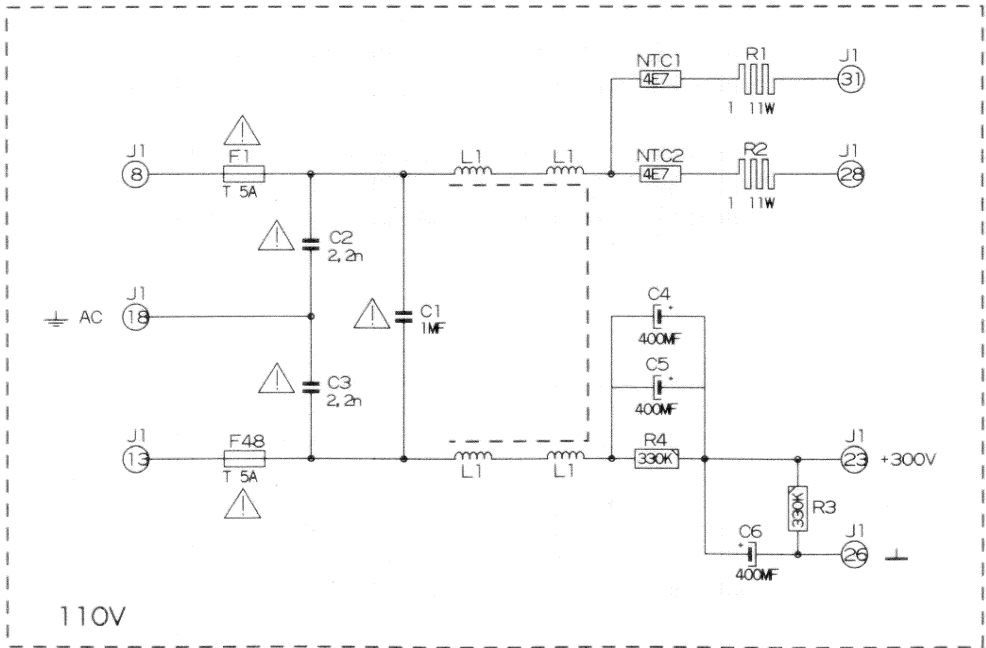
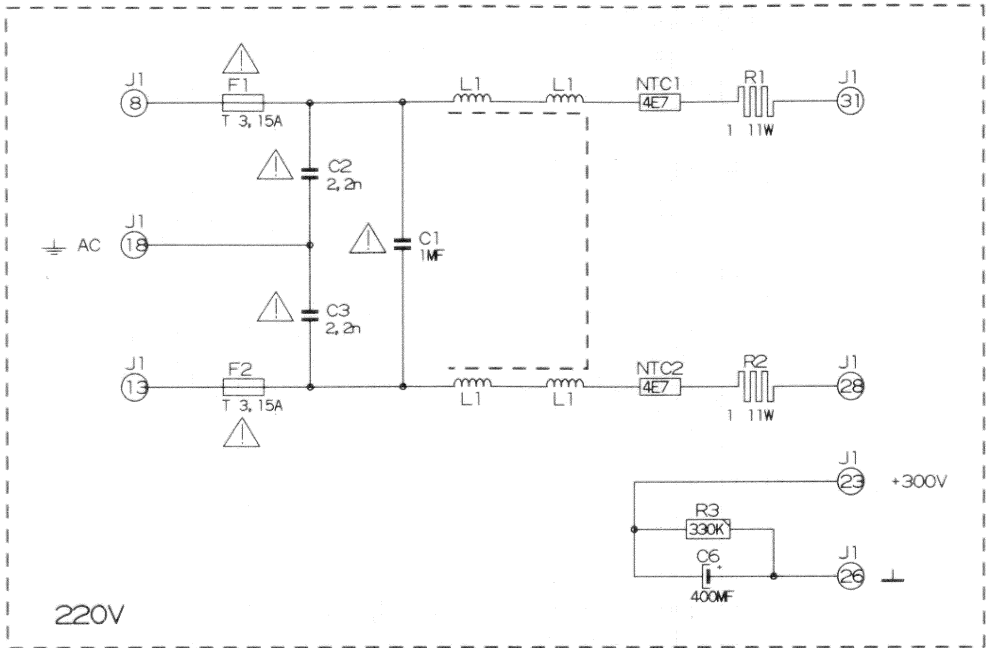
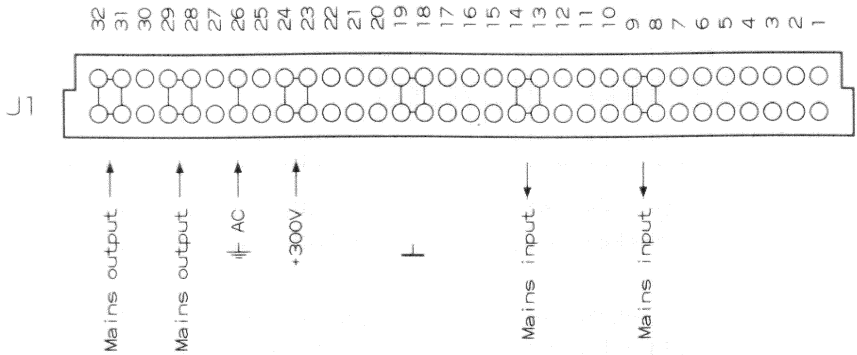



J1

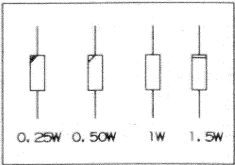
F1, F2

For 110V operation :T3.15A/250V  
For 220V operation : T5A/250V



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



Modifications reserved

Name	Mains input/output	Article nr.
Date	10/05/89	76 1548
Drawn	PG	Checked
		PGV
BARCO		PROJECTION SYSTEMS

The Mains Input/Output board filters out the incoming mains voltage and contains the user setting for 220Vac or 110Vac.

1. Mains filter

The mains filter consists of the coil L1 with four windings, and the capacitors C1-C2-C3. It is a bandpass filter, removing all high and low frequency noises.

NTC-resistors NTC1 and NTC2 limit the start up current and melting fuses F1 and F2 prevent damage to the Mains Input/Output board and the Switched Mode Power Supply in the event of short circuit or wrong 220/110Vac setting.

2. 220 Vac operation

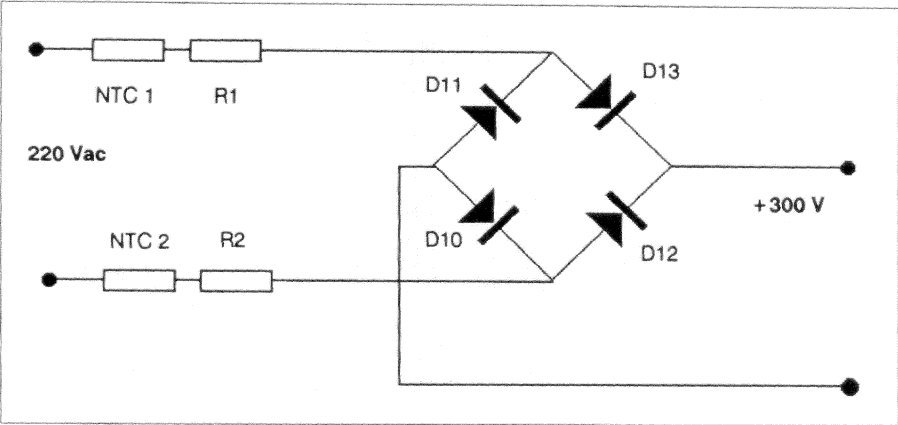


Figure 1. 220 Vac operation of the Mains Input/Output board.

When we look how the diode bridge D10-D11-D12-D13 of the Switch Mode Power Supply is connected to the Mains Input/Output board (Figure 1), we can see how the 220Vac operation works.

Diode bridge D10-D11-D12-D13 operates as a normal bridge rectifier, and we become an output DC-voltage of approximately +300 Volts.

Capacitor C6 forms an extra capacitive load, parallel on capacitor C27 on the Switch Mode Power Supply, to flatten the AC-ripple on the +300 DC-voltage. Resistor R3 discharges this capacitor quickly when the projector is switched off.

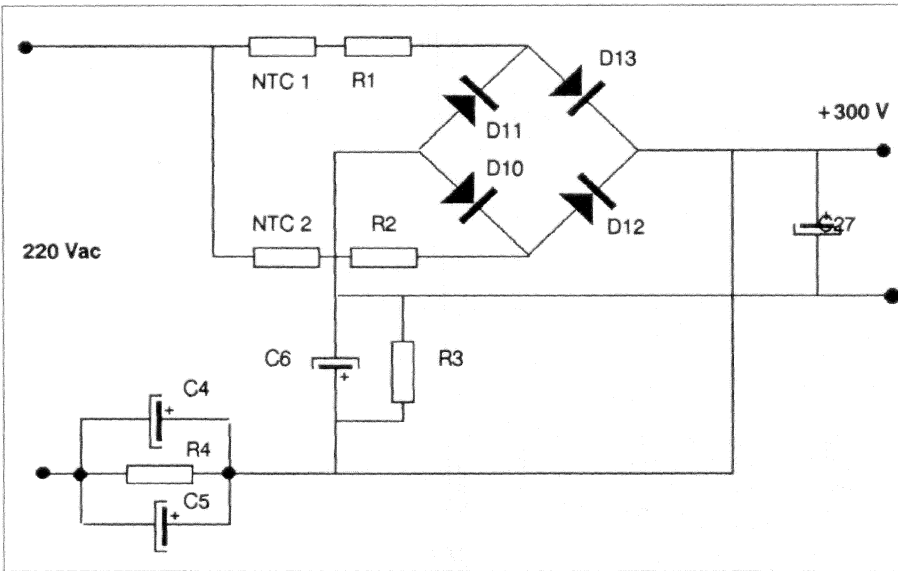


Figure 2. 220Vac operation of the Mains Input/Output board.

3. 110 Vac operation

When we look again how the diode bridge of the Switch Mode Power Supply is connected to the Mains Input/Output board during 110Vac operation, we become figure 2.

To make it more comprehensive, we redraw this figure (Figure 3.), deleting NTC1, NTC2, R1 and R2 that only play a roll during start up, and by deleting R3 and R4 that are only important while switching off.

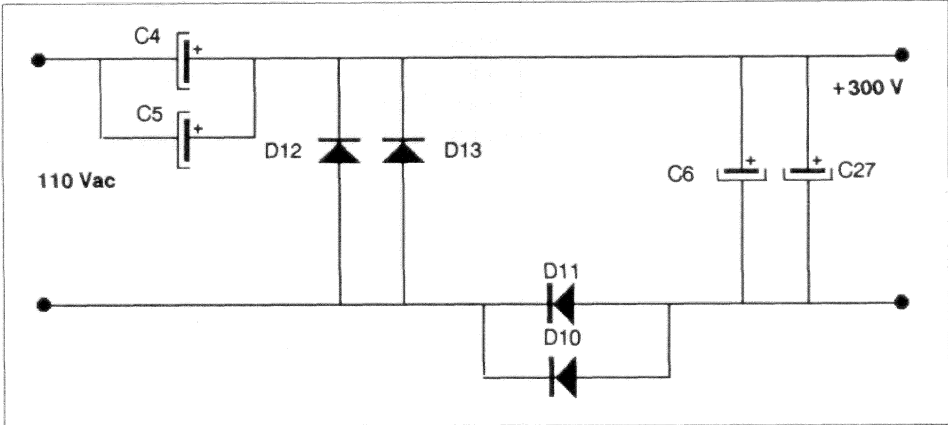


Figure 3. 110Vac operation of the Mains Input/Output board: schematic redraw of figure 2.

Now we see that the diode bridge operates as a voltage multiplier: during the positive half of the mains voltage, capacitors C6-C27 are charged through diodes D10-D11. During the negative half, capacitors C4-C5 are charged through diodes D12-D13.

The two voltages over the charged capacitors are added together and we become a DC-voltage of again approximately +300 Volts.

## NETSPANNINGSAAN- PASSING

### Procedure :

1. Schakel de projector uit en trek de stekker uit het stopkontakt.
2. Open de bovenkap.
3. Verwijder de beschermkap. De input module is bereikbaar.
4. Los de fixatieschroef van de inputmodule en trek de module uit.
5. Trek de selectieplug uit en plaats deze terug zoals aangegeven in de foto's op de eerste blz. van deze service sheet.
6. Verwijder de zekeringen en plaats de correcte zekeringen in de houders (zie blz. PC lay out).
7. Plaat de input module terug en bevestig de fixatieschroef.
8. Plaats de beschermkap terug.
9. Plug de stekker terug in het stopkontakt en schakel de projector in.

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## ADAPTATION DE L'ENTREE SECTEUR

### Procédure :

1. Mettre le projecteur hors fonction et débrancher-le de la prise.
2. Soulever le couvercle supérieur.
3. Enlever le couvercle de protection afin d'avoir accès au module "Entrée secteur".
4. Desserer la vis de fixation et retirer le module 'Entrée secteur'.
5. Retirer le "SELECTEUR DE TENSION" et le réintroduire selon les photos sur la première page , dépendant de la valeur du réseau dans la chambre.
6. Enlever les fusibles et insérer les fusibles corrects. (Voir à la page 'PC lay out)
7. Réintroduire le module 'Entrée secteur' et fixer la vis de fixation.
8. Remettre le couvercle de protection.
9. Brancher la prise et rallumer le projecteur.

## MAINS (POWER) ADAP- TATION

### Procedure :

1. Switch off the projector and unplug the power plug from the wall outlet.
2. Lift up the top cover
3. Remove the protection cover to access the POWER INPUT BOARD
4. Unscrew the fixation screw of the power input board and pull out this board.
5. Pull out the "POWER SELECTOR PLUG" and re-insert it as illustrated in on the first page of this service sheet, depending of the wall outlet in the room.
6. Pull out the fuses and place the correct fuses in the sockets. (see PC lay out)
7. Re-insert the power input board and secure it with the fixation screw.
8. Put back the protection cover.
9. Reconnect the power cord with the wall outlet and switch on the projector.

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


## ANPASSEN DER NETZ- SPANNUNG

### Vorgehensweise :

1. Schalten Sie den Projektor aus und ziehen sie den Netzstecker aus der Steckdose.
2. Heben Sie die Schutzhaube an.
3. Entfernen Sie die Schutzhaube. Sie haben nun Zugang zum NETZTEIL.
4. Lösen Sie die Befestigungsschraube des Netzteils und nehmen Sie dieses Teil heraus.
5. Ziehen Sie den Spannungswahlstecker heraus und stecken Sie ihn wie in Abb. auf Seite eins gezeigt wieder ein, je nach der vorhandenen Spannung.
6. Ziehen Sie die Sicherungen heraus und stecken Sie die richtigen Sicherungen in die Fassungen. (Siehe auf Seite 'PC lay out')
7. Setzen Sie das Netzteil wieder ein und befestigen Sie es mit der Befestigungsschraube.
8. Setzen Sie die Schutzhaube wieder auf.
9. Stecken Sie den Netzstecker wieder in die Steckdose und schalten Sie den Projektor ein.

110/220 V MAINS INPUT BOARD

76 1548

ITEM NO.	SIT.	DESCRIPTION	ITEM NO.	SIT.	DESCRIPTION
11 4716	C..1	 CAPACITOR POSAPO 1M M AC250	71 6515	PC..	PC INP MAINS 761548
11 4722	C..2	 CAPACITOR CESA Y 2K2 M 400	10 4401	R..1	RESISTOR WW V 1E K 11W
11 4722	C..3	 CAPACITOR CESA Y 2K2 M 400	10 4401	R..2	RESISTOR WW V 1E K 11W
11 1655	C..4	CAPACITOR ELRA 400M T 385	10 1266	R..3	RESISTOR CF 330K J 0W50
11 1655	C..5	CAPACITOR ELRA 400M T 385	10 1266	R..4	RESISTOR CF 330K J 0W50
11 1655	C..6	CAPACITOR ELRA 400M T 385			
31 4103	F..1	 FUSE 3A150 5X20 SLOW	31 3525	001.	CONNECTOR EURO MOBSE P64
31 4103	F..2	 FUSE 3A150 5X20 SLOW	36 7699	0011	RIVET CHOBERT D2,38 L6,35
77 4150	L..1	COIL CHOKE MAINS DATA	71 2792	003.	RESISTOR WW V HOLDER H15
10 5018	NTC1	RESISTOR NTC 4E7 2W	31 4514	004.	FUSE 5X20 CAP+HOLDER
10 5018	NTC2	RESISTOR NTC 4E7 2W	71 4943	005.	SPACER RIV L10,75D7 M3 AL
			31 3720	006.	CONNECTOR SL MOBTE P 6
			13 3036	007.	SPACER L 6 D 6 D2,4 CER



ART. NR.	DESCRIPTION	QUANTITY
10 4401	Resistor 1E 11W	2
10 5018	Resistor NTC 4E7 2W	2
11 1655	Capacitor 400M 385V	3
11 4716	Capacitor 1M AC 250V	1
11 4722	Capacitor 2K2 400V	2
31 4103	Fuse 3A150 5X20 Slow	2
77 4150	Mains choke coil	1

NUMBERS REFERRING TO PICTURE :

ART. NR.	DESCRIPTION	QUANTITY
31 3525	Euro connector P64	1
31 4514	Fuse 5x20 Cap + Holder	2
36 7699	Rivet Chobert D2.38 L3.35	2

