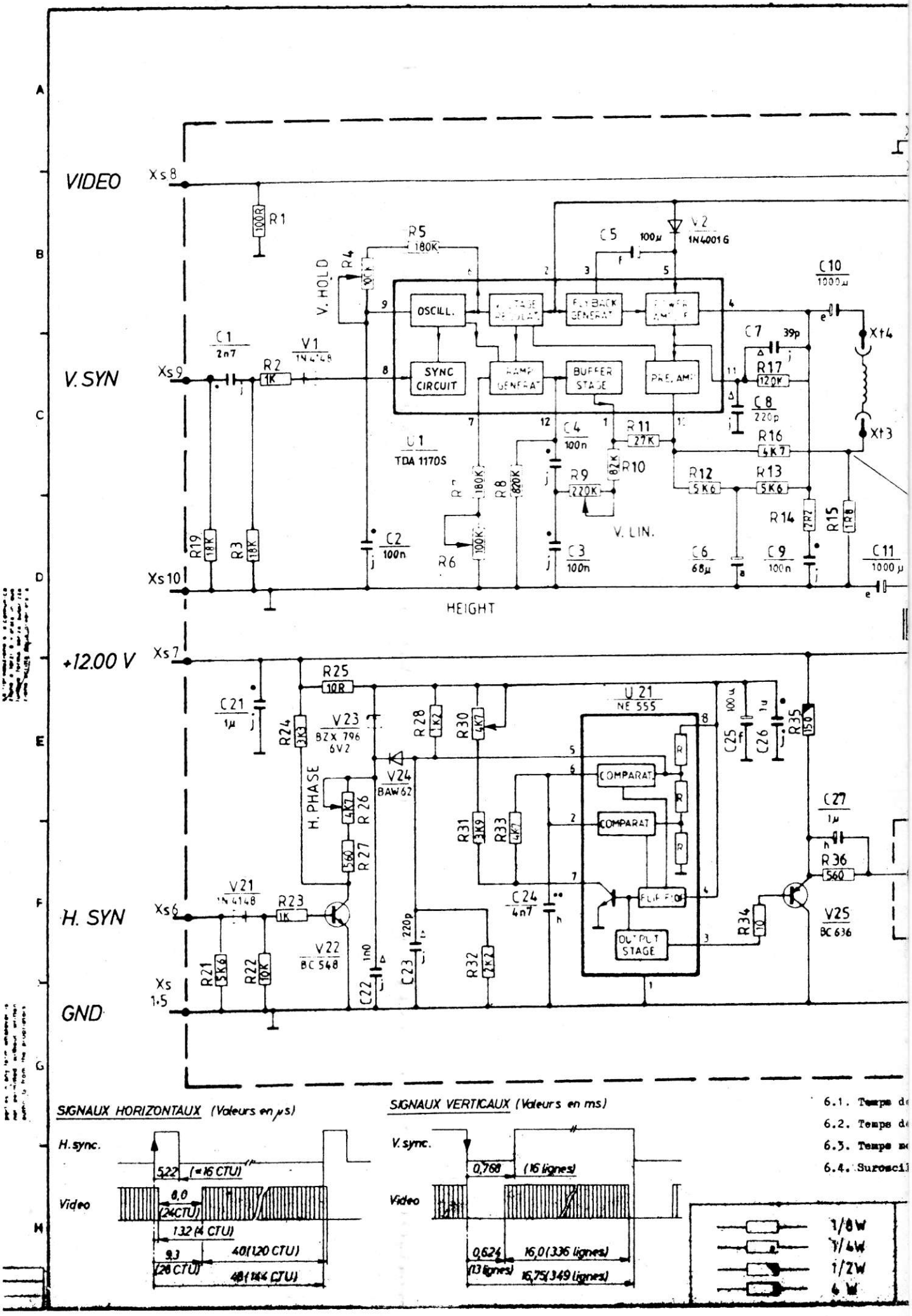
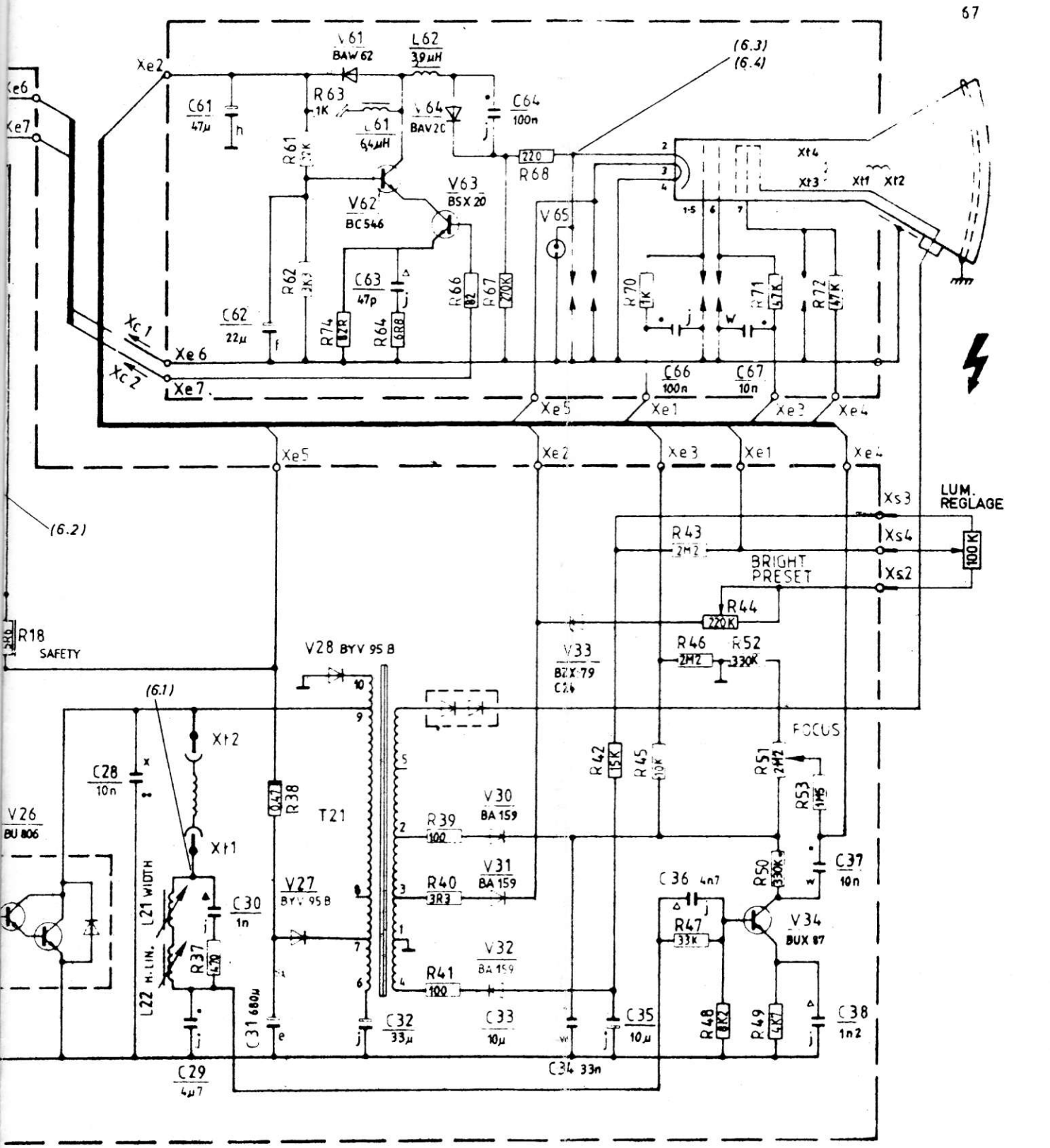
SCHEMAS ELECTRIQUES

HS- 220	CRT	PH-1201
HS- 224	CLAVIER	HTE-20032
HS- 225	OPTION MEMOIRE	HTE-20034
HS- 226	INTERFACE SERIE RS-232	HTE-20036
HS- 227	CONTROLEUR MFD 3½"	HTE-20038
HS- 230	CPU	HTE-20044
HS- 231	CONTROLEUR IMPRIMANTE	HTE-20044
HS- 232	ALIMENTATION	HTE-20046
TEC-0101	CIRCUIT FLOPPY 2½"	SY-SBP004105
TEC-0241 01	CIRCUIT FLOPPY 3½"	SBP 074101

LEVEL
A


VIDEO
Xs8
R1
100R
R5
180K
V. HOLD
R4
C5
100µ
V2
1N4001G
C10
1000µ
OSCILL.
FLYBACK GENERAT
POWER AMPLIF
C7
39p
Xt4
C1
2n7
V1
1N4148
R2
1K
V. SYN
Xs9
SYNC CIRCUIT
RAMP GENERAT
BUFFER STAGE
PRE. AMP
R17
120K
C8
220p
Xt3
U1
TDA 1170S
C4
100n
R11
27K
R16
4K7
R10
82K
R9
220K
R12
5K6
R13
5K6
R14
7R2
R15
1R8
V. LIN.
R19
18K
R3
18K
C2
100n
R6
100K
C3
100n
C6
68µ
C9
100n
C11
1000µ
Xs10
HEIGHT
+12.00 V
Xs7
R25
10R
C21
1µ
R24
3K3
V23
BZX 796 6V2
R28
1K2
R30
4K7
U21
NE 555
C25
100µ
C26
1µ
R35
150
V24
BAW62
H. PHASE
R26
4K7
R27
560
COMPARAT
COMPARAT
R31
3K9
R33
4K7
C27
1µ
R36
560
V21
1N4148
R23
1K
H. SYN
Xs6
C24
4n7
FLIP FLOP
OUTPUT STAGE
R34
10
V25
BC 636
V22
BC 548
220p
C23
R32
2K2
R21
5K6
R22
10K
C22
1n0
Xs 1.5
GND
SIGNAUX HORIZONTAUX (Valeurs en µs)
H. sync.
5,22 (=16 CTU)
Video
8,0 (24CTU)
1,32 (4 CTU)
9,3 (28 CTU)
40(120 CTU)
48(144 CTU)
SIGNAUX VERTICAUX (Valeurs en ms)
V. sync.
0,768 (16 lignes)
Video
0,624 (13 lignes)
16,0(336 lignes)
16,75(349 lignes)
6.1. Temps de
6.2. Temps de
6.3. Temps m
6.4. Suroscil
1/8W
1/4W
1/2W
1W



retour horizontal = 5,9 ± 0,3 µs

retour vertical = 360 ± 50 µs

ntés et descents sur le signal vidéo ≤ 18 ns (30 Vpp entre 10 et 90 %)

lation ≤ 10%

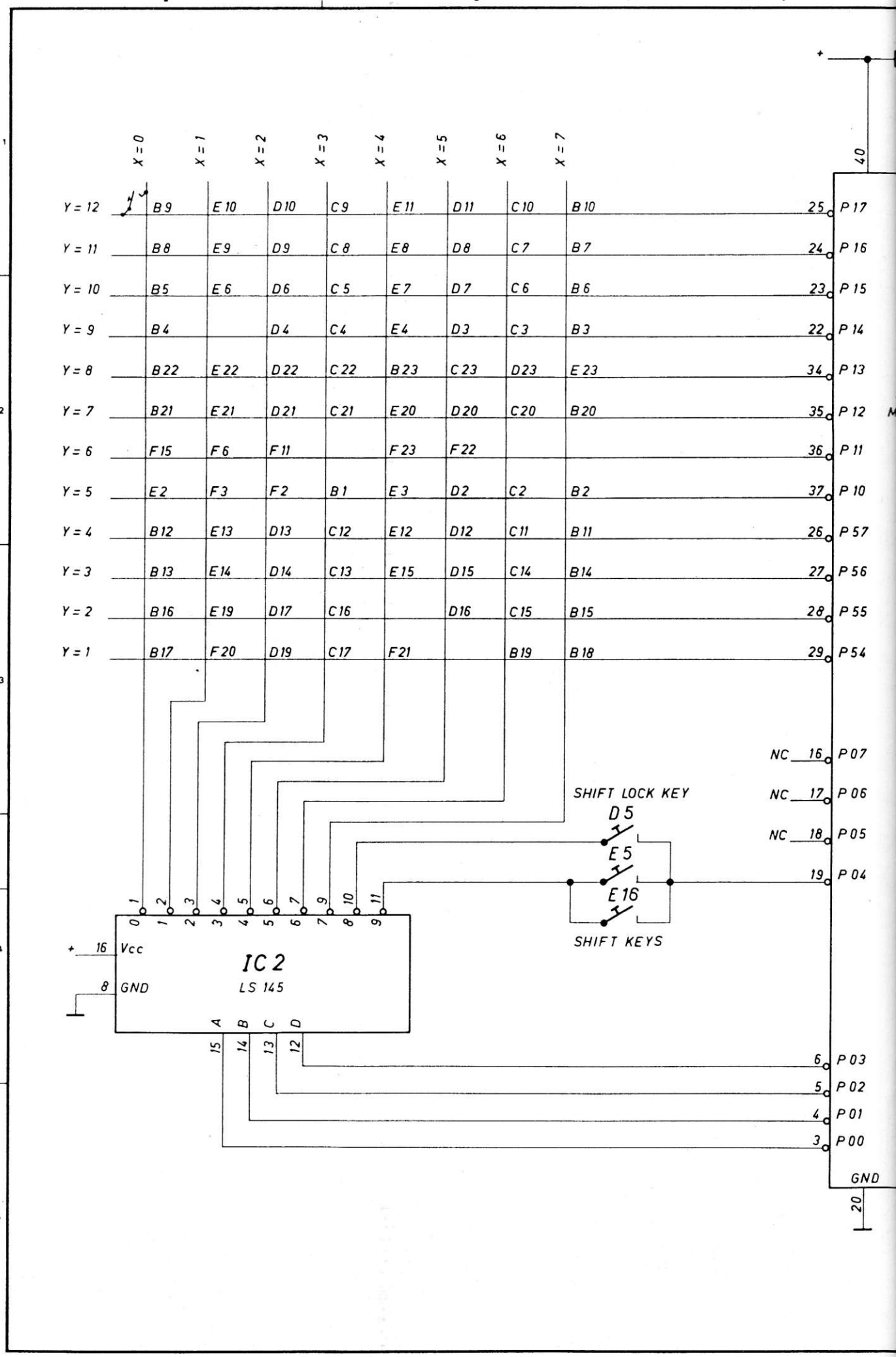
Schéma électrique **HS-220**

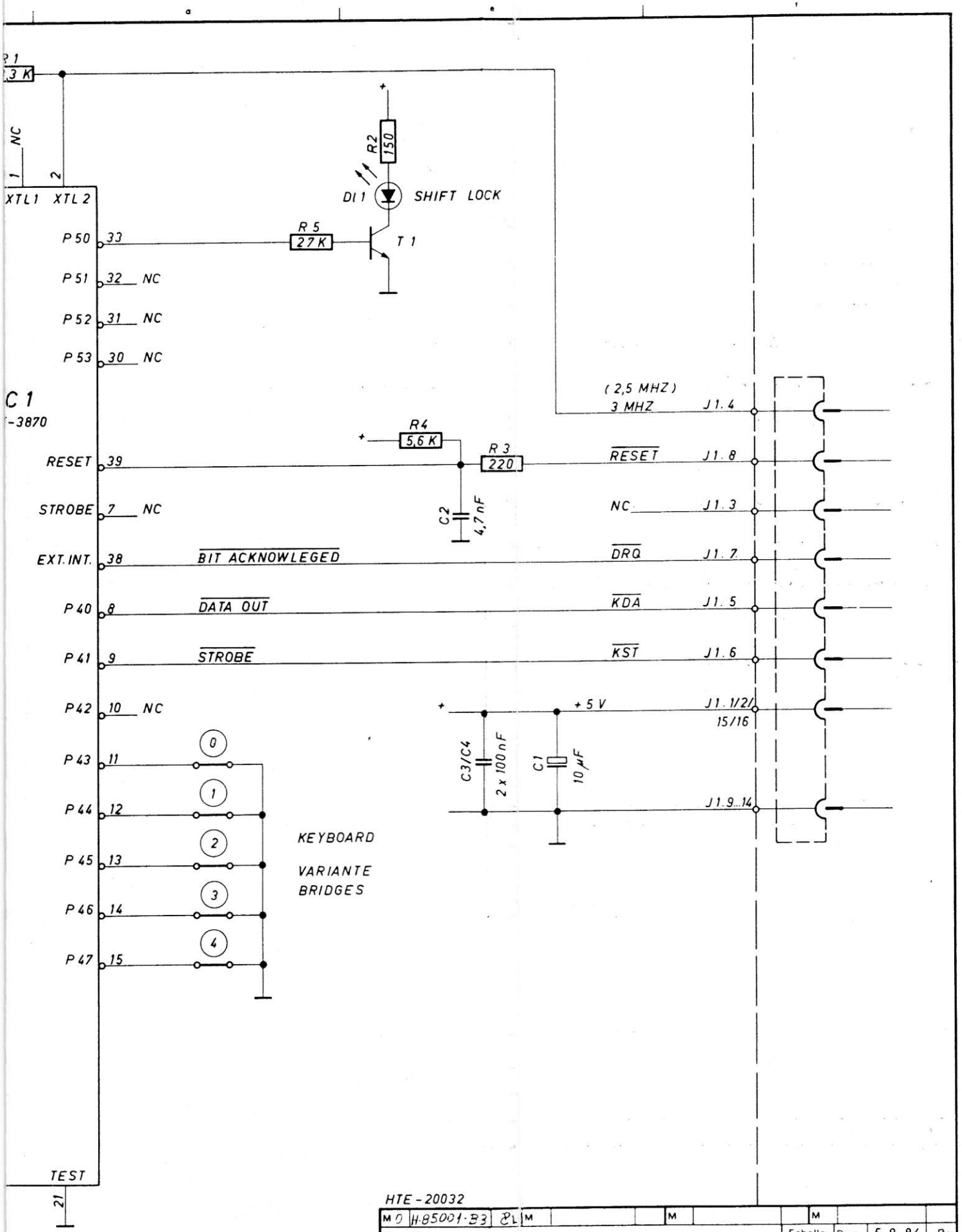
M1 H-84003-C4 (Moniteur pour tube cathodique AE-905-BC/BE)

HT-82

POLYESTER	e=16V f=25	MONITOR 12GP 20H	3119 208 89878
POLYPROFILENE	h=63V j=100	CIRCUIT DIAGRAM	
CERAMIC	w=630V x=1500V		
	z=6,3V		

Ce dessin remis confidentiellement ne peut être ni copié, ni communique sans notre consentement par écrit.
HERMES PRECISA INTERNATIONAL SA Yverdon-les-Bains et Ste-Croix





BC 237 B | T 1
CQY 54 | DI 1

HTE - 20032

M 0	H-85001-B3	8L	M	M	M
Trait, Recouvr.				Echelle	Dess 5.9.84
Matière:					Contr. 15.1.85
					NORY
Tolérances ⅄ = ± 0,05 □ = ± 0.1 △ = ± 0.2 ● = ± 0.5 × = resultante					Vu 21.1.85

HERMES PRECISA INTERNATIONAL SA

Schéma électrique
(Circ. clavier 60-61 HT-82)

HS-224

M0

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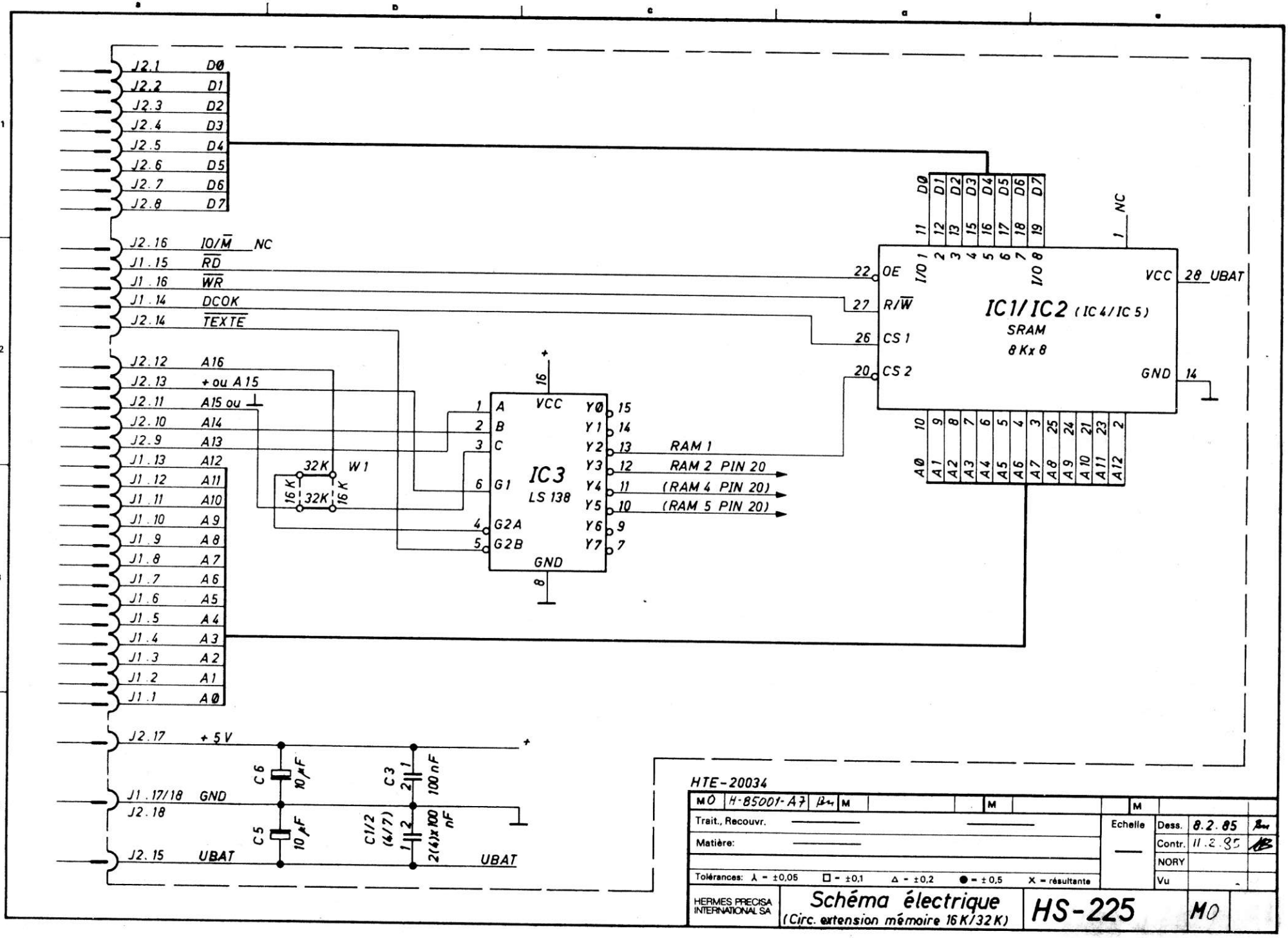
HERMES PRECISA INTERNATIONAL SA Yverdon-les-Bains et Ste-Croix



HTE-20034

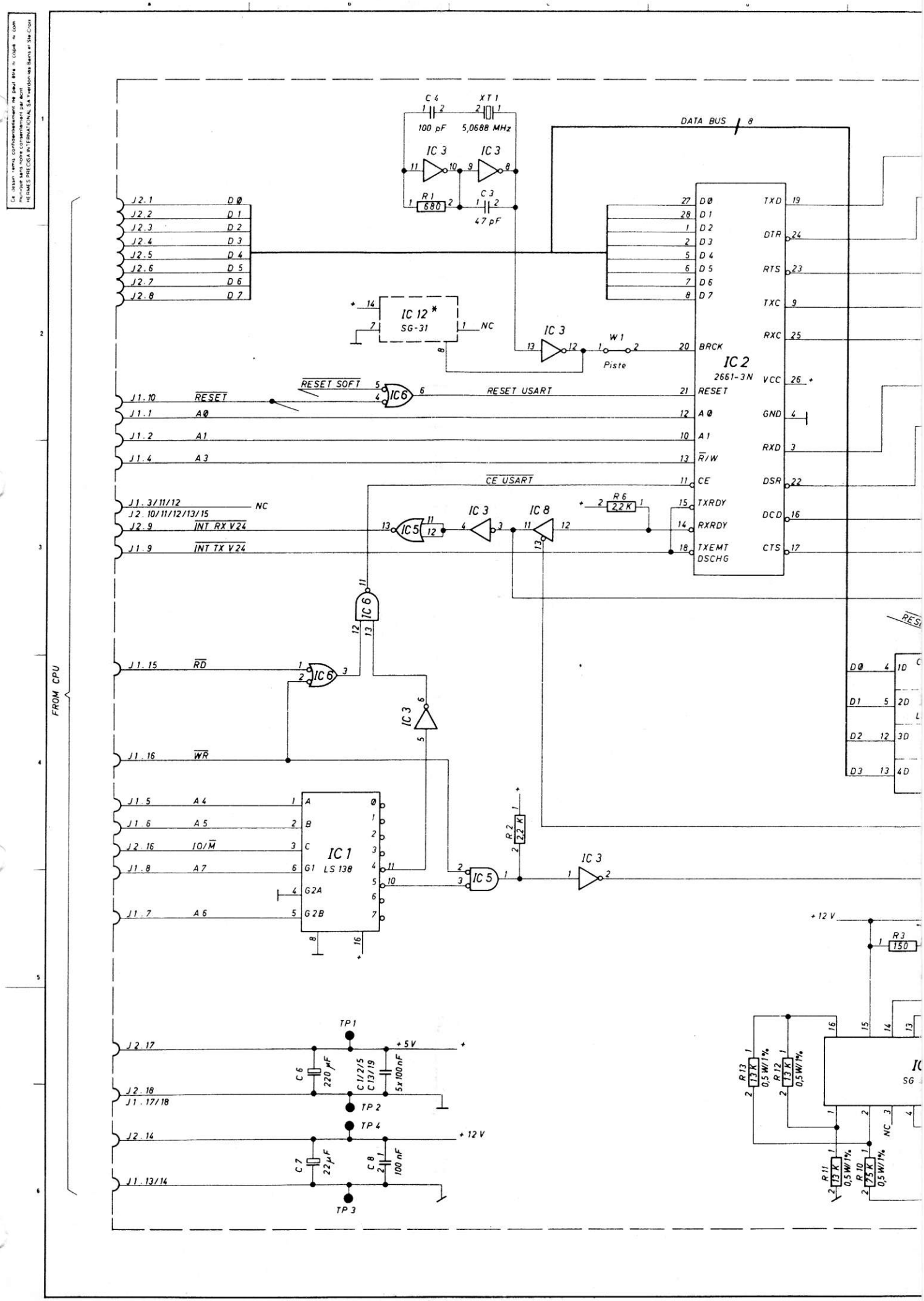
MO	H-85001-A7	M	M	M		
Trait., Recouvr.				Echelle	Dess.	8.2.85
Matière:					Contr.	11.2.85
					NORY	
Tolérances: λ = ±0,05	□ = ±0,1	Δ = ±0,2	● = ±0,5	X = résultante	Vu	

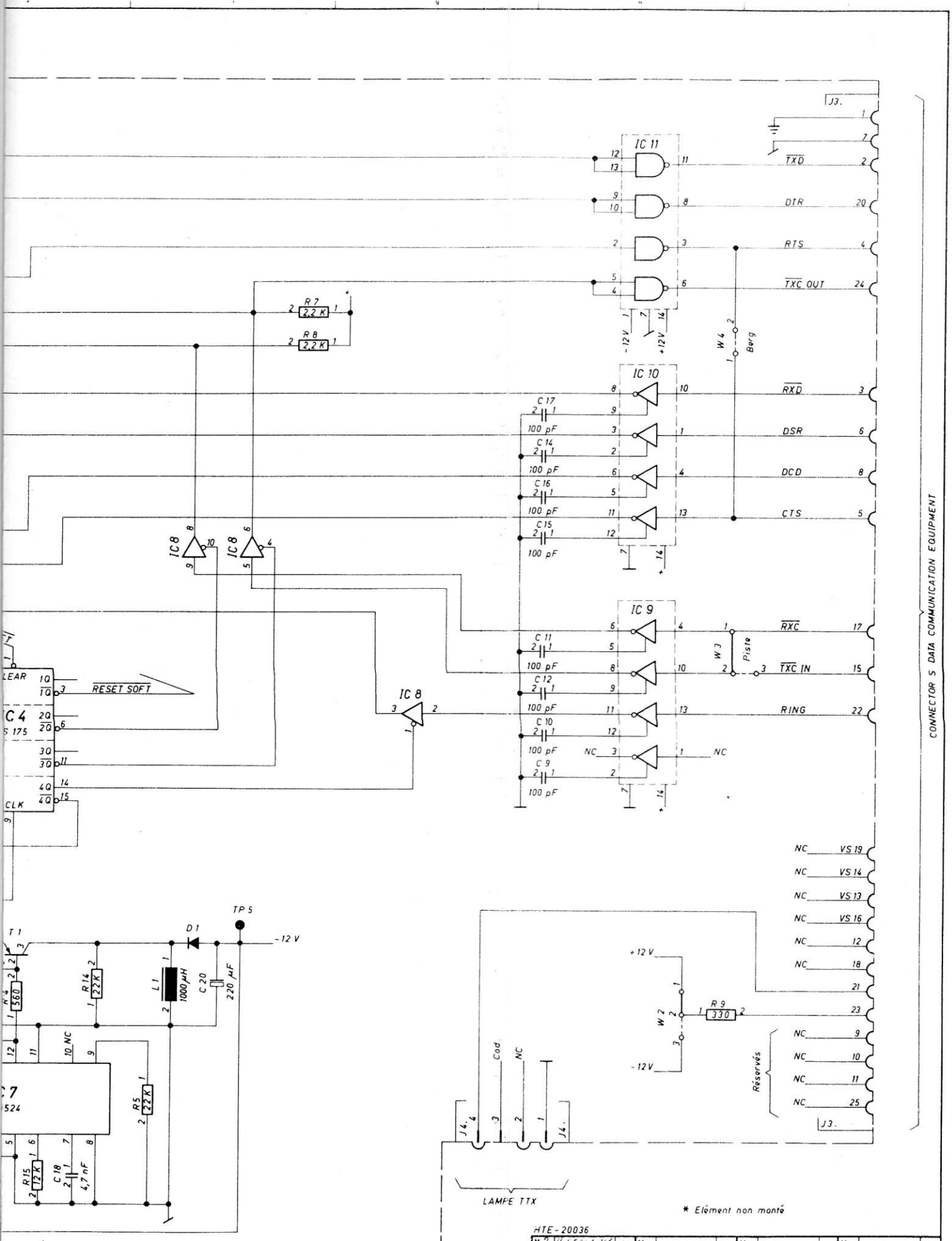
HERMES PRECISA INTERNATIONAL SA

Schéma électrique
(Circ. extension mémoire 16K/32K)

HS-225 MO

Ce dessin remis confidentiellement ne peut être ni copié ni communiqué sans notre consentement par écrit
HELIMES PRECISA INTERNATIONAL SA Yverdon-les-Bains et Ste-Croix





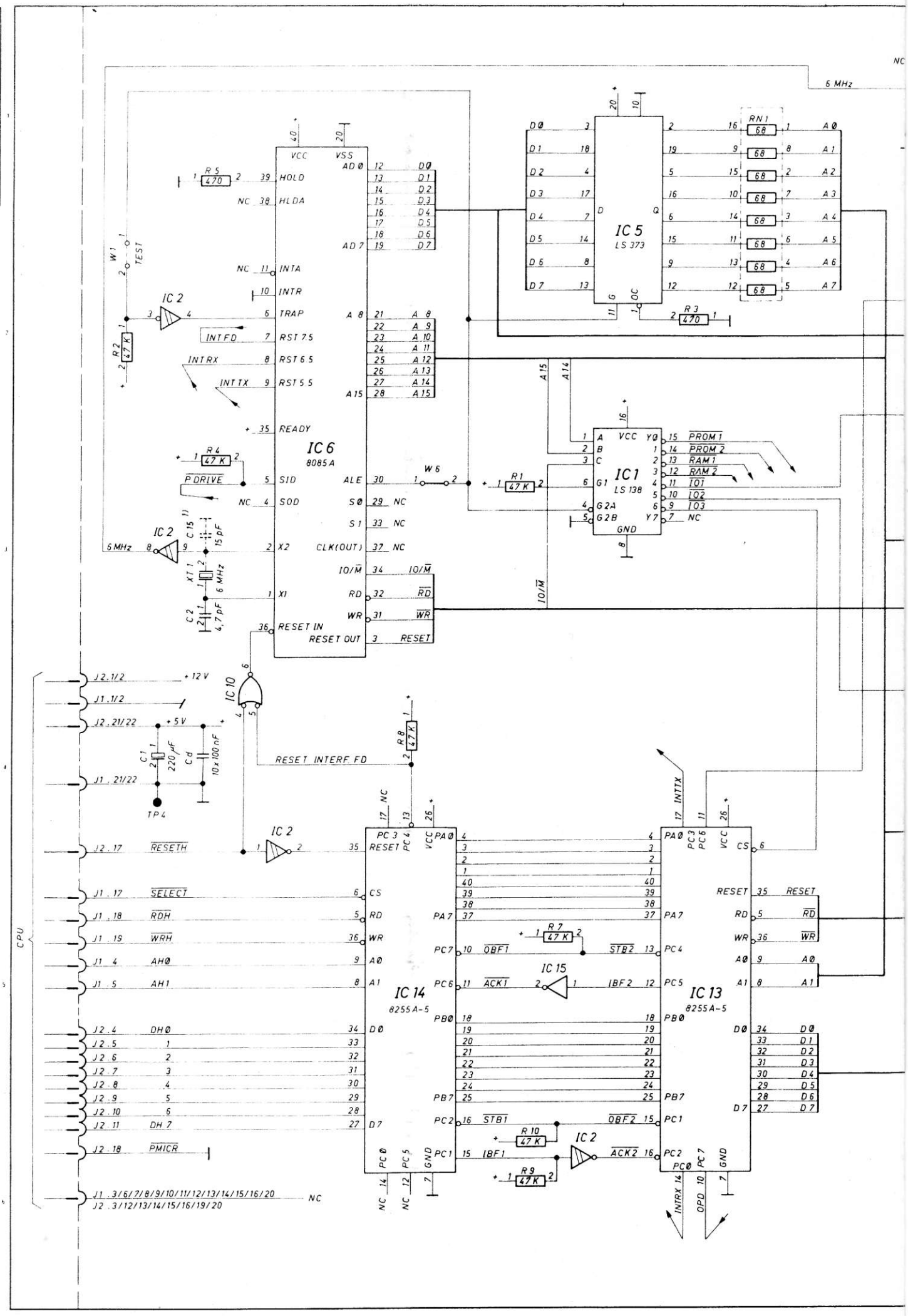
* Elément non monté

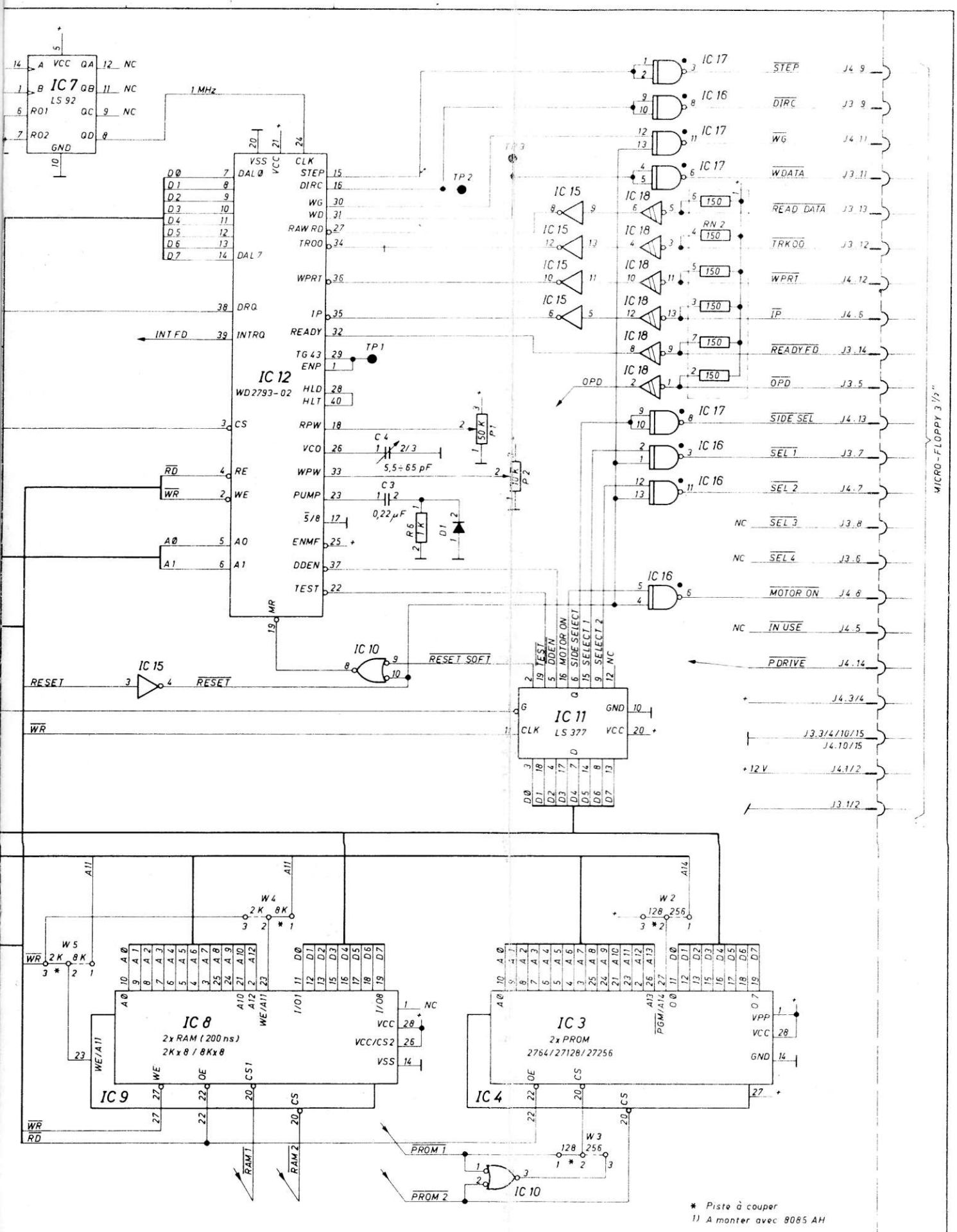
SN 74 LS 00	IC 6	SN 75189 A	IC 9 / IC 10
SN 74 LS 04	IC 3	MPS-A 56	T 1
SN 74 LS 33	IC 5	1 N 914	D 1
SN 74 LS 125	IC 8		
SN 75188	IC 11		

HTE-20036

M 2 H-ESCI-1-H6	Echelle	Dess.	28.6.85
Trait., Recouvr.		Contr.	4.7.85
Matière:		NORY	
Tolérances: Δ = ± 0,05 □ = ± 0,1 Δ = ± 0,2 ● = ± 0,5 × = résultante		Vu	

HERMES PRECISA INTERNATIONAL SA — Schéma électrique (Interface série RS-232 60-61 HT-821) — HS-226 — M2


IC 6
8085 A
VCC
VSS
HOLD
HLDA
INTA
INTR
TRAP
RST 7.5
RST 6.5
RST 5.5
READY
SID
SOD
X2
X1
RESET IN
RESET OUT
ALE
S0
S1
CLK(OUT)
IO/M
RD
WR
AD0
AD7
A8
A15
INTFD
INTRX
INTTX
PDRIVE
6 MHz
RESET INTERF. FD
IC 5
LS 373
IC 1
LS 138
PROM 1
PROM 2
RAM 1
RAM 2
IO1
IO2
IO3
IC 14
8255 A-5
IC 13
8255 A-5
RESETH
SELECT
RDH
WRH
AH0
AH1
DH0
DH7
PMICR
CPU
J2.1/2
J1.1/2
J2.21/22
J1.21/22
+12 V
+5 V
TP4
J1.3/6/7/8/9/10/11/12/13/14/15/16/20
J2.3/12/13/14/15/16/19/20
NC



HTE-20036

SN 74 LS 04	IC 15
SN 74 LS 08	IC 10
SN 74 LS 14	IC 2 / IC 18
SN 7438 N	IC 16 / IC 17
1 N 914	D 1

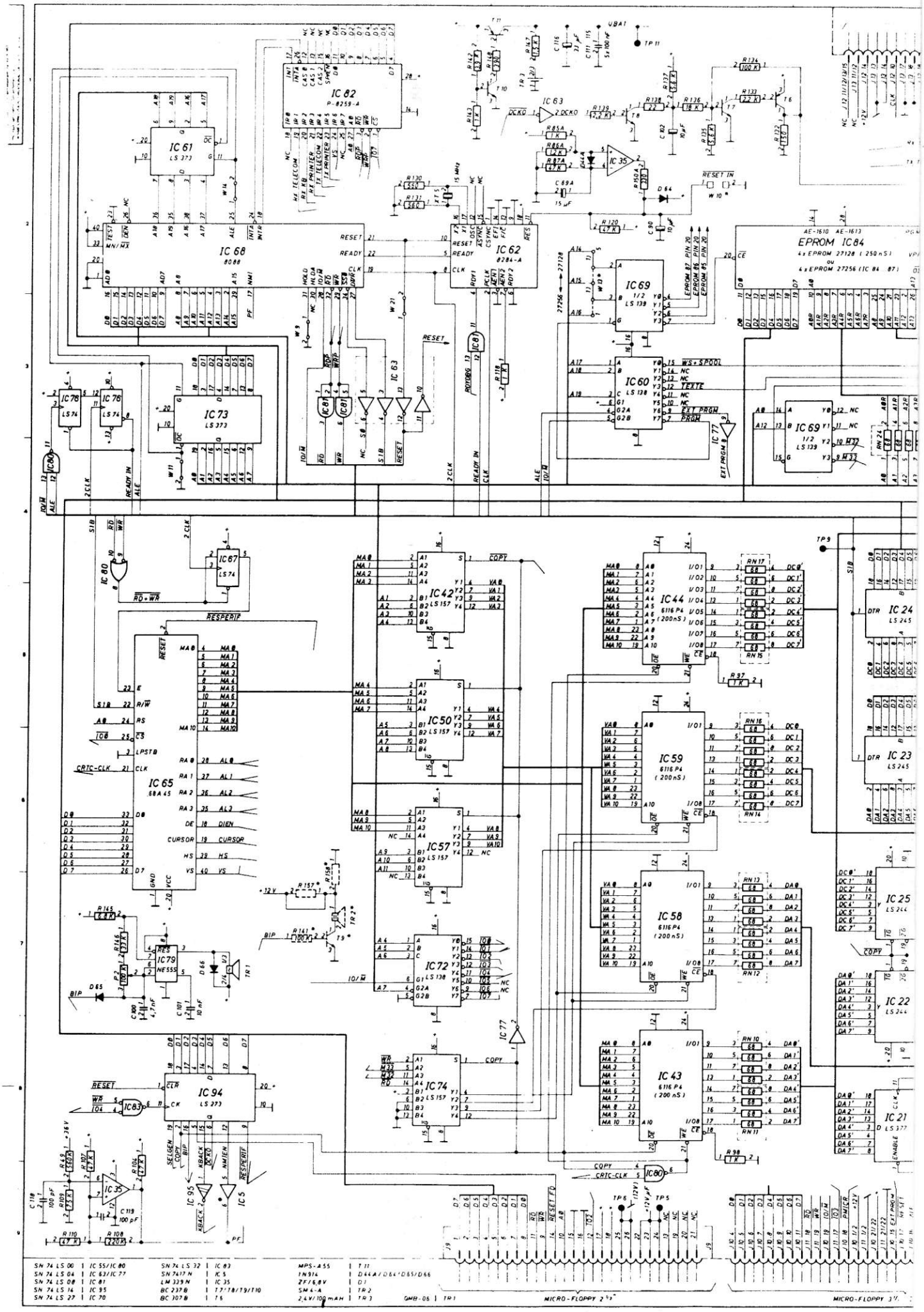
Trait., Recouvr.
Matière
Tolérances
Echelle
Dess 17.4.85
Contr
NOPV
Vu

HERMES PRECISA INTERNATIONAL SA

Schéma électrique
(Contrôleur µF 3 1/2 60/61 HT-82)

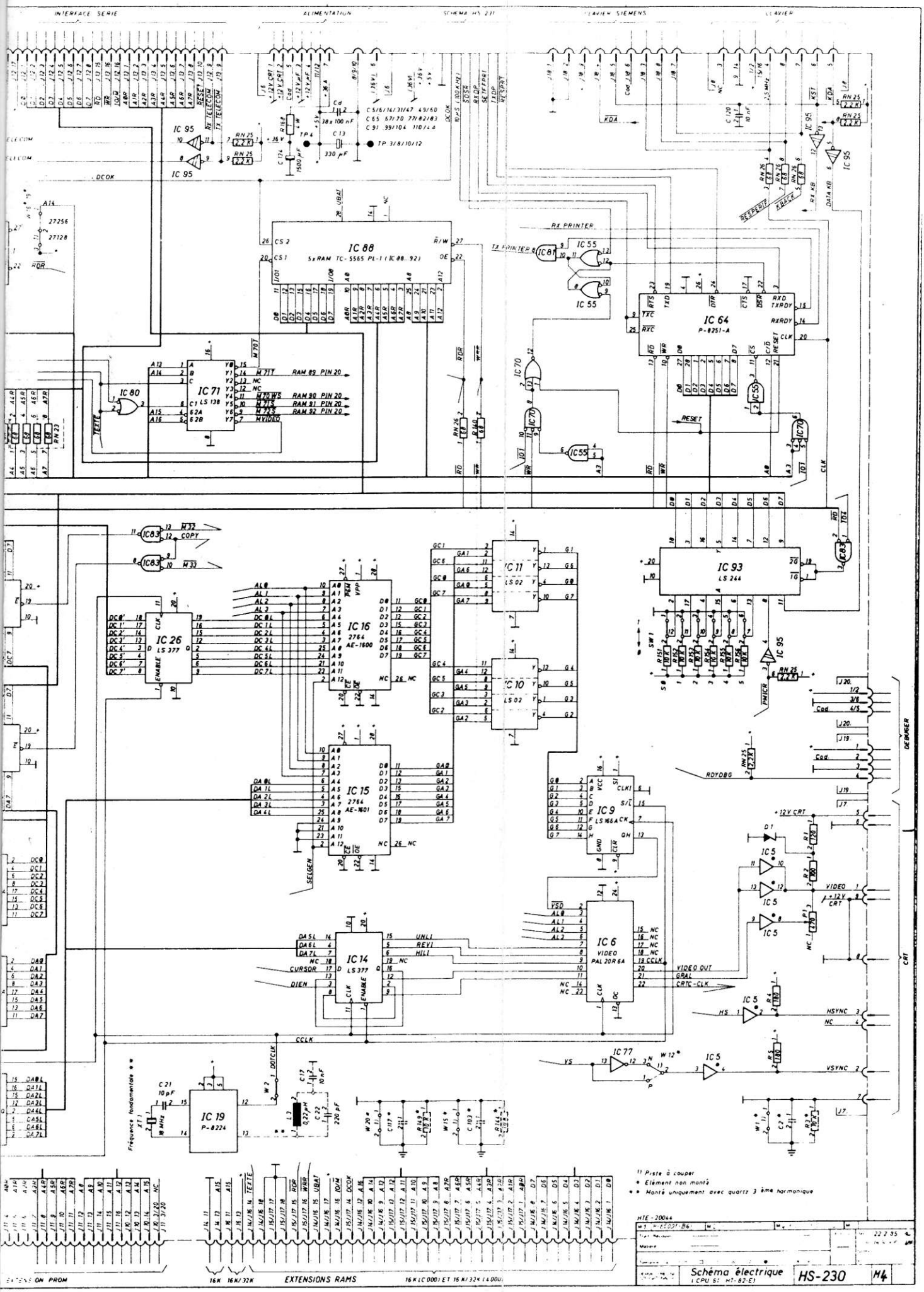
HS-227

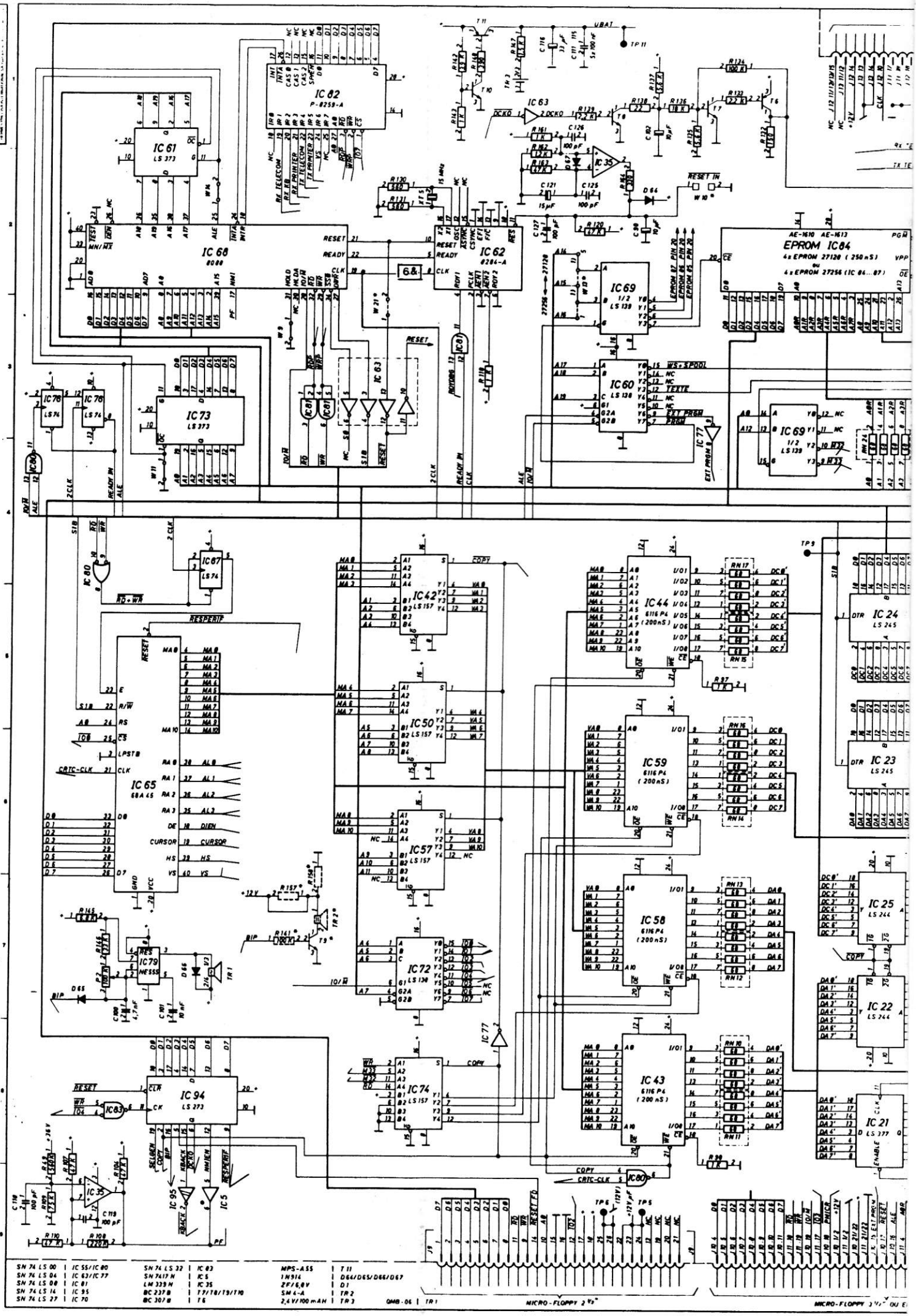
M2



SN 74 LS 00	IC 55/IC 80	SN 74 LS 32	IC 83	MPS-A55	T 11
SN 74 LS 04	IC 63/IC 77	SN 7417 N	IC 5	1N914	D44A/D64/D65/D66
SN 74 LS 08	IC 81	LM 339 N	IC 35	ZF/6,8V	D1
SN 74 LS 14	IC 95	BC 237B	T7/T8/T9/T10	SM 6-A	TR2
SN 74 LS 27	IC 70	BC 307B	T6	2,4V/100 mAH	TR3

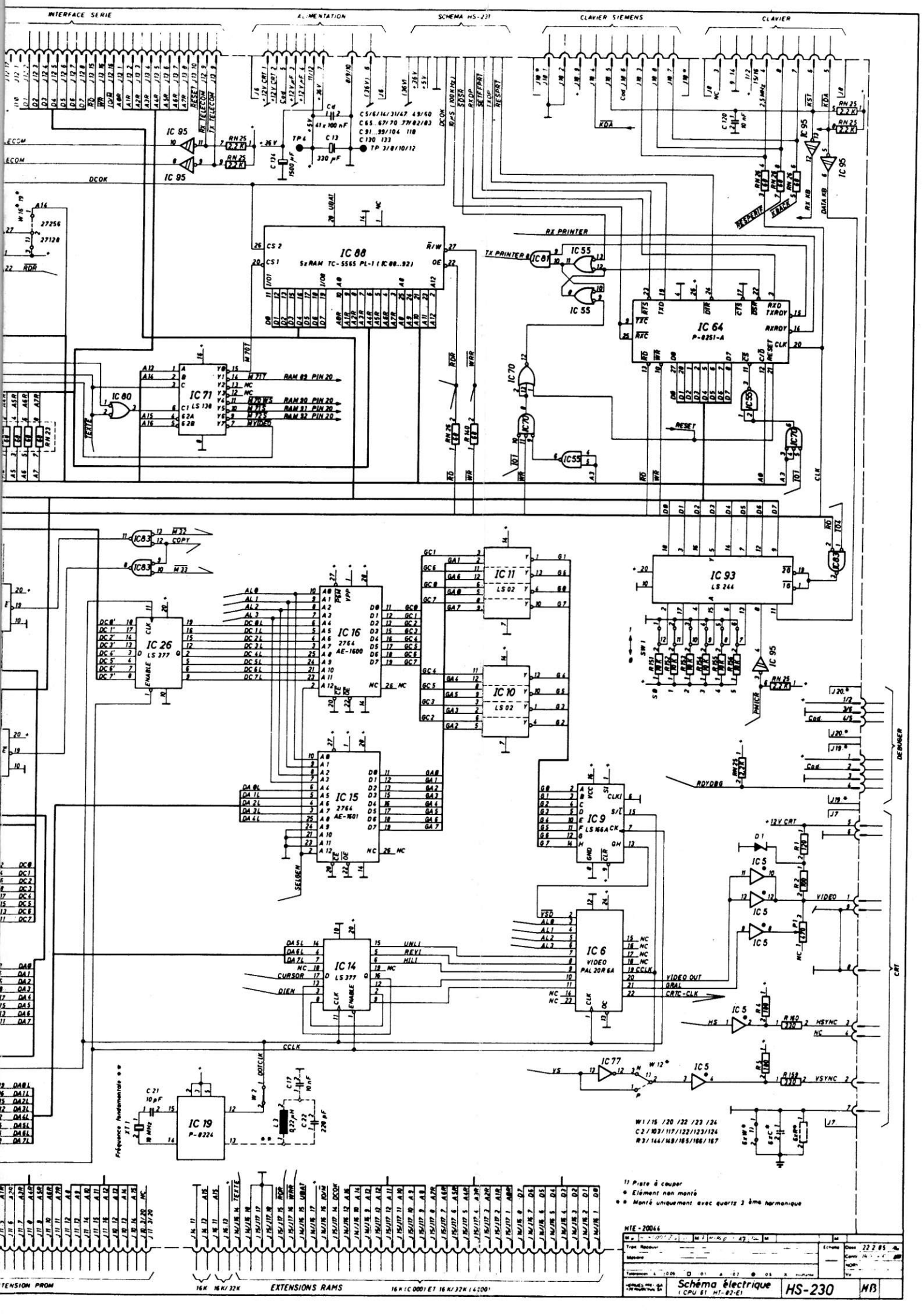
GMB-06 | TR1

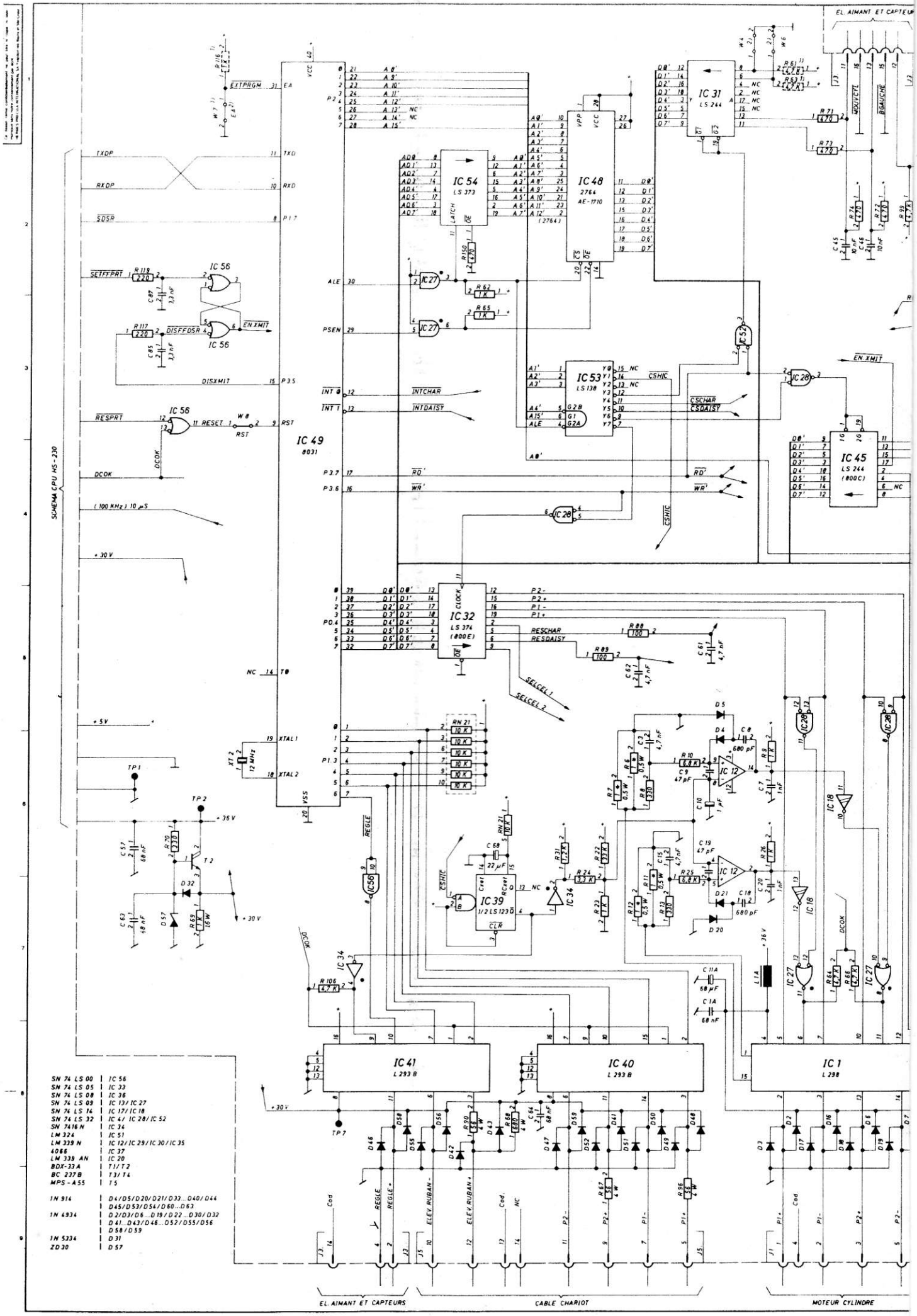

INTERFACE SERIE
ALIMENTATION
SCHEMA HS 211
CLAVIER SIEMENS
CLAVIER
IC 88
5xRAM TC-5565 PL-1 (IC 88..92)
IC 64
P-8251-A
IC 71
LS 138
IC 80
IC 55
IC 95
IC 70
IC 83
IC 93
LS 244
IC 26
LS 377
IC 16
2764
AE-1600
IC 15
2764
AE-1601
IC 11
LS 02
IC 10
LS 02
IC 9
LS 166A
IC 6
VIDEO
PAL 20R6A
IC 14
LS 377
IC 19
P-8224
IC 77
IC 5
RX PRINTER
TX PRINTER
RESET
CLK
VIDEO OUT
GRAL
CRTC-CLK
HSYNC
VSYNC
VIDEO
CCLK
DOTCLK
DERIVER
CRT
EXTENSIONS ON PROM
16K
16K/32K
EXTENSIONS RAMS
16K (C000) ET 16K/32K (4000)
Fréquence fondamentale **
(1) Piste à couper
* Elément non monté
** Monté uniquement avec quartz 3 ème harmonique
HTE-20044
Schéma électrique
(CPU S: H7-82-E)
HS-230
M4



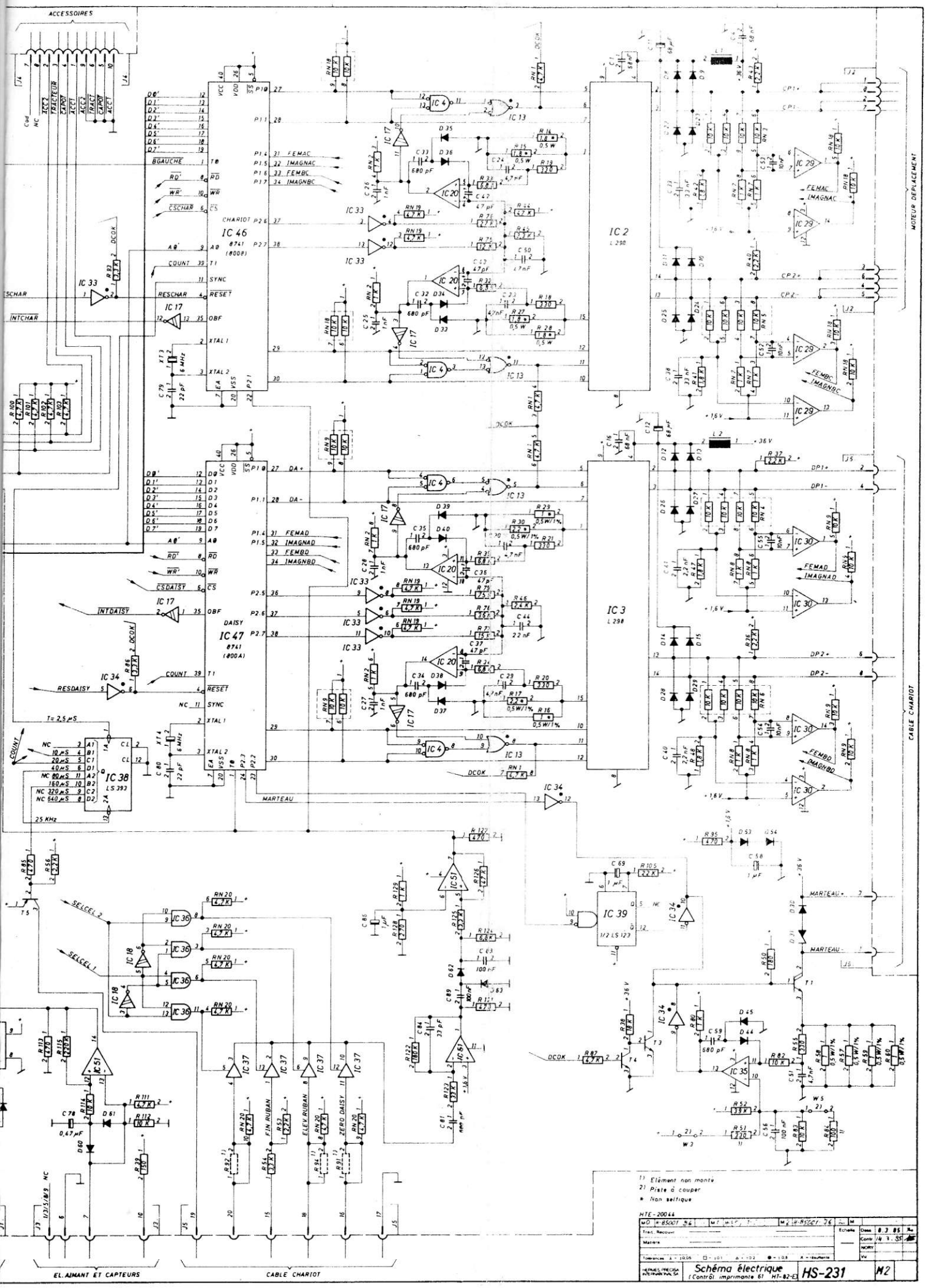
SN 74 LS 00	IC 55/IC 80	SN 74 LS 32	IC 83	MPS-A55	T 11
SN 74 LS 04	IC 63/IC 77	SN 7417 N	IC 5	1N914	D64/D65/D66/D67
SN 74 LS 08	IC 81	LM 339 N	IC 35	ZF/6,8V	D1
SN 74 LS 14	IC 95	BC 237 B	T7/T8/T9/T10	SM 4-A	TR 2
SN 74 LS 27	IC 70	BC 307 B	T6	2,4 V/100 mAH	TR 3

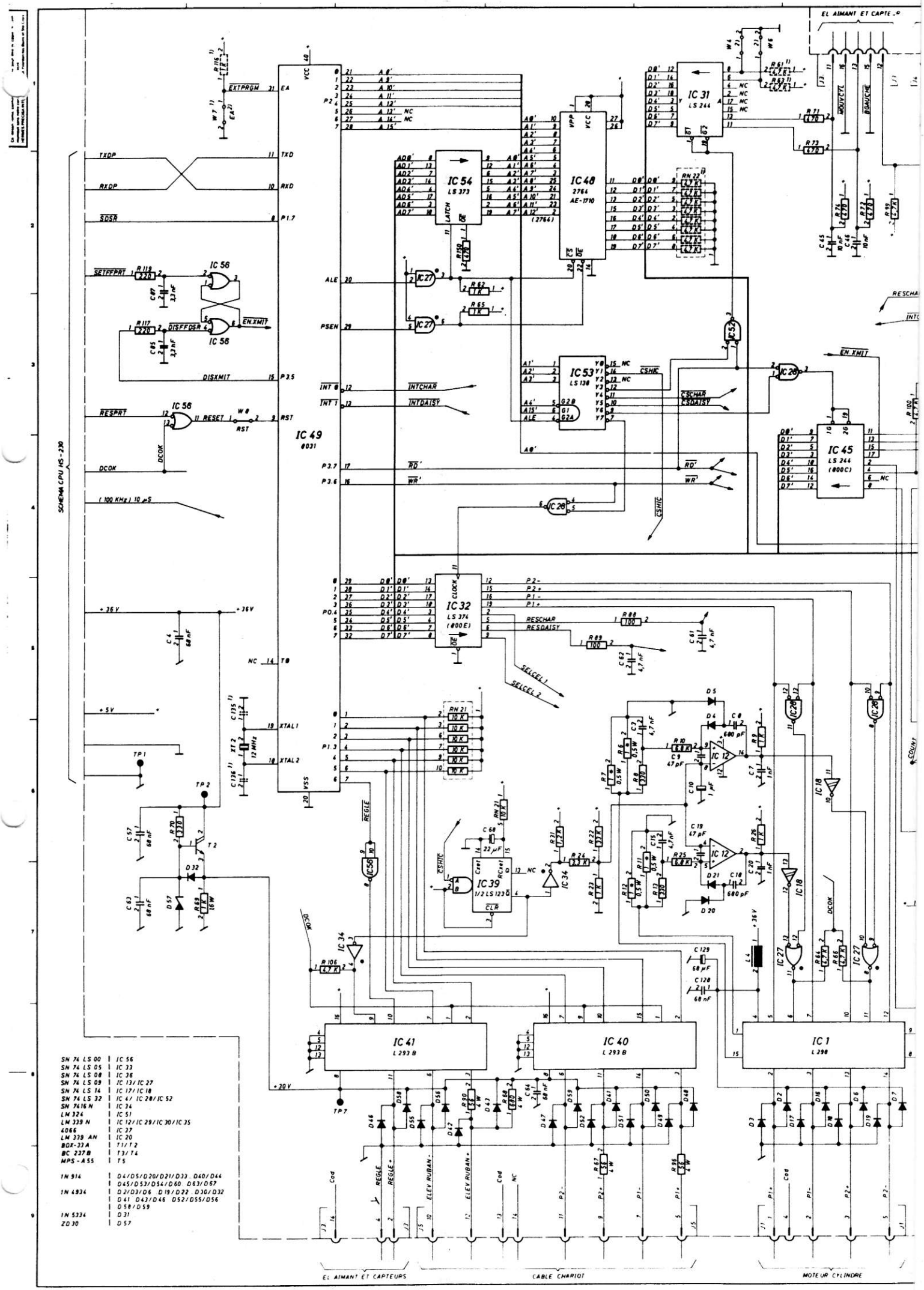
QMB-06 | TR 1

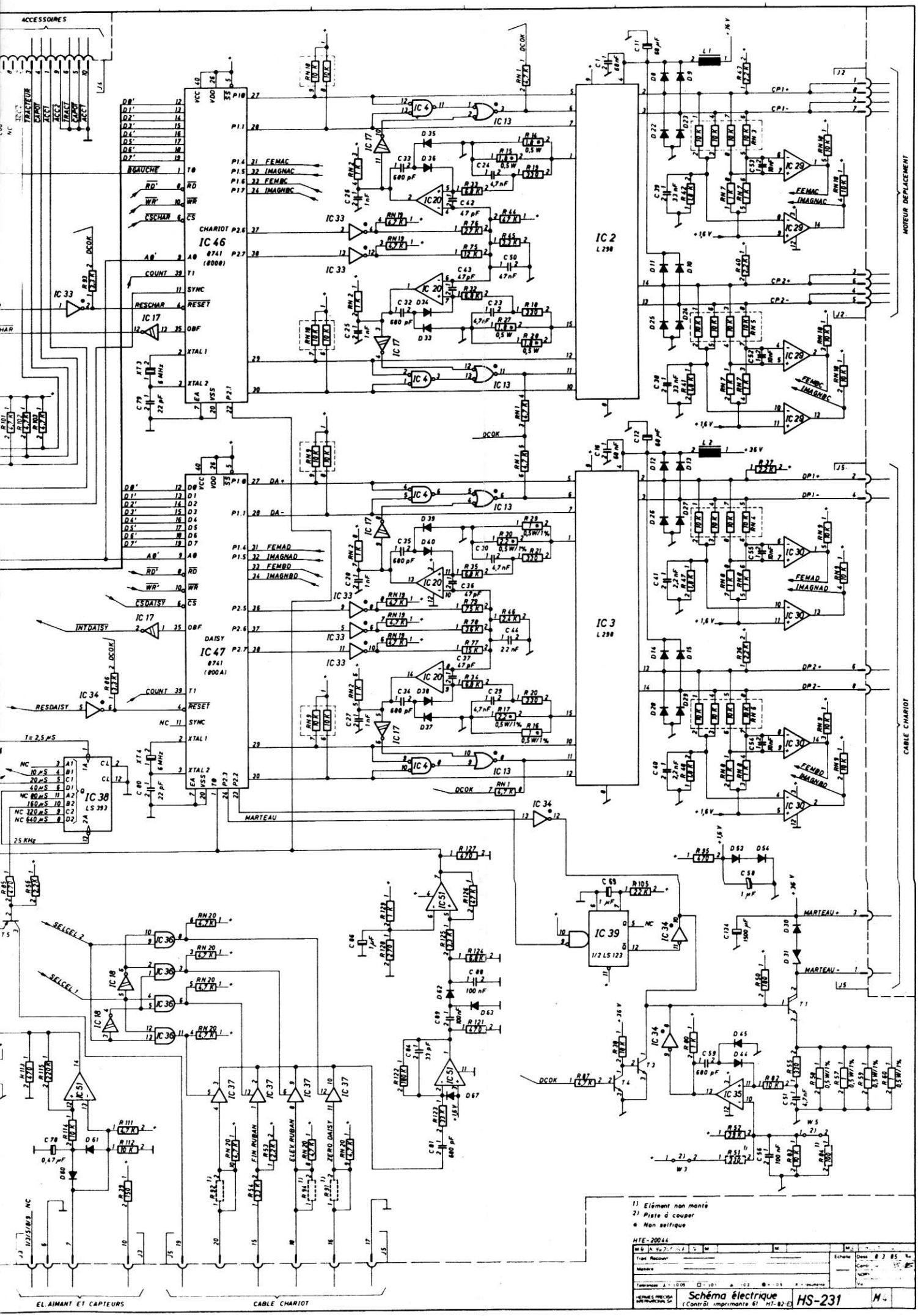

INTERFACE SERIE
ALIMENTATION
SCHEMA HS-231
CLAVIER SIEMENS
CLAVIER
IC 88
5x RAM TC-5565 PL-1 (IC 88...92)
IC 64
P-8251-A
IC 71
LS 138
IC 80
IC 55
IC 70
IC 95
IC 83
IC 93
LS 244
IC 26
LS 377
IC 16
2764
AE-1600
IC 11
LS 02
IC 10
LS 02
IC 15
2764
AE-1601
IC 9
LS 166A
IC 14
LS 377
IC 6
VIDEO
PAL 20R 6A
IC 5
IC 77
IC 19
P-8224
DEBOGER
CRT
RX PRINTER
TX PRINTER
RESET
COPY
VIDEO
HSYNC
VSYNC
VIDEO OUT
GRAL
CRTC-CLK
CCLK
DOTCLK
RAM 89 PIN 20
RAM 90 PIN 20
RAM 91 PIN 20
RAM 92 PIN 20
EXTENSION PROM
16K
16K/32K
EXTENSIONS RAMS
16K (C 0001) ET 16K/32K (C 0001)
Schéma électrique
(CPU 81 HT-82-E1)
HS-230
MB
HTE-20066

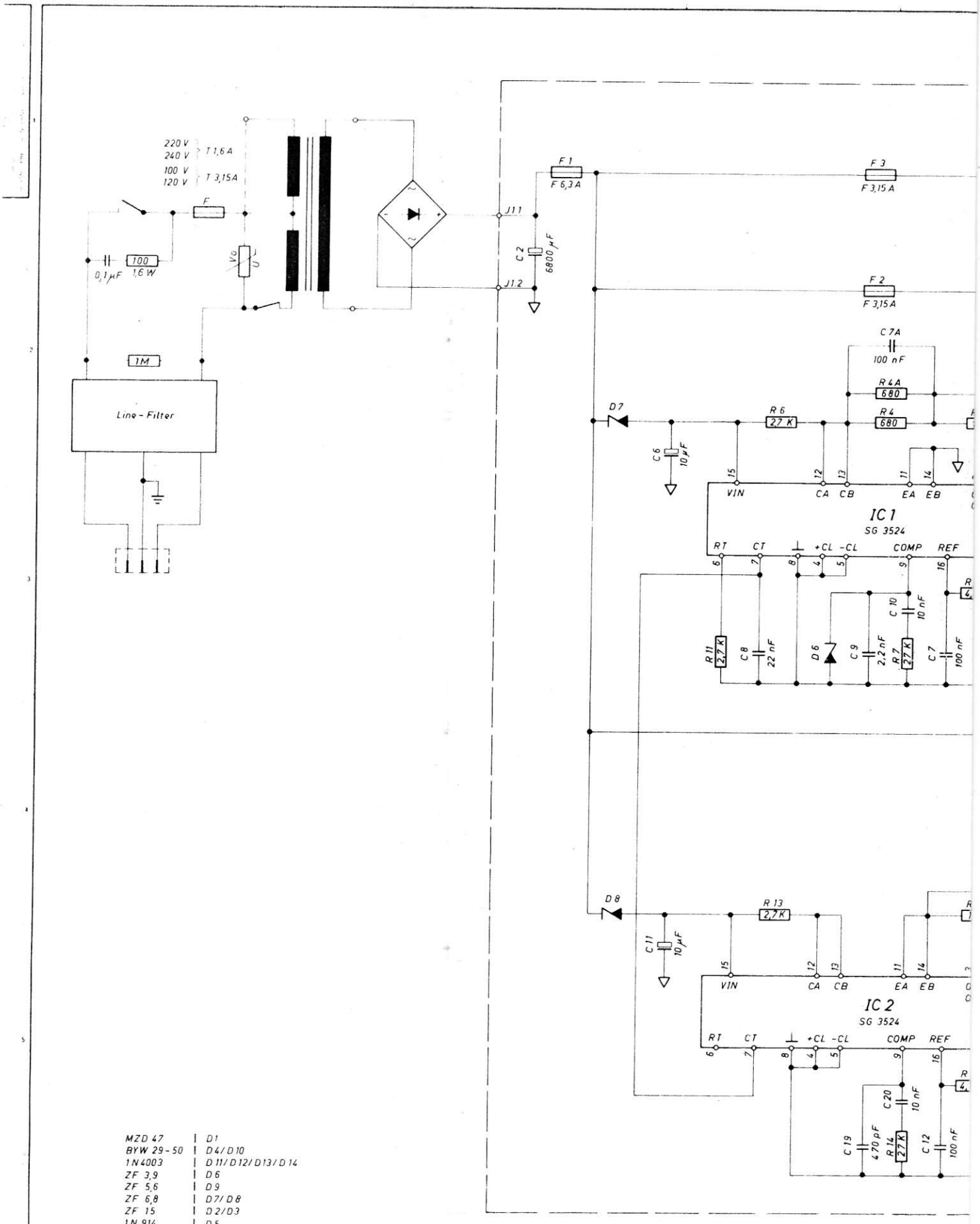


SN 74 LS 00	IC 56
SN 74 LS 05	IC 33
SN 74 LS 08	IC 36
SN 74 LS 09	IC 13/IC 27
SN 74 LS 14	IC 17/IC 18
SN 74 LS 32	IC 4/ IC 28/IC 52
SN 7416 N	IC 34
LM 324	IC 51
LM 339 N	IC 12/IC 29/IC 30/IC 35
4066	IC 37
LM 339 AN	IC 20
BDX-33 A	T1/T2
BC 237 B	T3/T4
MPS-A55	T5
1N 914	D4/D5/D20/D21/D33...D40/D44 D45/D53/D54/D60...D63
1N 4934	D2/D3/D6...D19/D22...D30/D32 D41...D43/D46...D52/D55/D56 D58/D59
1N 5334	D31
ZD 30	D57

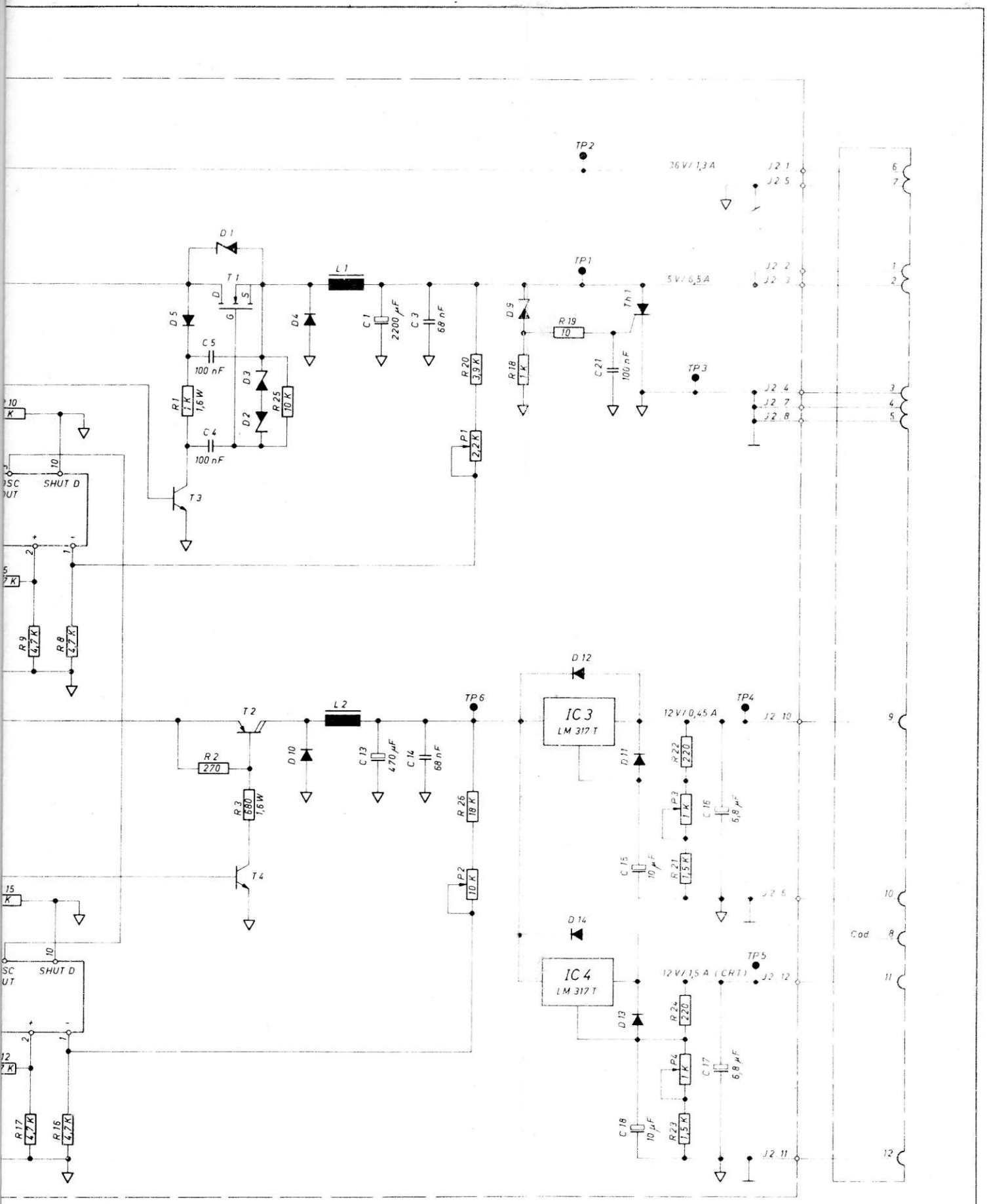

ACCESSOIRES
IC 46
8741
(8008)
IC 47
8741
(800A)
DAISY
IC 2
L 298
IC 3
L 298
IC 38
LS 393
IC 39
1/2 LS 123
MOTEUR DEPLACEMENT
CABLE CHARIOT
EL. AIMANT ET CAPTEURS
CABLE CHARIOT
1) Elément non monté
2) Piste à couper
* Non sélitique
HTE-20044
Schéma électrique
(Contrôl imprimante 61 HT-82-E)
HS-231
M2


SCHEMA CPU HS-230
IC 49
8031
IC 54
LS 373
IC 48
2764
AE-1710
IC 31
LS 244
IC 53
LS 138
IC 45
LS 244
(800C)
IC 32
LS 374
(800E)
IC 39
1/2 LS 123
IC 41
L 293 B
IC 40
L 293 B
IC 1
L 298
IC 56
IC 27
IC 28
IC 18
IC 12
IC 34
EL AIMANT ET CAPTEUR
EL AIMANT ET CAPTEURS
CABLE CHARIOT
MOTEUR CYLINDRE
SN 74 LS 00 | IC 56
SN 74 LS 05 | IC 33
SN 74 LS 08 | IC 36
SN 74 LS 09 | IC 13/IC 27
SN 74 LS 14 | IC 17/IC 18
SN 74 LS 32 | IC 47/IC 28/IC 52
SN 7416 N | IC 34
LM 324 | IC 51
LM 339 N | IC 12/IC 29/IC 30/IC 35
4066 | IC 37
LM 339 AN | IC 20
BDX-33 A | T1/T2
BC 237 B | T3/T4
MPS-A 55 | T5
1N 914 | D4/D5/D20/D21/D33 D40/D44
D45/D53/D54/D60 D63/D67
1N 4934 | D2/D3/D6 D19/D22 D30/D32
D41 D43/D46 D52/D55/D56
D58/D59
1N 5334 | D31
ZD 30 | D57


ACCESSOIRES
IC 46
8741
(8000)
IC 47
8741
(800A)
DAISY
IC 2
L 298
IC 3
L 298
IC 38
LS 393
IC 39
1/2 LS 123
MOTEUR DEPLACEMENT
CABLE CHARIOT
EL. AIMANT ET CAPTEURS
CABLE CHARIOT
1) Elément non monté
2) Piste à couper
* Non selfique
HTE-20044
Schéma électrique
(Contrôl imprimante 61 HT-82-E)
HS-231

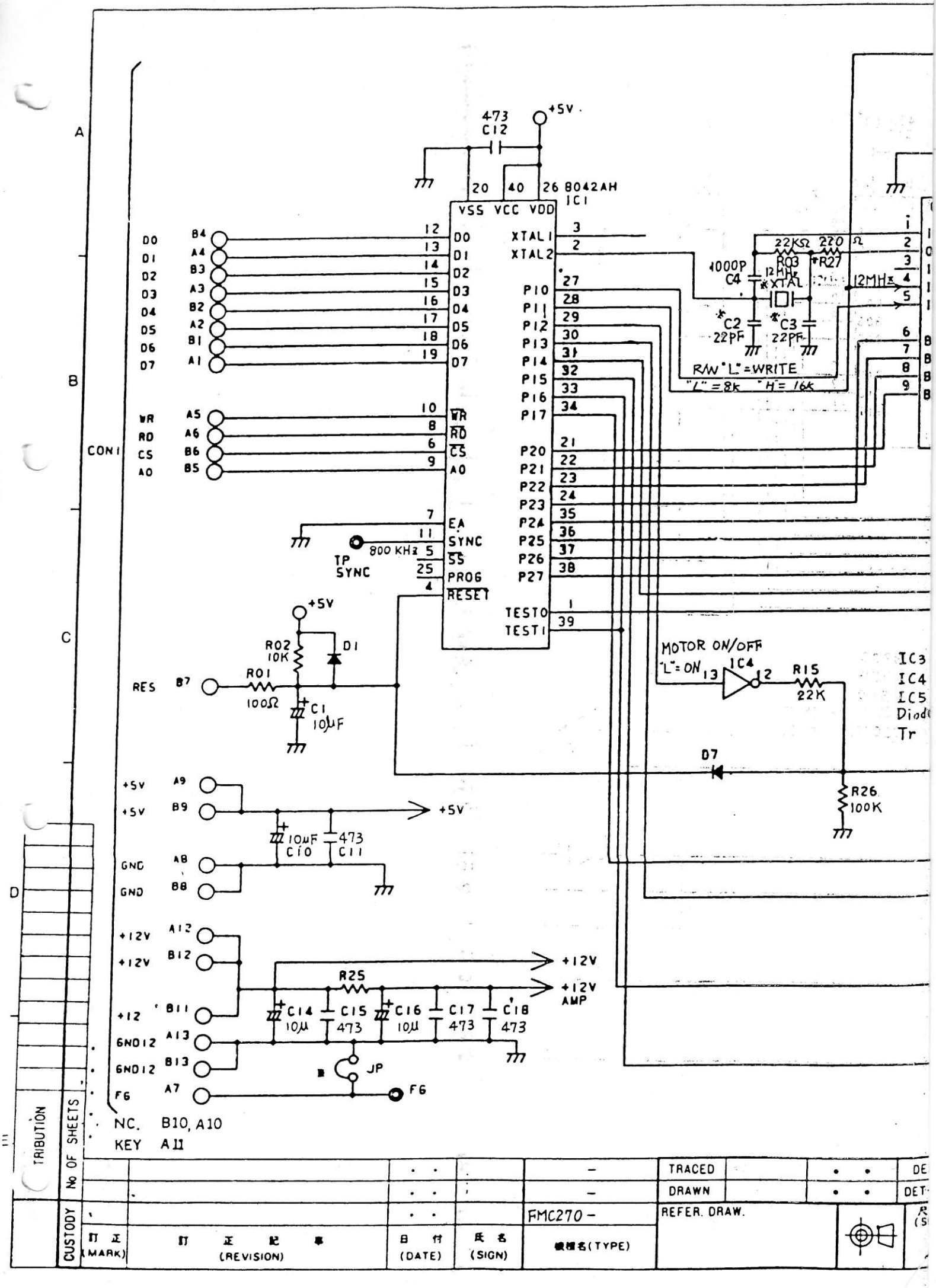


MZD 47	D1
BYW 29-50	D4/D10
1N4003	D11/D12/D13/D14
ZF 3,9	D6
ZF 5,6	D9
ZF 6,8	D7/D8
ZF 15	D2/D3
1N 914	D5
MTP 10 N05	T1
BDX 34A	T2
BF 391	T3
MPS-A05	T4
TIC 116 B	Th1

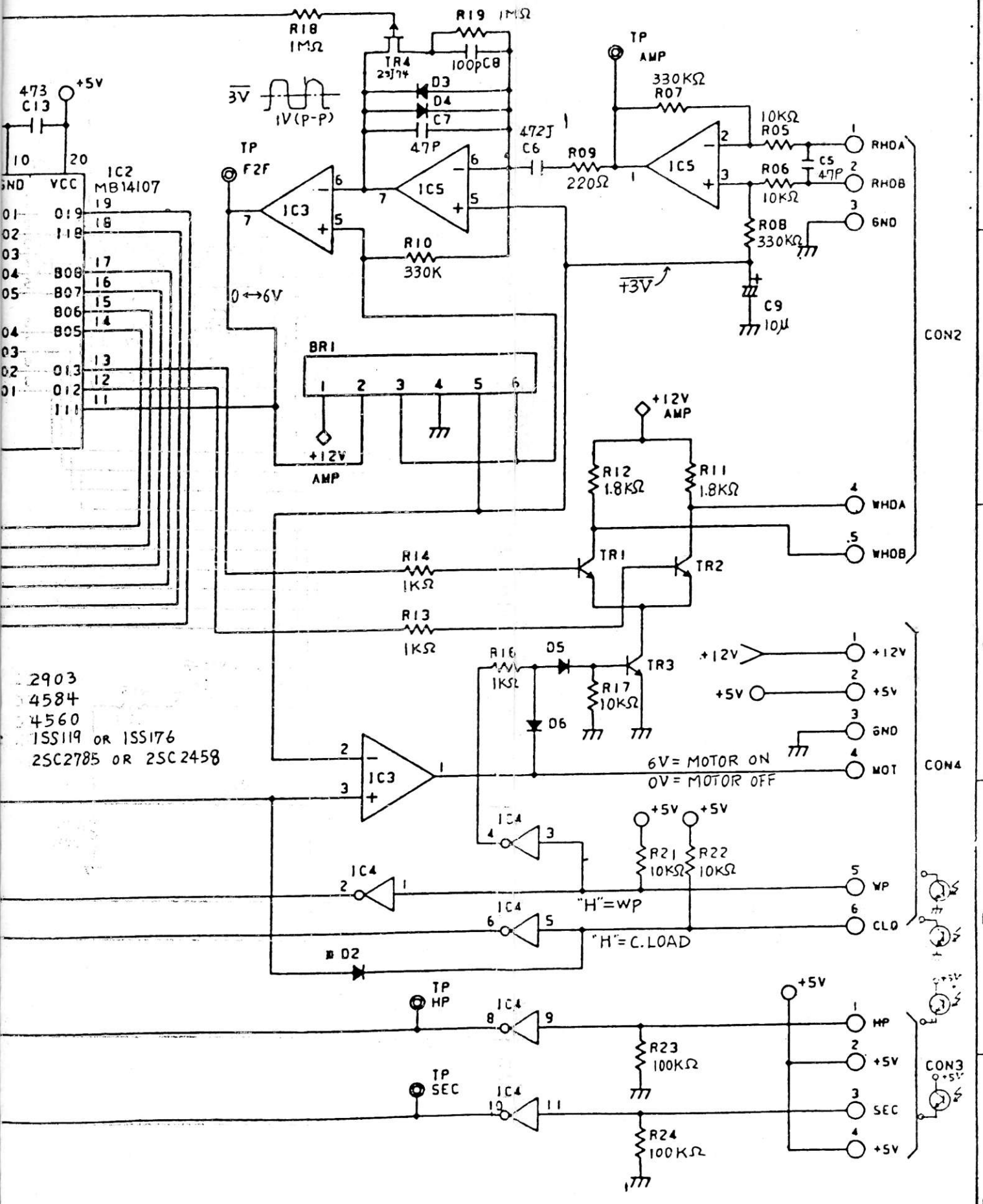


HTE-20046

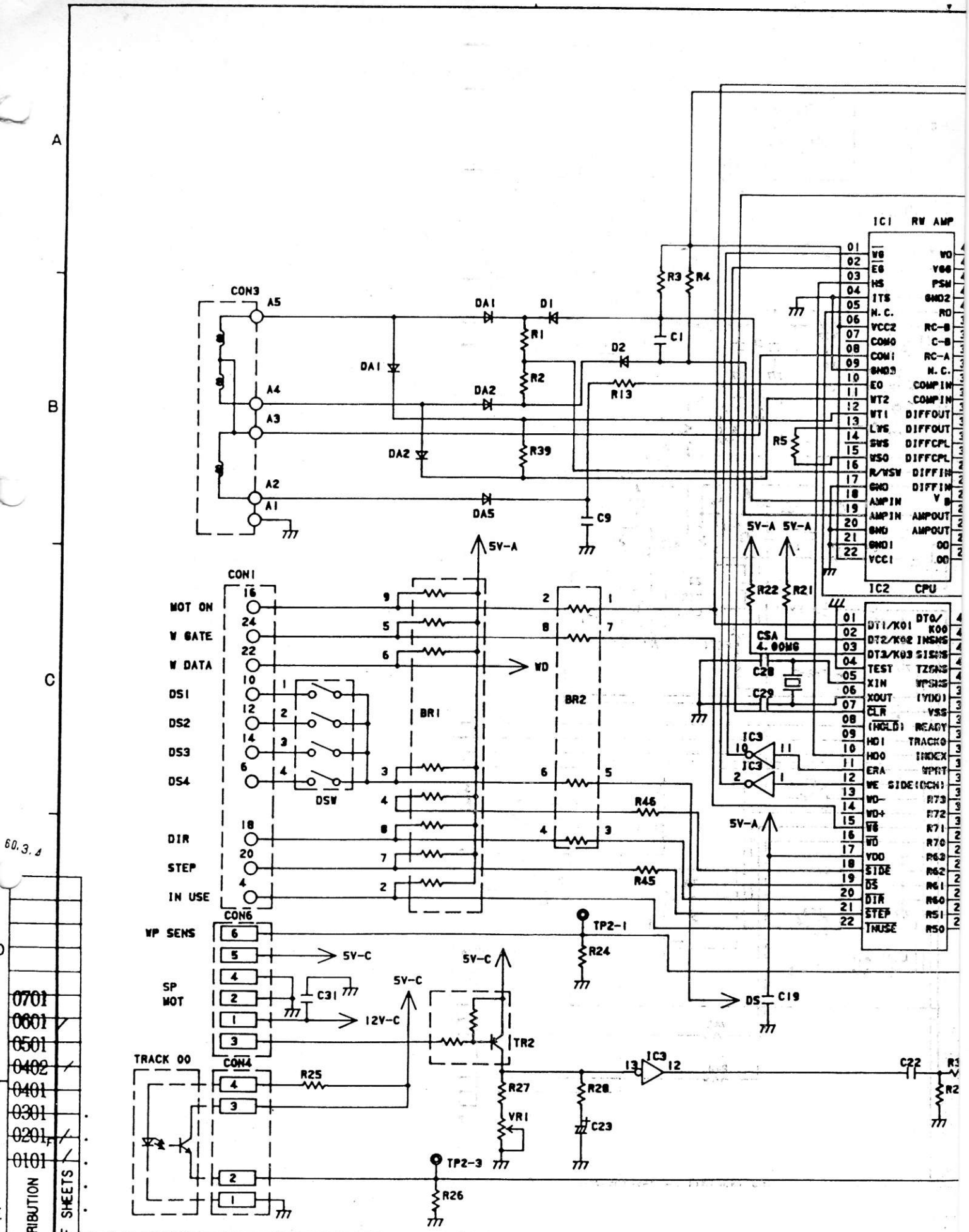
Trait., Recouvr.		Echelle	Dess. 18 12 84
Matière:		—	Contr.
Tolérances: ± 0,05 □ ± 0,1 Δ ± 0,2 ● ± 0,5			
HERMES PRECISA INTERNATIONAL SA	Schéma électrique (Circ. alimentation 61 HT-82)	HS-232	1/4

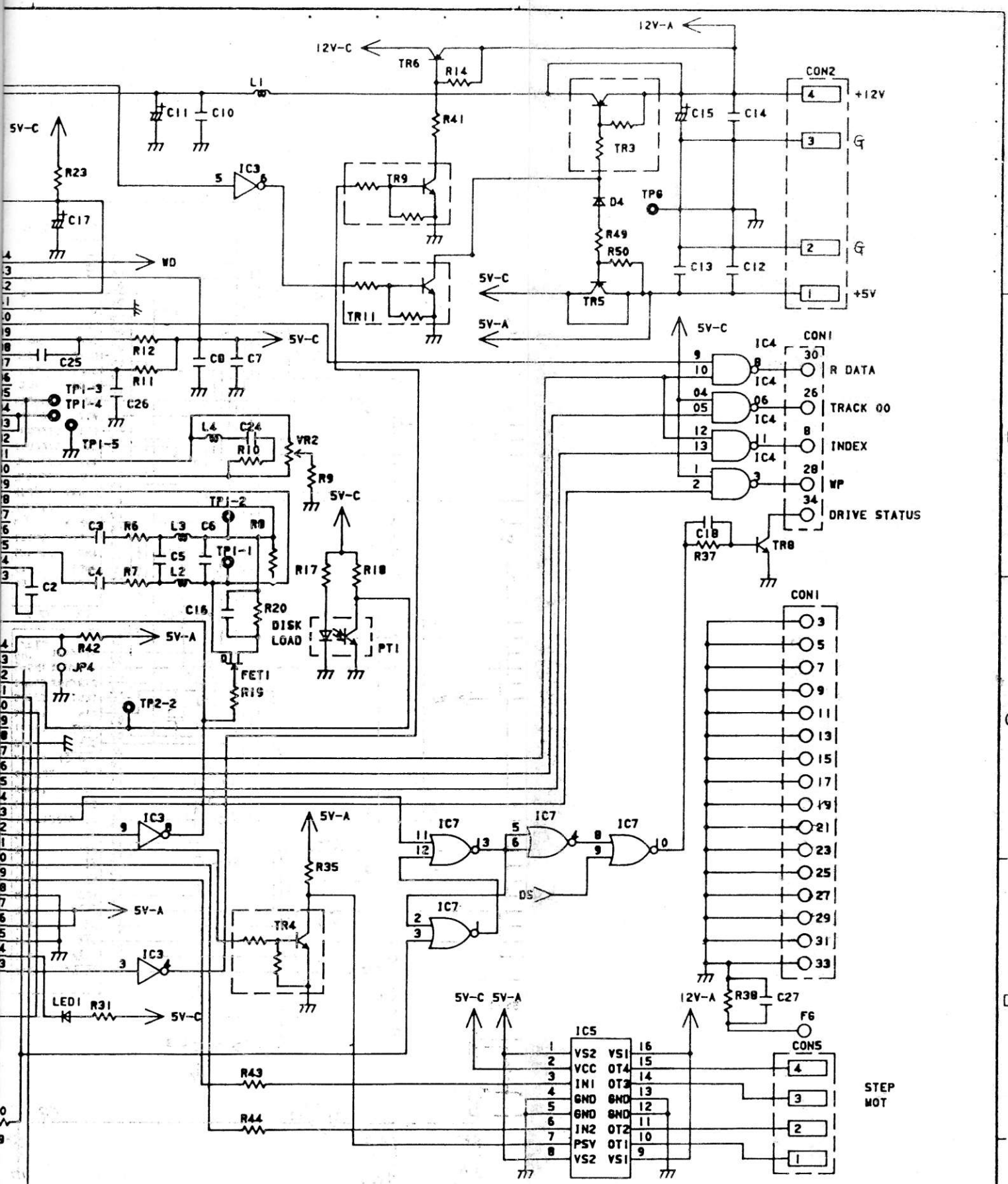


TRIBUTION	No OF SHEETS				—	TRACED		DE
					—	DRAWN		DET
	CUSTODY				FMC270 —	REFER. DRAW.		
		訂正 (MARK)	訂正記事 (REVISION)	日付 (DATE)	氏名 (SIGN)	機種名 (TYPE)		



SIG.	A.Tsuyama	5・12・'83	GEN-CHE.		・ ・	名称(NAME) FMC CIRCUIT
CHE.		・ ・	APPRO.	Y.Yoshimura	May・12・'83	PAGE /
SCALE) /	株式会社 三協精機製作所 SANKYO SEIKI MFG.CO.,LTD. JAPAN					図番(DWG. NO.) TEC 0101


IC1 RW AMP
IC2 CPU
CON3
CON1
CON6
CON4
MOT ON
W GATE
W DATA
DS1
DS2
DS3
DS4
DIR
STEP
IN USE
WP SENS
SP MOT
TRACK 00
BR1
BR2
DSW
5V-A
5V-C
12V-C
TP2-1
TP2-3
TR2
VR1
CSA 4.00MG
60.3.4
0701
0601
0501
0402
0401
0301
0201
0101
DISTRIBUTION
No. OF SHEETS
CUSTODY
TRACED
DRAWN
FDU355-SH2373
REFER. DRAW.
訂正 (MARK)
訂正記事 (REVISION)
日付 (DATE)
氏名 (SIGN)
機種名(TYPE)



TR3. TR5. TR11. D4. R49. R50. NOT MOUNTED

FILE NAME: TEC0241A-01

DESIG.	Ishizuka	Feb. 28. '85	GEN-CHE.	M. Tatsuno	Mar. 5. '85	名称(NAME) CIRCUIT DAIAGRAM	PAGE
CHE.	A. Toyama	Mar. 1. '85	APPRO.	K. Sakata	Mar. 5. '85		
(SCALE)		株式会社 三協精機製作所 SANKYO SEIKI MFG.CO.,LTD. JAPAN				図番(DWG. NO.) TEC 0241 01	