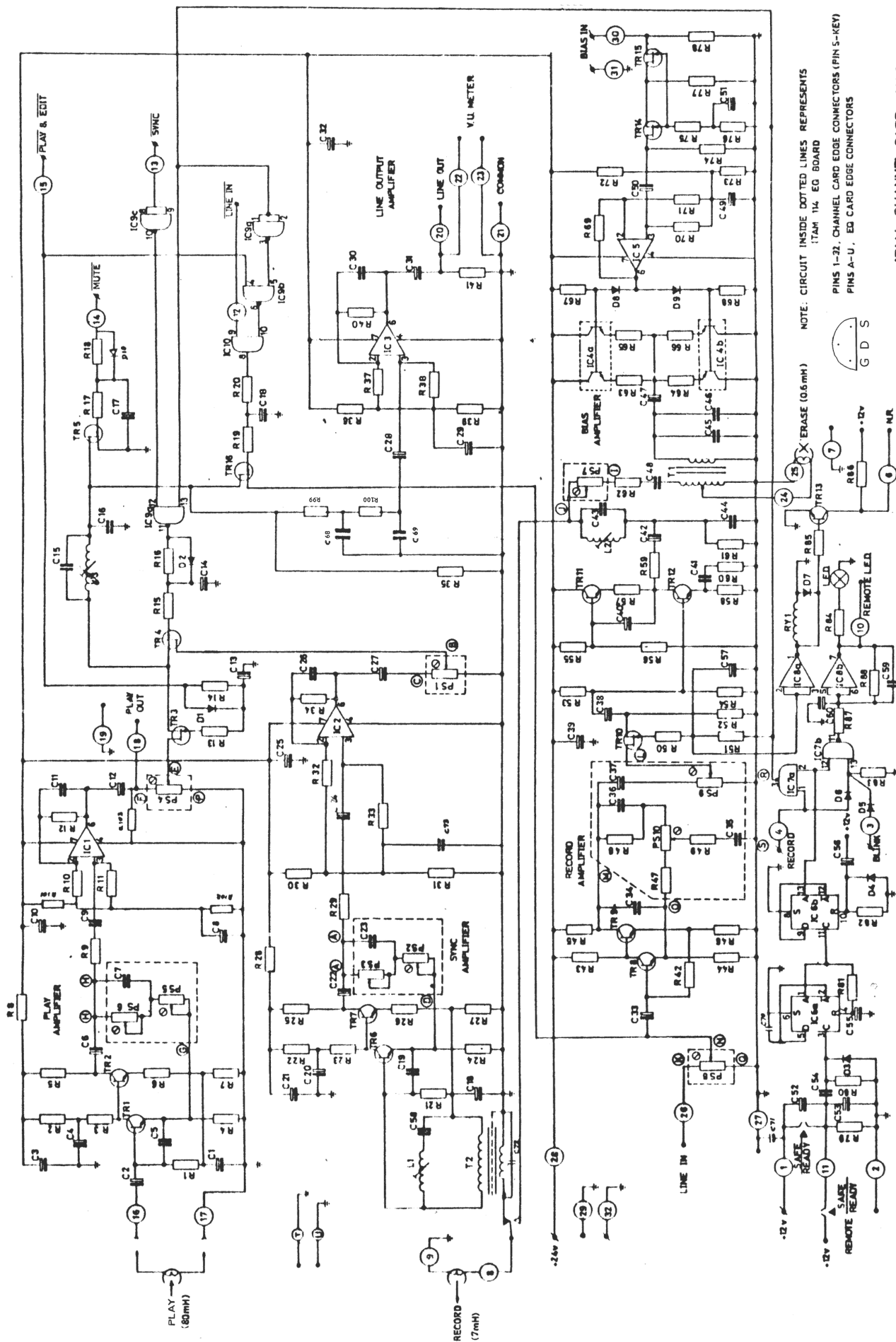


ITAM 1610 Multitrack

Industrial Tape Applications **ITA**

1 Felgate Mews, Studland ST, London W6 9JT



CHANNEL CARD P.C.B.

R	Resistance	P.No	R	Resistance	P.No
1	47k	GA047K	51	100k	GA100K
2	100k	GA100k	52	100k	GA100K
3	100k	GA100k	53	180k	GA180K
4	220	GA220H	54	56k	GA056K
5	12k	GA012K	55	220k	GA220K
6	68	GA068H	56	82k	GA082K
7	1k	GA001K	57	330	GA330H
8	2.2k	GA022K	58	680	GA680H
9	1k	GA001K	59	1k	GA001K
10	27k	GA027K	60	2.2k	GA022L
11	22k	GA022K	61	47k	GA047K
12	47k	GA047K	62	2.2k	GA122L
13	100k	GA100K	63	10	GA010H
14	100k	GA100K	64	10	GA010H
15	100k	GA100K	65	10	GA010H
16	100k	GA100K	66	10	GA010H
17	100k	GA100K	67	3.3k	GA033L
18	100k	GA100K	68	3.3k	GA033L
19	100k	GA100K	69	10k	GA010K
20	100k	GA100K	70	100k	GA100K
21	27k	GA027K	71	3.3k	GA033L
22	100k	GA100K	72	3.3k	GA033L
23	100k	GA100K	73	3.3k	GA033L
24	220	GA220H	74	100k	GA100K
25	12k	GA012K	75	100k	GA100K
26	68	GA068H	76	100k	GA100K
27	1k	GA001K	77	100k	GA100K
28	2.2k	GA022L	78	100k	GA100K
29	1k	GA001K	79	56k	GA056K
30	3.3k	GA033L	80	100k	GA100K
31	3.3k	GA033L	81	56k	GA056K
32	27k	GA027K	82	100k	GA100K
33	100k	GA100K	83	22k	GA022K
34	47k	GA047K	84	1.8k	GA018L
35	100k	GA100K	85	22k	GA022K
36	3.3k	GA033L	86	10k	GA010K
37	1k	GA001K	87	8.2k	GA082L
38	270k	GA270K	88	15k	GA015K
39	3.3k	GA033L	89	3.3k	GA033L
40	10k	GA010K	90	3.3k	GA033L
41	47k	GA047K	91	100k	GA100K
42	100k	GA100K	92	100k	GA100K
43	100k	GA100K	93	4.7k	GA047L
44	12k	GA012K	94	56k	GA056K
45	4.7k	GA047L	95	47k	GA047K
46	1.2k	GA012L	96	220	GA220H
47	27k	GA027K	97	22k	GA022K
48	270k	GA270K	98	330	GA330H
49	330	GA330H	99	10k	GA010K
50	100k	GA100K	100	10k	GA010K
			101	3.3k	GA033L
			102	3.3k	GA033L
			103	10k	GA010K

Motherboard rear connection and signals

Pin	Channel card 1 of 16	Master card	Pin
1	0 +12volt -----	1 --0 +12volt input	
2	0 Earth	2 0 Earth return	
3	0 Blink buss bar -----	3 --0 Blink output buss bar	
4	0 RECORD command -----	4 --0 RECORD output buss bar	
5	0 BLANK KEY	5 0 12volt output to remote	
6	0 Noise reduction command	6 0 Earth to remote	
7	0 Earth	7 0 PLAY switch from remote	
8	0 Record Head Hot	8 0 LINE IN switch from remote	
9	0 Record Head Earth	9 0 PLAY L.E.D. to remote	
10	0 Remote L.E.D.	10 0 LINE IN L.E.D. to remote	
11	0 Remote switch	11 0 No connection	
12	0 LINE IN command -----	12 --0 LINE IN. Command output	
13	0 SYNC command -----	13 --0 SYNC Command output	
14	0 MUTE command -----	14 --0 MUTE Command output	
15	0 PLAY ED command -----	15 --0 PLAY EDT Command output	
16	0 Play Head	16 0 STOP command input	
17	0 Play Head Earth	17 0 MUTE command input	
18	0 Play(committed output)	18 0 RECORD command input	
19	0 Play(committed Earth)	19 0 High speed select	
20	0 Line output	20 0 Medium speed select	
21	0 Line output Earth	21 0 Low speed select	
22	0 V.U. Meter feed	22 0 Speed common line	
23	0 Earth V.U. Meter	23 0 Take up pre-torque return	
24	0 Erase Head	24 0 Take up pre-torque send	
25	0 Erase Head Earth	25 0 No connection	
26	0 Line Input	26 0 No connection	
27	0 Earth Line input	27 0 Earth from power supply	
28	0 +24volt -----	28 --0 +24v from power supply	
29	0 Earth	29 0 BLANK KEY	
30	0 Bias input -----	30 --0 100kHz bias output buss bar	
31	0 Main Earth -----	31 --0 Main Earth	
32	0 Main Earth -----	32 --0 Main Earth	

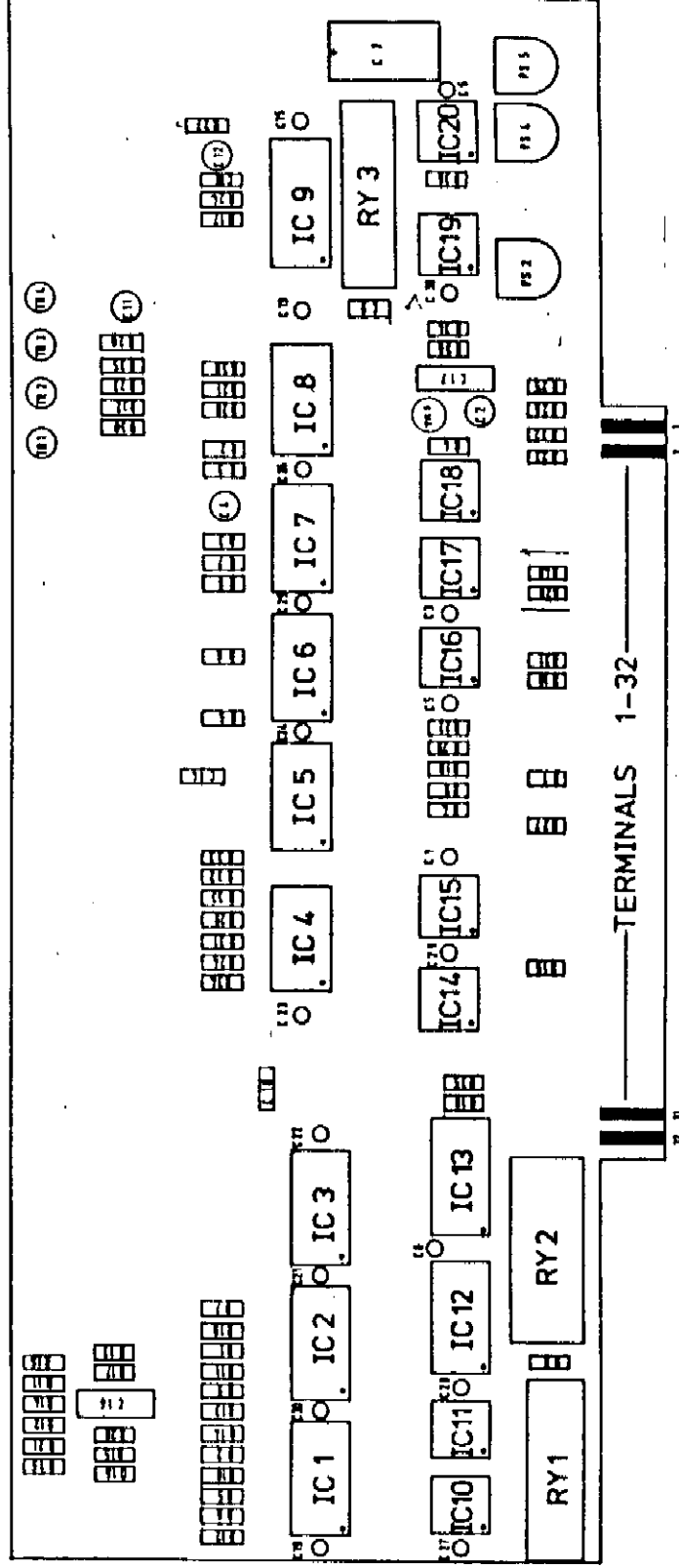
1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

Tape transport
Remote control connector
Front view
Pin identification.

1	Edit L.E.D.	11	Stop switch
2	Record L.E.D.	12	Play switch
3	Stop L.E.D.	13	Fast forward switch
4	Play L.E.D.	14	Rewind switch
5	Fast forward L.E.D.	15	
6	Rewind L.E.D.	16	+12volt output
7		17	Clock pulses(tape motion)
8	Switch common	18	Direction pulses
9	Edit switch	19	Servo DC input & Varispeed
10	Record switch	20	Earth & L.E.D. common

LOGIC PCB CONNECTIONS. PINS 1-32

1.	GROUND .
2.	GROUND .
3.	No connection.
4.	TAKEUP PRETORQUE (return).....6-12v.1sec pulsefrom pot on master card PCB
5.	TAKEUP PRETORQUE (send)12v 1sec pulseto relevent pot on master card
6.	TAPE LIFTERS12 STOP.OVPLAYto tape lifters motor PCB
7.	MUTEOV WIND 12v in others.....to MUTE buss bar on mother PCB
8.	RECORD COMMAND.....12v in RECORDto RECORD buss bar on mother PCB .
9.	BACK TENSION OUTPUT12v out.....to tape tension sense pot
10.	PINCH ROLLER SOLENOID(un buffered) 12v in PLAYheatsink assly.A7.
11.	PINCH ROLLER SOLENOID(buffered) 1.5v in PLAYheatsink assly.A7.
12.	BRAKES SOLENOID1.5v activated.....heatsink assly.A8..
13.	TAKEUP MOTOR.....2-3vheatsink assly.A3.
14.	BACK TENSION INPUT.....1.5-2.5v start of spool.....in from tape tension sense pot
15.	SUPPLY MOTOR3.5v approx start of reel...out to heatsink.A9.
16.	TAPE MOTION SENSE IN.....12v pulses with tape motion..in from motion sense PCB.
17.	12v decoupled output (spare)
18.	12v SUPPLY VCC.....12v.....in from 12v stabilizer heatsink A1.
19.	12v SUPPLY VCC.....12v.....in from 12v stabilizer heatsink A1.
20.	EDIT OUTPUT to REMOTE LAMP.....12v in EDIT.....out to pin 1 deck remote control
21.	RECORD OUTPUT to REMOTE LAMP.....12v in RECORD.....out to pin 2 deck remote control
22.	STOP OUTPUT to REMOTE LAMP.....12v in STOP.....out to pin 3 deck remote control
23.	PLAY OUTPUT to REMOTE LAMP.....12v in PLAY.....out to pin 4 deck remote control
24.	FAST FORWARD to REMOTE LAMP.....12v in FAST FORWARD.....out to pin 5 deck remote control
25.	REWIND to REMOTE LAMP.....12v in REWIND.....out to pin 6 deck remote control
26.	COMMON SWITCH.REMOTE OUTPUT.....OV.....out to pin 8 deck remote control
27.	EDIT REMOTE INPUT.....12v but OV button depressed....in from pin 9 deck remote control
28.	RECORD REMOTE INPUT.....12v but OV button depressed....in from pin 10 deck remote control
29.	STOP REMOTE INPUT.....12v but OV button depressed....in from pin 11 deck remote control
30.	PLAY REMOTE INPUT.....12v but OV button depressed....in from pin 12 deck remote control
31.	FAST FORWARD REMOTE INPUT.....12v but OV button depressed....in from pin 13 deck remote control
31.	REWIND REMOTE INPUT.....12v but OV button depressed....in from pin 14 deck remote control



DECK LOGIC P.C.B.

R	Resistance P.No.		C	Capacity	Type	Volt	P.No.
1	100k	GA100K	1	1u	AL EL	35	BX001B
2	3.3k	GA033L	2	22u	AL EL	16	BV016B
3	10k	GA010K	3	1u	AL EL	35	BX001B
4	330	GA330H	4	2.2u	AL EL	35	BX022C
5	18k	GA018K	5	1u	AL EL	35	BX001B
6	22k	GA022K	6	1u	AL EL	35	BX001B
7	4.7k	GA047L	7	220u	AL EL	25	BE220W
8	82k	GA082K	8	1u	AL EL	35	BX001B
9	5.6k	GA056L	9	1000p	poly	160	BM001N
10	100k	GA100K	10	1000p	poly	160	BM001N
11	56k	GA056K	11	4.7u	AL EL	35	BX047C
12	56k	GA056K	12	10u	AL EL	35	BX010B
13	56k	GA056K	13	1u	AL EL	35	BX001B
14	56k	GA056K	14	1000p	poly	160	BM001M
15	56k	GA056K	15	1u	AL EL	35	BX001B
16	56k	GA056K	16	0.01u	poly	160	BM001W
17	10k	GA010K	17	0.03u	poly	160	BM033N
18	3.3k	GA033L	18	1000p	poly	160	BM001N
	22k	GA022K	19	1u	AL EL	35	BX001B
20	56k	GA056K	20	1u	AL EL	35	BX001B
21	56k	GA056K	21	1u	AL EL	35	BX001B
22	2.2k	GA022L	22	1u	AL EL	35	BX001B
23	10k	GA010K	23	1u	AL EL	35	BX001B
24	4.7k	GA047L	24	1u	AL EL	35	BX001B
25			25	1u	AL EL	35	BX001B
26			26	1u	AL EL	35	BX001B
27	39k	GA039K	27	1u	AL EL	35	BX001B
28	56k	GA056K	28	1u	AL EL	35	BX001B
29	22k	GA022K	29	1u	AL EL	35	BX001B
30	56k	GA056K	30	1u	AL EL	35	BX001B
31	3.3k	GA033L					
32	22k	GA022K					
33	22k	GA022K					
34	22k	GA022K					
35	10k	GA010K					
36	56k	GA056K					
37	1.2k	GB012L					
39							
40	4.7	GA047L					
41							
42							
43							
44							
45							
46							

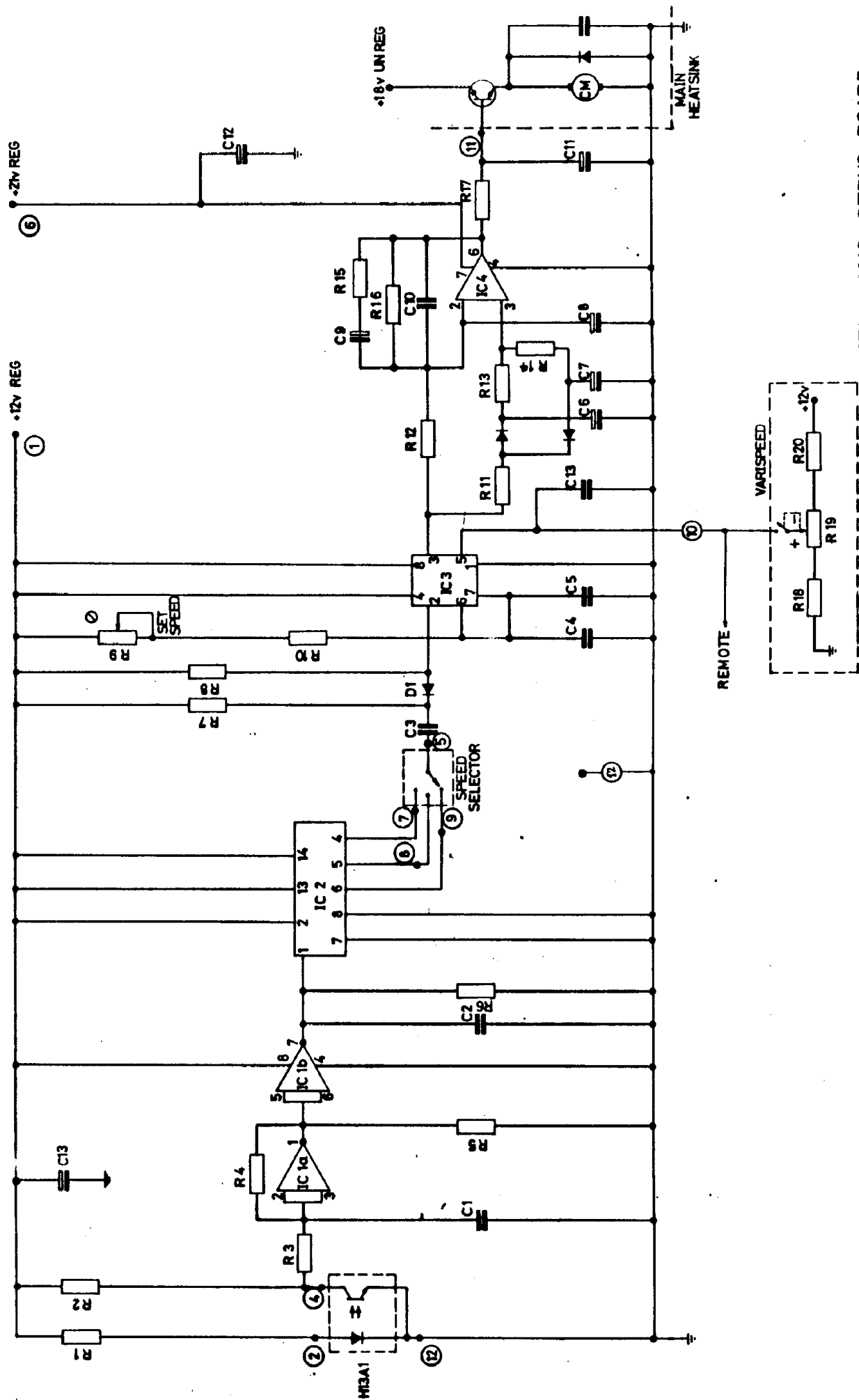
Transistor	Type	P.No
TR1	BFR18	CA003
TR2	BFR18	CA003
TR3	BFR18	CA003
TR4	BFR18	CA003
TR5	2N3053	CA004

DECK LOGIC P.C.B.

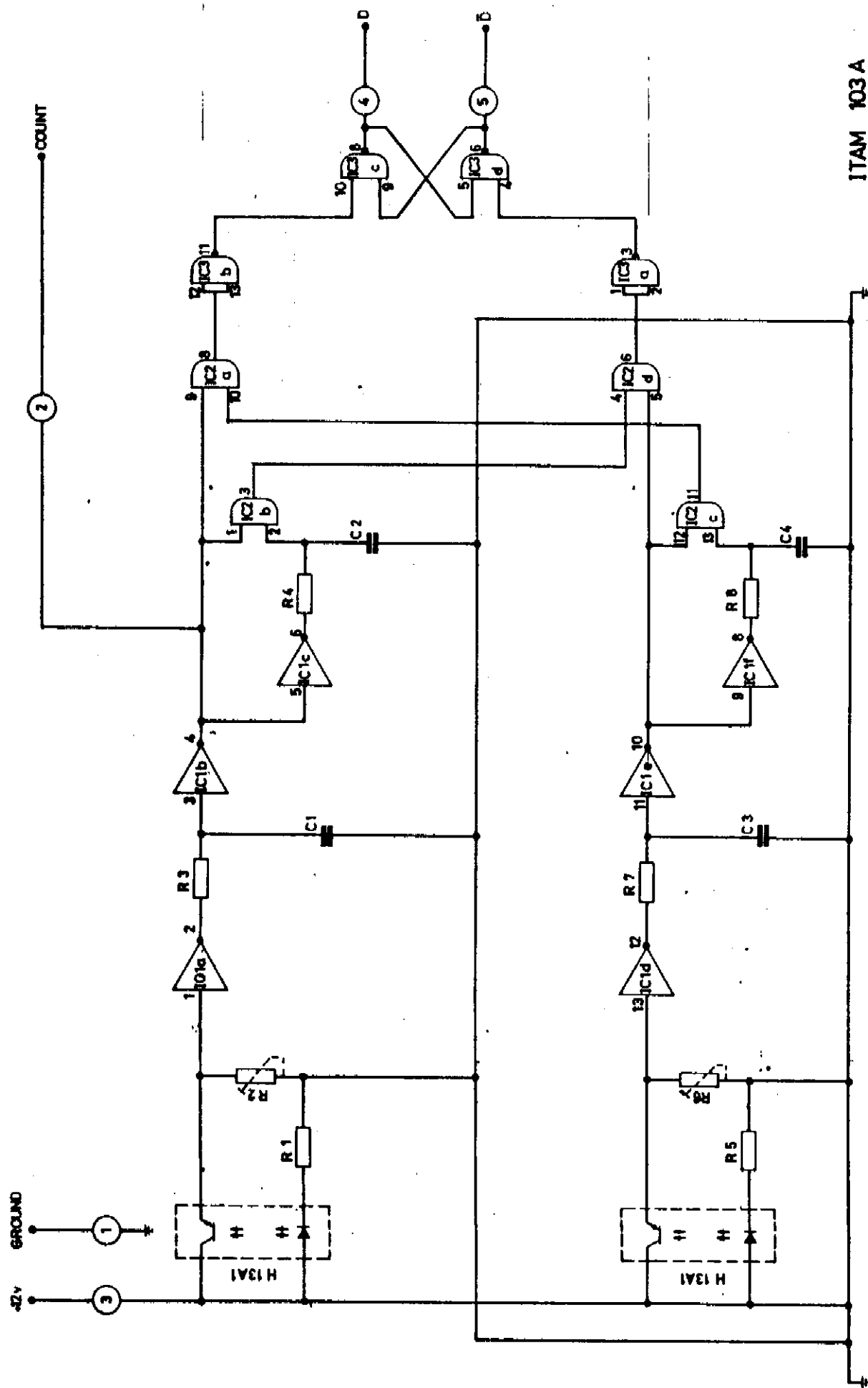
I.C.	Type	Manufacturer	P.No.
IC1	CD4011	R.C.A.	CC002
IC2	CD4011	R.C.A.	CC002
IC3	CD4011	R.C.A.	CC002
IC4	MM74C08N	NATIONAL	CC008
IC5	CD4011	R.C.A.	CC002
IC6	CD4011	R.C.A.	CC002
IC7	SN74L122N	TEXAS	CC009
IC8	CD4011	R.C.A.	CC002
IC9	MM74C221N	NATIONAL	CC010
IC10	MM74C908N	NATIONAL	CC005
IC11	MM74C908N	NATIONAL	CC005
IC12	MM74C08N	NATIONAL	CC008
IC13	CD4011	R.C.A.	CC002
IC14	MM74C908N	NATIONAL	CC005
IC15	MM74C908N	NATIONAL	CC005
IC16	MM74C908N	NATIONAL	CC005
IC17	MM74C908N	NATIONAL	CC005
IC18	MM74C908N	NATIONAL	CC005
IC19	MM74C908N	NATIONAL	CC005
IC20	MM74C908N	NATIONAL	CC005

DI D2 D3 D5 D6 D7 D8 D9 D10	Type IS44	P.No CD002
D11 D12 D13 D14 D15 D16 D17		
D18 D19 D20 D21		

D4	5.6volt.	Type BZY88 Zener	P.No CD004
D22 D23 D25 D26		Type IN4001	P.No CD003
D24 D27 D28 D29 D30 D31		Type IS44	P.No CD002

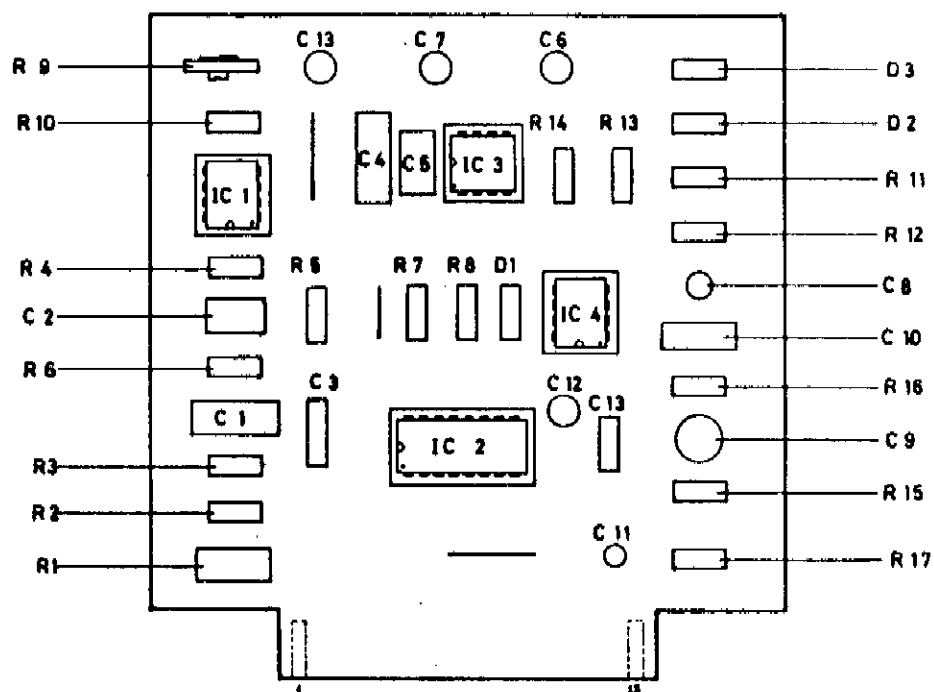


ITAM 1610 SERVO BOARD



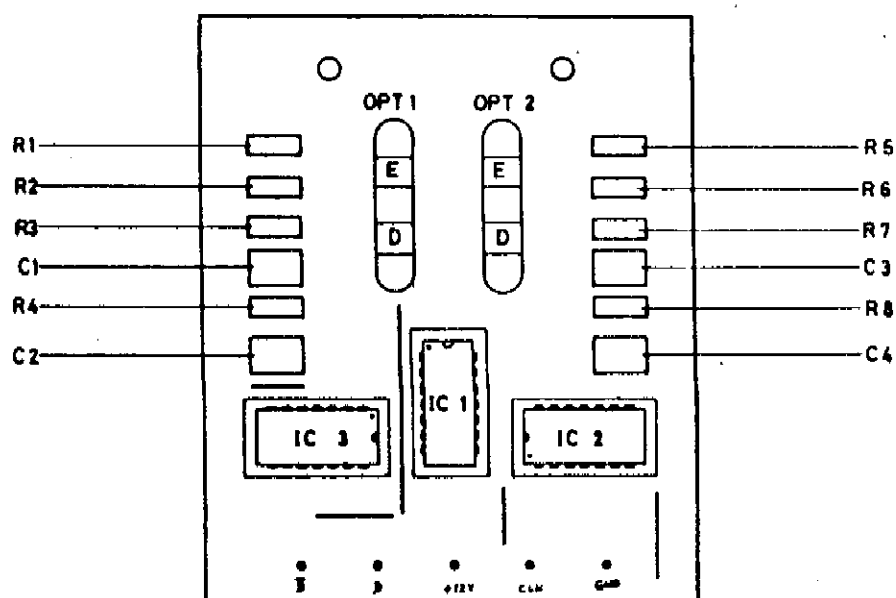
ITAM 103A

TAPE MOTION SENSING



ITAM SERVO BOARD COMPONENT LAYOUT

ITAM TAPE MOTION SENSING BOARD
COMPONENT LAYOUT



CAPSTAN SERVO ELECTRONICS.

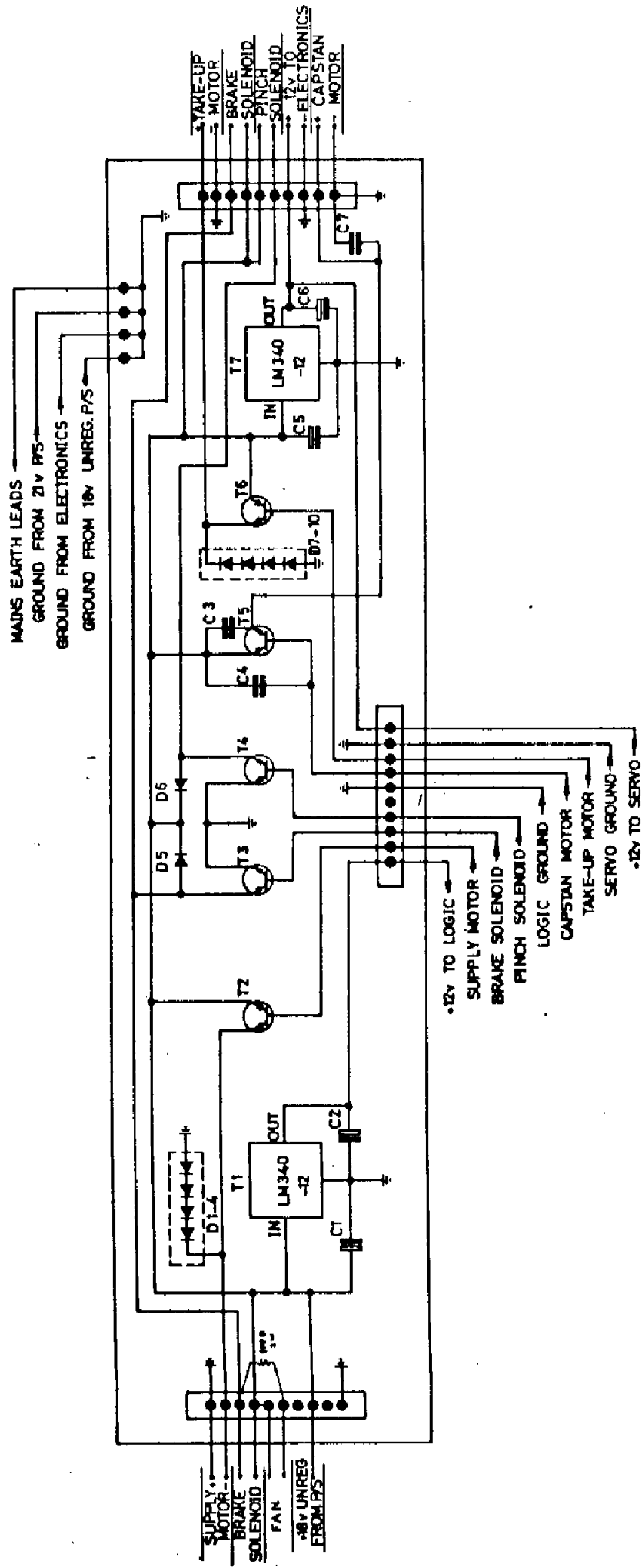
Res	Value	Part No
1	330	GA220H
2	27k	GA027K
3	4.7k	GA047L
4	47k	GA047K
5	2.2k	GA022L
6	4.7k	GA047L
7	10k	GA010K
8	2.2k	GA022L
9	47k	GE001
10	100k	GA100K
11	220	GA220H
12	6.8k	GA068L
13	2.2k	GA022L
14	2.2k	GA022L
15	6.8k	GA068L
16	1m	GA001M
17	4.7k	GA047L
18	15k	GA015K
19	5k	GC001AA30
20	5.6k	GA056L

C	Cap	Type	Volt	P.No
1	10n	poly	160	BM010N
2	2200p	poly	160	BL022X
3	4700p	poly	160	BL047X
4	10n	poly	160	BM010N
5	1000p	poly	160	BL001N
6	10u	AL EL	25	BW010B
7	10u	AL EL	25	BW010B
8	1u	AL EL	35	BX001B
9	68u	AL EL	25	BW068B
10	0.1u	poly	160	BL100N
11	2.2u	EL AL	35	BX022C
12	10u	EL AL	35	BW010B
13	10n	poly	160	BM010N

IC1	MM74C908N	NATIONAL	CC005
IC2	MC14520BCP	MOTOROLA	CC011
IC3	LM555	TEXAS etc	CC012
IC4	LM741	TEXAS etc	CC003
D1 D2 D3	IS44		CD002

Infra red sensor mounted on Capstan motor Type H13A1 Part No CF001

[illegible]



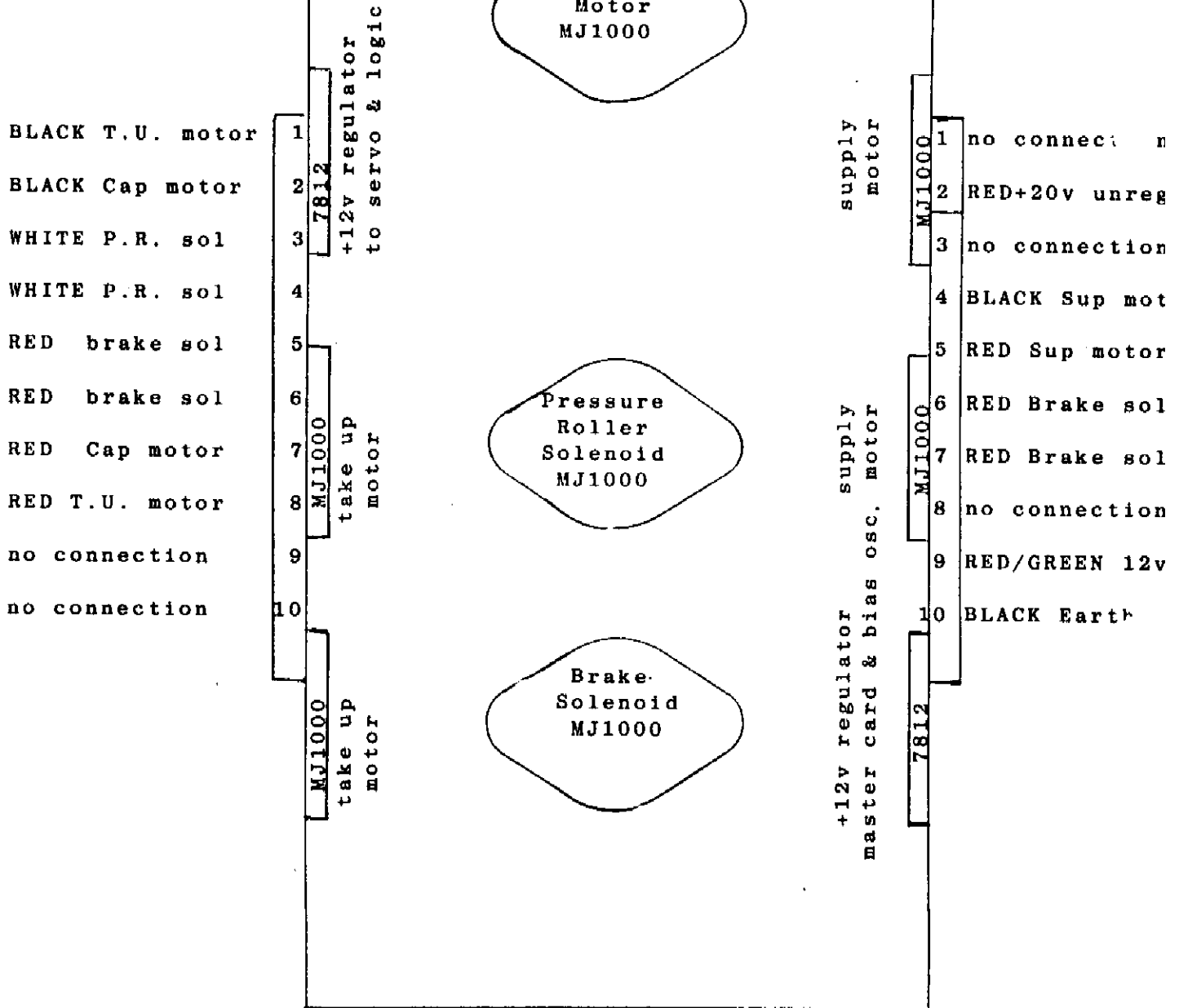
ITAM 1610 HEAT SINK WIRING DIAGRAM

Version A

RED/GREEN
BLACK
BLUE
WHITE
BLACK
no connection
YELLOW
GREEN
GREY
RED

Connector A

1 2 3 4 5 6 7 8 9 10

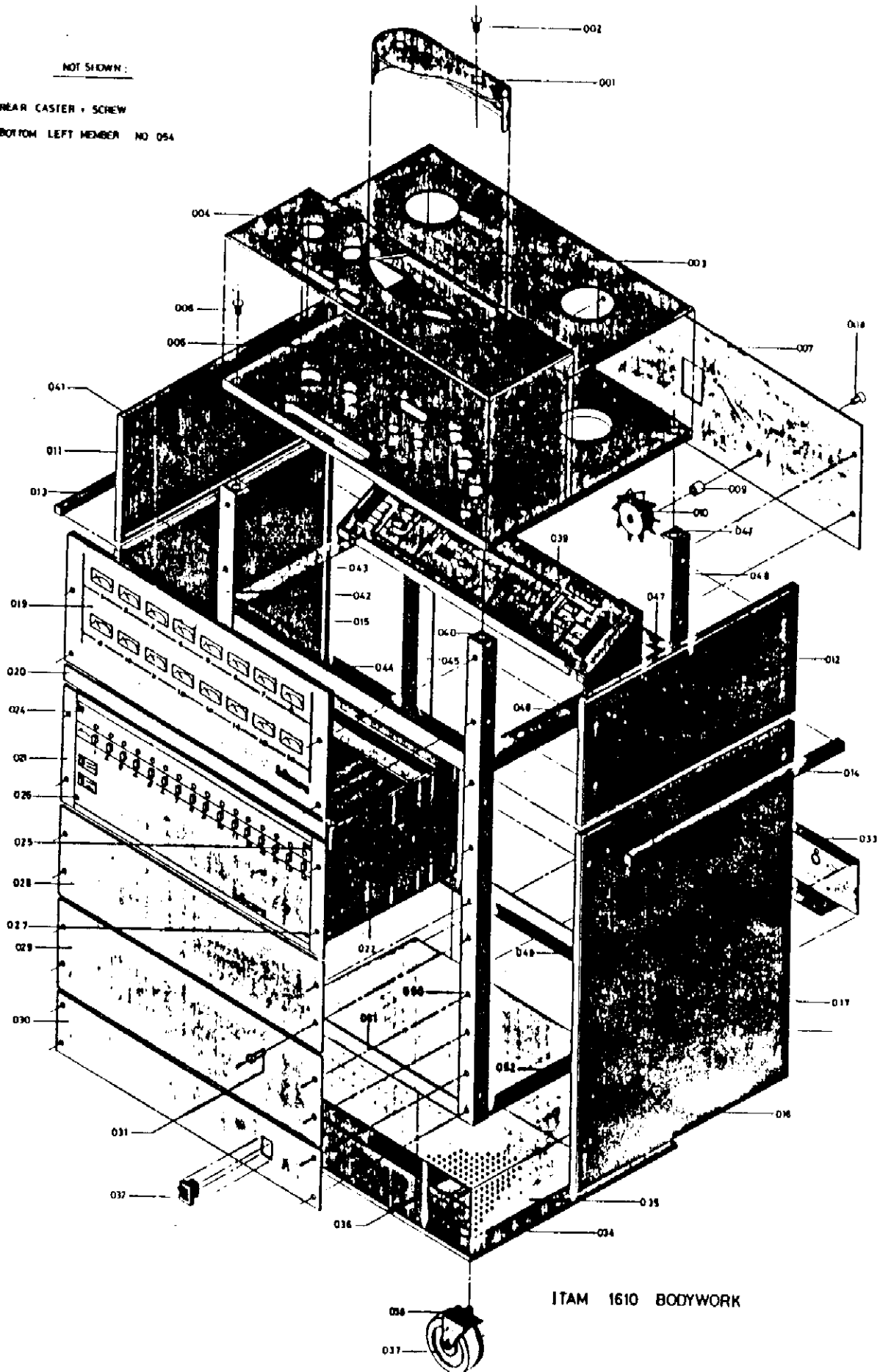


Top view of heatsink assly.

NOT SHOWN :

REAR CASTER - SCREW

BOTTOM LEFT MEMBER NO 054



ITAM 1610 BODYWORK