANCE WITH IS 2075

ANGLES:
LIN. DIM.:
MATERIAL: IC'S:
61, 70, 71, 72, 74
75, 76, 78 and 79

| IC | Input | Filter | Gain | Level |
|---------|-------|--------|------|-------|
| IC79p.3 | 100Hz | HF1 | 0 | 0 |
| IC79p.3 | 100Hz | HF1 | 0 | 0 |
| IC79p.3 | 100Hz | HF1 | 0 | 0 |
| IC79p.3 | 100Hz | HF1 | 0 | 0 |
| IC79p.3 | 100Hz | HF1 | 0 | 0 |
| IC79p.3 | 100Hz | HF1 | 0 | 0 |

Input = 100Hz/0dBm/J5p.14
Input = 10kHz/0dBm/J5p.14
HF1 HF0 FILTER IC79p.3
0 0 0 -1, 3dBm
0 1 100Hz -5, 5
1 0 200 -9, 5
1 1 400 -12, 0
0 0 0 33kHz -0, 70dBm
0 1 8k -4, 0
1 0 4k -7, 5
1 1 2k -10, 5

DR.: 8608/1
CH.: 890523
AP.1
AP.1
FIRST ANGLE PROJECTION
SIZE PRINT IDENT NO. DMS NO.
2901-2 2901-2
SCALE SHEET 6 OF 10

T.C. ELECTRONIC
GRIMPAULU 3, DK-BEED BRUGARD, DENMARK

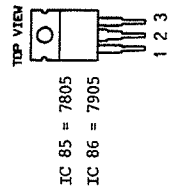
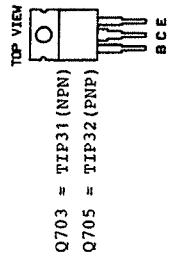
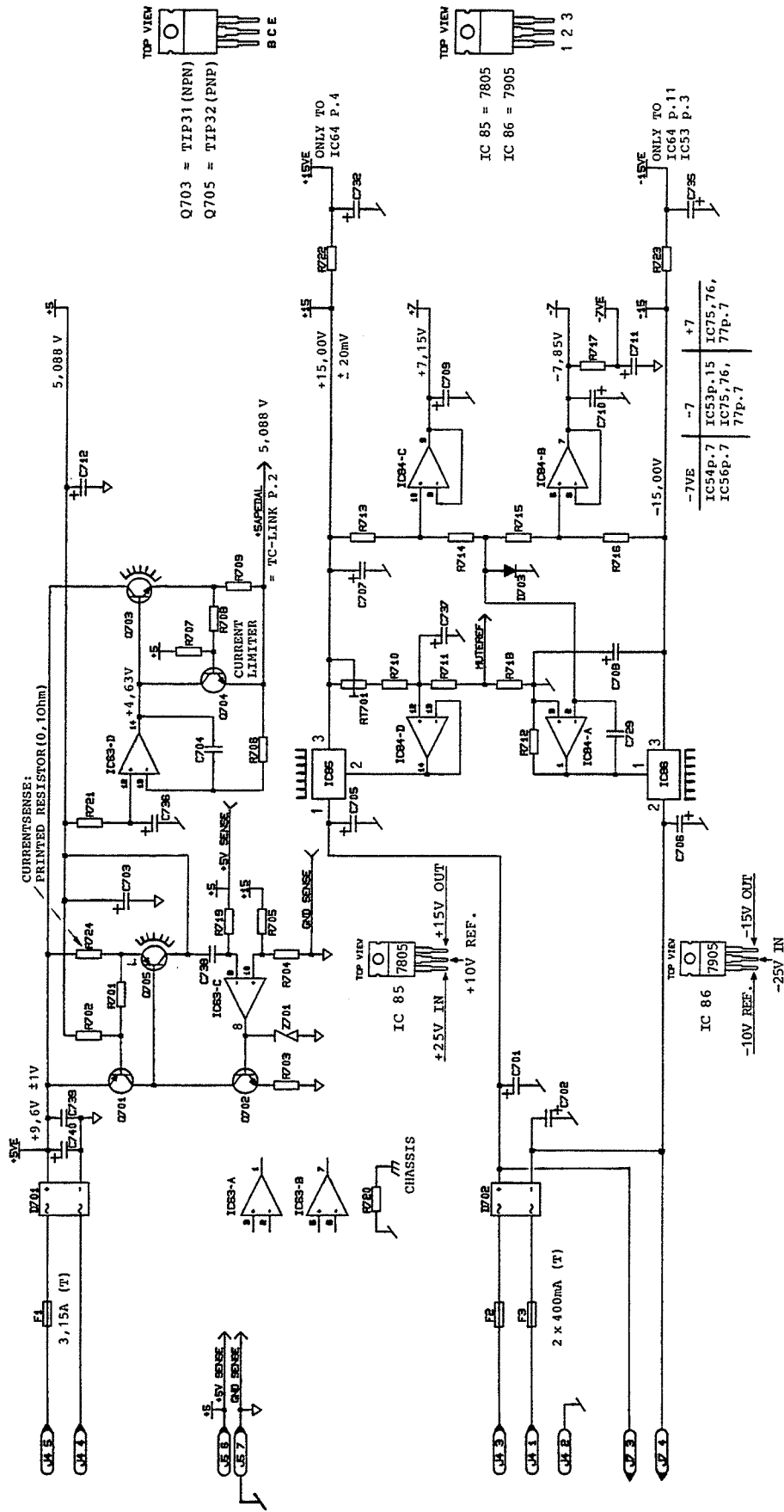
ANALOG ROUTING

NR. RPA DATE
1157 JF 87/116

REVISIONS

| ZONE | LTR | DESCRIPTION | DATE | APPROVAL |
|------|-----|-------------|------|----------|
| | | | | |

DC-VOLTAGES ARE ± 50mV

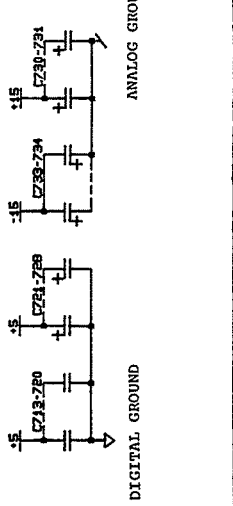


UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES AND TOLERANCES IN ACCORDANCE WITH DS 2075

ANGLES:
L.N. DIM.:
MATERIAL:

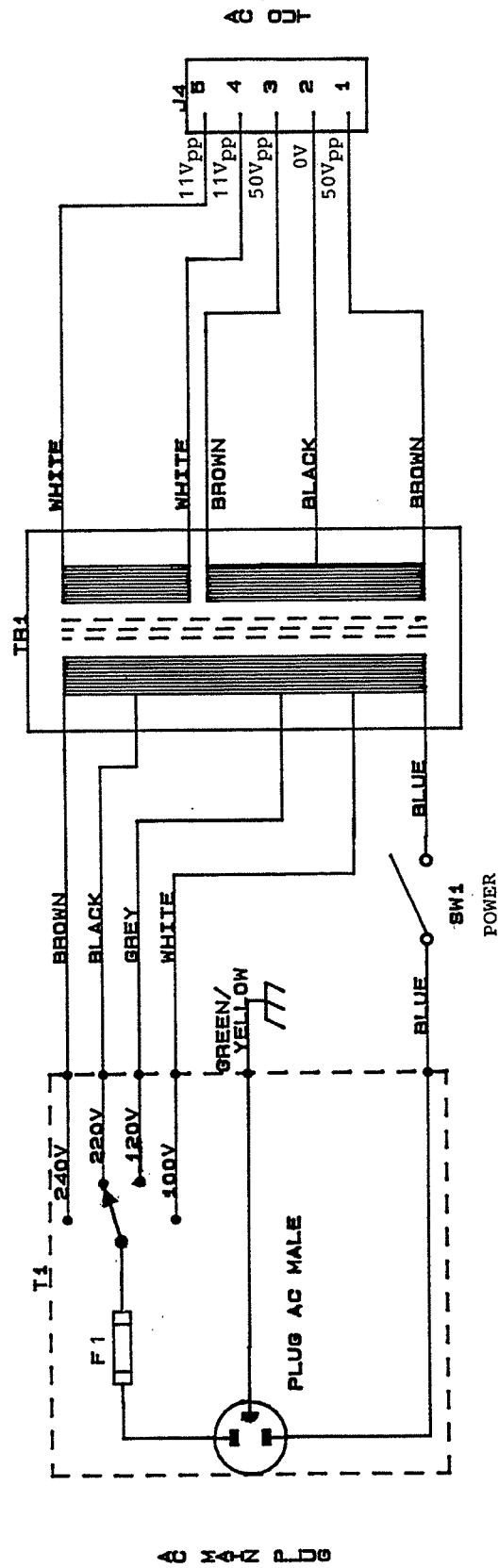
IC'S :
63, 84, 85, 86

| | | |
|------------------------|-----|--------------------------------------|
| DR.: 8608/1 | PHY | T.C. ELECTRONIC |
| CH.: 890523 | MWP | GRIMRAVÆJ 3, DK-8220 BRØNDØ, DENMARK |
| AP.: AP.1 | | TITLE |
| AP.: AP.1 | | POWER SUPPLY SECTION |
| FIRST ANGLE PROJECTION | | SIZE |
| | | PRINT IDENT NO. DMG NO. |
| | | 2901-2 |
| | | SCALE |
| | | SHEET 7 OF 10 |

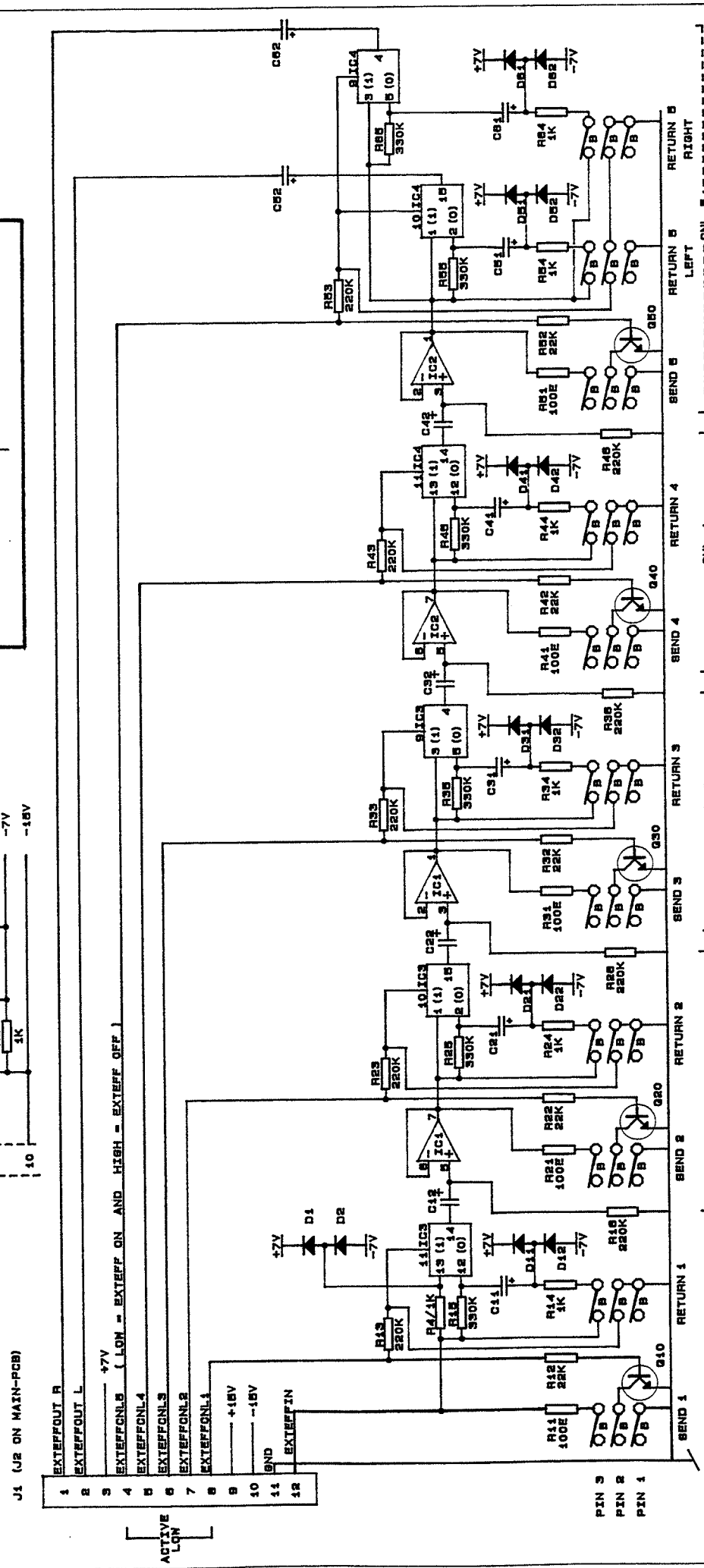
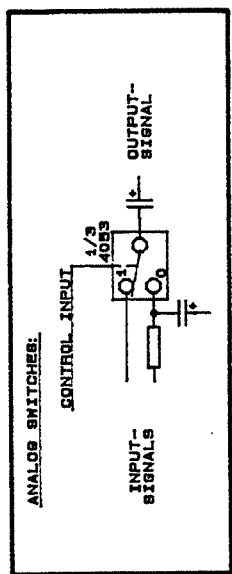
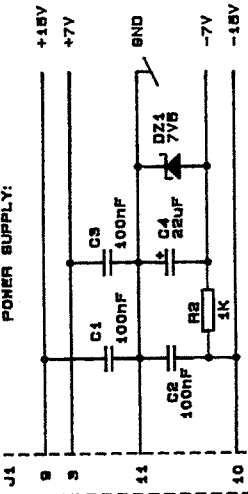


F1 : 100-120 V = 315mA (T)
 220-240 V = 160mA (T)

APPROX. AC-VOLTAGES WITH ANALOG
 GROUND AS REFERENCE (J4 P.2) :

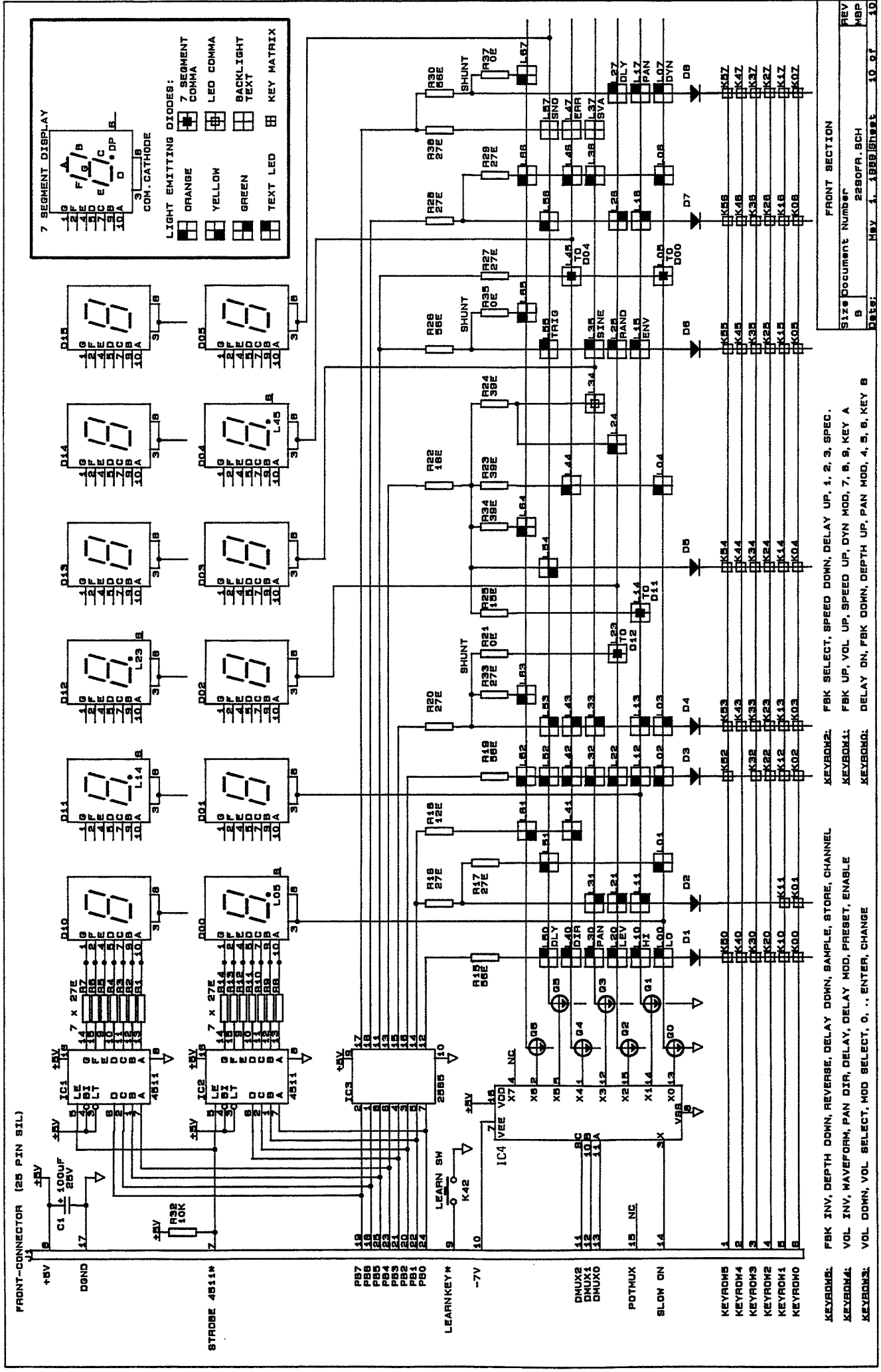


| | | |
|-----------------|-----------------|-----------------------|
| Title | | T.C.ELECTRONIC |
| Size | | MAINS AC POWER SUPPLY |
| Document Number | REV | |
| A | PS2290.sch | KV |
| Date: | January 1, 1980 | Sheet 7A OF 10 |



ALL DIODES = 1N4148 EXCEPT DZ1 = 7V6
 ALL EL.-CAPACITORS = 1UF EXCEPT C4 = 22UF
 ALL TRANSISTORS = BC847 OR BC848

Title
 T.C. ELECTRONIC EXT. EFF. CONTR.
 Size Document Number
 B 289EXT.SCH
 REV
 MBP
 10
 November 17, 1968



PARTSLIST 2901-5, 2290 CPU SECTION:

```

-----
PL-,NO-,TYPE---,TCKODE---,KOMPONENT----,TXT-----
R ,101,MODST , ,non exist ,
R ,102,MODST ,1B5%004K7,4K7 ,
R ,103,MODST , ,non exist ,
R ,104,MODST ,1B5%100K-,100K ,
R ,105,MODST , ,non exist ,
R ,106,MODST ,1B5%001K2,1K2 ,
R ,107,MODST ,1B5%004K7,4K7 ,
R ,108,MODST ,1B5%004K7,4K7 ,
R ,109,MODST ,1A5%150E-,150 ,
R ,110,MODST , ,non exist ,
R ,111,MODST ,1B5%001K0,1K0 ,
R ,112,MODST ,1B5%001K0,1K0 ,
R ,113,MODST ,1B5%010K-,10K ,
R ,114,MODST ,1B5%004K7,4K7 ,
R ,115,MODST ,1B5%022K-,22K ,
R ,116,MODST ,1B5%013K-,13K ,

RT ,101,MODST ,2HLA470E-,470E ,

C ,101,PLAQ ,31-A015P-,15P ,
C ,102,TANTAL ,35-C01U--,1U 35V ,
C ,103,ELLYT ,381S001U0,1U ,
C ,104,PLAQ ,31-A047P-,47P ,
C ,105,ELLYT ,381S001U0,1U ,
C ,106,PLAQ ,31-A015P-,15P ,

X ,101,XTAL ,8-XTAL8M-,8MHz HC18 ,

D ,101,DIODE ,4D-1N4148,1N4148 ,
D ,102,DIODE ,4D-1N4148,1N4148 ,
D ,103,DIODE ,4D-1N4148,1N4148 ,
D ,104,DIODE ,4D-1N4148,1N4148 ,

ZD ,101,ZENER ,4Z-C003V9,BZX79 C3V9 ,

Q ,101,TRANS ,5-BC547B-,BC548 ,
Q ,102,TRANS ,5-MPS3646,MPS3646 ,
Q ,103,TRANS ,5-BC547B-,BC548 ,
Q ,104,TRANS ,5-BC547B-,BC548 ,

IC , 1,CPU ,8-CPU-68B,68B03 NMOS ,
IC , 2,EPR0M ,8-EPR256K,27128 32Kx8 ,
IC , 3,SRAM ,8-RAM064K,8Kx8 CMOS ,
IC , 4,PIA ,8-PIA-68B,68B21 ,
IC , 5,ACIA ,8-ACIA-68,68B50 ,
IC , 6,HCTMOS ,65-HCT373,HCT373 ,
IC , 7,TTL ,67-LS139-,LS139 ,
IC , 8,HCTMOS ,65-HCT139,HCT139 ,
IC , 9, , ,non exist ,
IC , 10,HCTMOS ,65-HCT138,HCT138 ,
IC , 11,TTL ,66-LS93--,LS93 ,
IC , 12,HCT ,64-HCT14-,HCT14 ,
IC , 13,HCT ,64-HCT32-,HCT32 ,
IC , 14,HCT ,64-HCT00-,HCT00 ,

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IC , 15, , ,non exist ,
IC , 16,HCT ,64-HCT08-,HCT08 ,
BAT, 1,BATERI ,BAT-LIT-1,170mAT 2032 ,
ICJ, 1,SOKKEL ,C-ICSOK40,40 pin sokkel,
ICJ, 2,SOKKEL ,C-ICSOK28,28 PIN sokkel,
ICJ, 3,SOKKEL ,C-ICSOK28,28 pin sokkel,
ICJ, 4,SOKKEL ,C-ICSOK40,40 pin sokkel,
ICJ, 5,SOKKEL ,C-ICSOK24,24 pin sokkel,
ICJ, 6,SOKKEL ,C-ICSOK20,20 pin sokkel,
L , 1, , ,non exist ,Internal print jumper for J 11
L , 3, ,CHS12-02P,2 PIN ,
PCB, 1, ,PCB2901-5,Main print ,

PARTSLIST 2901-5, 2290 NEXT ADDRESS SEC. :

 PL-,NO-,TYPE---,TKCODE---,KOMPONENT---,TXT-----

R ,200,MODST , ,non exist ,R200 in RA301 pin 4.
 R ,201,MODST , ,non exist ,R201 in RA301 pin 9.
 R ,202,MODST ,1B5%004K7,4K7 ,
 R ,203,MODST , ,non exist ,R203 in RA301 pin 5.

RA ,201,R.ARRAY,1S6A033E-,33E 12PIN SEP,
 RA ,202,R.ARRAY,1S6A033E-,33E 12PIN SEP,

IC , 18,HCTMOS ,65-HCT175,HCT175 ,
 IC , 19,HCTMOS ,65-HCT393,HCT393 ,
 IC , 20,HCTMOS ,65-HCT367,HCT367 ,
 IC , 21,HCTMOS ,65-HCT367,HCT367 ,
 IC , 22,HCTMOS ,64-HCT74-,HCT74 ,
 IC , 23,HCTMOS ,65-HCT195,HCT195 ,
 IC , 24,HCTMOS ,65-HCT195,HCT195 ,
 IC , 25,HCTMOS ,65-HCT153,HCT153 ,
 IC , 26,HCTMOS ,65-HCT670,HCT670 ,
 IC , 27,HCTMOS ,65-HCT670,HCT670 ,
 IC , 28,HCTMOS ,65-HCT670,HCT670 ,
 IC , 29,HCTMOS ,65-HCT670,HCT670 ,

IC , 30,DYNRAM ,8-DY256X1,256K ,
 IC , 31,DYNRAM ,8-DY256X1,256K ,
 IC , 32,DYNRAM ,8-DY256X1,256K ,
 IC , 33,DYNRAM ,8-DY256X1,256K ,
 IC , 34,DYNRAM ,8-DY256X1,256K ,
 IC , 35,DYNRAM ,8-DY256X1,256K ,
 IC , 36,DYNRAM ,8-DY256X1,256K ,
 IC , 37,DYNRAM ,8-DY256X1,256K ,
 IC , 38,DYNRAM ,8-DY256X1,256K ,
 IC , 39,DYNRAM ,8-DY256X1,256K ,
 IC , 40,DYNRAM ,8-DY256X1,256K ,
 IC , 41,DYNRAM ,8-DY256X1,256K ,
 IC , 42,DYNRAM ,8-DY256X1,256K ,
 IC , 43,DYNRAM ,8-DY256X1,256K ,
 IC , 44,DYNRAM ,8-DY256X1,256K ,
 IC , 45,DYNRAM ,8-DY256X1,256K ,

ICJ, 19,SOKKEL ,C-ICSOK14,14 pin sokkel,
 ICJ, 30,SOKKEL ,C-ICSOK16,16 pin sokkel,
 ICJ, 31,SOKKEL ,C-ICSOK16,16 pin sokkel,
 ICJ, 32,SOKKEL ,C-ICSOK16,16 pin sokkel,
 ICJ, 33,SOKKEL ,C-ICSOK16,16 pin sokkel,
 ICJ, 34,SOKKEL ,C-ICSOK16,16 pin sokkel,
 ICJ, 35,SOKKEL ,C-ICSOK16,16 pin sokkel,
 ICJ, 36,SOKKEL ,C-ICSOK16,16 pin sokkel,
 ICJ, 37,SOKKEL ,C-ICSOK16,16 pin sokkel,
 ICJ, 38,SOKKEL ,C-ICSOK16,16 pin sokkel,
 ICJ, 39,SOKKEL ,C-ICSOK16,16 pin sokkel,
 ICJ, 40,SOKKEL ,C-ICSOK16,16 pin sokkel,
 ICJ, 41,SOKKEL ,C-ICSOK16,16 pin sokkel,
 ICJ, 42,SOKKEL ,C-ICSOK16,16 pin sokkel,
 ICJ, 43,SOKKEL ,C-ICSOK16,16 pin sokkel,
 ICJ, 44,SOKKEL ,C-ICSOK16,16 pin sokkel,

PARTSLIST 2901-5, 2290 COMMUNICATION SEC:

 PL-,NO-,TYPE---,TCKODE---,KOMPONENT-----,TXT-----

| | | | |
|----|-------------|-------------------------|---------------------------|
| R | , 401,MODST | ,1A5%220E-,220 | , |
| R | , 402,MODST | ,1A5%470E-,470 | , |
| R | , 403,MODST | ,1A5%220E-,220 | , |
| R | , 404,MODST | ,1B5%033K-,33K | , |
| R | , 405,MODST | ,1A5%220E-,220 | , |
| R | , 406,MODST | ,1A5%220E-,220 | , |
| R | , 407,MODST | ,1A5%220E-,220 | , |
| R | , 408,MODST | ,1B5%001K5,1K5 | , |
| R | , 409,MODST | ,1%B140K--,140K0 | 1% |
| R | , 410,MODST | ,1%B020K5-,20K5 | 1% |
| | | | |
| R | , 411,MODST | ,1A5%033E-,33E | , |
| R | , 412,MODST | ,1B5%022K-,22K | , |
| R | , 413,MODST | ,1B5%018K-,18K | , |
| R | , 414,MODST | ,1B5%047K-,47K | , |
| R | , 415,MODST | ,1B5%003K3,3K3 | , |
| R | , 416,MODST | , ,00 | , |
| R | , 417,MODST | ,1B5%047K-,47K | , |
| R | , 418,MODST | , ,00 | , |
| R | , 419,MODST | ,1B5%010K-,10K | , |
| R | , 420,MODST | ,1C5%001M-,1M | , |
| | | | |
| R | , 421,MODST | ,1B5%004K7,4K7 | , |
| R | , 422,MODST | ,1B5%010K-,10K | , |
| R | , 423,MODST | ,1B5%010K-,10K | , |
| R | , 424,MODST | ,1B5%033K-,33K | , |
| R | , 425,MODST | ,1B5%001K0,1K0 | , |
| R | , 426,MODST | ,1A5%047E-,47E | , |
| R | , 427,MODST | ,1B5%018K-,18K | , |
| R | , 428,MODST | ,1B5%004K7,4K7 | , |
| | | | |
| C | , 401,PLAQ | ,31-B022N-,22N | , |
| C | , 402,PLAQ | ,31-B022N-,22N | , |
| C | , 403,PLAQ | ,31-B022N-,22N | , |
| C | , 404,ELLYT | ,3B1S002U2,2U2 | , |
| C | , 405,PLAQ | ,31-A470P-,470P | , |
| C | , 406,PLAQ | ,31-B010N-,10N | , |
| C | , 407, | , ,non exist | , |
| C | , 408,PLAQ | ,31-A220P-,220P | , |
| | | | |
| D | , 401,DIODE | ,4D-1N4148,1N4148 | , |
| D | , 402,DIODE | ,4D-1N4148,1N4148 | , |
| D | , 403,DIODE | ,4D-1N4148,1N4148 | , Is placed on R416 place |
| D | , 404,DIODE | ,4D-1N4148,1N4148 | , |
| D | , 405,DIODE | ,4D-1N4148,1N4148 | , |
| | | | |
| DL | , 401,LED | ,9-03R0D-1,03 R0D ZENER | , |
| | | | |
| Q | , 401,TRANS | ,5-BC557B-,BC558 | , |
| Q | , 402,TRANS | ,5-BC557B-,BC558 | , |
| Q | , 403,TRANS | ,5-BC547B-,BC548 | , |
| Q | , 404,TRANS | ,5-BC557B-,BC558 | , |
| Q | , 405,TRANS | ,5-BC557B-,BC558 | , |

IC , 62, LINEAR , 9-0PT0900, PC900 ,
T , 1, DINSOKL, C-DIN--3-, 5 PDL ,
T , 2, DINSOKL, C-DIN--3-, 5 PDL ,
T , 3, DINSOKL, C-DIN--3-, 5 PDL ,
T , 4, JACK , C-JACK-01, BBB-PCI ,
T , 5, JACK , C-JACK-01, BBB-PCI ,
T , 14, JACK , C-JACK-01, BBB-PCI ,

PARTSLIST 2901-5, 2290 ANALOG IN/OUT SEC.:

PL-, NO-, TYPE---, TCKODE---, KOMPONENT---, TXT-----

| | | | |
|---|------------|-----------------|---|
| R | ,501,MODST | ,1B5%001K0,1K | , |
| R | ,502,MODST | ,1C5%001M-,1M | , |
| R | ,503,MODST | ,1%B010K0-,10K0 | , |
| R | ,504,MODST | ,1%B010K0-,10K0 | , |
| R | ,505,MODST | ,1%B005K11,5K11 | , |
| R | ,506,MODST | ,1%B005K11,5K11 | , |
| R | ,507,MODST | ,1%B010K0-,10K0 | , |
| R | ,508,MODST | ,1B5%003K0,3K0 | , |
| R | ,509,MODST | ,1B5%100K-,100K | , |
| R | ,510,MODST | ,1%B010K0-,10K0 | , |
| | | | |
| R | ,511,MODST | ,1B5%003K0,3K0 | , |
| R | ,512,LUS | ,19-LUS-00,0E | , |
| R | ,513, | ,,00 | , |
| R | ,514, | ,,00 | , |
| R | ,515,MODST | ,1B5%033K-,33K | , |
| R | ,516,MODST | ,1B5%002K7,2K7 | , |
| R | ,517,MODST | ,1%B010K0-,10K0 | , |
| R | ,518,MODST | ,1B5%003K0,3K0 | , |
| R | ,519,MODST | ,1B5%100K-,100K | , |
| R | ,520,MODST | ,1%B010K0-,10K0 | , |
| | | | |
| R | ,521,MODST | ,1B5%003K0,3K0 | , |
| R | ,522,LUS | ,19-LUS-00,0E | , |
| R | ,523, | ,,00 | , |
| R | ,524, | ,,00 | , |
| R | ,525,MODST | ,1B5%033K-,33K | , |
| R | ,526,MODST | ,1B5%002K7,2K7 | , |
| R | ,527,MODST | ,,not used | , |
| R | ,528,MODST | ,1%B010K0-,10K0 | , |
| R | ,529,MODST | ,1B5%220K-,220K | , |
| R | ,530,MODST | ,1%B010K0-,10K0 | , |
| | | | |
| R | ,531,MODST | ,1%B004K87,4K87 | , |
| R | ,532,MODST | ,1%B004K87,4K87 | , |
| R | ,533,MODST | ,1%B010K0-,10K0 | , |
| R | ,534,MODST | ,1%B010K0-,10K0 | , |
| R | ,535,MODST | ,1%B010K0-,10K0 | , |
| R | ,536,MODST | ,1%B010K0-,10K0 | , |
| R | ,537,MODST | ,1B5%047K-,47K | , |
| R | ,538,MODST | ,1B5%003K0,3K0 | , |
| R | ,539,MODST | ,1%B005K62,5K62 | , |
| R | ,540,MODST | ,1B5%003K0,3K0 | , |
| | | | |
| R | ,541,MODST | ,1B5%010K-,10K | , |
| R | ,542,MODST | ,1B5%010K-,10K | , |
| R | ,543,MODST | ,1B5%047K-,47K | , |
| R | ,544,MODST | ,1B5%047K-,47K | , |
| R | ,545,MODST | ,1B5%010K-,10K | , |
| R | ,546,MODST | ,1B5%001K5,1K5 | , |
| R | ,547,MODST | ,1%B012K1-,12K1 | , |
| R | ,548,MODST | ,1C5%001M8,1M8 | , |
| R | ,549,MODST | ,1B5%018K-,18K | , |

R ,550,MODST ,1B5%018K-,18K ,
R ,551,MODST ,1%B010K0-,10K0 ,
R ,552,MODST ,1B5%003K0,3K0 ,
R ,553,MODST ,1B5%010K-,10K ,
R ,554,MODST ,1B5%010K-,10K ,
R ,555,MODST ,1A5%047E-,47E ,
R ,556,MODST ,1A5%047E-,47E ,
R ,557,MODST ,1B5%001K5,1K5 ,
R ,558,MODST ,1B5%001K5,1K5 ,
R ,559,MODST ,1B5%010K-,10K ,
R ,560,MODST ,1B5%010K-,10K ,

R ,561,MODST ,1A5%047E-,47E ,
R ,562,MODST ,1A5%047E-,47E ,
R ,563,MODST ,1B5%001K5,1K5 ,
R ,564,MODST ,1B5%001K5,1K5 ,
R ,565,MODST ,1B5%010K-,10K ,
R ,566,MODST ,1B5%010K-,10K ,
R ,567,MODST ,1A5%047E-,47E ,
R ,568,MODST ,1A5%047E-,47E ,
R ,569,MODST ,1B5%001K5,1K5 ,
R ,570,MODST ,1B5%001K5,1K5 ,

R ,571,MODST ,1%B002K87,2K87 ,
R ,572,MODST ,1%A105E--,105E ,
R ,573,MODST ,1%B020K5-,20K5 ,
R ,574,MODST ,1A5%047E-,47E ,
R ,575,MODST ,1B5%330K-,330K ,
R ,576,MODST ,1B5%004K3,4K3 ,
R ,577,MODST ,1C5%003M3,3M3 ,
R ,578,MODST ,1B5%100K-,100K ,
R ,579,MODST ,1B5%003K0,3K0 ,
R ,580,MODST ,1B5%003K0,3K0 ,

RT ,501,TRIMMER, ,not used ,
RT ,502,TRIMMER,2HLB047K-,47K ,

RV , 1,POTM M,2E*B100K-,100K NLOB ST ,

C ,501,PLAQ ,31-A220P-,220P ,
C ,502,PLAQ ,31-A100P-,100P ,
C ,503,PLAQ ,31-A100P-,100P ,
C ,504,POLY ,34-B002N2,2N2 ,
C ,505,POLY ,34-B002N2,2N2 ,
C ,506,ELLYT ,381S022U-,22U 16 ,
C ,507,PLAQ ,31-A033P-,33P ,
C ,508,POLY ,34-B002N2,2N2 ,
C ,509,POLY ,34-B002N2,2N2 ,
C ,510,PLAQ ,31-A033P-,33P ,

C ,511,ELLYT ,381S022U-,22U 16 ,
C ,512,ELLYT ,381S022U-,22U 16 ,
C ,513,ELLYT ,381S022U-,22U 16 ,
C ,514,ELLYT ,381S022U-,22U 16 ,
C ,515,ELLYT ,381S022U-,22U 16 ,
C ,516,ELLYT ,381S022U-,22U 16 ,
C ,517,ELLYT ,381S022U-,22U 16 ,

| | | | |
|----|--------------|--------------------------|---|
| C | , 518, ELLYT | , 381S022U-, 22U 16 | , |
| C | , 519, PLA0 | , 31-A220P-, 220P | , |
| C | , 520, PLA0 | , 31-A100P-, 100P | , |
| | | | |
| C | , 521, ELLYT | , 381S022U-, 22U 16 | , |
| C | , 522, POLY | , 34-B002N2, 2N2 | , |
| C | , 523, POLY | , 34-B002N2, 2N2 | , |
| C | , 524, POLY | , 34-B002N2, 2N2 | , |
| C | , 525, POLY | , 34-B002N2, 2N2 | , |
| C | , 526, POLY | , 34-B002N2, 2N2 | , |
| C | , 527, ELLYT | , 381S022U-, 22U 16 | , |
| C | , 528, ELLYT | , 381S022U-, 22U 16 | , |
| C | , 529, PLA0 | , 31-B022N-, 22N | , |
| C | , 530, PLA0 | , 31-A100P-, 100p | , |
| C | , 531, PLA0 | , 31-A100P-, 100p | , |
| C | , 532, PLA0 | , 31-A100P-, 100p | , |
| | | | |
| D | , 501, DIODE | , 4D-1N4148, 1N 4148 | , |
| D | , 502, DIODE | , 4D-1N4148, 1N 4148 | , |
| D | , 503, DIODE | , 4D-1N4148, 1N 4148 | , |
| D | , 504, DIODE | , 4D-1N4148, 1N 4148 | , |
| D | , 505, DIODE | , 4D-1N4148, 1N 4148 | , |
| D | , 506, DIODE | , 4D-1N4148, 1N 4148 | , |
| D | , 507, DIODE | , 4D-1N4148, 1N 4148 | , |
| | | | |
| IC | , 73, LINEAR | , 7-DBX2150, DBX 2150-A | , |
| IC | , 77, CMOS | , 60-C4053-, 4053 | , |
| IC | , 80, LINEAR | , 72-TL-074, TL074 | , |
| IC | , 81, LINEAR | , 72-RC4741, RC 4741 GR5 | , |
| IC | , 82, LINEAR | , 72-RC4741, RC 4741 GR5 | , |
| IC | , 83, LINEAR | , 72-RC4559, RC 4559 | , |
| | | | |
| T | , 7, JACK | , C-JACK-03, MXB-PC | , |
| T | , 8, JACK | , C-JACK-01, BBB-PC | , |
| T | , 10, JACK | , C-JACK-01, BBB-PC | , |
| T | , 12, JACK | , C-JACK-01, BBB-PC | , |
| T | , 6, XLR | , C-XLR-04F, | , |
| T | , 9, XLR | , C-XLR-03M, | , |
| T | , 11, XLR | , C-XLR-03M, | , |
| T | , 13, XLR | , C-XLR-03M, | , |
| | | | |
| J | , 2, SIL | , CHS12-12P, | , |
| J | , 3, SIL | , CHS12-04P, | , |
| J | , 3A, SIL | , EFC-04POL, 4POL HUN | , |

PARTSLIST 2901-5, 2290 ANALOG ROUTING:

PL-, NO-, TYPE---, TCKODE---, KOMPONENT----, TXT-----

| | | | | |
|---|--------------|--------------------------|----|---|
| R | , 601, MODST | , 1%B010K0-, 10K0 | 1% | , |
| R | , 602, MODST | , 1B5%220K-, 220K | | , |
| R | , 603, MODST | , 1%B006K81, 6K81 | 1% | , |
| R | , 604, MODST | , 1%B010K0-, 10K0 | 1% | , |
| R | , 605, MODST | , 1%B020K5-, 20K5 | 1% | , |
| R | , 606, MODST | , 19-LUS-00, 0E MODSTAND | | , |
| R | , 607, MODST | , 1%B020K5-, 20K5 | 1% | , |
| R | , 608, LUS | , , 00 | | , |
| R | , 609, MODST | , 1%B020K5-, 20K5 | 1% | , |
| R | , 610, MODST | , , non exist | | , |
| | | | | |
| R | , 611, MODST | , 1%B001K21, 1K21 | 1% | , |
| R | , 612, MODST | , 1%B005K36, 5K36 | 1% | , |
| R | , 613, MODST | , 1%A105E--, 105E | 1% | , |
| R | , 614, MODST | , 1A5%047E-, 47E | | , |
| R | , 615, MODST | , 1B5%004K3, 4K3 | | , |
| R | , 616, MODST | , 1B5%330K-, 330K | | , |
| R | , 617, MODST | , 1%B001K21, 1K21 | 1% | , |
| R | , 618, MODST | , 1%B005K36, 5K36 | 1% | , |
| R | , 619, MODST | , 1%A105E--, 105E | 1% | , |
| R | , 620, MODST | , 1A5%047E-, 47E | | , |
| | | | | |
| R | , 621, MODST | , 1B5%004K3, 4K3 | | , |
| R | , 622, MODST | , 1B5%330K-, 330K | | , |
| R | , 623, MODST | , 1B5%033K-, 33K | | , |
| R | , 624, MODST | , 1B5%015K-, 15K | | , |
| R | , 625, MODST | , 1B5%100K-, 100K | | , |
| R | , 626, MODST | , 1B5%005K6, 5K6 | | , |
| R | , 627, MODST | , 1B5%010K-, 10K | | , |
| R | , 628, MODST | , , 00 | | , |
| R | , 629, MODST | , 1%B031K6-, 31K6 | 1% | , |
| R | , 630, MODST | , 1%B681K--, 681K | 1% | , |
| | | | | |
| R | , 631, MODST | , 1%B006K81, 6K81 | 1% | , |
| R | , 632, MODST | , 1%B002K87, 2K87 | 1% | , |
| R | , 633, MODST | , 1B5%018K-, 18K | | , |
| R | , 634, MODST | , 1%B020K5-, 20K5 | 1% | , |
| R | , 635, MODST | , 1%B011K0-, 11K0 | 1% | , |
| R | , 636, MODST | , 1%B010K0-, 10K0 | 1% | , |
| R | , 637, MODST | , 1B5%001K5, 1K5 | | , |
| R | , 638, MODST | , 1%B011K0-, 11K0 | 1% | , |
| R | , 639, MODST | , 1B5%220K-, 220K | | , |
| R | , 640, MODST | , 1%B100K--, 100K0 | 1% | , |
| | | | | |
| R | , 641, MODST | , 1%B100K--, 100K0 | 1% | , |
| R | , 642, MODST | , 1C5%003M3, 3M3 | | , |
| R | , 643, MODST | , 1C5%010M-, 10M | | , |
| R | , 644, MODST | , 1%A105E--, 105E | | , |
| R | , 645, MODST | , 1A5%047E-, 47E | | , |
| R | , 646, MODST | , 1B5%004K3, 4K3 | | , |
| R | , 647, MODST | , 1B5%330K-, 330K | | , |
| R | , 648, MODST | , 1%B020K5-, 20K5 | | , |
| R | , 649, MODST | , 1%B010K0-, 10K0 | | , |

R ,650,MODST ,1B5%047K-,47K ,
R ,651,MODST ,1B5%047K-,47K ,
R ,652,MODST ,1B5%330K-,330K ,
R ,653,MODST ,1B5%022K-,22K ,
R ,654,MODST ,1A5%470E-,470 ,
R ,655,MODST ,1%B010K0-,10K0 1% ,
R ,656,MODST ,1B5%033K-,33K ,

RT ,601,TRIMMER,2HLB047K-,47K ,
RT ,602,TRIMMER,2HLB047K-,47K ,
RT ,603,TRIMMER,2HLB047K-,47K ,

C ,601,ELLYT ,381S022U-,22U16 ,
C ,602,PLAQ ,31-B022N-,22N ,
C ,603,PLAQ ,31-B022N-,22N ,
C ,604,PLAQ ,31-A047P-,47P ,
C ,605,PLAQ ,31-A047P-,47P ,
C ,606,ELLYT ,381S022U-,22U 16 ,
C ,607,ELLYT ,381S004U7,4U7 16 ,
C ,608,ELLYT ,381S022U-,22U 16 ,
C ,609,POLY ,34-B047N-,47N ,
C ,610,POLY ,34-B003N3,3N3 ,

C ,611,PLAQ ,31-B022N-,22N ,
C ,612,PLAQ , ,oo Ohm ,
C ,613,ELLYT ,381S022U-,22U 16 ,
C ,614,ELLYT ,381S022U-,22U 16 ,
C ,615,PLAQ ,31-A220P-,220P ,
C ,616,ELLYT ,381S002U2,2U2 25 ,
C ,617,PLAQ ,31-B022N-,22N ,
C ,618,TANTAL ,35-B00U22,.22U/25 ,
C ,619,PLAQ ,31-B001N-,1N ,
C ,620,ELLYT ,381S022U-,22U 16 ,

C ,621,ELLYT ,381S022U-,22U 16 ,
C ,622,PLAQ ,31-B022N-,22N ,
C ,623,ELLYT ,381S022U-,22U 16 ,
C ,624,ELLYT ,381S022U-,22U 16 ,
C ,625,PLAQ ,31-B010N-,10N ,
C ,626,PLAQ ,31-A033P-,33p ,
C ,627,ELLYT ,381S022U-,22U 16 ,

DL ,601,LED ,9-Ø3RØD-2,Ø3mm led ,

Q ,601,FET ,5-BF245A-,BF245A ,

IC , 70,LINEAR ,7-DBX2150,DBX 2150-A ,
IC , 71,LINEAR ,7-DBX2150,DBX 2150-A ,
IC , 72,LINEAR ,7-DBX2150,DBX 2150-A ,
IC , 74,LINEAR ,72-LM-339,LM 339 ,
IC , 75,CMOS ,60-C4053-,CD 4053 ,
IC , 76,CMOS ,60-C4053-,CD 4053 ,
IC , 78,LINEAR ,72-TL-074,TL 074 ,
IC , 79,LINEAR ,72-TL-074,TL 074 ,

J , 5,SILPIN ,CHS25-15P,15 POL LANG ,
J , 8,SILPIN ,CHS12-08P,8 POL ,

PARTSLIST 2901-5, 2290 POWER SUPPLY SEC. :

| PL- | NO- | TYPE--- | TCKODE--- | KOMPONENT---- | TXT----- |
|-----|-------|----------|-------------|---------------|---|
| R | ,701, | MODST | ,1A5%047E- | ,47E | , |
| R | ,702, | MODST | ,1B5%001K0, | 1K0 | , |
| R | ,703, | MODST | ,1D5%033E- | ,33E | , |
| R | ,704, | MODST | ,1%B005K11, | 5K11 1% | , |
| R | ,705, | MODST | ,1%B010K0- | ,10K0 1% | , |
| R | ,706, | MODST | ,1B5%220K- | ,220K | , |
| R | ,707, | MODST | ,1B5%001K0, | 1K0 | , |
| R | ,708, | MODST | ,1A5%180E- | ,180E | , |
| R | ,709, | MODST | ,1A5%001E5, | 1E5 1/3W | , |
| R | ,710, | MODST | ,1%B010K0- | ,10K0 1% | , |
| R | ,711, | MODST | ,1%B020K5- | ,20K5 1% | , |
| R | ,712, | MODST | ,1B5%001K0, | 1K0 | , |
| R | ,713, | MODST | ,1%B005K62, | 5K62 1% | , |
| R | ,714, | MODST | ,1%B005K11, | 5K11 1% | , |
| R | ,715, | MODST | ,1%B005K62, | 5K62 1% | , |
| R | ,716, | MODST | ,1%B005K11, | 5K11 1% | , |
| R | ,717, | MODST | ,1A5%033E- | ,33E | , |
| R | ,718, | MODST | ,1B5%001K0, | 1K0 | , |
| R | ,719, | MODST | ,1B5%002K2, | 2K2 | , |
| R | ,720, | MODST | ,1A5%004E7, | 4E7 | , |
| R | ,721, | MODST | ,1B5%220K- | ,220K | , |
| R | ,722, | MODST | ,1A5%100E- | ,100E | , |
| R | ,723, | MODST | ,1A5%047E- | ,47E | , |
| R | ,724, | MODST | , | ,oo | ,cu wire 67mm a 0.3175mm*35um =0.1 Ohm. |
| RT | ,701, | TRIMMER, | 2HLB002K2, | 2K2 | , |
| C | ,701, | ELLYT | ,383S2200U, | 2200U 35 | , |
| C | ,702, | ELLYT | ,383S2200U, | 2200U 35 | , |
| C | ,703, | ELLYT | ,381S100-U, | 100U 35 2E | , |
| C | ,704, | MKT | ,34-B047N- | ,47N 2E | , |
| C | ,705, | ELLYT | ,382S0047U, | 47U 35 | , |
| C | ,706, | ELLYT | ,382S0047U, | 47U 35 | , |
| C | ,707, | ELLYT | ,381S022U- | ,22U 16 | , |
| C | ,708, | ELLYT | ,381S022U- | ,22U 16 | , |
| C | ,709, | ELLYT | ,381S022U- | ,22U 16 | , |
| C | ,710, | ELLYT | ,381S022U- | ,22U 16 | , |
| C | ,711, | ELLYT | ,381S022U- | ,22U 16 | , |
| C | ,712, | ELLYT | ,381S100-U, | 100U 35 2E | , |
| C | ,713, | PLAQ | ,31-B022N- | ,22N | , |
| C | ,714, | PLAQ | ,31-B022N- | ,22N | , |
| C | ,715, | PLAQ | ,31-B022N- | ,22N | , |
| C | ,716, | PLAQ | ,31-B022N- | ,22N | , |
| C | ,717, | PLAQ | ,31-B022N- | ,22N | , |
| C | ,718, | PLAQ | ,31-B022N- | ,22N | , |
| C | ,719, | PLAQ | ,31-B022N- | ,22N | , |
| C | ,720, | PLAQ | ,31-B022N- | ,22N | , |
| C | ,721, | TANTAL | ,35-C01U--, | 1U 35V | , |
| C | ,722, | TANTAL | ,35-C01U--, | 1U 35V | , |
| C | ,723, | TANTAL | ,35-C01U--, | 1U 35V | , |
| C | ,724, | TANTAL | ,35-C01U--, | 1U 35V | , |
| C | ,725, | TANTAL | ,35-C01U--, | 1U 35V | , |
| C | ,726, | TANTAL | ,35-C01U--, | 1U 35V | , |
| C | ,727, | TANTAL | ,35-C01U--, | 1U 35V | , |

C ,728,TANTAL ,35-C01U-- ,1U 35V ,
 C ,729,PLAQ ,31-A100P- ,100P ,
 C ,730,ELLYT ,381S022U- ,22U 16 ,
 C ,731,ELLYT ,381S022U- ,22U 16 ,
 C ,732,ELLYT ,381S022U- ,22U 16 ,
 C ,733,ELLYT ,381S022U- ,22U 16 ,
 C ,734,ELLYT ,381S022U- ,22U 16 ,
 C ,735,ELLYT ,381S022U- ,22U 16 ,
 C ,736,ELLYT ,381S001U0 ,1U 16 ,
 C ,737,ELLYT ,381S022U- ,22U 16 ,
 C ,738,PLAQ ,31-B022N- ,22N ,
 C ,739,MKT ,34-B100N+ ,100N 3E ,
 C ,740,ELLYT ,394S010M- ,10000U 16 ,
 C ,741,TANTAL ,35-C01U-- ,1U ,
 C ,742,TANTAL ,35-C01U-- ,1U ,

 D ,701,POWER ,4B-KBU4A- ,KBU 4A ,
 D ,702,POWER , ,non exist ,
 D ,703,DIODE ,4D-1N4148 ,1N4148 ,
 D ,704,DIODE ,4D-1N4001 ,1N4001 ,
 D ,705,DIODE ,4D-1N4001 ,1N4001 ,
 D ,706,DIODE ,4D-1N4001 ,1N4001 ,
 D ,707,DIODE ,4D-1N4001 ,1N4001 ,

 DZ ,701,ZENER ,4Z-C004V3 ,BZX79 4V3 ,

 Q ,701,TRANS ,5-BC557B- ,BC558 ,
 Q ,702,TRANS ,5-BC337-- ,BC337 ,
 Q ,703,POWER ,5-TIP31AB ,TIP31 A ,
 Q ,704,TRANS ,5-BC547B- ,BC548 ,
 Q ,705,POWER ,5-TIP32AB ,TIP32 A ,

 IC , 63,LINEAR ,72-LM-324 ,LM 324 ,
 IC , 84,LINEAR ,72-RC4741 ,4741 GR6 ,
 IC , 85,LINEAR ,71-7805-- ,7805 +SP.REG ,
 IC , 86,LINEAR ,71-7905-- ,7905 -SP.REG ,
 FUJ , 1,FU.HOL. ,D-SIKH-1*/D-SIKH-1- ,
 FUJ , 2,FU.HOL. ,D-SIKH-1*/D-SIKH-1- ,
 FUJ , 3,FU.HOL. ,D-SIKH-1*/D-SIKH-1- ,

 FU , 1,FUSE ,D-3150MAT ,3.15AT ,
 FU , 2,FUSE ,D-0400MAT ,315mAT ,
 FU , 3,FUSE ,D-0400MAT ,315mAT ,

 J , 4,SILSTIK,C-POWER-5,5POL HAN LIG ,

 MP , 32,ISOLSK. ,L-SKIVE-- ,TRANSHEAT PAD,for Q703 ,
 MP , 33,ISOLSK. ,L-SKIVE-- ,TRANSHEAT PAD,for Q705 ,
 MP , 34,ISOLSK. ,L-SKIVE-- ,TRANSHEAT PAD,for IC85,+15V ,
 MP , 35,ISOLSK. ,L-SKIVE-- ,TRANSHEAT PAD,for IC86,-15V ,
 MP , 36,ISOLBØS,L-BØSNING,Ø3 ISOL.BØSN ,for Q703 ,
 MP , 37,ISOLBØS,L-BØSNING,Ø3 ISOL.BØSN ,for Q705 ,
 MP , 38,ISOLBØS,L-BØSNING,Ø3 ISOL.BØSN ,for IC85,+15V ,
 MP , 39,ISOLBØS,L-BØSNING,Ø3 ISOL.BØSN ,for IC86,-15V ,

PARTSLIST 2902-02, 2290 CONVERTER

| PL- | NO- | TYPE--- | TCKODE--- | KOMPONENT---- | TYT----- |
|-----|-------|---------|-------------|---------------|----------|
| R | ,101, | MODST | ,1A5Z820E- | 820R | 5% , |
| R | ,102, | MODST | ,1A5Z820E- | 820R | 5% , |
| R | ,103, | MODST | ,1B5Z002K2, | 2K2 | 5% , |
| R | ,110, | MODST | ,1ZB033K2- | 33K2 | 1% , |
| R | ,111, | MODST | ,1ZB068K1- | 68K1 | 1% , |
| R | ,112, | MODST | ,1ZB068K1- | 68K1 | 1% , |
| R | ,113, | MODST | ,1ZB681K-- | 681K | 1% , |
| R | ,114, | MODST | ,1ZB681K-- | 681K | 1% , |
| R | ,115, | MODST | ,1ZB010K0- | 10K0 | 1% , |
| R | ,116, | MODST | ,1ZB010K0- | 10K0 | 1% , |
| R | ,117, | MODST | ,1ZB010K0- | 10K0 | 1% , |
| R | ,120, | MODST | ,1ZB014K0- | 14K0 | 1% , |
| R | ,121, | MODST | ,1ZB023K7- | 23K7 | 1% , |
| R | ,122, | MODST | ,1B5Z002K2, | 2K2 | 5% , |
| R | ,131, | MODST | ,1A5Z820E- | 820R | 5% , |
| R | ,132, | MODST | ,1A5Z820E- | 820R | 5% , |
| R | ,133, | MODST | ,1B5Z002K2, | 2K2 | 5% , |
| R | ,140, | MODST | ,1ZB033K2- | 33K2 | 1% , |
| R | ,141, | MODST | ,1ZB068K1- | 68K1 | 1% , |
| R | ,142, | MODST | ,1ZB068K1- | 68K1 | 1% , |
| R | ,143, | MODST | ,1ZB681K-- | 681K | 1% , |
| R | ,144, | MODST | ,1ZB681K-- | 681K | 1% , |
| R | ,145, | MODST | ,1ZB010K0- | 10K0 | 1% , |
| R | ,146, | MODST | ,1ZB010K0- | 10K0 | 1% , |
| R | ,147, | MODST | ,1ZB010K0- | 10K0 | 1% , |
| R | ,148, | MODST | ,1C5Z004M7, | 4M7 | 5% , |
| R | ,150, | MODST | ,1ZB014K0- | 14K0 | 1% , |
| R | ,151, | MODST | ,1ZB023K7- | 23K7 | 1% , |
| R | ,152, | MODST | ,1B5Z002K2, | 2K2 | 5% , |
| R | ,201, | MODST | ,1ZB006K81, | 6K81 | 1% , |
| R | ,202, | MODST | ,1ZB004K64, | 4K64 | 1% , |
| R | ,203, | MODST | ,1ZB006K81, | 6K81 | 1% , |
| R | ,204, | MODST | ,1ZB004K64, | 4K64 | 1% , |
| R | ,205, | MODST | ,19-LUS-00, | 0E | , |
| R | ,206, | MODST | , , | not used | , |
| R | ,207, | MODST | ,1ZB015K0- | 15K0 | 1% , |
| R | ,208, | MODST | ,1ZB015K0- | 15K0 | 1% , |
| R | ,210, | MODST | ,1ZB010K0- | 10K0 | 1% , |
| R | ,211, | MODST | ,1ZB010K0- | 10K0 | 1% , |
| R | ,212, | MODST | ,1ZB031K6- | 31K6 | 1% , |
| R | ,213, | MODST | ,1ZB010K0- | 10K0 | 1% , |
| R | ,215, | MODST | ,1ZB012K1- | 12K1 | 1% , |
| R | ,216, | MODST | ,1B5Z003K3, | 3K3 | 5% , |
| R | ,218, | MODST | ,1B5Z006K8, | 6K8 | 5% , |
| R | ,219, | MODST | ,1B5Z003K9, | 3K9 | 5% , |
| R | ,225, | MODST | ,1ZB001K00, | 1K0 | 1% , |
| R | ,226, | MODST | ,1ZB051K1- | 51K1 | 1% , |
| R | ,227, | MODST | ,1ZB110K-- | 110K | 1% , |
| R | ,230, | MODST | ,1ZB003K83, | 3K83 | 1% , |
| R | ,231, | MODST | , , | not used | , |
| R | ,232, | MODST | ,1B5Z002K2, | 2K2 | 5% , |

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|-----------------------------------|
| R ,233,MODST ,1B5Z002K7,2K7 5% , |
| R ,234,MODST ,1C5Z004M7,4M7 5% , |
| R ,236,MODST ,1ZB004K64,4K64 1% , |
| R ,237,MODST ,1ZB006K81,6K81 1% , |
| R ,240,MODST ,1ZB001K00,1K00 1% , |
| R ,241,MODST ,1A5Z010E-,10R 5% , |
| R ,242,MODST ,1ZA001E54,1E54 1% , |
| |
| R ,254,MODST ,1A5Z100E-,100R 5% , |
| R ,255,MODST ,1A5Z100E-,100R 5% , |
| R ,257,MODST ,1B5Z003K9,3K9 5% , |
| R ,258,MODST ,1B5Z002K7,2K7 5% , |
| R ,259,MODST ,1B5Z013K-,13K 5% , |
| R ,260,MODST ,1ZB003K16,3K16 1% , |
| R ,261,MODST ,1A5Z068E-,68R 5% , |
| R ,262,MODST ,1ZB003K16,3K16 1% , |
| R ,263,MODST ,1A5Z100E-,100R 5% , |
| R ,264,MODST ,1ZB002K15,2K15 1% , |
| R ,265,MODST ,1ZB005K62,5K62 1% , |
| R ,266,MODST ,1ZB001K00,1K00 1% , |
| R ,267,MODST ,1ZB001K00,1K00 1% , |
| |
| R ,276,MODST ,1ZB010K0-,10K0 1% , |
| R ,277,MODST ,1C5Z001M8,470K 5% , |
| R ,278,MODST ,1ZB010K0-,10K0 1% , |
| R ,279,MODST ,1B5Z008K2,8K2 5% , |
| R ,280,MODST ,1B5Z001K0,1K0 5% , |
| R ,281,MODST ,1B5Z010K-,10K 5% , |
| R ,282,MODST ,1B5Z001K0,1K0 5% , |
| R ,283,MODST ,1B5Z001K0,1K0 5% , |
| R ,284,MODST ,1A5Z100E-,100R 5% , |
| R ,285,MODST ,1B5Z022K-,22K 5% , |
| R ,286,MODST ,1B5Z006K8,6K8 5% , |
| |
| R ,290,MODST ,1A5Z010E-,10R 5% , |
| R ,291,MODST ,1A5Z010E-,10R 5% , |
| R ,292,MODST ,1A5Z010E-,10R 5% , |
| R ,293,MODST ,1A5Z010E-,10R 5% , |
| |
| R ,306,MODST ,1ZB017K8-,17K8 1% , |
| R ,307,MODST ,1ZB017K8-,17K8 1% , |
| R ,308,MODST ,1ZB012K1-,12K1 1% , |
| R ,310,MODST ,1ZB010K0-,10K0 1% , |
| R ,311,MODST ,1ZB010K0-,10K0 1% , |
| R ,312,MODST ,1ZB031K6-,31K6 1% , |
| R ,313,MODST ,1ZB010K0-,10K0 1% , |
| R ,314,MODST ,1B5Z100K-,100K 5% , |
| R ,315,MODST ,1ZB012K1-,12K1 1% , |
| R ,316,MODST ,1B5Z003K3,3K3 5% , |
| R ,318,MODST ,1B5Z010K-,10K 5% , |
| R ,319,MODST ,1B5Z003K9,3K9 5% , |
| |
| R ,322,MODST ,1A5Z047E-,47R 5% , |
| R ,323,MODST ,1B5Z470K-,470K 5% , |
| R ,325,MODST ,1B5Z001K0,1K0 5% , |
| R ,326,MODST ,1B5Z047K-,47K 5% , |
| R ,327,MODST ,1B5Z100K-,100K 5% , |
| R ,330,MODST ,1ZB003K83,3K83 1% , |
| R ,331,MODST , ,not used , |

R ,332,MODST ,1B5Z002K2,2K2 5% ,
 R ,333,MODST ,1B5Z002K7,2K7 5% ,
 R ,334,MODST ,1C5Z004M7,4M7 10% ,
 R ,336,MODST ,1ZB004K64,4K64 1% ,
 R ,337,MODST ,1ZB006K81,6K81 1% ,
 R ,338,MODST ,1B5Z068K-,68K 5% ,

R ,341,MODST ,1A5Z010E-,10R 5% ,
 R ,342,MODST ,1ZA001E87,1E87 1% ,
 R ,354,MODST ,1A5Z100E-,100R 5% ,
 R ,355,MODST ,1A5Z100E-,100R 5% ,
 R ,357,MODST ,1B5Z003K9,3K9 5% ,
 R ,358,MODST ,1B5Z002K7,2K7 5% ,
 R ,359,MODST ,1B5Z013K-,13K 5% ,
 R ,360,MODST ,1ZB003K16,3K16 1% ,

R ,362,MODST ,1ZB003K16,3K16 1% ,
 R ,363,MODST ,1A5Z100E-,100R 5% ,
 R ,364,MODST ,1ZB002K15,2K15 1% ,
 R ,365,MODST ,1ZB005K62,5K62 1% ,
 R ,366,MODST ,1ZB001K05,1K05 1% ,
 R ,367,MODST ,1ZB001K05,1K05 1% ,
 R ,368,MODST ,1B5Z015K-,15K 5% ,
 R ,369,MODST ,1B5Z015K-,15K 5% ,
 R ,370,MODST ,1ZB001K00,1K00 1% ,

RT , 1,TRIMMER,2HLB047K-,47K ,
 RT , 2,TRIMMER,2HLB047K-,47K ,
 RT , 3,TRIMMER,2HLB047K-,47K ,
 RT , 4,TRIMMER,2HLB047K-,47K ,
 RT , 5,TRIMMER,2HLA220E-,220R ,
 RT , 6,TRIMMER,2HLB220K-,220K ,
 RT , 7,TRIMMER,2HLB022K-,22K ,
 RT , 8,TRIMMER,2HLB047K-,47K ,
 RT , 9,TRIMMER,2HLB010K-,10K ,
 RT , 10,TRIMMER,2HLB022K-,22K ,
 RT , 11,TRIMMER,2HLB047K-,47K ,

C ,101,STYRD ,32-B010N-,10N 1% ,2E & 7E
 C ,102,STYRD ,32-B033N-,33N 1% ,2E & 7E
 C ,103,STYRD ,32-B010N-,10N 1% ,2E & 7E
 C ,104,STYRD ,32-B033N-,33N 1% ,2E & 7E
 C ,190,ELLYT ,381S010U-,10U ,1E
 C ,191,PLAQ ,31-B022N-,22N ,2E
 C ,192,ELLYT ,381S010U-,10U ,1E
 C ,193,ELLYT ,381S010U-,10U ,1E

C ,202,STYRD ,32-B002N7,2N7 1% ,2E & 5E
 C ,203,PLAQ ,31-A056P-,56P ,2E
 C ,205,STYRD ,32-B002N2,2N2 1% ,2E & 5E
 C ,206,PLAQ ,31-A470P-,470P ,2E
 C ,207,PLAQ ,31-A068P-,68P ,2E
 C ,208,STYRD ,32-B002N7,2N7 1% ,2E & 5E
 C ,209,STYRD ,32-B002N7,2N7 1% ,2E & 5E
 C ,210,PLAQ ,31-B001N-,1N0 ,2E
 C ,211,PLAQ ,31-A330P-,330P ,2E
 C ,212,PLAQ ,31-B022N-,22N ,2E
 C ,220,ELLYT ,381S010U-,10U ,1E

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|---|
| C ,221,ELLYT ,381S010U-,10U ,1E |
| C ,222,PLAQ ,31-B022N-,22N ,2E |
| C ,230,STYRO ,32-B010N-,10N 1% ,2E & 7E |
| C ,231,STYRO ,32-B010N-,10N 1% ,2E & 7E |
| C ,232,STYRO ,32-B010N-,10N 1% ,2E & 7E |
| C ,240,PLAQ ,31-A330P-,330P ,2E |
| C ,250,PLAQ ,31-B022N-,22N ,2E |
| C ,251,PLAQ ,31-B001N5,1N5 ,2E loddes på bagside af print |

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|----------------------------------|
| C ,290,ELLYT ,381S010U-,10U ,1E |
| C ,291,ELLYT ,381S010U-,10U ,1E |
| C ,292,ELLYT ,381S010U-,10U ,1E |
| C ,293,ELLYT ,381S010U-,10U ,1E |
| C ,294,ELLYT ,381S010U-,10U ,1E |
| C ,295,ELLYT ,381S010U-,10U ,1E |
| C ,296,TANTAL ,35-C01U--,1U ,1E |
| C ,297,TANTAL ,35-C01U--,1U ,1E |
| C ,298,PLAQ ,31-A003P3,3P3 ,* 2E |
| C ,299,ELLYT ,381S010U-,10uF ,1E |

| |
|---|
| C ,302,STYRO ,32-B001N5,1N5 1% ,2E & 5E; |
| C ,303,STYRO ,32-A470P-,470P 1% ,2E & 5E; |
| C ,305,STYRO ,32-B002N2,2N2 1% ,2E & 5E; |
| C ,306,PLAQ ,31-A150P-,150P ,2E ; |
| C ,307,PLAQ ,31-A015P-,15P ,2E ; |
| C ,308,PLAQ ,31-A220P-,220P ,2E ; |
| C ,310,PLAQ ,31-B001N-,1N0 ,2E ; |
| C ,311,PLAQ ,31-A330P-,330P ,2E ; |
| C ,312,PLAQ ,31-B022N-,22N ,2E ; |

| |
|--|
| C ,320,ELLYT ,381S010U-,10U ,1E ; |
| C ,321,ELLYT ,381S010U-,10U ,1E ; |
| C ,322,PLAQ ,31-B022N-,22N ,2E ; |
| C ,330,STYRO ,32-B010N-,10N 1% ,2E & 7E; |
| C ,331,STYRO ,32-B010N-,10N 1% ,2E & 7E; |
| C ,332,STYRO ,32-B010N-,10N 1% ,2E & 7E; |
| C ,390,ELLYT ,381S010U-,10U ,1E ; |
| C ,391,ELLYT ,381S010U-,10U ,1E ; |

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|--------------------------------------|
| Q ,100,TRANS ,5-BC547B-,BC548B NPN , |
| Q ,101,TRANS ,5-BC547B-,BC548B NPN , |
| Q ,200,TRANS ,5-BC557B-,BC558B PNP , |
| Q ,201,TRANS ,5-BF240--,BF240 NPN , |
| Q ,202,TRANS ,5-BF240--,BF240 NPN , |
| Q ,203,TRANS ,5-BC547B-,BC548B NPN , |
| Q ,204,TRANS ,5-BC547B-,BC548B NPN , |
| Q ,205,TRANS ,5-BC547B-,BC548B NPN , |
| Q ,206,TRANS ,5-BC557B-,BC558B PNP , |
| Q ,207,TRANS ,5-BC557B-,BC558B PNP , |

| |
|--------------------------------------|
| Q ,300,TRANS ,5-BC557B-,BC558B PNP , |
| Q ,301,TRANS ,5-BF240--,BF240 NPN , |
| Q ,302,TRANS ,5-BF240--,BF240 NPN , |
| Q ,303,TRANS ,5-BC547B-,BC548B NPN , |
| Q ,304,TRANS ,5-BC547B-,BC548B NPN , |
| Q ,305,TRANS ,5-BC547B-,BC548B NPN , |
| Q ,306,TRANS ,5-BC557B-,BC558B PNP , |
| Q ,307,TRANS ,5-BC557B-,BC558B PNP , |

D ,101,DIODE ,4D-1N4148,1N4148 ;
D ,102,DIODE ,4D-1N4148,1N4148 ;
D ,103,DIODE ,4D-1N4148,1N4148 ;
D ,104,DIODE ,4D-1N4148,1N4148 ;
D ,105,DIODE ,4D-1N4148,1N4148 ;
D ,106,DIODE ,4D-1N4148,1N4148 ;
D ,201,DIODE ,4D-1N4148,1N4148 ;
D ,202,DIODE ,4D-1N4148,1N4148 ;
D ,203,DIODE ,4D-1N4148,1N4148 ;
D ,204,DIODE ,4D-1N4148,1N4148 ;
D ,300,DIODE ,4D-1N4148,1N4148 ;

ZD , 1,ZENER ,4Z-C010V-,10V ;
ZD , 2,ZENER ,4Z-C003V3,3V3 ;

IC , 1,HCT ,65-HCT195,HCT195 ;
IC , 2,LS ,67-LS175-,74LS175 ;
IC , 3,LS ,66-LS86--,74LS86 ;
IC , 4,HCT ,65-HCT195,HCT195 ;
IC , 5,LINEAR ,72-TL-074,TL074 ;
IC , 6,LINEAR ,72-RC4741,4741 or 4156 ;
IC , 7,LINEAR ,72-TL-074,TL074 ;
IC , 8,SPECIAL,7-U LN2083,U LN2083A ;
IC , 9,LINEAR ,72-NE5532,5532 ;
IC , 10,LINEAR ,72-NE5532,5532 ;
IC , 11,LINEAR ,72-LM-710,710 , 14 pin package ;
IC , 12,LINEAR ,72-TL-074,TL074 ;
IC , 13,SPECIAL,7-DBX2150,DBX2150A , 8 pin SIL package ;
IC , 14,LINEAR ,72-NE5532,5532 ;
IC , 15,LINEAR ,72-TL-074,TL074 ;
IC , 16,SPECIAL,7-DBX2150,DBX2150A , 8 pin SIL package ;

ICJ, 1,SOCKET ,C-ICSOK14 ;

J , 1,SIL ,CFT-15POL, , 15 pol SIL stik hun top entry ;

PCB, 3,PRINT ,PCB2902-2,TC-2902 PW ;

MP , 1,STAG ,K-STØTTE4,22MM STAG ;
MP , 2,STAG ,K-STØTTE4,22MM STAG ;
MP , 3,STAG ,K-STØTTE4,22MM STAG ;
MP , 4,STAG ,K-STØTTE4,22MM STAG ;

MP , 5,SKIVE ,I-PERT-10,3MM ISOSKIVE,

* markerer rettelse Nr.1148 / ændring ifht. sidste opdat: 870113

PARTSLIST 2981-01, SA-02 2290 D/A OUTPUT2 OPTION PW

PL-;NO-,TYPE---,TCKODE---,KOMPONENT---,TXT-----

R , 1,MODST ,1ZB001K21,1K21 1% ,
 R , 2,MODST ,1ZA105E--,105E 1% ,
 R , 3,MODST ,1ZB005K36,5K36 1% ,
 R , 4,MODST ,1B5Z010K-,10K 5% ,
 R , 5,MODST ,1B5Z003K3,3K3 5% ,
 R , 6,MODST ,1ZB017K8-,17K8 1% ,
 R , 7,MODST ,1ZB017K8-,17K8 1% ,
 R , 8,MODST ,1ZB012K1-,12K1 1% ,
 R , 9,MODST ,1ZB006K81,6K81 1% ,
 R , 10,MODST ,1B5Z330K-,330K ,

R , 11,MODST ,1A5Z047E-,47E ,
 R , 12,MODST ,1B5Z004K3,4K3 ,
 R , 13,MODST ,1ZB031K6-,31K6 1% ,
 R , 14,MODST ,1ZB010K0-,10K0 1% ,
 R , 15,MODST ,1ZB010K0-,10K0 1% ,
 R , 16,MODST ,1ZB012K1-,12K1 1% ,
 R , 17,MODST ,1B5Z470K-,470K 5% ,
 R , 18,MODST ,1A5Z047E-,47R 5% ,
 R , 19,MODST ,1B5Z003K9,3K9 5% ,
 R , 20,MODST ,1B5Z100K-,100K 5% ,

R , 21,MODST ,1B5Z001K0,1K0 5% ,
 R , 22,MODST ,1B5Z047K-,47K 5% ,
 R , 23,MODST ,1B5Z100K-,100K 5% ,
 R , 24,MODST ,1ZB010K0-,10K0 1% ,

RT , 1,TRIMMER,2HLB047K-,47K HOR-L ,
 RT , 2,TRIMMER,2HLB047K-,47K HOR-L ,
 RT , 3,TRIMMER,2HLB010K-,10K HOR-L ,
 RT , 4,TRIMMER,2HLB022K-,22K HOR-L ,
 RT , 5,TRIMMER,2HLB047K-,47K HOR-L ,

C , 1,ELLYT ,381S010U-,10U ,
 C , 2,ELLYT ,381S010U-,10U ,
 C , 3,PLAQ ,31-B022N-,22N ,
 C , 4,ELLYT ,381S004U7,4U7 35V ,
 C , 5,PLAQ ,31-A015P-,15P ,
 C , 6,PLAQ ,31-A150P-,150P ,
 C , 7,STYRD ,32-B001N5,1N5 1% ,
 C , 8,STYRD ,32-A470P-,470P 1% ,
 C , 9,ELLYT ,381S022U-,22U 16V ,
 C , 10,STYRD ,32-B002N2,2N2 1% ,
 C , 11,PLAQ ,31-A220P-,220P ,
 C , 12,ELLYT ,381S022U-,22U 16V ,

IC , 1,LINEAR ,72-TL-074,TL074 ,
 IC , 2,SPECIAL,7-DBX2150,DBX2150A ,
 IC , 3,LINEAR ,72-LN-741,741 ,
 IC , 4,LINEAR ,7-DBX2150,DBX 2150-A ,

J , 8,SILSTIK,CFS-08POL,8 PDL FP ,

PJ , 1,LUS ,19-LUS-00,0E MODSTAND ,

PCB, 1,PRINT ,PCB2981-1,TC 2981 ,

PARTSLIST 2904-02,2290 EXT. EFFECT PW

PL-,NO-,TYPE---,TCKODE---,KOMPONENT---,TXT-----

R , 2,MODST ,1B5Z001K0,1K 1/4W 5%,
 R , 4,MODST ,1B5Z001K0,1K 1/4W 5%,

R , 11,MODST ,1A5Z100E-,100E 1/4W 5%,
 R , 12,MODST ,1B5Z022K-,22K 1/4W 5%,
 R , 13,MODST ,1B5Z220K-,220K 1/4W 5%,
 R , 14,MODST ,1B5Z001K0,1K 1/4W 5%,
 R , 15,MODST ,1B5Z330K-,330K 1/4W 5%,
 R , 16,MODST ,1B5Z220K-,220K 1/4W 5%,

R , 21,MODST ,1A5Z100E-,100E 1/4W 5%,
 R , 22,MODST ,1B5Z022K-,22K 1/4W 5%,
 R , 23,MODST ,1B5Z220K-,220K 1/4W 5%,
 R , 24,MODST ,1B5Z001K0,1K 1/4W 5%,
 R , 25,MODST ,1B5Z330K-,330K 1/4W 5%,
 R , 26,MODST ,1B5Z220K-,220K 1/4W 5%,

R , 31,MODST ,1A5Z100E-,100E 1/4W 5%,
 R , 32,MODST ,1B5Z022K-,22K 1/4W 5%,
 R , 33,MODST ,1B5Z220K-,220K 1/4W 5%,
 R , 34,MODST ,1B5Z001K0,1K 1/4W 5%,
 R , 35,MODST ,1B5Z330K-,330K 1/4W 5%,
 R , 36,MODST ,1B5Z220K-,220K 1/4W 5%,

R , 41,MODST ,1A5Z100E-,100E 1/4W 5%,
 R , 42,MODST ,1B5Z022K-,22K 1/4W 5%,
 R , 43,MODST ,1B5Z220K-,220K 1/4W 5%,
 R , 44,MODST ,1B5Z001K0,1K 1/4W 5%,
 R , 45,MODST ,1B5Z330K-,330K 1/4W 5%,
 R , 46,MODST ,1B5Z220K-,220K 1/4W 5%,

R , 51,MODST ,1A5Z100E-,100E 1/4W 5%,
 R , 52,MODST ,1B5Z022K-,22K 1/4W 5%,
 R , 53,MODST ,1B5Z220K-,220K 1/4W 5%,
 R , 54,MODST ,1B5Z001K0,1K 1/4W 5%,
 R , 55,MODST ,1B5Z330K-,330K 1/4W 5%,

R , 64,MODST ,1B5Z001K0,1K 1/4W 5%,
 R , 65,MODST ,1B5Z330K-,330K 1/4W 5%,

C , 1,POLY ,34-B100N-,100N 10% 2E,
 C , 2,POLY ,34-B100N-,100N 10% 2E,
 C , 3,POLY ,34-B100N-,100N 10% 2E,
 C , 4,ELLYT ,381S022U-,22U/16 ,
 C , 11,ELLYT ,381S001U0,1U/35 ,
 C , 12,ELLYT ,381S001U0,1U/35 ,
 C , 21,ELLYT ,381S001U0,1U/35 ,
 C , 22,ELLYT ,381S001U0,1U/35 ,
 C , 31,ELLYT ,381S001U0,1U/35 ,
 C , 32,ELLYT ,381S001U0,1U/35 ,
 C , 41,ELLYT ,381S001U0,1U/35 ,
 C , 42,ELLYT ,381S001U0,1U/35 ,
 C , 51,ELLYT ,381S001U0,1U/35 ,
 C , 52,ELLYT ,381S001U0,1U/35 ,
 C , 61,ELLYT ,381S001U0,1U/35 ,

C , 62, ELLYT , 3815001U0, 1U/35 ,
 D , 1, DIODE , 4D-1N4148, 1N4148 ,
 D , 2, DIODE , 4D-1N4148, 1N4148 ,
 D , 11, DIODE , 4D-1N4148, 1N4148 ,
 D , 12, DIODE , 4D-1N4148, 1N4148 ,
 D , 21, DIODE , 4D-1N4148, 1N4148 ,
 D , 22, DIODE , 4D-1N4148, 1N4148 ,
 D , 31, DIODE , 4D-1N4148, 1N4148 ,
 D , 32, DIODE , 4D-1N4148, 1N4148 ,
 D , 41, DIODE , 4D-1N4148, 1N4148 ,
 D , 42, DIODE , 4D-1N4148, 1N4148 ,
 D , 51, DIODE , 4D-1N4148, 1N4148 ,
 D , 52, DIODE , 4D-1N4148, 1N4148 ,
 D , 61, DIODE , 4D-1N4148, 1N4148 ,
 D , 62, DIODE , 4D-1N4148, 1N4148 ,
 DZ , 1, ZENER , 4Z-C007V5, BZX79 C7V5 ,
 Q , 10, TRANS , 5-BC547B-, BC 548 B NPN,
 Q , 20, TRANS , 5-BC547B-, BC 548 B NPN,
 Q , 30, TRANS , 5-BC547B-, BC 548 B NPN,
 Q , 40, TRANS , 5-BC547B-, BC 548 B NPN,
 Q , 50, TRANS , 5-BC547B-, BC 548 B NPN,
 IC , 1, LINEAR , 72-RC4559, RC 4559 ,
 IC , 2, LINEAR , 72-RC4559, RC 4559 ,
 IC , 3, LINEAR , 60-C4053-, MC 14053B ,
 IC , 4, LINEAR , 60-C4053-, MC 14053B ,
 T , 10, JACK , C-JACK-01, BBB-PCI TC 7,
 T , 11, JACK , C-JACK-01, BBB-PCI TC 7,
 T , 20, JACK , C-JACK-01, BBB-PCI TC 7,
 T , 21, JACK , C-JACK-01, BBB-PCI TC 7,
 T , 30, JACK , C-JACK-01, BBB-PCI TC 7,
 T , 31, JACK , C-JACK-01, BBB-PCI TC 7,
 T , 40, JACK , C-JACK-01, BBB-PCI TC 7,
 T , 41, JACK , C-JACK-01, BBB-PCI TC 7,
 T , 50, JACK , C-JACK-01, BBB-PCI TC 7,
 T , 51, JACK , C-JACK-01, BBB-PCI TC 7,
 T , 61, JACK , C-JACK-01, BBB-PCI TC 7,
 J 1, 2, SIL , CFT-12POL, 12pol hun ,
 PCB, 4, PRINT , PCB2904-2,

PARTSLIST 2903-02, 2290 DISPLAY KORT

PL-, NO-, TYPE---, TCKODE---, KOMPONENT----, TXT-----

| | | | |
|---|-------------|----------------------|---|
| R | , 1, MODST | , 1A5%027E-, 27E | , |
| R | , 2, MODST | , 1A5%027E-, 27E | , |
| R | , 3, MODST | , 1A5%027E-, 27E | , |
| R | , 4, MODST | , 1A5%027E-, 27E | , |
| R | , 5, MODST | , 1A5%027E-, 27E | , |
| R | , 6, MODST | , 1A5%027E-, 27E | , |
| R | , 7, MODST | , 1A5%027E-, 27E | , |
| R | , 8, MODST | , 1A5%027E-, 27E | , |
| R | , 9, MODST | , 1A5%027E-, 27E | , |
| R | , 10, MODST | , 1A5%027E-, 27E | , |
| R | , 11, MODST | , 1A5%027E-, 27E | , |
| R | , 12, MODST | , 1A5%027E-, 27E | , |
| R | , 13, MODST | , 1A5%027E-, 27E | , |
| R | , 14, MODST | , 1A5%027E-, 27E | , |
| R | , 15, MODST | , 1A5%056E-, 56E | , |
| R | , 16, MODST | , 1A5%027E-, 27E | , |
| R | , 17, MODST | , 1A5%027E-, 27E | , |
| R | , 18, MODST | , 1A5%012E-, 12E | , |
| R | , 19, MODST | , 1A5%056E-, 56E | , |
| R | , 20, MODST | , 1A5%027E-, 27E | , |
| R | , 21, LUS | , 19-LUS-00, 0E | , |
| R | , 22, MODST | , 1A5%018E-, 18E | , |
| R | , 23, MODST | , 1A5%039E-, 39E | , |
| R | , 24, MODST | , 1A5%039E-, 39E | , |
| R | , 25, MODST | , 1A5%015E-, 15E | , |
| R | , 26, MODST | , 1A5%056E-, 56E | , |
| R | , 27, MODST | , 1A5%027E-, 27E | , |
| R | , 28, MODST | , 1A5%027E-, 27E | , |
| R | , 29, MODST | , 1A5%027E-, 27E | , |
| R | , 30, MODST | , 1A5%056E-, 56E | , |
| R | , 31, | , non exist | , |
| R | , 32, MODST | , 1B5%010K-, 10K | , |
| R | , 33, MODST | , 1A5%027E-, 27E | , |
| R | , 34, MODST | , 1A5%039E-, 39E | , |
| R | , 35, LUS | , 19-LUS-00, 0E | , |
| R | , 36, MODST | , non exist | , |
| R | , 37, LUS | , 19-LUS-00, 0E | , |
| R | , 38, MODST | , 1A5%027E-, 27E | , |
| R | , 39, MODST | , 1A5%027E-, 27E | , |
| C | , 1, ELLYT | , 382S0100U, 100U 16 | , |
| D | , 1, DIODE | , 4D-1N4148, 1N4148 | , |
| D | , 2, DIODE | , 4D-1N4148, 1N4148 | , |
| D | , 3, DIODE | , 4D-1N4148, 1N4148 | , |
| D | , 4, DIODE | , 4D-1N4148, 1N4148 | , |
| D | , 5, DIODE | , 4D-1N4148, 1N4148 | , |
| D | , 6, DIODE | , 4D-1N4148, 1N4148 | , |
| D | , 7, DIODE | , 4D-1N4148, 1N4148 | , |
| D | , 8, DIODE | , 4D-1N4148, 1N4148 | , |

Q , 1, TRANS ,5-ZTX653-, ZTX 653 ;
 Q , 2, TRANS ,5-ZTX653-, ZTX 653 ;
 Q , 3, TRANS ,5-ZTX653-, ZTX 653 ;
 Q , 4, TRANS ,5-ZTX653-, ZTX 653 ;
 Q , 5, TRANS ,5-ZTX653-, ZTX 653 ;
 Q , 6, TRANS ,5-ZTX653-, ZTX 653 ;
 Q , 7, TRANS ,5-ZTX653-, ZTX 653 ;

 DG , 00, DISPLAY,9-7SEG-RØ, TFK D201P K ;
 DG , 01, DISPLAY,9-7SEG-RØ, TFK D201P K ;
 DG , 02, DISPLAY,9-7SEG-RØ, TFK D201P K ;
 DG , 03, DISPLAY,9-7SEG-RØ, TFK D201P K ;
 DG , 04, DISPLAY,9-7SEG-RØ, TFK D201P K ;
 DG , 05, DISPLAY,9-7SEG-RØ, TFK D201P K ;

 DG , 10, DISPLAY,9-7SEG-RØ, TFK D201P K ;
 DG , 11, DISPLAY,9-7SEG-RØ, TFK D201P K ;
 DG , 12, DISPLAY,9-7SEG-RØ, TFK D201P K ;
 DG , 13, DISPLAY,9-7SEG-RØ, TFK D201P K ;
 DG , 14, DISPLAY,9-7SEG-RØ, TFK D201P K ;
 DG , 15, DISPLAY,9-7SEG-RØ, TFK D201P K ;

 LD , 00, LED ,9-3X3ØRAN,Ø3F×5 ORANGE ;
 LD , 01, LED ,9-2,5X5ØR,2.5×5 ORANGE ;
 LD , 02, LED ,9-2,5X5ØR,2.5×5 ORANGE ;
 LD , 03, LED ,9-2,5X5GR,2.5×5 GRØN ;
 LD , 04, LED ,9-2,5X5ØR,2.5×5 ORANGE ;
 LD , 06, LED ,9-2,5X5ØR,2.5×5 ORANGE ;
 LD , 07, LED ,9-3X3ØRAN,Ø3F×5 ORANGE ;

 LD , 10, LED ,9-3X3ØRAN,Ø3F×5 ORANGE ;
 LD , 11, LED ,9-2,5X5GR,2.5×5 GRØN ;
 LD , 12, LED ,9-2,5X5ØR,2.5×5 ORANGE ;
 LD , 13, LED ,9-2,5X5GR,2.5×5 GRØN ;
 LD , 15, LED ,9-3X3ØRAN,Ø3F×5 ORANGE ;
 LD , 16, LED ,9-2,5X5GR,2.5×5 GRØN ;
 LD , 17, LED ,9-3X3ØRAN,Ø3F×5 ORANGE ;

 LD , 20, LED ,9-3X3ØRAN,Ø3F×5 ORANGE ;
 LD , 21, LED ,9-2,5X5GR,2.5×5 GRØN ;
 LD , 22, LED ,9-2,5X5ØR,2.5×5 ORANGE ;
 LD , 24, LED ,9-2,5X5ØR,2.5×5 ORANGE ;
 LD , 25, LED ,9-3X3ØRAN,Ø3F×5 ORANGE ;
 LD , 26, LED ,9-2,5X5GR,2.5×5 GRØN ;
 LD , 27, LED ,9-3X3ØRAN,Ø3F×5 ORANGE ;

 LD , 30, LED ,9-3X3ØRAN,Ø3F×5 ORANGE ;
 LD , 31, LED ,9-2,5X5GR,2.5×5 GRØN ;
 LD , 32, LED ,9-2,5X5ØR,2.5×5 ORANGE ;
 LD , 33, LED ,9-2,5X5GR,2.5×5 GRØN ;
 LD , 34, LED ,9-2,5X7RØ,2.5×7 RØD S ;
 LD , 35, LED ,9-3X3ØRAN,Ø3F×5 ORANGE ;
 LD , 36, LED ,9-2,5X5ØR,2.5×5 ORANGE ;
 LD , 37, LED ,9-2,5X7RØ,2.5×7 RØD S ;

 LD , 40, LED ,9-3X3ØRAN,Ø3F×5 ORANGE ;
 LD , 41, LED ,9-2,5X5GU,2.5×5 GUL ;
 LD , 42, LED ,9-2,5X5ØR,2.5×5 ORANGE ;
 LD , 43, LED ,9-2,5X5GR,2.5×5 GRØN ;

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LD , 44, LED , 9-2, 5X50R, 2.5x5 ORANGE ,
LD , 46, LED , 9-2, 5X50R, 2.5x5 ORANGE ,
LD , 47, LED , 9-2, 5X7RØ, 2.5x7 RØD S ,

LD , 50, LED , 9-3X30RAN, Ø3Fx5 ORANGE ,
LD , 51, LED , 9-2, 5X50R, 2.5x5 ORANGE ,
LD , 52, LED , 9-2, 5X50R, 2.5x5 ORANGE ,
LD , 53, LED , 9-2, 5X56R, 2.5x5 GRØN ,
LD , 54, LED , 9-2, 5X56U, 2.5x5 GUL ,
LD , 55, LED , 9-3X30RAN, Ø3Fx5 ORANGE ,
LD , 56, LED , 9-2, 5X50R, 2.5x5 ORANGE ,
LD , 57, LED , 9-2, 5X7RØ, 2.5x7 RØD S ,

LD , 60, LED , , , ,
LD , 61, LED , 9-2, 5X56U, 2.5x5 GUL ,
LD , 62, LED , 9-2, 5X50R, 2.5x5 ORANGE ,
LD , 63, LED , 9-2, 5X50R, 2.5x5 ORANGE ,
LD , 64, LED , 9-2, 5X50R, 2.5x5 ORANGE ,
LD , 65, LED , 9-2, 5X50R, 2.5x5 ORANGE ,
LD , 66, LED , 9-2, 5X50R, 2.5x5 ORANGE ,
LD , 67, LED , 9-2, 5X50R, 2.5x5 ORANGE ,

IC , 1, CMOS , 60-C4511-, 4511 ,
IC , 2, CMOS , 60-C4511-, 4511 ,
IC , 3, SPECIAL, 7-UDN2585, UDN2585A ,
IC , 4, CMOS , 60-C4051-, 4051 ,

S , 0, TROMSK , G-tryk--1, 1P DIGITAST ,
S , 1, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 2, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 3, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 4, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 5, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 6, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 7, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 10, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 11, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 12, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 13, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 14, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 15, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 16, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 17, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 20, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 22, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 23, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 24, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 25, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 26, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 27, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 30, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 32, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 33, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 34, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 35, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 36, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 37, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 40, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 42, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 43, TROMSK , G-TRYK--1, 1P DIGITAST ,

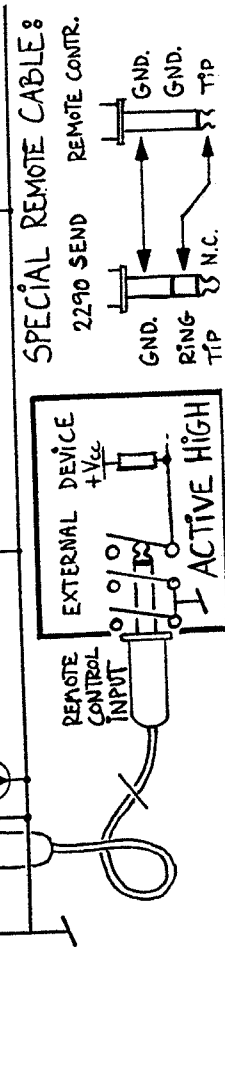
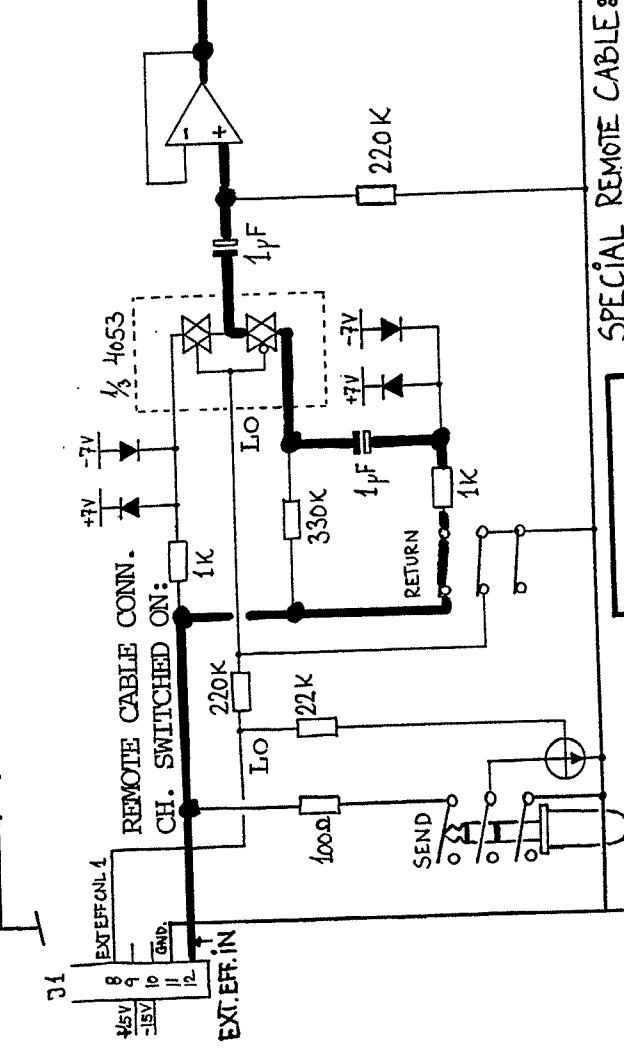
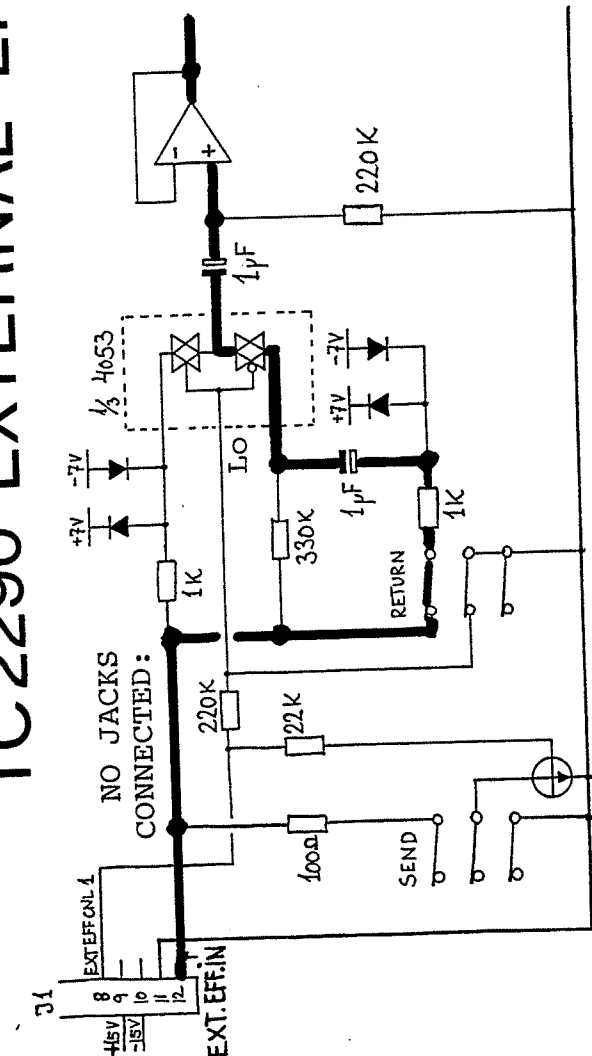
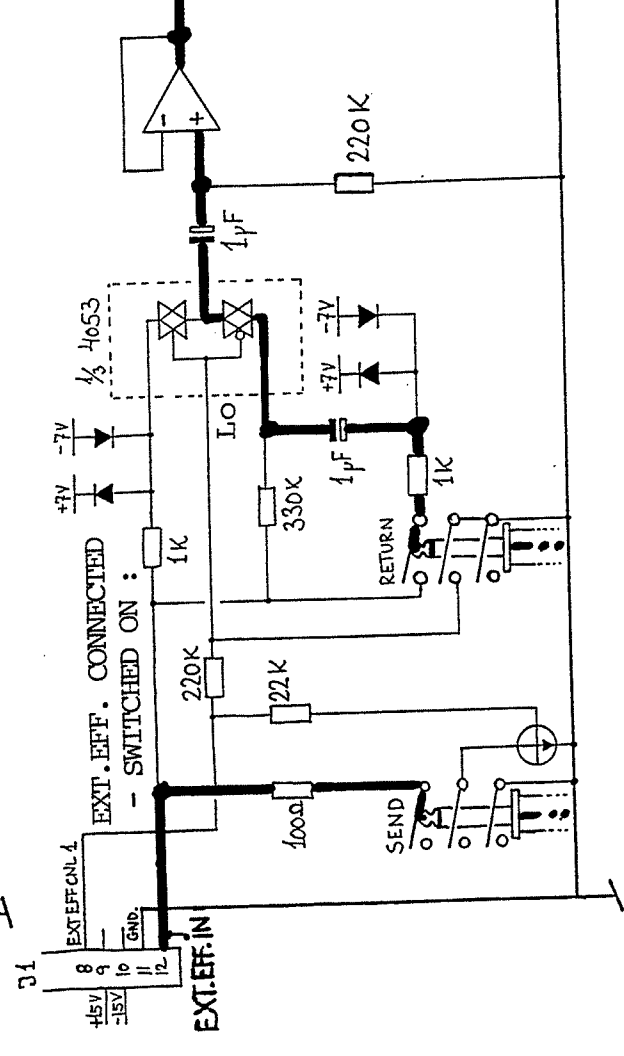
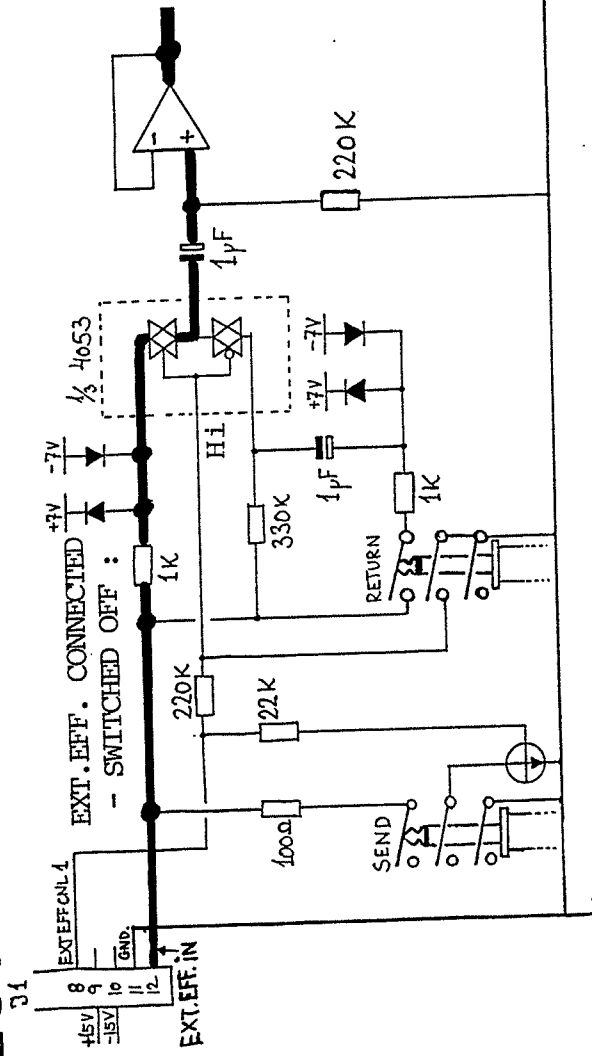
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S , 44, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 45, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 46, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 47, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 50, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 52, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 53, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 54, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 55, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 56, TROMSK , G-TRYK--1, 1P DIGITAST ,
S , 57, TROMSK , G-TRYK--1, 1P DIGITAST ,

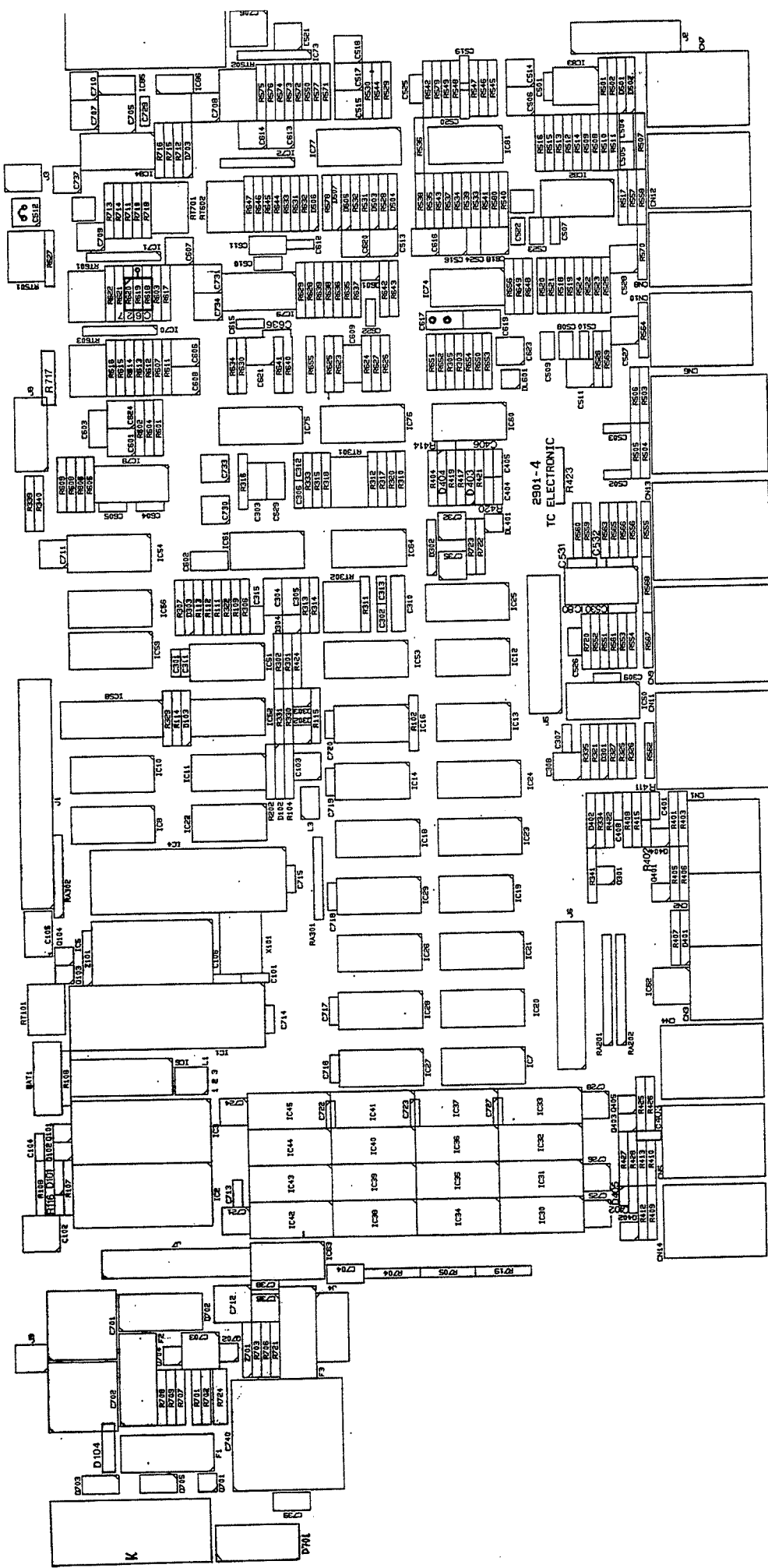
J , 1, CONN , CHC12-25P, 25 PQL PIN ,

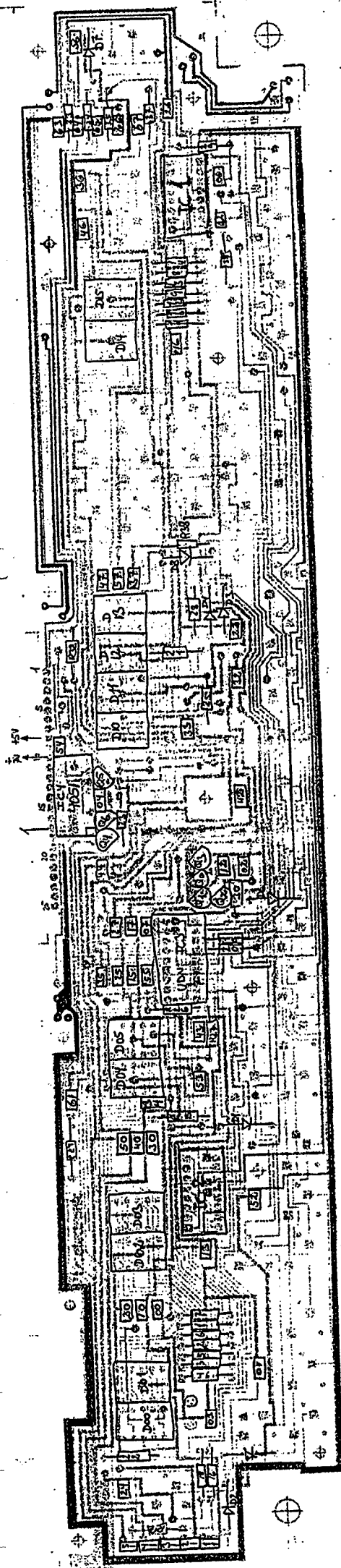
PCB, 2, PRINT , PCB2903-3, TC-2903 PW ,*

TC2290 EXTERNAL EFFECTS CONTROL

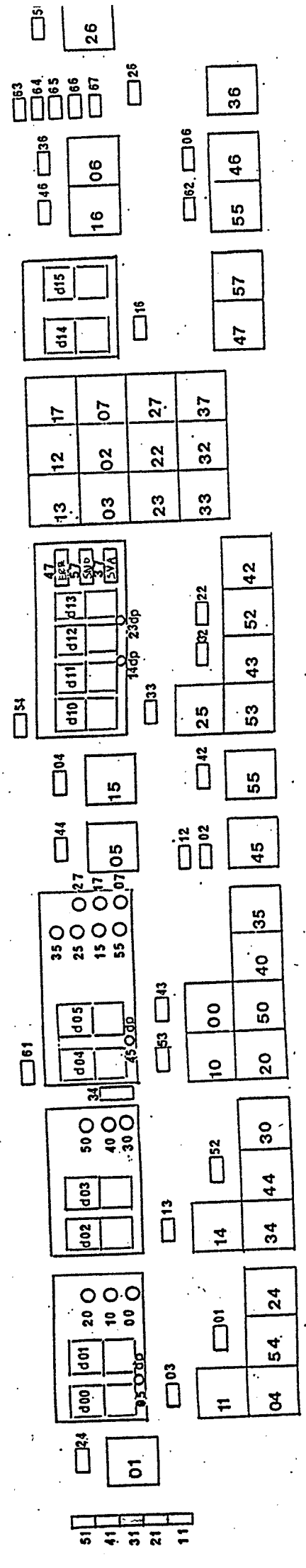
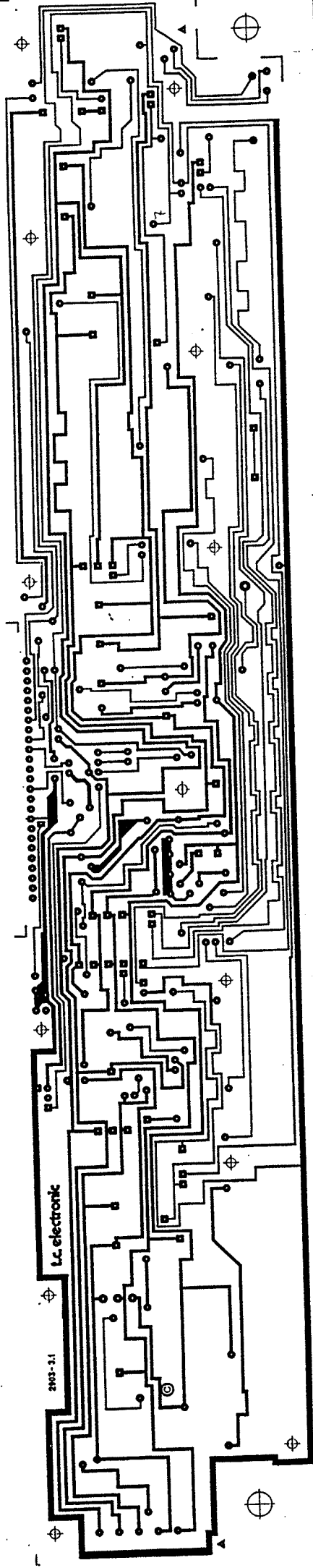


TC 2290 MAIN PCB. COMPONENT LOCATION






FRONT LAYOUT



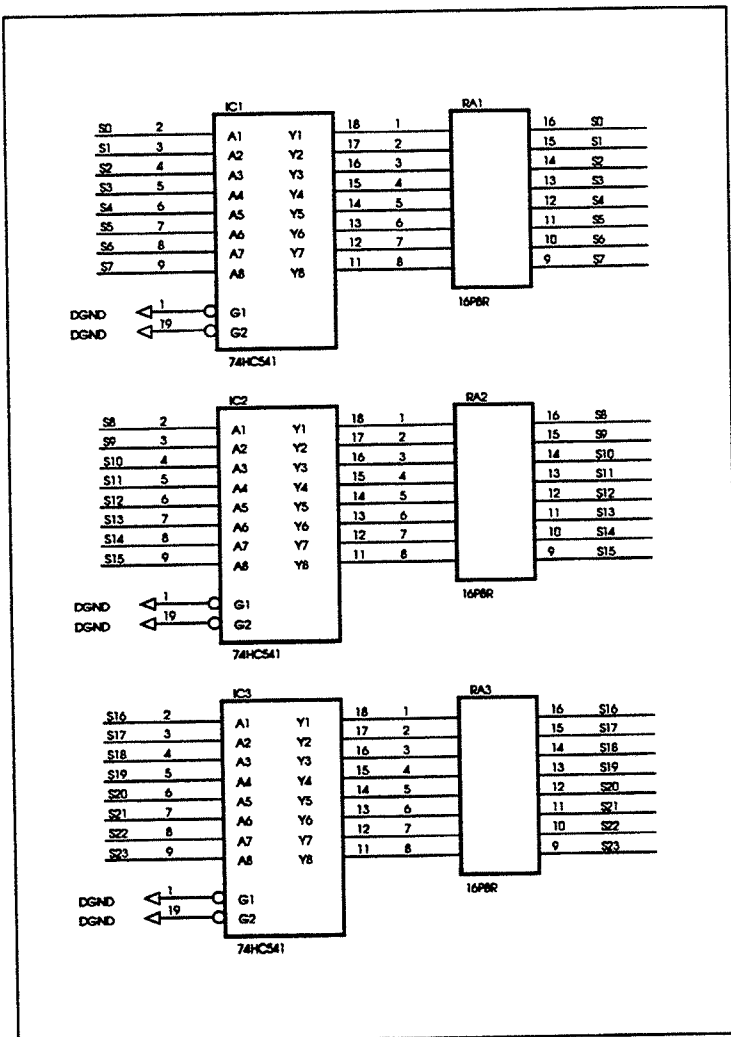
| IC | TYPE | PAGE | NUMBER OF PIN | +15VE | +15V | +7V | +5V | DGND | AGND | -7V | -7VE | -15V | -15VE | REMARKS |
|----|-----------|-------|---------------|-------|------|-----|-------|------|------|-----|------|------|-------|---------------------------------|
| 1 | | 1 | 40 | | | | 7 | 1 | | | | | | OR HD63B03 |
| 2 | MBM27256 | 1 | 28 | | | | 28 | 14 | | | | | | |
| 3 | HM6264 | 1 | 28 | | | | SH. 1 | 14 | | | | | | +BAT P.26&P28 THROUGH D101/R116 |
| 4 | MCE3B21 | 1 | 40 | | | | 20 | 1 | | | | | | OR HD63B21 |
| 5 | MCE3B50 | 1 | 24 | | | | 12 | 1 | | | | | | OR HD63B50 |
| 6 | 373 | 1 | 20 | | | | 20 | 10 | | | | | | |
| 7 | LS139 | 1+2 | 16 | | | | 16 | 8 | | | | | | |
| 8 | HCT139 | 1+3 | 16 | | | | 16 | 8 | | | | | | |
| 10 | 138 | 1 | 16 | | | | 16 | 8 | | | | | | |
| 11 | LS93 | 1 | 14 | | | | 5 | 10 | | | | | | |
| 12 | 14 | 1+2+3 | 14 | | | | 14 | 7 | | | | | | |
| 13 | 32 | 2 | 14 | | | | 14 | 7 | | | | | | |
| 14 | .00 | 1+2 | 14 | | | | 14 | 7 | | | | | | |
| 16 | 08 | 1+2 | 14 | | | | 14 | 7 | | | | | | |
| 18 | 175 | 2 | 16 | | | | 16 | 8 | | | | | | |
| 19 | 393 | 2 | 14 | | | | 14 | 7 | | | | | | |
| 20 | 367 | 2 | 16 | | | | 16 | 8 | | | | | | |
| 21 | 367 | 2 | 16 | | | | 16 | 8 | | | | | | |
| 22 | 74 | 2 | 14 | | | | 14 | 7 | | | | | | |
| 23 | 195 | 2 | 16 | | | | 16 | 8 | | | | | | |
| 24 | 195 | 2 | 16 | | | | 16 | 8 | | | | | | |
| 25 | 153 | 2 | 16 | | | | 16 | 8 | | | | | | |
| 26 | 570 | 2 | 16 | | | | 16 | 8 | | | | | | |
| 27 | 570 | 2 | 16 | | | | 16 | 8 | | | | | | |
| 28 | 570 | 2 | 16 | | | | 16 | 8 | | | | | | |
| 29 | 570 | 2 | 16 | | | | 16 | 8 | | | | | | |
| 30 | | | | | | | | | | | | | | |
| 45 | MB81256 | 2+2A | 16 | | | | 8 | 16 | | | | | | |
| 50 | LS628 | 3 | 14 | | | | 9 | 7 | | | | | | |
| 51 | 14 | 1+3+4 | 14 | | | | 14 | 7 | | | | | | |
| 52 | HC05 | 1+3+4 | 14 | | | | 14 | 7 | | | | | | |
| 53 | MC1408DAC | 3 | 16 | | | | 13 | 1 | | 15 | | | 3 | |
| 54 | MC140528 | 3 | 16 | | | | 16 | 8 | | | 7 | | | |
| 56 | MC140519 | 3 | 16 | | | | 16 | 8 | | | 7 | | | |
| 58 | HC374 | 3 | 20 | | | | 20 | 10 | | | | | | |
| 59 | MC14174B | 3 | 16 | | | | 16 | 8 | | | | | | |
| 60 | LM339 | 3+4 | 14 | | 3 | | 12 | | | | | | | |
| 61 | TL074 | 3+5 | 14 | | 4 | | | | | | | 11 | | |
| 62 | PC900 | 4 | 6 | | | | 6 | 5 | | | | | | |
| 63 | LM324 | 7 | 14 | | 4 | | | | | | | 11 | | |
| 64 | TL074 | 3 | 14 | 4 | | | | | | | | | 11 | |
| 70 | DBX2155 | 6 | 8 | | 7 | | | 2, 6 | | | | | | |
| 71 | DBX2155 | 6 | 8 | | 7 | | | 2, 6 | | | | | | |
| 72 | DBX2155 | 6 | 8 | | 7 | | | 2, 6 | | | | | | |
| 73 | DBX2155 | 5 | 8 | | 7 | | | 2, 6 | | | | | | |
| 74 | LM339 | 6 | 14 | | 3 | | | | | | | 12 | | |
| 75 | MC140538 | 6 | 16 | | | 16 | | 6, 8 | 7 | | | | | |
| 76 | MC140538 | 6 | 16 | | | 16 | | 6, 8 | 7 | | | | | |
| 77 | MC140538 | 5 | 16 | | | 16 | | 6, 8 | 7 | | | | | |
| 78 | TL074 | 6 | 14 | | 4 | | | | | | | 11 | | |
| 79 | TL074 | 6 | 14 | | 4 | | | | | | | 11 | | |
| 80 | | 5 | 14 | | 4 | | | | | | | 11 | | |
| 81 | | 5 | 14 | | 4 | | | | | | | 11 | | |
| 82 | | 5 | 14 | | 4 | | | | | | | 11 | | |
| 83 | RC4741 | 5 | 8 | | 8 | | | | | | | 4 | | |
| 84 | | 7 | 14 | | 4 | | | | | | | 11 | | |
| 85 | 7905 | 7 | 3 | | | | | | | | | | | |
| 86 | 7905 | 7 | 3 | | | | | | | | | | | |

ALL LS-IC'S MAY BE HCT-TYPE, EXCEPT IC50 AND IC7, WHICH MUST BE LS-TYPES.

| | | | | | |
|--|------------------------|--|--|--|---|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES AND TOLERANCES IN ACCORDANCE WITH DS 2075 | DR.: | | T.C. ELECTRONIC I/S | | |
| | CH.: 890508 | | MBP | | GRINDHOLMVEJ 3, DK-8220 BRABRAND, DENMARK |
| | AP.: | | TITLE | | |
| | AP.: | | MAIN PRINT | | |
| MATERIAL: | FIRST ANGLE PROJECTION | |  | | SIZE A2 |
| | | | SCALE | | CODE IDENT NO. |
| | | | | | DWG NO. |
| | | | | | SHEET 1 OF 1 |

TC 0050

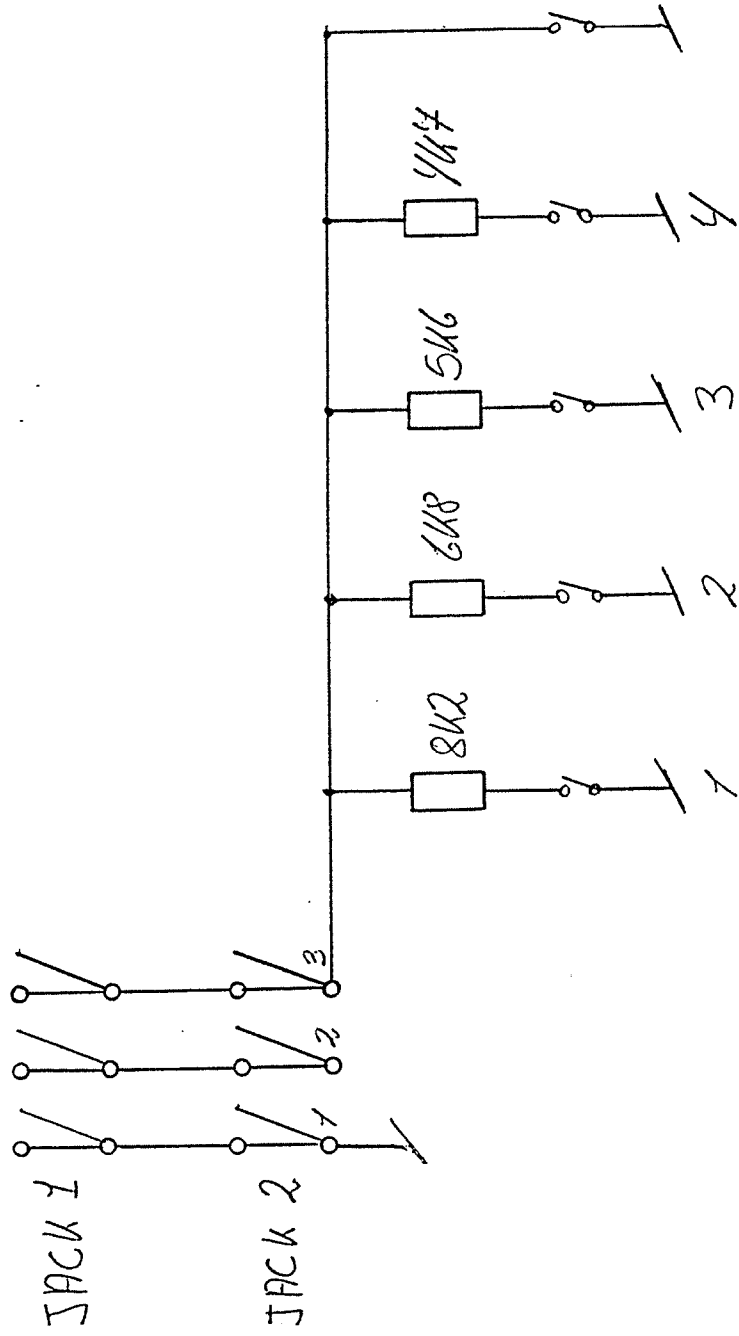
REMOTE CONTROL



SERVICE MANUAL

OF DENMARK
t.c. electronic

Grimhøjvej 3
8220 Brabrand
DK Denmark
Phone +45 86262800
Fax +45 86262928



REMOTE KEY

LEARN

| |
|---------------|
| TC ELECTRONIC |
| FODPANEL |
| 0050 |
| 880303 KV |

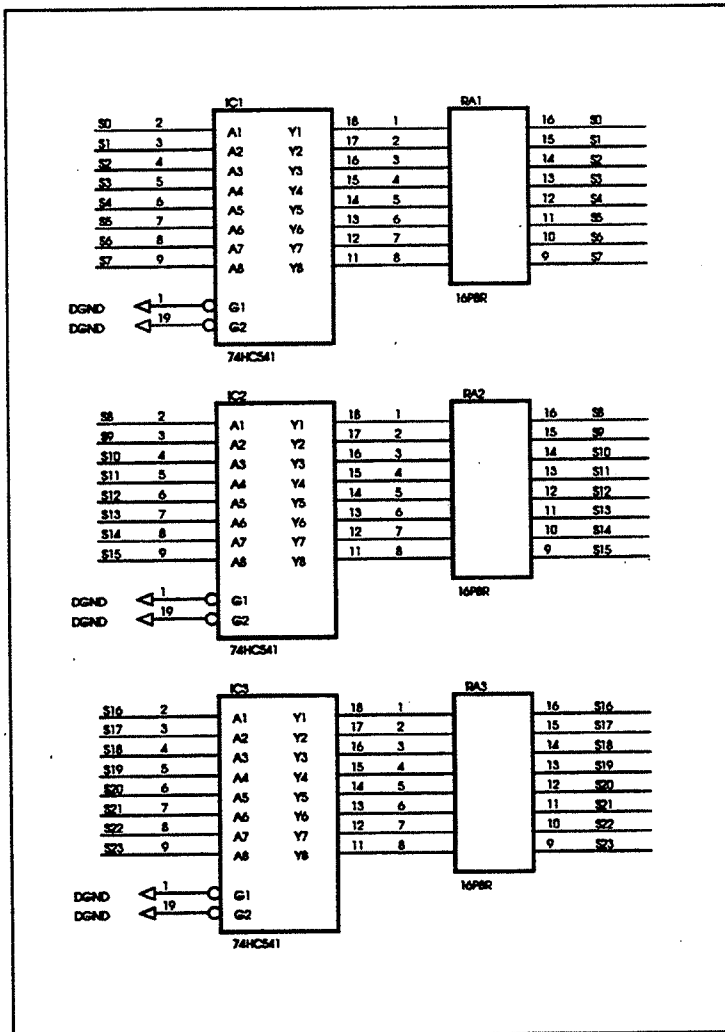
PARSTLIST 2921-01,050 FODPANEL:

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PL-,NO-,TYPE---,TCKODE---,KOMPONENT---,TXT-----  
  
R , 1,MODST ,1%B008K25,8K25 1% ,  
R , 2,MODST ,1%B006K81,6K81 1% ,  
R , 3,MODST ,1%B005K62,5K62 1% ,  
R , 4,MODST ,1%B004K64,4K64 1% ,  
  
S , 1,DIGIT ,G-TRYK--1,1POL DIGITAST,  
S , 2,DIGIT ,G-TRYK--1,1POL DIGITAST,  
S , 3,DIGIT ,G-TRYK--1,1POL DIGITAST,  
S , 4,DIGIT ,G-TRYK--1,1POL DIGITAST,  
S , 5,DIGIT ,G-TRYK--1,1POL DIGITAST,  
  
T , 1,JACK ,C-JACK-01,BBB-PC ,  
T , 2,JACK ,C-JACK-01,BBB-PC ,  
  
PCB, 1,PRINT ,PCB2921-1,0050 FODPANEL, print nr:2921
```




TC0144

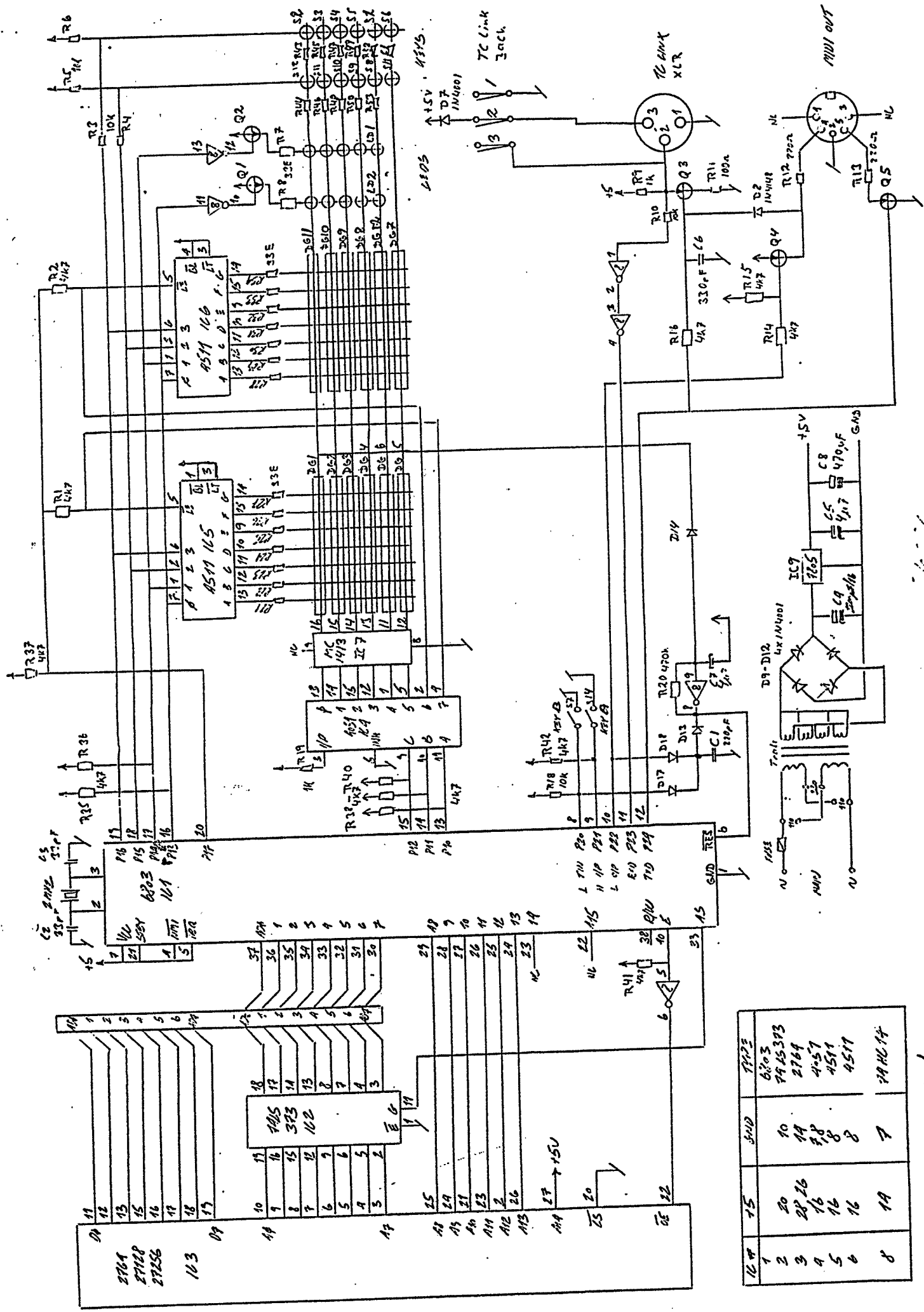
SERIAL REMOTE CONTROL



SERVICE
MANUAL

OF DENMARK
t.c. electronic

Grimhøjvej 3
8220 Brabrand
DK Denmark
Phone +45 86262800
Fax +45 86262928



| IC# | TYPE | QUANTITY | PRICE |
|-----|------|----------|--------|
| 1 | 7405 | 10 | \$1.50 |
| 2 | 7405 | 10 | \$1.50 |
| 3 | 7405 | 10 | \$1.50 |
| 4 | 7405 | 10 | \$1.50 |
| 5 | 7405 | 10 | \$1.50 |
| 6 | 7405 | 10 | \$1.50 |
| 8 | 7405 | 10 | \$1.50 |

260124
 160809
 1/1982
 1/1982
 1/1982
 1/1982

10.000 to 10.000 mV

PARTSLIST 2911-03, 0144 FODPANEL:

| PL- | NO- | TYPE--- | TCKODE--- | KOMPONENT---- | TXT----- |
|-----|-----|---------|-----------|----------------|----------|
| R | 1 | MODST | | 1B5%004K7,4K7 | , |
| R | 2 | MODST | | 1B5%004K7,4K7 | , |
| R | 3 | MODST | | 1B5%010K-,10K | , |
| R | 4 | MODST | | 1B5%010K-,10K | , |
| R | 5 | MODST | | 1B5%010K-,10K | , |
| R | 6 | MODST | | 1B5%010K-,10K | , |
| R | 7 | MODST | | 1A5%033E-,33E | , |
| R | 8 | MODST | | 1A5%033E-,33E | , |
| R | 9 | MODST | | 1B5%001K0,1K0 | , |
| R | 10 | MODST | | 1B5%010K-,10K | , |
| R | 11 | MODST | | 1A5%100E-,100E | , |
| R | 12 | MODST | | 1A5%220E-,220E | , |
| R | 13 | MODST | | 1A5%220E-,220E | , |
| R | 14 | MODST | | 1B5%004K7,4K7 | , |
| R | 15 | MODST | | 1B5%004K7,4K7 | , |
| R | 16 | MODST | | 1B5%004K7,4K7 | , |
| R | 17 | MODST | | ,00 | , |
| R | 18 | MODST | | 1B5%010K-,10K | , |
| R | 19 | MODST | | 1B5%001K0,1K0 | , |
| R | 20 | MODST | | 1B5%470K-,470K | , |
| R | 21 | MODST | | 1A5%033E-,33E | , |
| R | 22 | MODST | | 1A5%033E-,33E | , |
| R | 23 | MODST | | 1A5%033E-,33E | , |
| R | 24 | MODST | | 1A5%033E-,33E | , |
| R | 25 | MODST | | 1A5%033E-,33E | , |
| R | 26 | MODST | | 1A5%033E-,33E | , |
| R | 27 | MODST | | 1A5%033E-,33E | , |
| R | 28 | MODST | | 1A5%033E-,33E | , |
| R | 29 | MODST | | 1A5%033E-,33E | , |
| R | 30 | MODST | | 1A5%033E-,33E | , |
| R | 31 | MODST | | 1A5%033E-,33E | , |
| R | 32 | MODST | | 1A5%033E-,33E | , |
| R | 33 | MODST | | 1A5%033E-,33E | , |
| R | 34 | MODST | | 1A5%033E-,33E | , |
| R | 35 | MODST | | 1B5%004K7,4K7 | , |
| R | 36 | MODST | | 1B5%004K7,4K7 | , |
| R | 37 | MODST | | 1B5%004K7,4K7 | , |
| R | 38 | MODST | | 1B5%004K7,4K7 | , |
| R | 39 | MODST | | 1B5%004K7,4K7 | , |
| R | 40 | MODST | | 1B5%004K7,4K7 | , |
| R | 41 | MODST | | 1B5%004K7,4K7 | , |
| R | 42 | MODST | | 1B5%004K7,4K7 | , |
| R | 43 | MODST | | 1A5%220E-,220E | , |
| R | 44 | MODST | | 1A5%220E-,220E | , |
| R | 45 | MODST | | 1A5%220E-,220E | , |
| R | 46 | MODST | | 1A5%220E-,220E | , |
| R | 47 | MODST | | 1A5%220E-,220E | , |
| R | 48 | MODST | | 1A5%220E-,220E | , |
| R | 49 | MODST | | 1A5%220E-,220E | , |
| R | 50 | MODST | | 1A5%220E-,220E | , |
| R | 51 | MODST | | 1A5%220E-,220E | , |

| | | | |
|----|---------------|----------------------------|---------------------|
| R | , 52, MODST | , 1A5%220E-, 220E | , |
| R | , 53, MODST | , 1A5%220E-, 220E | , |
| R | , 54, | , | , |
| R | , 55, | , | , |
| | | | |
| C | , 1, PLAQ | , 31-A220P-, 220P | , |
| C | , 2, PLAQ | , 31-A033F-, 33P | , |
| C | , 3, PLAQ | , 31-A033P-, 33P | , |
| C | , 4, ELLYT | , 383S2200U, 2200U/16 | , |
| C | , 5, TANTAL | , 35-C04U7-, 4U7/16 | , |
| C | , 6, PLAQ | , 31-A330P-, 330P | , |
| C | , 7, ELLYT | , 381S004U7, 4U7/16 | , |
| C | , 8, ELLYT | , 382S0470-, 470U/10V | , |
| | | | |
| D | , 1, DIODE | , , not used | , |
| D | , 2, DIODE | , , not used | , |
| D | , 3, DIODE | , , not used | , |
| D | , 4, DIODE | , , not used | , |
| D | , 5, DIODE | , , not used | , |
| D | , 6, DIODE | , , not used | , |
| D | , 7, DIODE | , 4D-1N4001, 1N4001 | , |
| D | , 8, DIODE | , 4D-1N4148, 1N4148 | , |
| D | , 9, DIODE | , 4D-1N4001, 1N4001 | , |
| D | , 10, DIODE | , 4D-1N4001, 1N4001 | , |
| | | | |
| D | , 11, DIODE | , 4D-1N4001, 1N4001 | , |
| D | , 12, DIODE | , 4D-1N4001, 1N4001 | , |
| D | , 13, DIODE | , 4D-1N4148, 1N4148 | , |
| D | , 14, DIODE | , 4D-1N4148, 1N4148 | , |
| D | , 15, DIODE | , , not used | , |
| D | , 16, DIODE | , , not used | , |
| D | , 17, DIODE | , 4D-1N4148, 1N4148 | , |
| D | , 18, DIODE | , 4D-1N4148, 1N4148 | , |
| | | | |
| LD | , 1, LED | , 9-2, 5X50R, 2.5*5 ORANGE | , |
| LD | , 2, LED | , 9-2, 5X50R, 2.5*5 ORANGE | , |
| | | | |
| DG | , 1, DISPLAY | , 9-7SEG-R0, D201PK | , |
| DG | , 2, DISPLAY | , 9-7SEG-R0, D201PK | , |
| DG | , 3, DISPLAY | , 9-7SEG-R0, D201PK | , |
| DG | , 4, DISPLAY | , 9-7SEG-R0, D201PK | , |
| DG | , 5, DISPLAY | , 9-7SEG-R0, D201PK | , |
| DG | , 6, DISPLAY | , 9-7SEG-R0, D201PK | , |
| DG | , 7, DISPLAY | , 9-7SEG-R0, D201PK | , |
| DG | , 8, DISPLAY | , 9-7SEG-R0, D201PK | , |
| DG | , 9, DISPLAY | , 9-7SEG-R0, D201PK | , |
| DG | , 10, DISPLAY | , 9-7SEG-R0, D201PK | , |
| DG | , 11, DISPLAY | , 9-7SEG-R0, D201PK | , |
| DG | , 12, DISPLAY | , 9-7SEG-R0, D201PK | , |
| | | | |
| Q | , 1, TRANS | , 5-BC547B-, BC548 | , |
| Q | , 2, TRANS | , 5-BC547B-, BC548 | , |
| Q | , 3, TRANS | , 5-BC557B-, BC558 | , |
| Q | , 4, TRANS | , 5-BC557B-, BC558 | , |
| Q | , 5, TRANS | , 5-BC557B-, BC558 | , |
| | | | |
| IC | , 1, CPU | , 8-CPU-68-, 6803 | , |
| IC | , 2, TTL-LS | , 67-LS373-, LS373 | , |
| IC | , 3, EPROM | , 8-EPR064K, 2764 | , ALT.27128, 27256, |
| IC | , 4, CMOS | , 60-C4051-, 4051 | , |

IC , 5, CMOS ,60-C4511-,4511 ,
 IC , 6, CMOS ,60-C4511-,4511 ,
 IC , 7, DRIVER ,333014131,MC1413 ,
 IC , 8, HCMOS ,62-HC14--,74HC14 ,
 IC , 9, SP. REG ,71-7805--,7805 ,

 X , 1, X-TAL ,8-XTAL2M-,2 MHZ HC-18 ,

 TR , 1, TRAFD ,A-TRAFD-1,TD3706 ,

 FU , 1, FUSE ,D-0032MAT,32mA T 5*20 , 32mAT v/220V , 63mAT v/110V

 PJ , 1, LUS ,19-LUS-LI,OE UISDLERET ,
 PJ , 2, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 3, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 4, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 5, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 6, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 7, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 8, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 9, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 10, LUS ,19-LUS-00,OE MODSTAND ,

 PJ , 11, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 12, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 13, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 14, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 15, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 16, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 17, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 18, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 19, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 20, LUS ,19-LUS-00,OE MODSTAND ,

 PJ , 21, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 22, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 23, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 24, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 25, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 26, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 27, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 28, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 29, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 30, LUS ,19-LUS-00,OE MODSTAND ,

 PJ , 31, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 32, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 33, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 34, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 35, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 36, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 37, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 38, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 39, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 40, LUS ,19-LUS-00,OE MODSTAND ,

 PJ , 41, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 42, LUS ,19-LUS-00,OE MODSTAND ,
 PJ , 43, LUS ,19-LUS-00,OE MODSTAND ,

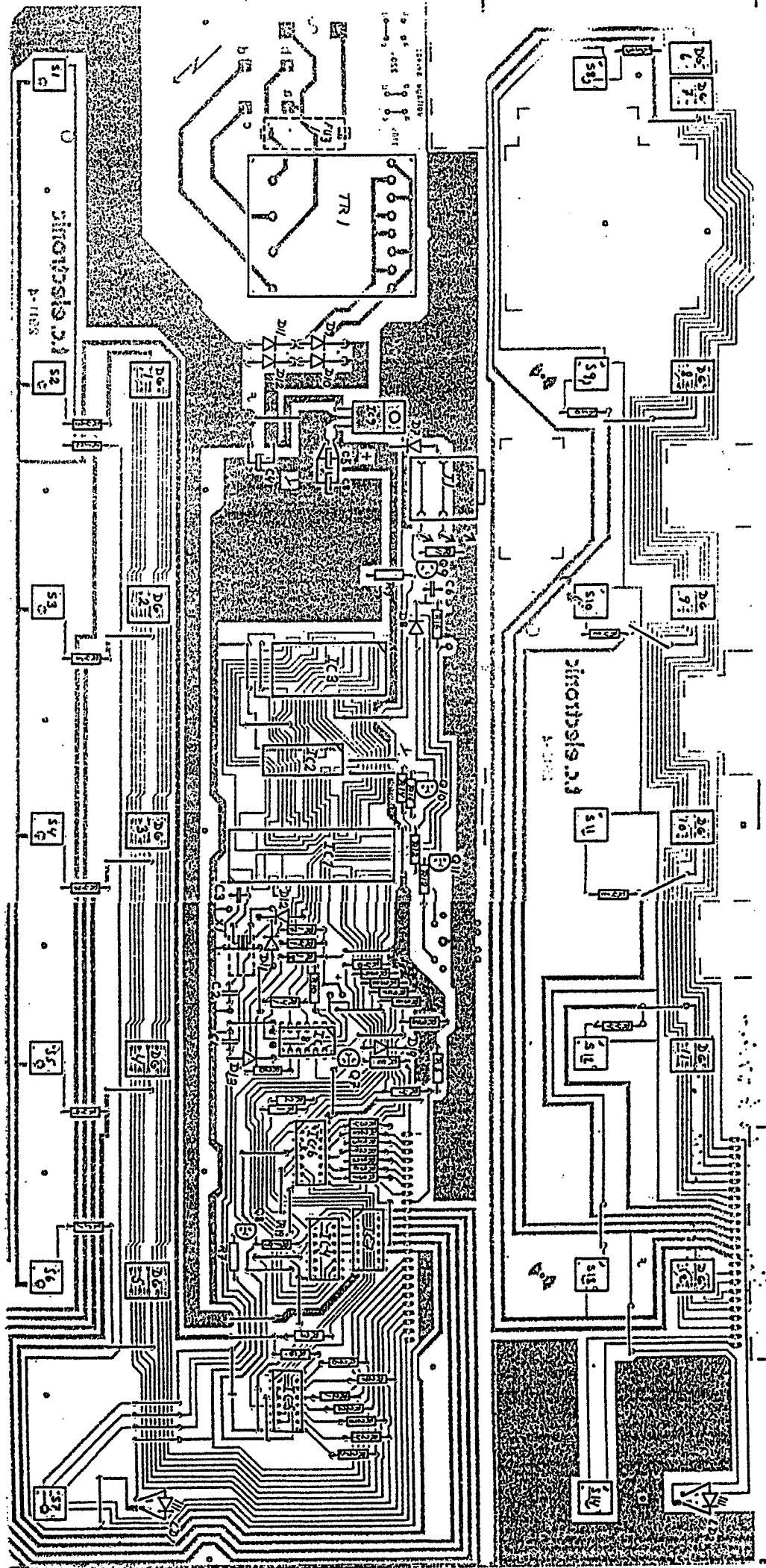
S , 1,DIGITAST,G-TRYK--1,1P DIGIT. ,
 S , 2,DIGITAST,G-TRYK--1,1P DIGIT. ,
 S , 3,DIGITAST,G-TRYK--1,1P DIGIT. ,
 S , 4,DIGITAST,G-TRYK--1,1P DIGIT. ,
 S , 5,DIGITAST,G-TRYK--1,1P DIGIT. ,
 S , 6,DIGITAST,G-TRYK--1,1P DIGIT. ,
 S , 7,DIGITAST,G-TRYK--1,1P DIGIT. ,
 S , 8,DIGITAST,G-TRYK--1,1P DIGIT. ,
 S , 9,DIGITAST,G-TRYK--1,1P DIGIT. ,
 S , 10,DIGITAST,G-TRYK--1,1P DIGIT. ,
 S , 11,DIGITAST,G-TRYK--1,1P DIGIT. ,
 S , 12,DIGITAST,G-TRYK--1,1P DIGIT. ,
 S , 13,DIGITAST,G-TRYK--1,1P DIGIT. ,
 S , 14,DIGITAST,G-TRYK--1,1P DIGIT. ,

 T , 1,JACK ,C-JACK-01,BBB-PCI ,
 T , 2,DINFATN.,C-DIN--3-,5 POL-PC ,anvendes ikke i første version

 J , 1A,SIL STIK,CHS25-10P, ,
 J , 1B,SIL STIK,CHS25-15P, ,
 J , 2A,SIL STIL,CFB-10POL, ,
 J , 2B,SIL STIK,CFB-15POL, ,

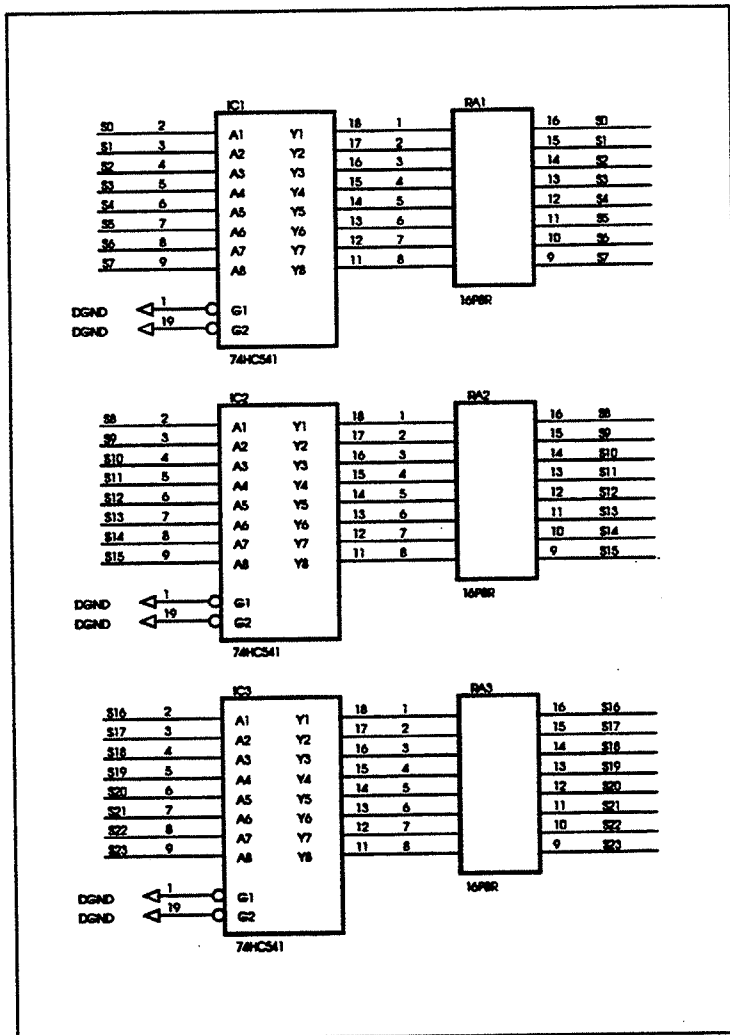
 FUJ, 1,FUSEHOLD,D-SIKH-1*,FUSE BOX TOP,
 FUJ, 1A,FUSEHILD,D-SIKH-1-,FUSE BOX ,

 PCB, 1,PRINT ,PCB2911-6,BUND PRINT ,
 PCB, 2,PRINT ,PCB2912-6,TOP PRINT ,



FATR

FAST TRIG OPTION



SERVICE
MANUAL

OF DENMARK
t.c. electronic

Grimhøjvej 3
8220 Brabrand
DK Denmark
Phone +45 86262800
Fax +45 86262928

PARTSLIST 2971-02, 2290 FATR OPTION:

 PL-, NO-, TYPE---, TCKODE---, KOMPONENT----, TXT-----

| | | | | |
|----|---|-----------|-----------------|-------|
| R | , | 1,MODST | ,1B001K50,1K50 | , |
| R | , | 2,MODST | ,1B5%120K-,120K | , |
| R | , | 3,MODST | ,1B5%240K-,240K | , |
| R | , | 4,MODST | ,1B5%470K-,470K | , |
| R | , | 5,MODST | ,1C5%001M-,1M0 | , |
| R | , | 6,MODST | ,1C5%002M2,2M2 | , |
| R | , | 7,MODST | ,1B5%022K-,22K | , |
| R | , | 8,MODST | ,1B5%022K-,22K | , |
| R | , | 9,MODST | ,1B5%003K3,3K3 | , |
| R | , | 10,MODST | ,1B5%022K-,22K | , |
| R | , | 11,MODST | ,1B5%022K-,22K | , |
| R | , | 12,MODST | ,1B5%022K-,22K | , |
| R | , | 13,MODST | ,1B5%002K2,2K2 | , |
| R | , | 14,MODST | ,1B5%001K0,1K0 | , |
| R | , | 15,MODST | ,1B5%022K-,22K | , |
| R | , | 16,MODST | ,1B5%220K-,220K | , |
| R | , | 17,MODST | ,1B5%022K-,22K | , |
| R | , | 18,MODST | ,1B5%220K-,220K | , |
| R | , | 19,MODST | ,1A5%039E-,39E | , |
| R | , | 20,MODST | ,1B5%002K2,2K2 | , |
| R | , | 21,MODST | ,1B5%027K-,27K | , |
| R | , | 22,MODST | ,1B5%022K-,22K | , |
| R | , | 23,MODST | ,1B5%022K-,22K | , |
| R | , | 24,MODST | ,1B5%004K7,4K7 | , |
| R | , | 25,MODST | ,1B5%002K2,2K2 | , |
| R | , | 26,MODST | ,1B5%002K2,2K2 | , |
| R | , | 27,MODST | ,1B5%002K2,2K2 | , |
| R | , | 28,MODST | ,1B5%002K2,2K2 | , |
| R | , | 29,MODST | ,1B5%047K-,47K | , |
| R | , | 30,MODST | ,1B5%047K-,47K | , |
| R | , | 31,MODST | ,1B5%010K-,10K | , |
| R | , | 32,MODST | ,1B5%002K2,2K2 | , |
| R | , | 33,MODST | ,1B5%022K-,22K | , |
| R | , | 34,MODST | ,1B5%022K-,22K | , |
| R | , | 35,MODST | ,1B5%004K7,4K7 | , |
| | | | | |
| RA | , | 1,NETV | ,1D8A033E-,33E | ,=RN1 |
| | | | | |
| RT | , | 1,TRIMMER | ,2HLB004K7,4K7 | , |
| | | | | |
| C | , | 1,ELLYT | ,381S022U-,22U | , |
| C | , | 2,PLAQ | ,31-B022N-,22N | , |
| C | , | 3,PLAQ | ,31-B022N-,22N | , |
| C | , | 4,PLAQ | ,31-B022N-,22N | , |
| C | , | 5,PLAQ | ,31-B022N-,22N | , |
| C | , | 6,PLAQ | ,31-B022N-,22N | , |
| C | , | 7,PLAQ | ,31-B022N-,22N | , |
| C | , | 8,PLAQ | ,31-B022N-,22N | , |
| C | , | 9,PLAQ | ,31-B022N-,22N | , |
| C | , | 10,ELLYT | ,381S022U-,22U | , |
| C | , | 11,ELLYT | ,381S001U0,1U | , |
| C | , | 12,PLAQ | ,31-A047P-,47P | , |
| C | , | 13,PLAQ | ,31-A068P-,68P | , |
| C | , | 14,MKT | ,34-B100N-,100N | , |
| C | , | 15,PLAQ | ,31-A150P-,150P | , |

C , 16,PLAQ ,31-B022N-,22N ,
 C , 17,PLAQ ,31-B001N-,1N ,
 C , 18,MKT ,34-B100N-,100N ,
 C , 19,PLAQ ,31-B022N-,22N ,
 C , 20,PLAQ ,31-B022N-,22N ,
 C , 21,PLAQ ,31-B001N-,1N ,
 C , 22,ELLYT ,381S022U-,22U ,
 C , 23,MKT ,34-B010N-,10N ,

 IC , 1,HCTMOS ,64-HCT74-,74HCT74 ,
 IC , 2,HCTMOS ,64-HCT02-,74HCT02 ,
 IC , 3,HCTMOS ,65HCT4040,74HCT4040 ,
 IC , 4,HCTMOS ,65-HCT163,74HCT163 ,
 IC , 5,HCTMOS ,64-HCT74-,74HCT74 ,
 IC , 6,HCTMOS ,64-HCT00-,74HCT00 ,
 IC , 7,HCTMOS ,65-HCT175,74HCT175 ,
 IC , 8,HCTMOS ,65-HCT163,74HCT163 ,
 IC , 9,HCTMOS ,65HCT4046,74HCT4046 ,
 IC , 10,LINEAR ,72-LM-358,LM358 ,
 IC , 11,ACIA ,8-ACIA-63,63B50 ,
 IC , 12,HCTMOS ,64-HCT32-,74HCT32 ,
 IC , 13,HCTMOS ,64-HCT74-,74HCT74 ,
 IC , 15,LINEAR ,72-LM-339,LM339 ,
 IC , 17,TTL LS ,67-LS240-,74LS240 ,
 IC , 18,HCTMOS ,65-HCT374,74HCT374 ,
 IC , 19,HCTMOS ,64-HCT11-,74HCT11 ,
 IC , 20,DRIVER ,333075151,75151 ,
 IC , 21,HCTMOS ,65-HCT138,74HCT138 ,
 IC , 22,HCTMOS ,65-HCT245,74HCT245 ,
 IC , 23,HCTMOS ,64-HCT00-,74HCT00 ,
 IC , 24,HCTMOS ,64-HCT86-,74HCT86 ,
 IC , 25,TTL LS ,67-LS174-,74LS174 ,
 IC , 26,TTL LS ,67-LS395-,74LS395 ,
 IC , 27,HCTMOS ,64-HCT02-,74HCT02 ,
 IC , 28,HCTMOS ,64-HCT32-,74HCT32 ,
 IC , 29,SPECIAL,72-26LS32,AM26LS32 ,

 D , 1,DIODE ,4D-1N4148,1N4148 ,
 D , 2,DIODE ,4D-1N4148,1N4148 ,

 Q , 1,TRANS ,5-BC557B-,BC 558B ,

 T , 1,JACK ,C-JACK-04,SRBRBR ,=CN1
 T , 2,JACK ,C-JACK-04,SRBRBR ,=CN2
 T , 3,D-SUB ,C-DSUB-09,9POL HUN ,=CN3

 J , 1,PIN ,CHD12-20P,20P-2MP LIGE ,

 ICJ, 14,IC-SOKL,C-ICSOK40,40 PIN DIL ,
 ICJ, 16,IC-SOKL,C-ICSOK20,20 PIN DIL ,

 W , 1,KABEL ,FLAD-D0W-,40POL/80MM ,
 W , 9,KABEL ,FLAD-TC03,20POL/120MM ,

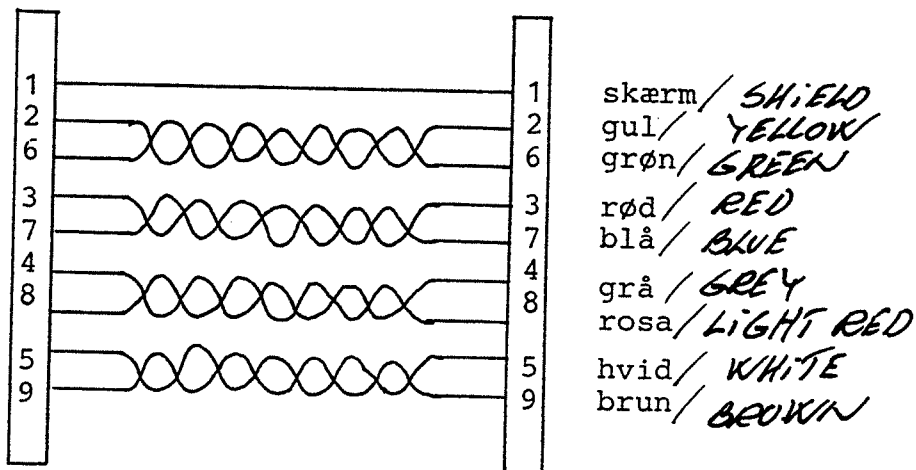
 PCB, 1,PRINT ,PCB2971-A,FATR F/2290 ,

SPECIFICATION :

STSA - DATAKABEL 2290 stereosampling / CABLE STSA

| pin | farve | funktion |
|-----|------------------|-------------|
| 1 | skærm / SHIELD | |
| 2 | gul / YELLOW | trig line * |
| 3 | rød / RED | data line |
| 4 | grå / GREY | clk line * |
| 5 | hvid / WHITE | com line * |
| 6 | grøn / GREEN | trig line |
| 7 | blå / BLUE | data line * |
| 8 | rosa / LIGHT RED | clk line |
| 9 | brun / BROWN | com line |

Wiring diagram



T.C.ELECTRONIC of DENMARK
 06-262800

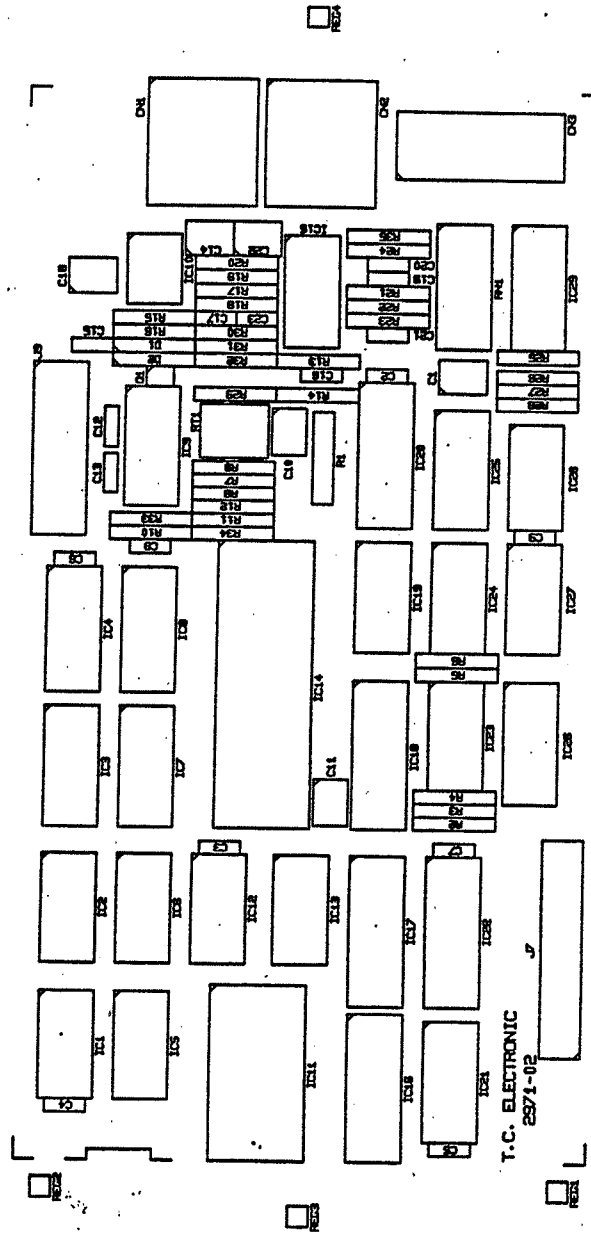
871221-JF

CAD - PRINT A/S

_JOB_Nr_ P1852

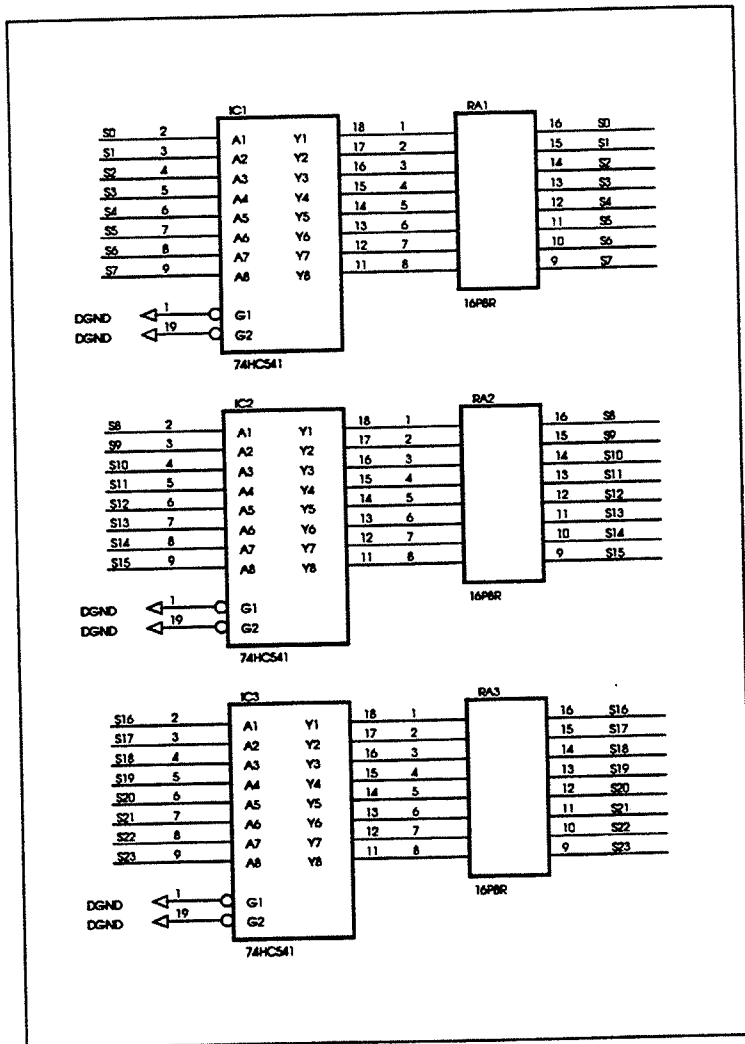
KUNDE T.C.ELECTRONIC

DATO (Y-M-D) 87-08-17



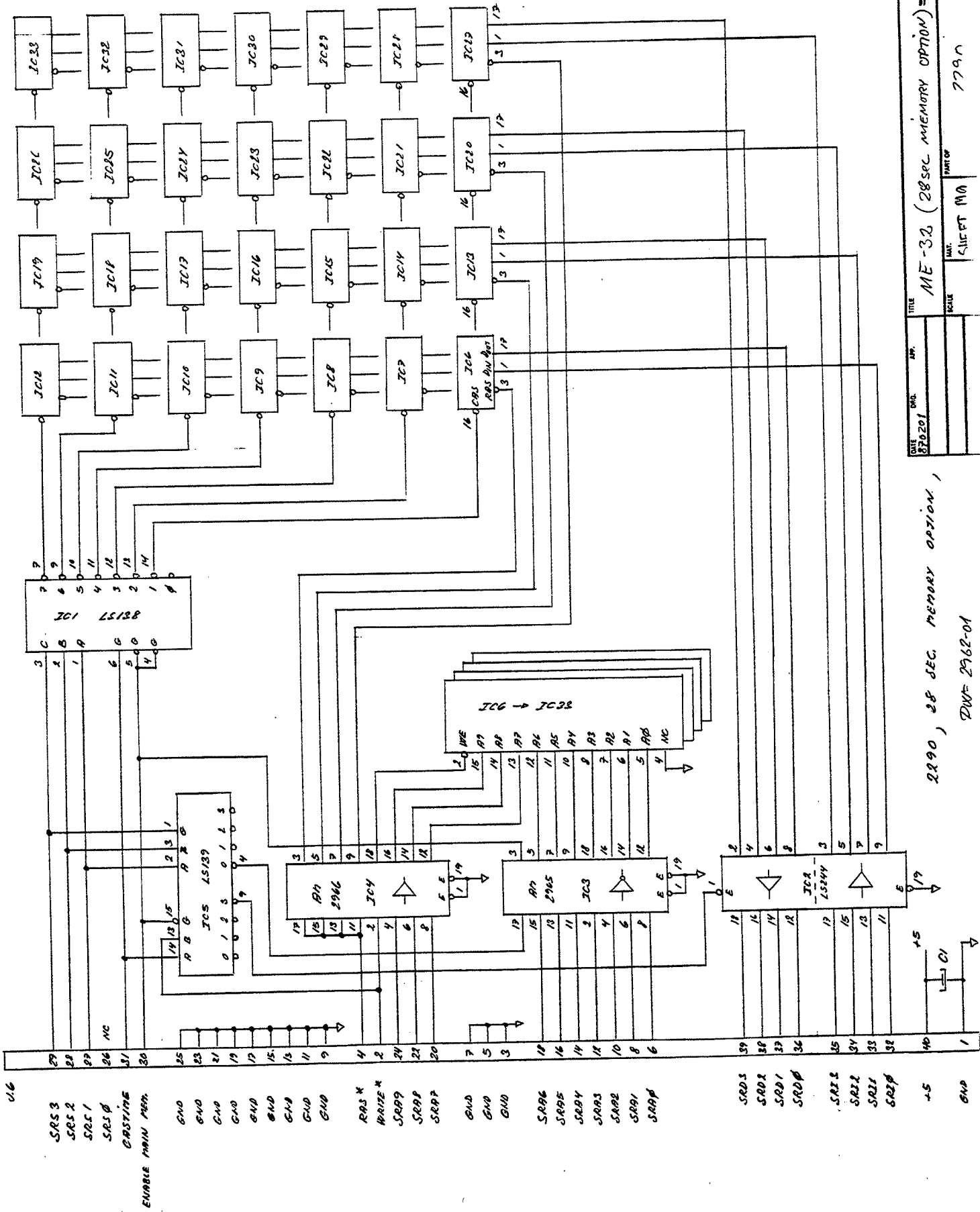
SERVICE MANUAL

ME XX MEMORY EXPANSION



OF DENMARK
t.c. electronic

Grimhøjvej 3
8220 Brabrand
DK Denmark
Phone +45 86262800
Fax +45 86262928



| | | | | | | |
|----------|----------|------|-------------------------------------|-------|----------------|---------|
| DATE | DWG. NO. | REV. | TITLE | SCALE | MAT. SHEET NO. | PART OF |
| 07/20/61 | 2962-01 | | ME-32 (28 SEC MEMORY OPTION) = ME00 | | 7790 | |

2890, 28 SEC. MEMORY OPTION,
DWG 2962-01

2962-01
t.c. electron

PARTSLIST ME32-01, MEMORY EXPANSION:

 PL-, NO-, TYPE---, TCKODE---, KOMPONENT----, TXT-----

| | | | | |
|----|---|------------|------------------------|-----|
| C | , | 1, ELLYT | , 381S100-U, 100uF/16V | , * |
| C | , | 2, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 3, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 4, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 5, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 6, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 7, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 8, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 9, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 10, PLAQ | , 31-B022N-, 22nF | , |
| | | | | |
| C | , | 11, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 12, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 13, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 14, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 15, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 16, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 17, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 18, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 19, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 20, PLAQ | , 31-B022N-, 22nF | , |
| | | | | |
| C | , | 21, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 22, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 23, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 24, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 25, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 26, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 27, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 28, | , | , |
| C | , | 29, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 30, PLAQ | , 31-B022N-, 22nF | , |
| | | | | |
| C | , | 31, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 32, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 33, PLAQ | , 31-B022N-, 22nF | , |
| C | , | 34, PLAQ | , 31-B022N-, 22nF | , |
| | | | | |
| IC | , | 1, TTL | , 67-LS138-, 74LS138 | , |
| IC | , | 2, TTL | , 67-LS244-, 74LS244 | , |
| IC | , | 3, DRIVER | , 72-AM2965, AM2965 | , |
| IC | , | 4, DRIVER | , 72-AM2966, AM2966 | , |
| IC | , | 5, TTL | , 67-LS139-, 74LS139 | , |
| | | | | |
| IC | , | 11, DYNRAM | , 8-DY1024-, 1M/120nS | , |
| IC | , | 12, DYNRAM | , 8-DY1024-, 1M/120nS | , |
| IC | , | 13, DYNRAM | , 8-DY1024-, 1M/120nS | , |
| IC | , | 14, DYNRAM | , 8-DY1024-, 1M/120nS | , |
| IC | , | 15, DYNRAM | , 8-DY1024-, 1M/120nS | , |
| IC | , | 16, DYNRAM | , 8-DY1024-, 1M/120nS | , |
| IC | , | 17, DYNRAM | , 8-DY1024-, 1M/120nS | , |
| IC | , | 18, DYNRAM | , 8-DY1024-, 1M/120nS | , |
| IC | , | 19, DYNRAM | , 8-DY1024-, 1M/120nS | , |
| IC | , | 20, DYNRAM | , 8-DY1024-, 1M/120nS | , |
| | | | | |
| IC | , | 21, DYNRAM | , 8-DY1024-, 1M/120nS | , |

IC , 22, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 23, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 24, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 25, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 26, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 27, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 28, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 29, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 30, DYNRAM , 8-DY1024-, 1M/120nS ,

 IC , 31, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 32, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 33, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 34, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 35, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 36, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 37, DYNRAM , 8-DY1024-, 1M/120nS ,
 IC , 38, DYNRAM , 8-DY1024-, 1M/120nS ,

 ICJ, 1, SOKKEL , C-ICSOK16, 16 PIN ,
 ICJ, 2, SOKKEL , C-ICSOK20, 20 PIN ,
 ICJ, 3, SOKKEL , C-ICSOK20, 20 PIN ,
 ICJ, 4, SOKKEL , C-ICSOK20, 20 PIN ,
 ICJ, 5, SOKKEL , C-ICSOK16, 16 PIN ,

 ICJ, 11, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 12, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 13, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 14, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 15, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 16, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 17, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 18, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 19, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 20, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 21, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 22, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 23, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 24, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 25, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 26, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 27, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 28, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 29, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 30, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 31, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 32, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 33, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 34, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 35, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 36, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 37, SOKKEL , C-ICSOK18, 18 PIN ,
 ICJ, 38, SOKKEL , C-ICSOK18, 18 PIN ,

 J , 20, STIK , FLAD-DOW-, 40 PQL 80MM ,

 PCB, 1, PRINT , PCB2962-1, TC-2962 ,

| SYMBOL | TOOL NO. | SIZE | COUNT | NP |
|--------|----------|------|-------|----|
| | - T1 | 0.6 | 240 | |
| A | - T2 | 0.8 | 656 | |
| B | - T3 | 1.0 | 2 | |
| C | - T4 | 3.0 | 4 | |
| D | - T5 | 3.2 | 1 | |
| E | - T6 | 3.5 | 4 | |
| F | - T7 | 4.1 | 1 | |

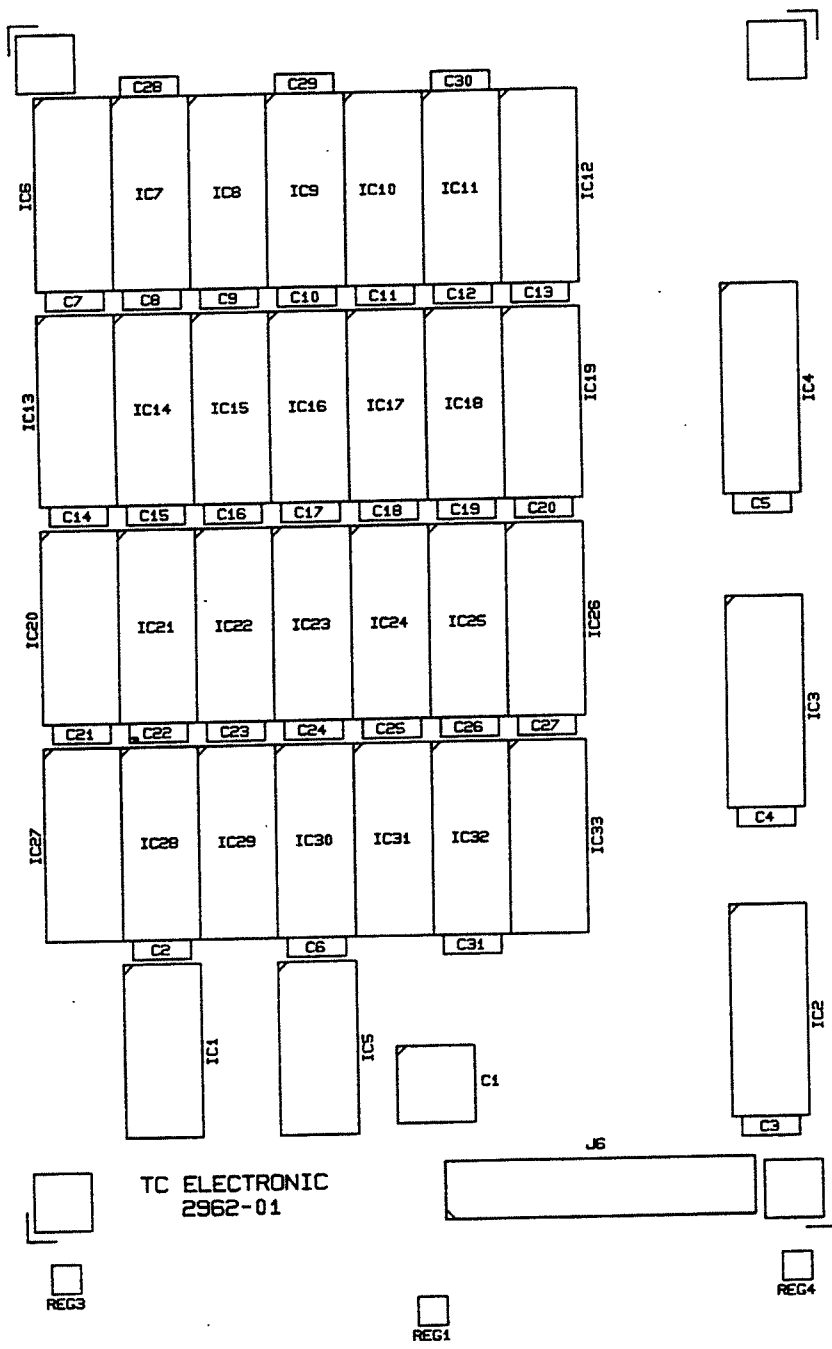
CAD - PRINT A/S

| | | |
|------------------|-------------------------|--------------------------|
| JOB NR: P1754 | KUNDE T.C.ELECTRONIC | DATE (Y-M-D) 87 02 10 |
|------------------|-------------------------|--------------------------|

TC-2962-01

REG2

TC 2962.-01



TC ELECTRONIC
2962-01

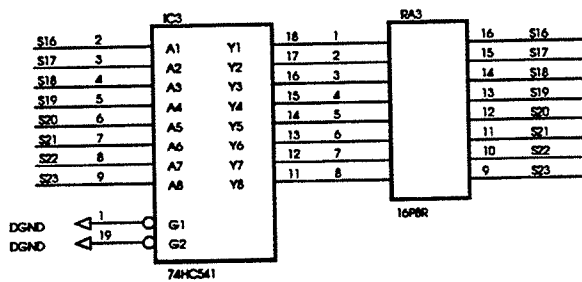
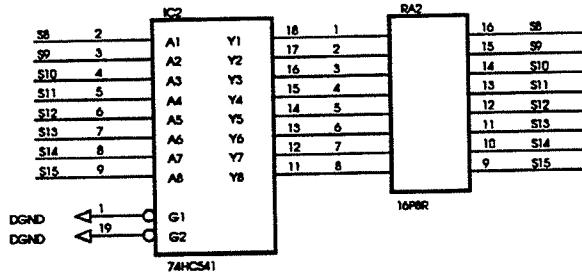
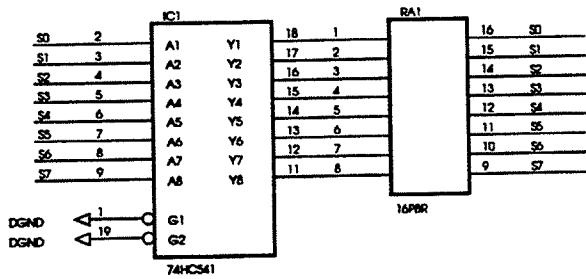
REG3

REG1

REG4

SA02

DUAL HEAD OPTION

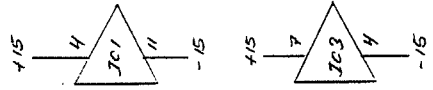
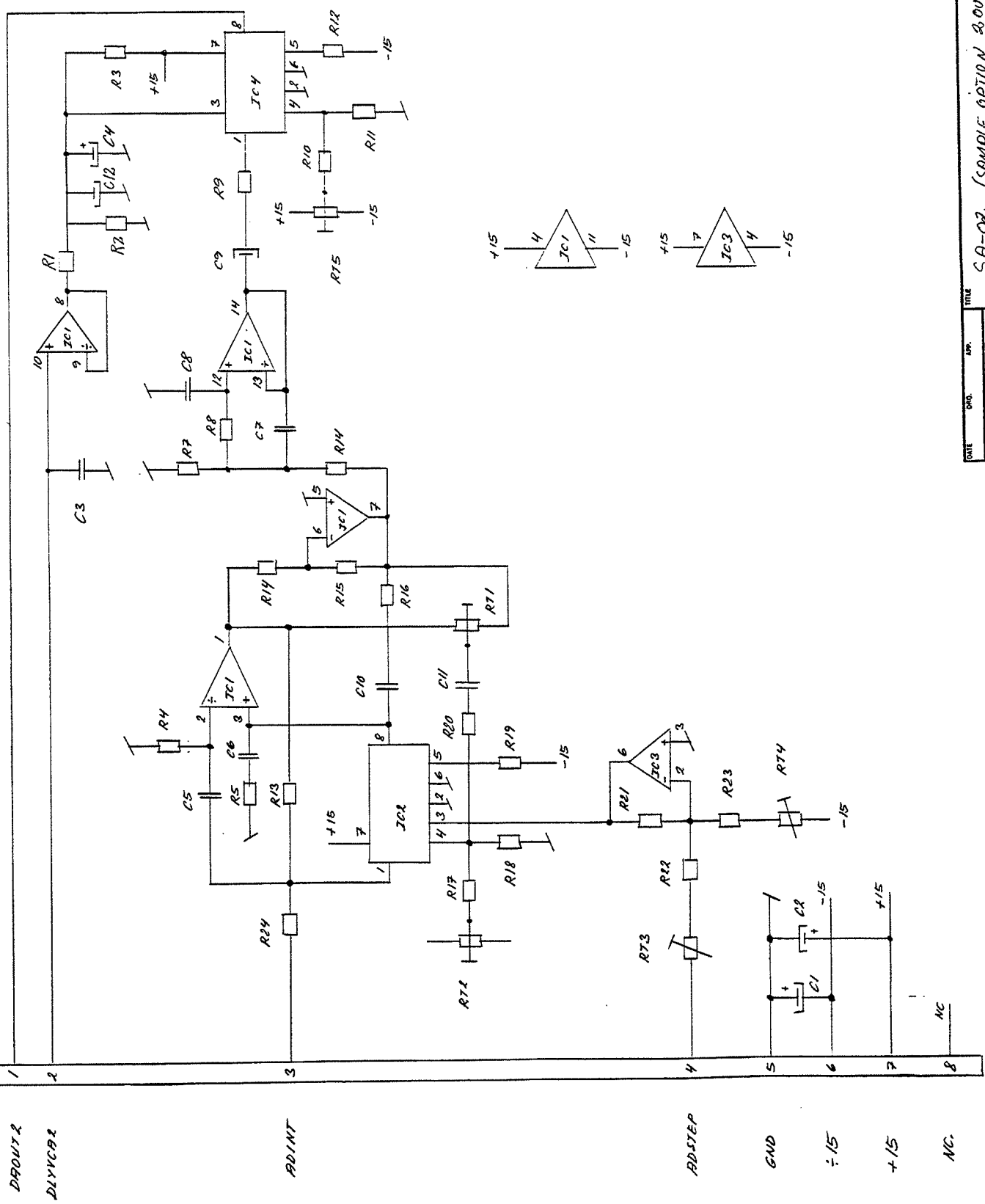


SERVICE
MANUAL

OF DENMARK
t.c. electronic

Grimhøjvej 3
8220 Brabrand
DK Denmark
Phone +45 86262800
Fax +45 86262928

U.S.



DRONT 2
 DLYCR2
 ADINT
 ADSTEP
 GND
 +15
 +15
 NC

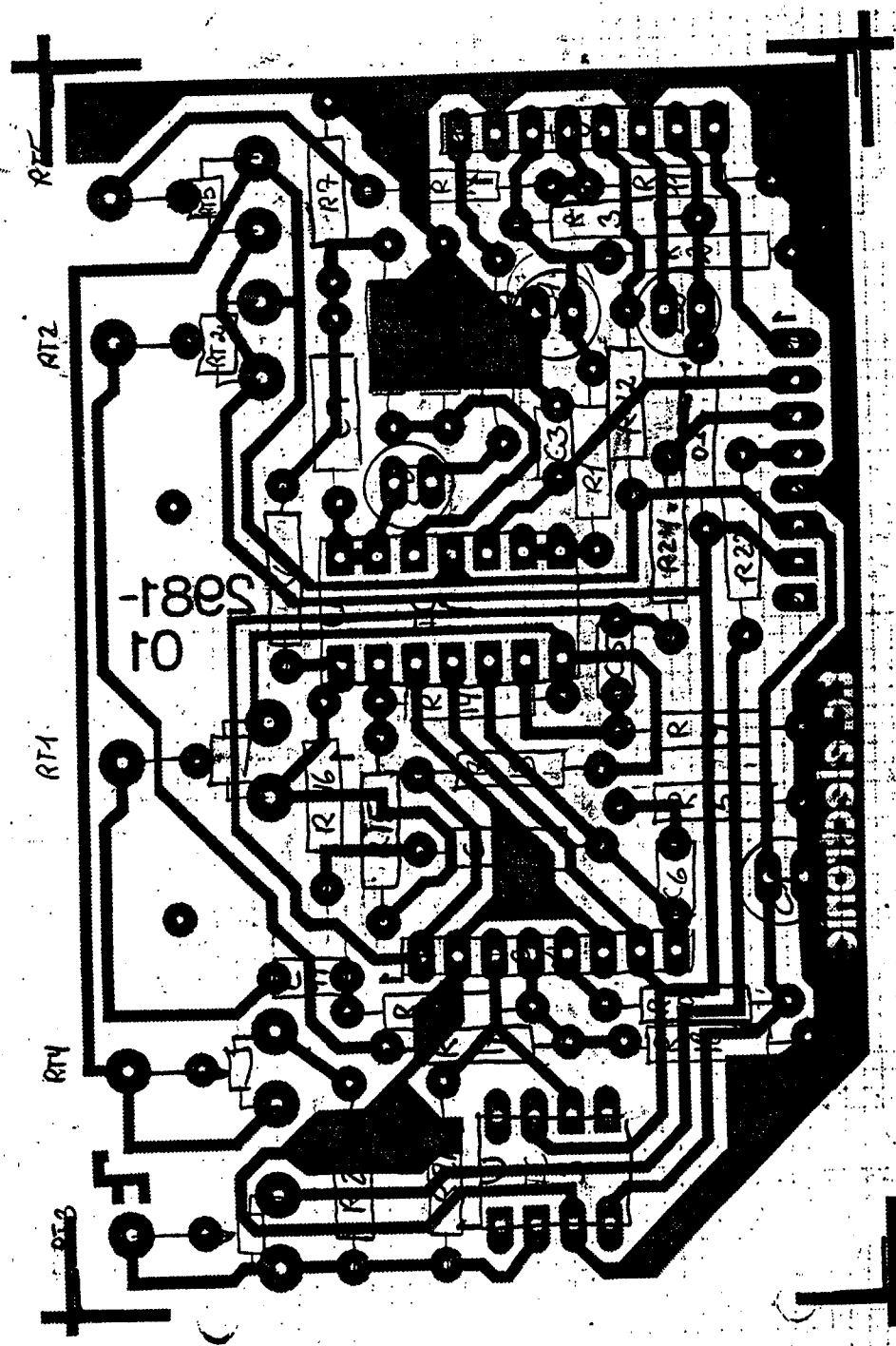
| | | | |
|--------|----------|--------------------------------|-----------------|
| DATE | DRG. NO. | TITLE | DRG. NO. |
| 870302 | 871116 | SA-02 (SAMPLE OPTION 2 OUTPUT) | 2981-1 |
| JF | JF | SCALE | OF DRAWING |
| 1/58 | 1/58 | SHEET 52 | 2290 |
| | | | t.c. electronic |

PARTSLIST 2981-01, SA-02 OPTION:

| PL- | NO- | TYPE--- | TCKODE--- | KOMPONENT---- | TXT----- |
|-----|-----|---------|------------|---------------|----------|
| R | 1 | MODST | ,1%B001K21 | ,1K21 | 1% |
| R | 2 | MODST | ,1%A105E-- | ,105E | 1% |
| R | 3 | MODST | ,1%B005K36 | ,5K36 | 1% |
| R | 4 | MODST | ,1B5%010K- | ,10K | 5% |
| R | 5 | MODST | ,1B5%003K3 | ,3K3 | 5% |
| R | 6 | MODST | ,1%B017K8- | ,17K8 | 1% |
| R | 7 | MODST | ,1%B017K8- | ,17K8 | 1% |
| R | 8 | MODST | ,1%B012K1- | ,12K1 | 1% |
| R | 9 | MODST | ,1%B006K81 | ,6K81 | 1% |
| R | 10 | MODST | ,1B5%330K- | ,330K | |
| R | 11 | MODST | ,1A5%047E- | ,47E | |
| R | 12 | MODST | ,1B5%004K3 | ,4K3 | |
| R | 13 | MODST | ,1%B031K6- | ,31K6 | 1% |
| R | 14 | MODST | ,1%B010K0- | ,10K0 | 1% |
| R | 15 | MODST | ,1%B010K0- | ,10K0 | 1% |
| R | 16 | MODST | ,1%B012K1- | ,12K1 | 1% |
| R | 17 | MODST | ,1B5%470K- | ,470K | 5% |
| R | 18 | MODST | ,1A5%047E- | ,47R | 5% |
| R | 19 | MODST | ,1B5%003K9 | ,3K9 | 5% |
| R | 20 | MODST | ,1B5%100K- | ,100K | 5% |
| R | 21 | MODST | ,1B5%001K0 | ,1K0 | 5% |
| R | 22 | MODST | ,1B5%047K- | ,47K | 5% |
| R | 23 | MODST | ,1B5%100K- | ,100K | 5% |
| R | 24 | MODST | ,1%B010K0- | ,10K0 | 1% |
| RT | 1 | TRIMMER | ,2HLB047K- | ,47K | HOR-L |
| RT | 2 | TRIMMER | ,2HLB047K- | ,47K | HOR-L |
| RT | 3 | TRIMMER | ,2HLB010K- | ,10K | HOR-L |
| RT | 4 | TRIMMER | ,2HLB022K- | ,22K | HOR-L |
| RT | 5 | TRIMMER | ,2HLB047K- | ,47K | HOR-L |
| C | 1 | ELLYT | ,381S010U- | ,10U | ,1E |
| C | 2 | ELLYT | ,381S010U- | ,10U | ,1E |
| C | 3 | PLAQ | ,31-B022N- | ,22N | ,2E |
| C | 4 | ELLYT | ,381S004U7 | ,4U7 35V | *,1E |
| C | 5 | PLAQ | ,31-A015P- | ,15P | ,2E |
| C | 6 | PLAQ | ,31-A150P- | ,150P | ,2E |
| C | 7 | STYRD | ,32-B001N5 | ,1N5 | 1% ,5E |
| C | 8 | STYRD | ,32-A470P- | ,470P | 1% ,5E |
| C | 9 | ELLYT | ,381S022U- | ,22U 16V | ,1E |
| C | 10 | STYRD | ,32-B002N2 | ,2N2 | 1% ,5E |
| C | 11 | PLAQ | ,31-A220P- | ,220P | ,2E |
| C | 12 | ELLYT | ,381S022U- | ,22U 16V | *,1E |
| IC | 1 | LINEAR | ,72-TL-074 | ,TL074 | |
| IC | 2 | SPECIAL | ,7-DBX2150 | ,DBX2150A | |
| IC | 3 | LINEAR | ,72-LM-741 | ,741 | |
| IC | 4 | LINEAR | ,7-DBX2150 | ,DBX 2150-A | |
| IC | 5 | EPROM | ,8-EPR256K | ,32Kx8 150nS | |
| J | 8 | SILSTIK | ,CFS-08POL | ,8 POL FP | |

PJ , 1,LUS ,19-LUS-00,0E MODSTAND ,
PCB, 1,PRINT ,PCB2981-1,TC 2981 ,
MP , 1,STAG ,K-STØTTE2,15MM ,
MP , 2,STAG ,K-STØTTE2,15MM ,

2981-1



101.6 mm