BARCO PROJECTION SYSTEMS

BARCO

BARCO DATA 701S

R9000718 - HD145 (120 VAC)

SERVICE SHEETS

DATE:16/02/96 revision 00 ART. NR. : R5975746A

BARCO PROJECTION SYSTEMS

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BARCO DATA 701

R9000719 - HD6 (120 VAC)

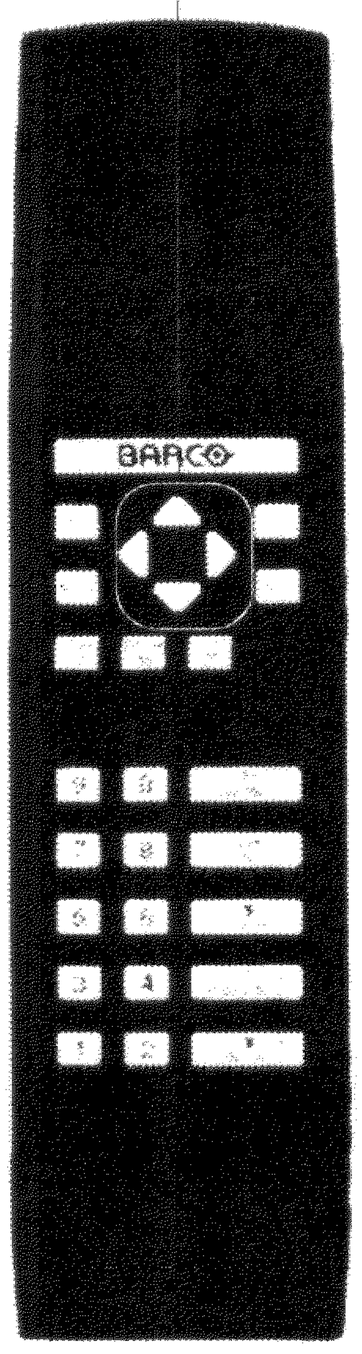
SERVICE SHEETS

DATE:02/05/95 revision 00 ART. NR. : R5975655A

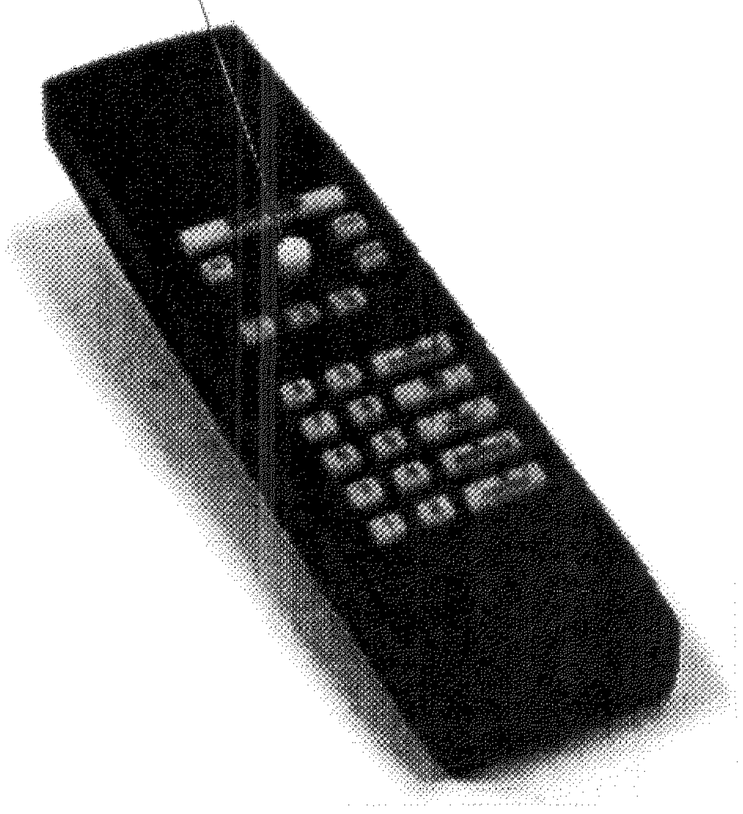
Transmitter RCU (remote control unit) 79 1664

Infra Red Remote control
79 1664

RCU with arrow keys



RCU with Joy stick

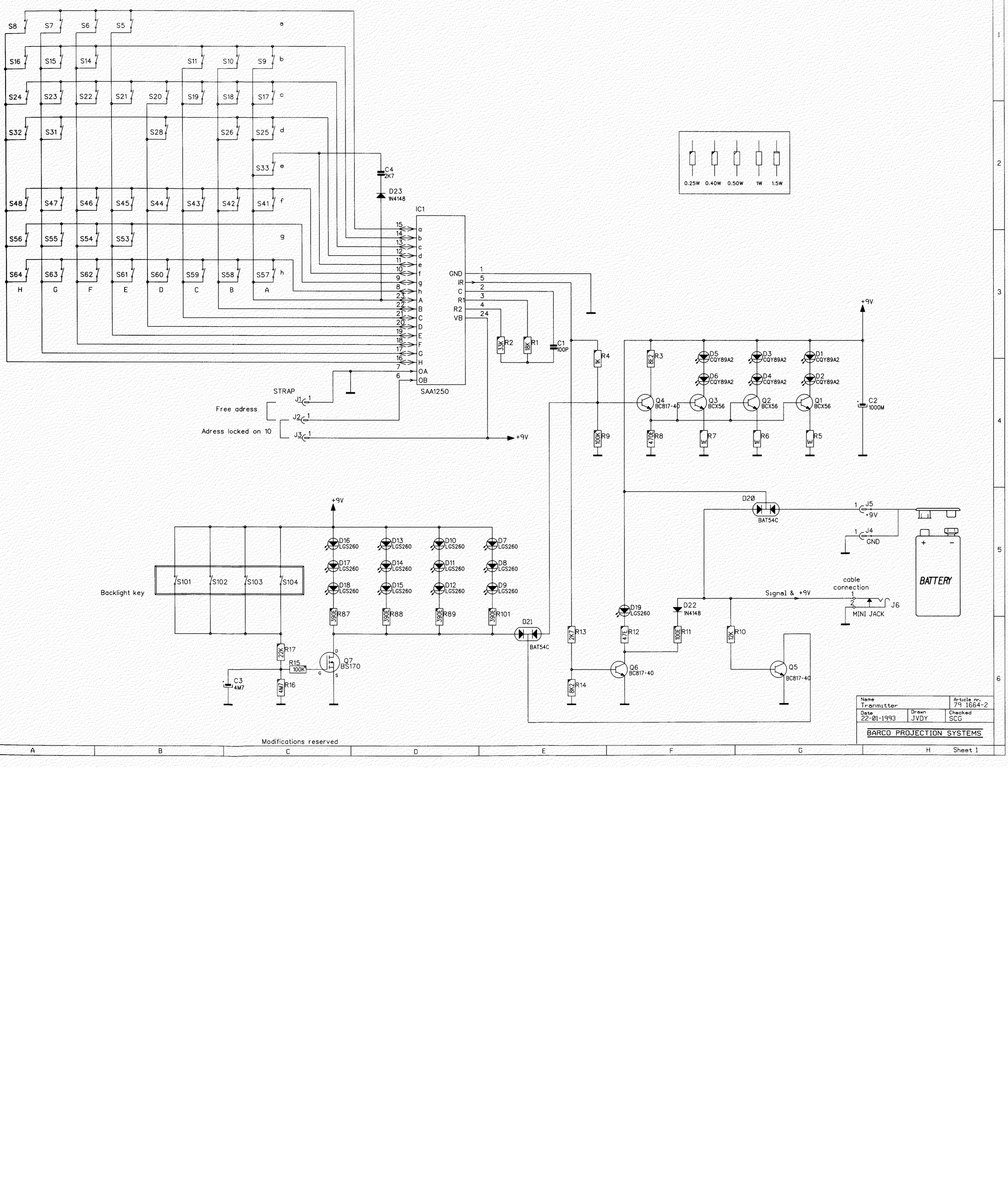


COMP.	LOC.
C1	B 2
C2	A 2
C3	B 5
C4	B 2
D1	B 1
D2	B 1
D3	B 1
D4	B 1
D5	B 1
D6	B 1
D7	B 3
D8	B 3
D9	B 2
D10	B 5
D11	B 4
D12	B 4
D13	B 3
D14	B 3
D15	B 2
D16	B 5
D17	B 4
D18	B 4
D19	B 5
D20	B 1
D21	B 1
D22	B 1
D23	B 2
IC1	B 2
J1	A 2
J2	A 2
J3	A 1
J4	B 5
J5	B 5
J6	B 5
Q1	B 1
Q2	B 1
Q3	B 1
Q4	B 1
Q5	B 1
Q6	B 1
Q7	B 5
R1	B 2
R2	B 2
R3	B 1
R4	B 2
R5	B 1
R6	B 1
R7	B 1
R8	B 1
R9	B 2
R10	B 1
R11	B 1
R12	B 1
R13	B 2
R14	B 2
R15	B 5
R16	B 5
R17	B 5
R87	B 5
R88	B 5
R89	B 5
R101	B 5
S5	B 2
S6	B 3
S7	B 3
S8	B 3
S9	B 2
S10	B 2
S11	B 3
S14	B 3
S15	B 3
S16	B 3
S17	B 4
S18	B 4
S19	B 4
S20	B 4
S21	B 4
S22	B 4
S23	B 4
S24	B 4
S25	B 3
S26	B 3
S28	B 3
S31	B 3
S32	B 3
S33	B 3
S36	B 3
S41	B 4
S42	B 4
S43	B 4
S44	B 4
S45	B 4
S46	B 4
S47	B 4
S48	B 4
S53	B 3
S54	B 3
S55	B 3
S56	B 3
S57	B 5
S58	B 5
S59	B 5
S60	B 5
S61	B 5
S62	B 5
S63	B 5
S64	B 5
S101	B 2
S102	B 2
S103	B 2
S104	B 2

Name: Transmitter		Article nr.: 79 1664-2
Date: 22-01-1993	Drawn: JVDY	Checked: SCG

BARCO PROJECTION SYSTEMS

Modifications reserved



COMP.	LOC.	COMP.	LOC.
C1	E 3	S102	B 5
C2	H 4	S103	C 5
C3	C 6	S104	C 5
C4	D 2		
D1	G 3		
D2	G 4		
D3	G 3		
D4	G 4		
D5	F 3		
D6	F 4		
D7	E 5		
D8	E 5		
D9	E 5		
D10	D 5		
D11	D 5		
D12	D 5		
D13	D 5		
D14	D 5		
D15	D 5		
D16	C 5		
D17	C 5		
D18	C 5		
D19	F 5		
D20	G 5		
D21	E 6		
D22	F 5		
D23	D 2		
IC1	D 2		
J1	C 4		
J2	C 4		
J3	C 4		
J4	G 5		
J5	G 5		
J6	G 5		
Q1	G 4		
Q2	G 4		
Q3	F 4		
Q4	F 4		
Q5	G 6		
Q6	F 6		
Q7	C 6		
R1	E 3		
R2	E 3		
R3	F 3		
R4	E 3		
R5	G 4		
R6	G 4		
R7	F 4		
R8	F 4		
R9	E 4		
R10	F 6		
R11	F 6		
R12	F 6		
R13	E 6		
R14	E 6		
R15	C 6		
R16	C 6		
R17	C 6		
R87	C 5		
R88	D 5		
R89	D 5		
R101	E 5		
S5	B 1		
S6	A 1		
S7	A 1		
S8	A 1		
S9	C 1		
S10	C 1		
S11	B 1		
S14	A 1		
S15	A 1		
S16	A 1		
S17	C 1		
S18	C 1		
S19	B 1		
S20	B 1		
S21	B 1		
S22	A 1		
S23	A 1		
S24	A 1		
S25	C 2		
S26	B 2		
S28	B 2		
S31	A 2		
S32	A 2		
S33	C 2		
S41	C 2		
S42	C 2		
S43	B 2		
S44	B 2		
S45	B 2		
S46	A 2		
S47	A 2		
S48	A 2		
S53	B 3		
S54	A 3		
S55	A 3		
S56	A 3		
S57	C 3		
S58	C 3		
S59	B 3		
S60	B 3		
S61	B 3		
S62	A 3		
S63	A 3		
S64	A 3		
S101	B 5		

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GREEN LED : transmit

CONNECTION WITH PROJECTOR
ONLY FOR LOCAL CONTROL

TOP VIEW

D19 D5 D6 D3 D4 D1 D2

J7 1

780456

ADDRESS LOCKED ON 10

FREE ADDRESS

J3
J2 FREE FIXED
J1

IC1

F1028

C2

A B C D E F G H I J K L M

B11 V12F

J5 J4

J6

F1018

ORIGIN

BATTERY
9V

To remote input

BOTTOM VIEW

Q1 R6 Q2 Q3 Q4 R3 D21 R7
Q10 R8 C5 Q5
R5 D26 D25 R22 R10 D20
Q8 R19 R20
Q6
R12
R11 R14 C1 R1 R2 D23 C4 R13 R115 R4 R9

C6 D22

S104 S103 S102 S101
D15 D9
S5
S10 S9
S8 S7
S33 S6 S11
D14 D8
S15 S16 S14 S28
S32 S31 S54 S53
D13 D7
S25 S26 S56 S55
S23 S24 S48 S47
D18 D12
S21 S22 S46 S45
S19 S20 S44 S43
D17 D11
S17 S18 S42 S41
S62 S61 S64 S63
D16 D10
S60 S59 S58 S57

R17 R15 R18 Q7 C3 R16 Q9 R21 D24 R87 R89 R88 R101

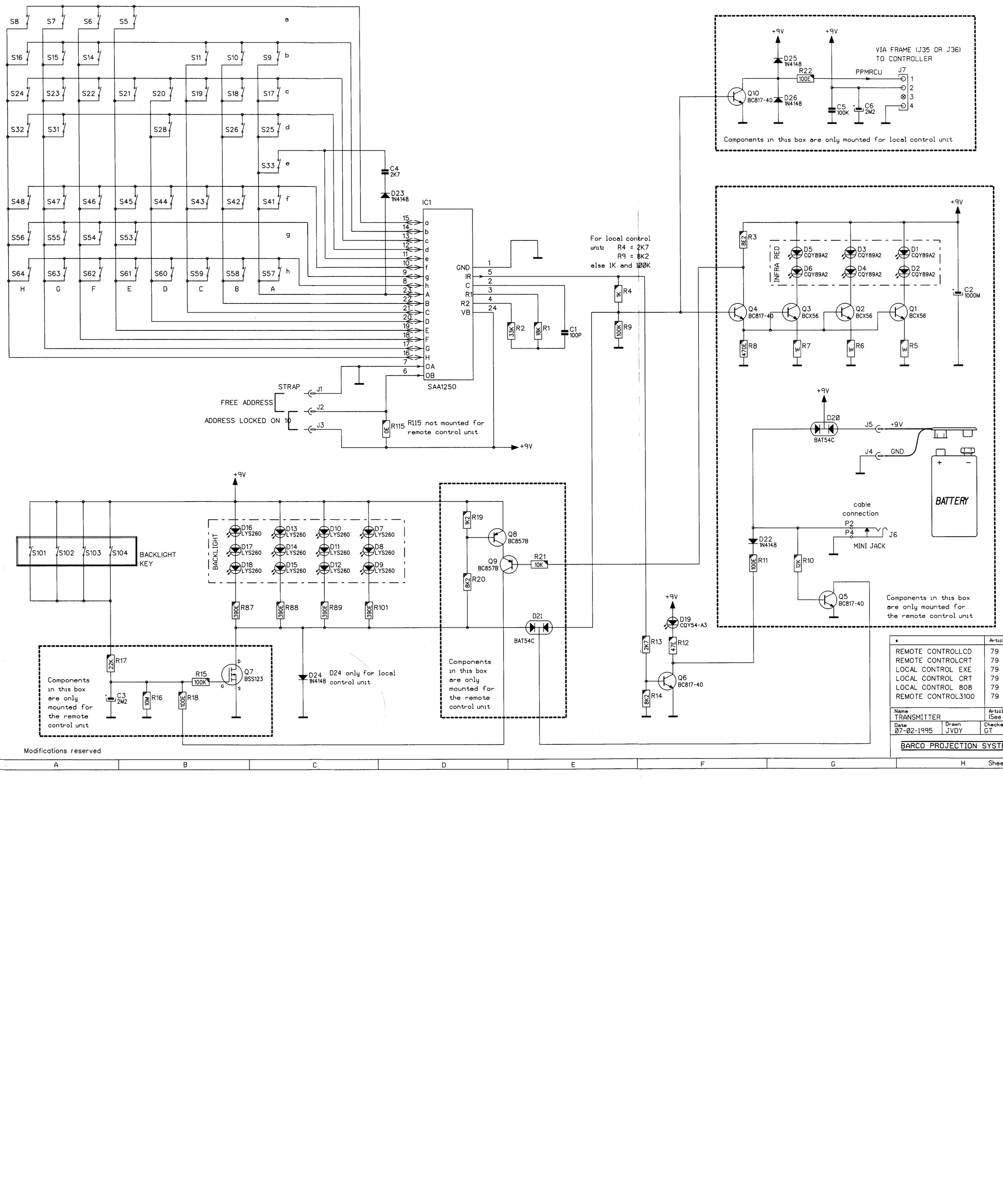
*	Article nr.
REMOTE CONTROL LCD	79 1663-3
REMOTE CONTROL CRT	79 1664-3
LOCAL CONTROL EXE	79 1665-3
LOCAL CONTROL CRT	79 1666-3
LOCAL CONTROL 808	79 1672-3
REMOTE CONTROL 3100	79 1673-3

Name	Article nr.
TRANSMITTER	(See *)
Date: 22-02-1995	Drawn: JVDY
Checked: SCG	

BARCO PROJECTION SYSTEMS

730456

BARCO



Modifications reserved

•	Article nr.
REMOTE CONTROLLCD	79 1663-3
REMOTE CONTROLCRT	79 1664-3
LOCAL CONTROL EXE	79 1665-3
LOCAL CONTROL CRT	79 1666-3
LOCAL CONTROL 808	79 1672-3
REMOTE CONTROL3100	79 1673-3

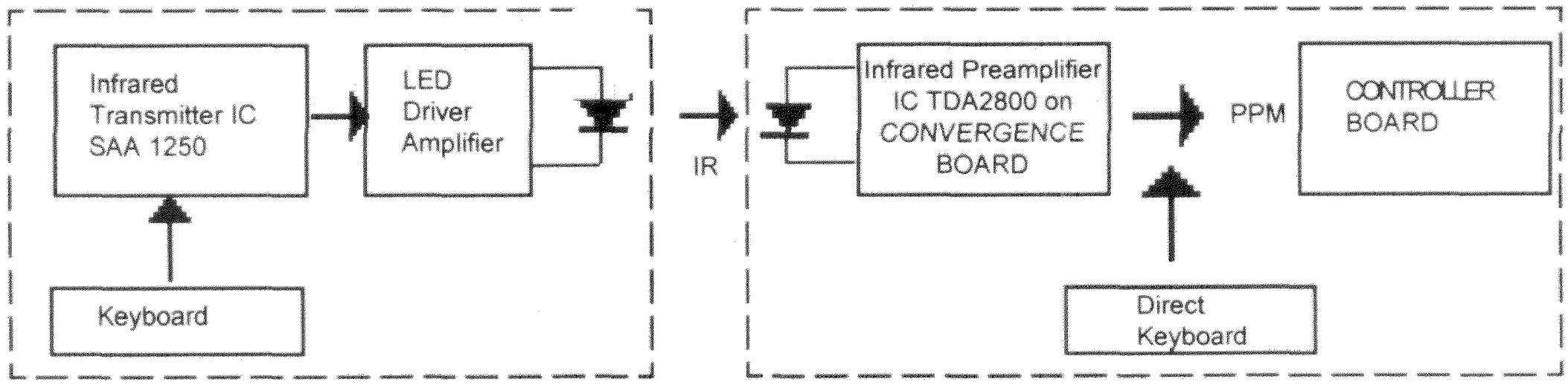
Name	Article nr.
TRANSMITTER	(See •)
Date: 07-02-1995	Drawn: JVDY / Checked: GT

BARCO PROJECTION SYSTEMS

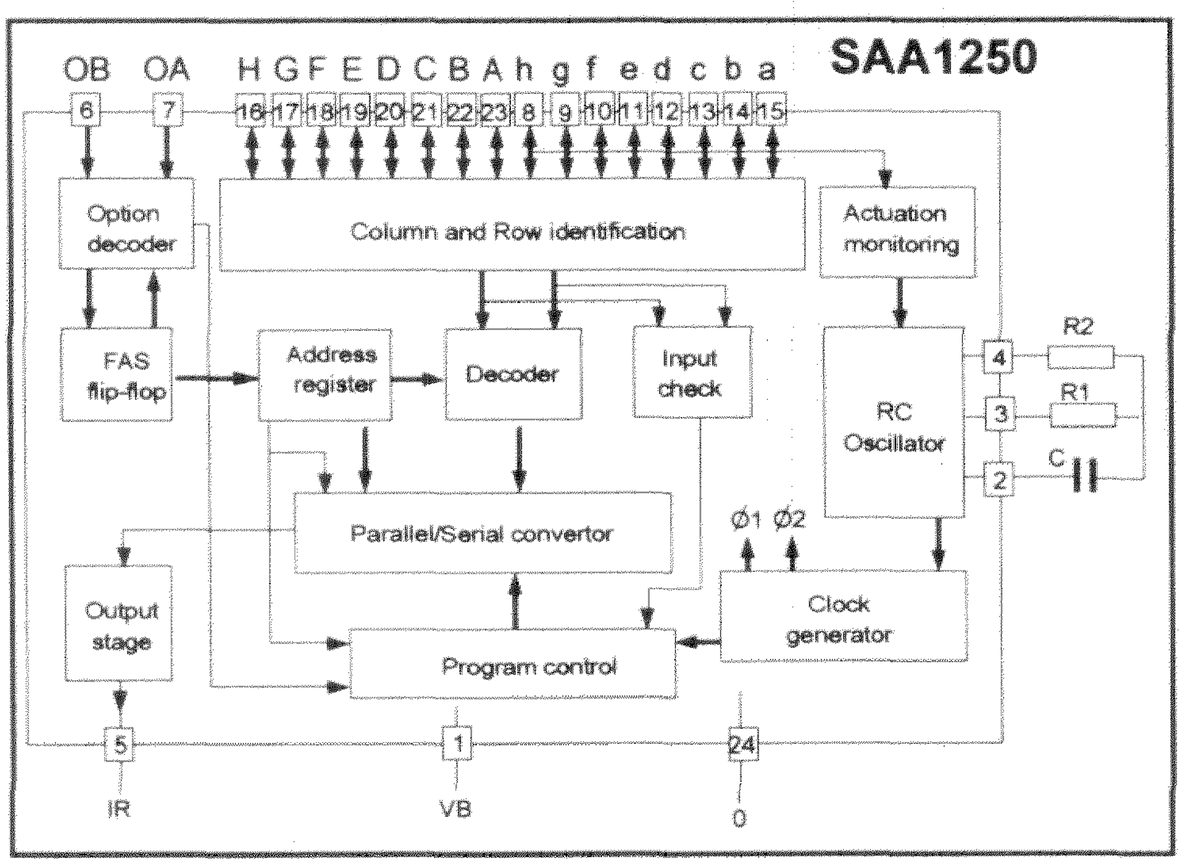
Sheet 1

COMP.	LOC.	COMP.	LOC.
C1	E 3	S48	A 2
C2	H 3	S53	B 2
C3	A 6	S54	A 2
C4	D 2	S55	A 2
C5	G 1	S56	A 2
C6	G 1	S57	C 3
		S58	B 3
D1	H 3	S59	B 3
D2	H 3	S60	B 3
D3	G 3	S61	B 3
D4	G 3	S62	A 3
D5	G 3	S63	A 3
D6	G 3	S64	A 3
D7	C 5	S101	A 5
D8	C 5	S102	A 5
D9	C 5	S103	A 5
D10	C 5	S104	A 5
D11	C 5		
D12	C 5		
D13	C 5		
D14	C 5		
D15	C 5		
D16	B 5		
D17	B 5		
D18	B 5		
D19	F 5		
D20	G 4		
D21	E 5		
D22	F 5		
D23	D 2		
D24	C 6		
D25	G 1		
D26	G 1		
IC1	D 2		
J1	C 4		
J2	C 4		
J3	C 4		
J4	G 4		
J5	G 4		
J6	G 5		
J7	H 1		
Q1	H 3		
Q2	G 3		
Q3	G 3		
Q4	F 3		
Q5	G 5		
Q6	F 6		
Q7	B 6		
Q8	E 5		
Q9	D 5		
Q10	F 1		
R1	E 3		
R2	E 3		
R3	F 2		
R4	E 3		
R5	H 3		
R6	G 3		
R7	G 3		
R8	F 3		
R9	E 3		
R10	G 5		
R11	F 5		
R12	F 6		
R13	F 6		
R14	F 6		
R15	B 6		
R16	B 6		
R17	A 6		
R18	B 6		
R19	D 5		
R20	D 5		
R21	E 5		
R22	G 1		
R87	B 5		
R88	C 5		
R89	C 5		
R101	C 5		
R115	D 4		
S5	B 1		
S6	A 1		
S7	A 1		
S8	A 1		
S9	C 1		
S10	C 1		
S11	B 1		
S14	A 1		
S15	A 1		
S16	A 1		
S17	C 1		
S18	C 1		
S19	B 1		
S20	B 1		
S21	B 1		
S22	A 1		
S23	A 1		
S24	A 1		
S25	C 2		
S26	B 2		
S28	B 2		
S31	A 2		
S32	A 2		
S33	C 2		
S41	C 2		
S42	B 2		
S43	B 2		
S44	B 2		
S45	B 2		
S46	A 2		
S47	A 2		

BLOCK DIAGRAM



BLOCK DIAGRAM IC SAA1250



Code for the OA and OB address inputs

input		OA	OB
option I		H	H
option II	H	L	
option III		L	H
free address selection		L*	L*

* L impulse (min.30us)

Used options:

Option III: alle commands are sent with address 10
Option: free address selection

Command table of the infrared transmitter IC SAA 1250

Command		Input code		Option III	Free Address Selection
No		**a b c d e f g h**	**A B C D E F G H**	**Address 10**	**OA and OB to L potential**
S5	Up	x	x		
S6	Down	x	x		
S7	Right	x	x		
S8	Left	x	x		
S9	Exit	x	x		
S10	Adjust	x	x		
S11	Enter	x	x		
S14	Text	x	x		
S15	Stdby	x	x		
S16	Pause	x	x		

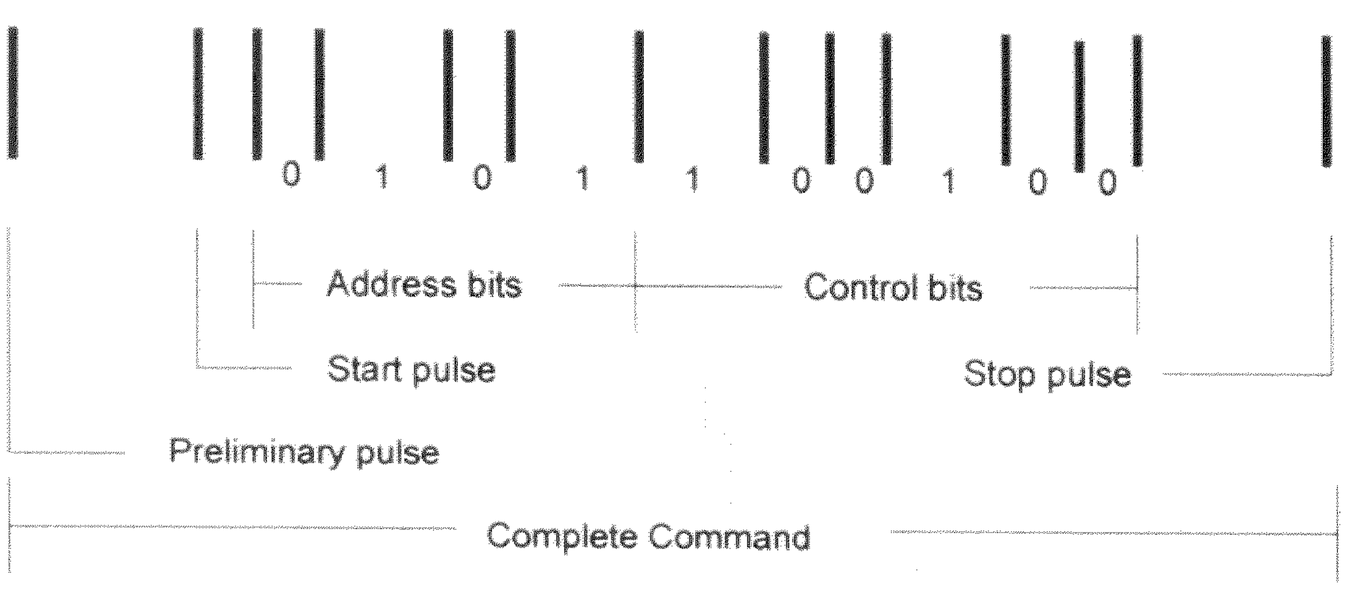
Command table of the infrared transmitter IC SAA 1250 (continu)

Command		Input code		Option III	Free Address Selection
No		**a b c d e f g h**	**A B C D E F G H**	**Address 10**	**OA and OB to L potential**
S17	1	x	x		Address 1
S18	2	x	x		Address 2
S19	3	x	x		Address 3
S20	4	x	x		Address 4
S21	5	x	x		Address 5
S22	6	x	x		Address 6
S23	7	x	x		Address 7
S24	8	x	x		Address 8
S25	9	x	x		Address 9
S26	0	x	x		Address 10
S27					
S33	Address	x	x		FAS OFF
S41	Contr+	x	x		
S42	Contr -	x	x		
S43	Bright+	x	x		
S44	Bright -	x	x		
S45	Sat+	x	x		
S46	Sat -	x	x		
S47	Tint+	x	x		
S48	Tint -	x	x		
S55	Sharp+	x	x		
S56	Sharp -	x	x		

Operational mode

According to Table above, the SAA 1250 operates in two modes, which are determined via the OA and OB address input (see table on preceding page).

The first command is given about 20ms after contact actuation. All following commands are sent periodically every 130 ms.



The signals are transmitted by means of infrared light in the shape of packages pulses. For the transmission of a 10-bit word, 14 pulses are required. The binary information of a bit is contained in the time interval between two pulses. We define the time T (approx. 100us) as the basis for the code to be employed.

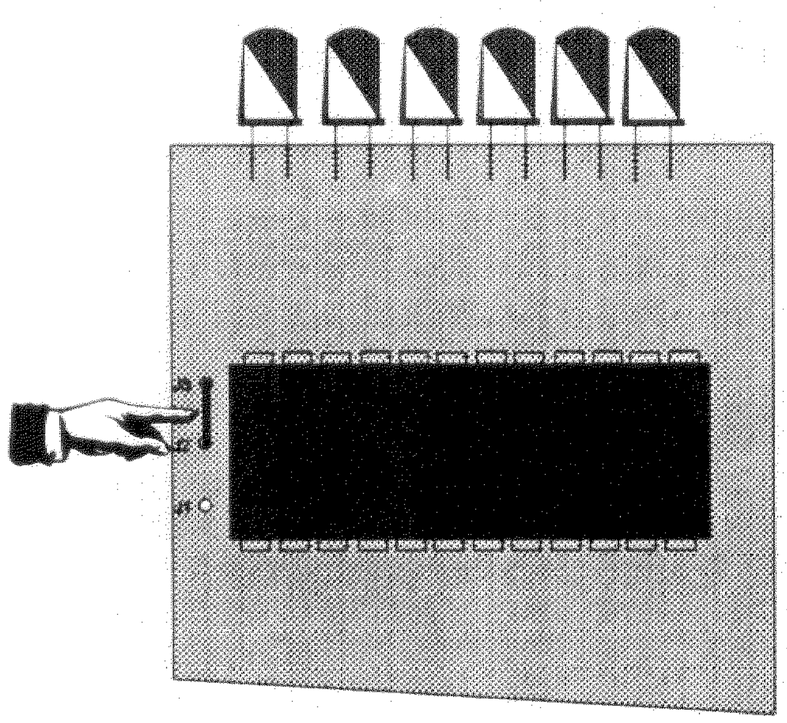
duration T = binary digit "0"
duration 2T = binary digit "1"

Spacing between preliminary pulse and start pulse 3T. This is followed after a 1T by the 11 data pulses and terminated after a 3T interval by the stop pulse.

Only for the Infra Red Remote control

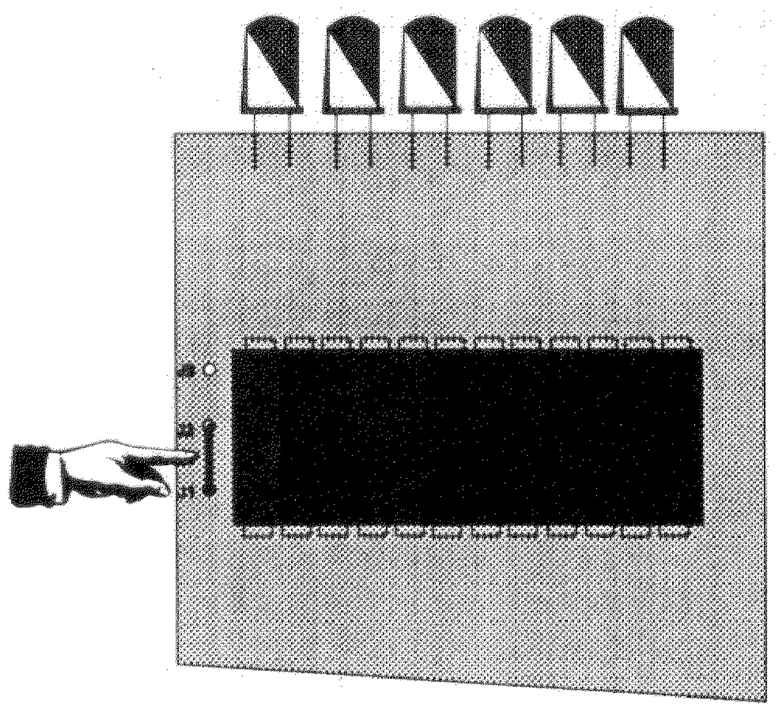
The OPTION III and the FREE ADDRESS SELECTION (FAS) are defined in the remote control RCU800 by means of an inserted jumper on the printed circuit board, see PCB lay-out.

FIXED ADDRESS SELECTION MODE



First signal is transmitted 20ms after key depression, further signals periodically in a distance of 130ms with Address 10.

FREE ADDRESS SELECTION MODE



311.DRW

First signal is transmitted 20ms after key depression, further signals every 130ms.

The commands can be transmitted consecutively to various addresses with free address selection.

In this mode the required address must be initially entered into the address register of the transmitter IC SAA1250, using one of the commands 17 to 32. Then all following commands are transmitted together with the stored address, including commands 17 to 32.

The command 33 (FAS off) clear , under the conditions of a L signal permanently applied to both address inputs, only the address register.

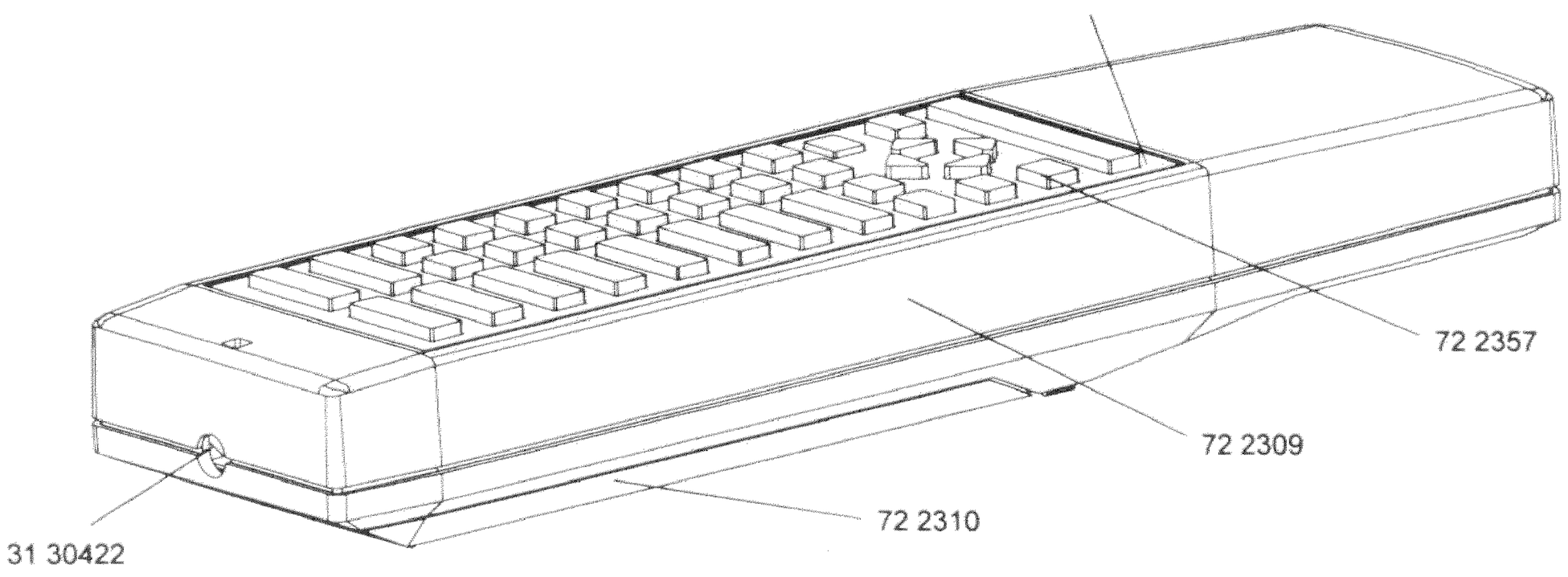
Parts listing Transmitter RCU 79 1664 (RCU with arrow keys)

ITEM NO.	SIT.	DESCRIPTION
P210137	C..1	C(S)CEC1CH1206COG101J 50
11 11355	C..2	C EL AX1000M T 10E14 85
11 15915	C..3	C EL5 RA 4M7M 35E2 85
P210147	C..4	C(S)CEC1CH1206COG272J 50
13 16666	D..1	D LED D5 T IR 89A2
13 16666	D..2	D LED D5 T IR 89A2
13 16666	D..3	D LED D5 T IR 89A2
13 16666	D..4	D LED D5 T IR 89A2
13 16666	D..5	D LED D5 T IR 89A2
13 16666	D..6	D LED D5 T IR 89A2
P234063	D..7	SMC(S)DIOLED LGS260
P234063	D..8	SMC(S)DIOLED LGS260
P234063	D..9	SMC(S)DIOLED LGS260
P234063	D.10	SMC(S)DIOLED LGS260
P234063	D.11	SMC(S)DIOLED LGS260
P234063	D.12	SMC(S)DIOLED LGS260
P234063	D.13	SMC(S)DIOLED LGS260
P234063	D.14	SMC(S)DIOLED LGS260
P234063	D.15	SMC(S)DIOLED LGS260
P234063	D.16	SMC(S)DIOLED LGS260
P234063	D.17	SMC(S)DIOLED LGS260
P234063	D.18	SMC(S)DIOLED LGS260
P234063	D.19	SMC(S)DIOLED LGS260
P234205	D.20	SMC(S)DISCH BAT54C SOT23
P234205	D.21	SMC(S)DISCH BAT54C SOT23
P234099	D.22	SMC(S)DIO 4148
P234099	D.23	SMC(S)DIO 4148
13 7371	I..1	U 1250 SAA DIP24 PIRTRA
31 30422	J...	J PHN FBS D 2.5MON P
31 3196	J...	J BAT NWS P 2 9V
78 0222	PC..	PCD#PJ52 D5000 TX

ITEM NO.	SIT.	DESCRIPTION
P232122	Q..1	SMC(S)TRNPN BCX56 SOT89
P232122	Q..2	SMC(S)TRNPN BCX56 SOT89
P232122	Q..3	SMC(S)TRNPN BCX56 SOT89
P232026	Q..4	SMC(S)TRA BC817-40
P232026	Q..5	SMC(S)TRA BC817-40
P232026	Q..6	SMC(S)TRA BC817-40
13 2910	Q..7	Q BS170 FN SS TO92 060A5
P200103	R..1	R# CE H 18K J 0W12 1206
P200109	R..2	R# CE H 33K J 0W12 1206
P200023	R..3	R# CE H 8E2 J 0W12 1206
P200073	R..4	R# CE H 1K J 0W12 1206
P200001	R..5	R# CE H 1E J 0W12 1206
P200001	R..6	R# CE H 1E J 0W12 1206
P200001	R..7	R# CE H 1E J 0W12 1206
P200065	R..8	R# CE H470E J 0W12 1206
P200121	R..9	R# CE H100K J 0W12 1206
P200099	R.10	R# CE H 12K J 0W12 1206
P200049	R.11	R# CE H100E J 0W12 1206
P200041	R.12	R# CE H 47E J 0W12 1206
P200083	R.13	R# CE H 2K7 J 0W12 1206
P200095	R.14	R# CE H 8K2 J 0W12 1206
P200121	R.15	R# CE H100K J 0W12 1206
P200161	R.16	R# CE H 4M7 J 0W12 1206
P200105	R.17	R# CE H 22K J 0W12 1206
P200063	R.87	R# CE H390E J 0W12 1206
P200063	R.88	R# CE H390E J 0W12 1206
P200063	R.89	R# CE H390E J 0W12 1206
P200063	R101	R# CE H390E J 0W12 1206

Note: Pxxxxxx = in SMD mounted components

72 2382



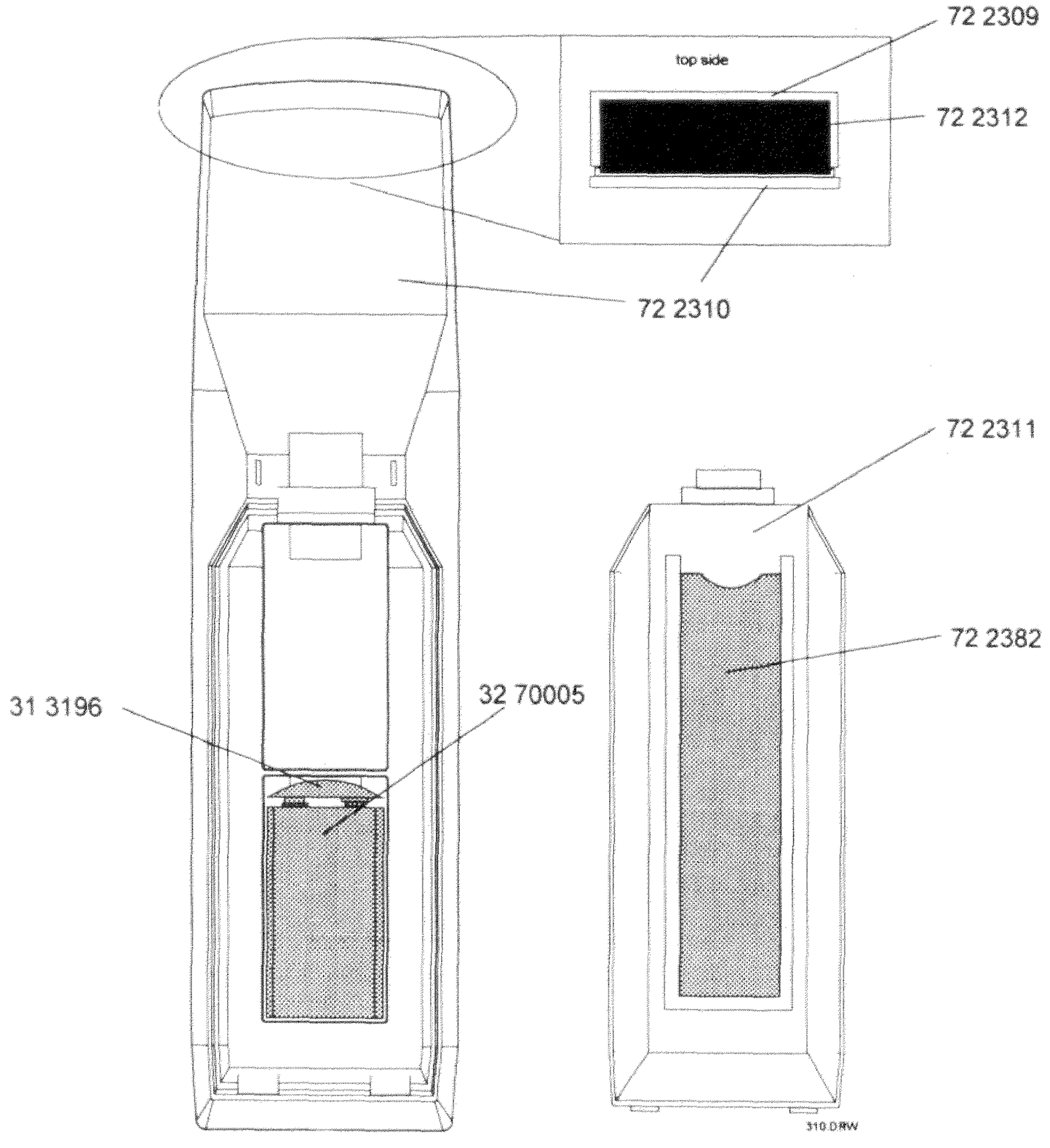
Transmitter RCU (remote control unit) 79 1664

Spare parts Transmitter RCU 79 1664 (RCU with arrow keys)

ART.NO.	DESCRIPTION	QUANTITY
13 16666	D LED D5 T IR 89A2	6
13 2910	Q BS170 FN SS TO92 060A5	1
13 7371	U 1250 SAA DIP24 PIRTRA	1
31 30422	J PHN FBS D 2.5MON P	1
31 3196	J BAT NWS P 2 9V	1
32 70005	BAT 9V 6F22 ALK 0A525	1
36 15075	SCR HILO_P 3.2X 8,5HS B	1
59 75045	LFLT RCU700 TX	1

ART.NO.	DESCRIPTION	QUANTITY
72 2309	HSG PJ49 TX2 CVR UP	1
72 2310	HSG PJ49 TX2 CVR DN	1
72 2311	HSG PJ49 TX2 CVR BAT	1
72 2312	HSG PJ49 TX2 WDW IR	1
72 2353	HSG PJ53 TX2 FOIL V700	1
72 2357	SW KYBD RUB PJ53 TX V700	1
72 2382	HSG PJ49 TX2 LFLT WDW	1
78 0222	PCD#PJ52 D5000 TX	1

Note: Pxxxxxx = in SMD mounted components

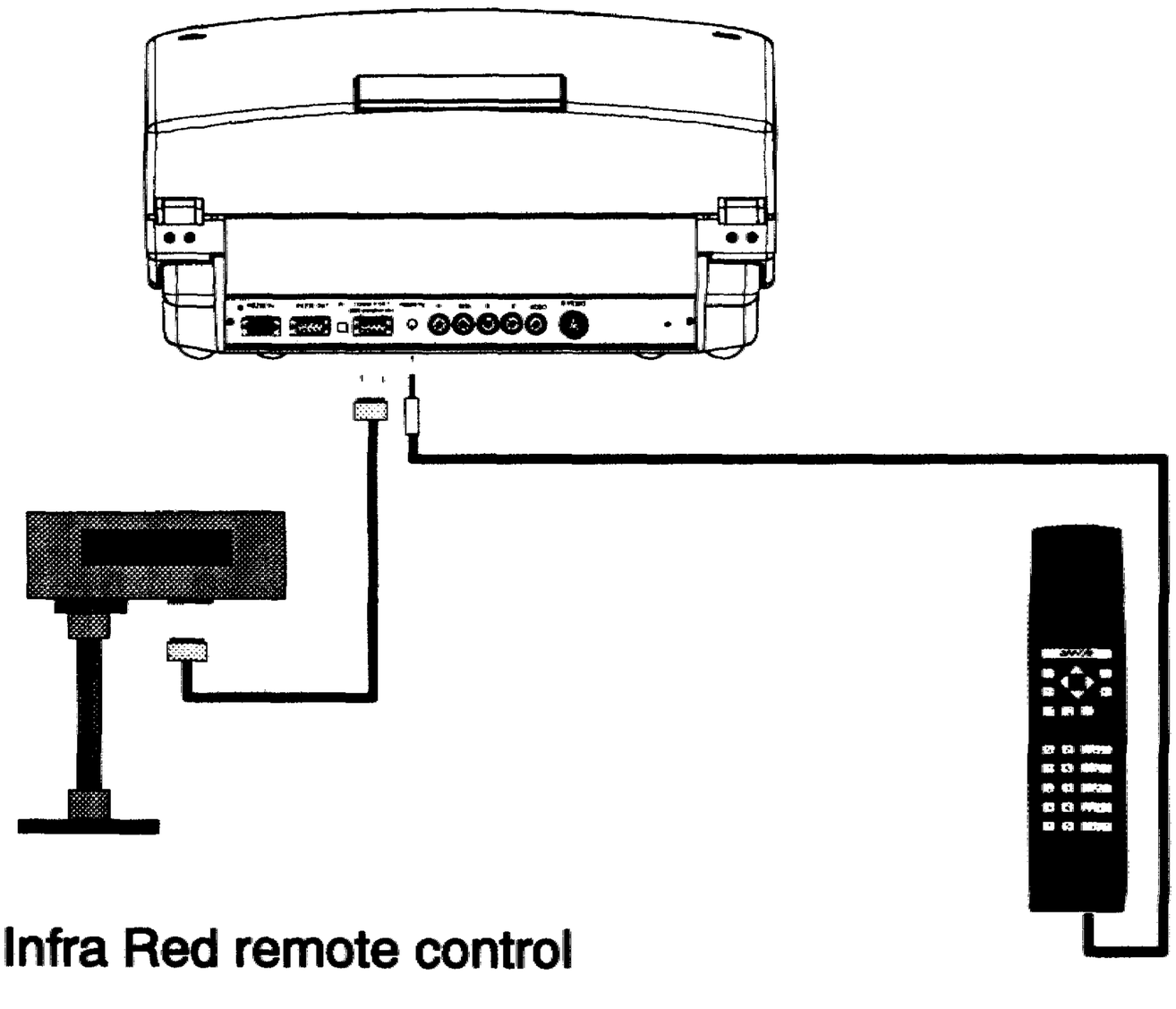


Transmitter RCU (remote control unit) 79 1664

Parts listing Transmitter RCU 79 1664 (RCU with Joy stick)

SIT.	ITEM NO. DESCRIPTION	QUANTITY
1000	R3615075SCR HILO_P 3.2X 8.5HS B	1
9000	R593540BAG PE 85X270	1
7000	R5975045LFLT RCU700 TX	1
5010	R722310HSG PJ49 TX2 CVR DN	1
5020	R722311HSG PJ49 TX2 CVR BAT	1
5030	R722312HSG PJ49 TX2 WDW IR	1
5021	R722382HSG PJ49 TX2 LFLT WDW	1
5000	R722686HSG PJ49 TX2 JOY CVR UP	1
4000	R722689SW KYBD PJ53 TX JOY V700	1
4010	R722690HSG PJ53 TX2 JOY FOIL	1
C 1	P210056C# COG MU 100P F 50 0805	1
C 2	R1111355C EL AX1000M M 10E9 85	1
C 3	P212001C# TA 2M2M 20 3528	1
C 4	P210147C# COG MU 2N7J 50 1206	1
D 1	R1316666D O LTE5208C T IR	1
D 2	R1316666D O LTE5208C T IR	1
D 3	R1316666D O LTE5208C T IR	1
D 4	R1316666D O LTE5208C T IR	1
D 5	R1316666D O LTE5208C T IR	1
D 6	R1316666D O LTE5208C T IR	1
D 7	P234062D#LED LYS260 YEL SOT23	1
D 8	P234062D#LED LYS260 YEL SOT23	1
D 9	P234062D#LED LYS260 YEL SOT23	1
D 10	P234062D#LED LYS260 YEL SOT23	1
D 11	P234062D#LED LYS260 YEL SOT23	1
D 12	P234062D#LED LYS260 YEL SOT23	1
D 13	P234062D#LED LYS260 YEL SOT23	1
D 14	P234062D#LED LYS260 YEL SOT23	1
D 15	P234062D#LED LYS260 YEL SOT23	1
D 16	P234062D#LED LYS260 YEL SOT23	1
D 17	P234062D#LED LYS260 YEL SOT23	1
D 18	P234062D#LED LYS260 YEL SOT23	1
D 19	R131662D LED D3 T RD	1
D 20	P234205D#BAT54C SCH SOT23	1
D 21	P234205D#BAT54C SCH SOT23	1
D 22	P234099D#4148 R DMMELF	1
D 23	P234099D#4148 R DMMELF	1
I 1	R137371U 1250 SAA DIP24 P	1
J	R313196J BAT WS P 2 T-TYPE 9V	1
J 6	B338800J PHN FBS D 3.5MON P	1
PC	R780456PCD#PJ53 V701 TX	1
Q 1	P232122Q#BCX56 N P SOT89	1
Q 2	P232122Q#BCX56 N P SOT89	1
Q 3	P232122Q#BCX56 N P SOT89	1
Q 4	P232026Q#BC817-40 N SS SOT23	1
Q 5	P232026Q#BC817-40 N SS SOT23	1
Q 6	P232026Q#BC817-40 N SS SOT23	1
Q 7	P232046Q#BSS123 F SS SOT23	1
Q 8	P232050Q#BC857B P SS SOT23	1
Q 9	P232050Q#BC857B P SS SOT23	1
R 1	P200103R# CE H 18K J 0W12 1206	1
R 2	P200109R# CE H 33K J 0W12 1206	1
R 3	P200023R# CE H 8E2 J 0W12 1206	1
R 4	P200073R# CE H 1K J 0W12 1206	1
R 5	P200001R# CE H 1E J 0W12 1206	1
R 6	P200001R# CE H 1E J 0W12 1206	1
R 7	P200001R# CE H 1E J 0W12 1206	1
R 8	P200065R# CE H470E J 0W12 1206	1
R 9	P200121R# CE H100K J 0W12 1206	1
R 10	P200099R# CE H 12K J 0W12 1206	1
R 11	P200049R# CE H100E J 0W12 1206	1
R 12	P200041R# CE H 47E J 0W12 1206	1
R 13	P200083R# CE H 2K7 J 0W12 1206	1
R 14	P200095R# CE H 8K2 J 0W12 1206	1
R 15	P200121R# CE H100K J 0W12 1206	1
R 16	P200676R# CE H 10M K 0W12 1206	1
R 17	P200105R# CE H 22K J 0W12 1206	1
R 18	P201063R# CE H100E F 0W1 0805	1
R 19	P201089R# CE H 1K2 F 0W1 0805	1
R 20	P201109R# CE H 8K2 F 0W1 0805	1
R 21	P201111R# CE H 10K F 0W1 0805	1
R 87	P200063R# CE H390E J 0W12 1206	1
R 88	P200063R# CE H390E J 0W12 1206	1
R 89	P200063R# CE H390E J 0W12 1206	1
R101	P200063R# CE H390E J 0W12 1206	1
W	R348100WU JUMP 0,6	1

Wired remote control



Infra Red remote control