ØLTRONIX

OWNER'S MANUAL

REGULATED POWER SUPPLY

LABPAC B602 D
B603 D

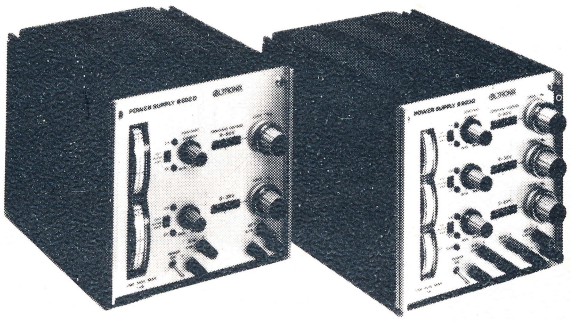
Serial No .....

USERS INSTRUCTIONAL LEAFLET

ØLTRONIX

LABPAC B602D B603D

UIL-1(4)
1977-03-28



RATING DATA [1]		B602D	B603D
Source voltage	U_S	220V±10%, 240V±10% [2], 48-63Hz	
Output voltage/current			
output 1	U_{ex}/I_{ex}	0-60V/0,7A	0-60V/0,65A
-"- 2		0-30V/1,4A	0-30V/1A
-"- 3		—	0-6V/3A
Ambient temperature, operating	t_{amb}	0-40°C	

PERFORMANCE RATINGS [1] (Data subject to Change)		
Source current, max	I_{Sm}	0,85A_{rms}
Load effect, all outputs (load regulation) I_{ex}=0-100%	U_{erL}	<15mV
Source effect, all outputs (line regulation) $U_{Snom}=U_S\pm10\%$	U_{erS}	<1mV or 0,01%
Temperature coefficient t_{amb}=0-40°C	α	<0,01%°C^{-1}
PARD (ripple and noise) f_B=20Hz-20MHz	U_{PARD}	<1,5mV_{p-p}

		B602D	B603D
Drift (stability) τ=8h, f_B=0-20Hz	U_{erD}	<0,05%	
Load transient recovery time I_{ex}=0-100% Trans. rec.band=±50mV	τ_R	<50µs	
Setting range, output 1	U/I	0-70V/0,04-0,74A	0-70V/0,03-0,68A
-"- -"- -"- 2		0-36V/0,07-1,47A	0-36V/0,05-1,05A
-"- -"- -"- 3		—	0-7V/0,15-3,15A
Control ranges	-	See Output Chart	
Control deviation, max of rated voltage	Δ_m	±0,3%	
Crossover area, max	$(U/I)_{const}$	100mV/50mA	
Reverse current protection, max	I_{Rm}	1A	3A on output 3
Reverse voltage protection, max	U_{Rm}	1V (One diode voltage forward drop)	
Isolation voltage, max on output terminals relative to the chassis	U_{isol}	±500V	
Insulating resistance, min U_{test}=500V	R_{insul}	>100Mohm	
Transformer OTP, automatic	t_{OTP}	110°C	
Storage temperature	t_{stor}	-40°C to 85°C	
Overall dimensions	height	176mm	
	width	176mm	
	depth	255mm	
Mass	m	5,0kg	5,3kg
Mains fuse	F_{10}	1,6A slowblow at the rear	
Mains cable (see Mains, page 3)	-	Fixed, 1,8m with 10-16A/250V, earthed EUR-connector.	

[1]) Rating Data and Performance Ratings are expressed in accordance with international recommendations, notably IEC-478.

[2]) Connected for U_{Snom}=240V on order or changed at Service Center.

To make the best use of your new LABPAC, follow these instructions!
(Applicable to both models, unless otherwise indicated).

MAINS

The unit has a fixed mains cable with earthed 10-16A/250V EUR-connector, fitted at the rear. Adjacent is the mains fuse. The unit is thermally protected by an automatic cut-out in the mains transformer.

As an option, mains filter may be provided with a single detachable mains cable using CEE22/4 (6A)-connector.

For 220/240V mains tap-changing, see Service Instruction LPB602/3D-1.

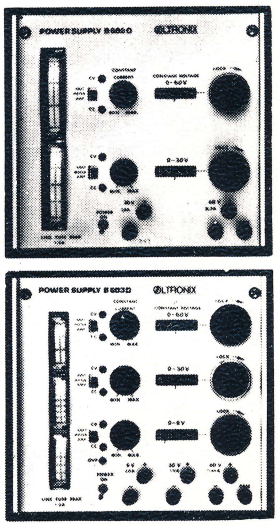


Figure 1

VOLTAGE ADJUSTMENT (Figure 1)

The output level is set by means of the "CONSTANT VOLTAGE" potentiometer. The set value is displayed in the adjacent window to within ±0.3% of the rated output voltage.
A mechanical brake "LOCK" provides for a secure setting against unintentional turning.

CURRENT ADJUSTMENT (Figure 1)

The max output current is controlled by the "CONSTANT CURRENT" potentiometer. It can be set to any current between the max rated and down to 5% thereof.

CONSTANT VOLTAGE / CONSTANT CURRENT (Figure 2)

The cross-over area of the CV/CC is determined by the setting of the two parameters and is less than 100mV for a 50 mA change.

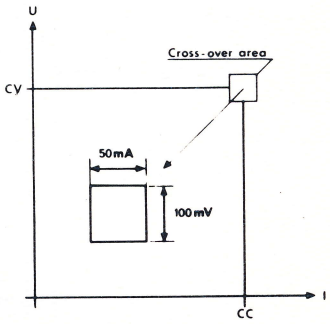
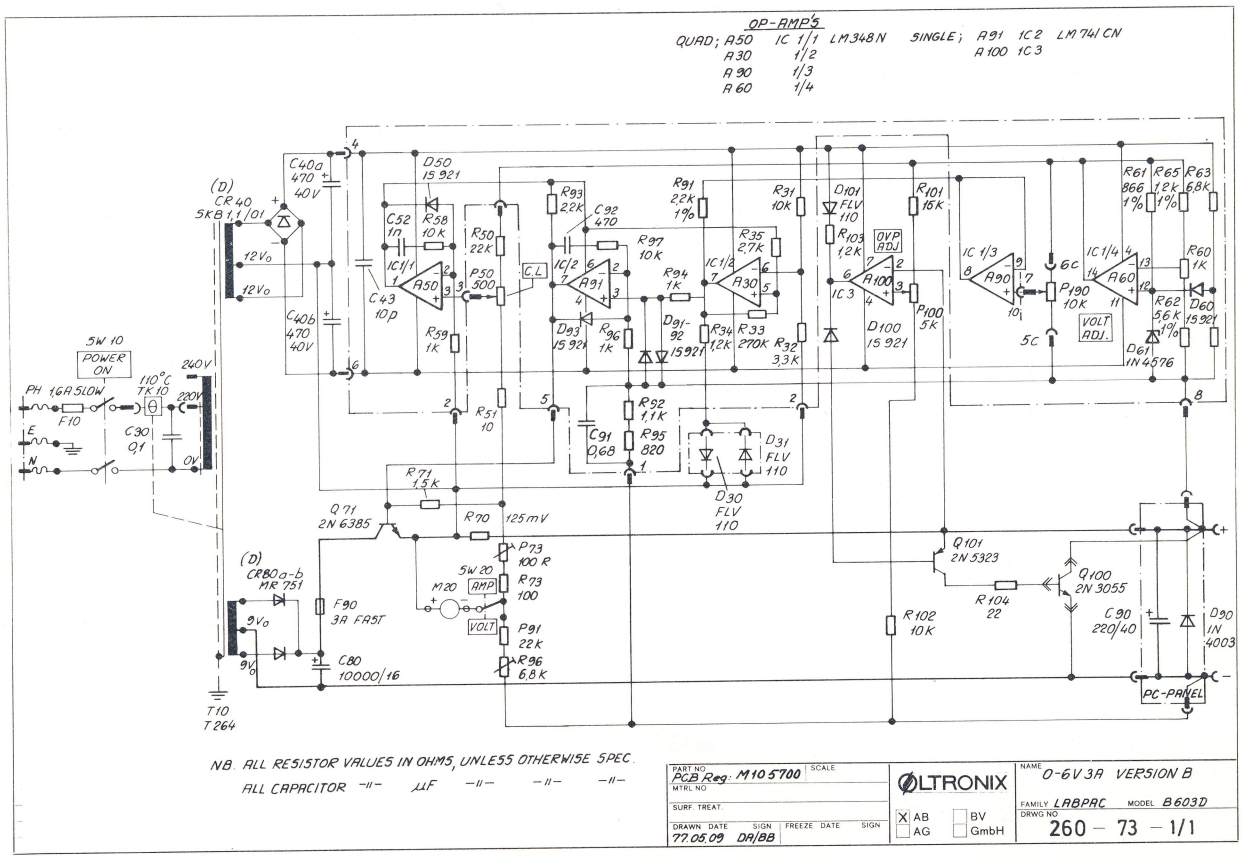


Figure 2

MONITORING (Figure 1)

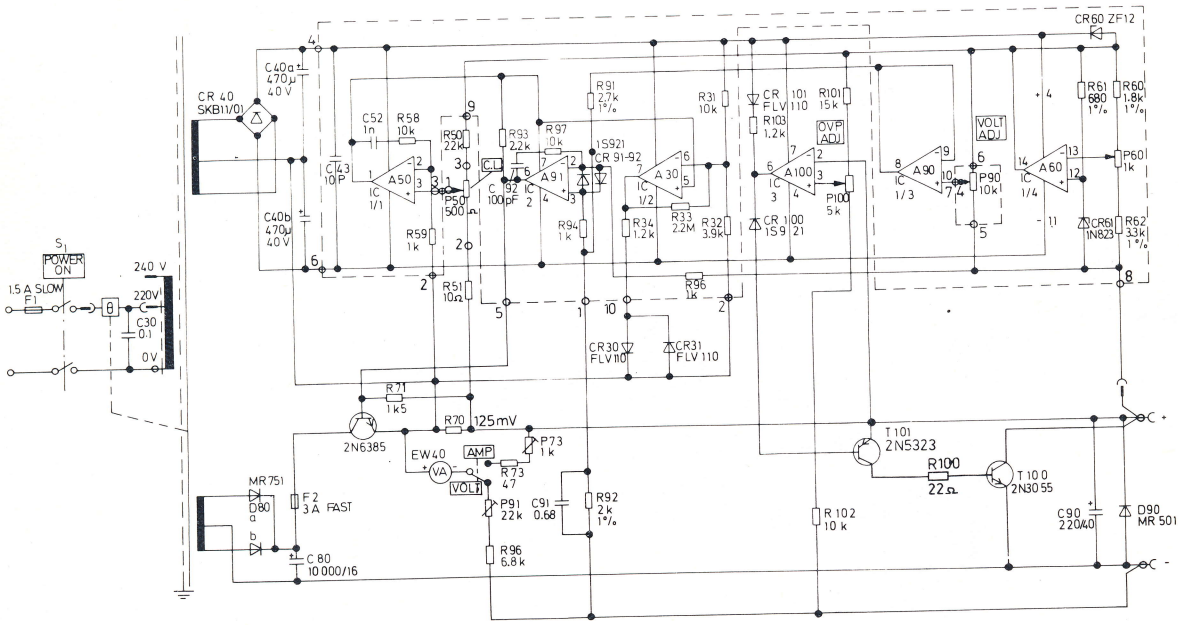
The operating mode for each output is indicated by two light emitting diodes "CV" and "CC". The output voltage or current are indicated on the meter as selected by the "VOLT-AMP" switch.



NB ALL RESISTOR VALUES IN OHMS, UNLESS OTHERWISE SPEC.
ALL CAPACITOR -"- µF -"- -"- -"-

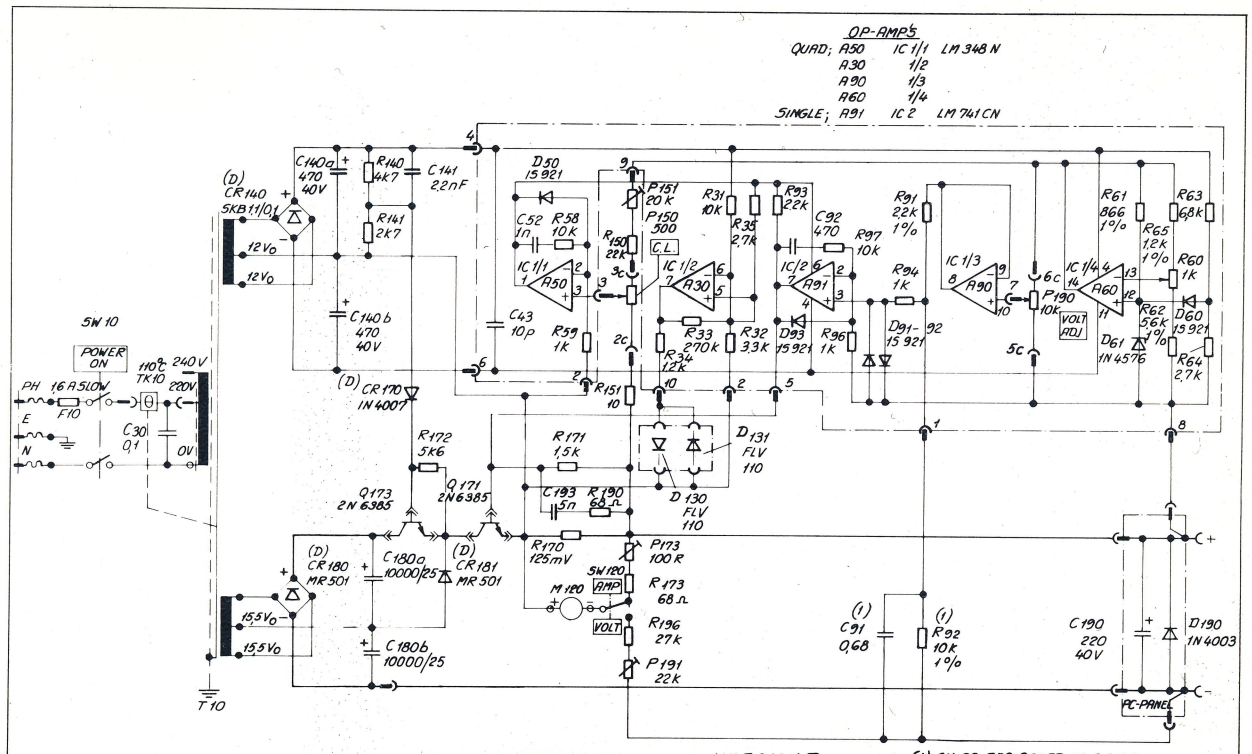
PART NO PCB Reg: M10 5700	SCALE	OLTRONIX	NAME 0-6V 3A VERSION B
MTRL NO			FAMILY LABPAC MODEL B603D
SURF. TREAT.		X AB / AG / BV / GmbH	DRWG NO 260 – 73 – 1/1
DRAWN DATE 77.05.09 SIGN DA/BB	FREEZE DATE SIGN		

No	REVISION	DATE	APPD



MODEL	MATERIAL	FINISH

MODEL LABPAC 603 D	MATERIAL	FINISH	
OLTRONIX	LABPAC B 603 D 0-6 V 3 A VERSION A PCB Reg: M10 4918	PART NO.	SCALE
		DR 1976-02-16 BF	APPD
		260 – 73 – 1	REV

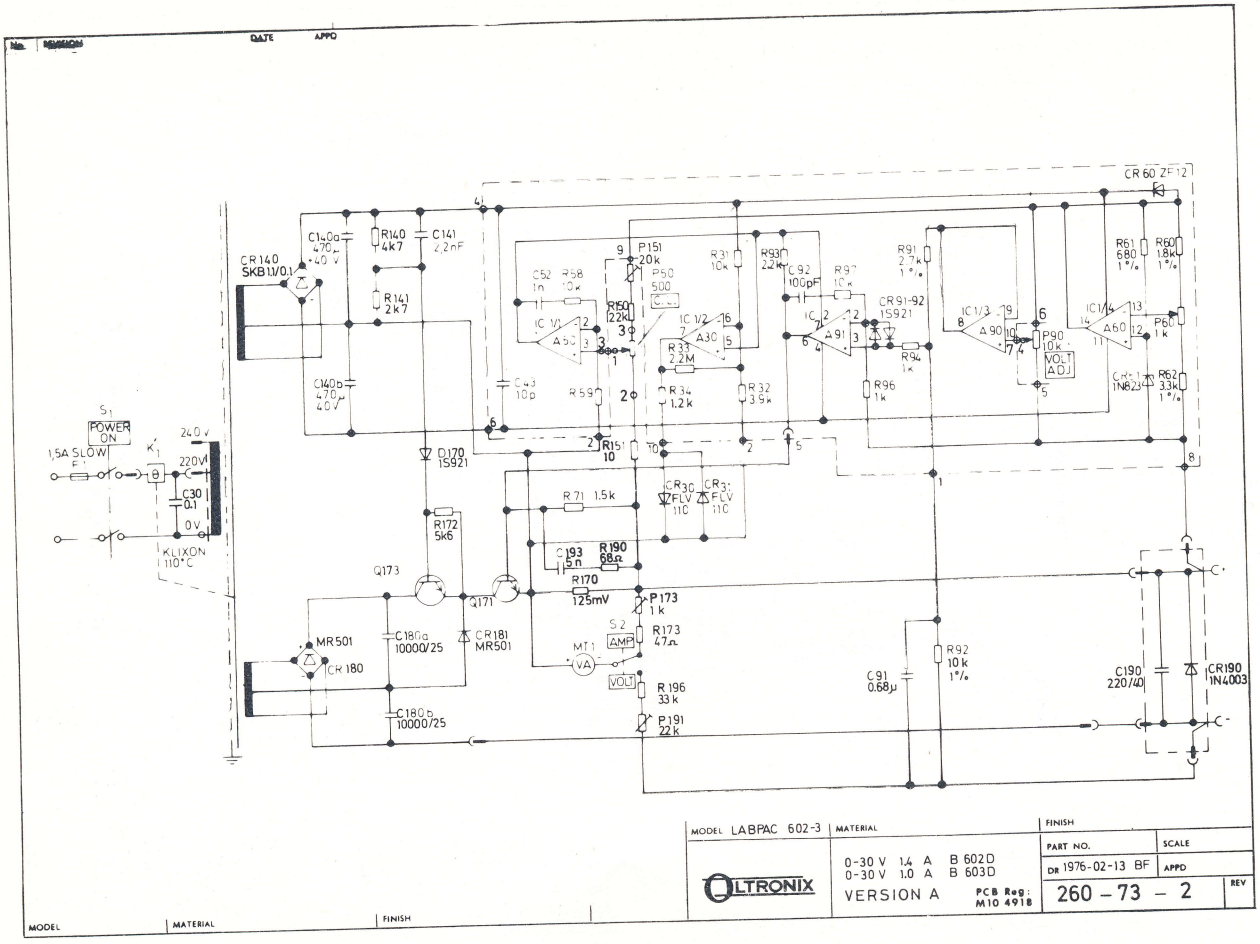


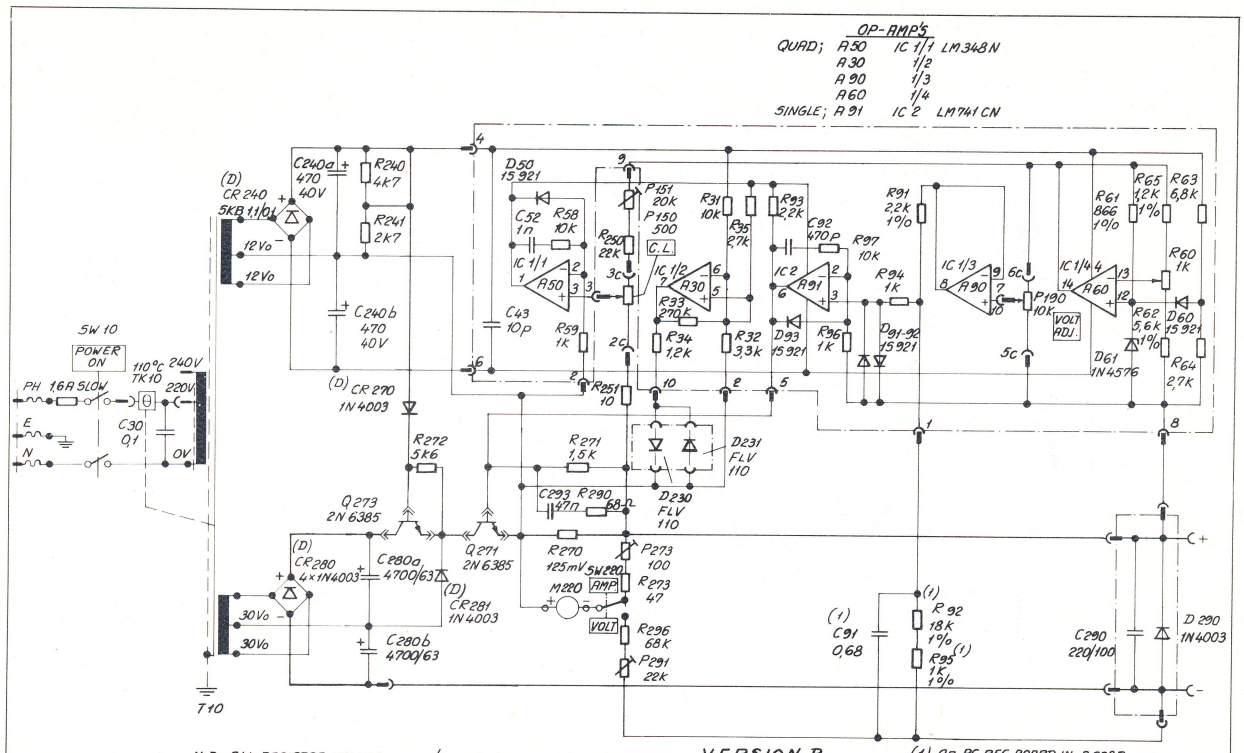
N.B. ALL RESISTOR VALUES IN OHMS, UNLESS OTHERWISE SPEC.
ALL CAPACITOR -"- µF -"- -"- -"-

VERSION B

(1) ON PC REG. BOARD IN B603D

PART NO PCB Reg: M105700	SCALE	ØLTRONIX	NAME 0-30V 1,4A B602D 0-30V 1,0A B603D
MTRL NO			
SURF TREAT		X AB / AG / BV / GmbH	FAMILY LABPAC MODEL 602-603
DRAWN DATE 77.04.21 SIGN 5c/BB	FREEZE DATE SIGN		DRWG NO 260 – 73 – 2/1


No.
REVISION
DATE
APPD
CR 60 ZF12
C140a 470µ 40 V
R140 4k7
C141 2.2nF
CR 140 SKB1/0.1
R141 2k7
C140b 470µ 40V
C52 1n
R58 10k
P151 20k
P50 500
R50 22kΩ
IC 1/1 A50
R33 2.2M
IC 1/2 A30
R31 10k
R93 22k
C92 100pF
R97 10k
IC 2/1 A91
CR91-92 1S921
R91 2.7k 1%
IC 1/3 A90
P90 10k VOLT ADJ
IC 1/4 A60
R61 680 1%
R60 1.8k 1%
P60 1k
CR61 1N823
R62 3.3k 1%
C43 10p
R59
R34 1.2k
R32 3.9k
R96 1k
R94 1k
S1 POWER ON
1.5A SLOW F1
K1
240 V
220V
C30 0.1
0 V
KLIXON 110°C
D170 1S921
R151 10
R71 1.5k
CR30 FLV 11C
CR31 FLV 11C
R172 5k6
C193 5n
R190 68Ω
R170 125mV
P173 1k
Q173
Q171
S2
AMP
VOLT
MT1
VA
R173 47Ω
R196 33k
P191 22k
MR501
CR 180
C180a 10000/25
C180b 10000/25
CR181 MR501
C91 0.68µ
R92 10k 1%
C190 220/40
CR190 1N4003
MODEL
MATERIAL
FINISH
MODEL LABPAC 602-3
MATERIAL
FINISH
OLTRONIX
0-30 V 1.4 A B 602D
0-30 V 1.0 A B 603D
VERSION A
PCB Reg: M10 4918
PART NO.
SCALE
DR 1976-02-13 BF
APPD
260 – 73 – 2
REV



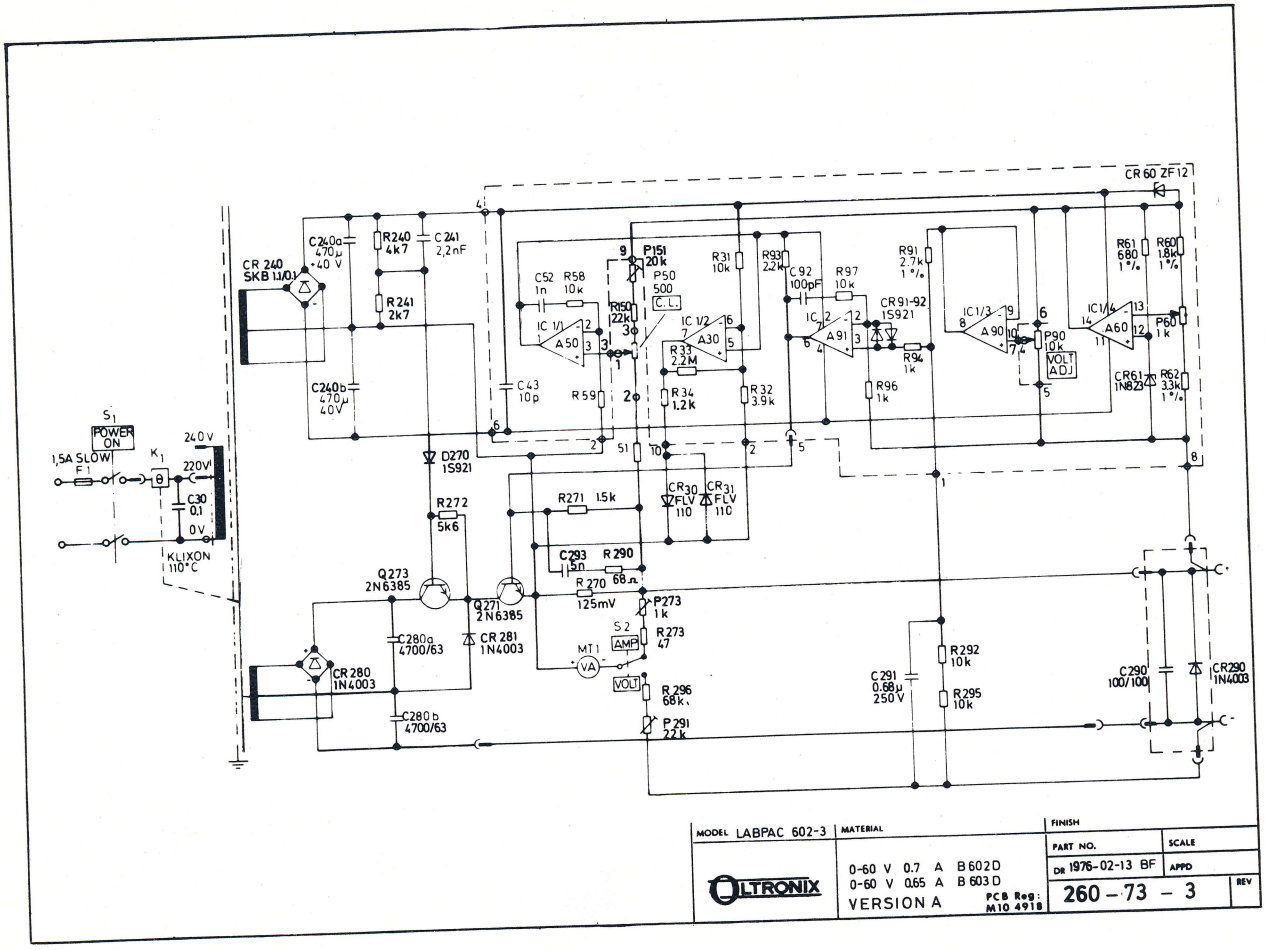
N.B. ALL RESISTOR VALUES IN OHM'S, UNLESS OTHERWISE SPEC.
ALL CAPACITOR -"- µF -"- -"- -"-

VERSION B

(1) On PC REG. BOARD IN B603D

PART NO. PCB Reg: M105700	SCALE	ØLTRONIX	NAME 0-60V 0,7A B602 D / 0-60V 0,65A B603 D
MTRL NO.			
SURF. TREAT.			FAMILY LABPAC MODEL 602-603
DRAWN DATE 77.04.25 SIGN Sc/BB	FREEZE DATE SIGN	X AB / AG / BV / GmbH	DRWG NO 260- 73- 3/1

fugel-4x0 423 421



MODEL LABPAC 602-3	MATERIAL	FINISH	
		PART NO.	SCALE
		DR 1976-02-13 BF	APPD
OLTRONIX	0-60 V 0.7 A B 602D 0-60 V 0.65 A B 603D VERSION A PCB Reg: M10 4918	260 – 73 – 3	REV

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