

BARCO  **DATA**
801

90 00830 (230V AC)

90 00839 (120V AC)

SERVICE MANUAL

BARCO PROJECTION SYSTEMS



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SERVICE MANUAL

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SAFETY NOTICE

PRODUCT SAFETY NOTICE

Components identified by  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.**

SAFETY NOTICE

Components having special safety characteristics are identified by  on schematics and on the parts list in this SERVICE MANUAL and its supplements and bulletins. Before servicing this apparatus, it is important that the service technician read and follow the "SAFETY PRECAUTIONS" and "PRODUCT SAFETY NOTICES" in this Service Manual.

SAFETY PRECAUTIONS

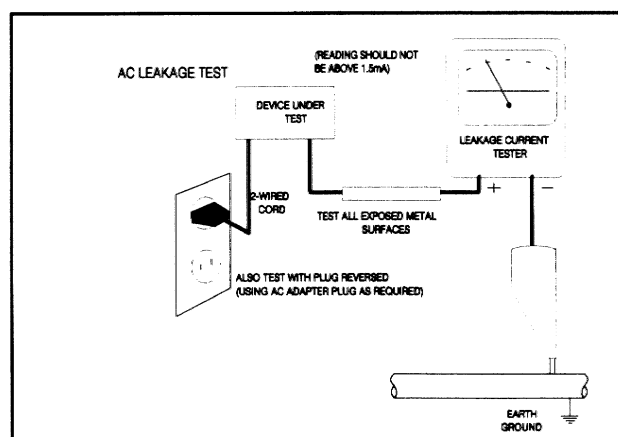
1. **Before returning an instrument to the customer**, always make a safety check of the entire instrument, including, but not limited to, the following items :

a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including, but not limited to, insulating materials, barriers, covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage.**

b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) excessively wide cabinet ventilation slots, and (2) an improperly fitted and/or incorrectly secured cover panels.

c. **Leakage Current Hot Check** - With the instrument completely reassembled, plug the AC line cord directly into a 220 VAC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.0 Leakage Current for Appliances and Underwriters Laboratories (UL) 1410, (50.7). With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle bracket, metal cabinet, screwheads, metallic overlays, control shafts, etc.). especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 1.5 milliamp. Reverse the instrument power cord plug in the outlet and repeat test.

ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING ACCESSORIES.



WARNING: RISK OF ELECTRIC SHOCK DURING THIS TEST. THE PROJECTOR IS NOT CONNECTED TO GROUND. DO NOT TOUCH THE PROJECTOR AND USE WELL INSULATED TEST PROBES.

d. **X-Radiation and High Voltage** - Because the picture tubes are the primary potential source of X-radiation in solid-state projectors, they are specially constructed to prohibit X-radiation emissions. For continued X-radiation protection, the replacement picture tube must be the same type as the original. Also, because the picture tube shields and mounting hardware perform an X-radiation protection function, they must be correctly in place.

After replacement of any X-ray radiation related safety components (marked in this manual with an *), the EHT voltage board must be checked.

2. Read and comply with all caution and safety-related notes on or inside the projector cabinet or on the projector chassis, or on the picture tube.

3. **Design Alteration Warning** - Do not alter or add to the mechanical or electrical design of this apparatus. Design alterations and additions, including, but not limited to, circuit modifications and the addition of items such as auxiliary audio and/or video output connections, might alter the safety characteristics of this apparatus and create a hazard to the user. Any design alterations or additions may void the manufacturer's warranty and may make you, the servicer responsible for personal injury or property damage resulting therefrom.

4. **Picture Tube Implosion Protection Warning** - The picture tube in this projector encloses a high vacuum. Do not remove, install, or otherwise handle the picture tube in any manner without first putting on shatterproof goggles equipped with side shields. People not so equipped must be kept safely away while picture tubes are handled. Keep the picture tube away from your body. Do not handle the picture tube by its neck.

For continued implosion protection, replace the picture tube only with one of the same type number.

5. **Hot Chassis Warning** - This projector chassis has two ground systems: the primary ground system is formed by the negative voltage of the rectified mains (power) and is only used as a reference in primary circuits; the secondary ground system is connected to earth ground via the earth conductor in the mains (power) lead. Separation between primary and secondary circuits is performed by the safety isolation transformers. Components bridging this transformers are also safety components and must never be defeated or altered.

All user-accessible conductive parts must be connected to earth ground, or are kept at SELV (Safety Extra Low Voltage).

6. Observe original lead dress. Take extra care to assure correct lead dress in the following areas:

- a. near sharp edges,
- b. near thermally hot parts - be sure that leads and components do not touch thermally hot parts,
- c. the AC supply,
- d. high voltage.

Always inspect in all areas for pinched, out-of-face, or frayed wiring. Do not change spacing between components, and between components and the printed-circuit board. Check AC power cord for damage.

7. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.

8. PRODUCT SAFETY NOTICE - Many electrical and mechanical parts have special safety-related characteristics some of which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified in BARCO service data by Δ on schematics and in the parts list. Use

of a substitute replacement that does not have the same safety characteristics as the recommended replacement part in BARCO service data parts list might create shock, fire, and/or other hazards. Product Safety is under review continuously and new instructions are issued whenever appropriate. For the latest information, always consult the appropriate current BARCO service literature.

SERVICING PRECAUTIONS

CAUTION: Before servicing instruments covered by this service data and its supplements and addendums, read and follow the SAFETY PRECAUTIONS of this publication.

NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 2 of this publication, always follow the safety precautions.

Remember: Safety First.

General Servicing Precautions

1. Always unplug the instrument AC power cord from the AC power source before:

- Removing or reinstalling any component, circuit board, module, or any other instrument assembly.
- Disconnecting or reconnecting any instrument electrical plug or other electrical connection.
- Connecting a test substitute in parallel with an electrolytic capacitor in the instrument.

Caution: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemical on or near this instrument or any of its assemblies.

3. Unless specified otherwise in this service data, clean electrical contacts by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable nonabrasive applicator: 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength). **Caution:** *This is a flammable mixture.*

Unless specified otherwise in this service data, lubrication of contacts is not required.

4. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service data might be equipped.

5. Do not apply AC power to this apparatus and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.

6. Always connect the test instrument ground lead to the appropriate instrument chassis ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

7. Use with this instrument only the test fixtures specified in this service data.

CAUTION: Do not connect the test fixture ground strap to any heatsink in this instrument.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Wear a commercially available high impedance discharging wrist strap device.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a static dissipative surface such as a 3M No 8210 table mat, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.

4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminium foil or comparable conductive material.)

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range 260°C to 315°C.
2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well tinned.
4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch, or 1.25 cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.
5. Use the following unsoldering technique:
 - a. Allow the soldering iron tip to reach normal temperature (260°C to 315°C).
 - b. Heat the component lead until the solder melts.
 - c. Quickly draw away the melted solder with an anti-static, suction-type solder removal device or with solder braid.

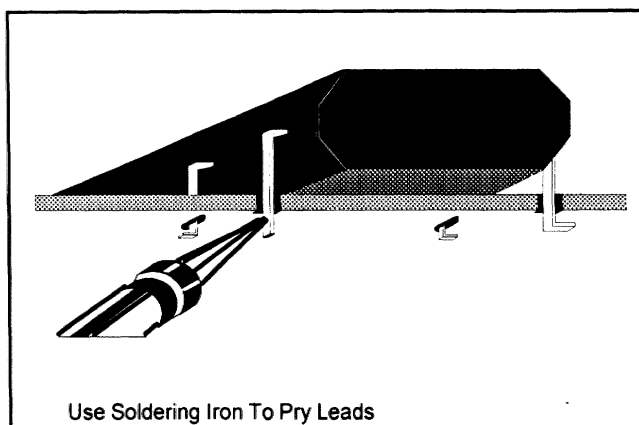
CAUTION: Work quickly to avoid overheating the circuit board printed foil.
6. Use the following soldering technique:
 - a. Allow the soldering iron tip to reach normal temperature (260°C to 315°C).

b. First, hold the soldering iron tip and solder strand against the component lead until the solder melts.

c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.

CAUTION: Work quickly to avoid overheating the circuit board printed foil or components.

d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.



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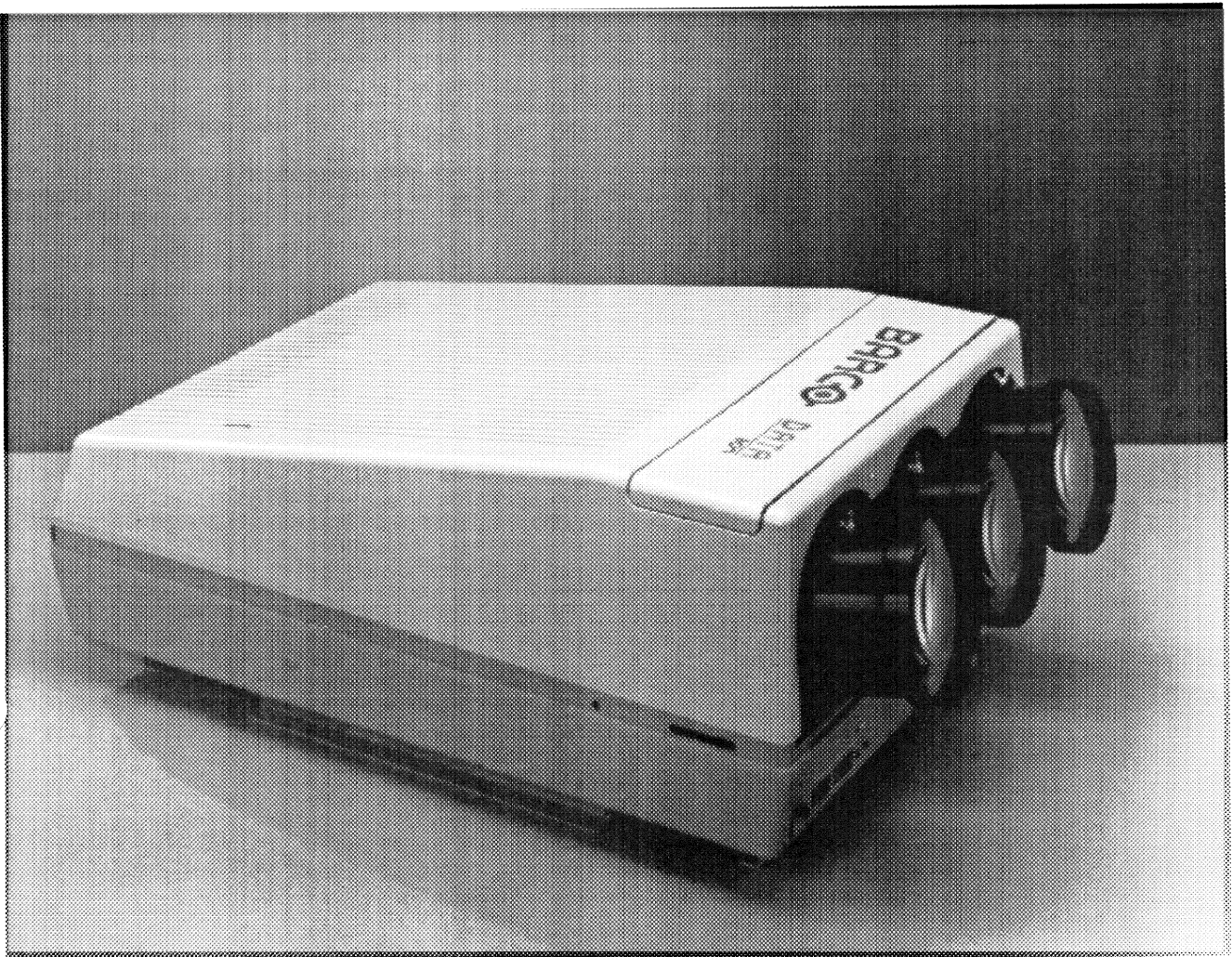
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GENERAL INFORMATION

BARCODATA 801: Gives presentations and training the right impact

PRELIMINARY



To match the new generation of PC graphics boards, typically running at frequencies between 50 kHz (60 Hz refresh rate) up to 61 kHz (74 Hz refresh rate), BARCO introduces the BARCODATA 801. Perfect geometry corrections, perfect image stability, a high RGB bandwidth of 75 MHz and a horizontal autolock scan rate up to 61,5 kHz are the most significant

specifications.

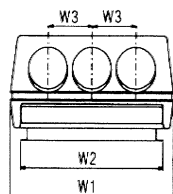
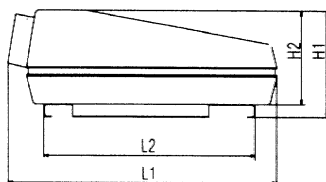
The implementation of an advanced, state-of-the-art optical system allows the BARCODATA 801 to deliver razor sharp images, with a high light output of screens up to 6 m (20 ft) wide. The BARCODATA 801 utilizes micro-processor control and a BARCO ASIC* which simplifies adjustments and

guarantees a consistent superb picture quality.

The extreme flexibility of the BARCODATA 801 makes it the perfect solution for dynamic large audience presentations of high quality computer data for board-room meetings, training sessions, software presentations, ...



Technical specifications



Dimensions:	mm	inch
L1	1000	39,37
L2	735	28,94
H1	342	13,46
H2	295	11,61
W1	575	22,64
W2	494	19,45
W3	180	7,09

Contact:

BARCO Projection Systems Head Office

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BARCO

LIGHT OUTPUT:

At 10 % peak white: 825 lumens

At 20 % peak white: 575 lumens

CRTS:

High brightness, high definition liquid cooled 8" CRTs.

LENSES:

High definition, fully color corrected, F1.06 hybrid lenses, with centre+edge focus adjustment.

OPTICAL RESOLUTION:

10 lp/mm at 50% MTF throughout the field.

SCREEN SIZE:

Minimum: 1,2 m x 0,9 m - 4' x 3'

Maximum: 6,0 m x 4,5 m - 19,8' x 14,8'

SCAN FREQUENCIES:

Horizontal: 15 - 61,5 kHz autolock

Vertical: 37 - 140 Hz autolock

MINIMAL RETRACE TIME:

Horizontal: < 3,3 µs

Vertical: < 300 µs

RGB BANDWIDTH: 75 MHz

HORIZONTAL LINEARITY:

> 97 % accuracy in the full horizontal frequency range.

INPUTS:

- RGB analog (BNC-connectors), sync on green or separate sync

- RGB analog input on D9-connector (optional BNC input)

- Video (PAL/SECAM/NTSC 4,43/NTSC 3,58) loop-through (2xBNC), with 75 Ohm termination switch

- S-Video input (4-pin mini-DIN), loop through with 75 Ohm termination switch

REMOTE CONTROL:

User-friendly infrared remote control for the control of:

- Source switching

- User settings per source (sharpness, hue, color, brightness, contrast)

- Geometry per source (password protected)

- Convergence per source (password protected)

PERIPHERALS AND OPTIONS:

- VS05: Video Source Selector - to connect 5

Video, 3 S-Video and 1 RGB analog source

- RCVDS800: Remote Controlled Video and Data Source Selector to select 10 different Video,

S-Video or RGB analog inputs

- IRIS800: Automatic Convergence System for CRT projectors

- External Remote Infrared Receiver

- Executive IR Remote Control with backlighting

- Control 800: Projector support software makes it possible to control up to 256 projectors from one central computer

- Special options: Orbiting, Contrast Modulation, Soft-Edge Matching, BCL-link and Convergence on green

- Sturdy, easily transportable flightcase

- Projection table

- Suspension system with pulley adapts the projector perfectly to the local mounting requirements

SPECIAL FEATURES:

- 38 frequency-related memory banks

- LDI (linear digital interpolation)

- Effective on-screen display

- Automatic storing of all adjustments

- Ability to set parameters to midposition

- Color temperature adjustment (3200 K, 6500 K, 9300 K or custom)

- Special sharpness control: improves picture quality for high-frequency sources

- Text generators for other languages

- Can be upgraded to BARCOGRAPHICS 801

POWER CONSUMPTION:

350 W [in normal operation]

SAFETY REGULATIONS:

The BARCODATA 801 complies with UL1950 and IEC 950.

WEIGHT:

Net weight: 64 kg - 141 lbs

Shipping weight: 80 kg - 176 lbs

ORDER INFORMATION:

BARCODATA 801:

230 V: 90 00830

120 V: 90 00839

**ASIC stands for Application Specific Integrated Circuits
The information and data given are typical for the equipment described. However any individual item is subject to change without any notice.*

Ref. no. 59 7981 - 27091993 - Printed in Belgium

BARCO PROJECTION SYSTEMS

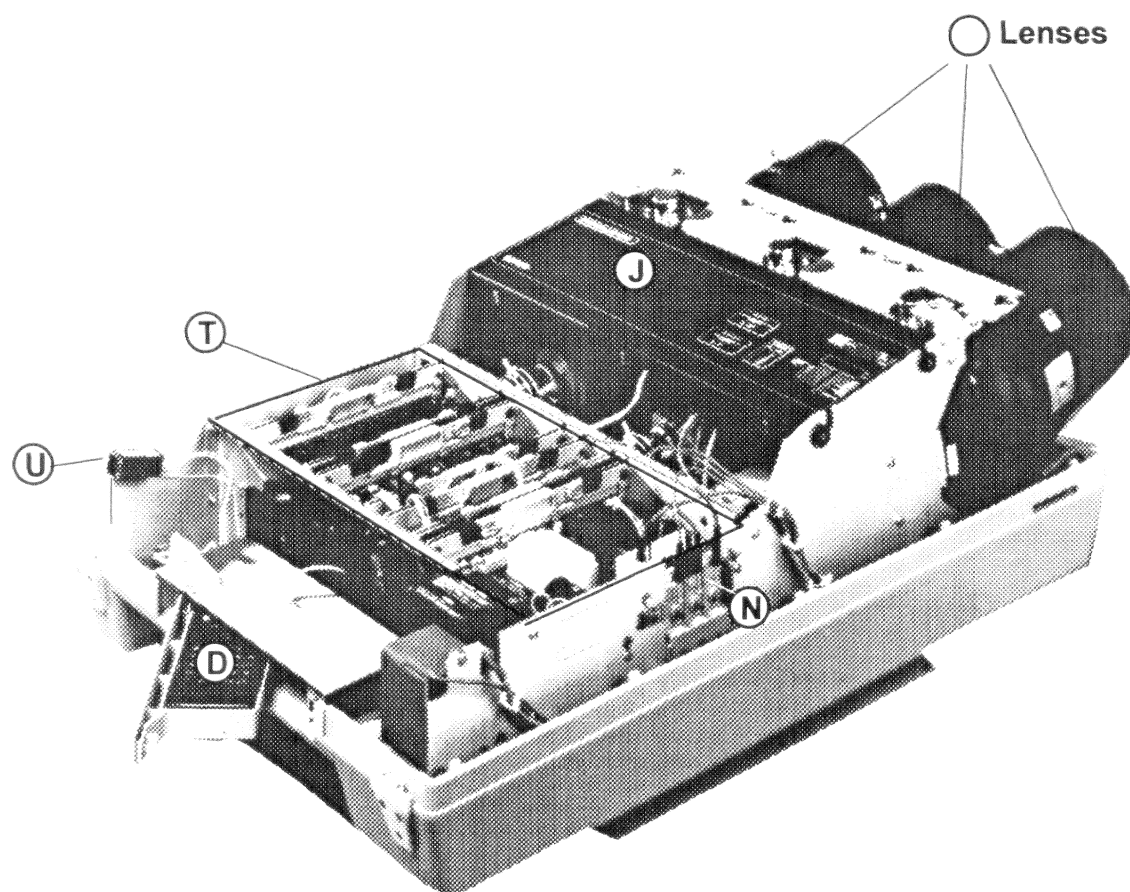


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PARTS LIST ON BOARD LEVEL
PARTS LIST ON COMPONENT LEVEL



Sheet reference

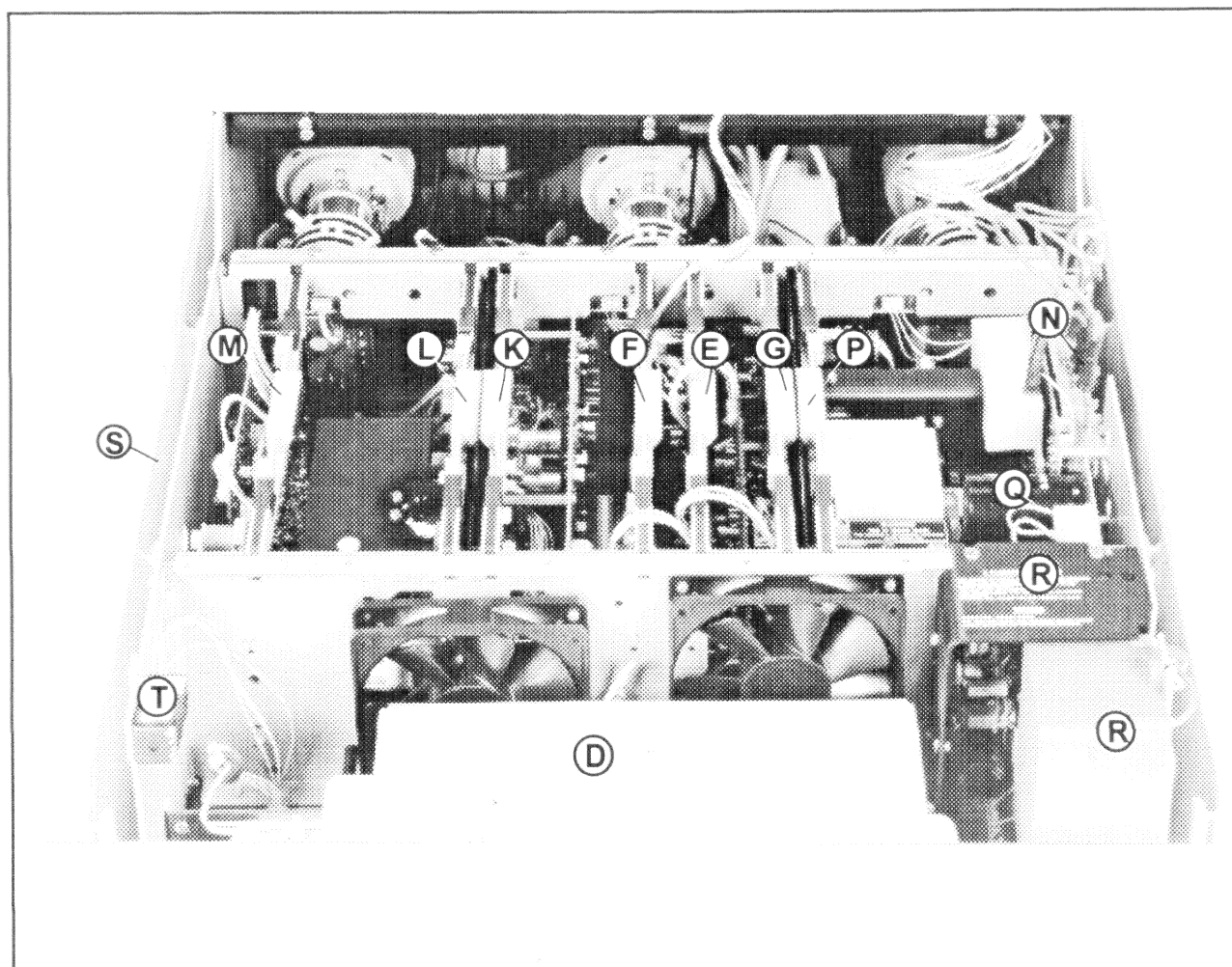
[]	13 0938	HD8 lenses
J	76 2249	Controller (Asic)
T	76 2175	Frame

Sheet reference

D	79 1637 79 1666	Internal control unit
U	76 1781	IR Receiver
N	76 1745	Focus control

PROJECTOR

TOP VIEW



Sheet reference

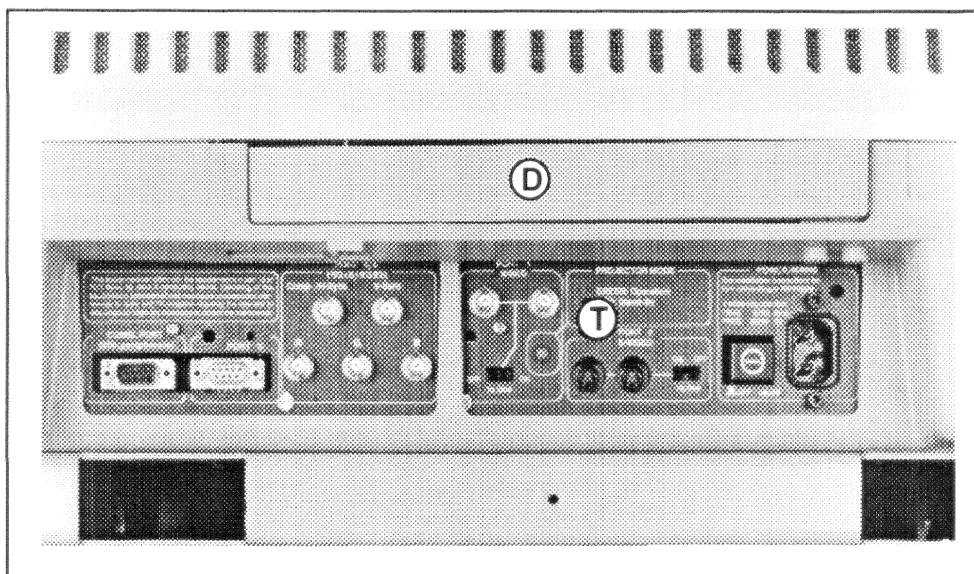
D	79 1666	Internal control unit
E	76 17481	Input RGB Analog+Switching
F	76 21055	Input RGB Analog
G	76 2174	QUAD Decoder+Gain Control
J	76 2249	Controller+PLL
K	76 2269	Sync+Vert. Deflection
L	76 1741	Hor. Deflection
M	76 18425	Hor. Shift

Sheet reference

N	76 1745	Focus Control
P	76 2170	SM Power Supply
Q	76 15485	Power Input
R	76 17427	EHT Generator
	76 1743	Quadrupler
S	76 2175	Frame
T	76 1781	IR Receiver Rear

PROJECTOR

Rear view



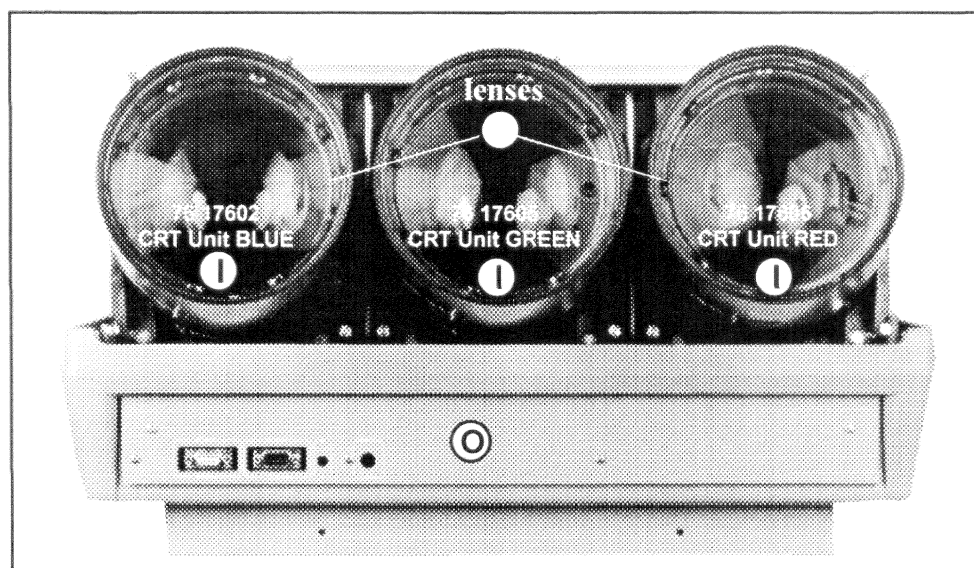
Sheet reference

S 76 2175 Frame

D 76 1666 Internal control unit

PROJECTOR

front view



Sheet reference

O 76 2172 Convergence

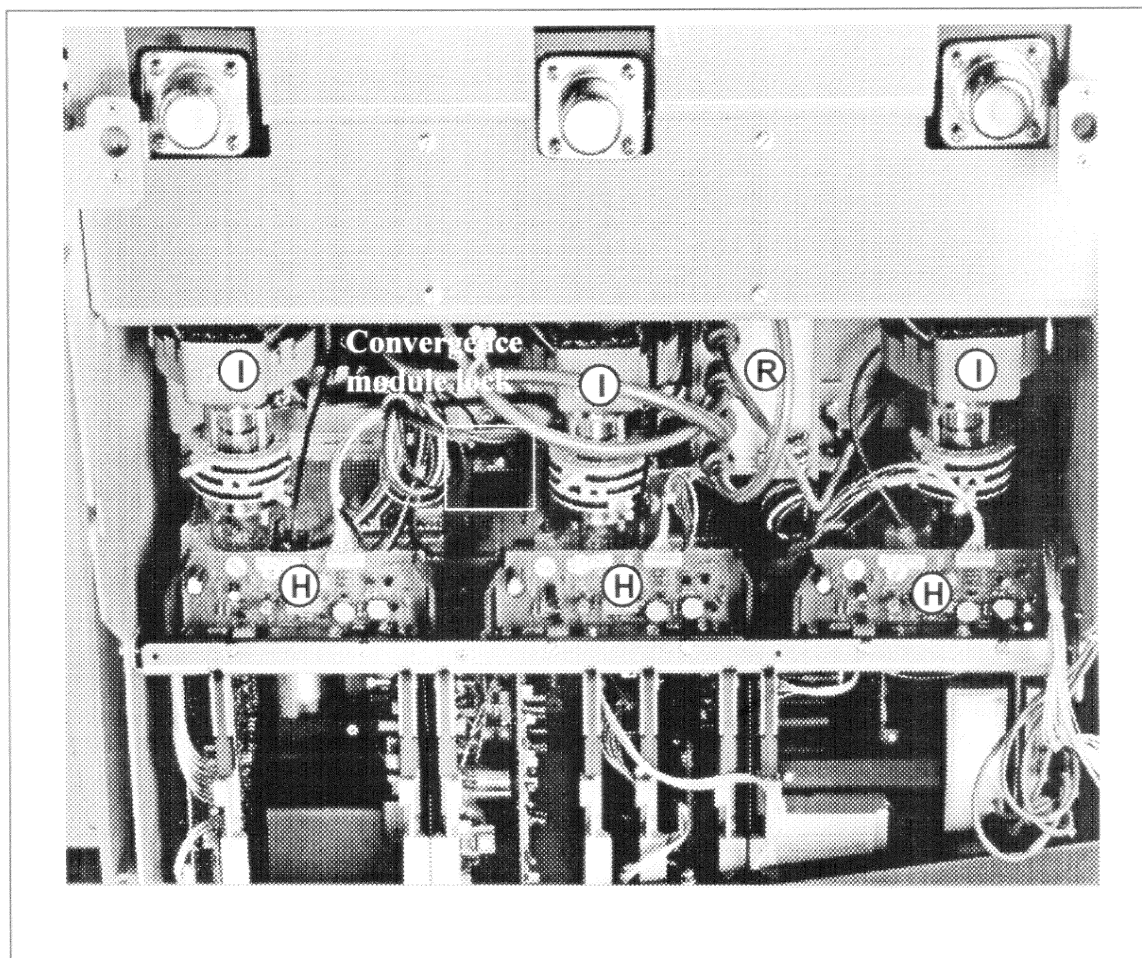
13 0938 Lenses

Sheet reference

I 76 17602 CRT Unit RED
76 17605 CRT Unit GREEN
76 17606 CRT Unit BLUE

PROJECTOR

Top view (front side)

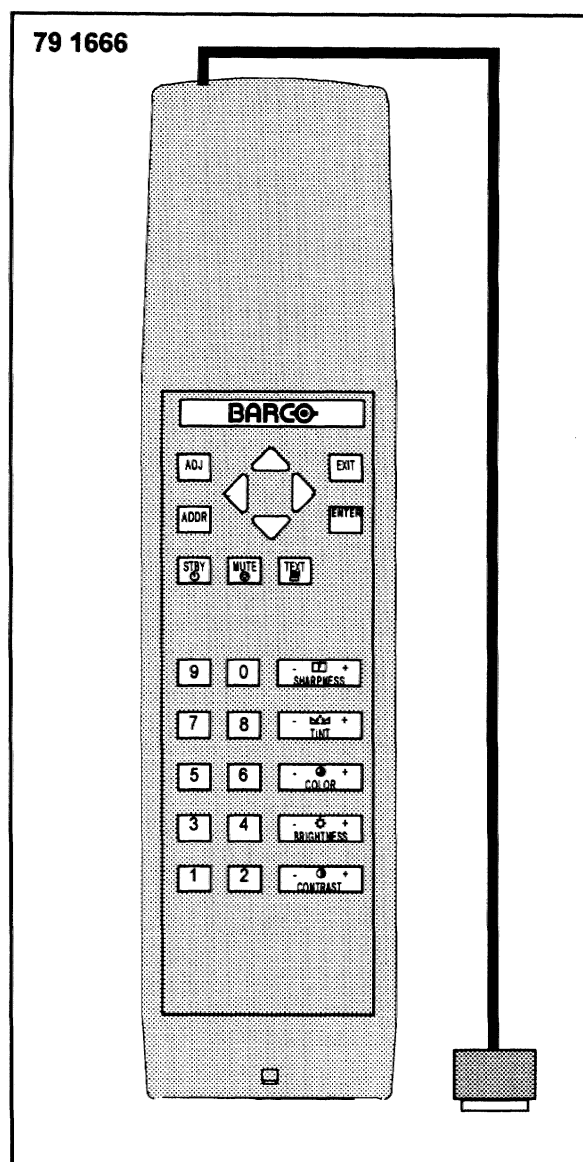


Sheet reference

H	76 2173	R-G-B Output
R	76 17447	EHT Splitter

Sheet reference

I	76 17602	CRT Unit RED
	76 17605	CRT Unit GREEN
	76 17606	CRT Unit BLUE

Internal control unit (D)**Sheet reference**

D	79 1666	Internal remote control
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SPARE PARTS ON MODULE LEVEL

76 15485	UN MNS PJ49 G800 INP	1	76 21712	UN CRT SKT PJ49 G 801 R	1
76 17427	UN EHT PJ49 G800 MK2	1	76 21715	UN CRT SKT PJ49 G 801 G	1
76 1743	UN EHT PJ49 G800 QDR	1	76 21716	UN CRT SKT PJ49 G 801 B	1
76 17447	UN EHT PJ49 G800 SPL	1	76 2172	UN CNV PJ49 G801	1
76 1745	UN FOC CTRL PJ49 G800	1	76 2173	UN RGB PJ49 G801 OUT	3
76 17481	UN RGB PJ51 G1200 SW +TLL	1	76 2174	UN RGB PJ49 G801 DVR	1
76 17602	UN CRT D 800 R 07MP Y	1	76 2175	UN FRM PJ49 -UN G801	1
76 17605	UN CRT D 800 G 07MP Y	1	76 1741	UN HOR PJ49 D800	1
76 17606	UN CRT D 800 B 07MP Y	1	76 2269	UN VER+S PJ49 D801	1
76 1781	UN RX PJ49 G800 IR RR	1	76 2249	UN CTRL PJ49 G801 ASIC	1
76 18425	UN SH PJ49 G801 CPL	1			
76 21055	UN INP PJ51 RGB A_S_TRACK	1	79 1666	UN TX PJ49 RCU800 W	1
76 2170	UN SMP PJ49 G801	1	79 1664	UN TX PJ49 RCU700 IR	1

SUGGESTED SPARE PARTS LIST BD801

a) First level Parts

ART NO.	DESCRIPTION	QUANTITY
76 1743	EHT Quadrupler	
76 17447	EHT splitter	
76 17792	CRT Red	
76 17795	CRT Green	
76 17796	CRT Blue	

b) Second Level Modules

ART NO.	DESCRIPTION	QUANTITY
76 2170	SM Power Supply	
76 1741	Hor. Deflection	
76 17427	EHT generator	
76 17481	RGB Ana+ Switching	
76 2173	RGB Output	

c) Third Level Modules

ART NO.	DESCRIPTION	QUANTITY
76 2269	Sync+Vertical Deflection	
76 2249	Controller (Asic)	
76 18425	Hor.Shift	
76 2172	Convergence	
76 2174	RGB driver	
79 1666	Internal control unit	
79 1664	IR Transmitter	

Spare parts projector BD801 90 00830 (special components)

ART NO.	DESCRIPTION	QUANTITY	ART NO.	DESCRIPTION	QUANTITY
10 01129	R CFFV 10E J 0W25 E2	1	10 6734	R TCE H200K K 0W5 S10TS3386P	1
10 03009	R CFFV 1E J 0W25 E1	1	10 6737	R TCE H 1M K 0W5 S10TS3386P	1
10 03169	R CFFV 22E J 0W25 E1	1	10 6825	R TCE V500E K 0W5 S10SS3386H	1
10 03209	R CFFV 47E J 0W25 E1	1	10 6827	R TCE V 2K K 0W5 S10SS3386H	3
10 11008	R CFFH 1E J 0W25 0207	3	10 6828	R TCE V 5K K 0W5 S10SS3386H	2
10 11009	R CFFH 1E J 0W25 SKS2	2	10 6832	R TCE V 50K K 0W5 S10SS3386H	1
10 11046	R CFFH 2E2 J 0W25 SKS3	1	10 6833	R TCE V100K K 0W5 S10SS3386H	3
10 11129	R CFFH 10E J 0W25	7	10 6834	R TCE V200K K 0W5 S10SS3386H	1
10 11169	R CFFH 22E J 0W25	2	10 6836	R TCE V500K K 0W5 S10SS3386H	1
10 11209	R CFFH 47E J 0W25	2	10 7004	R TCE H200E M 0W5 S7 TS3362P	5
10 11246	R CFFH100E J 0W35	1	10 75301	R MCE H100K K 0W5 M10SS3296P	2
10 11249	R CFFH100E J 0W30	1	10 7534	R MCE H100K K 0W75 M20SS3006P	2
10 11269	R CFFH150E J 0W25	1	10 7599	R M_UN FOC RGB +RDCN 10KV	1
10 11369	R CFFH 1K J 0W25	2			
10 11907	R CFFH E1 J 0W4	8	11 14169	C EL RA 10M M350E2 105	1
10 11908	R CFFH 1E J 0W35	1	11 14909	C EL RA1000M M 50E3 105	2
10 11917	R CFFH E22K 0W4	4	11 1568	C EL RA 2M2M250E2 85	1
10 11939	R CFFH E33J 0W4	1	11 1569	C EL RA 10M M250E2 85	2
10 11947	R CFFH E47K 0W4	1	11 1571	C EL RA 2M2M350E2 85	3
10 12009	R CFFH 1E J 0W5 SKS4	1	11 1578	C EL RA 100M M400E4 85	1
10 12997	R CFFH E1 K 0W7	2	11 1649	C EL RA 47M T350SKT 85	3
10 1300	R CF H 1E J 1W15 214	1	11 1655	C EL RA 400M T385SKT 85	4
10 14605	R CF H100K J 1W5	1	11 1716	C CE MI 680P 102E3 HV	1
10 1462	R CF H150K J 1W15 214	3	11 1720	C PPMERA 6N8J162E9 HV FKP1	1
10 15401	R MF H 2K F 0W4 E2	9	11 1773	C PPMERA 4N7J162E9 HV	6
10 1573	R MF H 43K2 F 0W4 E2	1	11 20902	C CE DI 100P K202E3 HV	3
10 2184	R CC 10M K 1W	3	11 2094	C CE DI 220P K750E3 HV	1
10 24378	R MF H 24K3 F 0W25 MK2	1	11 2681	C N750MI 15P G500E2	2
10 26505	R MF H332E F 0W4	1	11 28111	C CE DI 68P M102E3	1
10 28241	R MF H 91E G 0W6	2	11 2815	C CE DI 150P M400E3	1
10 3158	R MO H 68K J 0W7	4	11 2819	C CE DI 330P M400E3	1
10 3226	R MO H150E J 1W5	5	11 2830	C CE DI 2N7S400E3	2
10 3229	R MO H270E J 1W5	1	11 2837	C CE DI 10N S400E3	2
10 3248	R MO H 10K J 1W5	3	11 3890	C PETPPF 2M2K100E6	1
10 3254	R MO H 33K J 1W5	1	11 40426	C POMERA 100N K250E2 85	1
10 3256	R MO H 47K J 1W5	1	11 4120	C POMERA 10N K250E4	4
10 3352	R MO H 22K J 4W WK8	1	11 4124	C POMERA 22N K250E4	1
10 3600	R WW H E10K 4W 206-8	2	11 4126	C POMERA 33N K250E4	3
10 3606	R WW H E33K 4W KKA4	4	11 4130	C POMERA 68N K250E4	1
10 3620	R WW H 4E7 K 4W	5	11 4132	C POMERA 100N K250E4	1
10 3640	R WW H220E J 4W	1	11 4154	C POMERA 22N K400E2	2
10 3660	R WW H 1K K 4W	3	11 4162	C POMERA 100N K400E6	1
10 41808	R WWFV 4K7 K 3W	1	11 4603	C POMERA 100N M102E9 HV MKS	3
10 4212	R WW V 4E7 K 7W 212-3	3	11 47009	C CE DI 4N7M400E5 Y	1
10 4401	R WW V 1E K11W KKE11	2	11 4716	C PO RA 1M M250E11 X 1772	1
10 4426	R WW V120E K11W	2	11 4722	C CE DI 2N2M400E5 Y WKP	2
10 4527	R WW V150E K17W	1	11 4799	C PAMERA 30M K300TAP MP	1
10 4654	R HV H 1M J 0W5 3500 242	1	11 50051	C PPMERA 2N2J152E9 HV FKP1	2
10 4656	R HV H 1M2 J 0W5 3500	2	11 50654	C PPMERA 15N J162E9 HV 378	1
10 4658	R HV H 1M5 J 0W5 3500	1	11 7001	CT 7 -35P 160	2
10 4678	R HV H 10M J 0W5 3500	3			
10 46781	R HV H 10M J 1W 10000	1	13 0935	CRT SD07MP RED	1
10 4682	R HV H 15M J 0W5 3500	2	13 0936	CRT SD07MP GRN	1
10 4688	R HV H 27M J 0W5 3500	1	13 0937	CRT SD07MP BLU	1
10 4690	R HV H 33M J 0W5 3500	1	13 0938	LENS HD8	3
10 5016	R NTC 2K7 0W25 640	2	13 1262	TUBE SURGE PROT 1000V	4
10 5018	R NTC 4E7 2W DTCB	2	13 14071	Q BC547B N SS TO92 045A1	12
10 6724	R TCE H200E K 0W5 S10TS3386P	1	13 14072	Q BC547A N SS TO92 045A1	2
10 6725	R TCE H500E K 0W5 S10TS3386P	5	13 1411	Q BC549C N SS TO92 030A1	36
10 6726	R TCE H 1K K 0W5 S10TS3386P	1	13 1413	Q BC557 P SS TO92 045A1	1
10 6727	R TCE H 2K K 0W5 S10TS3386P	2	13 14131	Q BC557B P SS TO92 045A1	11
10 6728	R TCE H 5K K 0W5 S10TS3386P	1	13 1418	Q BC559 P SS TO92 030A1	11
10 6729	R TCE H 10K K 0W5 S10TS3386P	1	13 14181	Q BC559B P SS TO92 030A1	29
10 6732	R TCE H 50K K 0W5 S10TS3386P	2	13 14182	Q BC559C P SS TO92 030A1	11
10 6733	R TCE H100K K 0W5 S10TS3386P	6	13 14185	Q BC559C P SS TO92 030A1	1

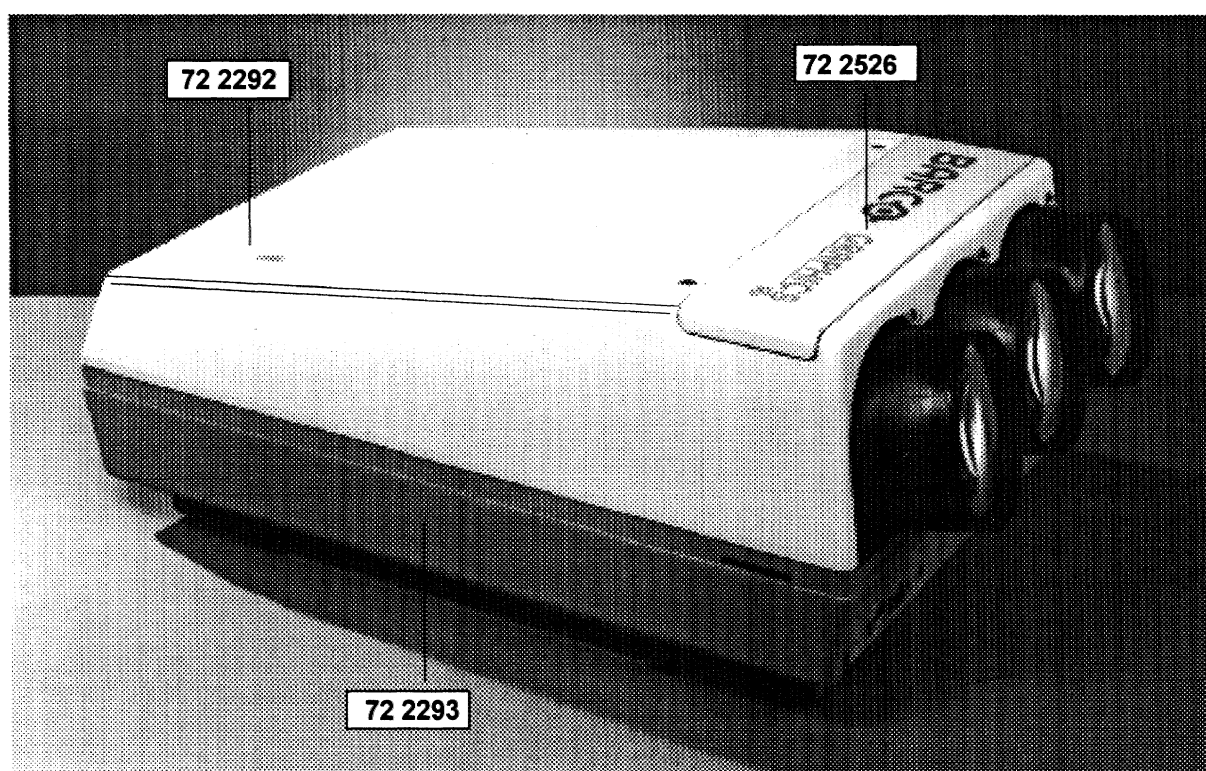
13 1424	Q BC338	N SS TO92 025A8	4	13 2102	U 33B	ZTK DO35 PSTAB	7
13 1428	Q BC548C	N SS TO92 030A1	2	13 2134	U 331	TBA DIP14 PARRAY	1
13 14295	Q BC549B	N SS TO92 030A1	78	13 22101	Q TIC106D	TH P TO66	1
13 14311	Q BC327	P SS TO92 045A5	9	13 2507	Q BF324	P SS TO92 03025	2
13 14651	Q BF245B	FN SS TO92 03006	2	13 25096	Q ON4046	N P SOT93 15208	2
13 1471	Q BF458	N P TO126 250A1	4	13 2515	Q BF470.870	P P TO126 25030	1
13 1491	Q BSX20.2369	N SS TO18 015A2	16	13 2517	Q BUX84	N P TO220 80003	1
13 1621	D S 1N4148	075150 DO35	283	13 2552	Q BF423	P SS TO92 25050	8
13 16217	D S 1N4148	075150 DO35	3	13 2568	Q BF959	N SS TO92 02030	4
13 1623	D S BA243	020100 DO35	3	13 2579	Q BD651	DN P TO220 12008	5
13 1627	D S BAV21	200250 DO35	2	13 2589	Q BUW22P	P P TO220 35006	1
13 1628	D S BAW62	075200 DO35	7	13 2590	Q BC560B	P SS TO92 045A1	1
13 1629	D S BA244	020100 DO35	2	13 2593	Q BUZ74A	FN P TO220 50002	2
13 1635	D Y HP5082-2800		1	13 2728	U 4557	TDA DIP28 PDEC	1
13 16361	D Y BAT85	030200 DO35	43	13 2751	U 2030V	TDA TO220T PAUD12	4
13 1637	D R BA158	600400 DO7	35	13 2762	U 2595	TDA DIP18 PHOR	1
13 1639	D S BAX12	090400 DO35	1	13 27655	U 1496	MC DIP14 PBAL_M	13
13 1644	D R 1N4001	05001A DO41	1	13 2773	U 4560/65	TDA DIP18 P	1
13 1646	D R 1N4007	10201A DO41	21	13 2787	U 4601	TDA SIP9 PSMP	2
13 1649	D LED D5	HLDR	1	13 2817	U 1881	LM DIP8 PSEPAR	1
13 1662	D LED D3	T RED	13	13 2824	U 2800	TBA DIP14 PIRREC	2
13 1663	D LED D5	T YEL	7	13 2827	U 8172	TDA H_W PVERT	3
13 1664	D LED D5	T RED	1	13 2833	U 76013	SC DIP28 PD_POT	34
13 16666	D LED D5	T IR 89A2	6	13 2851	U 1201	LM DIP16 PVID_A	5
13 1667	D LED D3	T GRN	3	13 2882	U#1	TG PLCC68 P CTRL	1
13 1674	D LED D5	T RED/GRN	1	13 2904	Q 2N2905A	P SS TO39 040A6	3
13 1681	D O BPW41	032	2	13 2909	Q BD652	P P TO220 12008	6
13 1683	U 2601	HCPL DIP8 POPTOC	3	13 2910	Q BS170	FN SS TO92 060A5	14
13 1684	U 2630	HCPL DIP8 POPTOC	1	13 29105	Q BS170	FN SS TO92 060A5	5
13 1691	U 601G-3	SFH DIP6 POPTOC	3	13 2911	Q 2N5583	P SS TO39 030A5	3
13 1704	D STB	2V8 0W4 C DO7	2	13 2913	Q BUP101	N P TO218 10215	2
13 1706	D ZEN	9V1 0W5 C DO41	2	13 2916	Q BS250	FN SS TO92 045A2	5
13 1707	D ZEN	47V 1W3 C DO41	1	13 2918	Q IXTH12N100	FN P TO247 10212	1
13 1716	D ZEN	5V1 0W5 C DO35	4	13 2923	Q BC556	P SS TO92 065A1	1
13 1720	D ZEN	6V2 0W5 C DO35	2	13 2924	Q BC546	N SS TO92 065A1	2
13 1721	D ZEN	13V 0W5 C DO35	1	13 2935	Q BUX87	N P TO126 450A5	1
13 17215	D ZEN	13V 0W5 B DO35	2	13 2941	Q IRF632	FN P TO220 20008	2
13 1729	D ZEN	4V7 0W5 C DO35	1	13 2942	Q IRF9630	FP P TO220 20005	2
13 1730	D ZEN	20V 0W5 C DO35	6	13 2944	Q BCY87	2N SS TO71 040A2	6
13 1733	D STB	2V 0W33 C SOD27	4	13 2945	Q BDV65C	DN P SOT93 12020	1
13 1734	D ZEN	5V6 0W5 B DO35	6	13 2948	Q BF459	N P TO126 300A1	1
13 1735	D ZEN	10V 0W5 C DO35	1	13 2951	Q IXTH11N100	FN P TO247 10211	11
13 1740	D ZEN	12V 0W5 C DO34	3	13 2954	Q BFY90	N SS TO72 03025	5
13 1742	D ZEN	6V8 0W5 C DO35	3	13 3013	Q ACC MNTG PAD	TO5	4
13 1743	D ZEN	8V2 0W5 C DO35	1	13 30191	Q ACC WSHR MET	TO126	2
13 1744	D ZEN	5V6 0W5 C DO35	4	13 30192	Q ACC ISO MICA	TO126	2
13 1745	D ZEN	18V 1W1 C DO41	1	13 30193	Q ACC ISO BSHG	TO126	2
13 1754	D ZEN	3V3 0W5 C DO35	3	13 30291	Q ACC ISO MICA	TO220	29
13 1756	D ZEN	7V5 0W5 C DO35	3	13 30292	Q ACC ISO BSHG	TO220	25
13 1766	D ZEN	18V 0W5 B DO35	2	13 3036	SPR L 6	D 6 D 2.4 C CER	5
13 1767	D ZEN	6V8 0W5 B DO35	4	13 3039	SPR L 8	D 4 D 1.2 C CER	45
13 1768	D ZEN	7V5 0W5 B DO35	1	13 30391	SPR L 8	D 4 D 1.5 C CER	8
13 1771	D ZEN	150V 3W25 C SOD57	1	13 3052	Q ACC HTSNK	TO126	1
13 1787	D ZEN	51V 0W5 C DO35	1	13 3063	Q ACC ISO MICA	SOT93	5
13 1788	D ZEN	15V BZX79C DO35	1	13 3074	Q ACC ISO SIL600	W 30	3
13 1790	D ZEN	33V 1W C DO41	2	13 4001	U 7805	TO220 PSTAB	2
13 1826	D V BB112	008 SOD69	3	13 4002	U 7812	TO220 PSTAB	5
13 19025	D R BYM56E	13203A SOD18 BY255	4	13 4016	U 7912	TO220 PSTAB	6
13 1906	D R BYV96E	1021A5 SOD57	10	13 4025	U 78L24	TO92 PSTAB	1
13 1913	D R BY229	10207A TO220	2	13 4026	U 317T	TO220 PSTAB	1
13 1914	D Y BYV19	04510A TO220	1	13 4027	U 337T	TO220 PSTAB	1
13 1927	D R BY229	60007A TO220	8	13 4028	U 317LZ	TO92 PSTAB	2
13 1948	D R BYD33D	2001A3 SOD81	1	13 4029	U 337LZ	TO92 PSTAB	2
13 19481	D R BYD33J	6001A3 SOD81	3	13 4030	U 2940-5	LM TO220 PSTAB	2
13 1950	D R BYV27	15002A SOD57	1	13 4031	U 431C	TL TO92 PSTAB	2
13 1952	D R BYW96E	10203A SOD64	1	13 4032	U 78L05	TO92 PSTAB	4
13 1954	D R BYW29	20008A TO220	2	13 4035	U 79L05	TO92 PSTAB	1
13 1958	D R BY329	12208A TO220	1	13 4113	U 084	TL DIP14 POPAMP	8

13 4114	U 393 LM DIP8 PV_COM	7	31 3224	R ACC HLDR H25 WW V	2
13 4116	U 353 LF DIP8 POPAMP	3	31 3248	J U0.3 FBT P14 E1SN SPG	2
13 4124	U 082 TL DIP8 POPAMP	7	31 3251	J PIN MBT D 0.8	6
13 4125	U 34084 DIP14 POPAMP	14	31 32539	J U0.6 FBT P28 E1AU TLP	1
13 4145	U 3080E CA DIP8 POPAMP	1	31 3276	J MD1 MBT P10 R1SN	1
13 4222	U 1495 MC DIL14 P	1	31 3286	J MD1 MBT P 3 R1SN	2
13 4224	U 582 TLP 1119A1P	2	31 32862	J MD1 MBT P 2 E1SN	9
13 4301	U 06 VPH	1	31 3329	BSHG SNAP D30 /24 BLK	3
13 6700	U 74AC541	1	31 3366	J CIS MBS P 1 R1 L8.7RL	2
13 6701	U 74AC32	1	31 33921	J MD JMP P 1 E1SN	12
13 6702	U 74AC00	1	31 3454	J TAB1 MBT H 4.8S0.5	5
13 7002	U 74HCT573 DIP20 PLATCH	3	31 34685	J SL FL MBT P12 M3.96 P	3
13 7005	U 74HCT03 DIP14 PNANDG	1	31 3487	J U0.6 FBT P32 E1SN SPG	1
13 7174	U SRAM 32KX8 70DIL28	1	31 35000	J DE S8 MBS P 9 FU M BL	2
13 7184	U 28C64 DIP28 CEPROM	1	31 35010	J DE S8 FBS P 9 FU MFT	1
13 7191	U 8088 DIP40 PCPU	1	31 35016	J DE FBS P 9 FU MFTUDB	1
13 7192	U 8284A DIP18 PCPU	1	31 3525	J EUR2C MBS P64 E1C2S 1.6	14
13 7193	U 80C31 DIP40 PCPU	1	31 35251	J EUR2C MBS P64 E1C2S 1.6	3
13 7206	U 1488 DIP14 PL_DVR	1	31 3526	J EUR2C FBT P64 E1C2S 1.6	16
13 7207	U 1489 DIP14 PL_REC	1	31 3530	J EUR2R FBS P64 E1C2S 1.6	2
13 7271	U SRAM 8KX8-12DIP28 P 6264	1	31 3531	J EUR2C MBS P64 E1C2SP1.6	1
13 7274	U 8256AH DIP40 PMUART	1	31 35722	J MT I MBT P 3 R1SN RED	2
13 73325	U 4098B DIP16 PMULTI	4	31 36078	J SL FL MBT P 8 M3.96 P	1
13 7371	U 1250 SAA DIP24 PIRTRA	1	31 37091	J HV H MBT P 1 CUP	3
13 7391	U 4053B DIP16 PM/DEM	7	31 37092	J HV H MBT P 1 SLV	3
13 7392	U 4070B DIP14 PCOM_G	1	31 37093	J HV H MBT P 1 SEAL	3
13 73945	U 4093B DIP14 PNANDG	1	31 37094	J HV H MBT P 1 CVR	3
13 7397	U 4013B DIP14 PFL_FL	2	31 3726	J SL MBT P 8 M3.96 NP	1
13 7495	U 74LS92 DIP14 PCOUNT	1	31 3729	J PIN MBT D 2 TESTEYE	8
13 7518	U 74LS375 DIP16 PLATCH	1	31 3851	J M_DIN FBS P 4 M	2
13 7534	U 74HCT00 DIP14 PNANDG	1	31 3922	J CT MBT P 2 M2SN	1
13 7536	U 74HCT04 DIP14 PINV	2	31 3923	J CT MBT P 3 M2SN	1
13 7537	U 74HCT08 DIP14 PNANDG	1	31 3924	J CT MBT P 4 M2SN	3
13 7544	U 74HCT245 DIP20 PTR	1	31 3925	J CT MBT P 5 M2SN	1
13 7551	U 74HCT14 DIP14 PSTRIG	2	31 3926	J CT MBT P 6 M2SN	5
13 7552	U 74HCT123 DIP16 PMULTV	3	31 3927	J CT MBT P 7 M2SN	2
13 7567	U 74HCT574 DIP20 PFL_FL	1	31 3928	J CT MBT P 8 M2SN	1
13 7602	U 4046B DIP16 PPLL	1	31 3945	J CT MBS P 5 M2SN	1
13 76025	U 4046B DIP16 PPLL	1	31 3947	J CT MBS P 7 M2SN	4
13 7625	U 34063 DIP8 PSMP	1	31 3949	J CT MBS P 9 M2SN	2
			31 3952	J CT MBS P12 M2SN	2
			31 3955	J CT MBS P15 M2SN	1
30 2061	COIL ACC 10 X10 X12	8	31 4103	F 5X20 T 3A15 H RU/VDE	2
30 2086	CORE TOR 16 /9 X 6	1	31 4104	F 5X20 T 5A H RU/VDE	3
30 2102	CORE TUBE 4.95/1.3 X40.5	2	31 41041	F 5X20 T 4A H RU/VDE	3
30 2108	CORE TUBE 3.5 /1.3 X 3	11	31 4116	F 5X20 T 2A H RU/VDE	1
30 5913	CH MNS AX 12 UH 3A	7	31 4142	F 5X20 T 0A125L RU/VDE	1
30 6024	CH RA NS 10 UH	1	31 4143	F 5X20 F 2A H RU/VDE	1
30 6052	CH RA NS 150 UH	2	31 4147	F 5X20 F 3A15 H RU/VDE	1
30 61322	CH AX NS 10 UH	3	31 4514	F ACC HLDR 5X20 PC+CAP	3
30 61582	CH AX NS 1.5 MH	4	31 4516	F ACC HLDR T 5X20 PC/HSG	9
30 6511	DL 63.943US DL711	1	31 5302	J PIN MBT D 1.3L 5.5+3	3
30 6528	DL 400NS 200E DIP14	1	31 5303	J REC FWT H 2.8S0.5 PCS	1
30 6529	DL 63.555US DL750	1	31 5310	J TAB1 MBT H 2.8S0.5 F_1	4
30 6648	YOKE DEF DAV7645	3	31 5315	J RVT MBT D 2 L14	1
30 6661	YOKE ACC MAGN 2/4P SHSP	3	31 53151	J RVT MBT D 2.3L13	6
30 6718	T PJ49 SMP STAND-BY	1	31 5331	SLDRLUG SCR 1TAG D3.2 L12	5
30 6816	X 8.867238 MHZ HC49 S20	1	31 5353	J TAB1 MBS H 2.8S0.5	1
30 6849	X 7.159090 MHZ HC49 S20	1			
30 6857	X 18.432000 MHZ HC49	1			
30 6858	X 24.000000 MHZ HC49	1			
			32 4147	SW SLD L102 1C BS H 8.5	1
			32 4148	SW SLD L202 2C BS H 8.5	1
31 1036	J CRT FBT SD130 SKT	3	32 4182	SW DIP 1M P 1 BT SN	2
31 2830	J UPLCC FBT P68 E1SN SPG	1	32 4184	SW DIP 1M P 8 BT SN	2
31 30421	J PHN FBS D 2.5MON P	1	32 47155	SW MNS NE18 2C	2
31 30422	J PHN FBS D 2.5MON P	1	32 4791	SW F 8C	1
31 31401	J BNC FCT P 1 50E LG	7	32 4792	SW MNS JPZ 2M TV5 BS	1
31 3196	J BAT NWS P 2 9V	1	32 4793	SW MNS NE18 2C+F2C	1
31 3220	R ACC HLDR H10 WW V	1	32 6103	CD (0.75) 3 IEC_2X	1

32 70005	BAT 9V 6F22 ALK 0A525	1	36 61026	NUT D934 M 3 I	27
32 8193	U_S D 800 ADEC V200	1	36 6103	NUT D934 M 4 S Z	1
32 8221	U_S **MK1 RWI V403	1	36 61036	NUT D934 M 4 I	5
32 8296	U_S D 801 CTRL V510	1	36 6104	NUT D934 M 5 S Z	2
			36 61106	NUT D934 M 2.5 I	8
34 2007	CBL F (...)12 SOL	1	36 6150	NUT D555 M 3 P	2
34 20091	CBL ACC TIE FIX 5 TM2	6	36 61575	NUT TWOLOK M 5 SCB	12
34 217003	W_U 7X0.2 UL1007 BLK 030	1	36 6245	NUT D985 M 8 S Z	4
34 225405	W_U 7X0.16 UL1061 050 YEL	1	36 6988	NUT I SOUTH M 3 X0.5	2
34 7968	CBL ACC SADDLE LWS 3.2	6	36 7092	FSTNR 9MM STUD	2
34 8002	GRMT T1 D 6	6	36 7093	FSTNR 9MM RVT PLT	2
34 8003	GRMT T1.5 D 9.5	1	36 7094	FSTNR 9MM RTNR	2
34 80051	CBL ACC TIE C D13.5/16	3	36 73481	WSHR D126 5.5 S Z	9
34 8019	CBL ACC TIE B L100 W2.5	31	36 73786	WSHR D125 B 4.3 B	2
34 8020	CBL ACC TIE B L110 W	1	36 73796	WSHR D125 A 5.3 B	12
34 8024	CBL ACC SADDLE LWS 1.6	6	36 7382	WSHR D125 B 8.4 S Z	6
34 8071	CBL ACC TIE FIX TM1S6	1	36 73823	WSHR D 8.25X22.3 T1.5 S Z	4
34 8085	FSTNR PJ49 NPL	1	36 7434	RVT POP D2.4 L 6 P AA	2
34 8086	CBL ACC SLCSE D 8.9	2	36 7435	RVT POP D2.4 L 9.3 P AA	6
34 8087	CBL ACC SLCSE D12	2	36 74391	RVT POP D3.2 L 7.4 P ASW	9
34 8089	CBL ACC SLCSE D 5.6	5	36 74411	RVT POP D3.2 L 9.8 P ASW	40
34 809001	SLV_U SHR D2.4/1.2 010 BLK	2	36 74541	RVT POP D3.2 L 6.2 C AS	4
34 84074	CD CT FTMT P 7 170	1	36 7457	RVT POP D3.2 L11.6 P SS	6
34 84096	CD CT FTMT P 9 140	1	36 7462	RVT POP D2.4 L 7 P AS	32
34 84124	CD CT FTMT P12 140	1	36 7502	WSHR D6798 A 3.2 S Z	41
34 85044	CD CT FTMS P 4 220	1	36 7503	WSHR D6798 A 4.3 S Z	3
34 85047	CD CT \$FTFT P 4 400	1	36 7504	WSHR D6798 A 5.3 S Z	13
			36 75256	WSHR D 3.1 X 6.2 T0.6 J	28
36 15075	SCR HILO_P 3.2X 8.5HS B	2	36 7528	WSHR D6798 A 2.7 S Z	8
36 15105	SCR HILO_P 4.2X 13 HS B	2	36 7533	WSHR D10 X13 T0.4 D	7
36 1912	SCR D965 M 3 X 6 PS Z	2	36 75491	WSHR D9021 A 4.3 S Z	1
36 19125	SCR D965 M 3 X 6 PS B	1	36 7600	NUT BLOC M 3	18
36 1913	SCR D965 M 3 X 8 PS Z	2	36 7699	RVT CHB D2.38L6.35 P A	20
36 19145	SCR D965 M 3 X 10 PS B	4	36 7813	WSHR D137 M 6	1
36 1916	SCR D965 M 3 X 16 PS Z	2	36 9996	SCR D84 M 3 X 12 SP	1
36 1924	SCR D965 M 4 X 10 PS Z	6			
36 19285	SCR D965 M 4 X 20 PS B	12	39 53261	TAPE GLUE TSFR W 25.4 PO2	1
36 20121	SCR D84 M 2.5X 6 SS Z	1			
36 20147	SCR D84 M 2.5X 10 SI	8	42 02262	BTN PUSH RED	1
36 20157	SCR D84 M 2.5X 12 SI	2			
36 20216	SCR D84 M 3 X 6 SI	13	59 0234	PRM LBL PJ CEBEC 724 BLK	1
36 2022	SCR D84 M 3 X 8 SS Z	1	59 0269	PRM LBL PJ NO BATT INSTAL	1
36 20226	SCR D84 M 3 X 8 SI	21	59 0298	PRM LBL PJ P/S_NR	1
36 20236	SCR D84 M 3 X 10 SI	24	59 3001	P BAG PE 180X 250X 0.07	1
36 20276	SCR D84 M 3 X 20 SI	3	59 3010	P BAG PE 120X 80X 0.07	1
36 20526	SCR D84 M 4 X 10 SI	2	59 3430	P BOX F FOAM T1 W1500	1
36 2053	SCR D84 M 4 X 12 SS Z	4	59 3540	P BAG PE 85X 270X 0.07	1
36 20656	SCR D84 M 5 X 8 SI	2	59 3600	P TAPE CORDSTRAP KY	2
36 2066	SCR D84 M 5 X 10 SS Z	1	59 3601	P TAPE CORDSTRAP CC50/2	1
36 2121	SCR D7985 M 3 X 6 PS Z	13	59 75045	LFLT RCU700 TX	1
36 21219	SCR D7985 M 3 X 6 PIC	1	59 75345	MAN OWN PJ49 D801	1
36 2122	SCR D7985 M 3 X 8 PS Z	7	59 75355	MAN INS PJ49 D801	1
36 21229	SCR D7985 M 3 X 8 PIC	37			
36 2212	SCR D963 M 3 X 6 SS Z	5	71 23023	WSHR D 3.25X 7 T0.5 L	1
36 23278	SCR D933 M 4 X 12 XI	2	71 23024	WSHR D 3.25X 7 T1 L	7
36 23288	SCR D933 M 4 X 16 XI	1	71 23042	WSHR D 4.25X10 T1.25S Z	2
36 23348	SCR D933 M 5 X 20 XI	12	71 23058	WSHR D 5.5 X14.2 T0.2 A	16
36 23358	SCR D933 M 5 X 25 XI	6	71 23059	WSHR D 5.5 X14.2 T0.5 A	22
36 23368	SCR D933 M 5 X 30 XI	6	71 2792	R ACC HLDR H15 WW V	2
36 23772	SCR D933 M 8 X 30 XS B	6			
36 26696	SCR D921 M 3 X 8 SI	29	72 1560	G PCB PJ L 97.5 02	4
36 31049	SCR D933 M 3 X 6 XIC	25	72 1632	D ACC SPR D5 LED	13
36 31059	SCR D933 M 3 X 8 XIC	14	72 1721	HNG PJ43 HSG BASE	4
36 31079	SCR D933 M 3 X 12 XIC	4	72 1850	R ACC CLIPS TCE V PROTECT	4
36 31239	SCR D933 M 4 X 10 XIC	62	72 2209	FRM PJ49 CTRL LED FIX	1
36 31449	SCR D933 M 5 X 10 XIC	1	72 2226	FRM PJ49 CTRL CBL FIX	4
36 31469	SCR D933 M 5 X 16 XIC	28	72 2241	G PCB PJ49 CNV	2
36 6102	NUT D934 M 3 S Z	14	72 2268	HSG PJ49 HSG UP IR CAP	1

72 2276	LOCK PJ49 PCB UN CPL	01	5	78 0212	PCD PJ49 800 CTRL ASIC	07	1
72 2292	HSG PJ49 HSG UP P_WHTG800		1	78 0222	PCD#PJ52 D5000 TX		1
72 2292D	HSG PJ49 HSG *800 UP		1	78 0231	PCS PJ49 CNV NS SEOS		1
72 2293	HSG PJ49 HSG DN G800		1	78 0236	PCB PJ49 G800 RGB OUT	02	1
72 2296	HSG PJ51 CSB BRKT		1	78 0237	PCD PJ49 G801 RGB DVR	01	1
72 2300	WDW PJ49 HSG UP		1	78 0238	PCS PJ49 CRT *801	01	3
72 2309	HSG PJ49 TX2 CVR UP	02	1	78 0304	PCD EP49 G 801 SH		1
72 2310	HSG PJ49 TX2 CVR DN		1				
72 2311	HSG PJ49 TX2 CVR BAT		1	79 1664	UN RCU PJ49 700 IR+LGHT		1
72 2312	HSG PJ49 TX2 WDW IR		1	79 1666	UN RCU PJ51 1200 WIRE		1
72 2325	G PCB PJ49		4				
72 2353	HSG PJ53 TX2 FOIL V700		1	80 0307	HNG PJ43 PLT FIX		4
72 2357	SW KYBD RUB PJ53 TX V700		1	80 0308	HNG PJ43 PIN		2
72 2382	HSG PJ49 TX2 LFLT WDW		1	80 0316	TAPE FOAM 30 W30		1
72 2526	NPL PJ49 D 801		1	80 0354	WSHR D 3.25X 7.5 T. B		3
72 2544	HSG PJ51 G1200 RC BASE		1	80 0557	SPR L 3 D 7 D 3 P		1
				80 0658	SPR L13.5 H 5 M 3 B		4
73 2132X	P BOX F WD 1020X610 G800		1	80 0762	SLDRLUG SCR 1TAG D9.8 L24		7
73 2140	P BOX F WD 50X50X37		2	80 0949	SPG PJ45 MNS CNN FIX		2
				80 1520	SPR L 6.5 D 9.75D 4.9 P PSU		1
76 15485	UN MNS PJ49 G800 INP		1	80 1602	X ACC INSUL STRIP PCM5		2
76 1740	UN FAN PJ49 G800 L100		2	80 1693	FRM PJ HD9 CRT SPG SCR		2
76 1741	UN HOR PJ49 D800		1	80 1829	NUT BPS SIX FAN DC GR		6
76 17427	UN EHT PJ49 G800 MK2		1	80 2349	SPG PJ45 MNS CD 326103		1
76 1743	UN EHT PJ49 G800 QDR		1	80 2600	FRM PJ49 HSG BASE PLT	10	1
76 17447	UN EHT PJ49 G800 SPL		1	80 2609	FRM PJ49 CNV SPG		1
76 1745	UN FOC_C PJ49 G800 10KV		1	80 2613	FRM PJ49 CTRL DN	09	1
76 1746	UN FOC_C PJ49 G800		1	80 2614	FRM PJ49 CTRL UP	08	1
76 17481	UN RGB PJ51 G1200 SW +TLL		1	80 2620	FRM PJ49 CRT AKWADAG		3
76 17602	UN CRT D 800 07MP R Y		1	80 2628	Q ACC SPG 1X 3.1		6
76 17605	UN CRT D 800 07MP G Y		1	80 2629	HTSNK PJ49 RGB PR_AMP	03	2
76 17606	UN CRT D 800 07MP B Y		1	80 2630	HTSNK PJ49 SMP PART 1	12	1
76 1771	UN SMP PJ49 G800 SUB		1	80 2631	HTSNK PJ49 SMP PART 2	09	1
76 1781	UN RX PJ49 G800 IR RR		1	80 2632	HTSNK PJ49 SMP SUB		1
76 18425	UN SH PJ49 G801 CPL		1	80 2634	HTSNK PJ49 EHT	07	1
76 1872S	UN CNV PJ49R *800 C_OVER		1	80 2637	FRM PJ49 CNN PLT D1100	12	1
76 21055	UN INP PJ51 RGB A_S_TRACK		1	80 2640	HTSNK PJ49 SMP SUB WSHR		2
76 2170	UN SMP PJ49 G801		1	80 2643	SPR RVT L26.25D 7 M3 A		2
76 21712	UN CRT SKT PJ49 G 801 R		1	80 2644	HTSNK PJ49 VER		1
76 21715	UN CRT SKT PJ49 G 801 G		1	80 2645	HTSNK PJ49 VER FIX LATH		1
76 21716	UN CRT SKT PJ49 G 801 B		1	80 2646	FRM PJ49 SMP SUB FIX		1
76 2172	UN CNV PJ49 G801		1	80 2647	WSHR D 4.25X18 T9 A		4
76 2173	UN RGB PJ49 G801 OUT		3	80 2648	SPR L69.5 H 7 M 3 B		2
76 2174	UN RGB PJ49 G801 DVR+Q		1	80 2649	DPL PJ49 FIX BRKT A	02	1
76 2175	UN FRM PJ49 -UN G801		1	80 2650	DPL PJ49 FIX BRKT B	02	1
76 2237	UN FRM PJ49CPL D 801 7MP		1	80 2656	SPR RVT L13.75D 7 M3 A		1
76 2249	UN CTRL PJ49 D801 ASIC		1	80 2658	HTSNK PJ49 FOC		1
76 2269	UN VER+S PJ49 D801		1	80 2665	FRM PJ49 HOR CORE LIN FIX		1
				80 2666	SPR RVT L17 D 6 M3 B		1
77 3028	CH SMP TV31		1	80 2667	FRM PJ49 RX CAN IR		1
77 3215	CH SMP PJ49		3	80 2682	SCR PJ49 FIX LENS SCR I		2
77 3310	COIL IF N27.5 B5 D0.14		1	80 2686	Q ACC SPG 1XM3		1
77 4017	COIL IF N47 B5 D0.12		1	80 2691	HTSNK PJ49 HOR A GRAPHICS		1
77 41507	CH MNS MN44 PVDM		1	80 2692	HTSNK PJ49 FIX HTSNK		6
77 4151	COIL AMP PJ45 HOR DATA		3	80 2696	FRM PJ49 HD8 CRT/UN L	14	1
77 4153	COIL LIN PJ45 HOR DHR		1	80 2697	FRM PJ49 HD8 CRT/UN R		1
77 4211	COIL IF N56 B5 D0.12		1	80 2740	HTSNK PJ49 HOR B GRAPHICS	08	1
77 4212	COIL IF N40 C5 D0.12		5	80 2741	HTSNK PJ49 HOR FIX CAP		1
77 4223	CH FAN PJ49 CTRL		3	80 2742	FRM PJ49 HD8 NUT		2
77 4271	COIL IF N 6.5 B5ZK D0.2		3	80 2743	FRM PJ49 HD8 NUT FIX L		1
77 4272	COIL IF N10.5 B5ZK D0.2		1	80 2744	FRM PJ49 HD8 NUT FIX R		1
77 4306	T PJ49 LIN CTRL		1	80 2745	FRM PJ49 HD8 FIX SPL		1
77 4308	T PJ49 FOC		1	80 2746	FRM PJ49 HD8 PLT SOL R	02	1
77 4310	T PJ49 HOR DEF		1	80 2747	FRM PJ49 HD8 PLT SOL L	02	1
77 4312	COIL SHF PJ49 G800		3	80 2748	FRM PJ49 HD8 NUT LOCK		2
77 4319	T PJ49 SMP G 800 VAR MK2		1	80 2751	COIL LIN PJ49 POSITION		1
77 4341	T PJ49 SMP G 801 FIX		1	80 2758	HTSNK PJ49 HOR I FIX		1
77 5164	COIL CH HOR DEF		2	80 2771	SCRN PJ49 G800 HSG INOX		1

80 2779	Q ACC ISO SHT	30X125	1	80 4616	FRM PJ49 HD8 G801 BRKTSPG	1
80 2780	Q ACC ISO SHT	33X 33	3	80 4617	FRM PJ49 HD8 G801 BRKT 03	1
80 2783	Q ACC ISO SHT	30X225	1	80 4618	FRM PJ49 CNV G801 BRKT 02	1
80 2827	CORE LIN 802739+802626		1	80 4619	FRM PJ49 CNV G801 FIX PLT	1
80 2864	FRM PJ49 FRM MECH CPL	05	1	80 4620	FRM PJ49 CNV FR G801BEIGE 01	1
80 2881	HSG PJ49 G 800 HNG NPL		2	80 4622	HTSNK PJ49 RGB OUT G801	1
80 2904	FRM PJ49 HD8 LENS/CRT GRN		2	80 4623	FRM PJ49 HD8 HTSNK CNV 01	1
80 2905	FRM PJ49 HD8 LENS/CRT RED		1	80 4638	P BOX PJ** MAN TX CPL	1
80 2906	FRM PJ49 HD8 PLT UP D800		1	80 4674	Q ACC SPG 1XM3 SHORT 02	11
80 2907	FRM HD8 PJ49 DUST RING D		3	80 4677	SCR BPS M 5 X131 CPL 01	2
80 2920	Q ACC ISO SHT	16X 28	1	80 4792	PRM LBL PJ BOX UNINERSAL	1
80 2947	SCRN PJ49 GR00 MU_MET FAN		1	80 4831	Q ACC SPG 1X 3.1 LONG 02	4
80 2948	TAPE RUB L 18 W18X8 BLK		1	80 4832	Q ACC SPG 1XM3 LONG 03	2
80 2960	FRM PJ49 CNV FIX FR		2	80 4833	Q ACC SPG 2X 3.1 LONG 02	3
80 2986	FRM PJ49 HD8 LENS/CRT DIE	05	3	80 4834	Q ACC SPG 2XM3 LONG 02	2
80 3085	BTN PUSH PJ49R *800 MNS		1	80 5143	FRM PJ49 RGB CVR	1
80 3145	SPR RVT L18 D 5 M3 A		4	80 5147	FRM PJ49 VER SCR N FIX	1
80 3155	SCRN PJ51 G800 INOX		1	80 5226	HNG FLT ROLL82X28 I	1
80 3238	LOCK PJ51 PCB RGB_A AUT		1	80 5304	HTSNK PJ49 G801 SH	1
80 3291	FRM PJ51 LOCK FIX R		1	80 5319	HTSNK PJ49 *801 CTRL MK2	2
80 3292	FRM PJ51 LOCK FIX L		1			
80 3299	SPR L37 H 5.5 M 3 B		4	V1120903	C CE DI 100P M153E5 HV	3
80 3317	P BOX F COR EPERAN MK2		4			
80 3340	SPR L	01	5			
80 3341	FRM PJ49 CNV R *800	01	1			
80 3647	HSG PJ51 CSB AXLE MK2	03	1			
80 3649	HSG PJ51 CSB SCR N	04	1			
80 3649D	HSG PJ51 CSB SCR N		1			
80 3723	FRM PJ53 RX IR SCR N	01	1			
80 3815	FE P TIN 0.5 170X 10		1			
80 3831	PRM LBL PJ BOX B_DATA		1			
80 3837	P BOX PJ49 *800 BTM CVR TOP		1			
80 3857	SPR L30 D 6 M 3 P		1			
80 3867	SPR L13 D 6 M 3 P		1			
80 3884	SPR L45 H 8 M5 SN		4			
80 3989	FRM PJ49 HD8 PLT DN G801		1			
80 4530	FRM PJ51 CTRL FIX FR		1			
80 4531	FRM PJ51 CTRL FIX RR		1			
80 4615	HTSNK PJ49 CNV G801	06	1			



Abbreviations used on schematic diagrams and PCB lay outs
A

AC Mains AC

B

B Bleu
B Blue
B1 Bleu primary
B2 Blue secondary
BCL Beam current limiter
BHH Bleu convergence coil horizontal high
BHL Bleu convergence coil horizontal low
BL Blanking
BVH Bleu convergence coil vertical high
BVL Blue convergence coil vertical low

C

C Chroma
C Chroma ground
COIN Coincidence
CP Clamp pulse
CTS C Clear to send - computer

D

D HV Drain connection to high voltage transformer
DTR C Data terminal ready - computer

E

E-W East-west modulation

F

FBHD Feedback horizontal deflection
FBHV Feedback high voltage
Fil1 Heater
Fil2 Heater
F/S Fast/slow time constant switching

G

G Green
G Green
G1 Green primary
G1 G1 picture tubes
G2 Green secondary
G2B G2 blue picture tube

G2G G2 green picture tube
G2R G2 red picture tube
GHH Green convergence coil horizontal high
GHL Green convergence coil horizontal low
GND Ground
GNDM ground mains related
GVH Green convergence coil vertical high
GVL Green convergence coil vertical low

H

HA Horizontal amplitude
HDH B Horizontal deflection high blue
HDH G Horizontal deflection high green
HDH R Horizontal deflection high red
HDL Horizontal deflection low
HDL B Horizontal deflection low blue
HDL G Horizontal deflection low green
HDL R Horizontal deflection low red
HDR Horizontal drive pulses
HP Horizontal pulses
HPAR Horizontal parabola
HS Horizontal sync
HS T Horizontal sync from TTL input
HTHD High tension for horizontal deflection
HVL High voltage transformer low

I

IBCL B Individual beam current limiter blue
IBCL G Individual beam current limiter green
IBCL R Individual beam current limiter red
IR RC Infra red information from IR receiver in projec- tor

L

LP Positive 350 V Line flyback pulses

N

NSH B North south high blue
NSH G North south high green
NSH R North south high red
NSL B North south low blue
NSL G North south low green
NSL R North south low red

O

OFF ON OFF (stand by)

R

R Red
R Red
R1 Red primary
R2 Red secondary
RHH Red convergence coil horizontal high
RHL Red convergence coil horizontal low
RVH Red convergence coil vertical high
RVL Red convergence coil vertical low
RXD C Receive data - computer

S

SC Sand castle
SCL Clock I2C
SDA Data I2C communication
SF Scan fail
SF 1 Scan fail node 1
SF 2 Scan fail node 2
SF 3 Scan fail node 3
SF 5 Scan fail node 5
SF 6 Scan fail node 6

T

TXD C Transmit data - computer

V

V BL Vertical blanking
V PAR Vertical parabola
VBL Vertical blanking
VDH B Vertical deflection high blue
VDH G Vertical deflection high green
VDH R Vertical deflection high red
VDL B Vertical deflection low blue
VDL G Vertical deflection low green
VDL R Vertical deflection low red
VF Vertical flyback pulses
VID Video
VS Vertical sync
VS T Vertical sync from TTL input

Y

Y Y-signal
Y Y-signal ground

+17 +17 V supply
+17M +17V supply voltage mains related
+17(C) +17 V supply voltage convergence
+230 +230V supply voltage
+30 +30 V supply voltage
+300HV+300V mains related supply voltage to high voltage transformer
+300M +300 V supply voltage mains related
+5 SB +5V supply voltage stand by
+9 +9 V supply voltage
+9 SB +9V supply voltage stand by
+9SB +9 V supply voltage stand by
+FAN Supply voltage for fans
+RGSB +RGSB switching voltage
+S VID +S VID switching voltage
+SH Positive supply voltage for hor shift
+TTL +TTL swithing voltage
+VID +VID switching voltage
+VID +VID switching voltage
-17 -17 V supply
-17 -17V supply voltage
-8 -8 V supply voltage
-9 SB -9V supply voltage stand by
-9SB -9 V supply voltage stand by
-SH Negative supply voltage for hor shift

