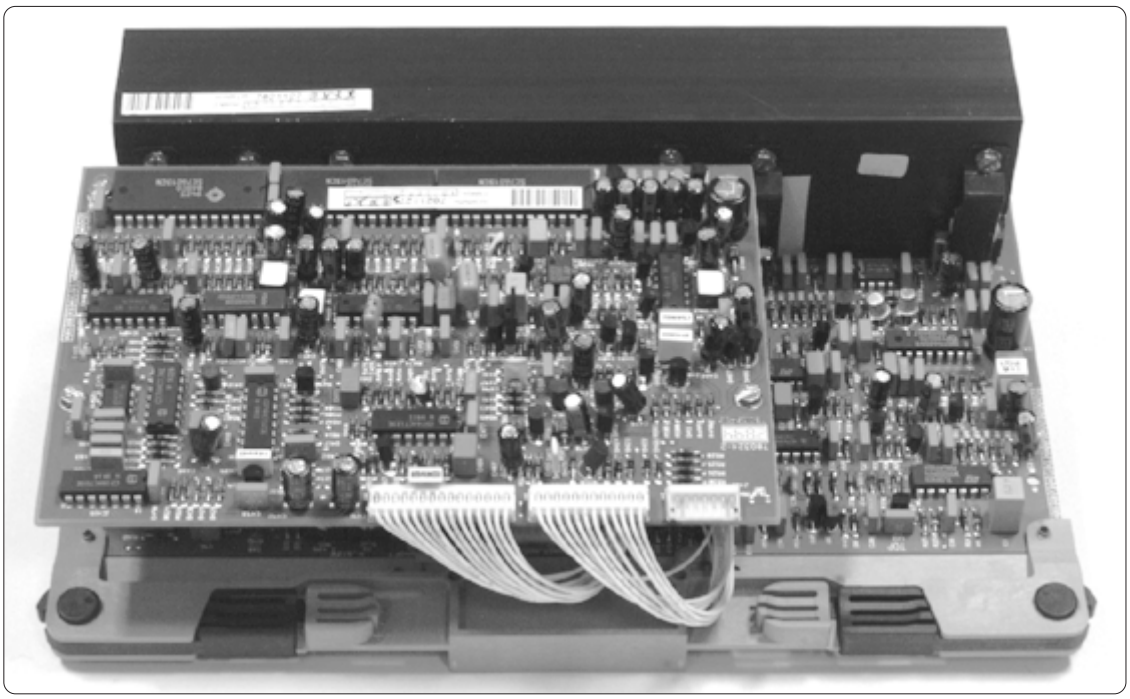
BARCO

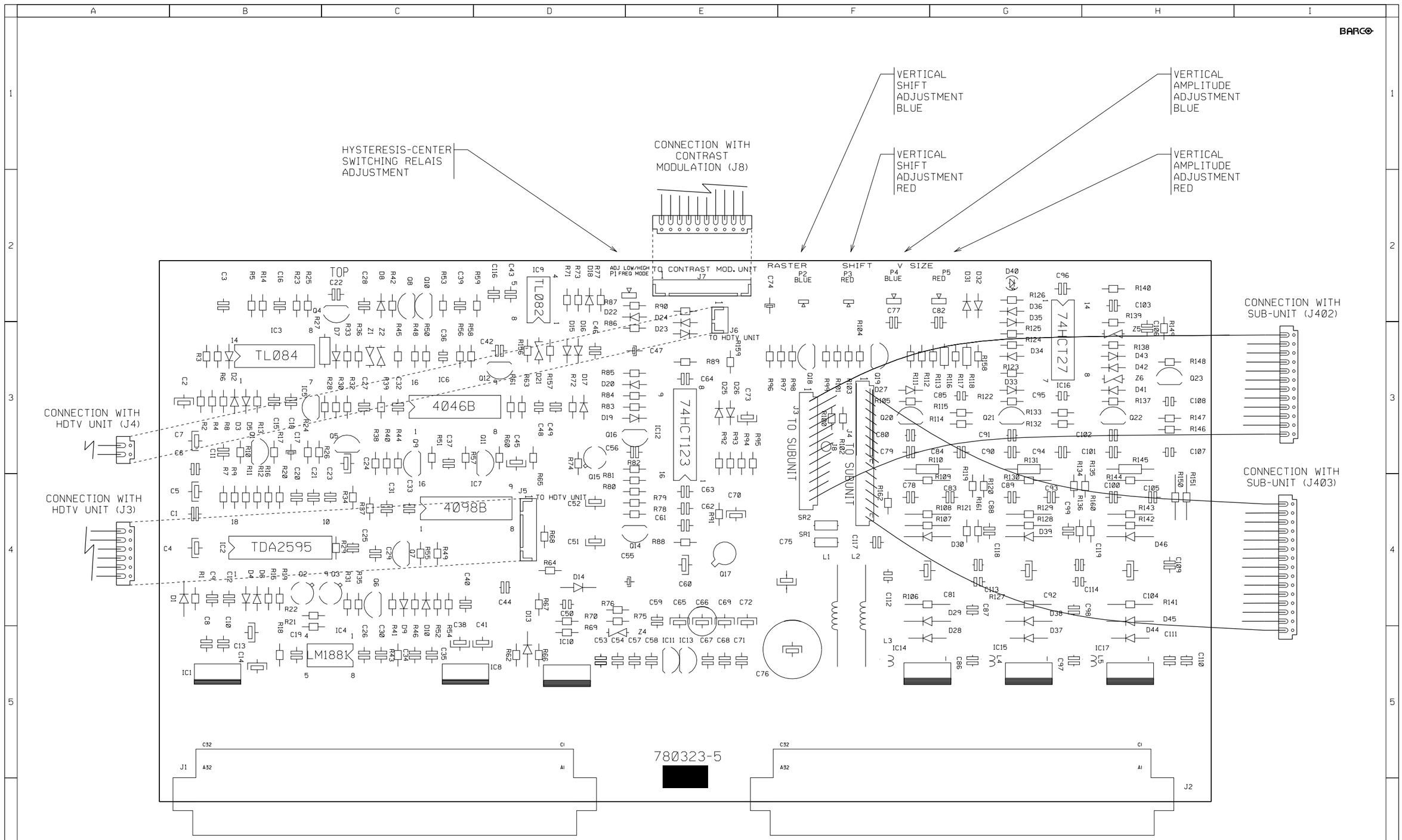
BARCO Projection Systems

SECTION G

service sheet

Sync+Vertical Deflection R7621127

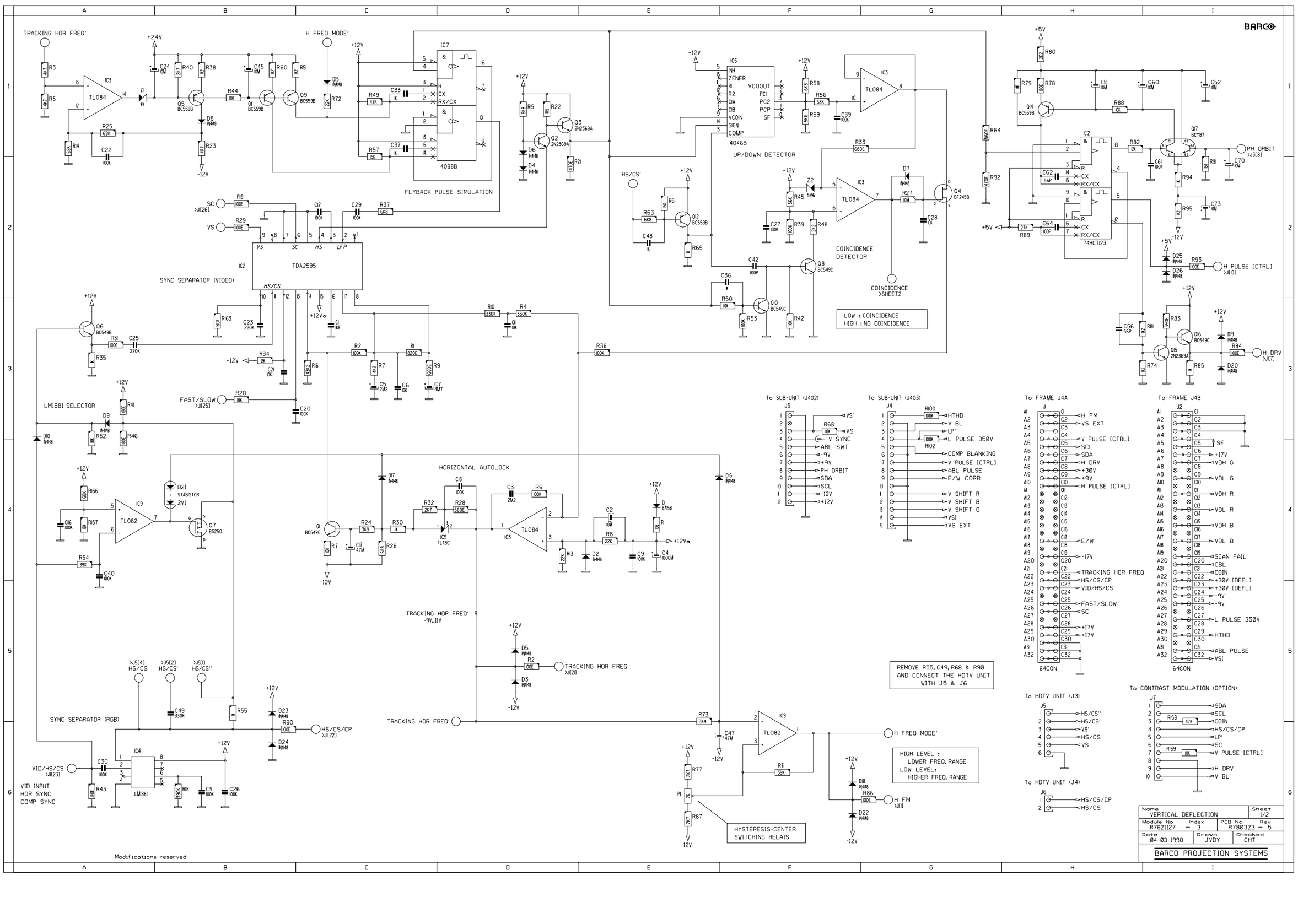




Modifications reserved

Name: SYNC & VERTICAL DEFL.			Sheet: 1 / 1
Module No: R7621127 — 3	Index	PCB No: R780323 — 5	Rev
Date: 04-03-1998	Drawn: JVDY	Checked: CHT	

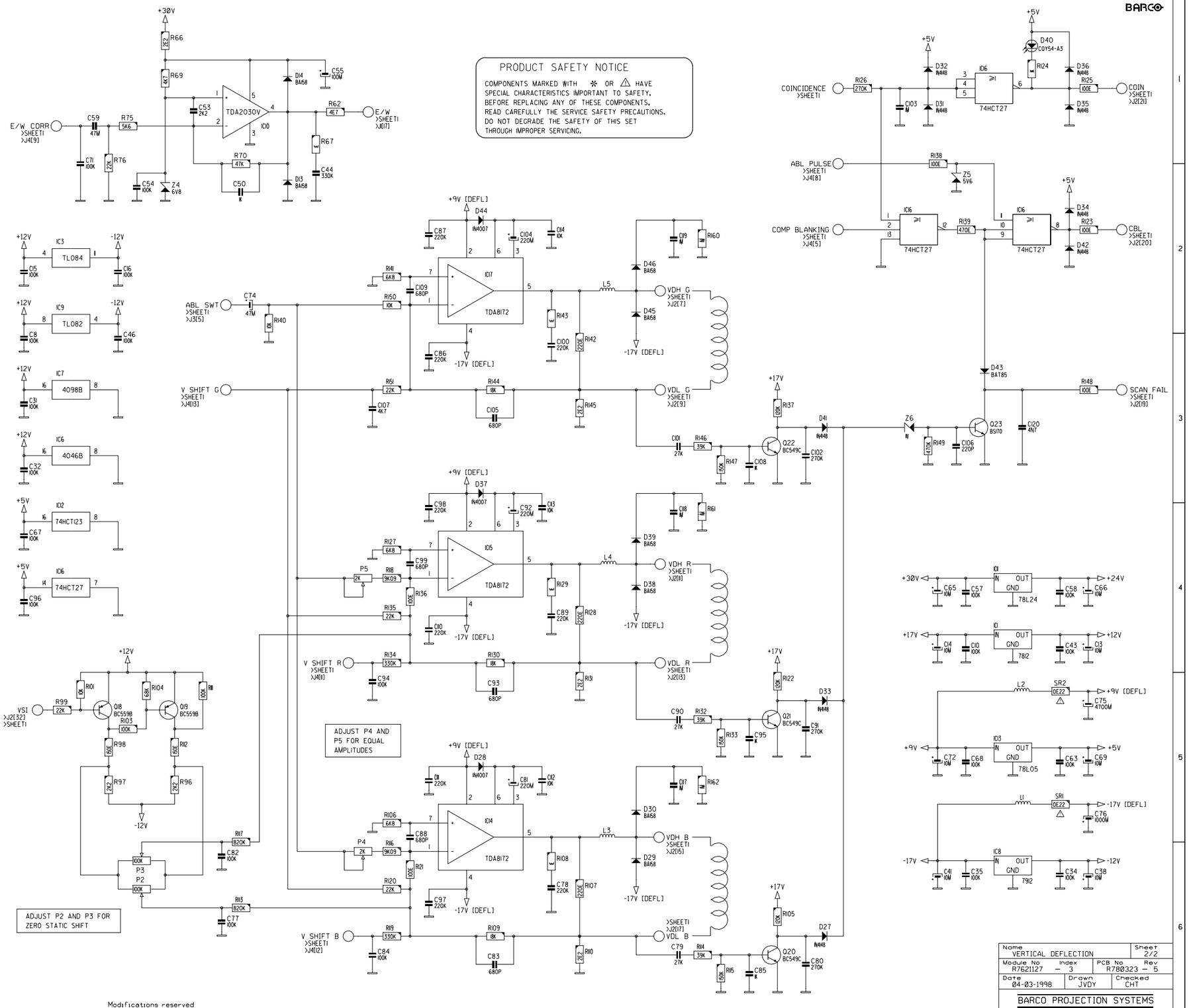
BARCO PROJECTION SYSTEMS


TRACKING HOR FREQ'
H FREQ MODE'
+24V
+12V
-12V
+5V
IC7
4098B
FLYBACK PULSE SIMULATION
IC6
4046B
VCOOUT
PCI
PC2
PCP
SF
VCOIN
SIGN
COMP
UP/DOWN DETECTOR
HS/CS'
COINCIDENCE DETECTOR
COINCIDENCE >SHEET2
LOW : COINCIDENCE
HIGH : NO COINCIDENCE
IC2
TDA2595
SYNC SEPARATOR (VIDEO)
VS
SC
HS
LFP
HS/CS
SC >J1E26]
VS
LM1881 SELECTOR
FAST/SLOW >J1E25]
HORIZONTAL AUTOLOCK
TRACKING HOR FREQ' -9V..11V
TRACKING HOR FREQ >J1E21]
SYNC SEPARATOR (RGB)
>J5[4] HS/CS
>J5[2] HS/CS'
>J5[1] HS/CS''
HS/CS/CP >J1E22]
VID/HS/CS >J1E23]
VID INPUT
HOR SYNC
COMP SYNC
LM1881
IC3
TL084
IC9
TL082
IC5
TL43C
IC4
74HCT123
PH ORBIT >J3[8]
H PULSE [CTRL] >J1E10]
H DRV >J1E7]
H FM >J1E1]
REMOVE R55, C49, R68 & R90 AND CONNECT THE HDTV UNIT WITH J5 & J6
HIGH LEVEL : LOWER FREQ. RANGE
LOW LEVEL: HIGHER FREQ. RANGE
HYSTERESIS-CENTER SWITCHING RELAIS
To SUB-UNIT (J402)
To SUB-UNIT (J403)
To FRAME J4A
To FRAME J4B
64CON
To CONTRAST MODULATION (OPTION)
To HDTV UNIT (J3)
To HDTV UNIT (J4)
Modifications reserved
BARCO
Name VERTICAL DEFLECTION
Sheet 1/2
Module No R7621127 — Index 3
PCB No R780323 — Rev 5
Date 04-03-1998
Drawn JVDY
Checked CHT
BARCO PROJECTION SYSTEMS

BARCO

PRODUCT SAFETY NOTICE

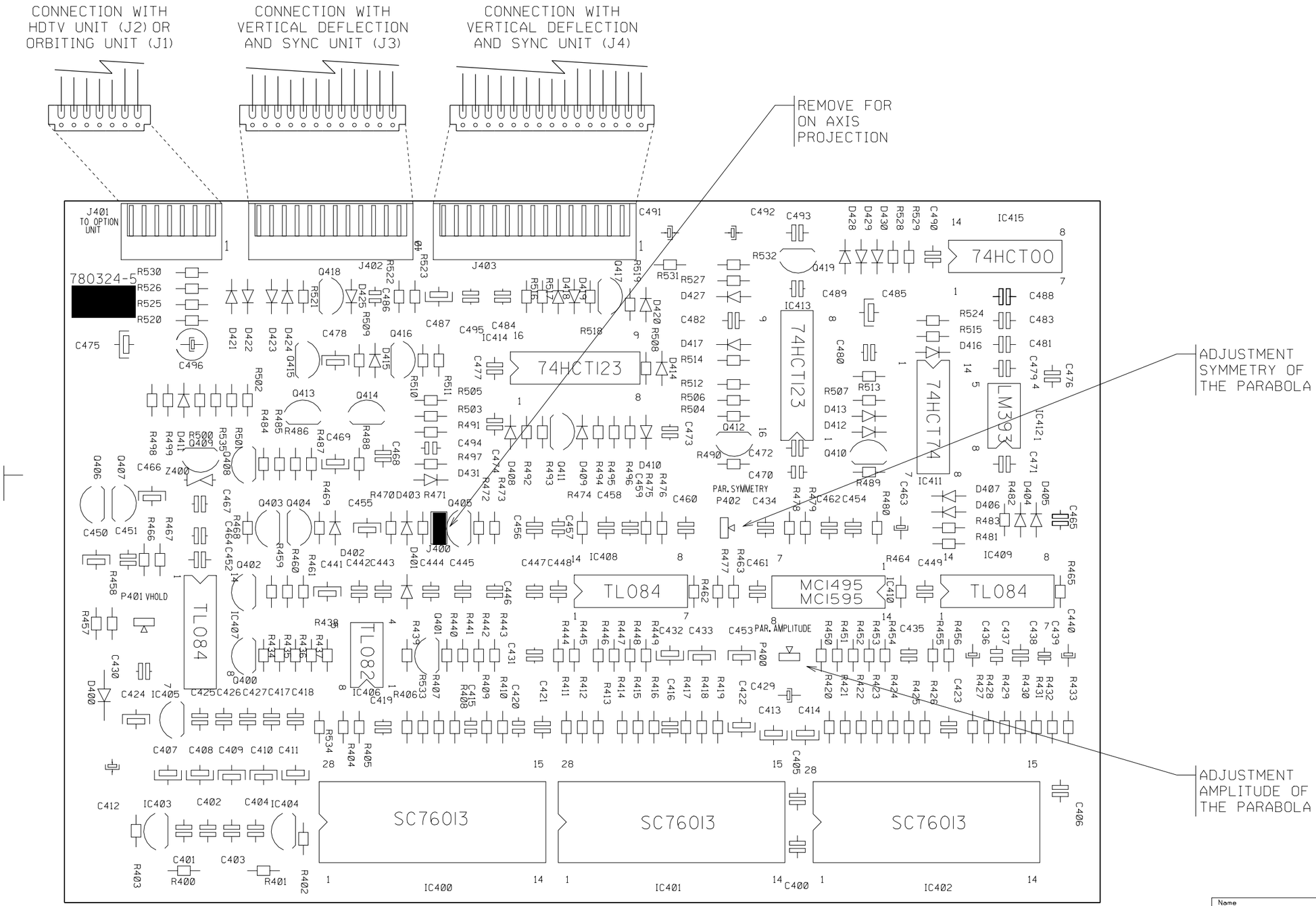
COMPONENTS MARKED WITH ✻ OR ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. BEFORE REPLACING ANY OF THESE COMPONENTS, READ CAREFULLY THE SERVICE SAFETY PRECAUTIONS. DO NOT DEGRADE THE SAFETY OF THIS SET THROUGH IMPROPER SERVICING.



Name			Sheet
VERTICAL DEFLECTION			2/2
Module No	Index	PCB No	Rev
R7621127	– 3	R780323	– 5
Date	Drawn	Checked	
04-03-1998	JVDY	CHT	

BARCO PROJECTION SYSTEMS

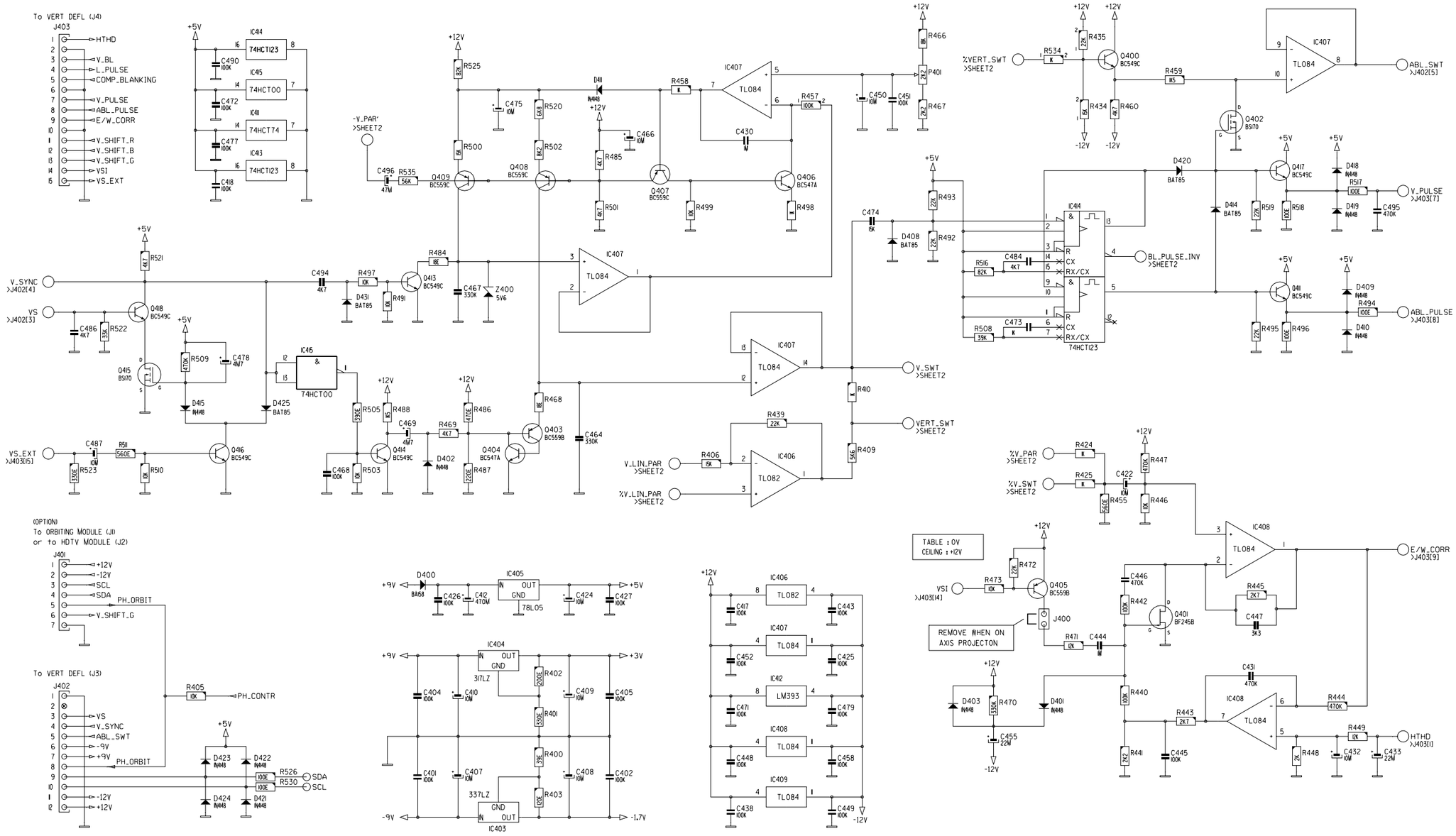
COMP.	LOC.	SHT.	COMP.	LOC.	SHT.	COMP.	LOC.	SHT.
C1	C 3	1	D26	I 2	1	R42	F 3	1
C2	E 4	1	D27	E 6	2	R43	A 6	1
C3	D 4	1	D28	C 5	2	R44	B 1	1
C4	E 4	1	D29	D 6	2	R45	F 2	1
C5	C 3	1	D30	D 5	2	R46	A 3	1
C6	C 3	1	D31	F 1	2	R48	F 2	1
C7	C 3	1	D32	F 1	2	R49	C 1	1
C8	A 2	2	D33	E 5	2	R50	F 2	1
C9	E 4	1	D34	G 2	2	R51	C 1	1
C10	F 4	2	D35	G 1	2	R52	A 3	1
C11	D 3	1	D36	G 1	2	R53	F 3	1
C12	C 2	1	D37	C 3	2	R54	A 4	1
C13	G 4	2	D38	D 4	2	R55	B 5	1
C14	F 4	2	D39	D 4	2	R56	F 1	1
C15	A 2	2	D40	G 1	2	R57	C 1	1
C16	A 2	2	D41	E 3	2	R58	F 2	1
C17	C 4	1	D42	G 2	2	R59	F 1	1
C18	D 4	1	D43	F 3	2	R60	B 1	1
C19	B 6	1	D44	C 2	2	R61	E 2	1
C20	C 3	1	D45	D 2	2	R62	C 1	2
C21	B 3	1	D46	D 2	2	R63	E 2	1
C22	A 1	1				R64	G 1	1
C23	B 3	1	IC1	F 4	2	R65	E 2	1
C24	B 1	1	IC2	B 2	1	R66	B 1	2
C25	A 3	1	IC3	D 4	1	R67	B 1	2
C26	B 6	1	IC3	F 2	1	R68	F 3	1
C27	F 2	1	IC3	A 1	1	R69	B 1	2
C28	G 2	1	IC3	G 1	1	R70	B 1	2
C29	C 2	1	IC3	A 2	2	R71	F 6	1
C30	A 6	1	IC3	A 2	2	R72	C 1	1
C31	A 3	2	IC4	A 6	1	R73	E 5	1
C32	A 3	2	IC5	D 4	1	R74	I 3	1
C33	C 1	1	IC6	F 1	1	R75	A 1	2
C34	G 6	2	IC6	A 3	2	R76	A 1	2
C35	F 6	2	IC6	A 3	2	R77	E 6	1
C36	F 2	1	IC7	D 1	1	R78	H 1	1
C37	C 1	1	IC7	A 3	2	R79	H 1	1
C38	G 6	2	IC7	A 3	2	R80	H 1	1
C39	F 1	1	IC8	F 6	2	R81	I 3	1
C40	A 4	1	IC9	A 4	1	R82	H 1	1
C41	F 6	2	IC9	F 5	1	R83	I 3	1
C42	F 2	1	IC9	A 2	2	R84	I 3	1
C43	G 4	2	IC9	A 2	2	R85	I 3	1
C44	B 2	2	IC10	B 1	2	R86	G 6	1
C45	B 1	1	IC11	F 4	2	R87	E 6	1
C46	A 2	2	IC12	H 1	1	R88	H 1	1
C47	F 6	1	IC12	A 4	2	R89	H 2	1
C48	E 2	1	IC12	A 4	2	R90	B 5	1
C49	B 5	1	IC13	F 5	2	R91	I 2	1
C50	B 2	2	IC14	C 5	2	R92	G 2	1
C51	H 1	1	IC15	C 4	2	R93	I 2	1
C52	I 1	1	IC16	A 4	2	R94	I 2	1
C53	B 1	2	IC16	A 4	2	R95	I 2	1
C54	A 2	2	IC16	F 2	2	R96	B 5	2
C55	C 1	2	IC16	F 1	2	R97	A 5	2
C56	H 3	1	IC16	G 2	2	R98	A 5	2
C57	F 4	2	IC17	C 2	2	R99	A 5	2
C58	G 4	2				R100	G 3	1
C59	A 1	2	J1	H 3	1	R101	A 5	2
C60	I 1	1	J2	I 3	1	R102	G 4	1
C61	I 2	1	J3	F 3	1	R103	A 5	2
C62	H 2	1	J4	G 3	1	R104	A 6	2
C63	G 5	2	J5	H 5	1	R105	E 6	2
C64	H 2	1	J6	H 6	1	R106	C 5	2
C65	F 4	2	J7	I 5	1	R107	D 6	2
C66	G 4	2	J8	F 3	1	R108	D 6	2
C67	A 4	2				R109	C 6	2
C68	F 5	2	L1	G 5	2	R110	D 6	2
C69	G 5	2	L2	G 5	2	R111	B 5	2
C70	I 2	1	L3	D 5	2	R112	B 5	2
C71	A 1	2	L4	D 4	2	R113	B 6	2
C72	F 5	2	L5	D 2	2	R114	E 6	2
C73	I 2	1				R115	E 6	2
C74	B 2	2	P1	E 6	1	R116	C 6	2
C75	G 5	2	P2	A 6	2	R117	B 5	2
C76	G 5	2	P3	A 6	2	R118	C 4	2
C77	B 6	2	P4	C 5	2	R119	C 6	2
C78	D 6	2	P5	C 4	2	R120	C 6	2
C79	E 6	2				R121	C 6	2
C80	E 6	2	Q1	C 4	1	R122	E 5	2
C81	D 5	2	Q2	D 1	1	R123	G 2	2
C82	B 6	2	Q3	D 1	1	R124	C 1	2
C83	C 6	2	Q4	G 2	1	R125	G 1	2
C84	C 6	2	Q5	B 1	1	R126	F 1	2
C85	E 6	2	Q6	A 3	1	R127	C 4	2
C86	C 3	2	Q7	B 4	1	R128	D 4	2
C87	C 2	2	Q8	F 2	1	R129	D 4	2
C88	C 5	2	Q9	C 1	1	R130	C 4	2
C89	D 4	2	Q10	F 3	1	R131	D 5	2
C90	E 5	2	Q11	B 1	1	R132	B 5	2
C91	E 5	2	Q12	E 2	1	R133	E 5	2
C92	D 4	2	Q14	H 1	1	R134	C 4	2
C93	C 5	2	Q15	I 3	1	R135	C 4	2
C94	C 5	2	Q16	I 3	1	R136	C 4	2
C95	E 5	2	Q17	I 1	1	R137	E 3	2
C96	A 4	2	Q18	A 5	2	R138	F 1	2
C97	C 6	2	Q19	B 5	2	R139	F 2	2
C98	C 4	2	Q20	E 6	2	R140	B 2	2
C99	C 4	2	Q21	E 5	2	R141	C 2	2
C100	D 3	2	Q22	E 3	2	R142	D 3	2
C101	E 3	2	Q23	F 3	2	R143	D 2	2
C102	E 3	2				R144	C 3	2
C103	F 1	2	R1	E 4	1	R145	D 3	2
C104	D 2	2	R2	D 5	1	R146	E 3	2
C105	C 3	2	R3	A 1	1	R147	E 3	2
C106	F 3	2	R4	D 3	1	R148	G 3	2
C107	C 3	2	R5	A 1	1	R149	F 3	2
C108	E 3	2	R6	D 4	1	R150	C 2	2
C109	C 2	2	R7	C 3	1	R151	C 3	2
C110	C 4	2	R8	E 4	1	R156	A 4	1
C111	C 5	2	R9	C 3	1	R157	A 4	1
C112	D 5	2	R10	D 3	1	R158	I 5	1
C113	D 4	2	R11	C 3	1	R159	I 6	1
C114	D 2	2	R12	C 3	1	R160	E 2	2
C116	A 4	1	R13	D 4	1	R161	E 2	2
C117	E 5	2	R14	A 1	1	R162	E 5	2
C118	E 4	2	R15	D 1	1	R163	B 3	1
C119	E 2	2	R16	C 3	1			
C120	G 3	2	R17	C 4	1	SR1	G 5	2
			R18	B 6	1	SR2	G 5	2
D1	E 4	1	R19	B 2	1			
D2	E 4	1	R20	B 3	1	Z1	A 1	1
D3	D 5	1	R21	D 2	1	Z2	F 2	1
D4	D 2	1	R22	D 1	1	Z4	B 2	2
D5	D 5	1	R23	B 1	1	Z5	F 2	2
D6	D 1	1	R24	C 4	1	Z6	F 3	2
D7	G 2	1	R25	A 1	1			
D8	B 1	1	R26	C 4	1			
D9	A 3	1	R27	G 2	1			
D10	A 3	1	R28	D 4	1			
D13	B 2	2	R29	B 2	1			
D14	B 1	2	R30	C 4	1			
D15	C 1	1	R31	A 3	1			
D16	F 4	1	R32	C 4	1			
D17	C 4	1	R33	F 1	1			
D18	F 6	1	R34	B 3	1			
D19	I 3	1	R35	A 3	1			
D20	I 3	1	R36	E 3	1			
D21	B 4	1	R37	C 2	1			
D22	F 6	1	R38	B 1	1			
D23	B 5	1	R39	F 2	1			
D24	B 6	1	R40	B 1	1			
D25	I 2	1	R41	A 3	1			



Modifications reserved

Name: SUB-UNIT VERTICAL DEFL.	Sheet: 1 / 1
Module No: R7621127S — 1	PCB No: R780324 — 5
Date: 04-03-1998	Drawn: JVDY
Checked: CHT	

BARCO PROJECTION SYSTEMS



Modifications reserved

Name	SUB VERTICAL DEFLECTION
Sheet	1/3
Module No	R7621275 – 1
Index	
PCB No	R780324 – 5
Rev	
Date	04-03-1998
Drawn	JVDY
Checked	CHT

BARCO PROJECTION SYSTEMS

BARCO

ADJUST PARABOLA
FOR 1.5Vptp
WITH P400

Modifications reserved

Name	SUB VERTICAL DEFLECTION
Sheet	2/3
Module No	R7621127S – 1
Index	
PCB No	R780324 – 5
Rev	
Date	04-03-1998
Drawn	JYDY
Checked	CHT

BARCO PROJECTION SYSTEMS

COMP.	LOC.	SHT.
C400	F 2	2
C401	C 5	1
C402	D 5	1
C403	F 1	2
C404	C 5	1
C405	D 5	1
C406	A 6	2
C407	C 5	1
C408	D 5	1
C409	D 5	1
C410	C 5	1
C411	C 4	2
C412	D 4	1
C413	I 2	2
C414	I 4	2
C415	C 4	2
C416	B 6	2
C417	E 4	1
C418	B 2	1
C419	C 4	2
C420	C 4	2
C421	B 5	2
C422	G 4	1
C423	G 2	2
C424	D 4	1
C425	F 5	1
C426	C 4	1
C427	D 4	1
C429	A 1	2
C430	E 2	1
C431	H 5	1
C432	H 5	1
C433	I 5	1
C434	A 2	2
C435	C 1	2
C436	D 2	2
C437	C 1	2
C438	E 6	1
C439	D 1	2
C440	C 1	2
C441	C 5	2
C442	C 5	2
C443	F 4	1
C444	G 5	1
C445	G 5	1
C446	G 4	1
C447	H 4	1
C448	E 5	1
C449	F 6	1
C450	F 2	1
C451	F 2	1
C452	E 5	1
C453	A 2	2
C454	C 1	2
C455	F 5	1
C456	H 4	2
C457	H 4	2
C458	F 5	1
C459	H 2	2
C460	H 2	2
C461	A 2	2
C462	B 1	2
C463	D 5	2
C464	D 3	1
C465	E 5	2
C466	D 2	1
C467	C 3	1
C468	C 4	1
C469	C 3	1
C470	G 3	2
C471	E 5	1
C472	B 2	1
C473	F 3	1
C474	F 2	1
C475	D 2	1
C476	E 6	2
C477	B 2	1
C478	B 3	1
C479	F 5	1
C480	F 6	2
C481	E 5	2
C482	G 3	2
C483	C 3	2
C484	F 2	1
C485	F 6	2
C486	A 3	1
C487	A 4	1

COMP.	LOC.	SHT.
C488	H 6	2
C489	G 4	2
C490	B 1	1
C491	G 2	2
C492	G 4	2
C493	G 4	2
C494	C 3	1
C495	I 2	1
C496	C 2	1
D400	C 4	1
D401	G 5	1
D402	C 4	1
D403	F 5	1
D404	E 4	2
D405	D 4	2
D406	D 5	2
D407	E 5	2
D408	F 2	1
D409	H 3	1
D410	H 3	1
D411	D 2	1
D412	F 5	2
D413	F 4	2
D414	H 2	1
D415	B 3	1
D416	G 6	2
D417	G 2	2
D418	H 2	1
D419	H 2	1
D420	G 2	1
D421	B 5	1
D422	B 5	1
D423	B 5	1
D424	B 5	1
D425	B 3	1
D427	H 4	2
D428	G 6	2
D429	I 5	2
D430	I 5	2
D431	C 3	1
IC400	C 3	2
IC401	A 5	2
IC402	F 1	2
IC403	D 6	1
IC404	D 5	1
IC405	D 4	1
IC406	E 4	1
IC406	E 4	1
IC406	E 4	1
IC406	C 4	2
IC407	D 2	1
IC407	E 3	1
IC407	E 1	1
IC407	H 1	1
IC407	E 5	1
IC407	E 5	1
IC408	H 5	1
IC408	H 4	1
IC408	E 5	1
IC408	E 5	1
IC408	H 2	2
IC408	H 4	2
IC409	E 5	1
IC409	E 5	1
IC409	D 1	2
IC409	D 2	2
IC409	C 2	2
IC409	E 5	2
IC410	B 2	2
IC411	B 2	1
IC411	B 2	1
IC411	G 5	2
IC412	E 5	1
IC412	E 5	1
IC412	F 5	2
IC412	F 6	2
IC413	B 2	1
IC413	B 2	1
IC413	G 3	2
IC414	B 1	1
IC414	B 1	1
IC414	G 2	1
IC415	B 1	1
IC415	B 1	1
IC415	C 3	1

COMP.	LOC.	SHT.
IC415	H 5	2
IC415	H 5	2
IC415	I 5	2
J400	G 4	1
J401	A 4	1
J402	A 5	1
J403	A 1	1
P400	A 1	2
P401	F 1	1
P402	A 2	2
Q400	G 1	1
Q401	G 4	1
Q402	H 2	1
Q403	D 3	1
Q404	D 4	1
Q405	G 4	1
Q406	E 2	1
Q407	D 2	1
Q408	D 2	1
Q409	C 2	1
Q410	I 6	2
Q411	H 3	1
Q412	G 3	2
Q413	C 3	1
Q414	C 4	1
Q415	B 3	1
Q416	B 4	1
Q417	H 2	1
Q418	B 3	1
Q419	G 4	2
R400	D 5	1
R401	D 5	1
R402	D 5	1
R403	D 5	1
R404	E 5	2
R405	B 5	1
R406	E 4	1
R407	C 4	2
R408	C 4	2
R409	F 4	1
R410	F 3	1
R411	B 5	2
R412	B 5	2
R413	B 5	2
R414	E 6	2
R415	B 6	2
R416	B 6	2
R417	B 6	2
R418	B 6	2
R419	B 6	2
R420	I 4	2
R421	I 4	2
R422	I 2	2
R423	I 2	2
R424	G 4	1
R425	G 4	1
R426	G 2	2
R427	G 1	2
R428	D 2	2
R429	D 2	2
R430	D 1	2
R431	D 1	2
R432	D 1	2
R433	D 1	2
R434	G 2	1
R435	G 1	1
R436	C 4	2
R437	C 4	2
R438	B 5	2
R439	E 3	1
R440	G 5	1
R441	G 5	1
R442	G 4	1
R443	G 5	1
R444	H 5	1
R445	H 4	1
R446	G 4	1
R447	G 4	1
R448	H 5	1
R449	H 5	1
R450	A 1	2
R451	A 1	2
R452	A 2	2

COMP.	LOC.	SHT.
R453	B 2	2
R454	C 1	2
R455	G 4	1
R456	C 2	2
R457	E 2	1
R458	E 2	1
R459	G 1	1
R460	G 2	1
R461	C 5	2
R462	H 2	2
R463	A 2	2
R464	D 5	2
R465	E 4	2
R466	F 1	1
R467	F 2	1
R468	D 3	1
R469	C 3	1
R470	F 5	1
R471	G 5	1
R472	G 4	1
R473	F 4	1
R474	H 4	2
R475	H 2	2
R476	H 2	2
R477	A 2	2
R478	B 2	2
R479	C 1	2
R480	B 1	2
R481	D 5	2
R482	E 5	2
R483	E 5	2
R484	C 2	1
R485	D 2	1
R486	D 3	1
R487	D 4	1
R488	C 3	1
R489	I 6	2
R490	H 2	2
R491	C 3	1
R492	F 2	1
R493	F 2	1
R494	H 3	1
R495	H 3	1
R496	H 3	1
R497	C 3	1
R498	E 2	1
R499	E 2	1
R500	C 2	1
R501	D 2	1
R502	D 2	1
R503	C 4	1
R504	G 2	2
R505	C 3	1
R506	G 2	2
R507	F 5	2
R508	F 3	1
R509	B 3	1
R510	B 4	1
R511	B 4	1
R512	H 4	2
R513	F 5	2
R514	G 3	2
R515	F 6	2
R516	F 3	1
R517	H 2	1
R518	H 2	1
R519	H 2	1
R520	D 2	1
R521	B 2	1
R522	B 3	1
R523	A 4	1
R524	F 5	2
R525	C 1	1
R526	B 5	1
R527	G 4	2
R528	I 5	2
R529	H 6	2
R530	B 5	1
R531	H 4	2
R532	G 4	2
R533	D 4	2
R534	G 1	1
R535	C 2	1
R536	D 3	2
R537	D 3	2
Z400	D 3	1

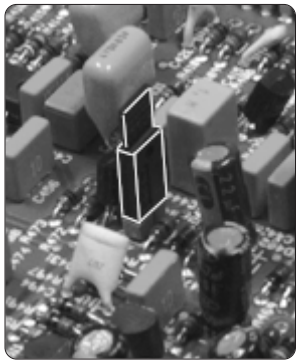
Name	SUB VERTICAL DEFLECTION
Sheet	3/3
Module No	R76211275 – 1
Index	
PCB No	R780324 – 5
Rev	
Date	04-03-1998
Drawn	JVDY
Checked	CHT

BARCO PROJECTION SYSTEMS

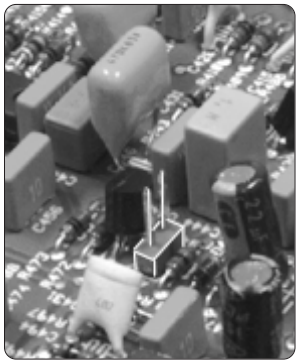
Adaptation of the E-W correction

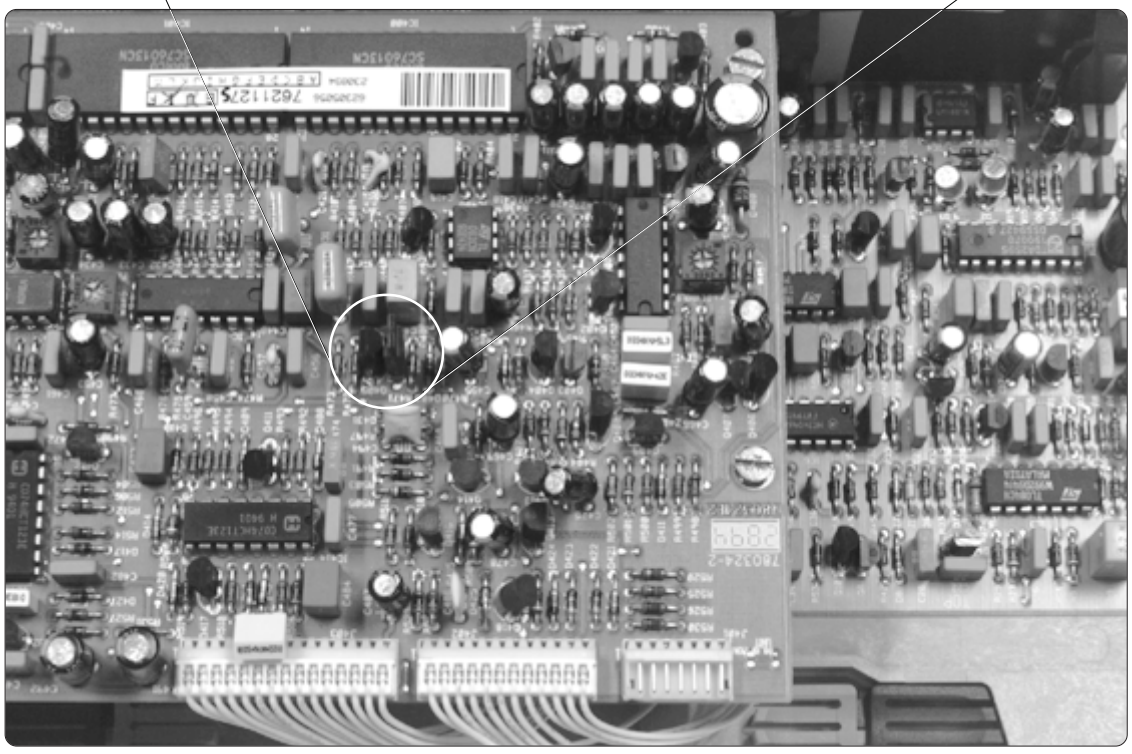
when changing the projector configuration to <u>ON AXIS PROJECTION</u>

Normal projection configuration
(Strap J400 plugged in)



ON AXIS projection configuration
(Strap J400 removed)





Adjustment procedure 'VERTICAL DEFLECTION+SYNC MODULE'

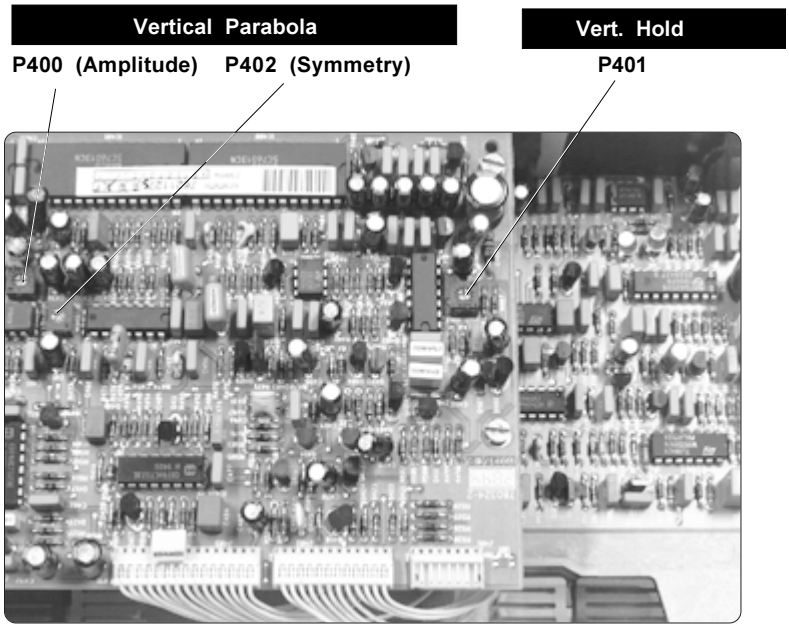
Introduction

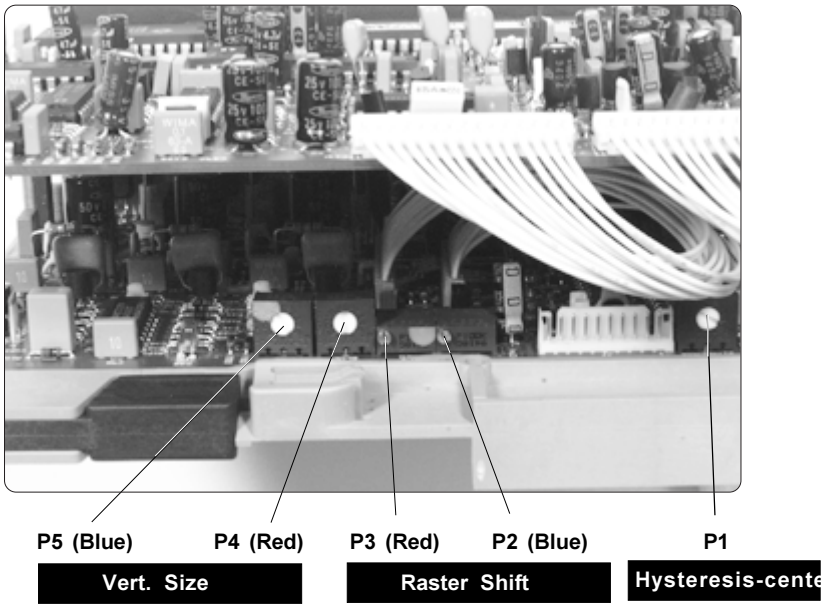
The following adjustments are provided on the **main module**:

a. Vertical SHIFT adjustment for RED - P3 and BLUE - P2 image
b. Vertical amplitude correction for RED - P4 and BLUE - P5 image

The following adjustments are provided on the **sub module**:

a. Vertical Hold P401
b. Vertical Parabola: Amplitude P400
Symmetry P402

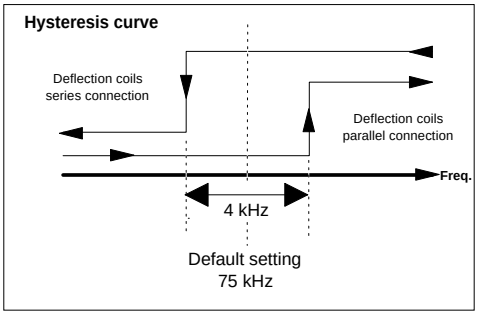




Adjustments on the main module

a. Hysteresis-center adjustment for deflection switching relay P1

This control adjusts the switching point of the relay to adapt the deflection coils for low and high line input frequencies.



Factory default adjustment: mid position of the potentiometer (switching point of the relay at approx. 75 kHz with a hysteresis of 4 kHz).

Adjustment range: the potentiometer P1 adjusts the switchover point of the relay between 60 and 90 kHz.

b. Main Vertical SHIFT adjustment for RED and BLUE image

Note: the mentioned adjustments are provided on the main module in order to correct the Vert. Shift range and the Vert. Amplitude of the red and blue picture after replacement of the respective picture tubes.

Preparation

Adjust the vertical raster centering controls for Red and Blue in their mid position. The numeric indicator under the respective bar scale indicates 50.
(Refer to the Owner's manual of the projector - Guided or Random adjustment mode).

Alignment

Use the vertical shift controls P3 for RED and P2 for BLUE to shift vertically the Red and Blue image until the center coincides with the center of the Green image.

c. Vertical amplitude correction for RED and BLUE image

Adjust potentiometer P4 for the Red image and P5 for the Blue image to obtain the same vertical amplitude as the Green image.

Adjustments on the sub module

a. Vertical Hold P401

- The projector has to operate on a signal (the frequency is not relevant)
- Adjust the potentiometer P401 for synchronisation of the picture (Vertical lock)

b. Vertical Parabola P400-P402

Adjustment of the **Symmetry** of the vertical parabola P402

- The projector has to operate on a signal with standard frequency.
- Connect the oscilloscope to the resistor R456 (side: output pin 1 of IC409).
- Adjust the potentiometer P402 for a symmetrical curve of the parabola signal.

Adjustment of the **Amplitude** of the vertical parabola P400

- The projector has to operate on a signal with standard frequency.
- Connect the oscilloscope to the resistor R456 (side: output pin 1 of IC409).
- Adjust the potentiometer P400 for an amplitude of the parabola signal of 1.5V.

TECHNICAL DESCRIPTION "UN SYNC + VERT DEFL " (7621127)

Introduction.

On this board and its sub-unit we find the sync separator, the horizontal autolock circuit, the vertical oscillator and the vertical output stages.
The generation of the waveforms for the east-west correction signals, the left / right and top / bottom blanking and the composite blanking.

The horizontal drive pulses, with its phase adjustment, for the MOSFET switchers on the HOR DEFL module are also prepared on this board.

A Barco designed IC, called the "BELLA" , comprising four digitally controlled potentiometers, is utilised for the adjustment of the amplitude of the waveforms, or for the adjustment of some DC control voltages. This IC, custom made for Barco, is driven by an I²C (serial data) bus from the microprocessor on the controller board.

1. Vertical oscillator - Vertical pulses
(on the Subunit)

a) Vertical Sawtooth Generator

The vertical sawtooth relaxation oscillator is built around the darlington Q403 / Q404 , C464 and the current generator Q408 (all on the subunit of the Vert Sync module). The current that charges up C464 is simulated by another vertical relaxation oscillator built around Q413 / C467 / Q409. The amplitude of the sawtooth of this oscillator is maintained stable, irrelevant the vertical frequency. In order to stabilize the amplitude regardless of the vertical frequency, the charging current must increase with increasing vertical frequencies. The obtained current is then 'mirrored' to the real oscillator.

The initial (minimum) charging current of C467 is taken from the +12V via R525. Additional current is provided by the OPAMP output through the diode D411. This output voltage is determined by the voltage difference between the pins 5 and 6. Pin 5 voltage is adjusted with P401 and determines the "gain" of the loop system. This is the current versus frequency behaviour. P401 is adjusted to obtain locking for the full range of vertical frequencies (see Service manual).
The other input , pin 6, is a reference for the 'average' amplitude of the simulated sawtooth. Therefore, the sawtooth across C467 is buffered and the average amplitude is measured by the Miller integrator of IC407.
The output voltage changes as long both inputs have different potential, and settles down as soon this condition is fulfilled.
The voltage adjusted by P401 determines consequently the average current of the generators for one typical vertical frequency.

In free run (no sync applied), the ramp voltage is limited by Z400. The OPAMP would then go into saturation (in the free running mode) and the output drops to approx. -10V. As soon *"V drive"* is applied the voltage now must increase from -10V to around +6 volts before D411 gets forward biased, as from that moment onwards the current 'follows' the frequency. That would take too long and therefore the output voltage of the OPAMP is limited because Q407 gets in conduction as soon the OPAMP output is around +6 volts. Q406 is turned on then and the input current is deviated via this transistor to avoid saturation of the output.

b) Synchronisation of the vertical oscillator

The TDA2595 performs well as sync stripper for videosignals because of its noise integrating input. Such a (delaying) input circuit however has a bad performance for computer signals. The LM1881 is better suited for computer sync signals and

consequently the latter is used as sync stripper for all modes except Video / SVID. An automatic detection circuit drives two gating diodes in order to guide the sync from the LM1881 to the TDA2595 or to bypass this one.

1. By means of the "V sync" stripped from the composite sync

The *"VID/HS/CS"* from the "RGB INP + SW" module is capacitively applied to pin 2 of the sync stripper IC4, and to the emitterfollower Q6 on condition D10 is forward biased.
The separated sync pulses at pin 1 go through R55 and D9 to the same emitterfollower on condition D9 is forward biased.
Whether the TDA2595 is used or the LM1881 as sync separator, depends on the condition of the gating diodes D9 / D10.
The composite video mode is detected as follows. The OPAMP 5 - 6 - 7 in IC9 acts as a level detector (no feedback). The video is integrated at the pin 6 input and pin 5 is fixed at a threshold level with R156/R157. For composite video the output pin 7 switches low which results in a saturation of Q7 and thus a blocking of D9.
D16 and D17 are then both forward biased via the stabistor D21. Consequently, the line oscillator is forced at the minimum (15 khz) and the "Freq Mode" is also forced to the lowest range.
The *HS/CS'* output of the sync stripper goes to the base of Q8 of the coincidence detector and the COMP input of the PPL IC6.

The vertical positive pulses from IC2 pin 9 (VS) leave the main unit and arrive on the subunit at the base of Q418. In order to find these pulses at the collector, Q415 must be conducting to form a ground return for the emitter.

As long no vertical pulses arrive on Q416's base, the latter is not conducting and Q415 is turned on via the R509 resistor connected to the +5V line.

2. By the vertical external sync

The vertical oscillator can also be synchronised by *VS EXT* pulses, separate vertical sync pulses injected into the projector at the VS input. Such pulses can also be delivered by the optional "HDTV Sync interface" if mounted on this unit. The "VS EXT" pulses are inverted by Q416 and trigger the oscillator via D425. The same negative pulses at the collector also charge up C478 to an average low level cutting off Q402 in this case.

c) "Bella", a Barco customer made IC

The voltage or waveform, applied between VRP and VRN is adjustable in 128 steps and becomes available at the corresponding VO output. The corresponding pins of such a potentiometer are :

VRP1 : "positive side" of the potentiometer "1".
VRN1 : "negative side" of the potentiometer "2".
VO1 : variable out (slider) of potentiometer "1".

Notes :

1. If the signals applied to above inputs are negative and positive with respect to the supply, then, the VSS pin (14) must be supplied with a negative voltage.

2. The amplitude of the input signals is limited to + 3.2V and -1.7V. Measures must be taken to avoid saturation of the input.

The control of these IC's is accomplished with a **SCL** (serial clock) and **SDA** (serial Data) which come from the controller. The address of the IC is determined by the address pins which are grounded or left open (=high).
Obviously, as one IC contains four potentiometers, the address of the IC is followed by a "slave" address selecting the correct potentiometer "0", "1", "2", or "3".

d) Vertical linearity control

Vertical Linearity control is obtained by adding an adjustable vertical parabola to the sawtooth waveform. That adjusted parabola is in fact the sum of a parabola with fixed amplitude and a parabola with variable amplitude.
The sawtooth is buffered with OPAMP (12 - 13 - 14 of IC407). Behind the buffer we have two outputs for further processing :

a) the V SWT , sent to the multiplier, to generate a vertical parabola, and for the keystone correction (E/W correction).
b) the VERT SWT , sent to the Bella IC400, for the vertical amplitude control.

The V LIN PAR (pin 7 output of IC406) is applied to :

- the Bella IC400 to adjust the amplitude, the output is labelled *" %V LIN PAR*."
- the OPAMP IC406 input pin 2 (to be added to the adjusted *V LIN PAR*).

The OPAMP 1 - 2 - 3 adds the *VLIN PAR* to the *%V LIN PAR* and the output is added to the *V SWT* by R409 / R410.

e) Generation of vertical pulses from the vertical sawtooth.

1. Pulse for overshoot in the deflection

The "black" cathode currents are measured during a small time at the end of the vertical retrace time (top of the picture). To allow a correct measurement, the three beams may not be blanked during that time.
This means that the spot can be visible at the top of the picture.

An extra movement of the electron beam in the vertical deflection at the moment of unblanking can move the "visible beam" to a point beyond the screen. For this extra excursion (or "overshoot" in the scanning) a pulse is generated as follows.
The *"V SWT"* is capacitively coupled to the trigger input (negative going transient) of IC 414. R492 / R493 installs a DC offset at this input.
The pin 13 (positive polarity) output pulse drives the Mosfet Q402 into saturation at the end of the vertical flyback to produce a maximum excursion of the spot.
The other opposite polarity output of this one-shot , "BL PULSE INV", is used for blanking (see later).

Due to the integrating behaviour of the scan coils, the current is delayed with respect to the voltage.

The ABL pulse to be used in the "RGB - DRIVER " module for the black current measurement has to be delayed with respect to the above "overshoot-pulse".

This is realised by triggering the second one - shot by the trailing edge of the former "overshoot" pulse. The width of this pulse is also a lot smaller compared to the former one.

2. Generation of the blanking and unblanking pulses

As mentioned earlier the opposite polarity output pin 4 (*BL PULSE INV*) of the double one-shot IC414 is used for blanking (see sheet 2) during the vertical retrace time.
To unblank the video during the ABL time (see composite blanking), the *"ABL PULSE INV"* from pin 12 of the double one-shot is used.

3. Pulses for the controller and the RGB DRIVER (ABL measurement)

V pulse (for the controller)

The two outputs at the pins 13 and 5 are added with D420 and D414 and then buffered with Q417. The "*V PULSE*" is protected by the diodes hooked to the +5V and ground with D419/D418 and sent to the microprocessor-controller board via the main board.

ABL pulse (for the RGB DRIVER):

The shorter pulse and delayed with respect to the overshoot generated by the second one-shot is buffered with Q411 before leaving this module. It is used on the RGB DRIVER board to determine the time for the 'black current' measurement.

2. Vertical output stages, vertical shift and amplitude control

a. Power amplifiers

The *VERT SWT* at the node R410 / R409 is sent to the BELLA IC406 (VRP**0**, pin 17) for adjustment. The output VO**0** (% VERT SWT) is then passed through the 'ABL overshoot as described above.
It is now capacitively coupled to the inverting inputs of the power amplifiers IC14- IC15- IC17. At the same inputs we find :

- a DC voltage coming from P2 and P3, these are factory set coarse alignments. These coarse alignments also reduce the range of the BELLA potentiometers, thus increasing the resolution of the digital control.

- the vertical shift voltages controlled by the BELLA IC401 on the subunit, G shift, R shift and B shift. The red and blue beam will follow the green shift, because a portion of the green shift voltage is fed to the red and blue shift lines.

- a sawtooth which is proportional with the deflection currents. This is the voltage across the feedback resistors R145, R131 and R110. These are used to stabilise the vertical amplitudes.

The TDA8172 allows for a short vertical retrace time by doubling the supply voltage during retrace.

b. Vertical scan fail detection

The vertical scan fail circuit is the same for the three deflection output circuits. We limit the discussion to the green output.
The feedback across the feedback resistor R145 is capacitively coupled to the base-emitter of Q22. The conduction time of this transistor is only during the positive portion of the ramp and is determined by the amplitude of the vertical ramp. By the capacitor the shift voltage is removed and does not play a role in the scan fail detection. The (integrated) collector voltage across C102 is thus inversely proportional with the amplitude of the sawtooth. As long as the amplitude is acceptable, the collector voltage is sufficiently low to block Q23.
Either one of the scan fail circuits can saturate Q23 to "cause" the scan fail condition.

3. EAST-WEST CORRECTION

a. Trapezoidal distortion (sheet 2 of the Subunit schematic).

The DC is removed from the *V SWT* signal with C440, the amplitude is reduced to match the Bella specifications. The OPAMP inverts the ramp and the output produces a sawtooth that is symmetrical around the zero level, since the non - inverting input is at ground level. Two ramps labelled *+/- V SWT* are available for adjustment by the "0" potentiometer in the Bella IC402. The output is labelled ***" %V SWT"*** *(adjusted Vertical Sawtooth).*

b) <u>Pincushion distortion.</u>

For the pincushion correction a vertical parabola is required. This parabola is generated by the multiplier IC410 . The *-V PAR* output pin 1 of the OPAMP together with he inverted *+ V PAR* feed the potentiometer " 1 " in the Bella IC402. The output is labelled ***"% V PAR"*** *(adjusted Vertical Parabola).*

c) <u>Line frequency dependent correction - Power Amplifier</u> (sheet 1).

The adjusted waveforms are added with R424 / R425 and then passing the capacitor C422. A small DC voltage obtained from R446/R447 is added to the signal. This small DC voltage undergoes the same gain of the E/W waveform.
The output is passed on to a Miller integrator to remove the waveform and check the gain of the OPAMP. On the other input we apply a portion of the line frequency dependent +HTHD voltage.
The gain of the OPAMP depends on the feedback ratio R445 / Q401. The gate bias of the latter is the output voltage of the integrator. As this voltage is line frequency dependent the gain of the OPAMP follows the value of the HTHD voltage. Note that the +HTHD voltage is not exactly proportional with the line frequency. However, the East / West correction always must be <u>related to (a certain percentage of) the hor. scan voltage</u>.
Depending on the ceiling / table position, the maximum E/W correction is at the top or the bottom of the screen. The feedback time constant between gate and source is adapted accordingly. In table position *VSI* is low level and Q405 is on. R471/C444 is added to the R442/C446 time constant.
If the projector is mounted ON-AXIS, J400 link must be removed as in this case there is no E/W correction needed.
The output of the OPAMP, pin 1 (E/W CORR) is sent to the main unit via J403(9) where it is amplified with IC10, a TDA2030 power amplifier. It reaches finally the "UN HOR DEFL" to modulate the scan voltage +HTHD.

4. Horizontal oscillator Autolock Phase alignment
(on the main board)

a) Horizontal oscillator + Autolock

The oscillator in the TDA2595 is locked to the centre frequency by a PLL system in

the IC itself, but the latter has only a limited range of approx. 1.2 khz. Therefore, it serves as a fine lock for the frequency. An additional PLL (4046B), IC6, is used to coarse lock the frequency first.
The 4046B consists of two digitally controlled phase comparators. For this application only the second one is used. The **SIGN** input, pin 14, is the line oscillator *"HOSC"* of the TDA2595, and the **COMP** input is the comp. sync *HS/CS'*. The corresponding output is **PC2**, pin 13, a three-level state output.

If the output is open (high impedance), the voltage is set at 6 volts with R58/R59. This voltage can increase or decrease by the push-pull output of the IC. The voltage is buffered and reaches pin 5 of a voltage comparator in IC3. The other input , pin 6, is fixed by R45/R39. The output of the comparator switches on or off the fet Q4 which allows the transfer of the regulating voltage to the TDA2595 when on (shorted).

b) Coincidence detector

The HOSC (squarewave) switches on and off the transistor Q10. When switched on, any pulse arriving at the base of Q8 is clamped at ground and cannot switch on the latter. When the frequency and/or phase of the line oscillator is different from the composite sync, these pulses arrive on the base of Q8 at the moment Q10 is off. These pulses then switch on and off Q8 and discharge C27 which decreases the voltage at pin 6. The voltage at the other input cannot drop lower than 6 volts due to the zenerdiode Z4.
Consequently, the output pin 7 switches "high" to forward biases Q10. The latter connects the buffer-output with the integrating OPAMP (1-2-3 of IC3).

c) Locking of the oscillator

The regulating voltage at pin 1 of IC3 drives Q1 via an adjustable zener IC5. The efficiency of the circuit is thus automatically adapted to the line frequency. The collector-emitter current of Q1 determines the frequency of the line oscillator in the TDA2595.
The line oscillator is corrected until it is locked to the comp. sync frequency. The PLL output is now disconnected from the OPAMP input since the coincidence circuit turns off the fet Q4.
From this point on, the fine frequency lock in the TDA2595 takes over and adjusts the line oscillator until the exact frequency and phase is reached.
As the coarse tuning voltage is lost now, the PLL output pin 17 of the TDA2595, feeds now pin 2 of the integrating OPAMP IC3 to establish and maintain the fine tuning loop.
In the locked state, this PLL output is 6 volts. As pin 3 of the OPAMP is set at 6 volts with R8 / R13, the action of the OPAMP continues up to the moment the oscillator is locked to the centre of the hold range of the PLL.

d) Frequency mode switching - Tracking Hor Freq.

The horizontal frequency tracked voltage "TRACKING HOR FREQ" is smoothened with R73/C47 and compared with an adjustable voltage from the slider of P1 *(Hysteresis centre switching relays).*
The " H FREQ MODE " output is high or low depending on :

- the TRACKING HOR FREQ voltage, thus on the tuned frequency

- the slider voltage of P1.

The slider voltage is limited both sides with R77 / R87. The user / service engineer can only determine the "high" or "low freq. mode" in some window, the mid range of frequencies.

As is discussed in the "UN HOR DEFL" board the two parts of the scan coil windings are in series in the *"lower freq mode"* range and in parallel in the "*higher freq mod"*. The "H FREQ MODE" voltage is obviously sent to the deflection circuits to activate the relays.
Since the flyback time in the second range is half the flyback time of the lower range the microprocessor must be informed on the actual range the projector is running. The *"H FM"* is consequently sent to the microprocessor - controller board.

The "*TRACKING HOR FREQ* **"** in the schematics, is proportional with the line frequency and will be used to track some waveforms with the line frequency.

e) Line flyback pulse simulation

The phase of the *HS* squarewave output, pin 4 of the TDA2595, is determined by the position of the pulse applied to pin 2 *(LFP)*. Delaying this pulse with respect to the drive pulse of pin 4 will mean that the drive pulse will be shifted back in the time for about the same amount of the delay.
The width of this pulse also is the width of the SC (Sandcastle) which exits at pin 6. This pulse is generated by means of two one-shots in IC7. The first one generates a pulse starting at the end of the scan (= positive transition of the squarewave) and with a duration determined by the time constant of the one- shot. This duration is relevant for the delay.
The second one-shot is triggered at the negative transient of the first pulse thus the output pulse starts with the end of the first pulse. The duration of this pulse will be the duration of the SC pulse.

As the *TRACKING HOR FREQ* voltage is not at the correct dc level, nor has the correct range (efficiency), the voltage is put to a suitable range with an OPAMP and Q5 in the feedback loop. The output is dropped with Z1 and drives simultaneously Q11 and Q9. The delay, this is the width of the output pulse at pin 6 of the one shot in IC4, is regulated by Q9.
The width of the pulse at output pin 10 is regulated with Q11.

f) Phase alignment :

The HOSC squarewave is not suitable for driving the MOSFETs in the horizontal deflection. Two one shots will derive a drive pulse with the correct width and position by means of an adjustable delay (=phase) with respect to the (reference) input sync signal.
The adjustment range over the entire frequency range must be proportional with the line period.
The range in *absolute* value must be much lower for the higher frequencies than for the lower frequencies. The *relative* value (percentage) must be the same. This is obtained by tracking the phase range with the line frequency by means of an automatic system (feedback) as described hereafter.
The *"PH CONTR"* voltage from the BELLA IC401 on the subunit is sent via R405 to contact 8 of the J402 connector. The optional ORBITING module can here overrule the PH CONTR if the projector is switched as a SLAVE.

Anyhow, the phase controlling voltage arrives at one base of the differential amplifier Q17. The other transistor in Q17 receives the integrated pulses of pin 13. This DC voltage is proportional with the width of the output pulses and the line period .
Assume we have set the phase voltage at 2 volts. The comparator will now adjusts the width of the output pulses at pin 13 until both bases of Q2 carry the same 2 volts. Therefore, the width of the pulses will be narrower when the line period decreases, thus for the higher frequencies. Note that the width of this pulse here is the phase delay time.
Indeed, the other one - shot now is triggered with the negative pulse of pin 4 on the positive going transient.
The width of the horizontal drive pulse is tuned by R89 / C64.

The positive drive pulses at pin 5 are sent to the controller to lock the PLL of the textgenerator. By using locking pulses which have undergone the phase shift, the text on the screen is not affected by the phase control but fixed to the scanning.
The negative going pulses at pin 12 are slightly amplified and buffered with Q15, buffered with Q16 and sent to the "UN HOR DEFL" module.

5. Adjustable blankings
a) Left / right blanking .

The Left/Right Blanking pulses are generated by two one-shots in IC413 which are triggered with *"L PULSE"* (FlyBack pulses from the Hor Defl board).

The available range of the BELLA potentiometers of IC402 is 0 -1.5 volts. This range should allow the same relative blanking irrelevant the line period. Therefore, the absolute value must be smaller at higher frequencies. A feedback system is used that automatically adapts the width of the pulse to the line period (compare this with the phase alignment where a similar problem is solved in a similar way).

Pulses, coinciding with the start of the flyback time, and, having a width set by C470/ Q412, exit at pin 13 of IC413. These pulses are integrated and the resulting voltage is sent to pin 10 of IC408 to be compared with the voltage at pin 9 *(=LEFT BL)*. The OPAMP's output is fed back to the input pin 2 with a Miller capacitor. The current of Q412 is adapted until both voltages at the pins 2 and 3 are identical.

The ***"LEFT INV"*** is connected to the gating (adding) diode D430 or pin 1 of the NAND gate IC415.
To generate the blanking pulse for the end of the scan, the inverted output at pin 12 is integrated and compared with the BELLA voltage *RIGHT BL*.
The pulses ***RIGHT INV*** are applied to the same NAND-gate input via D429.

b) Top / Bottom blanking

To achieve a high accuracy, or, in other words, to dispose of a steep ramp, the sawtooth is sent into a "dead band response amplifier" built around the OPAMP 9 - 10 - 8 in IC409.
The sawtooth *V SWT* enters pin 9 capacitively. The output is inverted and the clipping levels are set by clamping circuits : R465/D404/D405 and R483/D407/D406.
The modified waveform is now sent to two level detectors of IC412, on the inverting and the non-inverting inputs. A potentiometer of the BELLA IC400 and another one in IC401 adjust the DC levels of the other inputs.
The outputs are added and applied to the "Data" input of an RS-flipflop of IC411. The clock input of this RS-FF are line pulses, the output is in this case always a multiple

of a line period to avoid the half line offset with interlaced signals.

c) Composite blanking

The user controlled blankings are added with gating diodes to the same input of IC415. The other input of this NAND gate are the vertical blanking pulses during the retrace time *"BL PULSE INV"*. The output is now combined with the **UN**BLANKING ABL pulse *"ABL PULSE INV"*. The output is inverted with another NAND gate of the IC415 and the COMP BLANKING is finally leaving to the RGB DRIVER module.

Parts listing R7621127 CPL

SIT.	ITEM NO.	DESCRIPTION	QUANTITY
10	R133039	SPR L 8 D 1,2D 4 CE	2
2000	R133039	SPR L 8 D 1,2D 4 CE	5
1040	R133074	HTSN@A I_SIL W30	
1050	R133074	HTSN@A I_SIL W30	
1030	R3631049	SCR Z933 M 3 X 6 SS	8
1070	R3631059	SCR Z933 M 3 X 8 SS	3
1090	R367699	RVT AVTRON2,5L 8,1 AL	6
1080	R722276	LOCK49 PCB UN CPL	1
1020	R802628	HTSN A GEN SPG 1X 3.1	6
1010	R802645	HTSN D800 FIX LATH	1
1000	R803217	HTSN G1200 VER	1
1011	R805147	FRM49 VER SCRN FIX	1
1021	V3621217	SCR $7500CM 3 X 6 STZN	6
1060	Z3676041	SPR L37 M 3 H 5,5IBRNI	4
C 4	R111469	C EL RA1000M M 16E2 85	1
C 75	R1114729	C EL RA4700M M 16E3 105	1
C 17	R111476	C EL RA 47M M 25E2 85	
C 47	R111476	C EL RA 47M M 25E2 85	
C 59	R111476	C EL RA 47M M 25E2 85	
C 74	R111476	C EL RA 47M M 25E2 85	
C 55	R1114879	C EL RA 100M M 35E2 85	1
C 81	R111488	C EL RA 220M M 50E2 85	1
C 92	R111488	C EL RA 220M M 50E2 85	1
C104	R111488	C EL RA 220M M 50E2 85	1
C 2	R111531	C EL RA 10M M 35E2 85	
C 13	R111531	C EL RA 10M M 35E2 85	
C 14	R111531	C EL RA 10M M 35E2 85	
C 24	R111531	C EL RA 10M M 35E2 85	
C 38	R111531	C EL RA 10M M 35E2 85	
C 41	R111531	C EL RA 10M M 35E2 85	
C 45	R111531	C EL RA 10M M 35E2 85	
C 51	R111531	C EL RA 10M M 35E2 85	
C 52	R111531	C EL RA 10M M 35E2 85	
C 60	R111531	C EL RA 10M M 35E2 85	
C 65	R111531	C EL RA 10M M 35E2 85	
C 66	R111531	C EL RA 10M M 35E2 85	1
C 69	R111531	C EL RA 10M M 35E2 85	
C 70	R111531	C EL RA 10M M 35E2 85	
C 72	R111531	C EL RA 10M M 35E2 85	
C 73	R111531	C EL RA 10M M 35E2 85	
C 5	R111548	C EL RA 2M2M 50E2 85	
C 7	R111550	C EL RA 4M7M 50E2 85	
C 56	R112239	C NP0 MI 56P G100E2	1
C 62	R112239	C NP0 MI 56P G100E2	
C 42	R112242	C NP0 MI 100P G100E2	
C 64	R112242	C NP0 MI 100P G100E2	
C106	R112366	C N750MI 220P G100E2	1
C 83	R112737	C CE MI 680P K100E2	1
C 88	R112737	C CE MI 680P K100E2	1
C 93	R112737	C CE MI 680P K100E2	1
C 99	R112737	C CE MI 680P K100E2	1
C105	R112737	C CE MI 680P K100E2	1
C109	R112737	C CE MI 680P K100E2	
C 36	R112739	C CE MI 1N K100E2	
C 48	R112739	C CE MI 1N K100E2	
C 50	R112739	C CE MI 1N K100E2	
C 85	R112739	C CE MI 1N K100E2	
C 95	R112739	C CE MI 1N K100E2	
C108	R112739	C CE MI 1N K100E2	
C 53	R112743	C CE MI 2N2K100E2	
C107	R112747	C CE MI 4N7K100E2 85	
C120	R112747	C CE MI 4N7K100E2 85	1
C112	R112763	C CE MI 10N Z 63E2 85	1
C113	R112763	C CE MI 10N Z 63E2 85	
C114	R112763	C CE MI 10N Z 63E2 85	
C 11	R1137121	C POMERA 10N K250E2 85	
C 21	R1137121	C POMERA 10N K250E2 85	
C 28	R1137121	C POMERA 10N K250E2 85	
C 79	R1137171	C POMERA 27N K100E2 85	
C 90	R1137171	C POMERA 27N K100E2 85	
C101	R1137171	C POMERA 27N K100E2 85	
C 8	R113724	C POMERA 100N K 63E2 85	
C 9	R113724	C POMERA 100N K 63E2 85	
C 10	R113724	C POMERA 100N K 63E2 85	
C 12	R113724	C POMERA 100N K 63E2 85	
C 15	R113724	C POMERA 100N K 63E2 85	
C 16	R113724	C POMERA 100N K 63E2 85	
C 18	R113724	C POMERA 100N K 63E2 85	
C 19	R113724	C POMERA 100N K 63E2 85	
C 20	R113724	C POMERA 100N K 63E2 85	
C 22	R113724	C POMERA 100N K 63E2 85	
C 26	R113724	C POMERA 100N K 63E2 85	
C 27	R113724	C POMERA 100N K 63E2 85	
C 29	R113724	C POMERA 100N K 63E2 85	
C 30	R113724	C POMERA 100N K 63E2 85	
C 31	R113724	C POMERA 100N K 63E2 85	
C 32	R113724	C POMERA 100N K 63E2 85	
C 34	R113724	C POMERA 100N K 63E2 85	
C 35	R113724	C POMERA 100N K 63E2 85	
C 39	R113724	C POMERA 100N K 63E2 85	
C 40	R113724	C POMERA 100N K 63E2 85	
C 43	R113724	C POMERA 100N K 63E2 85	
C 46	R113724	C POMERA 100N K 63E2 85	
C 54	R113724	C POMERA 100N K 63E2 85	
C 57	R113724	C POMERA 100N K 63E2 85	
C 58	R113724	C POMERA 100N K 63E2 85	
C 61	R113724	C POMERA 100N K 63E2 85	
C 63	R113724	C POMERA 100N K 63E2 85	
C 67	R113724	C POMERA 100N K 63E2 85	
C 68	R113724	C POMERA 100N K 63E2 85	
C 71	R113724	C POMERA 100N K 63E2 85	
C 77	R113724	C POMERA 100N K 63E2 85	
C 82	R113724	C POMERA 100N K 63E2 85	
C 84	R113724	C POMERA 100N K 63E2 85	
C 94	R113724	C POMERA 100N K 63E2 85	
C 96	R113724	C POMERA 100N K 63E2 85	
C116	R113724	C POMERA 100N K 63E2 85	
C 23	R113728	C POMERA 220N K 63E2 85	
C 25	R113728	C POMERA 220N K 63E2 85	
C 78	R113728	C POMERA 220N K 63E2 85	1
C 86	R113728	C POMERA 220N K 63E2 85	
C 87	R113728	C POMERA 220N K 63E2 85	
C 89	R113728	C POMERA 220N K 63E2 85	1
C 97	R113728	C POMERA 220N K 63E2 85	
C 98	R113728	C POMERA 220N K 63E2 85	
C100	R113728	C POMERA 220N K 63E2 85	1
C110	R113728	C POMERA 220N K 63E2 85	
C111	R113728	C POMERA 220N K 63E2 85	
C 80	R113729	C POMERA 270N K 63E2 85	
C 91	R113729	C POMERA 270N K 63E2 85	
C102	R113729	C POMERA 270N K 63E2 85	
C 44	R113730	C POMERA 330N K 63E2 85	
C 49	R113730	C POMERA 330N K 63E2 85	
C103	R114090	C POMERA 1M K 63E2 85	1
C117	R114090	C POMERA 1M K 63E2 85	1

SIT.	ITEM NO.	DESCRIPTION	QUANTITY
C118	R114090	C POMERA 1M K 63E2 85	1
C119	R114090	C POMERA 1M K 63E2 85	1
C 33	R1159161	C PP RA 1N J100E2 85	
C 37	R1159161	C PP RA 1N J100E2 85	
C 1	R115922	C PP RA 1N8J100E2 85	1
C 6	R115940	C PP RA 10N J 63E2 85	
C 76	V1114718	C EL RA1000M M 25E2 SM	1
C 3	V114098	C POMERA 2M2M 50E2 85	1
D 2	R131621	D S 1N4148 075150 DO35	
D 3	R131621	D S 1N4148 075150 DO35	
D 4	R131621	D S 1N4148 075150 DO35	
D 5	R131621	D S 1N4148 075150 DO35	
D 6	R131621	D S 1N4148 075150 DO35	
D 7	R131621	D S 1N4148 075150 DO35	
D 8	R131621	D S 1N4148 075150 DO35	
D 9	R131621	D S 1N4148 075150 DO35	
D 10	R131621	D S 1N4148 075150 DO35	
D 15	R131621	D S 1N4148 075150 DO35	
D 16	R131621	D S 1N4148 075150 DO35	
D 17	R131621	D S 1N4148 075150 DO35	
D 18	R131621	D S 1N4148 075150 DO35	
D 19	R131621	D S 1N4148 075150 DO35	
D 20	R131621	D S 1N4148 075150 DO35	
D 22	R131621	D S 1N4148 075150 DO35	
D 23	R131621	D S 1N4148 075150 DO35	
D 24	R131621	D S 1N4148 075150 DO35	
D 25	R131621	D S 1N4148 075150 DO35	
D 26	R131621	D S 1N4148 075150 DO35	
D 27	R131621	D S 1N4148 075150 DO35	
D 31	R131621	D S 1N4148 075150 DO35	
D 32	R131621	D S 1N4148 075150 DO35	
D 33	R131621	D S 1N4148 075150 DO35	
D 34	R131621	D S 1N4148 075150 DO35	
D 35	R131621	D S 1N4148 075150 DO35	
D 36	R131621	D S 1N4148 075150 DO35	
D 41	R131621	D S 1N4148 075150 DO35	
D 42	R131621	D S 1N4148 075150 DO35	
D 43	R1316361	D Y BAT85 030200 DO34	
D 1	R131637	D R BA158 600400 DO7	1
D 13	R131637	D R BA158 600400 DO7	1
D 14	R131637	D R BA158 600400 DO7	1
D 29	R131637	D R BA158 600400 DO7	
D 30	R131637	D R BA158 600400 DO7	
D 38	R131637	D R BA158 600400 DO7	
D 39	R131637	D R BA158 600400 DO7	
D 45	R131637	D R BA158 600400 DO7	
D 46	R131637	D R BA158 600400 DO7	
D 28	R131646	D R 1N4007 10201A DO41	
D 37	R131646	D R 1N4007 10201A DO41	
D 44	R131646	D R 1N4007 10201A DO41	
D 40	R131662	D LED D3 T RD	1
D 21	R131733	D STB 2V 0W33 DO35	
I 10	R132751	U 2030V TDA TO220T P	1
I 2	R132762	U 2595 TDA DIP18 P	1
I 4	R132817	U 1881 LM DIP8 P	1
I 14	R132827	U 8172 TDA H_W P	1
I 15	R132827	U 8172 TDA H_W P	1
I 17	R132827	U 8172 TDA H_W P	1
I 1	R134002	U 7812 TO220 P	1
I 8	R134016	U 7912 TO220 P	1
I 11	R134025	U 78L24AC TO92 P	1
I 5	R134031	U 431C TL TO92 P	1
I 13	R134032	U 78L05AC TO92 P	1
I 3	R134113	U 084 TL DIP14 P	1
I 9	R134124	U 082 TL DIP8 P	1
I 7	R1373325	U 4098B DIP16 P	1
I 12	R137552	U 74HCT123 DIP16 P	1
I 16	R137556	U 74HCT27 DIP14 P	1
I 6	R137602	U 4046B DIP16 I	1
I 2	R313249	J U0.3 FBT P18 E1SN SPG	1
J 1	R313525	J EUR2C MBS P64 E1C2S 1,6	1
J 2	R313525	J EUR2C MBS P64 E1C2S 1,6	1
J 6	R313922	J CT H MBT P 2 M2SN WH	1
J 5	R313926	J CT H MBT P 6 M2SN WH	1
J 7	R313930	J CT H MBT P10 M2SN WH	1
J 3	R3484125	CD CT FTMT P12 160	1
J 4	R3484154	CD CT FTMT P15 150	1
L 1	R305913	CH MNS AX NS 12 UH 3A	1
L 2	R305913	CH MNS AX NS 12 UH 3A	1
L 3	R3061222	CH AX NS 1.5 UH	1
L 4	R3061222	CH AX NS 1.5 UH	1
L 5	R3061222	CH AX NS 1.5 UH	1
P 1	R106827	R TCE V 2K K 0W5 S10SS	1
P 4	R106827	R TCE V 2K K 0W5 S10SS	1
P 5	R106827	R TCE V 2K K 0W5 S10SS	1
P 2	R1075301	R MCE H100K K 0W5 M10SS	1
P 3	R1075301	R MCE H100K K 0W5 M10SS	1
PC	R780323	PCB G1200 VER	1
Q 1	R131411	Q BC549C N SS TO92	
Q 8	R131411	Q BC549C N SS TO92	
Q 10	R131411	Q BC549C N SS TO92	1
Q 16	R131411	Q BC549C N SS TO92	
Q 20	R131411	Q BC549C N SS TO92	
Q 21	R131411	Q BC549C N SS TO92	
Q 22	R131411	Q BC549C N SS TO92	
Q 5	R1314181	Q BC559B P SS TO92	
Q 9	R1314181	Q BC559B P SS TO92	
Q 11	R1314181	Q BC559B P SS TO92	
Q 12	R1314181	Q BC559B P SS TO92	
Q 14	R1314181	Q BC559B P SS TO92	
Q 18	R1314181	Q BC559B P SS TO92	
Q 19	R1314181	Q BC559B P SS TO92	
Q 6	R1314295	Q BC549B N SS TO92	
Q 4	R1314651	Q BF245B FN SS TO92	
Q 23	R132910	Q BS170 FN SS TO92	
Q 7	R132916	Q BS250 FP SS TO92	1
Q 17	R132944	Q BCY87 2N SS TO71	1
Q 2	V132504	Q 2N2369A N SS TO18	1
Q 3	V132504	Q 2N2369A N SS TO18	1
Q 15	V132504	Q 2N2369A N SS TO18	1
R110	R101404	R MF H 2E2 J 2W E7	1
R131	R101404	R MF H 2E2 J 2W E7	1
R145	R101404	R MF H 2E2 J 2W E7	1
R 67	R101500	R MF H 1E F 0W4 E3	
R108	R101500	R MF H 1E F 0W4 E3	
R129	R101500	R MF H 1E F 0W4 E3	
R143	R101500	R MF H 1E F 0W4 E3	
R 66	R101504	R MF H 2E2 F 0W4 E3	
R 80	R101504	R MF H 2E2 F 0W4 E3	
R 62	R101508	R MF H 4E7 F 0W4 E3	
R 1	R101512	R MF H 10E F 0W4 E3	
R 2	R101524	R MF H100E F 0W4 E3	
R 19	R101524	R MF H100E F 0W4 E3	
R 29	R101524	R MF H100E F 0W4 E3	

SIT.	ITEM NO.	DESCRIPTION	QUANTITY
R 31	R101524	R MF H100E F 0W4 E3	
R 84	R101524	R MF H100E F 0W4 E3	
R 86	R101524	R MF H100E F 0W4 E3	
R 90	R101524	R MF H100E F 0W4 E3	
R 93	R101524	R MF H100E F 0W4 E3	
R121	R101524	R MF H100E F 0W4 E3	
R123	R101524	R MF H100E F 0W4 E3	
R125	R101524	R MF H100E F 0W4 E3	
R136	R101524	R MF H100E F 0W4 E3	
R138	R101524	R MF H100E F 0W4 E3	
R148	R101524	R MF H100E F 0W4 E3	
R 43	R101525	R MF H120E F 0W4 E3	
R 98	R101526	R MF H150E F 0W4 E3	
R112	R101526	R MF H150E F 0W4 E3	
R 41	R101527	R MF H180E F 0W4 E3	
R 46	R101527	R MF H180E F 0W4 E3	
R 78	R101527	R MF H180E F 0W4 E3	
R107	R101528	R MF H220E F 0W4 E3	
R128	R101528	R MF H220E F 0W4 E3	
R142	R101528	R MF H220E F 0W4 E3	
R 83	R101531	R MF H390E F 0W4 E3	
R 21	R101532	R MF H470E F 0W4 E3	
R 92	R101532	R MF H470E F 0W4 E3	
R139	R101532	R MF H470E F 0W4 E3	
R 28	R101533	R MF H560E F 0W4 E3	
R 64	R101533	R MF H560E F 0W4 E3	
R 9	R101534	R MF H680E F 0W4 E3	
R 33	R101534	R MF H680E F 0W4 E3	
R 11	R101535	R MF H820E F 0W4 E3	
R 30	R101536	R MF H 1K F 0W4 E3	
R 35	R101536	R MF H 1K F 0W4 E3	
R 55	R101536	R MF H 1K F 0W4 E3	
R 65	R101536	R MF H 1K F 0W4 E3	
R 85	R101536	R MF H 1K F 0W4 E3	
R 94	R101536	R MF H 1K F 0W4 E3	
R124	R101536	R MF H 1K F 0W4 E3	
R 38	R101537	R MF H 1K2 F 0W4 E3	
R 51	R101537	R MF H 1K2 F 0W4 E3	
R 60	R101537	R MF H 1K2 F 0W4 E3	
R 74	R101537	R MF H 1K2 F 0W4 E3	
R 81	R101537	R MF H 1K2 F 0W4 E3	
R 95	R101537	R MF H 1K2 F 0W4 E3	
R 22	R101538	R MF H 1K5 F 0W4 E3	
R 48	R101540	R MF H 2K2 F 0W4 E3	
R 96	R101540	R MF H 2K2 F 0W4 E3	
R 97	R101540	R MF H 2K2 F 0W4 E3	
R 32	R101541	R MF H 2K7 F 0W4 E3	
R 40	R101541	R MF H 2K7 F 0W4 E3	
R 77	R101541	R MF H 2K7 F 0W4 E3	
R 87	R101541	R MF H 2K7 F 0W4 E3	1
R 24	R101543	R MF H 3K9 F 0W4 E3	
R 73	R101543	R MF H 3K9 F 0W4 E3	
R 3	R101544	R MF H 4K7 F 0W4 E3	
R 5	R101544	R MF H 4K7 F 0W4 E3	
R 7	R101544	R MF H 4K7 F 0W4 E3	
R 23	R101544	R MF H 4K7 F 0W4 E3	
R 69	R101544	R MF H 4K7 F 0W4 E3	
R 59	R101545	R MF H 5K6 F 0W4 E3	
R 75	R101545	R MF H 5K6 F 0W4 E3	
R 15	R101546	R MF H 6K8 F 0W4 E3	
R 26	R101546	R MF H 6K8 F 0W4 E3	
R 37	R101546	R MF H 6K8 F 0W4 E3	
R 58	R101546	R MF H 6K8 F 0W4 E3	
R 63	R101546	R MF H 6K8 F 0W4 E3	
R106	R101546	R MF H 6K8 F 0W4 E3	
R127	R101546	R MF H 6K8 F 0W4 E3	
R141	R101546	R MF H 6K8 F 0W4 E3	
R 17	R101548	R MF H 10K F 0W4 E3	
R 20	R101548	R MF H 10K F 0W4 E3	
R 42	R101548	R MF H 10K F 0W4 E3	
R 44	R101548	R MF H 10K F 0W4 E3	
R 50	R101548	R MF H 10K F 0W4 E3	
R 52	R101548	R MF H 10K F 0W4 E3	
R 68	R101548	R MF H 10K F 0W4 E3	
R 88	R101548	R MF H 10K F 0W4 E3	
R101	R101548	R MF H 10K F 0W4 E3	
R140	R101548	R MF H 10K F 0W4 E3	
R150	R101548	R MF H 10K F 0W4 E3	
R159	R101548	R MF H 10K F 0W4 E3	
R 34	R101549	R MF H 12K F 0W4 E3	
R 82	R101549	R MF H 12K F 0W4 E3	
R 57	R101550	R MF H 15K F 0W4 E3	
R 61	R101550	R MF H 15K F 0W4 E3	
R 91	R101550	R MF H 15K F 0W4 E3	
R109	R101551	R MF H 18K F 0W4 E3	
R130	R101551	R MF H 18K F 0W4 E3	
R144	R101551	R MF H 18K F 0W4 E3	
R157	R101551	R MF H 18K F 0W4 E3	
R 8	R101552	R MF H 22K F 0W4 E3	
R 13	R101552	R MF H 22K F 0W4 E3	
R 72	R101552	R MF H 22K F 0W4 E3	
R 76	R101552	R MF H 22K F 0W4 E3	
R 99	R101552	R MF H 22K F 0W4 E3	
R120	R101552	R MF H 22K F 0W4 E3	
R135	R101552	R MF H 22K F 0W4 E3	
R151	R101552	R MF H 22K F 0W4 E3	
R 89	R101553	R MF H 27K F 0W4 E3	
R 54	R101555	R MF H 39K F 0W4 E3	
R 71	R101555	R MF H 39K F 0W4 E3	
R114	R101555	R MF H 39K F 0W4 E3	
R132	R101555	R MF H 39K F 0W4 E3	
R146	R101555	R MF H 39K F 0W4 E3	
R 49	R101556	R MF H 47K F 0W4 E3	
R 70	R101556	R MF H 47K F 0W4 E3	
R158	R101556	R MF H 47K F 0W4 E3	
R 45	R101557	R MF H 56K F 0W4 E3	
R 14	R101558	R MF H 68K F 0W4 E3	
R 25	R101558	R MF H 68K F 0W4 E3	
R 56	R101558	R MF H 68K F 0W4 E3	
R104	R101558	R MF H 68K F 0W4 E3	
R156	R101558	R MF H 68K F 0W4 E3	
R 6	R101560	R MF H100K F 0W4 E3	
R 12	R101560	R MF H100K F 0W4 E3	
R 36	R101560	R MF H100K F 0W4 E3	
R 39	R101560	R MF H100K F 0W4 E3	
R 53	R101560	R MF H100K F 0W4 E3	
R100	R101560	R MF H100K F 0W4 E3	
R102	R101560	R MF H100K F 0W4 E3	
R103	R101560	R MF H100K F 0W4 E3	
R111	R101560	R MF H100K F 0W4 E3	
R105	R101561	R MF H120K F 0W4 E3	
R122	R101561	R MF H120K F 0W4 E3	
R137	R101561	R MF H120K F 0W4 E3	
R115	R101562	R MF H150K F 0W4 E3	
R133	R101562	R MF H150K F 0W4 E3	
R147	R101562	R MF H150K F 0W4 E3	
R126	R101565	R MF H270K F 0W4 E3	
R 4	R101566	R MF H330K F 0W4 E3	
R 10	R101566	R MF H330K F 0W4 E3	
R119	R101566	R MF H330K F 0W4 E3	
R134	R101566	R MF H330K F 0W4 E3	
R 18	R101567	R MF H390K F 0W4 E3	

SIT.	ITEM NO.	DESCRIPTION	QUANTITY	SIT.	ITEM NO.	DESCRIPTION	QUANTITY
R149	R101568	R MF H470K F 0W4 E3	1				
R163	R1015691	R MF H510K F 0W4 E3	1				
R113	R101571	R MF H820K F 0W4 E3					
R117	R101571	R MF H820K F 0W4 E3					
R 79	R101572	R MF H 1M F 0W4 E3					
R160	R101572	R MF H 1M F 0W4 E3					
R161	R101572	R MF H 1M F 0W4 E3					
R162	R101572	R MF H 1M F 0W4 E3					
R 16	R101573	R MF H 43K2 F 0W4 E3	1				
R 27	V1026000	R MF H 10M F 0W6 E4	1				
R116	V1026926	R MF H 9K09F 0W6 E4	1				
R118	V1026926	R MF H 9K09F 0W6 E4	1				
SR 1	R1011917	R CFFH E22K 0W35	1				
SR 2	R1011917	R CFFH E22K 0W35	1				
Z 6	R131728	D ZEN 11V 0W5 C DO35					
Z 2	R131734	D ZEN 5V6 0W5 B DO35					
Z 5	R131734	D ZEN 5V6 0W5 B DO35					
Z 4	R131767	D ZEN 6V8 0W5 B DO35					
Z 1	R131786	D ZEN 16V 0W5 B DO35	1				

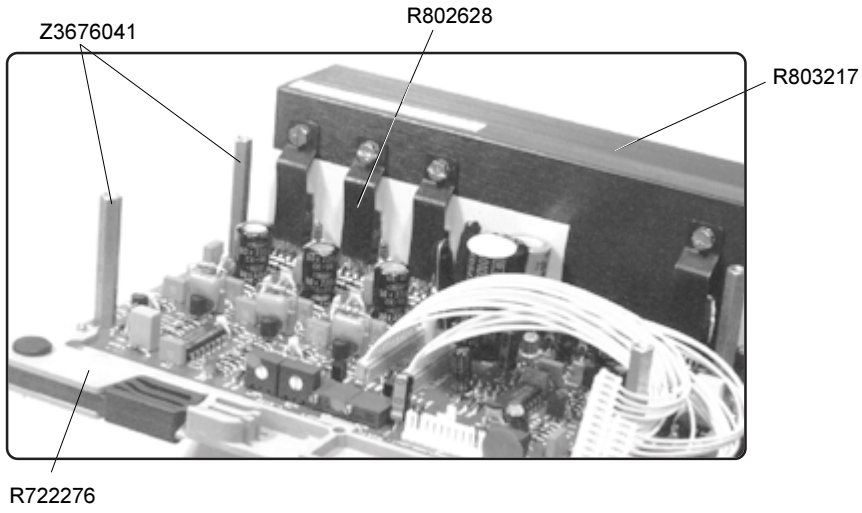
Parts listing R7621127S CPL

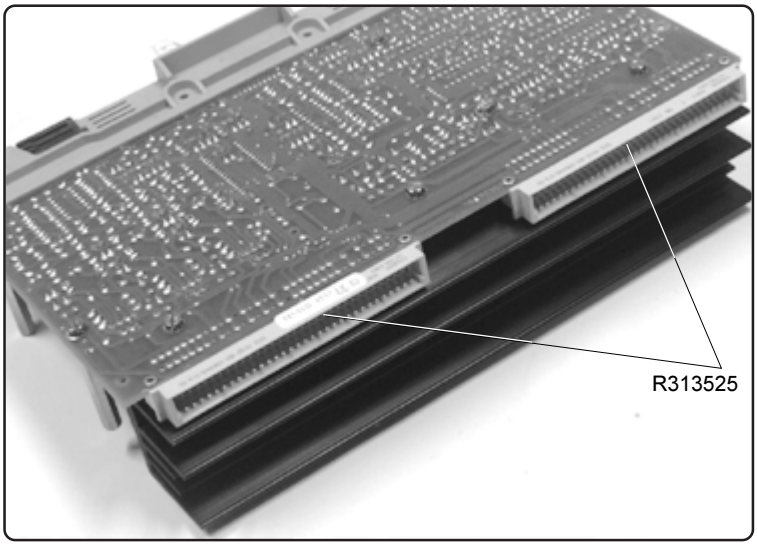
SIT.	ITEM NO.	DESCRIPTION	QUANTITY	SIT.	ITEM NO.	DESCRIPTION	QUANTITY
1000	R3133921	J MD SHUNT F P2 E1SN I RD	1	C457	R112763	C CE MI 10N Z 63E2 85	
				C474	R1137141	C POMERA 15N K100E2 85	
C412	R111468	C EL RA 470M M 16E2 85	1	C435	R1137151	C POMERA 18N K100E2 85	
C429	R111476	C EL RA 47M M 25E2 85		C454	R1137181	C POMERA 33N K100E2 85	1
C436	R111476	C EL RA 47M M 25E2 85		C400	R113724	C POMERA 100N K 63E2 85	
C440	R111476	C EL RA 47M M 25E2 85		C401	R113724	C POMERA 100N K 63E2 85	
C463	R111476	C EL RA 47M M 25E2 85		C402	R113724	C POMERA 100N K 63E2 85	
C496	R111476	C EL RA 47M M 25E2 85		C403	R113724	C POMERA 100N K 63E2 85	
C491	R111477	C EL RA 100M M 25E2 85		C404	R113724	C POMERA 100N K 63E2 85	
C492	R111477	C EL RA 100M M 25E2 85		C405	R113724	C POMERA 100N K 63E2 85	
C407	R111531	C EL RA 10M M 35E2 85		C406	R113724	C POMERA 100N K 63E2 85	
C408	R111531	C EL RA 10M M 35E2 85		C416	R113724	C POMERA 100N K 63E2 85	1
C409	R111531	C EL RA 10M M 35E2 85	1	C417	R113724	C POMERA 100N K 63E2 85	
C410	R111531	C EL RA 10M M 35E2 85		C418	R113724	C POMERA 100N K 63E2 85	
C411	R111531	C EL RA 10M M 35E2 85		C421	R113724	C POMERA 100N K 63E2 85	
C422	R111531	C EL RA 10M M 35E2 85		C423	R113724	C POMERA 100N K 63E2 85	
C424	R111531	C EL RA 10M M 35E2 85		C425	R113724	C POMERA 100N K 63E2 85	
C432	R111531	C EL RA 10M M 35E2 85		C426	R113724	C POMERA 100N K 63E2 85	
C441	R111531	C EL RA 10M M 35E2 85		C427	R113724	C POMERA 100N K 63E2 85	
C450	R111531	C EL RA 10M M 35E2 85		C438	R113724	C POMERA 100N K 63E2 85	
C466	R111531	C EL RA 10M M 35E2 85		C442	R113724	C POMERA 100N K 63E2 85	
C475	R111531	C EL RA 10M M 35E2 85		C443	R113724	C POMERA 100N K 63E2 85	
C487	R111531	C EL RA 10M M 35E2 85		C445	R113724	C POMERA 100N K 63E2 85	
C433	R111532	REPLACED BY V1114855		C448	R113724	C POMERA 100N K 63E2 85	
C455	R111532	REPLACED BY V1114855		C449	R113724	C POMERA 100N K 63E2 85	
C485	R111532	REPLACED BY V1114855		C451	R113724	C POMERA 100N K 63E2 85	1
C413	R111550	C EL RA 4M7M 50E2 85	1	C452	R113724	C POMERA 100N K 63E2 85	
C414	R111550	C EL RA 4M7M 50E2 85		C456	R113724	C POMERA 100N K 63E2 85	
C453	R111550	C EL RA 4M7M 50E2 85		C458	R113724	C POMERA 100N K 63E2 85	
C469	R111550	C EL RA 4M7M 50E2 85		C460	R113724	C POMERA 100N K 63E2 85	
C478	R111550	C EL RA 4M7M 50E2 85		C461	R113724	C POMERA 100N K 63E2 85	
C434	R111678	C EL BRA 10M M 25E2 85		C462	R113724	C POMERA 100N K 63E2 85	
C415	R112739	C CE MI 1N K100E2	1	C468	R113724	C POMERA 100N K 63E2 85	
C420	R112739	C CE MI 1N K100E2	1	C471	R113724	C POMERA 100N K 63E2 85	
C437	R112739	C CE MI 1N K100E2		C472	R113724	C POMERA 100N K 63E2 85	
C470	R112739	C CE MI 1N K100E2	1	C476	R113724	C POMERA 100N K 63E2 85	
C439	R112741	C CE MI 1N5K100E2		C477	R113724	C POMERA 100N K 63E2 85	
C465	R112743	C CE MI 2N2K100E2		C479	R113724	C POMERA 100N K 63E2 85	
C486	R112747	C CE MI 4N7K100E2 85		C481	R113724	C POMERA 100N K 63E2 85	
C494	R112747	C CE MI 4N7K100E2 85	1	C482	R113724	C POMERA 100N K 63E2 85	

Sync+Vertical Deflection R7621127

SIT.	ITEM NO.	DESCRIPTION	QUANTITY
C483	R113724	C POMERA 100N K 63E2 85	
C490	R113724	C POMERA 100N K 63E2 85	
C493	R113724	C POMERA 100N K 63E2 85	
C459	R113726	C POMERA 150N K 63E2 85	1
C431	R113732	C POMERA 470N K 63E2 85	
C446	R113732	C POMERA 470N K 63E2 85	
C488	R113829	C POMERA 22N J 63E2 85	1
C489	R114068	C POMERA 10N M 63E2 85	1
C464	R114085	C POMERA 330N K 63E2 85	1
C467	R114085	C POMERA 330N K 63E2 85	1
C495	R114087	C POMERA 470N K 63E2 85	1
C430	R114090	C POMERA 1M K 63E2 85	
C444	R114090	C POMERA 1M K 63E2 85	1
C419	R1159201	C PP RA 1N5J100E2 85	
C447	R115928	C PP RA 3N3J 63E2 85	
C480	R115940	C PP RA 10N J 63E2 85	
C473	V1151612	C PP RA 1N H100E2 85	
C484	V1151672	C PP RA 4N7H 63E2 85	
D401	R131621	D S 1N4148 075150 DO35	
D402	R131621	D S 1N4148 075150 DO35	
D403	R131621	D S 1N4148 075150 DO35	
D409	R131621	D S 1N4148 075150 DO35	
D410	R131621	D S 1N4148 075150 DO35	
D411	R131621	D S 1N4148 075150 DO35	
D415	R131621	D S 1N4148 075150 DO35	
D416	R131621	D S 1N4148 075150 DO35	
D417	R131621	D S 1N4148 075150 DO35	
D418	R131621	D S 1N4148 075150 DO35	
D419	R131621	D S 1N4148 075150 DO35	
D421	R131621	D S 1N4148 075150 DO35	
D422	R131621	D S 1N4148 075150 DO35	
D423	R131621	D S 1N4148 075150 DO35	
D424	R131621	D S 1N4148 075150 DO35	
D427	R131621	D S 1N4148 075150 DO35	
D404	R1316361	D Y BAT85 030200 DO34	
D405	R1316361	D Y BAT85 030200 DO34	
D406	R1316361	D Y BAT85 030200 DO34	
D407	R1316361	D Y BAT85 030200 DO34	
D408	R1316361	D Y BAT85 030200 DO34	
D412	R1316361	D Y BAT85 030200 DO34	
D413	R1316361	D Y BAT85 030200 DO34	
D414	R1316361	D Y BAT85 030200 DO34	
D420	R1316361	D Y BAT85 030200 DO34	
D425	R1316361	D Y BAT85 030200 DO34	
D428	R1316361	D Y BAT85 030200 DO34	
D429	R1316361	D Y BAT85 030200 DO34	
D430	R1316361	D Y BAT85 030200 DO34	
D431	R1316361	D Y BAT85 030200 DO34	
D400	R131637	D R BA158 600400 DO7	1
I400	R132833	U BELLA 4 DIP28 P	1
I401	R132833	U BELLA 4 DIP28 P	1
I402	R132833	U BELLA 4 DIP28 P	1
I404	R134028	U 317LZ LM TO92 P	1
I403	R134029	U 337LZ TO92 P	1
I405	R134032	U 78L05AC TO92 P	1
I407	R134113	U 084 TL DIP14 P	1
I408	R134113	U 084 TL DIP14 P	1
I409	R134113	U 084 TL DIP14 P	1
I412	R134114	U 393 LM DIP8 P	1
I406	R134124	U 082 TL DIP8 P	1
I410	R134222	U 1495 MC DIP14 P	1
I415	R137534	U 74HCT00 DIP14 P	1
I411	R137548	U 74HCT74 DIP14 P	1
I413	R137552	U 74HCT123 DIP16 P	1
I414	R137552	U 74HCT123 DIP16 P	1
J400	R3132862	J MD1 C MBT P 2 E1SN 6,7	1
J401	R313947	J CT H MBS P 7 M2SN WH	1
J402	R313952	J CT H MBS P12 M2SN WH	1
J403	R313955	J CT H MBS P15 M2SN WH	1
J401	R314007	J CT C FWT P 7 M2SN	1
P402	R107005	R TCE H500E K 0W5 S 7TS	1
P401	R107007	R TCE H 2K K 0W5 S 7TS	1
P400	R107009	R TCE H 10K K 0W5 S 7TS	1
PC	R780324	PCB G1200 VER SUB	1
Q404	R1314072	Q BC547A N SS TO92	1
Q406	R1314072	Q BC547A N SS TO92	1
Q400	R131411	Q BC549C N SS TO92	1
Q411	R131411	Q BC549C N SS TO92	1
Q413	R131411	Q BC549C N SS TO92	
Q414	R131411	Q BC549C N SS TO92	
Q416	R131411	Q BC549C N SS TO92	
Q417	R131411	Q BC549C N SS TO92	1
Q418	R131411	Q BC549C N SS TO92	
Q403	R1314181	Q BC559B P SS TO92	
Q405	R1314181	Q BC559B P SS TO92	1
Q407	R1314182	Q BC559C P SS TO92	
Q408	R1314182	Q BC559C P SS TO92	1
Q409	R1314182	Q BC559C P SS TO92	
Q412	R1314182	Q BC559C P SS TO92	
Q419	R1314182	Q BC559C P SS TO92	
Q401	R1314651	Q BF245B FN SS TO92	1
Q402	R132910	Q BS170 FN SS TO92	1
Q410	R132910	Q BS170 FN SS TO92	1
Q415	R132910	Q BS170 FN SS TO92	1
R468	R101515	R MF H 18E F 0W4 E3	
R484	R101515	R MF H 18E F 0W4 E3	
R400	R101519	R MF H 39E F 0W4 E3	
R411	R101524	R MF H100E F 0W4 E3	
R413	R101524	R MF H100E F 0W4 E3	
R494	R101524	R MF H100E F 0W4 E3	
R496	R101524	R MF H100E F 0W4 E3	
R517	R101524	R MF H100E F 0W4 E3	
R518	R101524	R MF H100E F 0W4 E3	
R526	R101524	R MF H100E F 0W4 E3	
R530	R101524	R MF H100E F 0W4 E3	
R403	R101525	R MF H120E F 0W4 E3	
R417	R101526	R MF H150E F 0W4 E3	
R504	R101526	R MF H150E F 0W4 E3	
R527	R101526	R MF H150E F 0W4 E3	
R506	R101527	R MF H180E F 0W4 E3	
R531	R101527	R MF H180E F 0W4 E3	
R419	R101528	R MF H220E F 0W4 E3	
R487	R101528	R MF H220E F 0W4 E3	
R537	R101528	R MF H220E F 0W4 E3	1
R402	R1015281	R MF H200E F 0W4 E3	
R401	R101530	R MF H330E F 0W4 E3	
R523	R101530	R MF H330E F 0W4 E3	
R505	R101531	R MF H390E F 0W4 E3	
R486	R101532	R MF H470E F 0W4 E3	
R415	R101533	R MF H560E F 0W4 E3	
R455	R101533	R MF H560E F 0W4 E3	
R511	R101533	R MF H560E F 0W4 E3	
R463	R101535	R MF H820E F 0W4 E3	
R410	R101536	R MF H 1K F 0W4 E3	
R418	R101536	R MF H 1K F 0W4 E3	

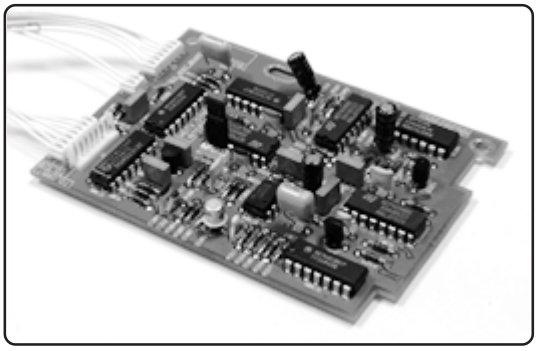
SIT.	ITEM NO.	DESCRIPTION	QUANTITY
R424	R101536	R MF H 1K F 0W4 E3	
R425	R101536	R MF H 1K F 0W4 E3	
R426	R101536	R MF H 1K F 0W4 E3	
R458	R101536	R MF H 1K F 0W4 E3	
R498	R101536	R MF H 1K F 0W4 E3	
R514	R101536	R MF H 1K F 0W4 E3	
R532	R101536	R MF H 1K F 0W4 E3	
R534	R101536	R MF H 1K F 0W4 E3	
R416	R101537	R MF H 1K2 F 0W4 E3	
R427	R101538	R MF H 1K5 F 0W4 E3	
R459	R101538	R MF H 1K5 F 0W4 E3	
R479	R101538	R MF H 1K5 F 0W4 E3	
R488	R101538	R MF H 1K5 F 0W4 E3	
R477	R101539	R MF H 1K8 F 0W4 E3	
R407	R101540	R MF H 2K2 F 0W4 E3	
R441	R101540	R MF H 2K2 F 0W4 E3	
R461	R101540	R MF H 2K2 F 0W4 E3	
R467	R101540	R MF H 2K2 F 0W4 E3	
R480	R101540	R MF H 2K2 F 0W4 E3	
R481	R101540	R MF H 2K2 F 0W4 E3	
R536	R101540	R MF H 2K2 F 0W4 E3	1
R448	R1015401	R MF H 2K F 0W4 E3	
R408	R101541	R MF H 2K7 F 0W4 E3	
R421	R101541	R MF H 2K7 F 0W4 E3	
R443	R101541	R MF H 2K7 F 0W4 E3	
R445	R101541	R MF H 2K7 F 0W4 E3	
R482	R101541	R MF H 2K7 F 0W4 E3	
R431	R101542	R MF H 3K3 F 0W4 E3	
R454	R101542	R MF H 3K3 F 0W4 E3	
R432	R101543	R MF H 3K9 F 0W4 E3	
R422	R101544	R MF H 4K7 F 0W4 E3	
R460	R101544	R MF H 4K7 F 0W4 E3	
R464	R101544	R MF H 4K7 F 0W4 E3	
R469	R101544	R MF H 4K7 F 0W4 E3	
R485	R101544	R MF H 4K7 F 0W4 E3	
R489	R101544	R MF H 4K7 F 0W4 E3	
R501	R101544	R MF H 4K7 F 0W4 E3	
R507	R101544	R MF H 4K7 F 0W4 E3	
R521	R101544	R MF H 4K7 F 0W4 E3	
R409	R101545	R MF H 5K6 F 0W4 E3	
R456	R101546	R MF H 6K8 F 0W4 E3	
R520	R101546	R MF H 6K8 F 0W4 E3	
R420	R101547	R MF H 8K2 F 0W4 E3	
R423	R101547	R MF H 8K2 F 0W4 E3	
R478	R101547	R MF H 8K2 F 0W4 E3	
R502	R101547	R MF H 8K2 F 0W4 E3	
R513	R101547	R MF H 8K2 F 0W4 E3	
R404	R101548	R MF H 10K F 0W4 E3	
R405	R101548	R MF H 10K F 0W4 E3	
R414	R101548	R MF H 10K F 0W4 E3	
R438	R101548	R MF H 10K F 0W4 E3	
R446	R101548	R MF H 10K F 0W4 E3	
R450	R101548	R MF H 10K F 0W4 E3	
R452	R101548	R MF H 10K F 0W4 E3	
R453	R101548	R MF H 10K F 0W4 E3	
R473	R101548	R MF H 10K F 0W4 E3	
R491	R101548	R MF H 10K F 0W4 E3	
R497	R101548	R MF H 10K F 0W4 E3	
R499	R101548	R MF H 10K F 0W4 E3	
R503	R101548	R MF H 10K F 0W4 E3	
R510	R101548	R MF H 10K F 0W4 E3	
R524	R101548	R MF H 10K F 0W4 E3	
R533	R101548	R MF H 10K F 0W4 E3	1
R449	R101549	R MF H 12K F 0W4 E3	
R451	R101549	R MF H 12K F 0W4 E3	
R471	R101549	R MF H 12K F 0W4 E3	
R529	R101549	R MF H 12K F 0W4 E3	
R406	R101550	R MF H 15K F 0W4 E3	
R434	R101550	R MF H 15K F 0W4 E3	
R500	R101550	R MF H 15K F 0W4 E3	
R466	R101551	R MF H 18K F 0W4 E3	
R412	R101552	R MF H 22K F 0W4 E3	
R435	R101552	R MF H 22K F 0W4 E3	
R439	R101552	R MF H 22K F 0W4 E3	
R472	R101552	R MF H 22K F 0W4 E3	
R475	R101552	R MF H 22K F 0W4 E3	
R490	R101552	R MF H 22K F 0W4 E3	
R492	R101552	R MF H 22K F 0W4 E3	
R493	R101552	R MF H 22K F 0W4 E3	
R495	R101552	R MF H 22K F 0W4 E3	
R512	R101552	R MF H 22K F 0W4 E3	
R519	R101552	R MF H 22K F 0W4 E3	
R528	R101552	R MF H 22K F 0W4 E3	
R428	R101554	R MF H 33K F 0W4 E3	
R429	R101554	R MF H 33K F 0W4 E3	
R430	R101554	R MF H 33K F 0W4 E3	
R433	R101554	R MF H 33K F 0W4 E3	
R436	R101554	R MF H 33K F 0W4 E3	
R522	R101554	R MF H 33K F 0W4 E3	
R508	R101555	R MF H 39K F 0W4 E3	
R437	R101556	R MF H 47K F 0W4 E3	
R465	R101556	R MF H 47K F 0W4 E3	
R483	R101556	R MF H 47K F 0W4 E3	
R535	R101557	R MF H 56K F 0W4 E3	
R474	R101559	R MF H 82K F 0W4 E3	
R516	R101559	R MF H 82K F 0W4 E3	
R525	R101559	R MF H 82K F 0W4 E3	
R440	R101560	R MF H100K F 0W4 E3	
R442	R101560	R MF H100K F 0W4 E3	
R457	R101560	R MF H100K F 0W4 E3	
R462	R101563	R MF H180K F 0W4 E3	
R476	R101564	R MF H220K F 0W4 E3	
R470	R101566	R MF H330K F 0W4 E3	
R444	R101568	R MF H470K F 0W4 E3	
R447	R101568	R MF H470K F 0W4 E3	
R509	R101568	R MF H470K F 0W4 E3	
R515	R101571	R MF H820K F 0W4 E3	
Z400	R131734	D ZEN 5V6 0W5 B DO35	


Z3676041
R802628
R803217
R722276

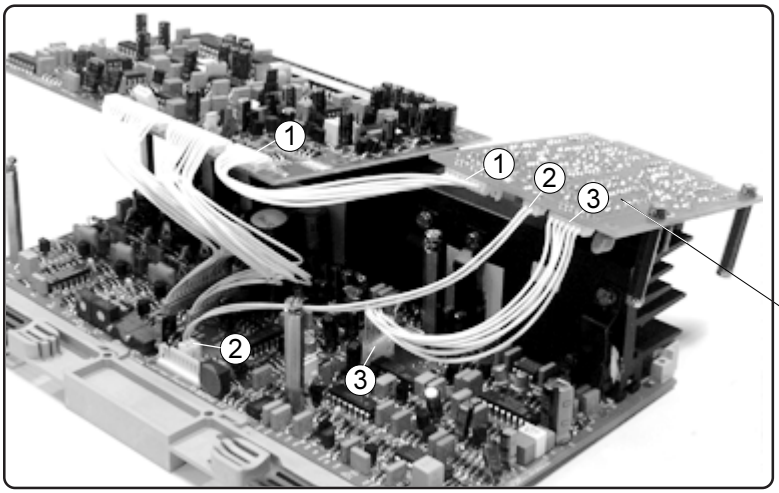

R313525

Mounting the HDTV interface R762268T on the Sync+Vertical deflection module

HDTV interface R762268T

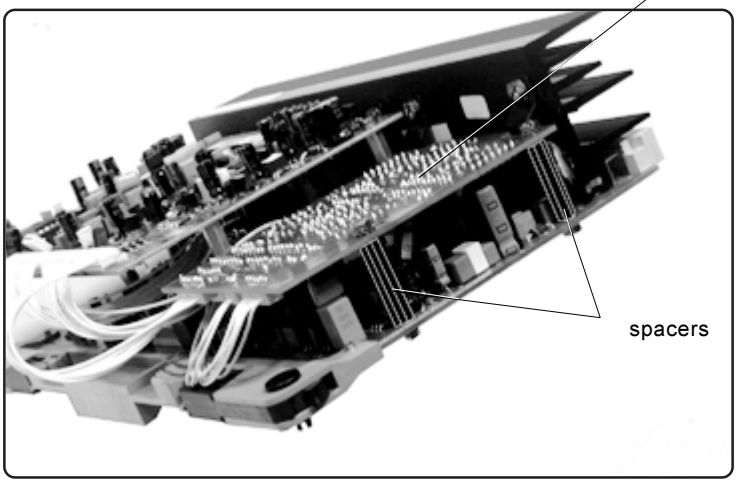


Interconnection



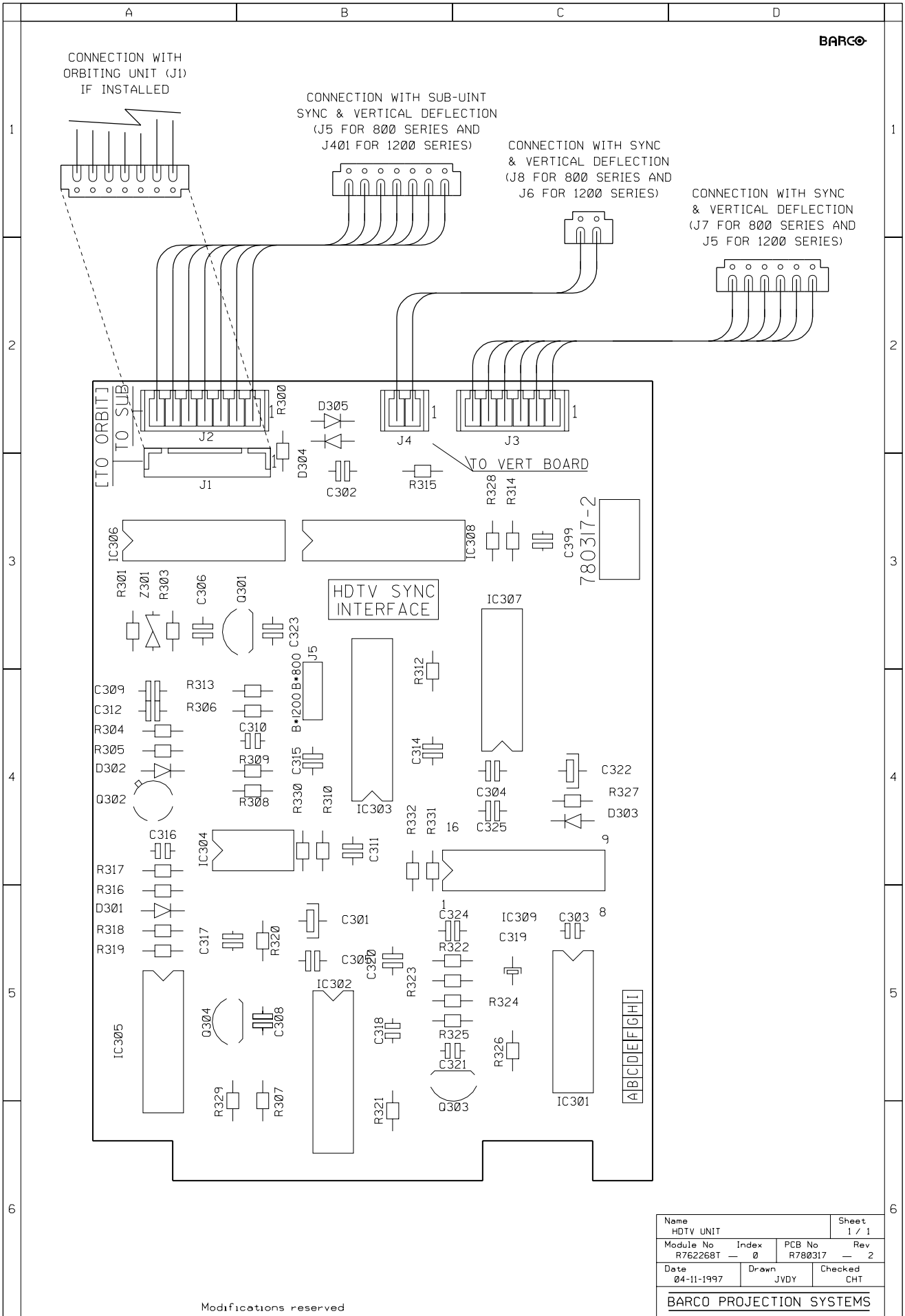
HDTV interface R762268T

Mechanical mounting



Modifications on the main module for proper HDTV operation

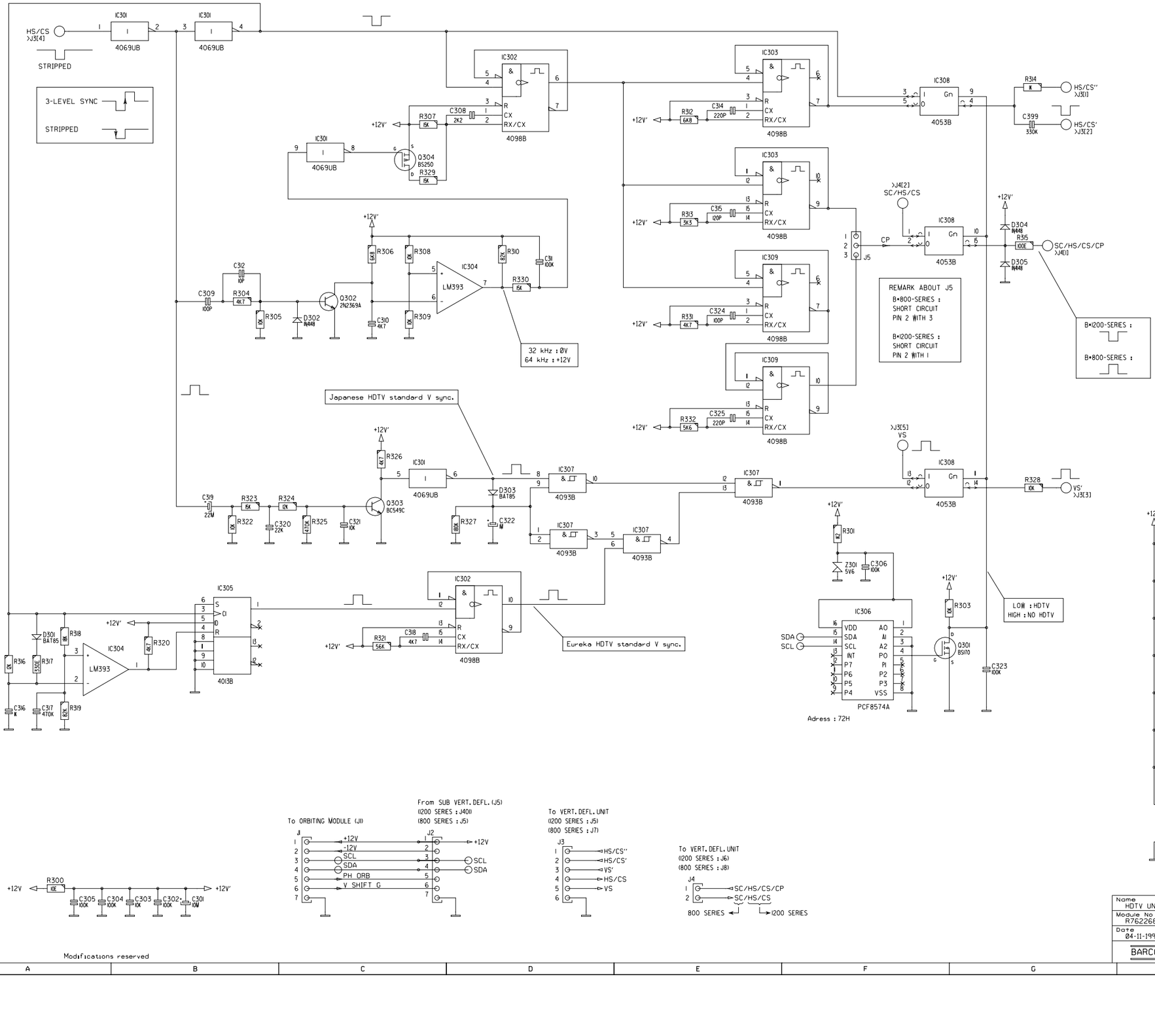
Remove on the main module the resistors R55-R68-R90 and the capacitor C49



Modifications reserved

Name: HDTV UNIT			Sheet: 1 / 1
Module No: R762268T — 0	Index	PCB No: R780317 — 2	Rev
Date: 04-11-1997	Drawn: JVDY	Checked: CHT	

BARCO PROJECTION SYSTEMS



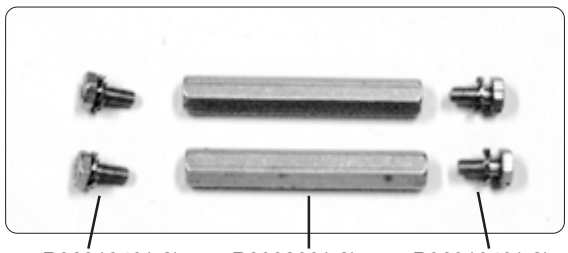
COMP.	LOC.
C301	B 6
C302	B 6
C303	B 6
C304	A 6
C305	A 6
C306	F 4
C308	D 1
C309	B 2
C310	C 3
C311	D 2
C312	B 2
C314	E 1
C315	E 2
C316	A 5
C317	A 5
C318	C 5
C319	B 4
C320	B 4
C321	C 4
C322	D 4
C323	G 5
C324	E 3
C325	E 3
C399	G 1
D301	A 5
D302	C 3
D303	D 4
D304	G 2
D305	G 2
IC301	B 1
IC301	B 1
IC301	C 2
IC301	C 4
IC301	H 4
IC302	D 1
IC302	H 4
IC302	D 4
IC303	E 2
IC303	E 1
IC303	H 4
IC304	A 5
IC304	D 2
IC304	H 5
IC305	B 4
IC305	H 5
IC306	F 4
IC307	H 5
IC307	E 4
IC307	E 4
IC307	D 4
IC307	D 4
IC308	H 5
IC308	H 6
IC308	F 4
IC308	F 1
IC308	F 2
IC309	H 5
IC309	E 3
IC309	E 2
J1	C 6
J2	C 6
J3	D 6
J4	E 6
J5	F 2
Q301	G 5
Q302	C 3
Q303	C 4
Q304	C 2
R300	A 6
R301	F 4
R303	G 4
R304	B 2
R305	B 3
R306	C 2
R307	C 1
R308	C 2
R309	C 3
R310	D 2
R312	E 1
R313	E 2
R314	G 1
R315	G 2
R316	A 5
R317	A 5
R318	A 5
R319	A 5
R320	B 5
R321	C 5
R322	B 4
R323	B 4
R324	C 4
R325	C 4
R326	C 3
R327	D 4
R328	G 4
R329	C 2
R330	D 2
R331	E 3
R332	E 3
Z301	F 4

Name	Sheet
HDTV UNIT	1/1
Module No / Index	PCB No / Rev
R762268T – 0	R780317 – 2
Date	Drawn / Checked
04-11-1997	JVDY / CHT

BARCO PROJECTION SYSTEMS

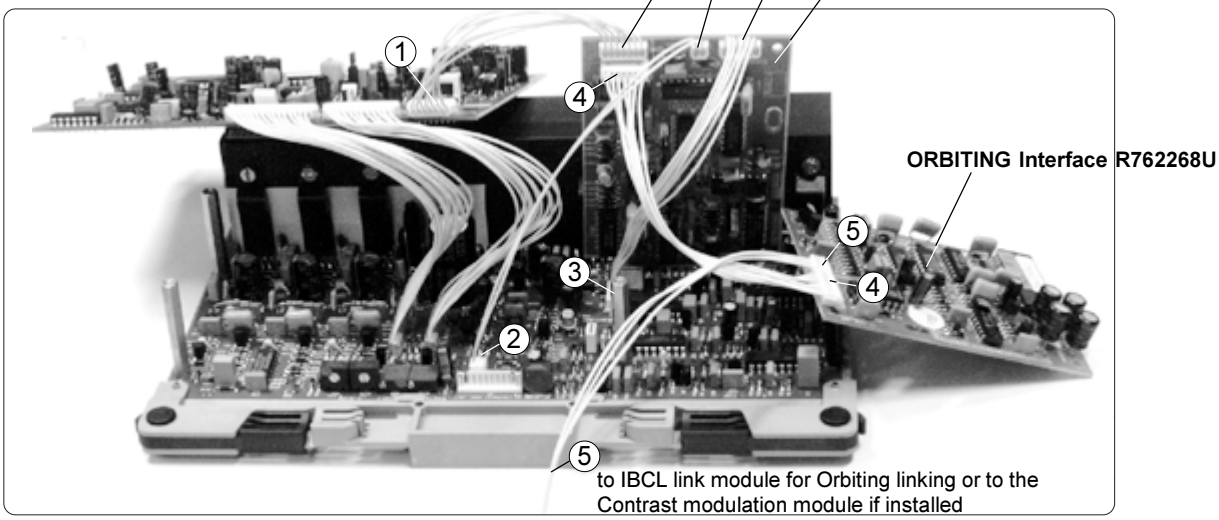
Parts listing R762268U

SIT.	ITEM NO.	DESCRIPTION	QUANTITY
	R34840710	CD CT FTFT P 7 120	1
	R3485037	CD CT $FTFT P 3 200	1
1010	R3631049	SCR D933 M 3 X 6 XIC	4
1000	R803299	SPR L37 H 5.5 M 3 B	2
C 1	R113728	C POMERA 220N K 63E2	1
C 2	R111531	C EL RA 10M M 35E2 85	
C 3	R111531	C EL RA 10M M 35E2 85	
C 4	R113724	C POMERA 100N K 63E2	
C 5	R113724	C POMERA 100N K 63E2	
C 6	R111478	C EL RA 220M M 25E2 85	1
C 7	R113728	C POMERA 220N K 63E2	1
C 8	R113728	C POMERA 220N K 63E2	1
C 9	R113728	C POMERA 220N K 63E2	1
C 10	R113728	C POMERA 220N K 63E2	1
C 11	R111478	C EL RA 220M M 25E2 85	1
C 12	R111478	C EL RA 220M M 25E2 85	1
C 13	R111478	C EL RA 220M M 25E2 85	1
C 14	R113728	C POMERA 220N K 63E2	
C 15	R111531	C EL RA 10M M 35E2 85	
C 16	R111531	C EL RA 10M M 35E2 85	
C 17	R113724	C POMERA 100N K 63E2	
C 18	R113724	C POMERA 100N K 63E2	
C 19	R113724	C POMERA 100N K 63E2	
C 20	R113724	C POMERA 100N K 63E2	
C 21	R113724	C POMERA 100N K 63E2	
D 1	R131621	D S 1N4148 075150 DO35	
D 2	R131621	D S 1N4148 075150 DO35	
D 3	R131621	D S 1N4148 075150 DO35	
D 4	R131621	D S 1N4148 075150 DO35	
D 5	R131621	D S 1N4148 075150 DO35	
D 6	R131621	D S 1N4148 075150 DO35	
D 7	R131621	D S 1N4148 075150 DO35	
D 8	R131621	D S 1N4148 075150 DO35	
I 1	R132833	U 76013 SC DIP28 P	1
I 2	R132832	U 8574A PCF DIP16 P	1
I 3	R134113	U 084 TL DIP14 P	1
I 4	R137600	U 4052B DIP16 P	1
I 5	R134113	U 084 TL DIP14 P	1
I 6	R137303	U 4066B DIP14 P	1
I 9	R134029	U 337LZ TO92 P	1
I 26	R134028	U 317LZ LM TO92 P	1
J 1	R313947	J CT H MBS P 7 M2SN	1
J 2	R313943	J CT H MBS P 3 M2SN	1
PC	R780351	PCD PJ49 800 ORBIT 2	1
Q 1	R1314181	Q BC559B P SS TO92	
Q 2	R1314181	Q BC559B P SS TO92	
Q 3	R1314181	Q BC559B P SS TO92	
Q 4	R132916	Q BS250 FN SS TO92	1
Q 5	R131411	Q BC549C N SS TO92	
R 1	R101544	R MF H 4K7 F 0W4 E3	
R 2	R101544	R MF H 4K7 F 0W4 E3	
R 3	R101529	R MF H270E F 0W4 E3	
R 4	R101556	R MF H 47K F 0W4 E3	
R 5	R101554	R MF H 33K F 0W4 E3	
R 6	R101524	R MF H100E F 0W4 E3	
R 7	R101538	R MF H 1K5 F 0W4 E3	
R 8	R101564	R MF H220K F 0W4 E3	
R 9	R101554	R MF H 33K F 0W4 E3	
R 10	R101542	R MF H 3K3 F 0W4 E3	
R 11	R101555	R MF H 39K F 0W4 E3	
R 12	R101519	R MF H 39E F 0W4 E3	
R 13	R101525	R MF H120E F 0W4 E3	
R 14	R101548	R MF H 10K F 0W4 E3	
R 15	R101548	R MF H 10K F 0W4 E3	
R 16	R101544	R MF H 4K7 F 0W4 E3	
R 17	R101548	R MF H 10K F 0W4 E3	
R 18	R101542	R MF H 3K3 F 0W4 E3	
R 19	R101544	R MF H 4K7 F 0W4 E3	
R 20	R101542	R MF H 3K3 F 0W4 E3	
R 21	R101542	R MF H 3K3 F 0W4 E3	
R 22	R101550	R MF H 15K F 0W4 E3	
R 23	R101555	R MF H 39K F 0W4 E3	
R 24	R101560	R MF H100K F 0W4 E3	
R 25	R101567	R MF H390K F 0W4 E3	
R 26	R101567	R MF H390K F 0W4 E3	
R 27	R101550	R MF H 15K F 0W4 E3	
R 28	R101556	R MF H 47K F 0W4 E3	
R 29	R101556	R MF H 47K F 0W4 E3	
R 30	R101562	R MF H150K F 0W4 E3	
R 31	R101560	R MF H100K F 0W4 E3	
R 32	R101562	R MF H150K F 0W4 E3	
R 33	R101554	R MF H 33K F 0W4 E3	
R 34	R101564	R MF H220K F 0W4 E3	
R 35	R101560	R MF H100K F 0W4 E3	
R 36	R101560	R MF H100K F 0W4 E3	
R 37	R101556	R MF H 47K F 0W4 E3	
R 38	R101556	R MF H 47K F 0W4 E3	
R 39	R101524	R MF H100E F 0W4 E3	
R 40	R101528	R MF H220E F 0W4 E3	
R 41	R101530	R MF H330E F 0W4 E3	
R 42	R101548	R MF H 10K F 0W4 E3	
R 43	R101552	R MF H 22K F 0W4 E3	
R 44	R101548	R MF H 10K F 0W4 E3	
R 45	R101552	R MF H 22K F 0W4 E3	
R 46	R101552	R MF H 22K F 0W4 E3	
R 47	R101548	R MF H 10K F 0W4 E3	
R 48	R101552	R MF H 22K F 0W4 E3	
R 49	R101552	R MF H 22K F 0W4 E3	
R 50	R101548	R MF H 10K F 0W4 E3	
R 51	R101536	R MF H 1K F 0W4 E3	
R 52	R101536	R MF H 1K F 0W4 E3	

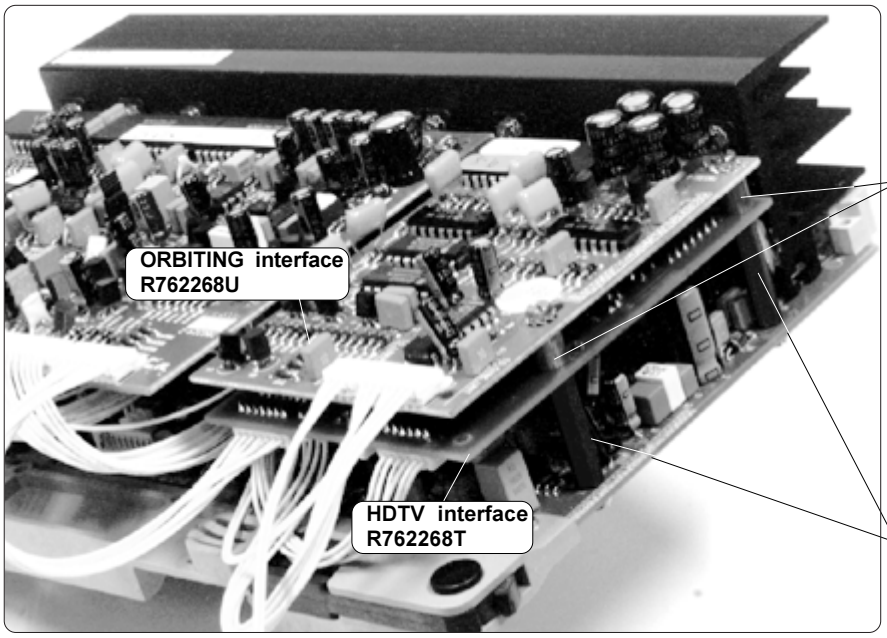


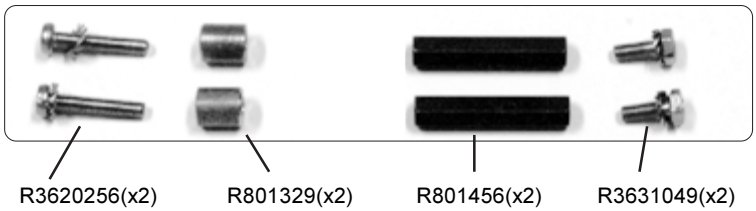
Mounting the HDTV R762268T+ORBITING R762268U Interface on the Sync+Vertical deflection module

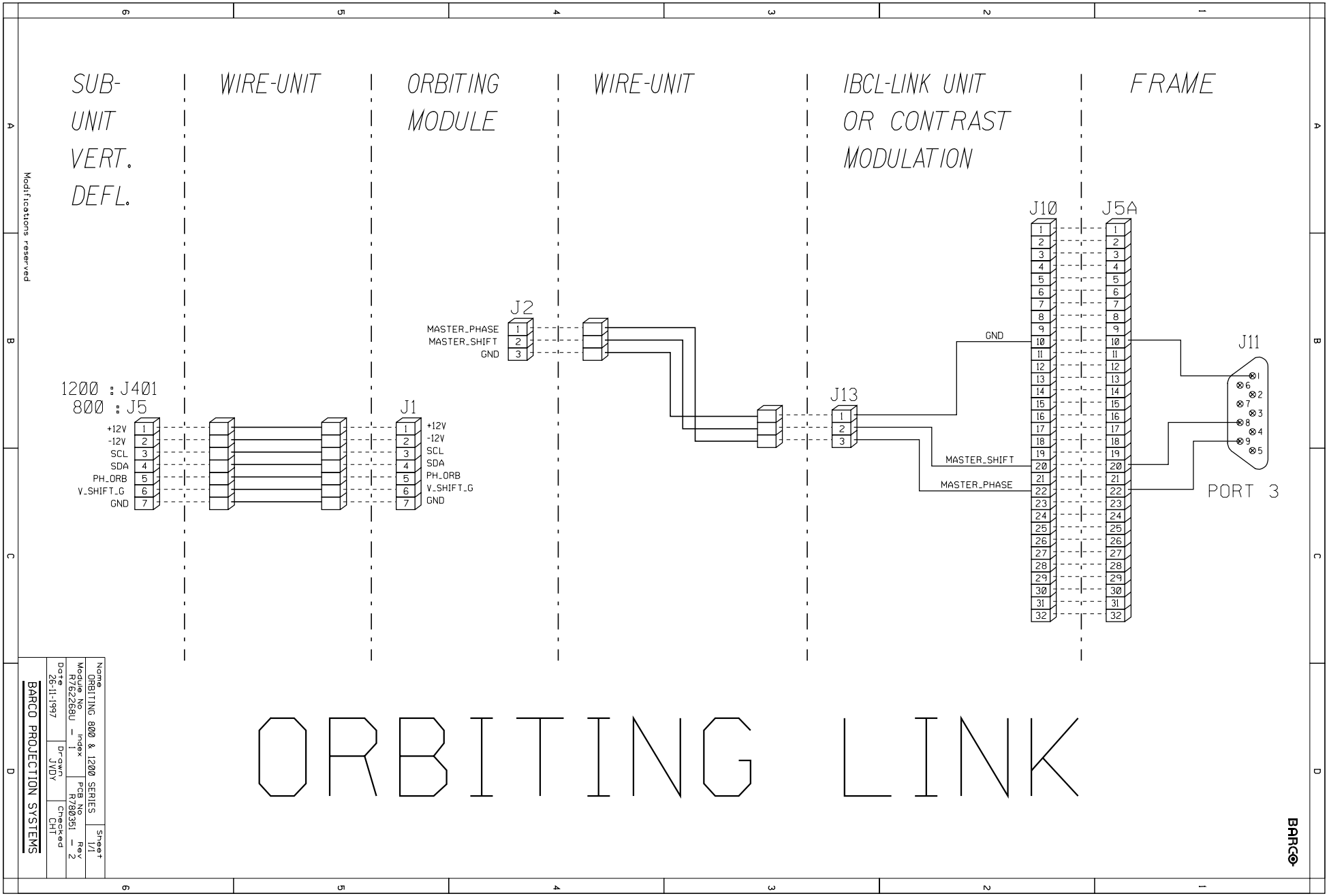
Interconnection

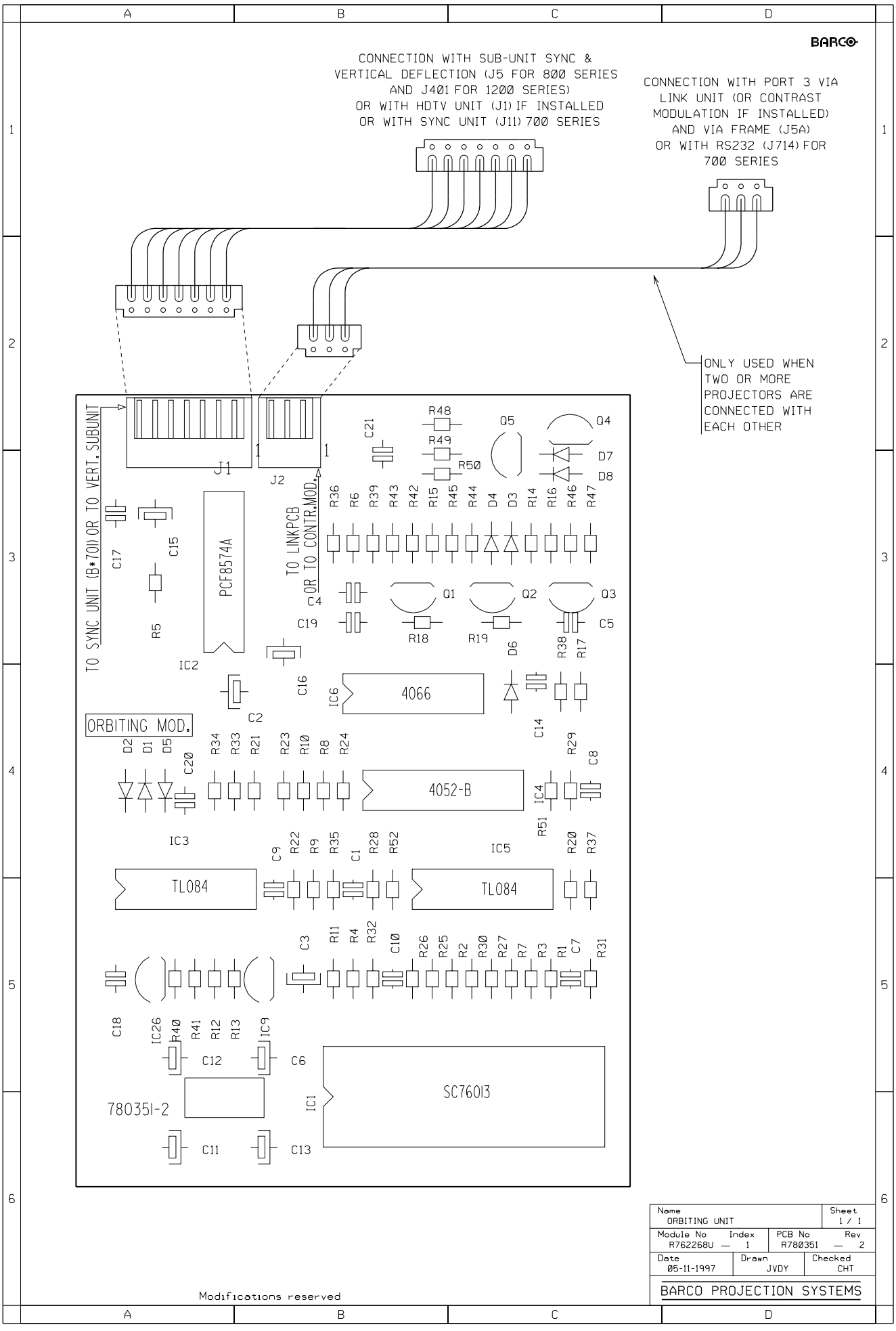


Mechanical mounting



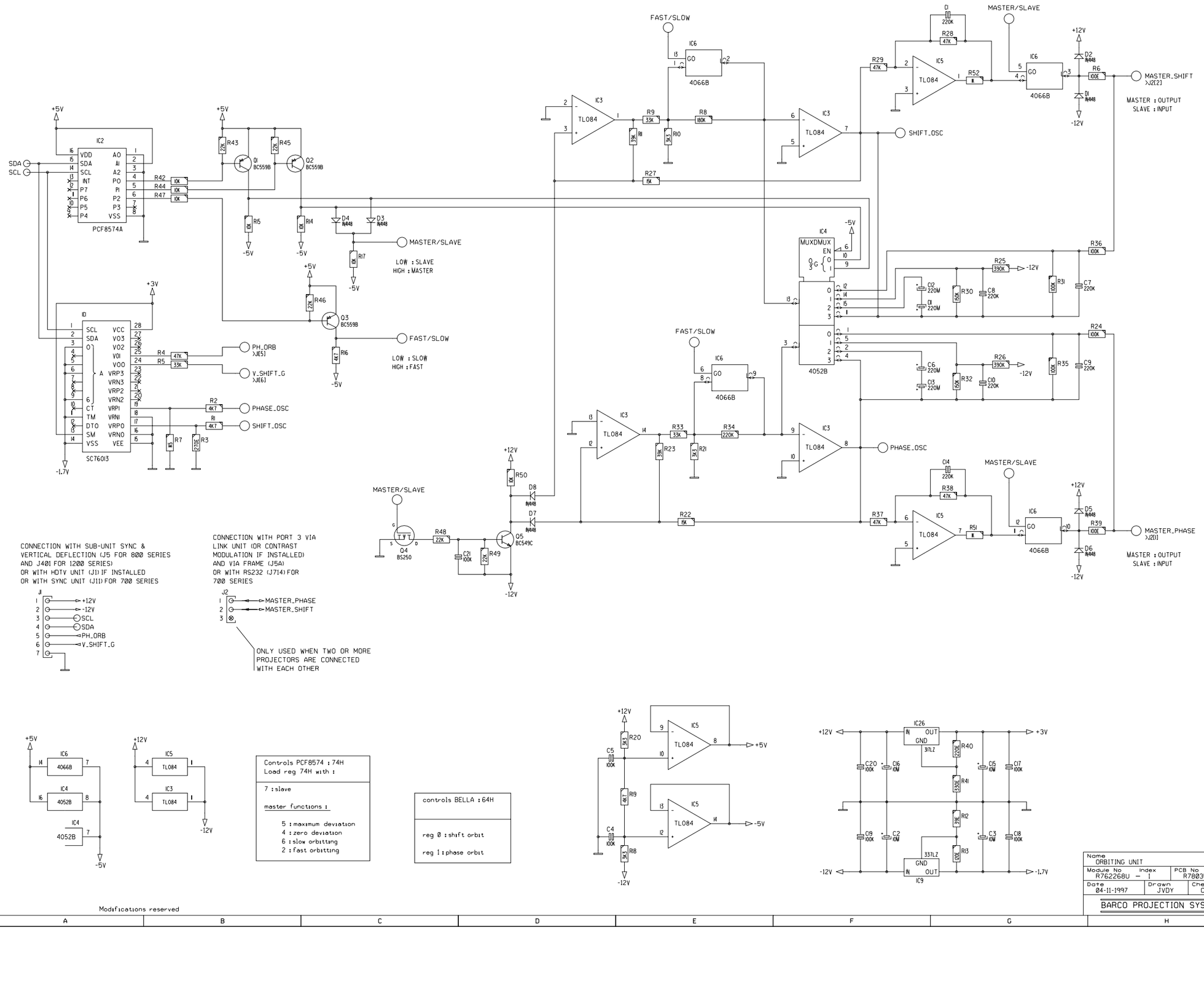



SUB-
UNIT
VERT.
DEFL.
WIRE-UNIT
ORBITING
MODULE
WIRE-UNIT
IBCL-LINK UNIT
OR CONTRAST
MODULATION
FRAME
1200 : J401
800 : J5
+12V
-12V
SCL
SDA
PH_ORB
V_SHIFT_G
GND
J1
J2
MASTER_PHASE
MASTER_SHIFT
GND
J13
J10
J5A
J11
GND
MASTER_SHIFT
MASTER_PHASE
PORT 3
ORBITING LINK
Modifications reserved
BARCO PROJECTION SYSTEMS
Name
ORBITING 800 & 1200 SERIES
Module No
R762268U
Index
1
PCB No
R780351
Rev
2
Date
26-11-1997
Drawn
JVDY
Checked
CHT
Sheet
1/1
BARCO



Name: ORBITING UNIT			Sheet: 1 / 1
Module No: R762268U — 1	Index	PCB No: R780351 — 2	Rev
Date: 05-11-1997	Drawn: JVDY	Checked: CHT	

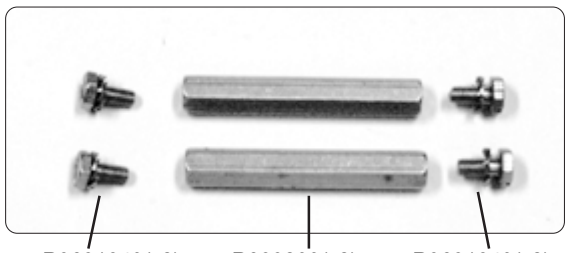
BARCO PROJECTION SYSTEMS



COMP.	LOC.
C1	G 1
C2	F 6
C3	G 6
C4	D 6
C5	D 5
C6	F 3
C7	G 2
C8	G 3
C9	G 3
C10	G 3
C11	F 3
C12	F 2
C13	F 3
C14	G 4
C15	G 6
C16	F 6
C17	G 6
C18	G 6
C19	F 6
C20	F 6
C21	D 4
D1	G 1
D2	G 1
D3	C 2
D4	C 2
D5	G 4
D6	G 4
D7	D 4
D8	D 4
IC1	A 3
IC2	A 2
IC3	B 6
IC3	E 3
IC3	F 3
IC3	F 1
IC3	D 1
IC4	A 6
IC4	A 6
IC4	F 2
IC5	G 1
IC5	G 4
IC5	E 6
IC5	E 5
IC5	B 5
IC6	G 1
IC6	G 4
IC6	A 5
IC6	E 3
IC6	E 1
IC9	F 6
IC26	F 5
J1	A 4
J2	B 4
Q1	B 2
Q2	C 2
Q3	C 3
Q4	C 4
Q5	D 4
R1	B 3
R2	B 3
R3	B 3
R4	B 3
R5	B 3
R6	H 1
R7	B 3
R8	E 1
R9	E 1
R10	E 2
R11	E 2
R12	G 6
R13	G 6
R14	C 2
R15	B 2
R16	C 3
R17	C 2
R18	E 6
R19	E 6
R20	E 5
R21	E 4
R22	E 4
R23	E 4
R24	H 3
R25	G 2
R26	G 3
R27	E 2
R28	G 1
R29	F 1
R30	G 3
R31	G 2
R32	G 3
R33	E 3
R34	E 3
R35	G 3
R36	H 2
R37	F 4
R38	G 4
R39	H 4
R40	G 5
R41	G 6
R42	B 2
R43	B 2
R44	B 2
R45	B 2
R46	C 3
R47	B 2
R48	C 4
R49	D 4
R50	D 4
R51	G 4
R52	G 1

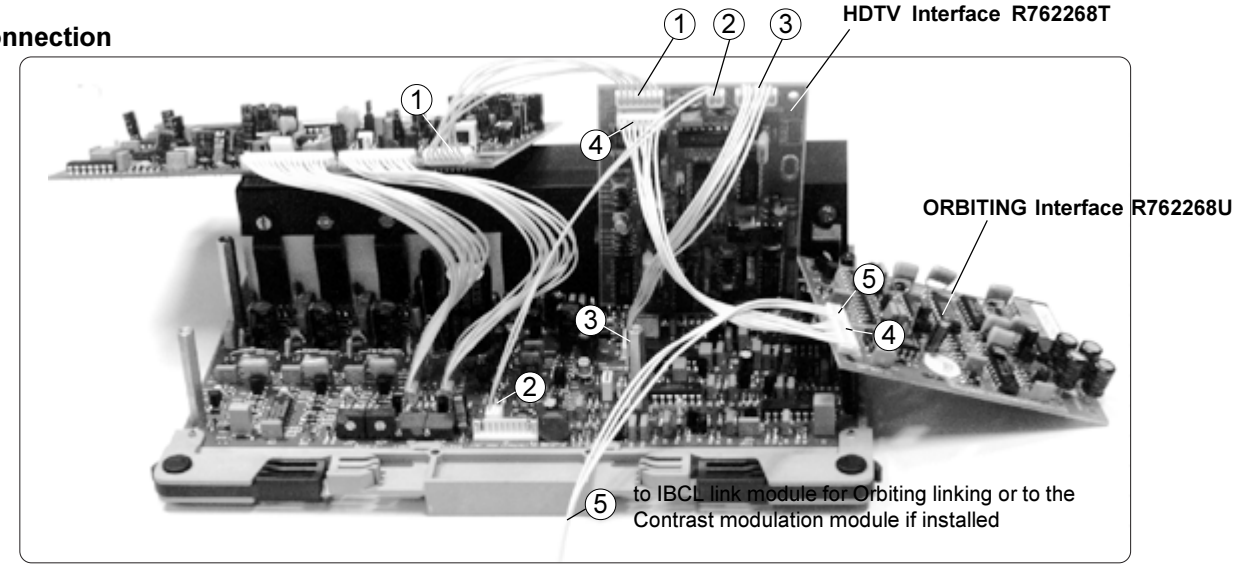
Parts listing R762268U

SIT.	ITEM NO.	DESCRIPTION	QUANTITY
	R34840710	CD CT FTFT P 7 120	1
	R3485037	CD CT $FTFT P 3 200	1
1010	R3631049	SCR D933 M 3 X 6 XIC	4
1000	R803299	SPR L37 H 5.5 M 3 B	2
C 1	R113728	C POMERA 220N K 63E2	1
C 2	R111531	C EL RA 10M M 35E2 85	
C 3	R111531	C EL RA 10M M 35E2 85	
C 4	R113724	C POMERA 100N K 63E2	
C 5	R113724	C POMERA 100N K 63E2	
C 6	R111478	C EL RA 220M M 25E2 85	1
C 7	R113728	C POMERA 220N K 63E2	1
C 8	R113728	C POMERA 220N K 63E2	1
C 9	R113728	C POMERA 220N K 63E2	1
C 10	R113728	C POMERA 220N K 63E2	1
C 11	R111478	C EL RA 220M M 25E2 85	1
C 12	R111478	C EL RA 220M M 25E2 85	1
C 13	R111478	C EL RA 220M M 25E2 85	1
C 14	R113728	C POMERA 220N K 63E2	
C 15	R111531	C EL RA 10M M 35E2 85	
C 16	R111531	C EL RA 10M M 35E2 85	
C 17	R113724	C POMERA 100N K 63E2	
C 18	R113724	C POMERA 100N K 63E2	
C 19	R113724	C POMERA 100N K 63E2	
C 20	R113724	C POMERA 100N K 63E2	
C 21	R113724	C POMERA 100N K 63E2	
D 1	R131621	D S 1N4148 075150 DO35	
D 2	R131621	D S 1N4148 075150 DO35	
D 3	R131621	D S 1N4148 075150 DO35	
D 4	R131621	D S 1N4148 075150 DO35	
D 5	R131621	D S 1N4148 075150 DO35	
D 6	R131621	D S 1N4148 075150 DO35	
D 7	R131621	D S 1N4148 075150 DO35	
D 8	R131621	D S 1N4148 075150 DO35	
I 1	R132833	U 76013 SC DIP28 P	1
I 2	R132832	U 8574A PCF DIP16 P	1
I 3	R134113	U 084 TL DIP14 P	1
I 4	R137600	U 4052B DIP16 P	1
I 5	R134113	U 084 TL DIP14 P	1
I 6	R137303	U 4066B DIP14 P	1
I 9	R134029	U 337LZ TO92 P	1
I 26	R134028	U 317LZ LM TO92 P	1
J 1	R313947	J CT H MBS P 7 M2SN	1
J 2	R313943	J CT H MBS P 3 M2SN	1
PC	R780351	PCD PJ49 800 ORBIT 2	1
Q 1	R1314181	Q BC559B P SS TO92	
Q 2	R1314181	Q BC559B P SS TO92	
Q 3	R1314181	Q BC559B P SS TO92	
Q 4	R132916	Q BS250 FN SS TO92	1
Q 5	R131411	Q BC549C N SS TO92	
R 1	R101544	R MF H 4K7 F 0W4 E3	
R 2	R101544	R MF H 4K7 F 0W4 E3	
R 3	R101529	R MF H270E F 0W4 E3	
R 4	R101556	R MF H 47K F 0W4 E3	
R 5	R101554	R MF H 33K F 0W4 E3	
R 6	R101524	R MF H100E F 0W4 E3	
R 7	R101538	R MF H 1K5 F 0W4 E3	
R 8	R101564	R MF H220K F 0W4 E3	
R 9	R101554	R MF H 33K F 0W4 E3	
R 10	R101542	R MF H 3K3 F 0W4 E3	
R 11	R101555	R MF H 39K F 0W4 E3	
R 12	R101519	R MF H 39E F 0W4 E3	
R 13	R101525	R MF H120E F 0W4 E3	
R 14	R101548	R MF H 10K F 0W4 E3	
R 15	R101548	R MF H 10K F 0W4 E3	
R 16	R101544	R MF H 4K7 F 0W4 E3	
R 17	R101548	R MF H 10K F 0W4 E3	
R 18	R101542	R MF H 3K3 F 0W4 E3	
R 19	R101544	R MF H 4K7 F 0W4 E3	
R 20	R101542	R MF H 3K3 F 0W4 E3	
R 21	R101542	R MF H 3K3 F 0W4 E3	
R 22	R101550	R MF H 15K F 0W4 E3	
R 23	R101555	R MF H 39K F 0W4 E3	
R 24	R101560	R MF H100K F 0W4 E3	
R 25	R101567	R MF H390K F 0W4 E3	
R 26	R101567	R MF H390K F 0W4 E3	
R 27	R101550	R MF H 15K F 0W4 E3	
R 28	R101556	R MF H 47K F 0W4 E3	
R 29	R101556	R MF H 47K F 0W4 E3	
R 30	R101562	R MF H150K F 0W4 E3	
R 31	R101560	R MF H100K F 0W4 E3	
R 32	R101562	R MF H150K F 0W4 E3	
R 33	R101554	R MF H 33K F 0W4 E3	
R 34	R101564	R MF H220K F 0W4 E3	
R 35	R101560	R MF H100K F 0W4 E3	
R 36	R101560	R MF H100K F 0W4 E3	
R 37	R101556	R MF H 47K F 0W4 E3	
R 38	R101556	R MF H 47K F 0W4 E3	
R 39	R101524	R MF H100E F 0W4 E3	
R 40	R101528	R MF H220E F 0W4 E3	
R 41	R101530	R MF H330E F 0W4 E3	
R 42	R101548	R MF H 10K F 0W4 E3	
R 43	R101552	R MF H 22K F 0W4 E3	
R 44	R101548	R MF H 10K F 0W4 E3	
R 45	R101552	R MF H 22K F 0W4 E3	
R 46	R101552	R MF H 22K F 0W4 E3	
R 47	R101548	R MF H 10K F 0W4 E3	
R 48	R101552	R MF H 22K F 0W4 E3	
R 49	R101552	R MF H 22K F 0W4 E3	
R 50	R101548	R MF H 10K F 0W4 E3	
R 51	R101536	R MF H 1K F 0W4 E3	
R 52	R101536	R MF H 1K F 0W4 E3	



Mounting the HDTV R762268T+ORBITING R762268U Interface on the Sync+Vertical deflection module

Interconnection



Mechanical mounting