

ELKA

X 705

schematic diagrams



- ① 410CST0771 - Matrix for flutes filters
- ② 410CST0757 - Upper drawbars
- ③ 410CST0730 - Solo variations
- ④ 410CST0760 - Percussion register
- ⑤ 410CST0761 - Upper manual register
- ⑥ 410CST0748 - Upper keyboard contacts assembly
- ⑦ 410CST0783 - Matrix

⑧ 410CST0735 A

⑨ 410CST0735 B

⑩ 410CST0735 C

⑪ 410CST0736

⑫ 410CST0737

⑬ 410CST0738

⑭ 410CST0739

⑮ 410CST0740

⑯ F000576

⑰ F000577

⑱ 410CST0741

⑲ 410CST0742

⑳ 410CST0722 - Encoder

㉑ 410CST0723 - Decoder

㉒ 410CST0724 - Wave form generator

㉓ 410CST0725 - Vibrato telstar pitch bend

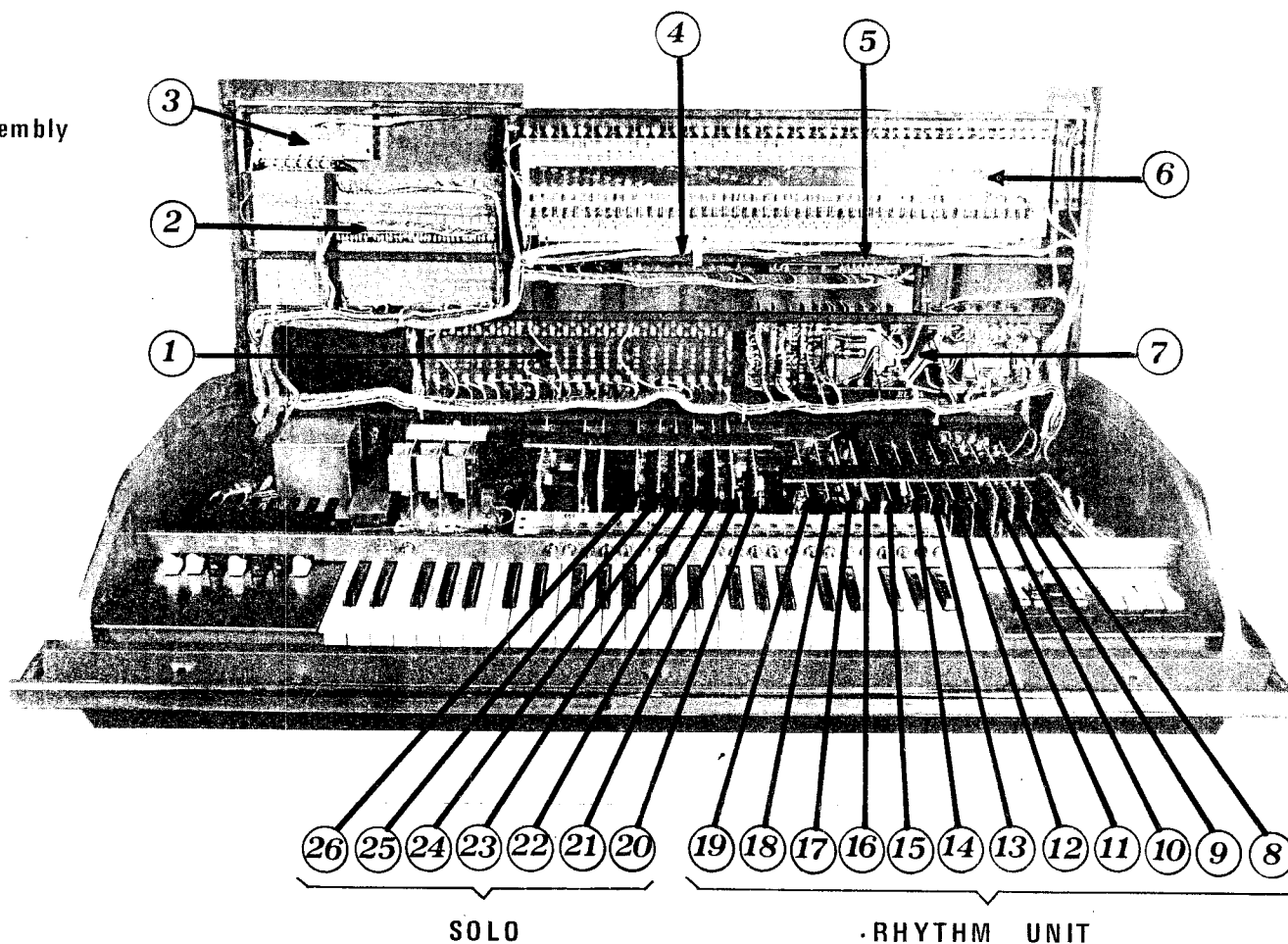
㉔ 410CST0726 - VCA - VCF controls

㉕ 410CST0727 - Timbre control

㉖ 410CST0728 - VCA - VCF

R
H
Y
T
H
M

U
N
I
T



SOLO

RHYTHM UNIT

SOLO

① 410CST0750 - Lower drawbars

② Transformer

④ F000627 - Power supply + 12V

⑤ 410CST0751 - Pedal bass-Manual bass

⑥ F000627 - Power supply - 12V

⑦ F000627 - Power supply - 27V

⑧ 410CST0770 - Matrix for power supply

⑨ 410CST0753 - Presets push-button assembly

⑩ 410CST0753 - Solo push-button assembly

⑪ 410CST0748 - Lower keyboard contacts assembly

⑫ 410CST0756 - Elkatone and vibrato register

⑬ 410CST0717 - Strings memorization

⑭ CST0934- Master oscillator and dividers

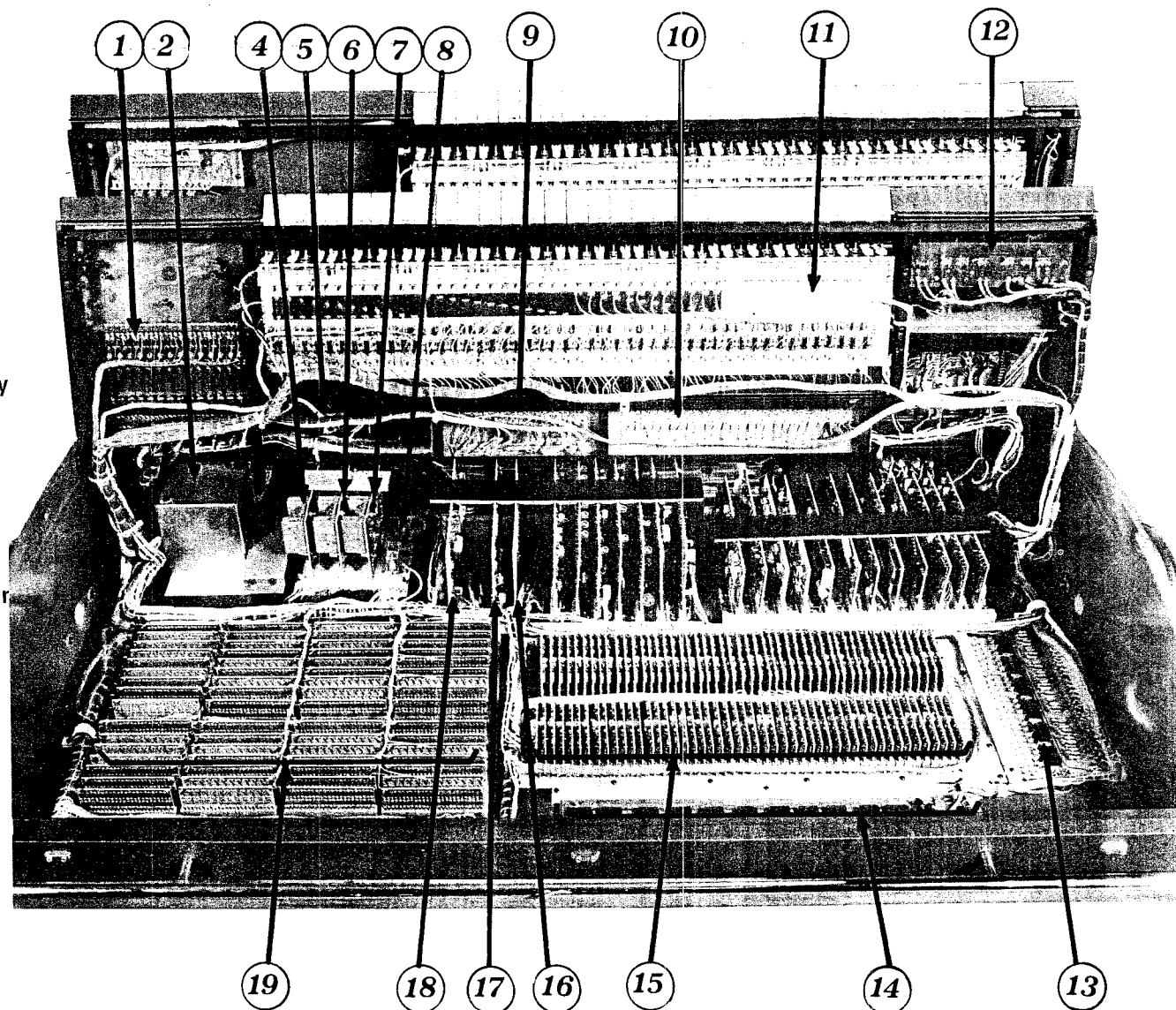
⑮ F000589 - Piano strings switches

⑯ 410CST0871

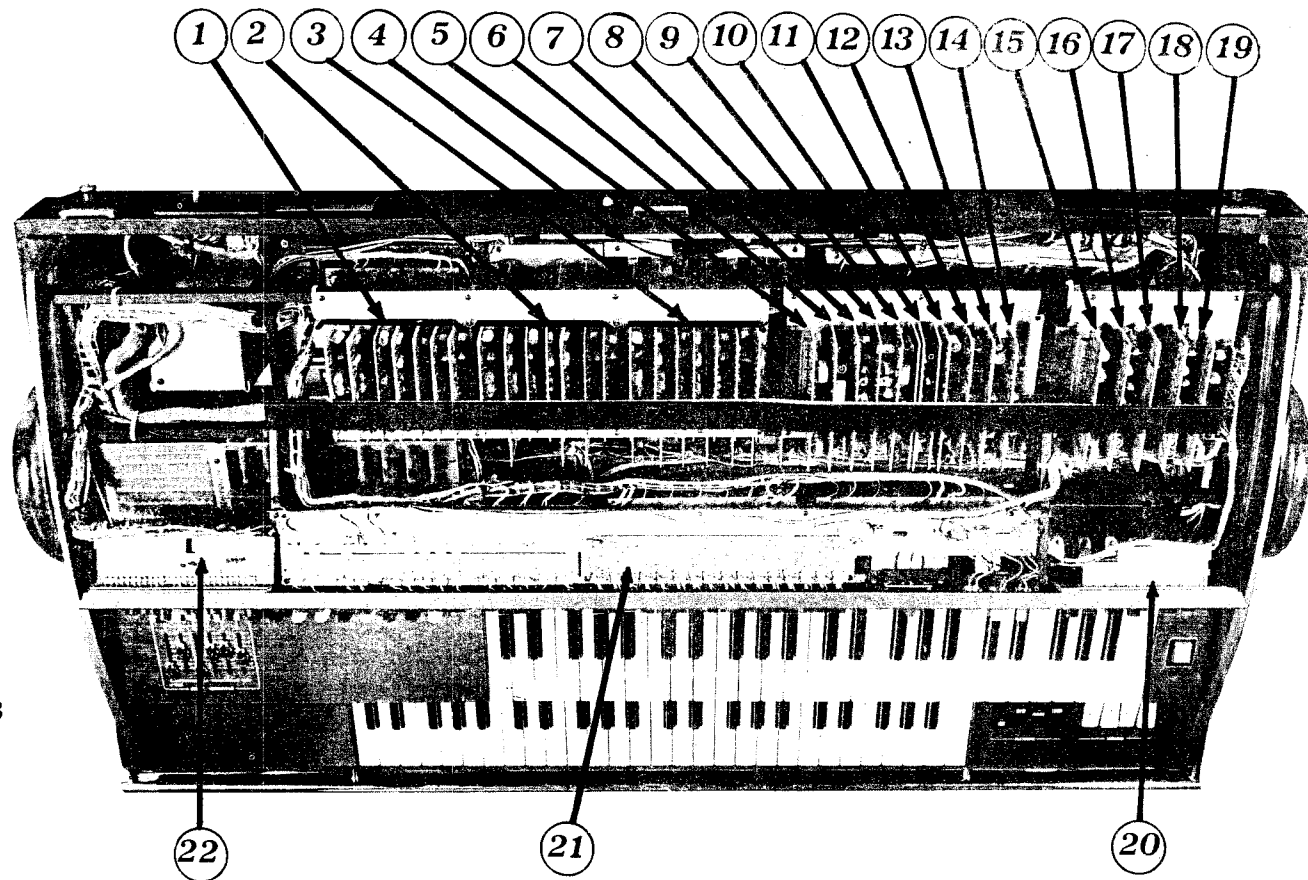
⑰ 410CST0718 - Bass selector

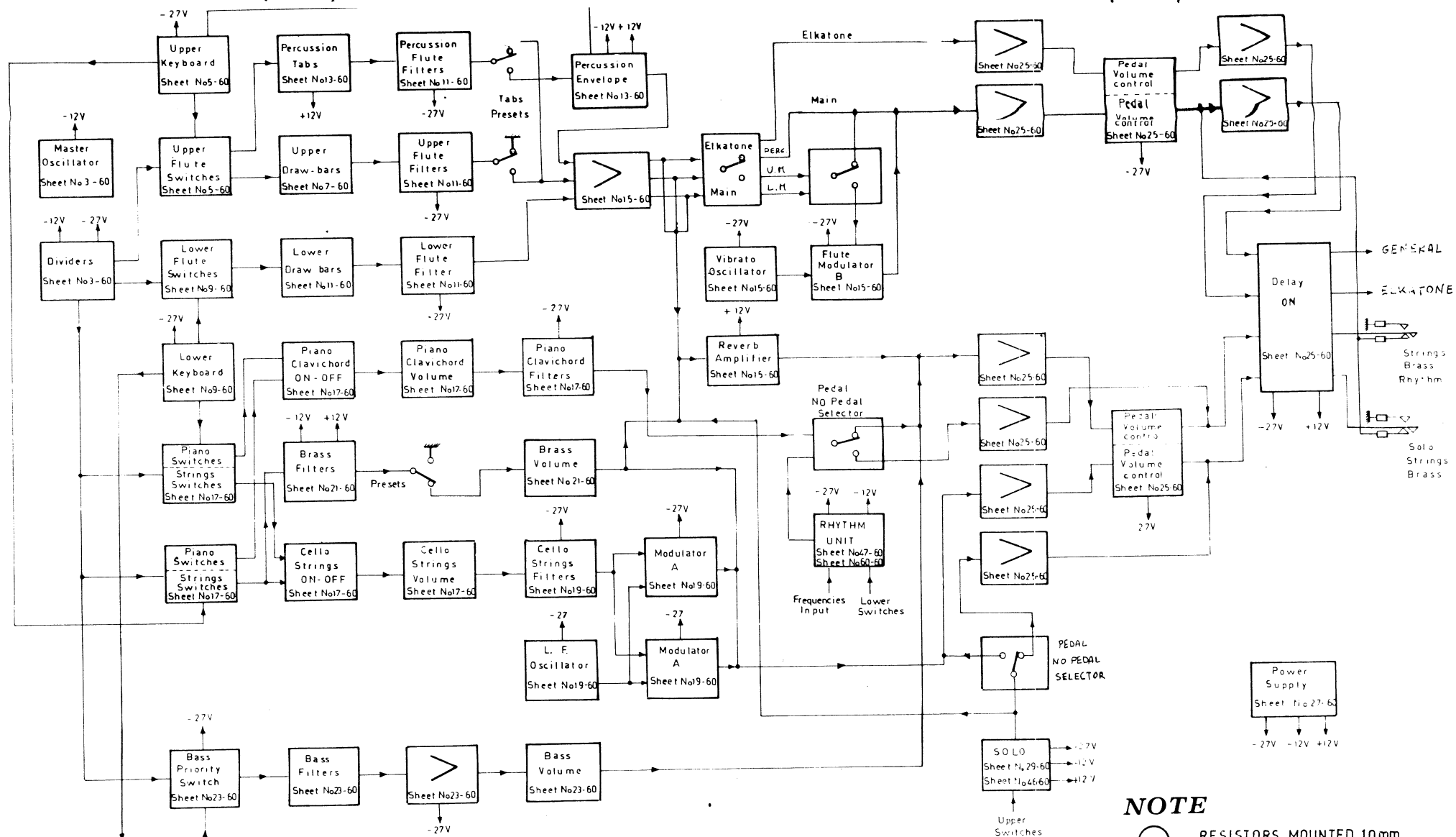
⑱ 410CST0720 - Brass

⑲ Flutes switches



- ① F000445 - Upper keyboard flutes filters
- ② F000445 - Percussion and presets filters
- ③ F000445 - Lower keyboard flutes filters
- ④ Reverb unit
- ⑤ 410CST0779 - Preamplifier
- ⑥ 410CST0782 - Percussion
- ⑦ 410CST0781 - Reverb amplifier
- ⑧ 410CST0774 - Vibrato
- ⑨ 410CST0773 - Flute Modulator B
- ⑩ 410CST0776 - Strings filters
- ⑪ 410CST0773 - Modulator A
- ⑫ 410CST0773 - Modulator A
- ⑬ 410CST0772 - Low frequency oscillator
- ⑭ 410CST0775 - Piano clavichord filters
- ⑮ 410CST0896 - Preamplifier B
- ⑯ 410CST0926 - Expression pedal control A
- ⑰ 410CST0777 - Delay on
- ⑱ 410CST0926 - Expression pedal control B
- ⑲ 410CST0896 - Preamplifier B
- ⑳ 410CST0762 - Sustain controls
- ㉑ 410CST0744 - Rhythm an automatic on-off
- ㉒ 410CST0765 - Volumes





NOTE



RESISTORS MOUNTED 10mm
ABOVE BOARD



NON INFLAMMABLE RESISTORS
MOUNTED 10mm ABOVE BOARD



1/2W RESISTORS

N. B.

- The firm reserves the right to make changes without any warning and to their own discretion.
- The tensions are measured when the instrument is turned on but not played.

Transistors	Equivalents
BC 171	BC 173 - BC 108 - BC 208 - BC 209
BC 173	BC 109 - BC 209 - BC 239
BC 415 B	BC 205 B - BC 308 B
BC 415 C	BC 205 C - BC 308 C
BC 205 C	BC 308 C
BC 308 C	BC 205 C

All diodes are FDH9439 Fairchild
or BA 130

Designed by
Lucy Blom

Drawn by
John Gano

Checked by
John Gano

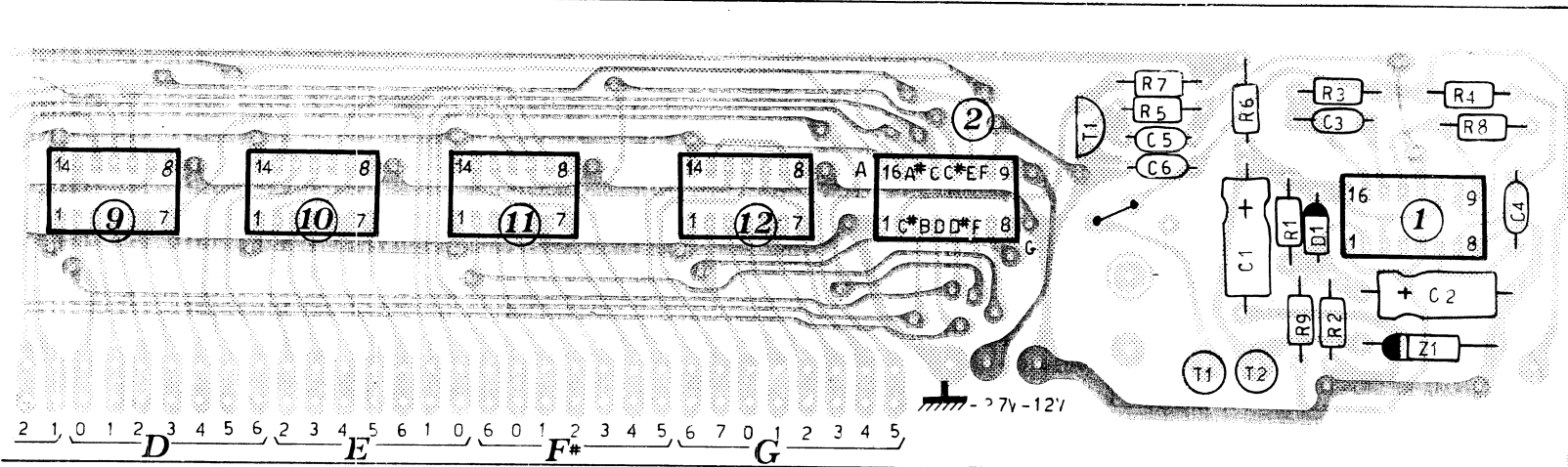
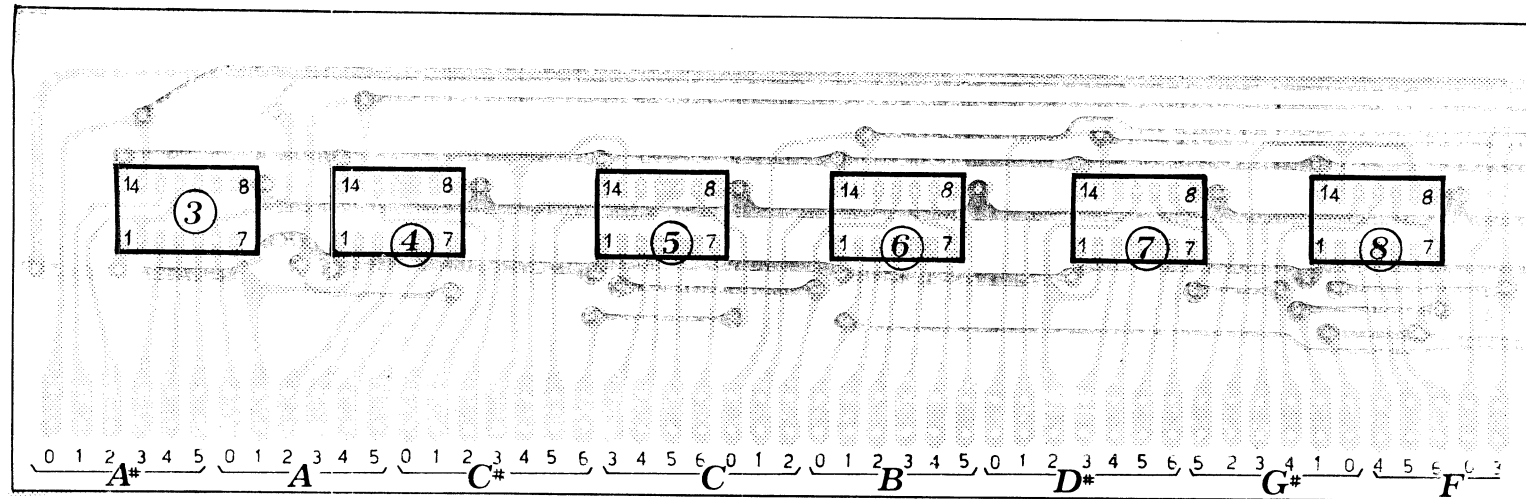


Model
X 705

Object:
Block Diagram

Sheet No 1 - 60

Date 10-10-77



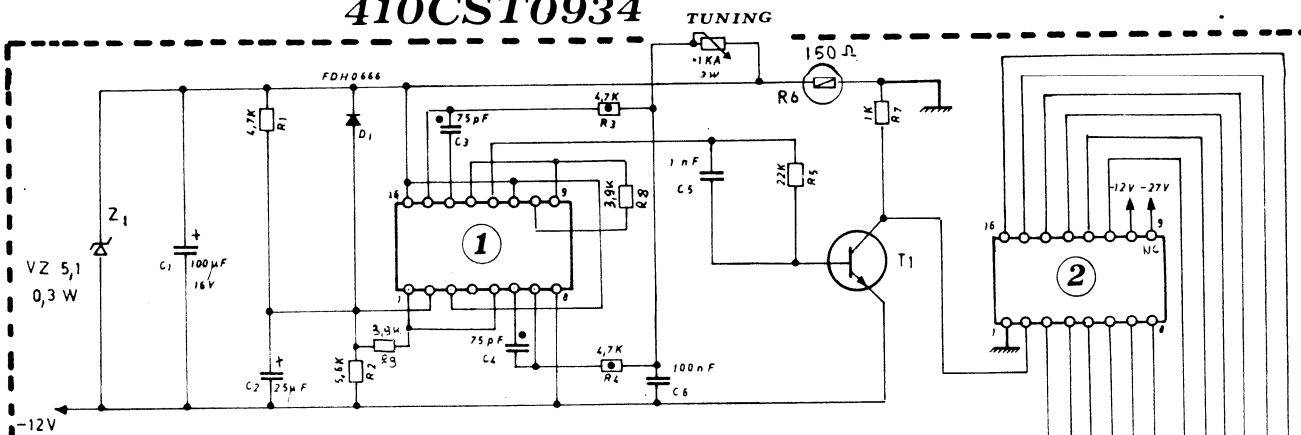
Model
X 705

Object
Assembly of
Printed Circuit

Sheet No 2-60
Date 8-9-78

THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON ASSEMBLED
BOARDS

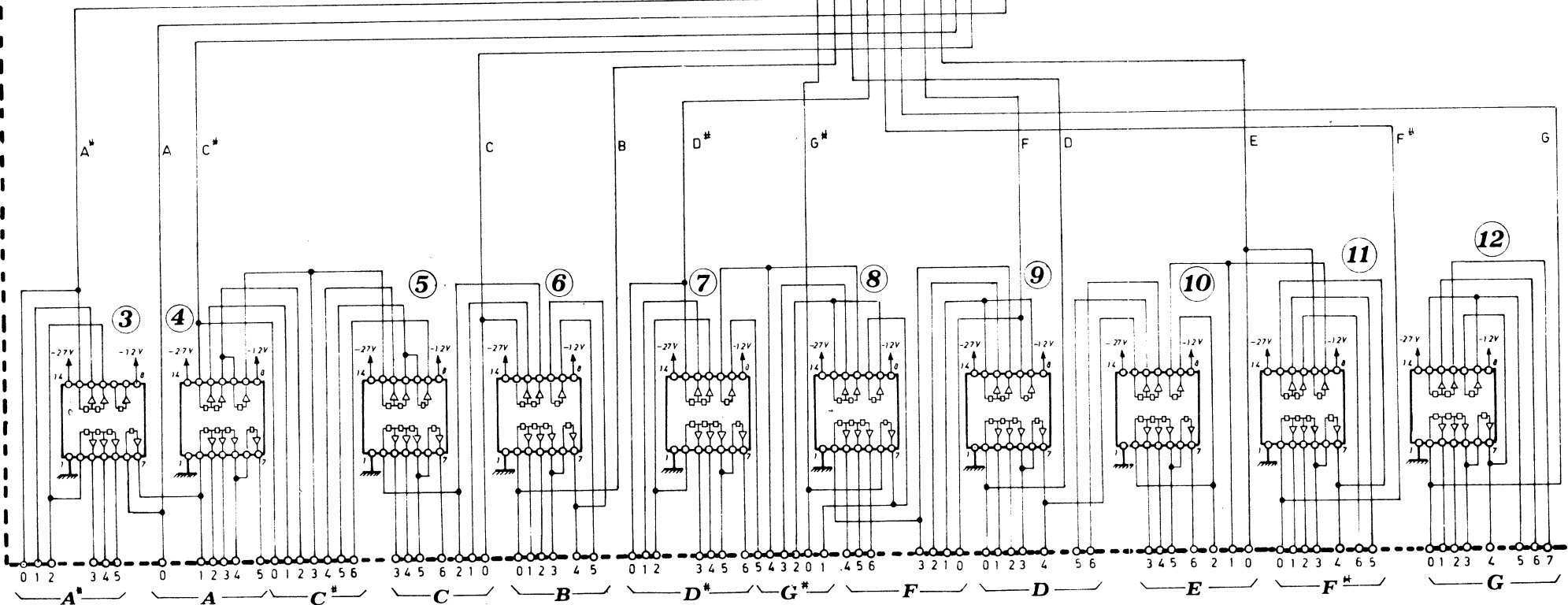
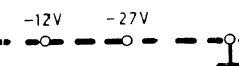
410CST0934

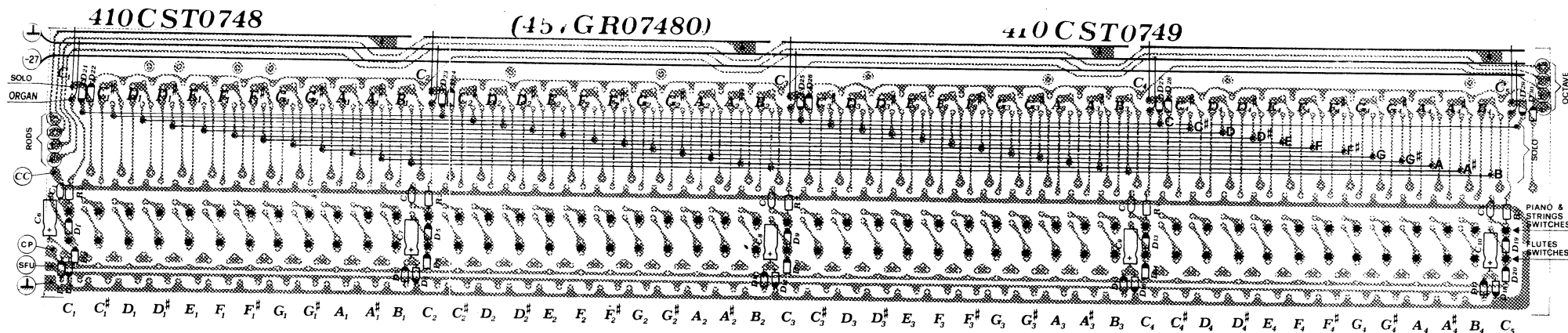


Code	Type	Transistors
T ₁	NPN	BC 173

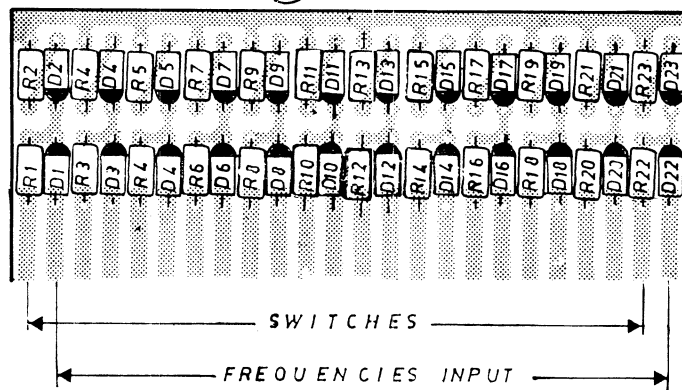
Integrated circuit		
Code	Type	Manufactured
1	74221	Texas
2	MK 50242	Mostek
3 ÷ 12	HBF6740AE	SGS

- 1) All resistors marked by a point • must be metal film 2% tolerance
- 2) All capacitors marked by a point • must be polistirolo 2% tolerance

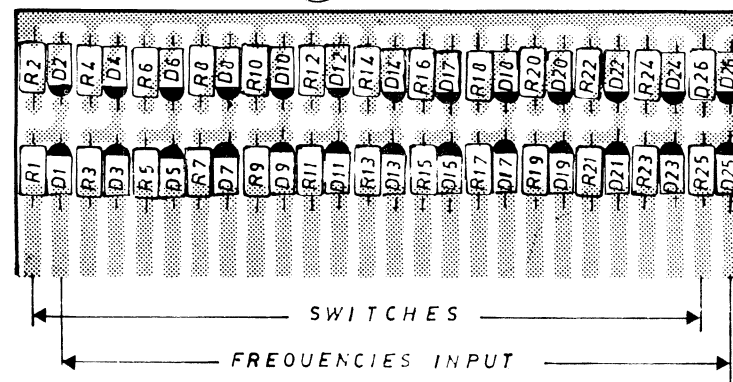




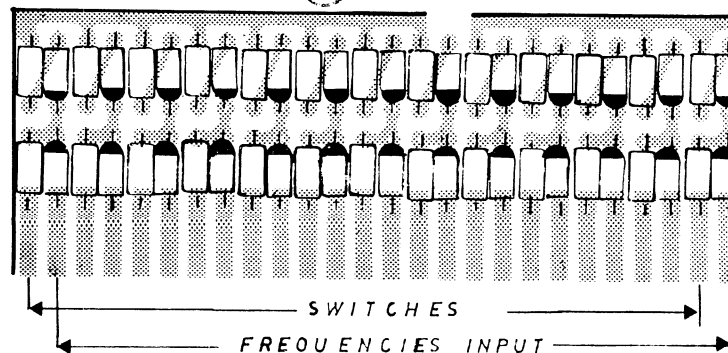
M000489 (31) (427GR0489A)



M000487 (12) (427GR0487B)



M000488 (4) (427GR0488E)



THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS

	Model	Object:	Sheet No 4-50
	X-705	Assembly of Printed Circuit	Date 19-7-77

1) The outputs $\frac{1}{16!}, \frac{2}{16!}$, etc.... should

be connected to board F000512
Sheet No 7 - 60



Model
X 705

Object	Upper Keyboard
--------	-------------------

Sheet No 5 - 60

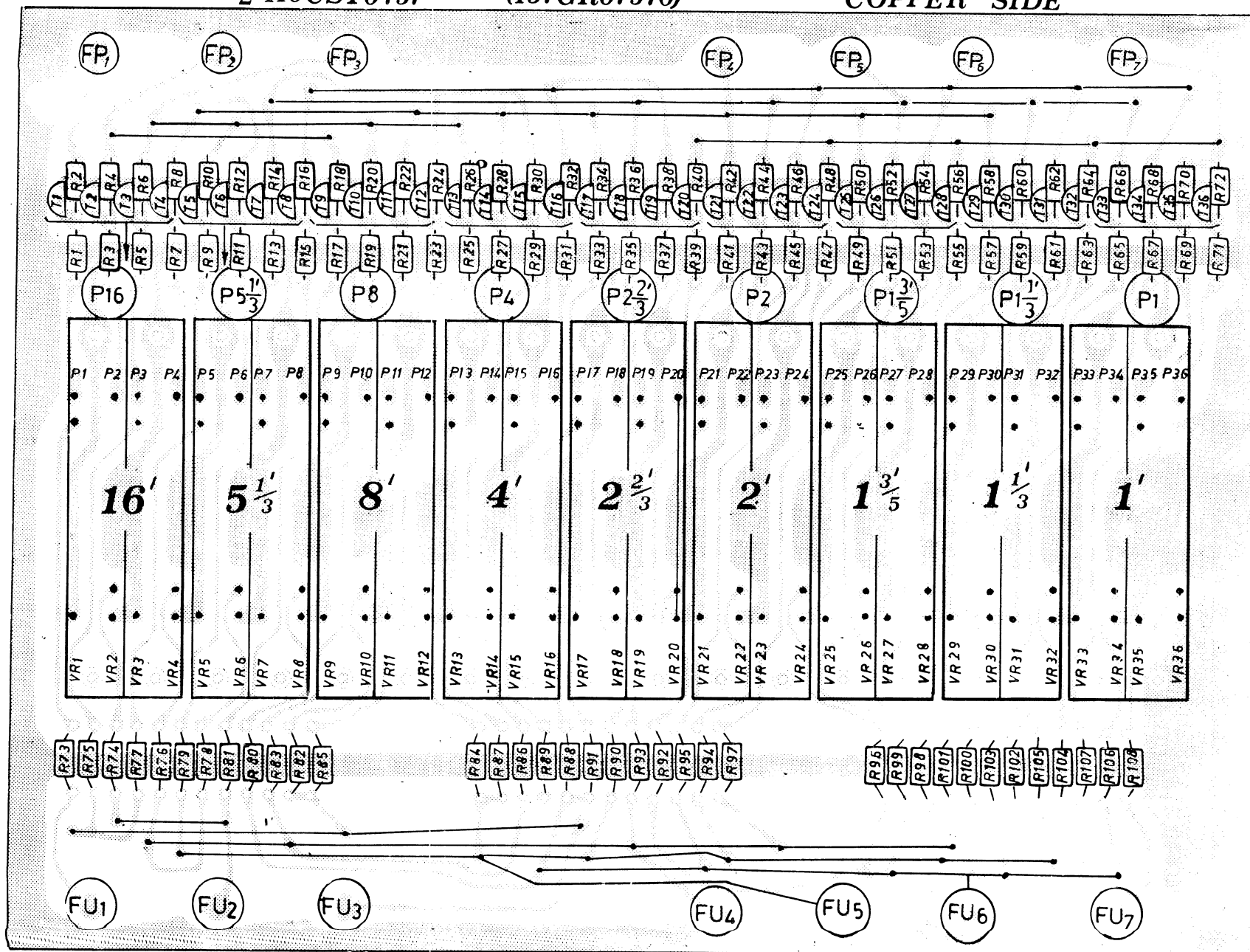
Date 25-8-77

1/2 410CST0757

(457GR07570)

COPPER SIDE

F000512
(427GR05120)



P1	D1	1/16	C1
P2	D2	2/16	C2
P3	D3	3/16	C3
P4	D4	4/16	C4
P5	D5	5/16	C5
P6	D6	5/16	C6
P7	D7	5/16	C7
P8	D8	5/16	C8
P9	D9	1/8	C9
P10	D10	2/8	C10
P11	D11	3/8	C11
P12	D12	4/8	C12
P13	D13	1/4	C13
P14	D14	2/4	C14
P15	D15	3/4	C15
P16	D16	4/4	C16
P17	D17	2/3	C17
P18	D18	2/3	C18
P19	D19	2/3	C19
P20	D20	2/3	C20
P21	D21	1/2	C21
P22	D22	2/2	C22
P23	D23	3/2	C23
P24	D24	4/2	C24
P25	D25	1/3	C25
P26	D26	1/3	C26
P27	D27	1/3	C27
P28	D28	1/3	C28
P29	D29	1/3	C29
P30	D30	1/3	C30
P31	D31	1/3	C31
P32	D32	1/3	C32
P33	D33	1/3	C33
P34	D34	1/3	C34
P35	D35	1/3	C35
P36	D36	1/3	C36

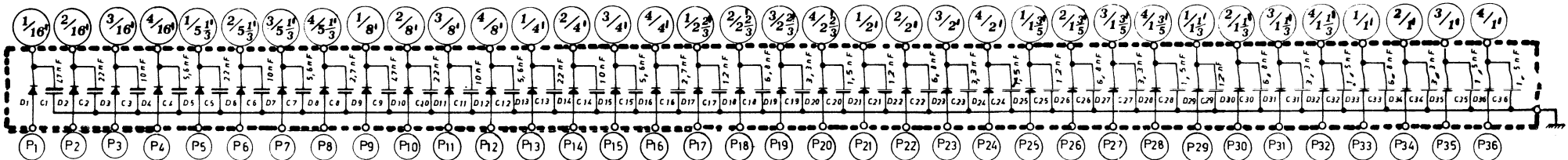


Model
X 705

Object
Assembly of
Printed Circuit

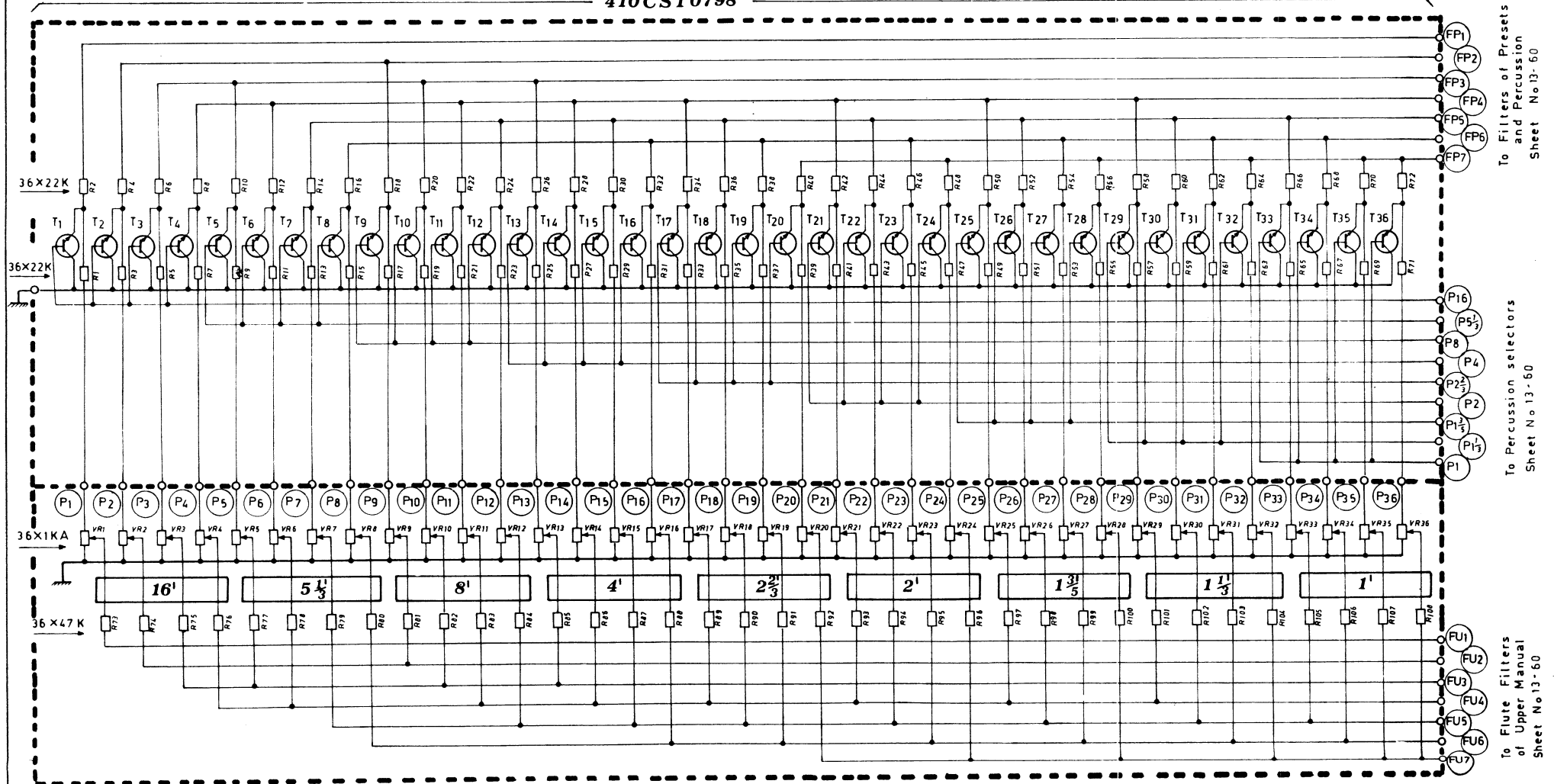
Sheet No. 6-60
Date 1-9-77

THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS.



M000512

410CST0798

To Filters of Presets
and Percussion
Sheet No 13-60To Percussion selectors
Sheet No 13-60To Flute Filters
of Upper Manual
Sheet No 13-60

Code	Type	Transistors
T1 ÷ T36	NPN	BC 171

Model
X 705Object
Upper Keyboard
Drawbars

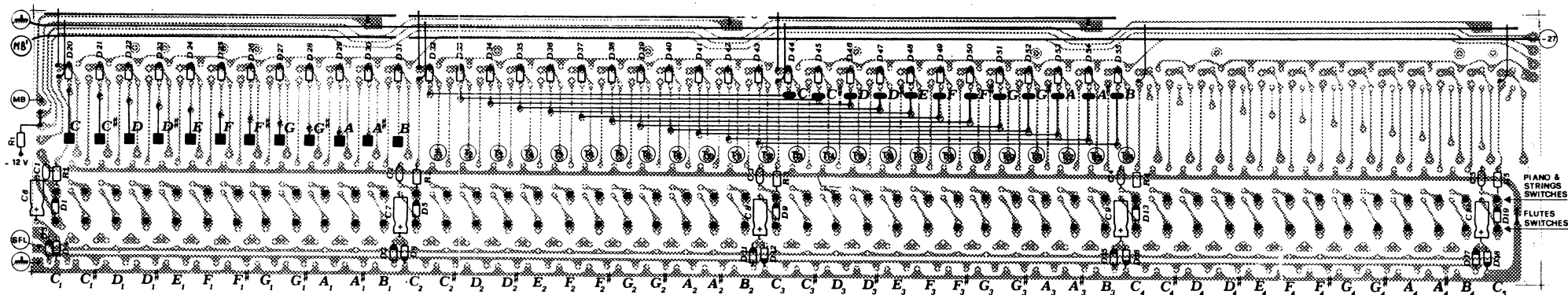
Sheet No 7-60

Date 9-2-77

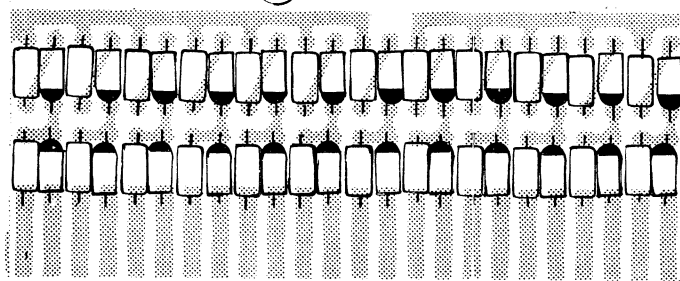
410CST0748

(457GR07481)

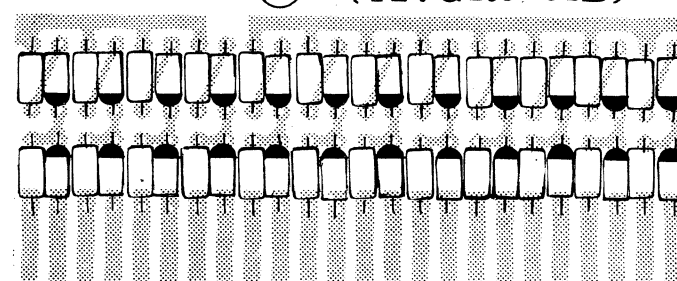
410CST0818



M000490 (11) (427GR0490C)



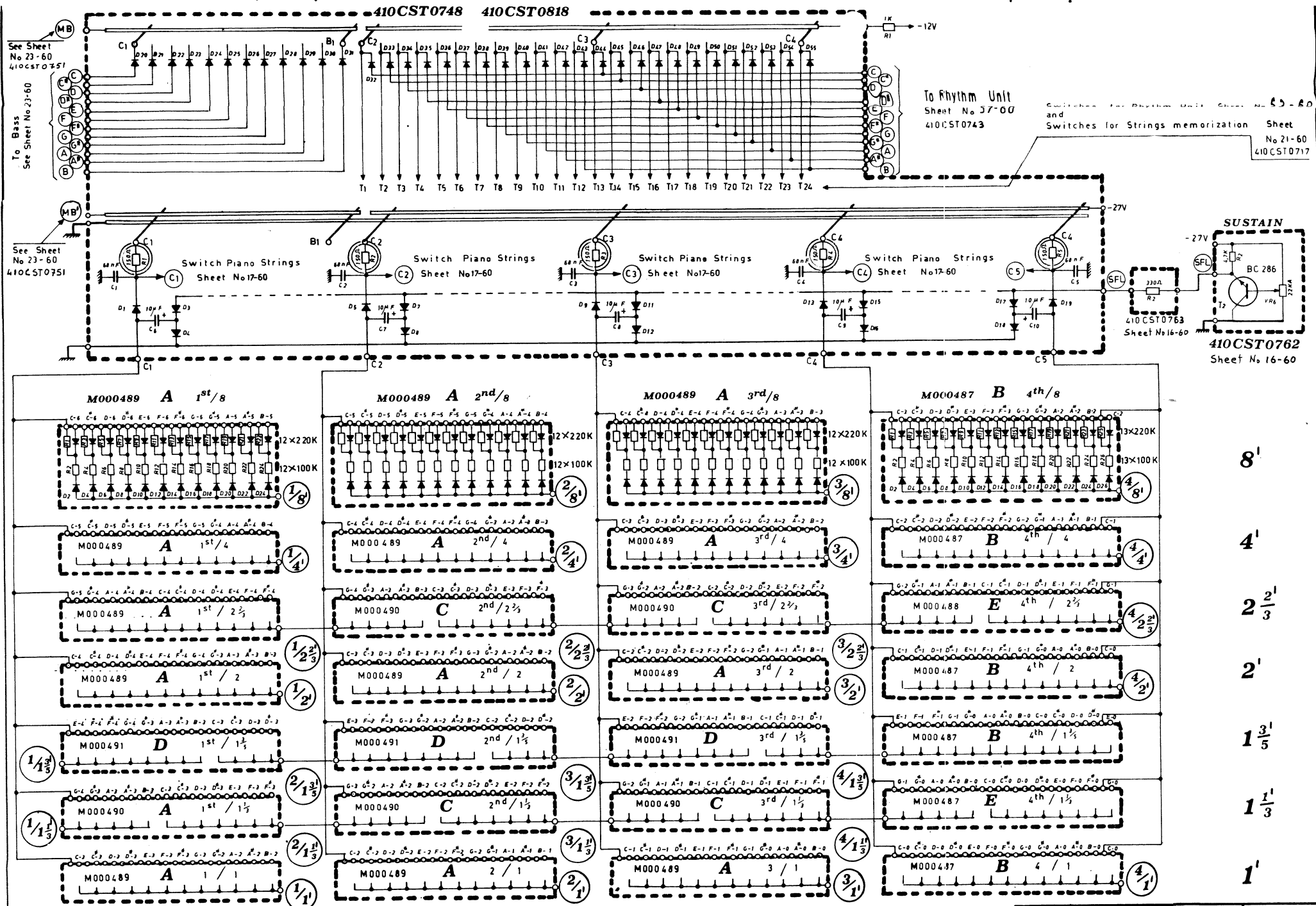
M000491 (6) (427GR0491D)



Model
X 705

Object:
Assembly of
Printed Circuit

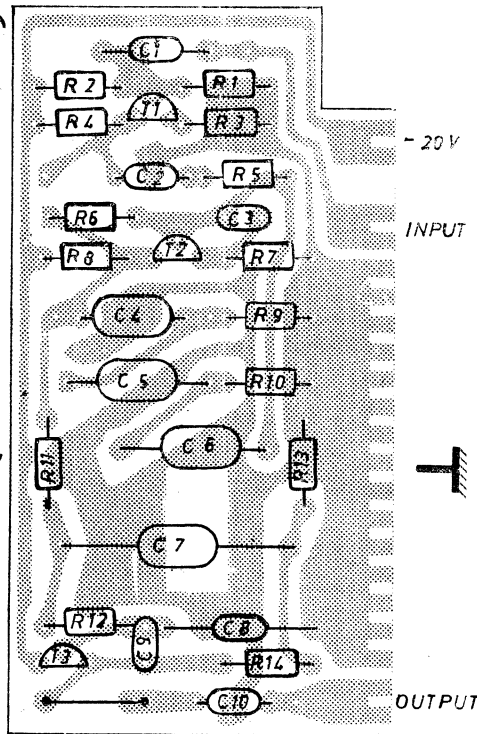
Sheet No 8-60
Date 10-10-77



Note
1) The outputs 1/8', 2/8', etc... should be connected to board
Sheet No 11-60

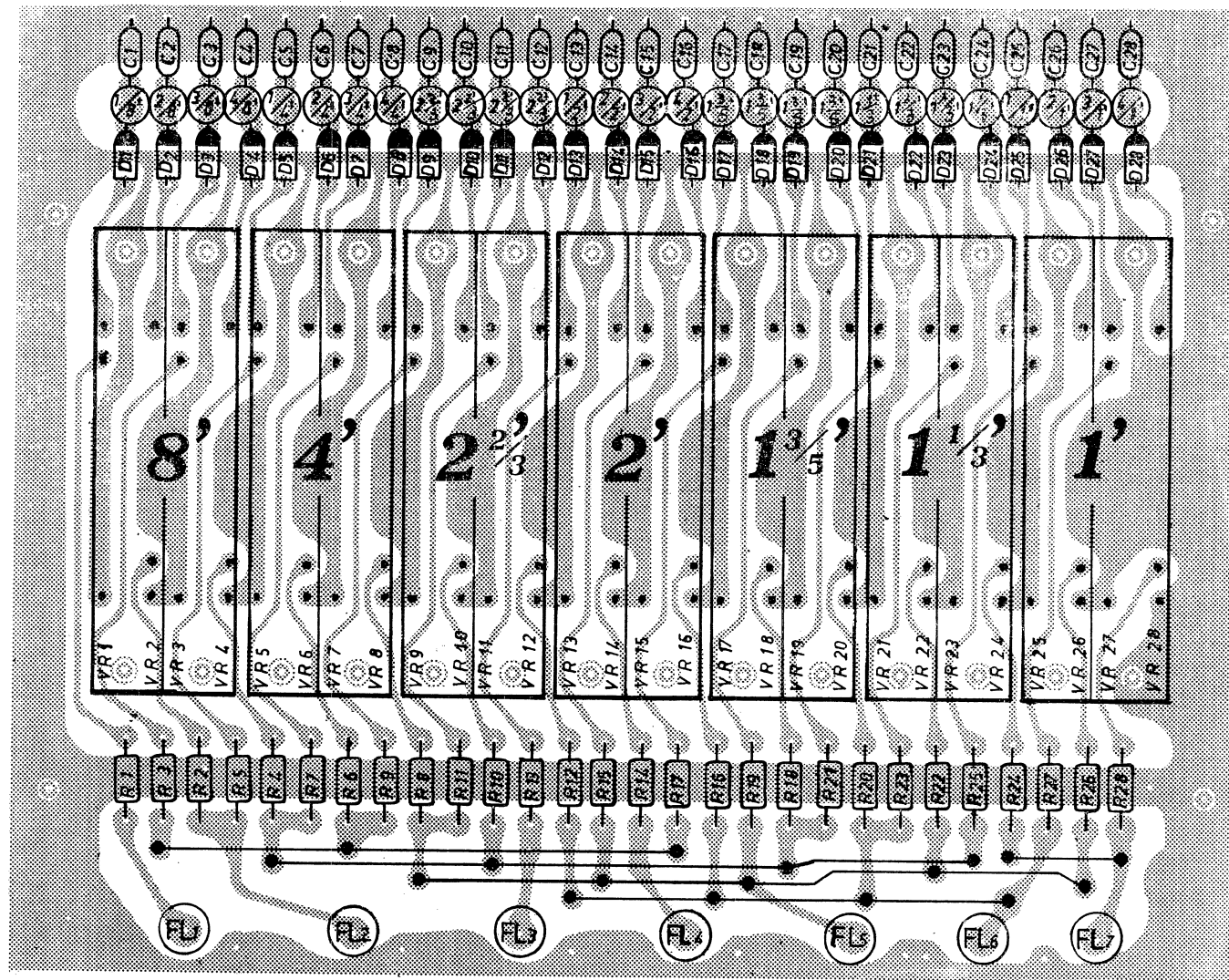
	Model X 705	Object: Lower Keyboard	Sheet No 9-60 Date 26-8-77
--	----------------	---------------------------	-------------------------------

F000445 (427GRO4451-2-3-4-5-6-7)



410CST0750 (457GRO7500)

Copper Side

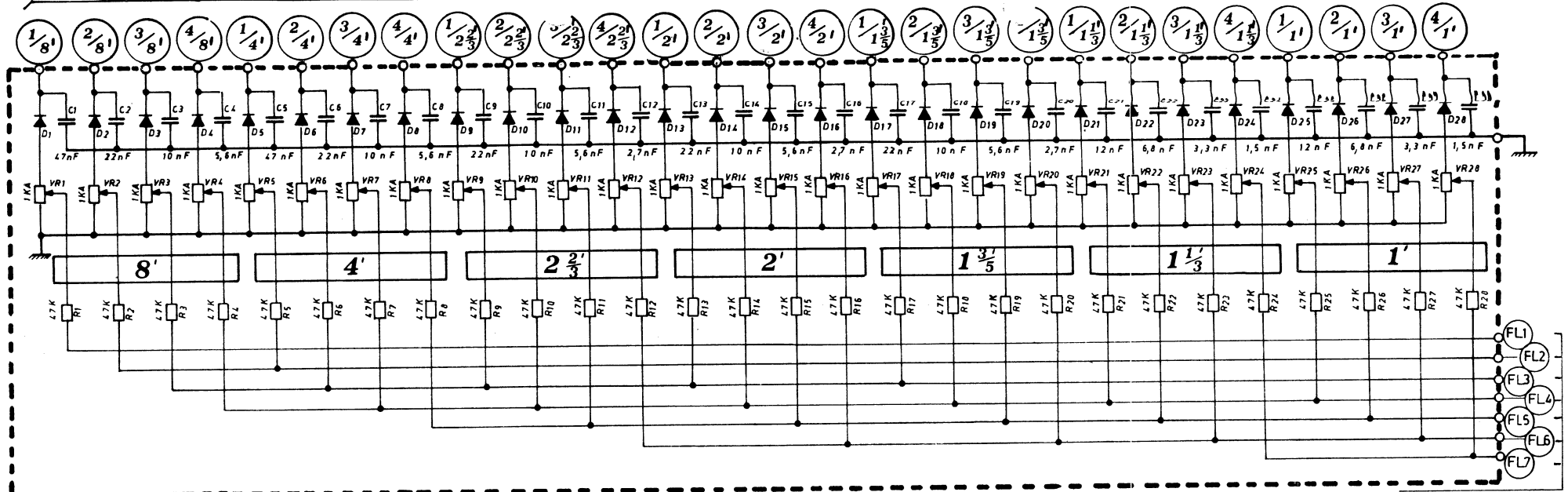


Model
X 705

Object:
Assembly of
Printed Circuit

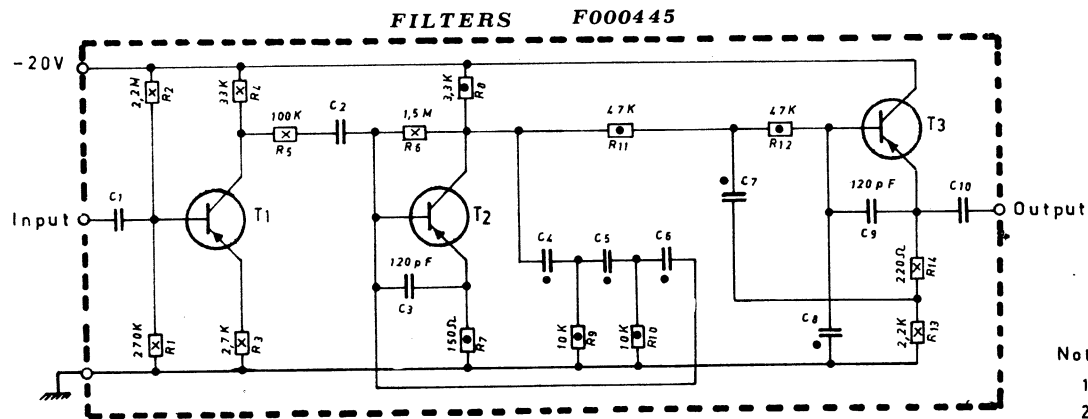
Sheet No 10-60
Date 1-9-77

THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS, WHILE
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS



410CST0750

To Flute Filters
of Lower Manual
Sheet No 13 - 60



Code	Type	Transistors
T1 - T3	PNP	BC 415
T2	PNP	BC 415C yellow point or green point

	Upper Lower and Percussion Filters						
	FU1 FL1 FP1	FU2 FL2 FP2	FU3 FL3 FP3	FU4 FL4 FP4	FU5 FL5 FP5	FU6 FL6 FP6	FU7 FL7 FP7
C1	330nF	220nF	100nF	47nF	27nF	12nF	6,8nF
C2	82nF	47nF	22nF	10nF	5,6nF	2,7nF	1,2nF
C4	47,2nF	23,6nF	11,8nF	5,9nF	2,95nF	1,475pF	737pF
C5	47,2nF	23,6nF	11,8nF	5,9nF	2,95nF	1,475pF	737pF
C6	47,2nF	23,6nF	11,8nF	5,9nF	2,95nF	1,475pF	737pF
C7	176nF	88nF	44nF	22nF	11nF	5,5nF	2750pF
C8	16nF	8nF	4nF	2nF	1nF	500pF	250pF
C10	100nF	100nF	100nF	47nF	22nF	10nF	4,7nF

Note

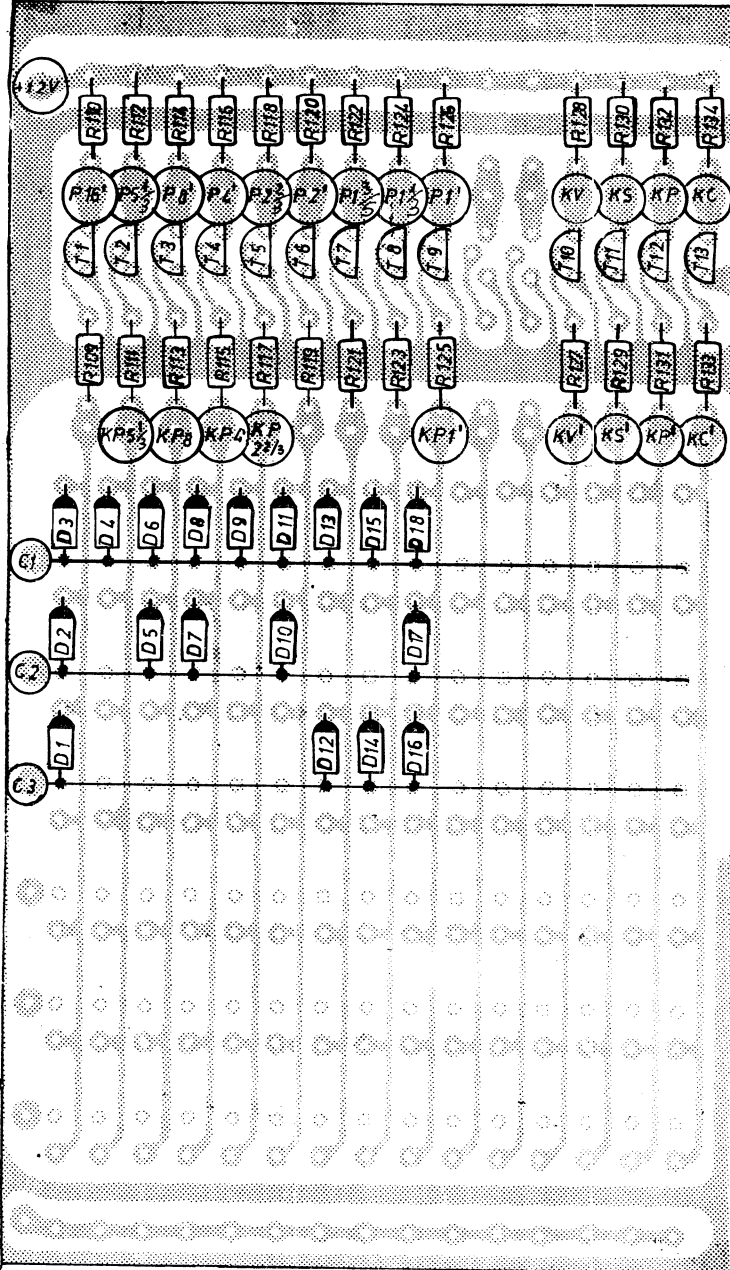
- 1) All resistors marked by a point • must be metal film ones 2% tolerance
- 2) All resistors marked by a asterisk x must be carbon film ones 5% tolerance
- 3) All capacitors marked by a point • are polycarbonate 2% tolerance

	Model	Object:	Sheet No 11-60
	x 705	Lower Manual Draw Bars and Filters	Date 9-3-77

1/2

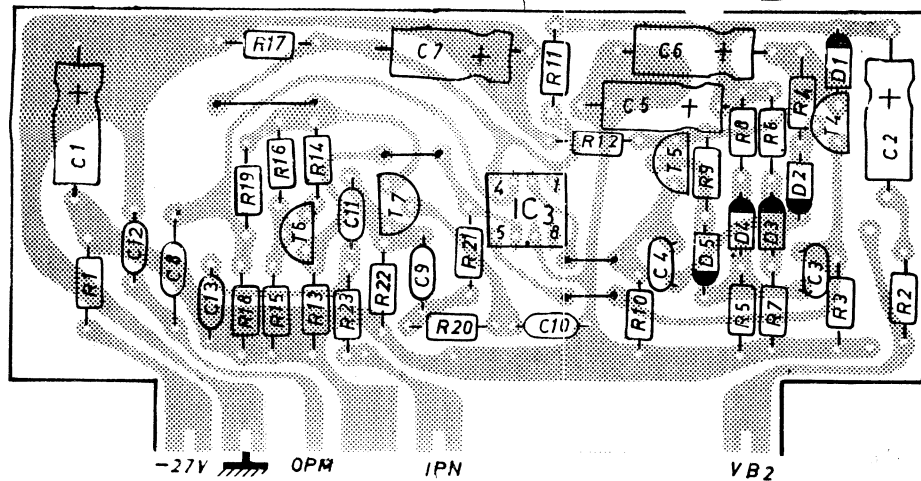
410CST0757

(457GRO7570)



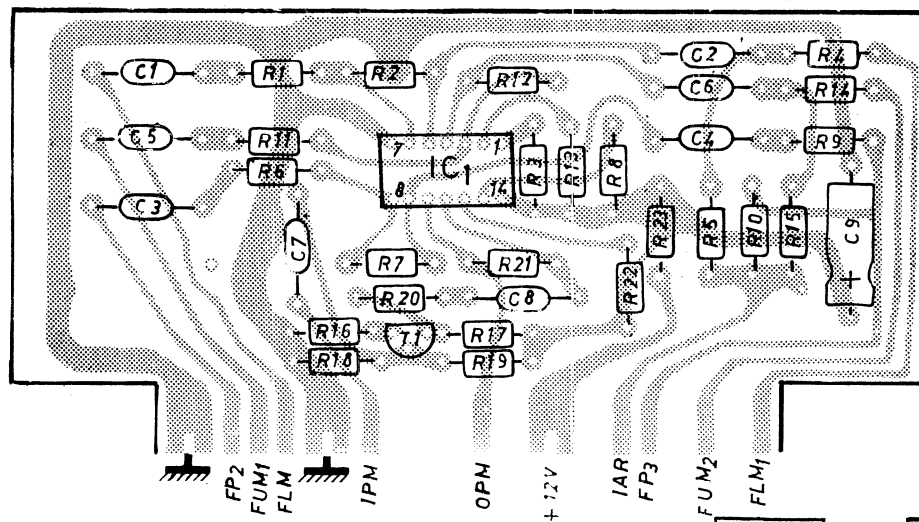
410CST0773

(457GR0773B)



410CST0779

(457GR07790)



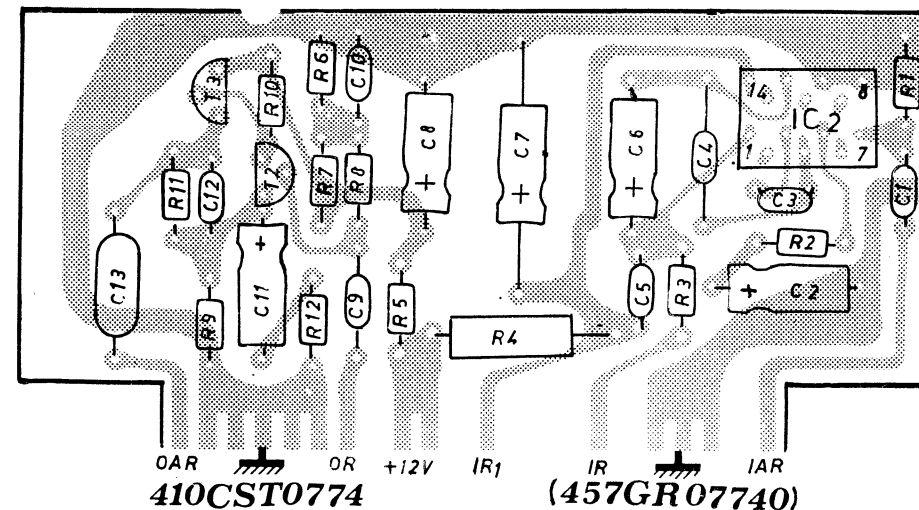
410CST0756

(457PR07561)

THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS.

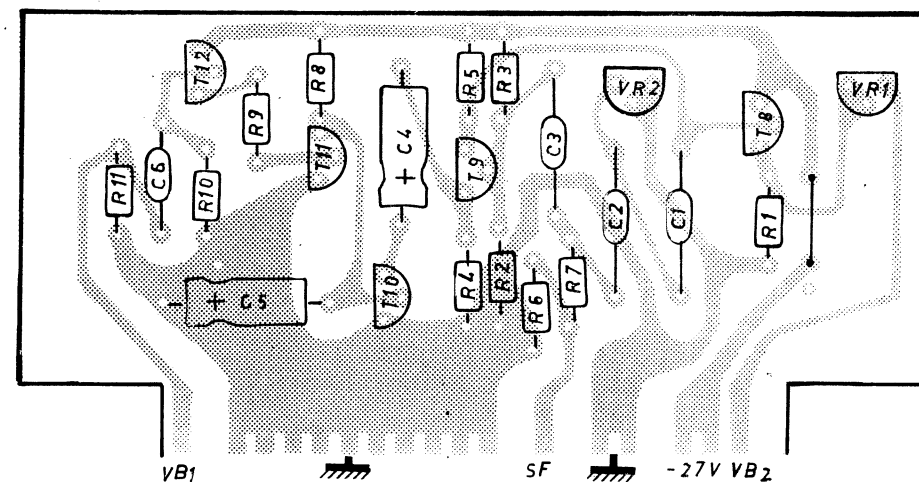
410CST0781

(457GR07810)



410CST0774

(457GR07740)

SLOW
FAST

UPPER

PERC.

LOWER

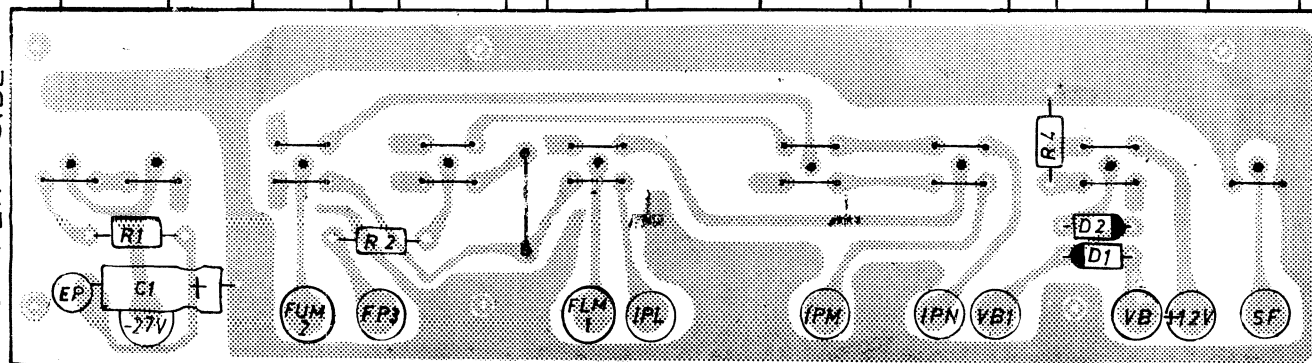
UPPER

LOWER

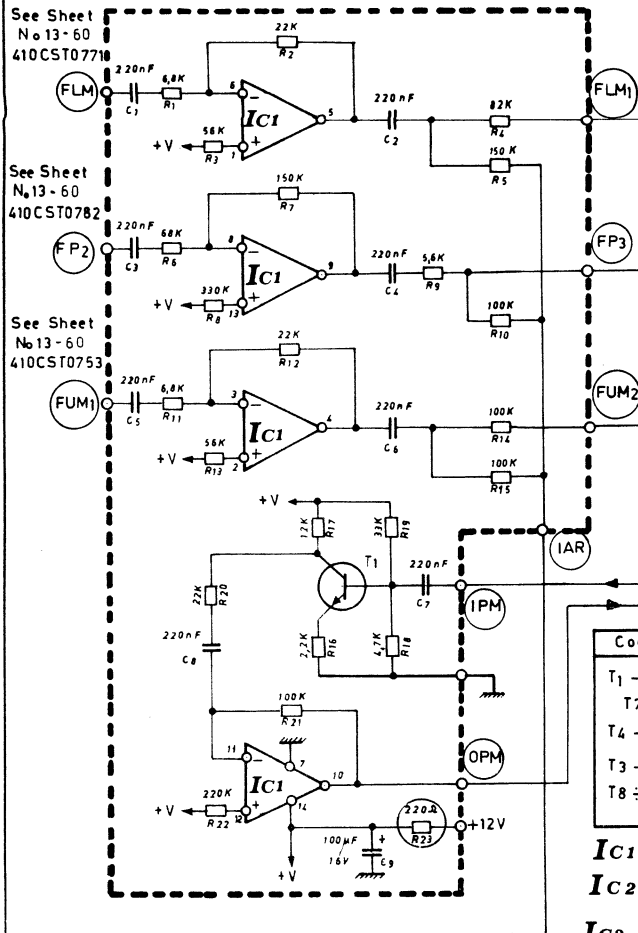
DELAY

SLOW
FAST

COPPER SIDE

Model
X 705Object:
Assembly of
Printed CircuitSheet No 4-60
Date 20-9-77

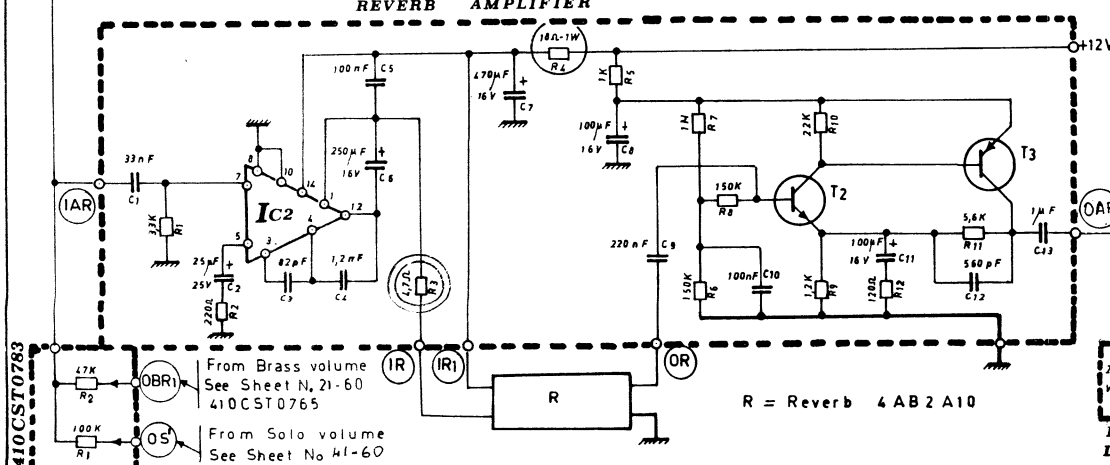
PREAMPLIFIER 410CST0779



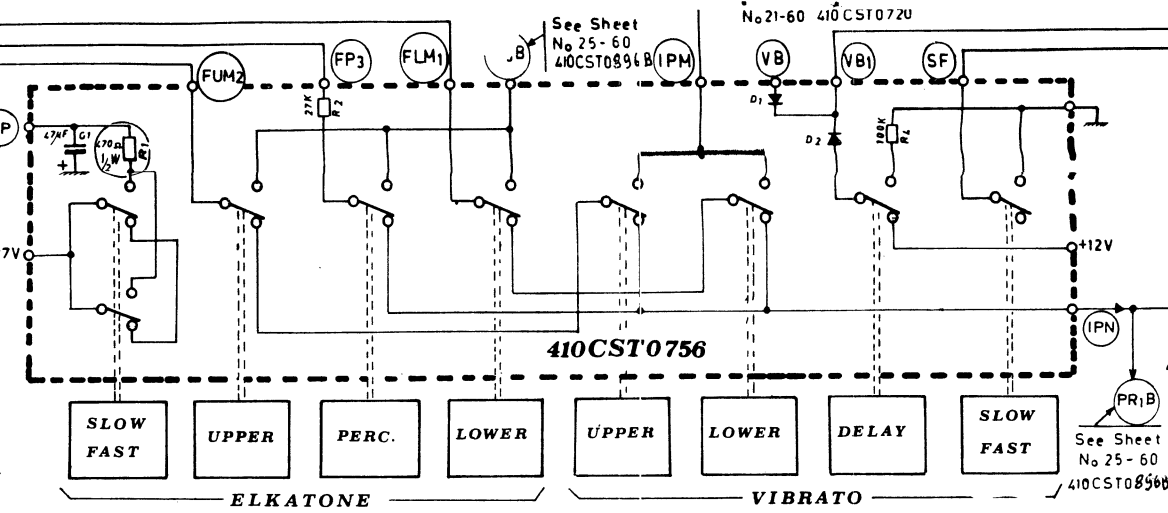
Code	Type	Transistors
T ₁ - T ₂	NPN	BC 173B
T ₇		
T ₄ - T ₅	PNP	BC 205 Mistral
T ₃ - T ₆	PNP	BC 415C
T ₈ - T ₁₂		

IC₁ = 3301
 IC₂ = TAA 611 A12 SGS
 IC₃ = 350Y TCA ITT

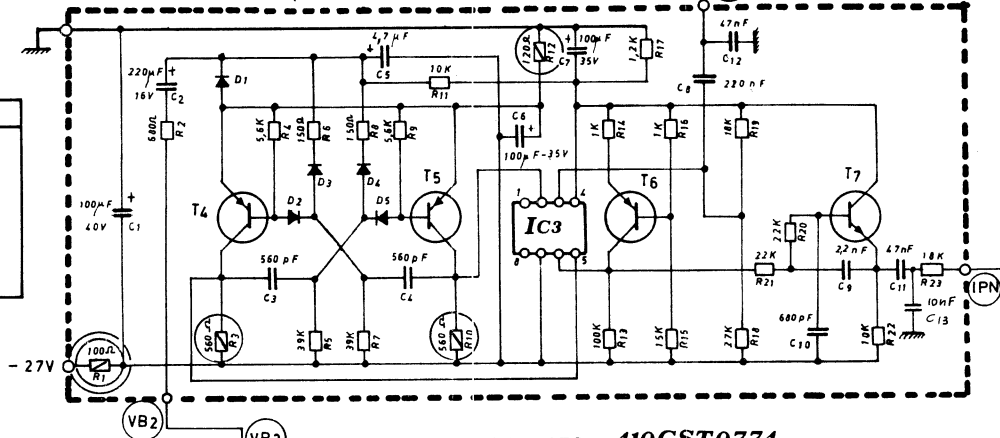
REVERB AMPLIFIER 410CST0781



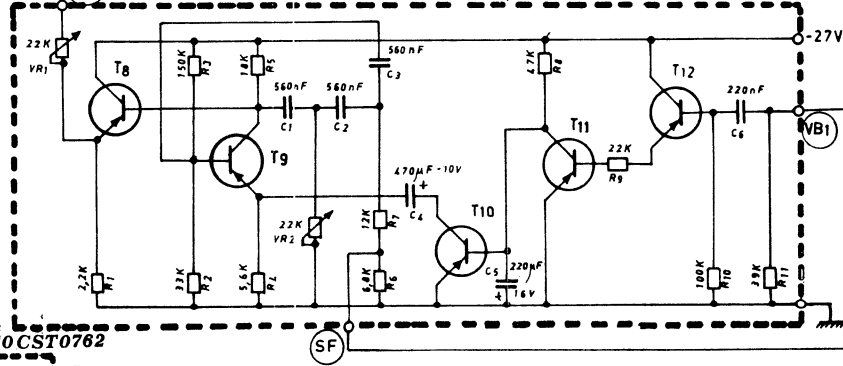
R = Reverb 4 AB 2 A10



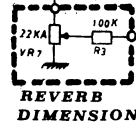
FLUTE MODULATOR 410CST0773(B)



VIBRATO 410CST0774



410CST0762



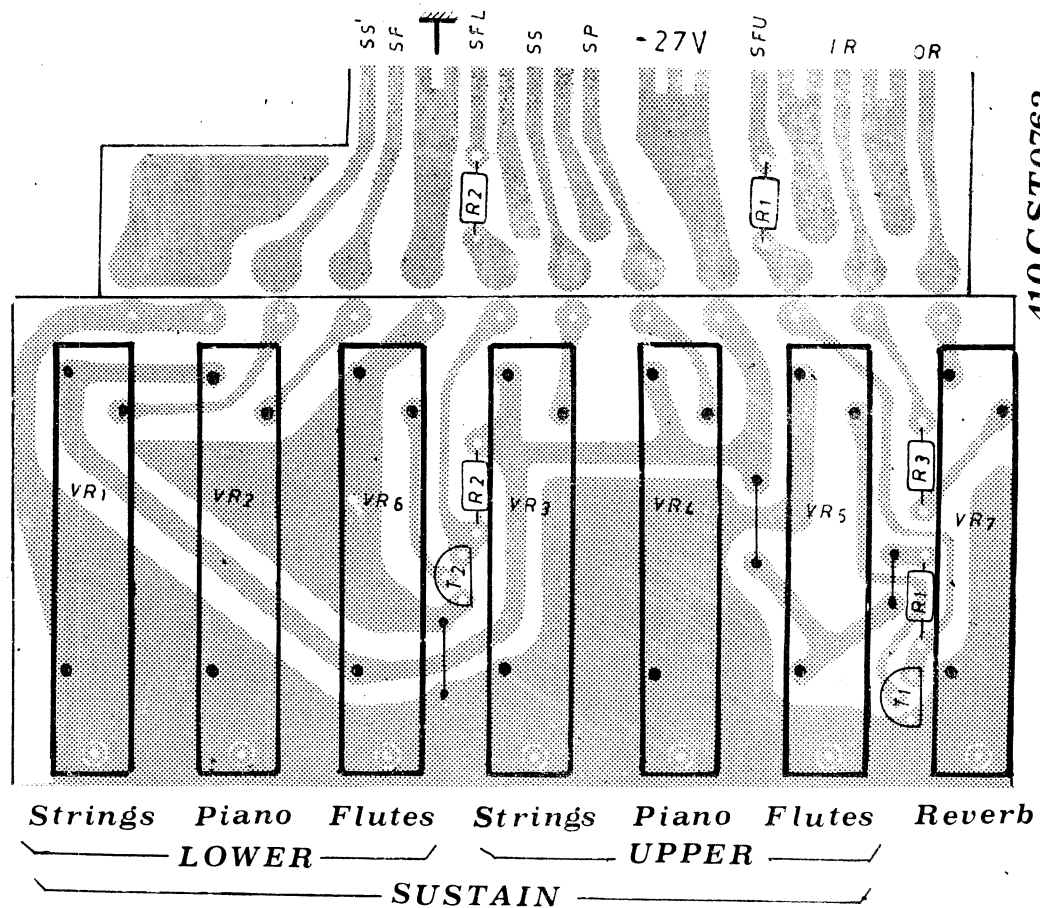
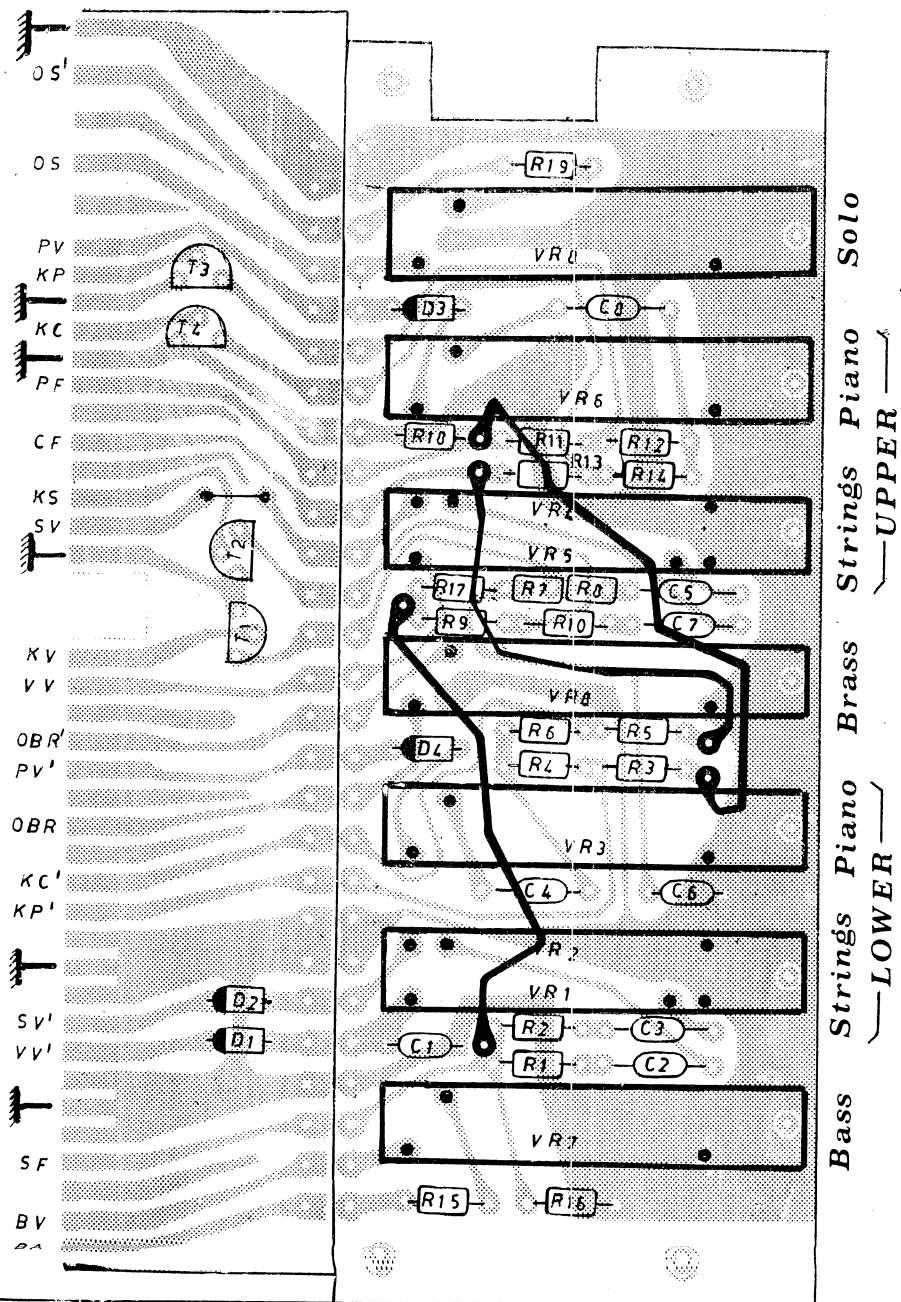
To Preamplifier PR1A
 See Sheet No 25-60
 410CST0836A

Model	Object	Sheet No 15-60
X 705	Preamplifier Vibrato and Reverb amplifier	Date 17-3-77

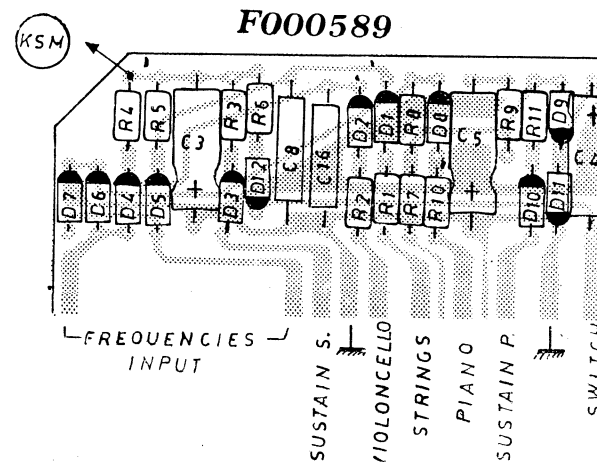
410CST0766

410CST0765

(457GR07650)



410CST0763
410CST0762
(457GR07630)

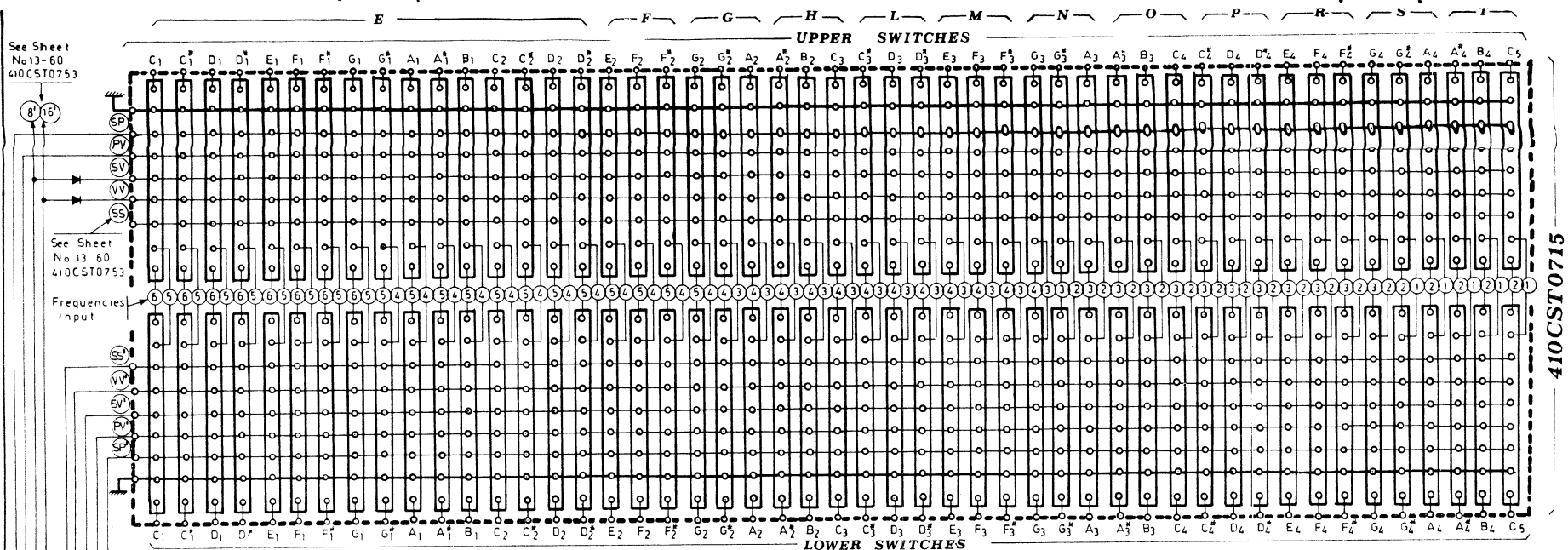


Model
X 705

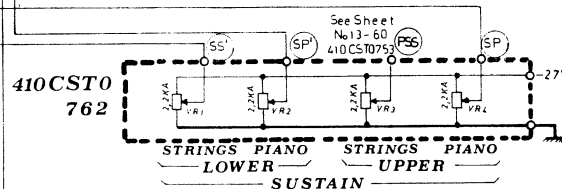
Object:
Assembly of
Printed Circuit

Sheet No 16-60
Date 27-9-77

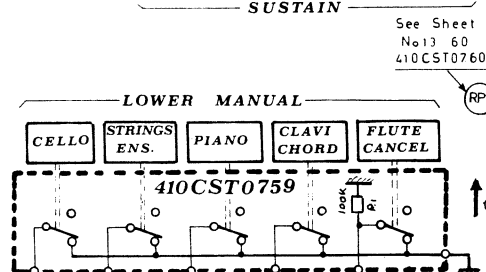
THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILE
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS



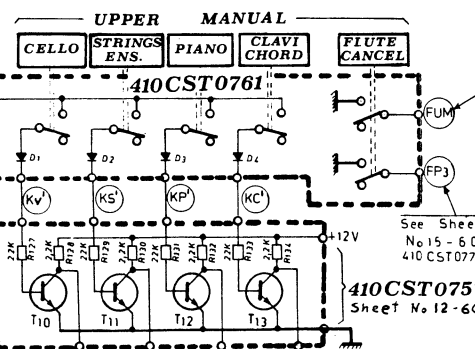
410CST0715



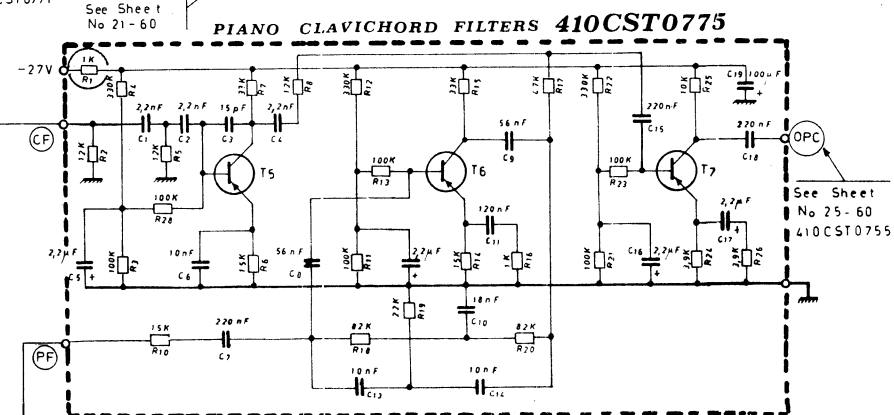
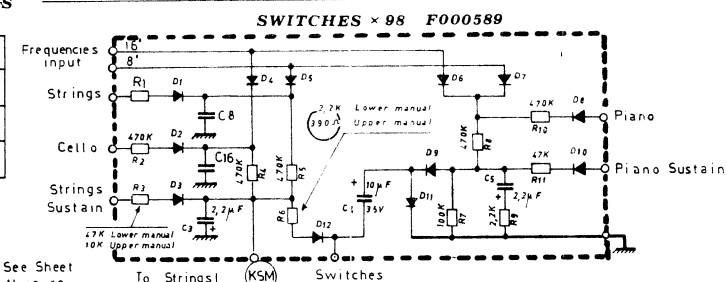
	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>	<i>L</i>	<i>M</i>	<i>N</i>	<i>O</i>	<i>P</i>	<i>R</i>	<i>S</i>	<i>T</i>
<i>C</i> ₈	6,8 nF	5,6 nF	4,7 nF	3,9 nF	3,3 nF	2,7 nF	2,2 nF	1,8 nF	1,5 nF	1,2 nF	1 nF	820 pF
<i>C</i> ₁₆	12 nF	10 nF	6,8 nF	62 nF	5,6 nF	4,7 nF	3,9 nF	3,3 nF	2,7 nF	2,2 nF	1,8 nF	1,5 nF
<i>R</i> ₁	470 K	470 K	470 K	470 K	470 K	470 K	470 K	560 K	560 K	820 K	820 K	1 M



See Sheet
No 13 60
410 CST0760



See Sheet
No 13-60
410CST0771

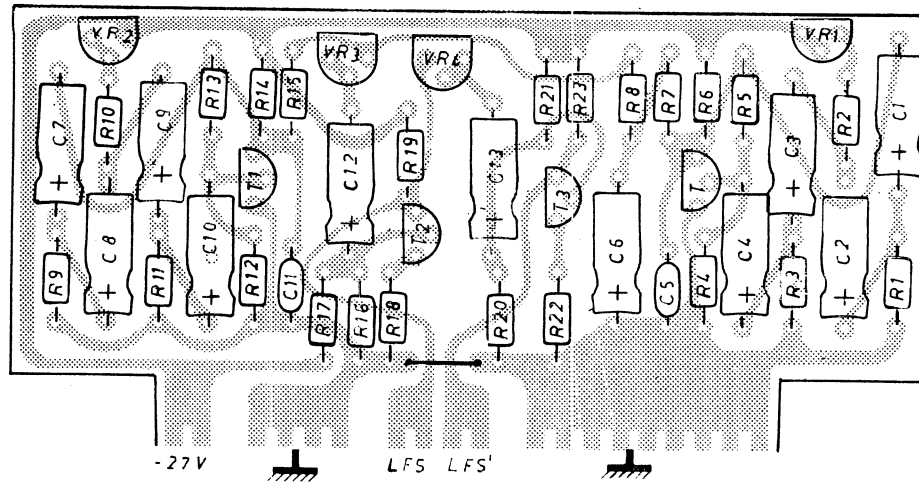


Code	Type	Transistors
$T_1 \div T_4$	NPN	BC 173
$T_5 \div T_7$	PNP	BC 415C
$T_{10} \div T_{13}$	NPN	BC 173

	Model	Object:	Sheet No17-60
	X-705	Piano-Strings switches and Piano Filters	Date 8-9-77

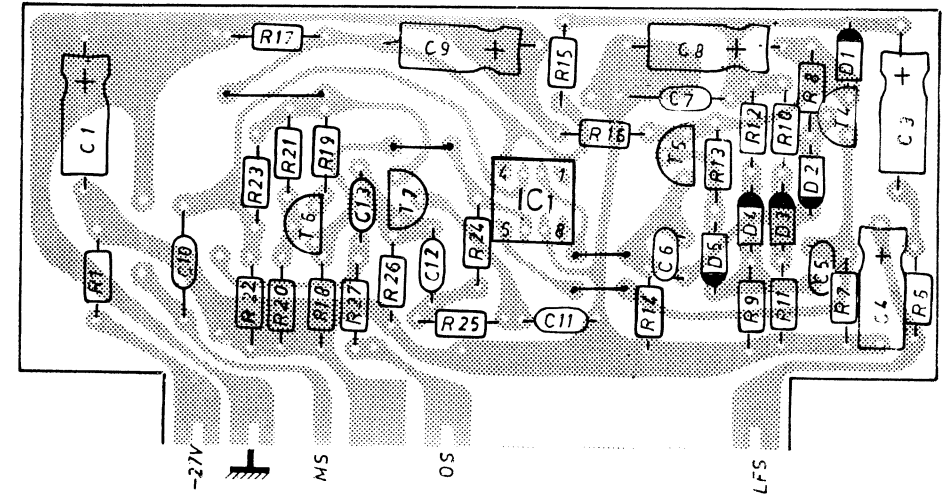
410CST0772

(457GR07720)



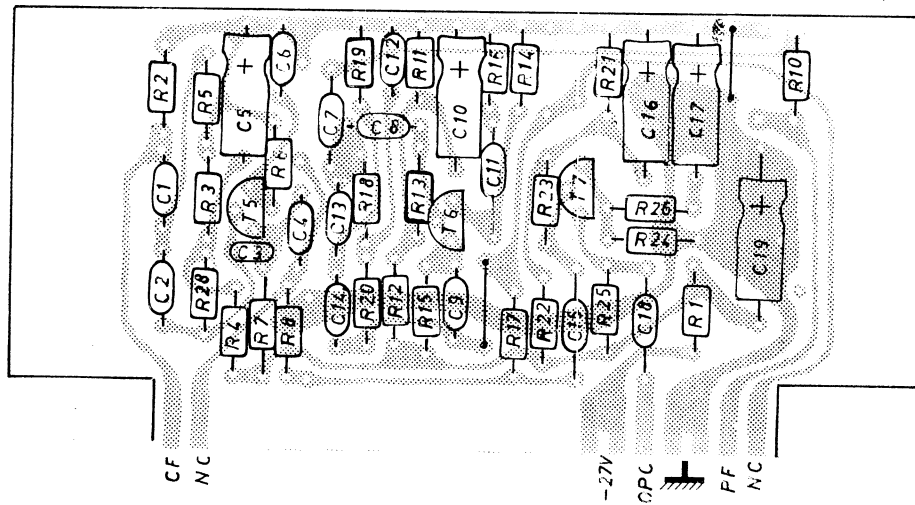
410CST0773

(457GR0773A)



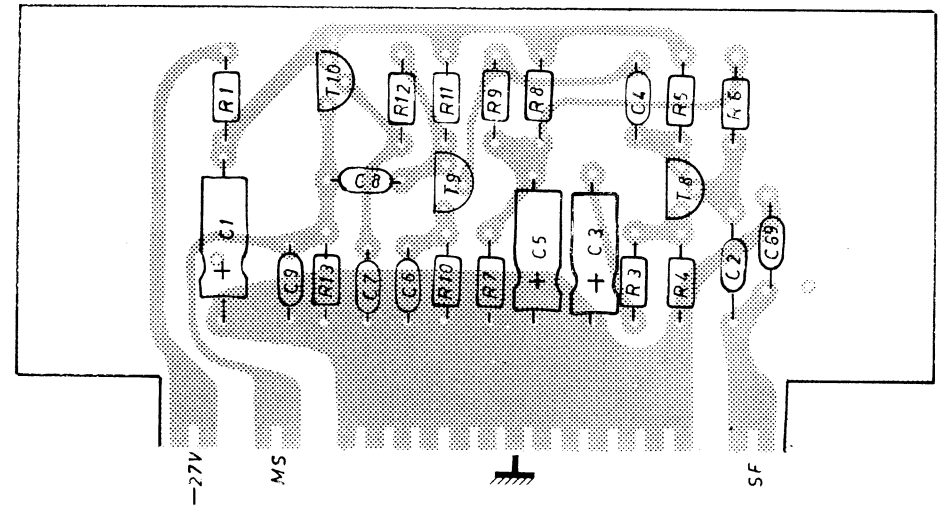
410CST0775

(457GR07750)

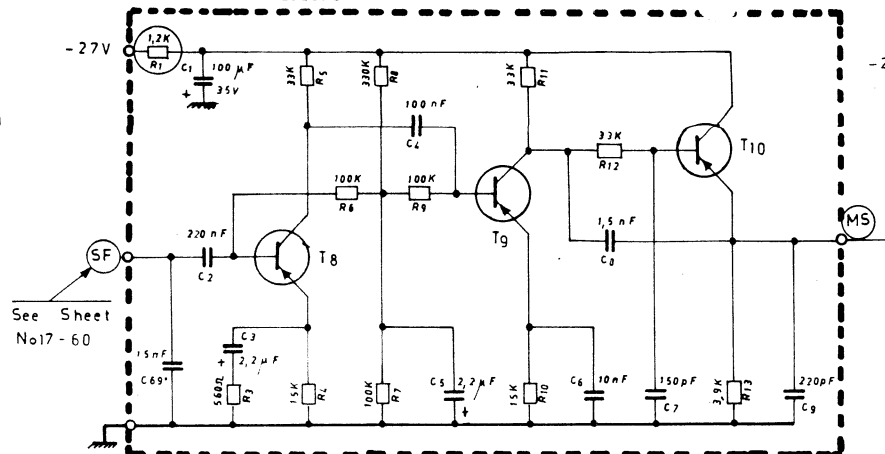


410CST0776

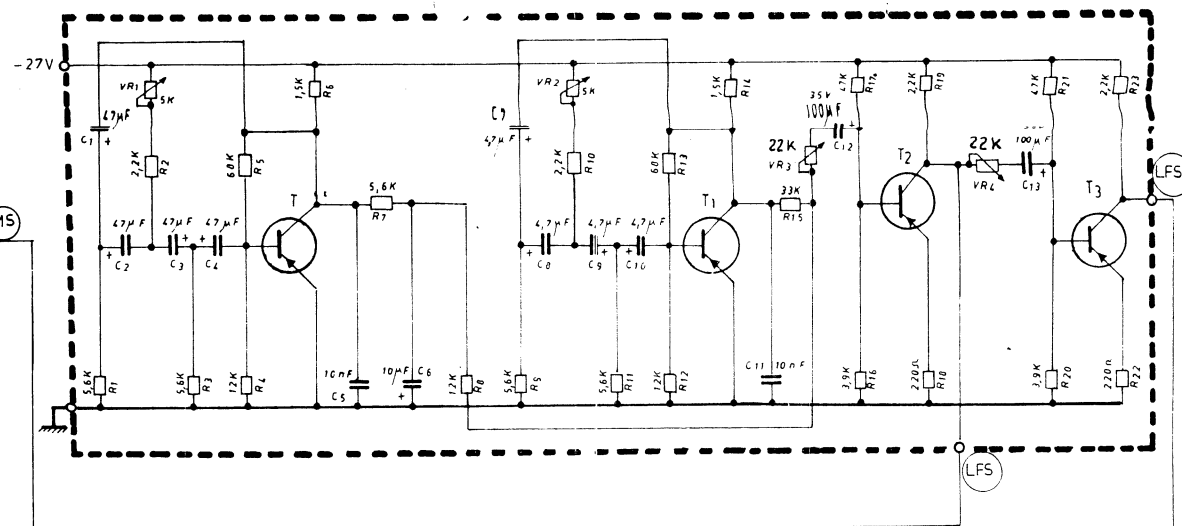
(457GR07760)

Model
X 705Object:
Assembly of
Printed CircuitSheet No 18-60
Date 22-9-77THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS

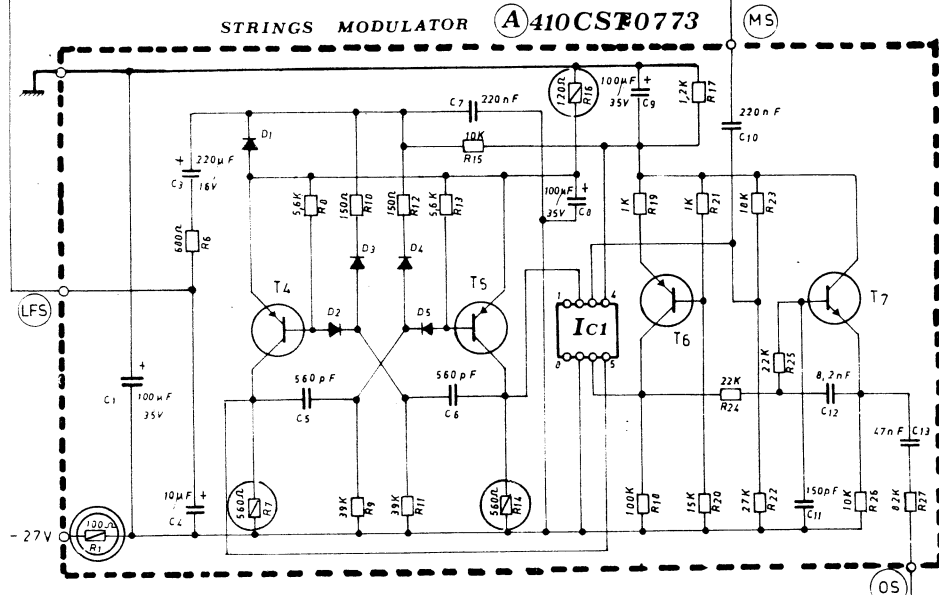
STRINGS FILTERS 410CST0772



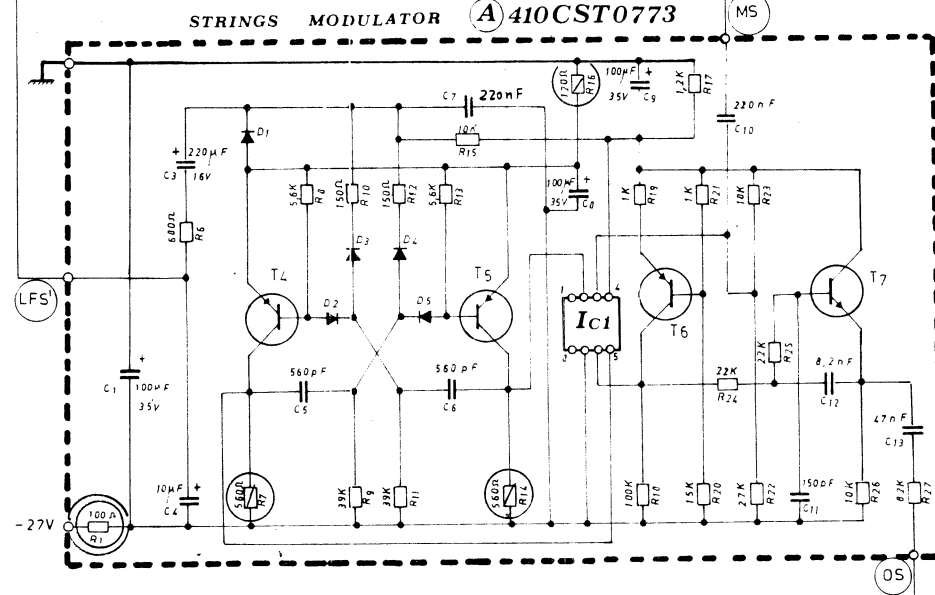
LOW FREQUENCY OSCILLATOR 410CST0772



STRINGS MODULATOR A 410CST0773



STRINGS MODULATOR A 410CST0773



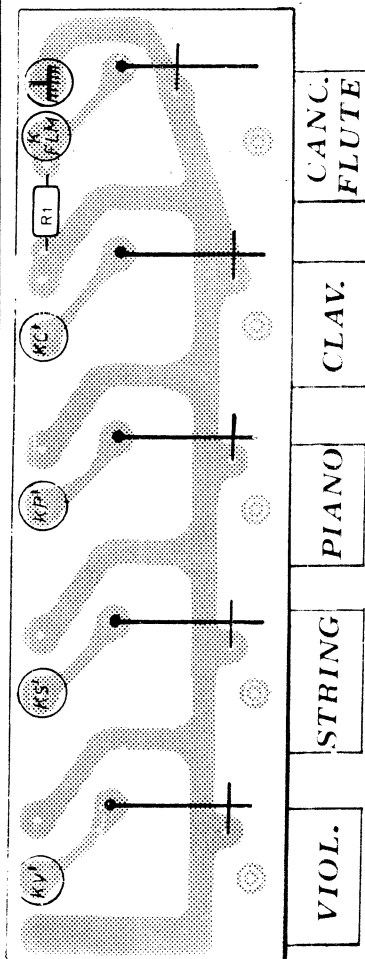
Code	Type	Transistors
T7	NPN	BC 173
T4-T5	PNP	BC 205
T1-T3	PNP	BC 415 C
T6-T8	PNP	BC 415 B
T9-T10		

IC1 = TCA 350E ITT

To Preamplifier (PR3A) 410CST0896A
See Sheet
No 25-60

	Model	Object:	Sheet No19-60
	X 705	Strings Amplifier and Modulators	Date 30-6-77

(457PR07591)
410CST0759



THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS

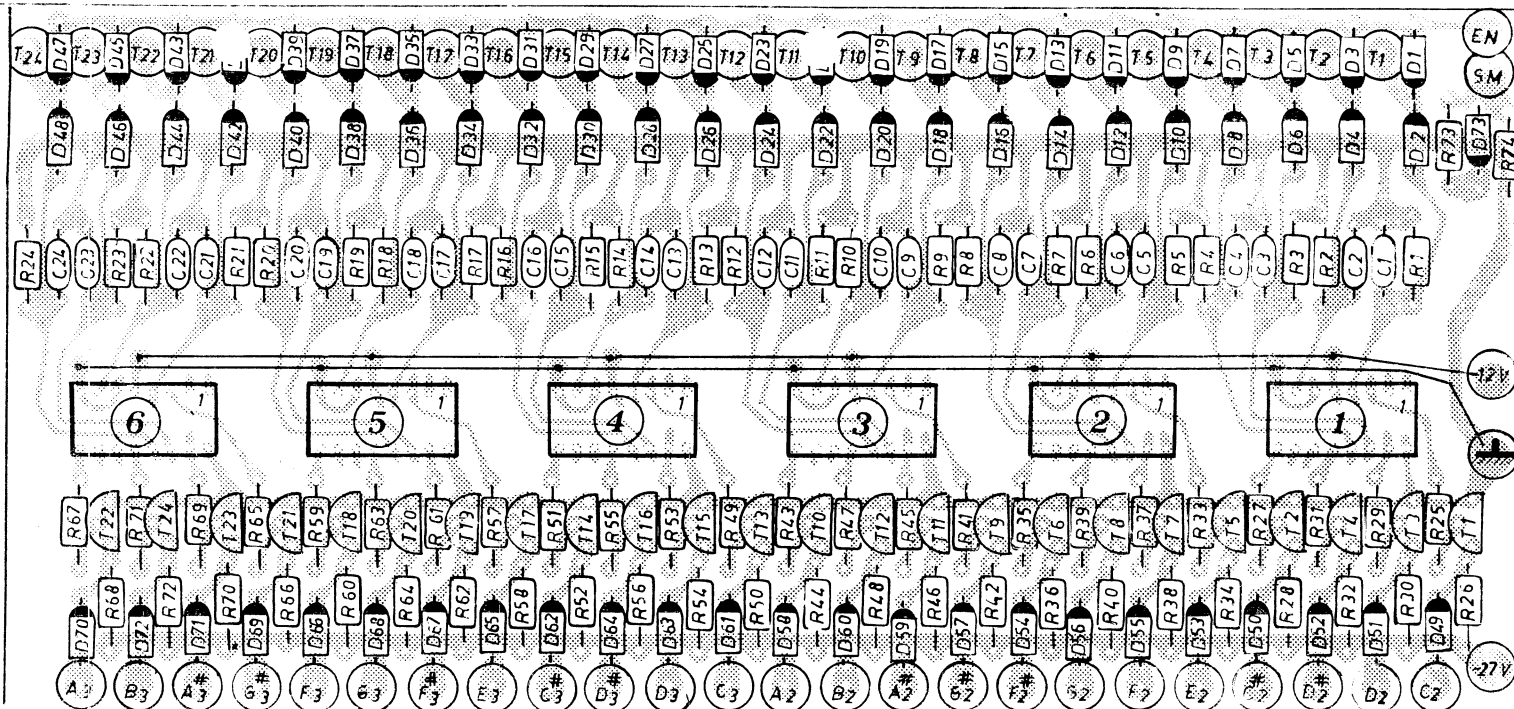


Model
X 705

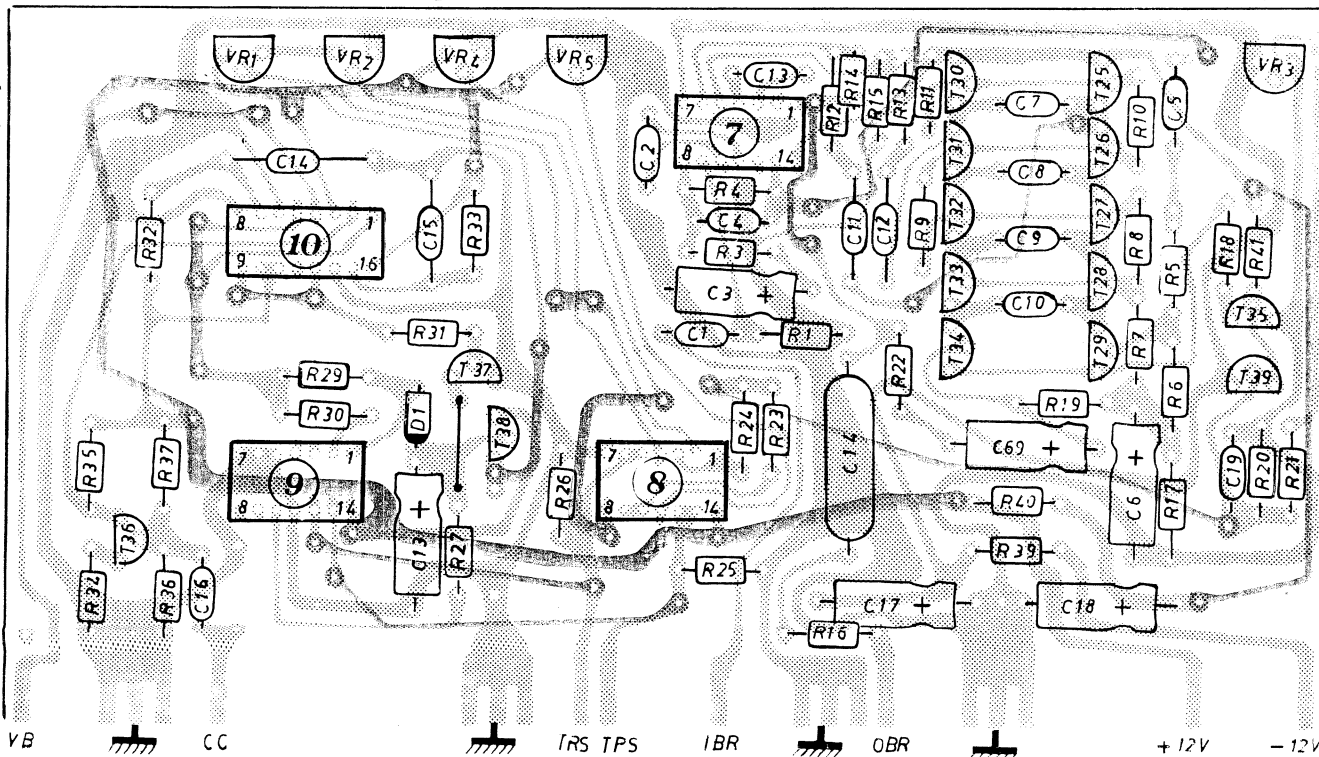
Object:
Assembly of
Printed Circuit

Sheet No 20-60
Date 28 9-77

410CST0717 (457GR07170)



410CST0720 (457GR07200)



VB

CC

IRS TPS

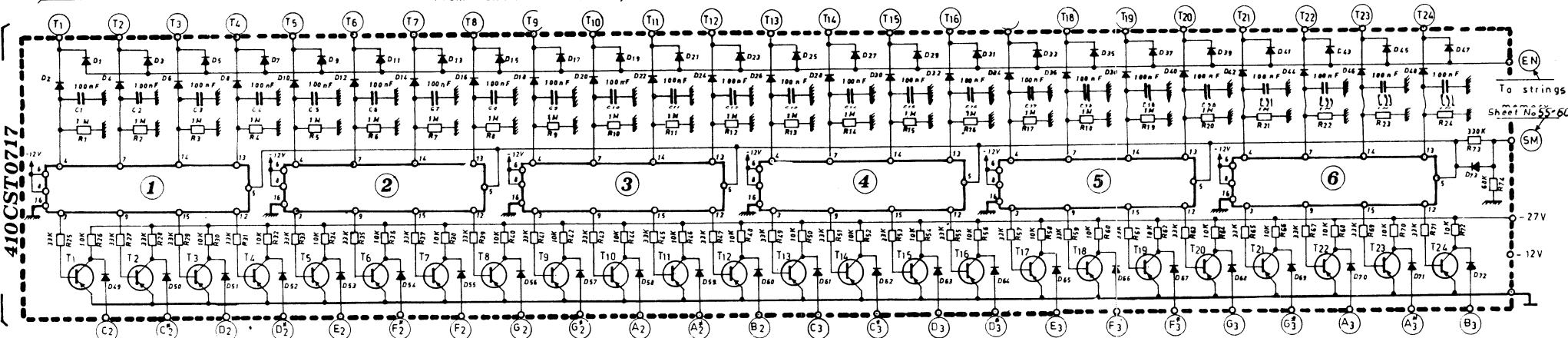
IBR

OBR

+12V

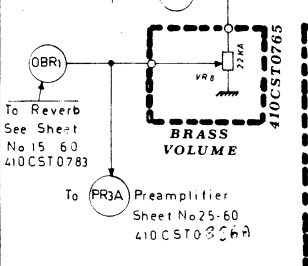
-12V

STRINGS MEMORIZATION
410CST0717



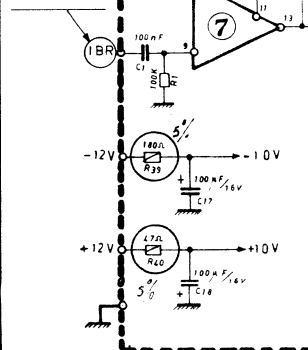
To (KSM) Strings switches lower manual (F000589) See Sheet No 17 - 60

To Presets
See Sheet
No 13 - 60
410CST0753



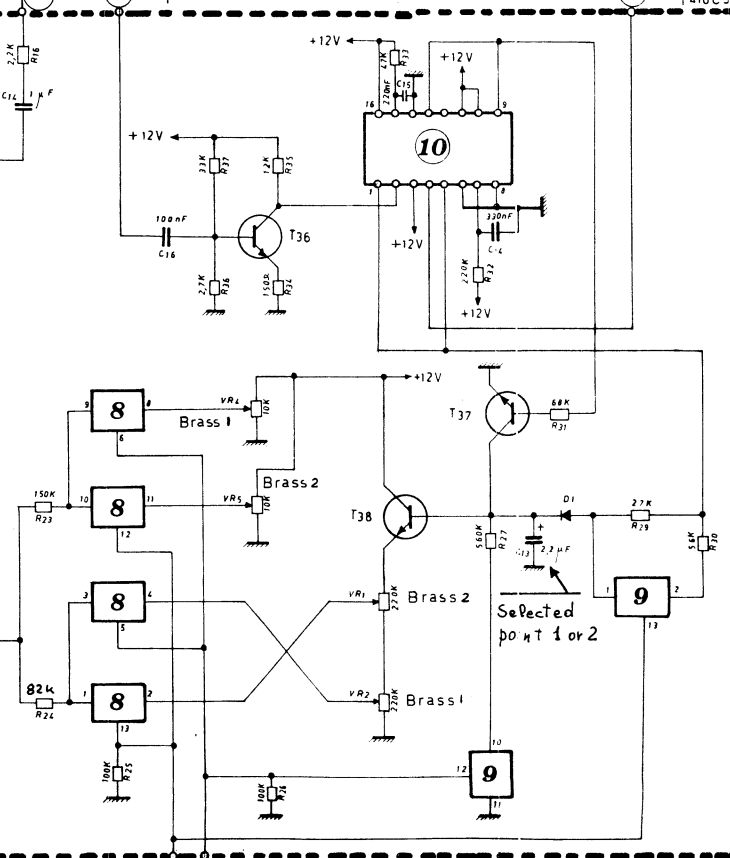
To PR3A Preamplifier
Sheet No 25 - 60
410CST0753

To Presets
See Sheet
No 13 - 60
410CST0753



BRASS 410CST0720

See Sheet No 5 - 60
410CST0748



See Sheet
No 13 - 60
410CST0753

See Sheet
No 15 - 60
410CST0756

Code	Type	Transistors
T1 - T24 T39	PNP	BC 415 B
T25-T38		BC 173

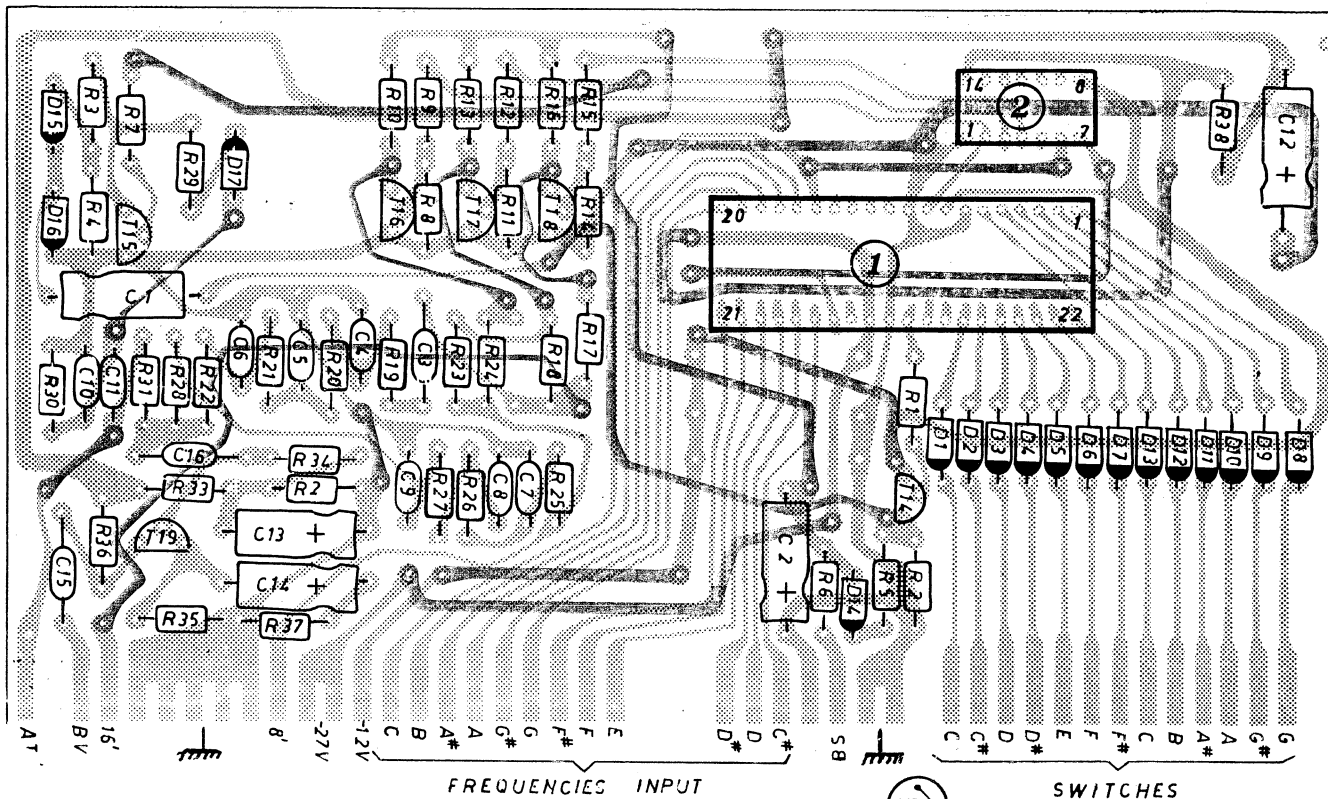
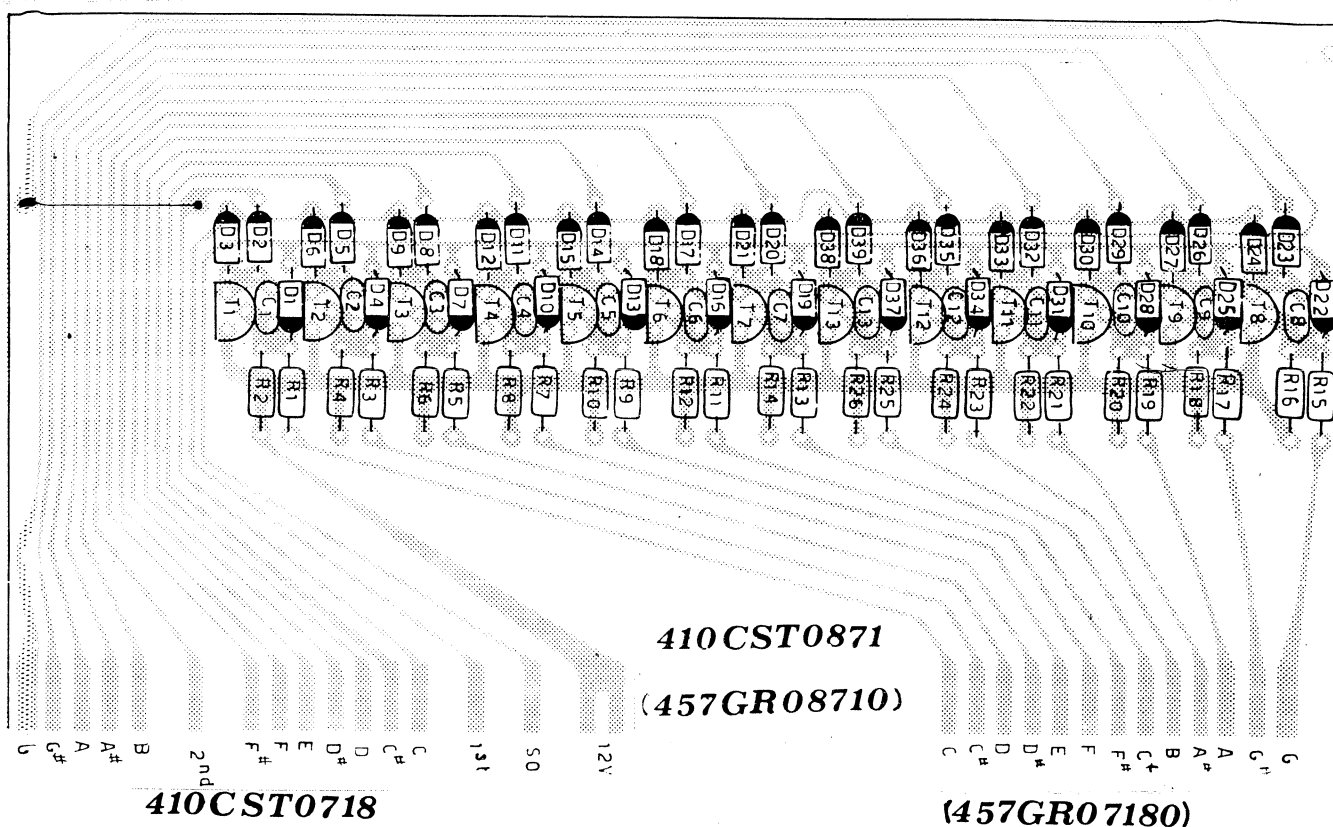
Integrated circuits		
Code	Type	Manufactured
1 - 6	4042	Fairchild
7	μA739 PC	
8 - 9	4016	
10	74 C 221	

4016 { Pin 7 = GND
Pin 14 = +12V

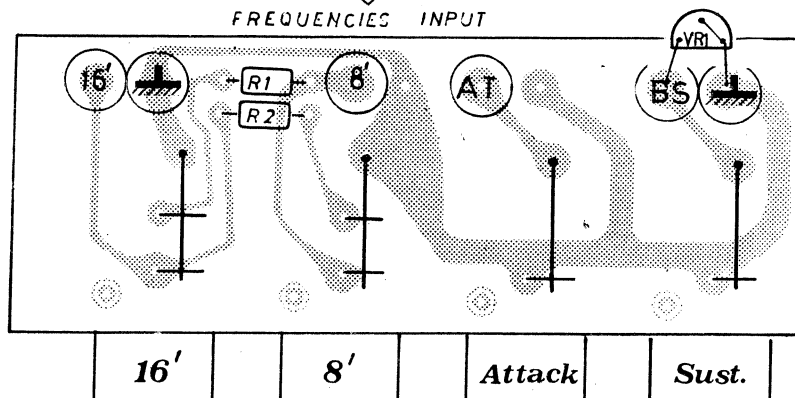


Model X 705	Object: Strings memorization and Brass	Sheet No 21 - 60 Date 19-9-77
----------------	--	----------------------------------

THE NUMBERS IN BRACKETS REPRESENT THE ELKA CODES OF THE ASSEMBLED BOARDS WHILST THE OTHERS REPRESENT THE ELKA CODES OF THE NON-ASSEMBLED BOARDS.

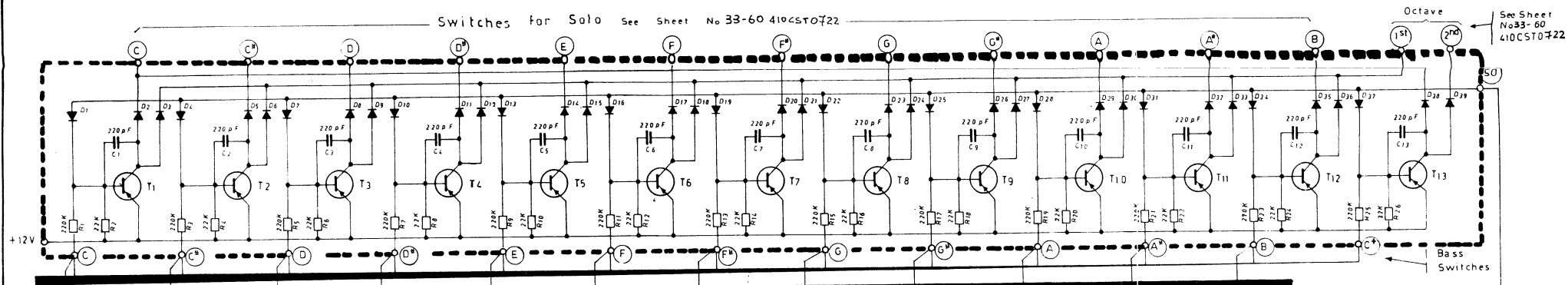


410CST0758
(457PR07581)

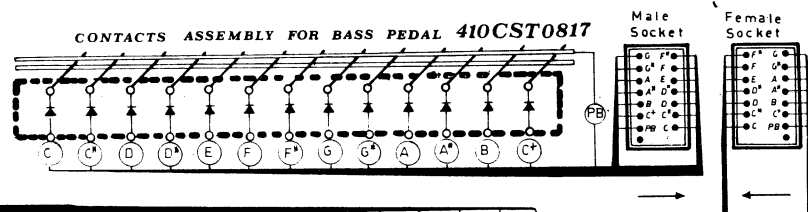


410CST0871

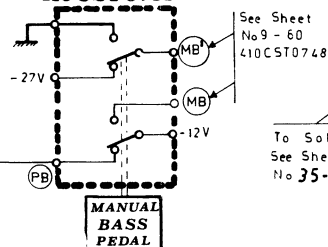
Switches for Solo See Sheet No 33-60 410CST0722



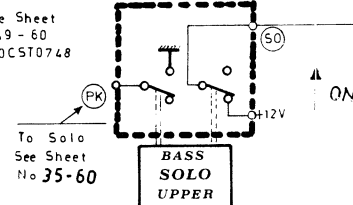
CONTACTS ASSEMBLY FOR BASS PEDAL 410CST0817



Sheet No 28-60 410CST0751

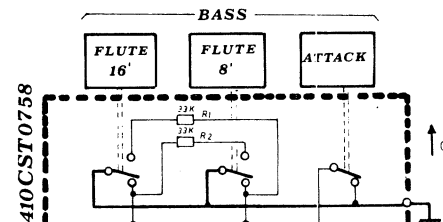
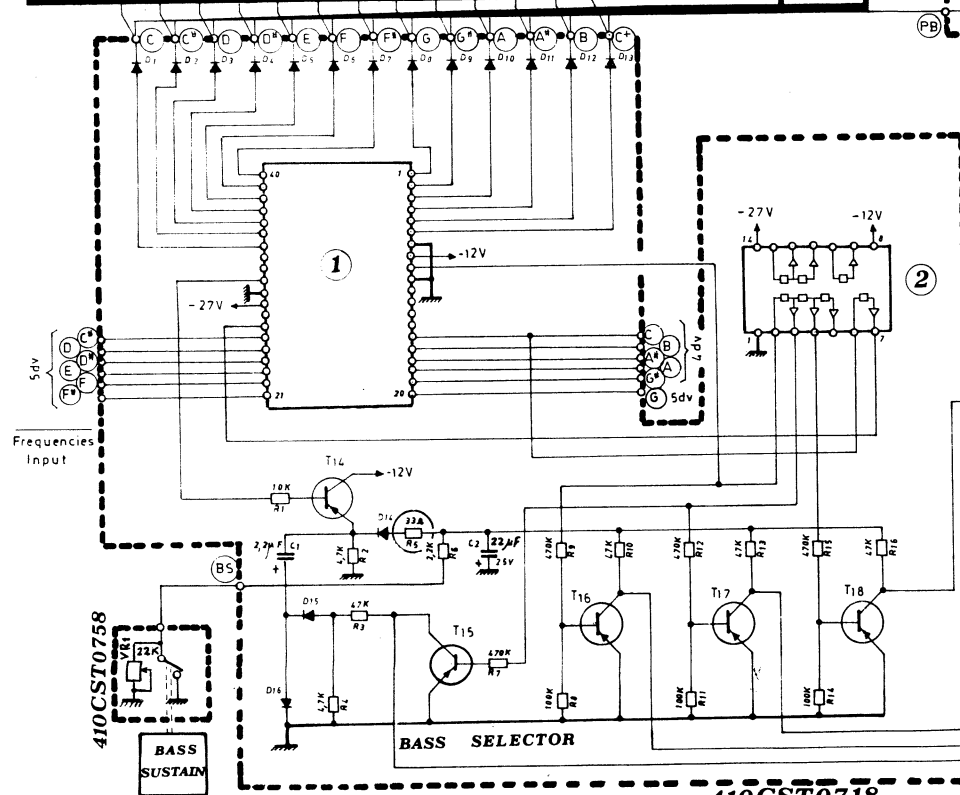


Sheet No 28-60 410CST0761

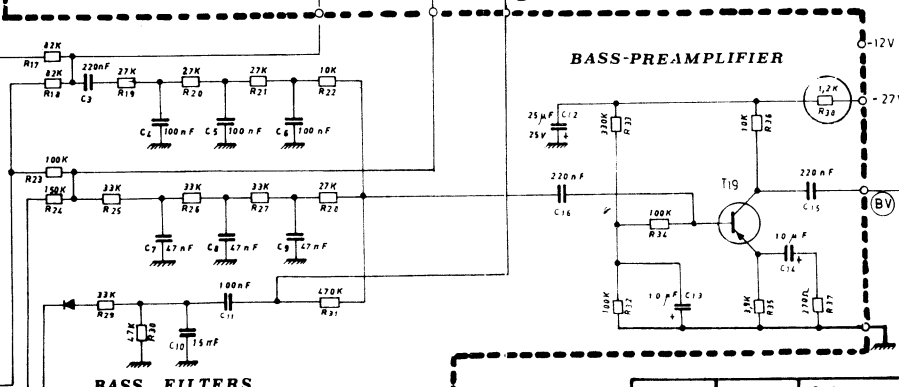


Code	Type	Transistors
T1 - T19	PNP	BC 415 B

Integrated circuits		
Code	Type	Manufactured
1	AY 13-13	G.I.E.
2	EL444 NC HBF4740AE	Texas S.G.S.

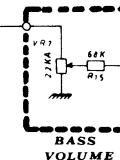


BASS-PREAMPLIFIER



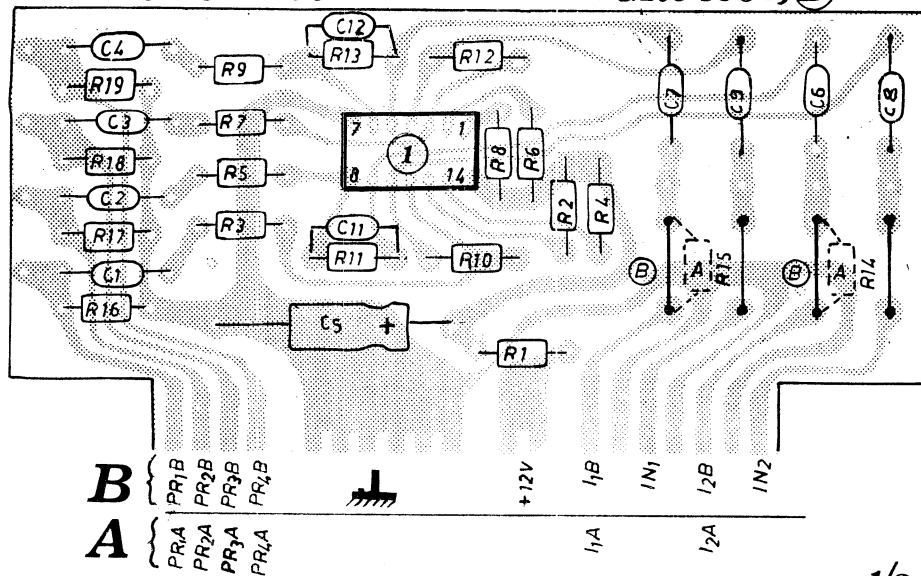
To Preamplifier PR1A
See Sheet
No 25-60
410CST0864

410CST0765



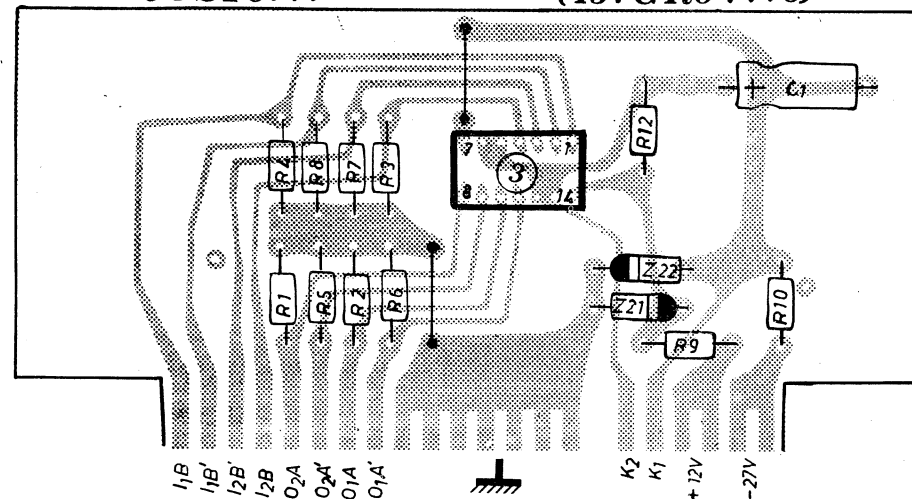
Model	Object:	Sheet No 23-60
X 705	Bass selector and filters	Date 13-9-77

410CST0896

(457GR08960)A
(457GR08961)B

410CST077

(457GR07770)



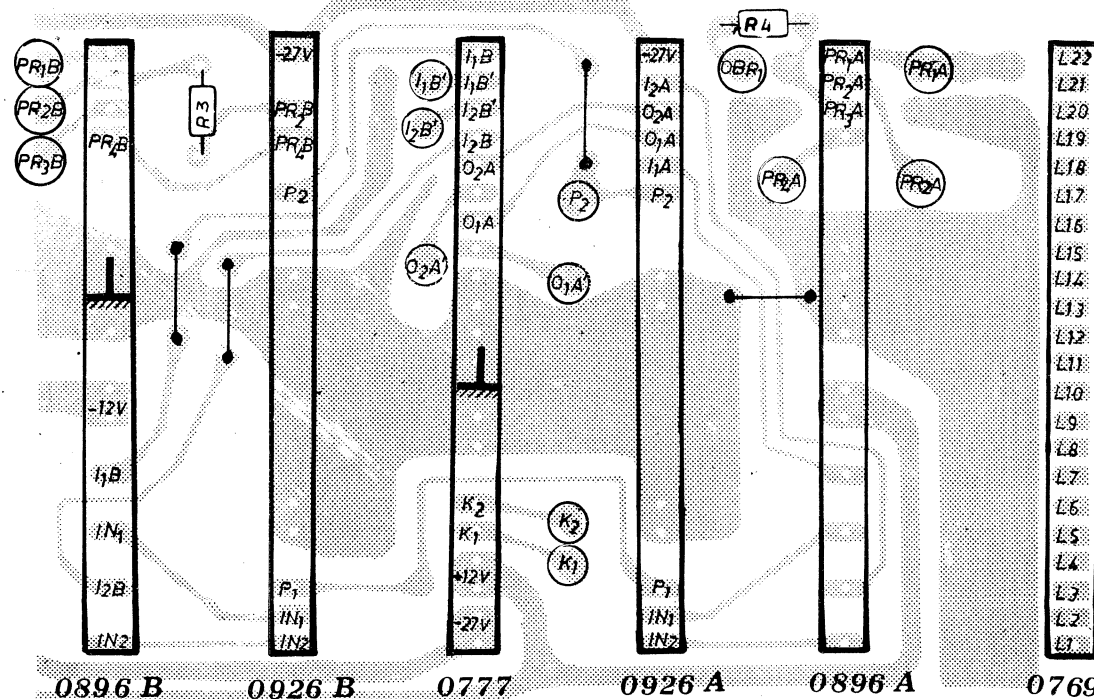
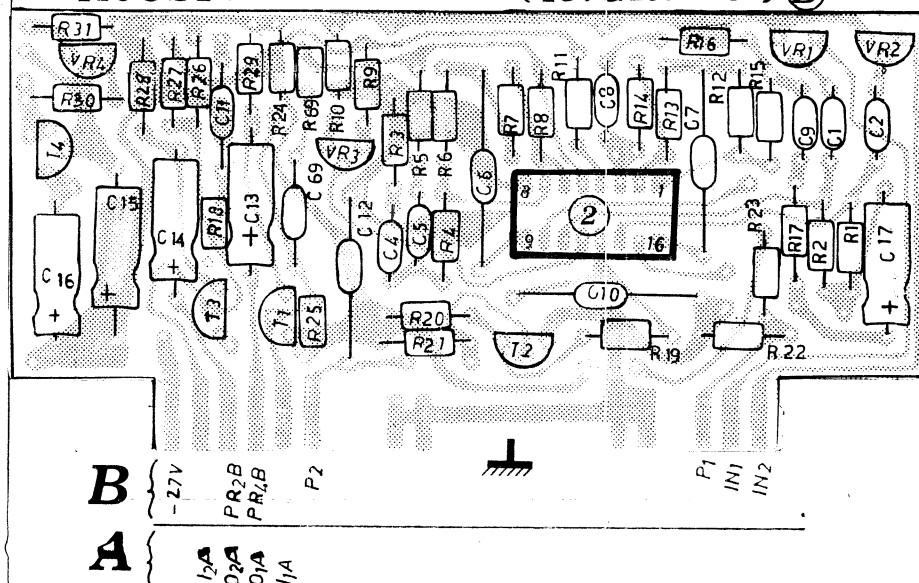
1/2

410CST0783

(457GR07830)

COPPER SIDE

410CST0926

(457GR09260)A
(457GR09261)BModel
X705Object
Assembly of
Printed CircuitSheet No 24-60
Date 11-10-77

THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS

0896 B

0926 B

0777

0926 A

0896 A

0769

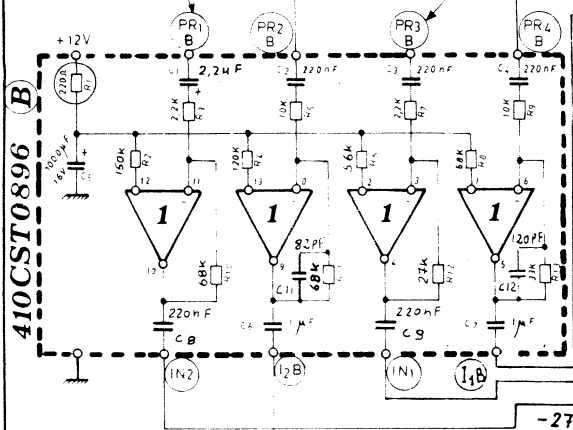
See Sheet No 15-60
410CST0756

See Sheet No 15-60
410CST0756

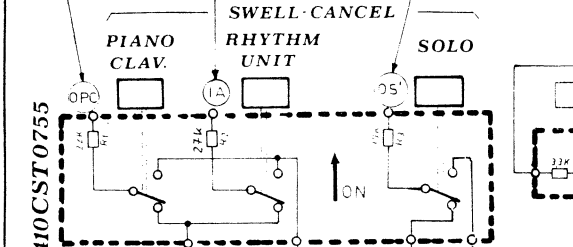
410CST0926

B

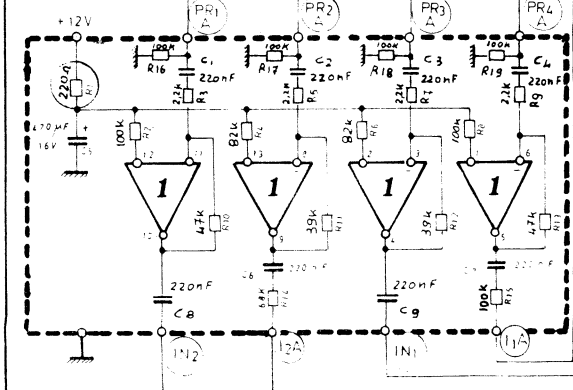
410CST0896



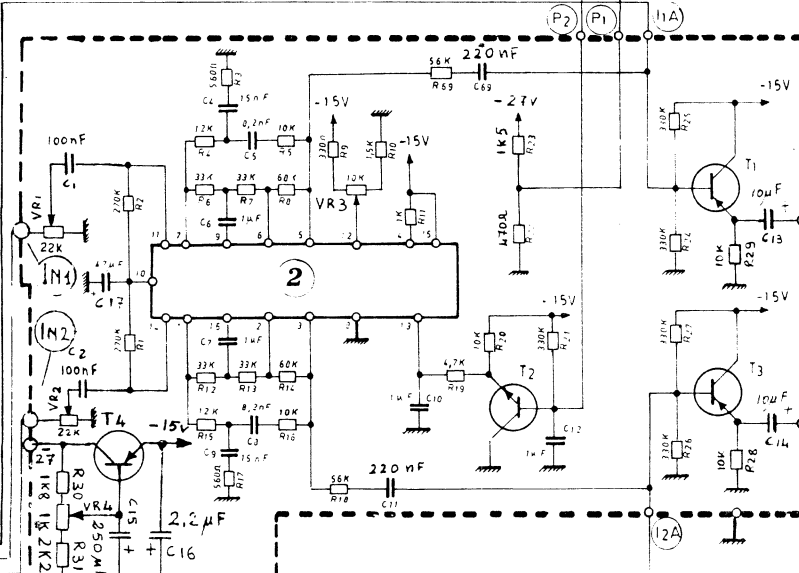
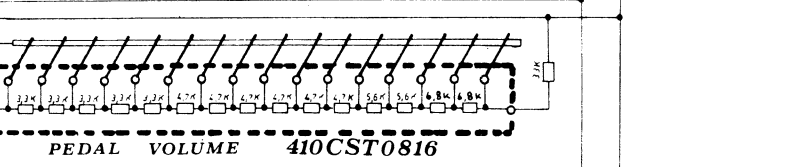
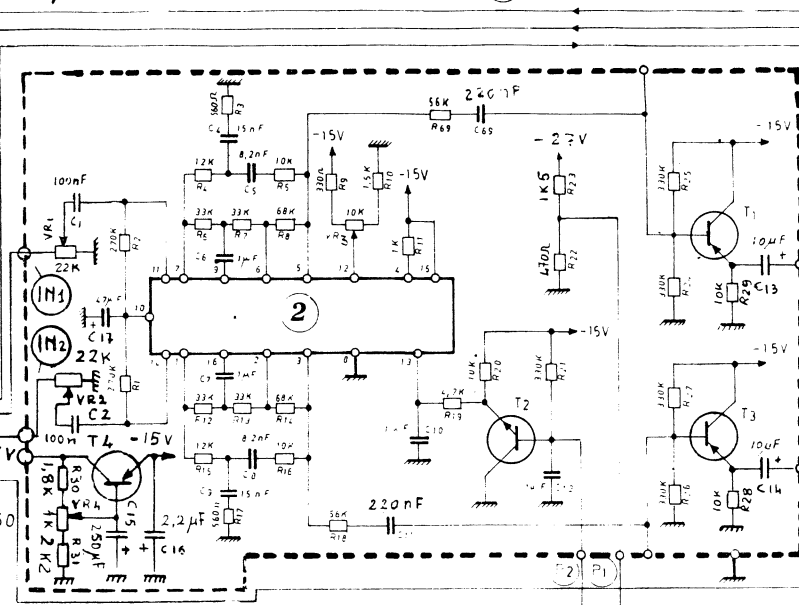
From Piano See Sheet No 17-60 410CST0775
From Rhythm Unit See Sheet No 59-60 410CST0744
From Solo Vol See Sheet No 41-60 410CST0765



From BassV See Sheet No 23-60 410CST0765
From Reverb See Sheet No 15-60 410CST0762
From BrassV See Sheet No 21-60
From Strings See Sheet No 19-60

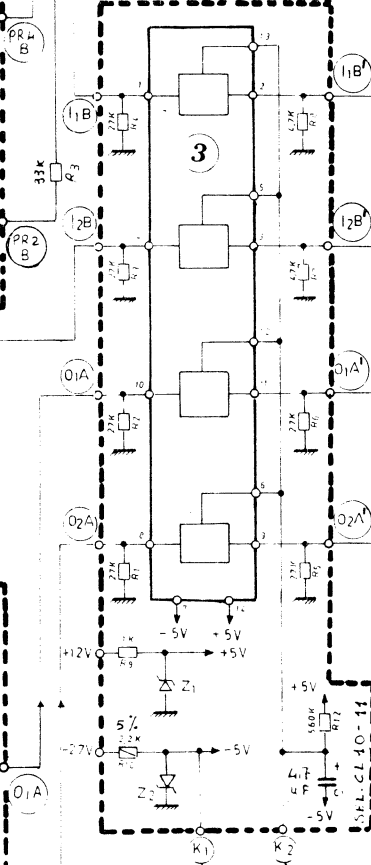


PREAMPLIFIER 410CST0896 A



PEDAL CONTROL 410CST0926 A

410CST0777



ELKATONE

GENERAL

STRINGS
BRASS
SOLO

BASS
PIANO
RHYTHM

Z1 = Z2 = VZ 5,1

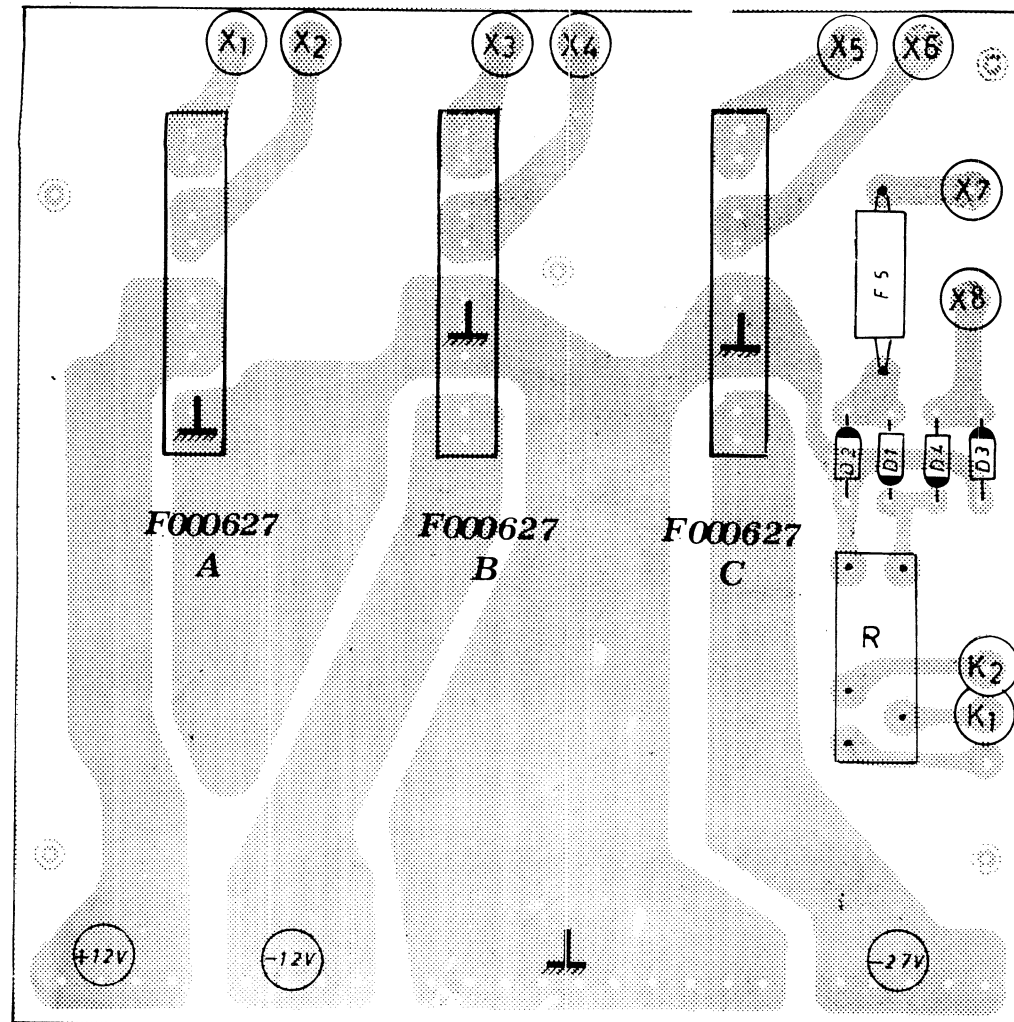
3301 { Pin 7 = GND
Pin 14 = +12V

See Sheet No 27-60
410CST0770

Integrated Circuits		
Code	Type	Manufactured
1	3301	
2	TCA 730	
3	4016	RCA only

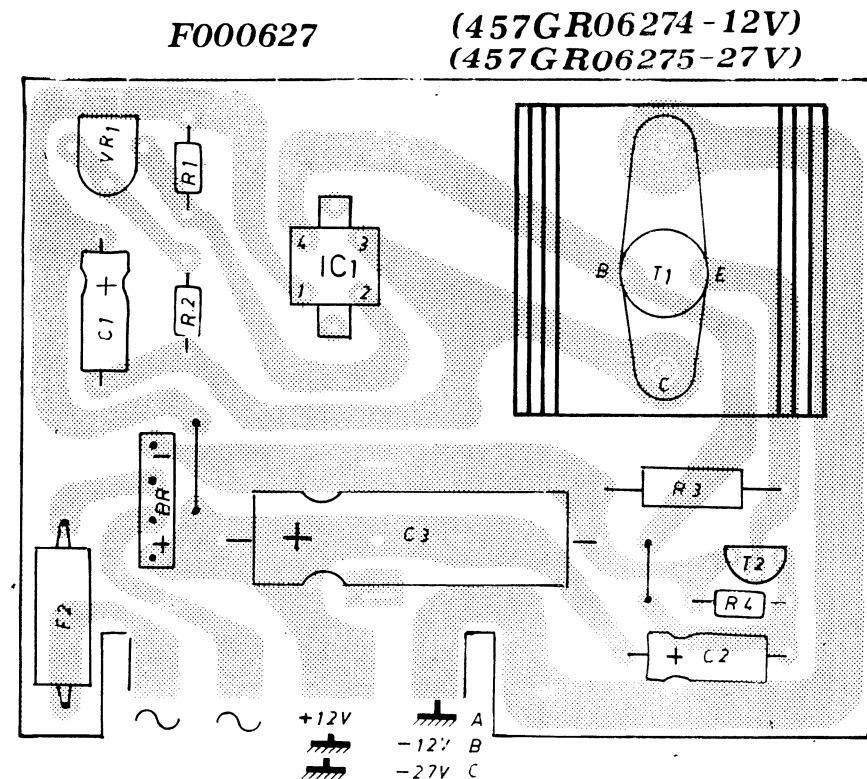
Code	Type	Transistors
T1 - T3	PNP	BC 415C
T2	NPN	BC 173B
T4	PNP	BC 287

Model X 705	Object: Preamplifier Pedal volume and Outputs	Sheet No 25-60
		Date 22-9-77



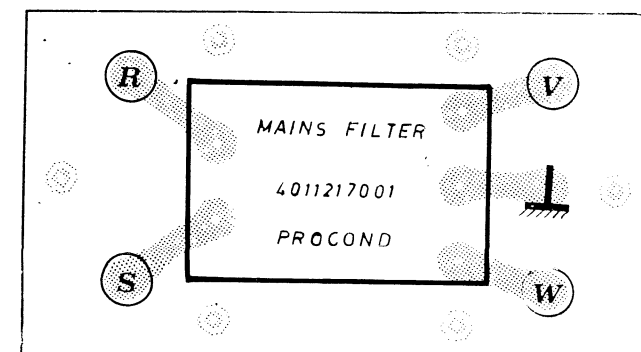
410CST0770

(457PR07701)



410CST0936

(427GR09360)



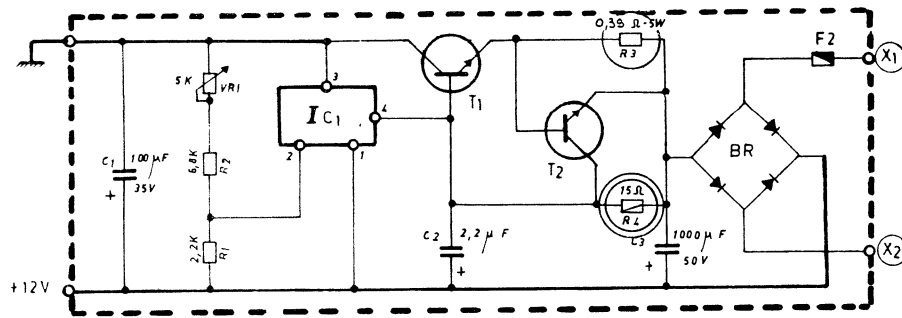
Model
X-705

Object:
Assembly of
Printed Circuit

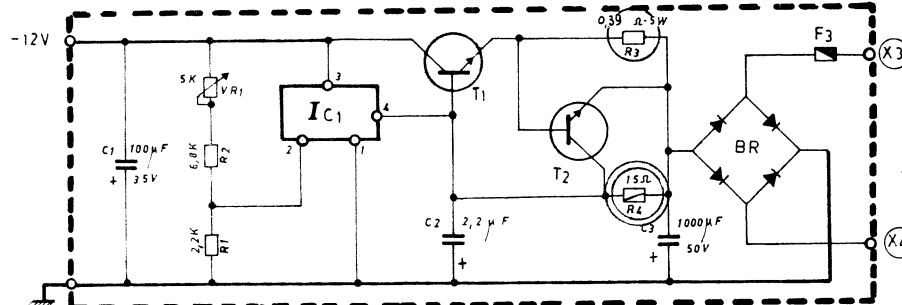
Sheet No 26-60

Date 30-9-77

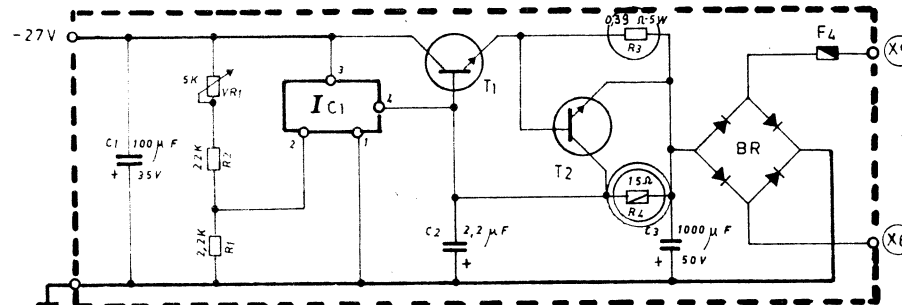
F000627 A



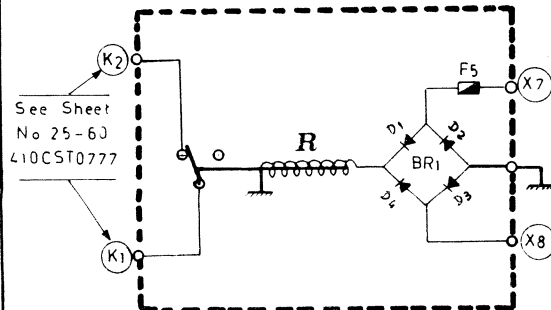
F000627 B



F000627 C



410 CST0770



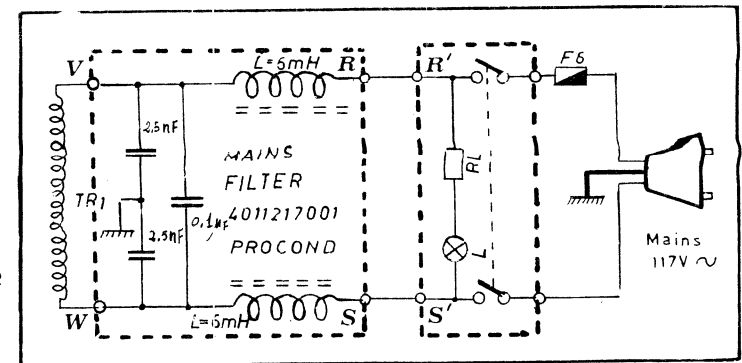
TR=Transformer T094N
BR=BSB2 G.I.E.
BR1=4x10D2 or 4x1N40003

TR1 Transform T094K
SW=L=2W-I-XII-03
F1= Fuse 500mA
F2= Fuse 125AT
F3= Fuse 125AT
F4= Fuse 125AT
F5= Fuse 125mA
F6= Fuse 1AT

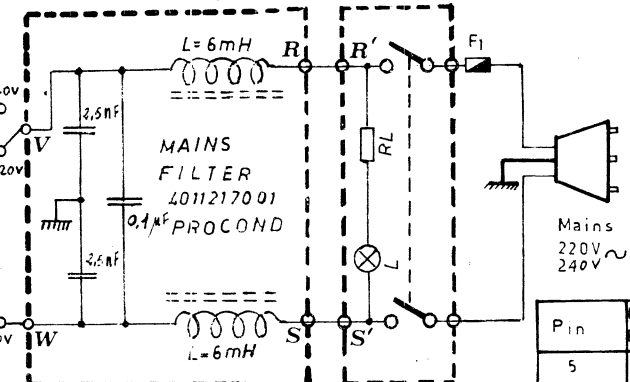
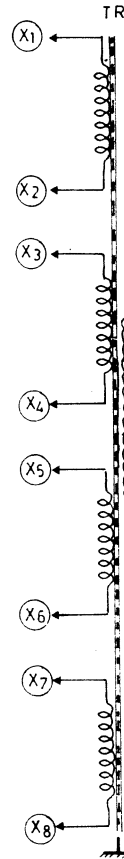
IC1 = μ A79MG

R = Relais R10 - 12V - 5A

Code	Type	Transistors
T1	NPN	2N3055 Motorola
T2	NPN	BC 173

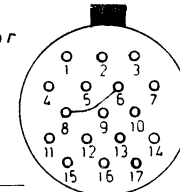
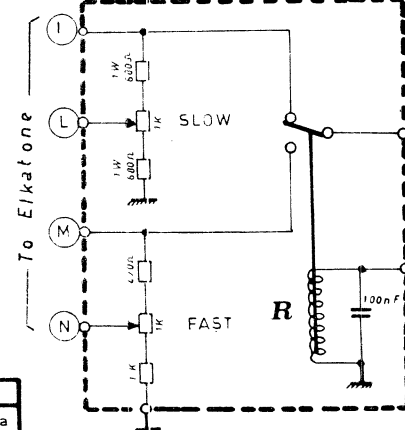


410CST0936



Pin	Reference Elkatone 610
5	(H) To motor
6	F
8	V
11	M
12	N
13	I
14	L
2	GND

ELKATONE PEDAL AMP-5

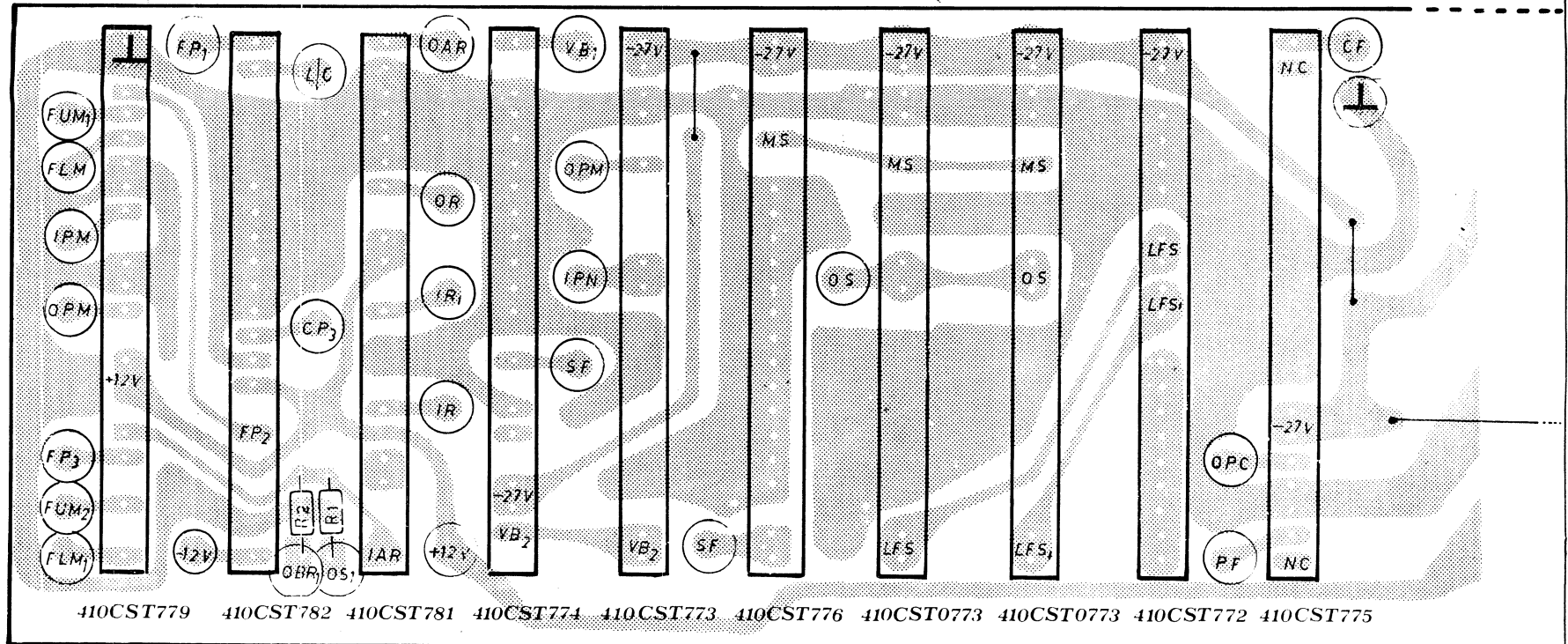


See Sheet
No 15 - 60
410 CST0756

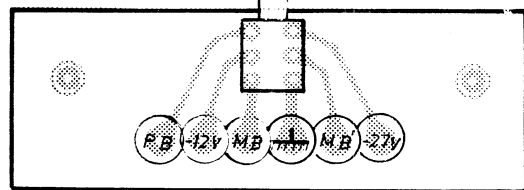
Model	Object:	Sheet No 27-60
X 705	Power Supply	Date 31 8 77

410CST0783

(57GR07830)



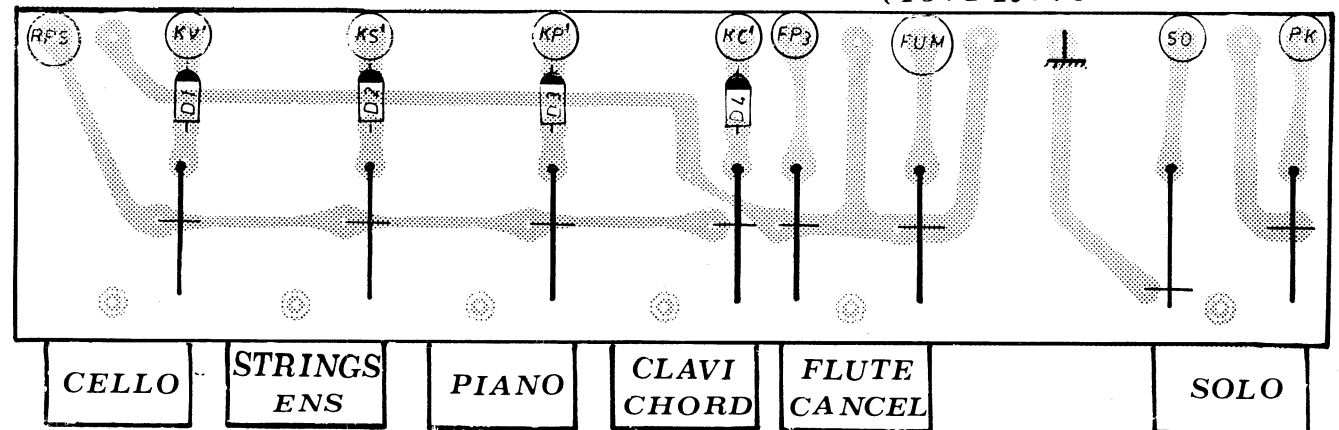
PEDAL BASS ↑
MANUAL BASS ↓



410CST0751 (457GR07510)

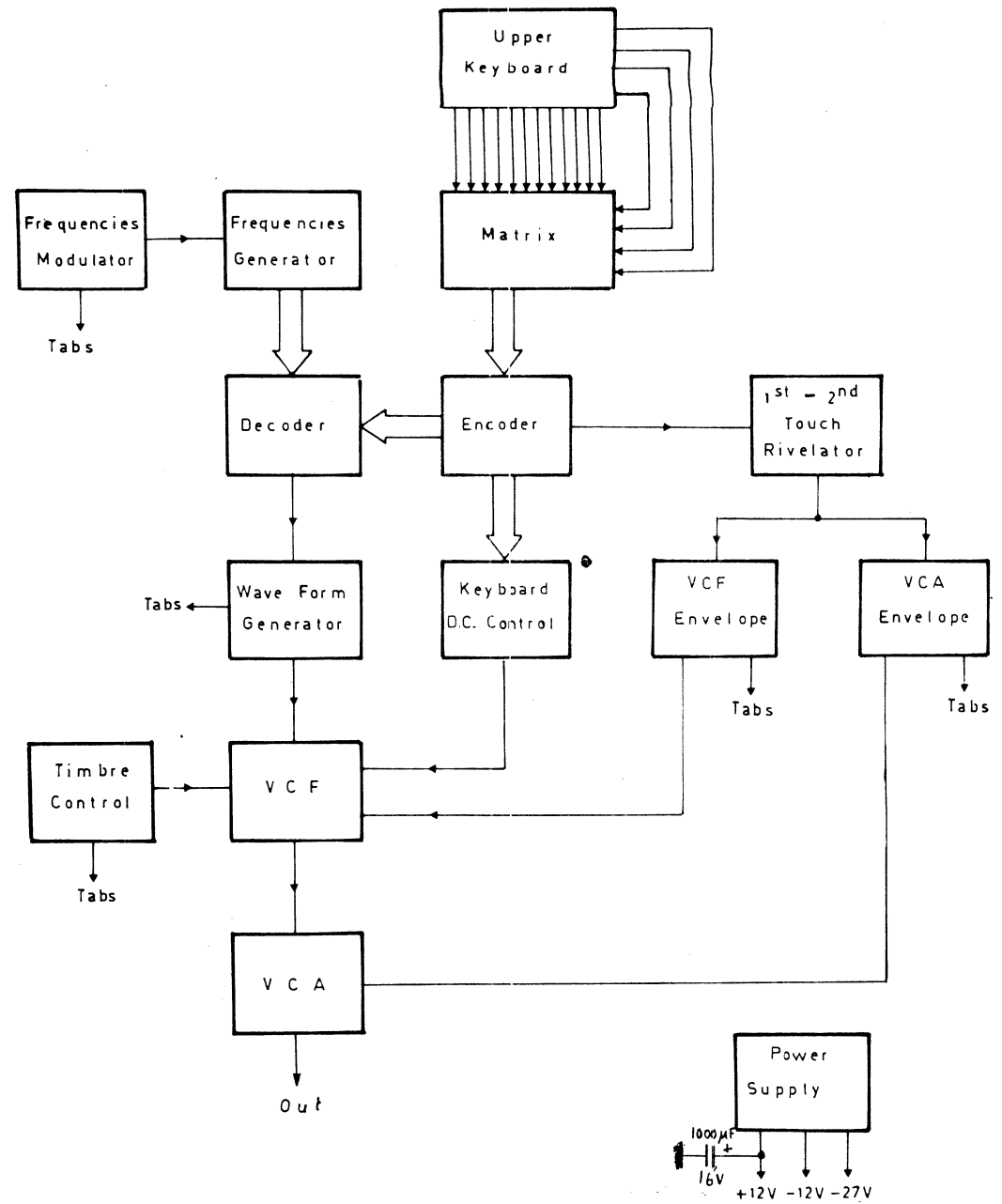
410CST0761

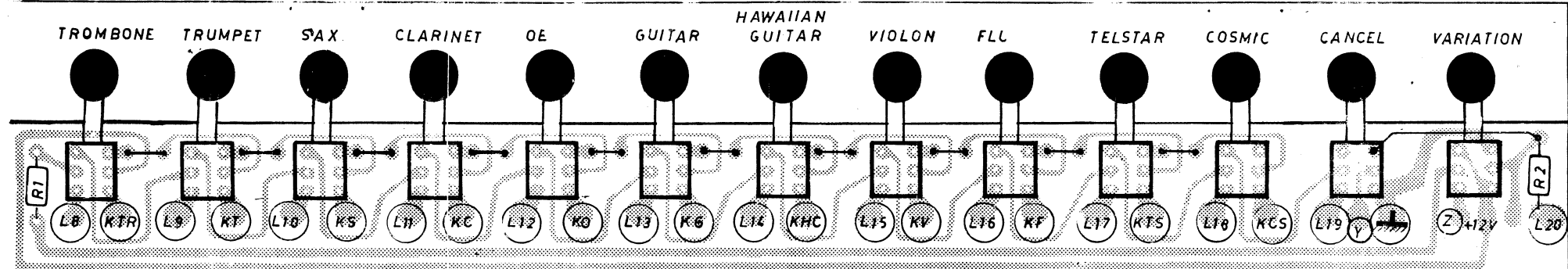
(457PR07610)



Model	Object:	Sheet No 28-60
X-705	Assembly of	
	Printed Circuit	Date 11 10 77

SOLO



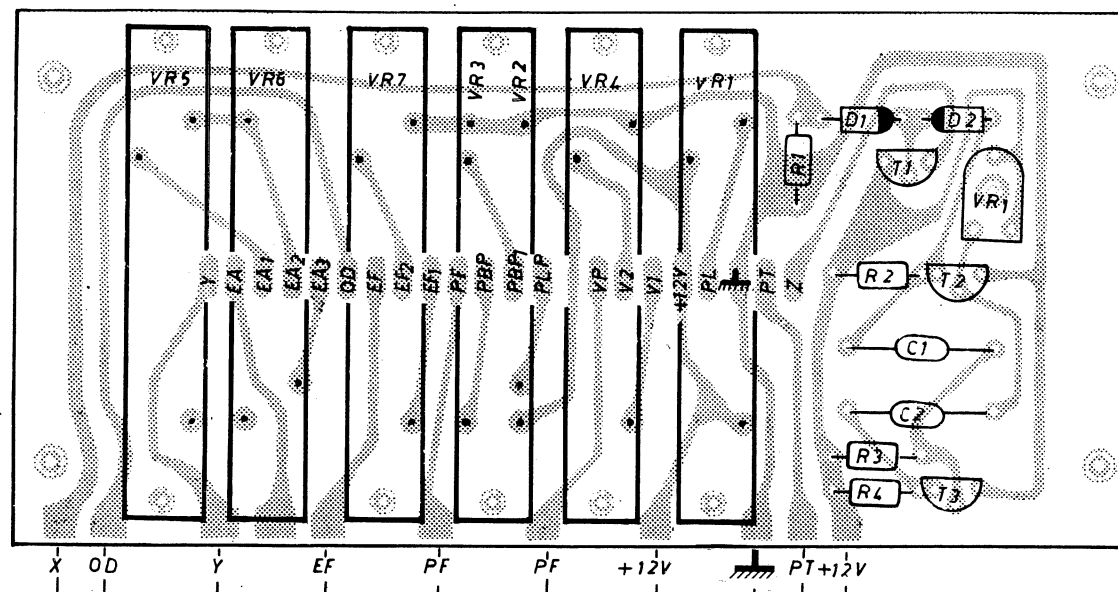


1/2 410CST0753

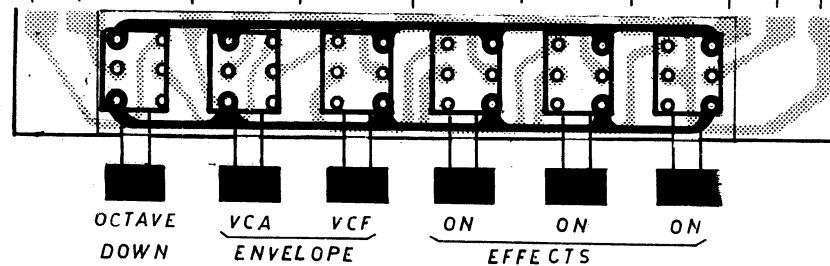
(427GR07530)

ATTACK SUSTAIN WOW FILTER VIBRATO BEND

410CST0730
(457PR07300)



410CST0733
(427PR07330)

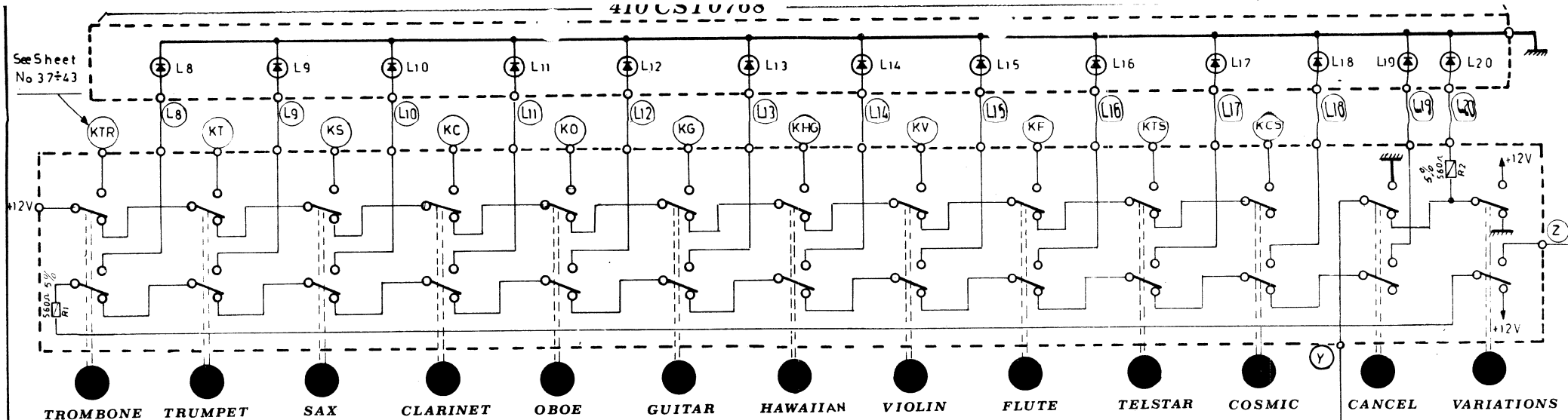
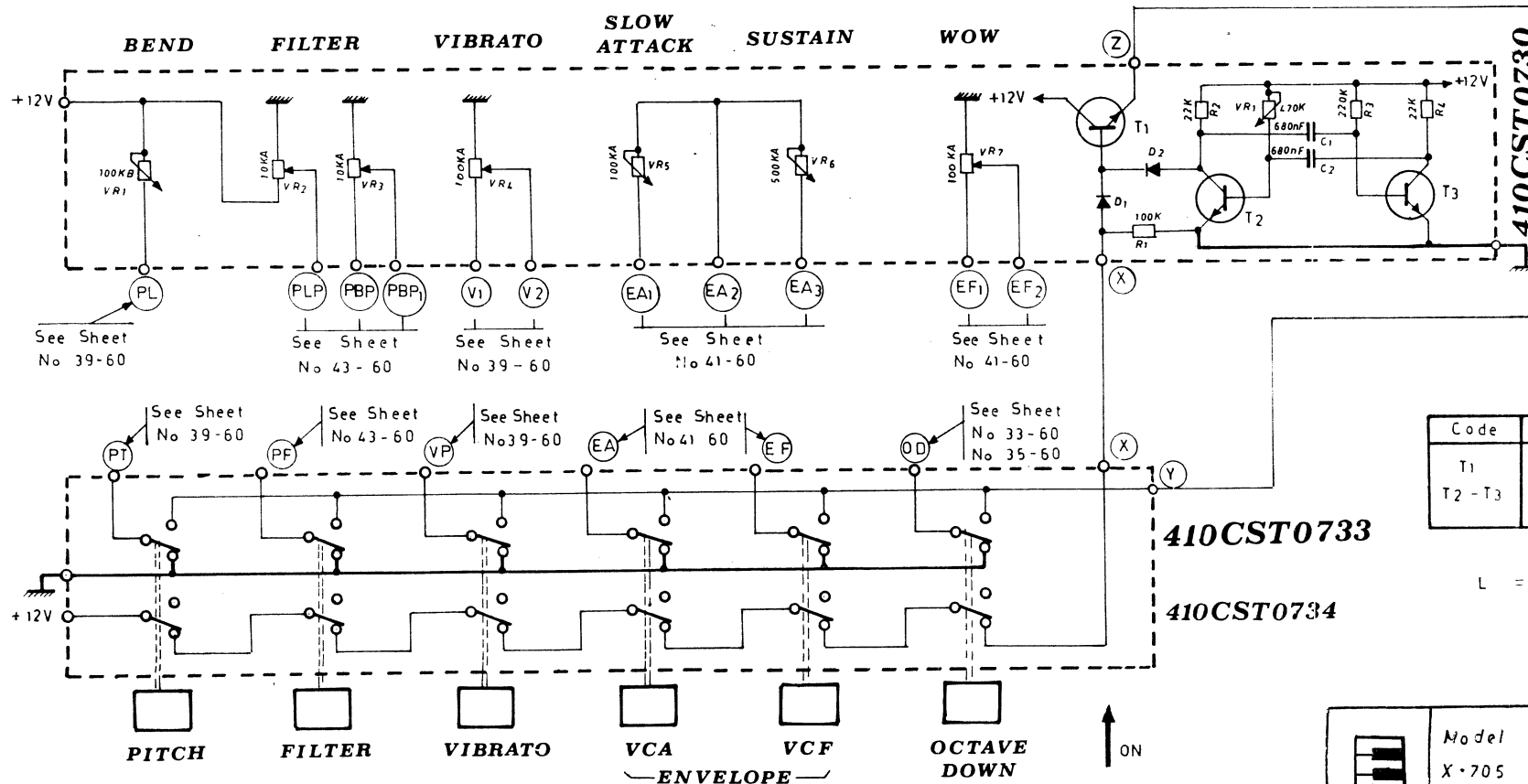


410CST0734

ON



Model	Object:	Sheet No 30:60
X-705	Assembly of	
	Printed Circuit	Date 11-10-77

See Sheet
No 37-43 $\frac{1}{2}$ 410CST0753

Code	Type	Transistors
T1	NPN	2N 58 56 or BC 286
T2 - T3	NPN	BC 171 B

L = Led FLV 110

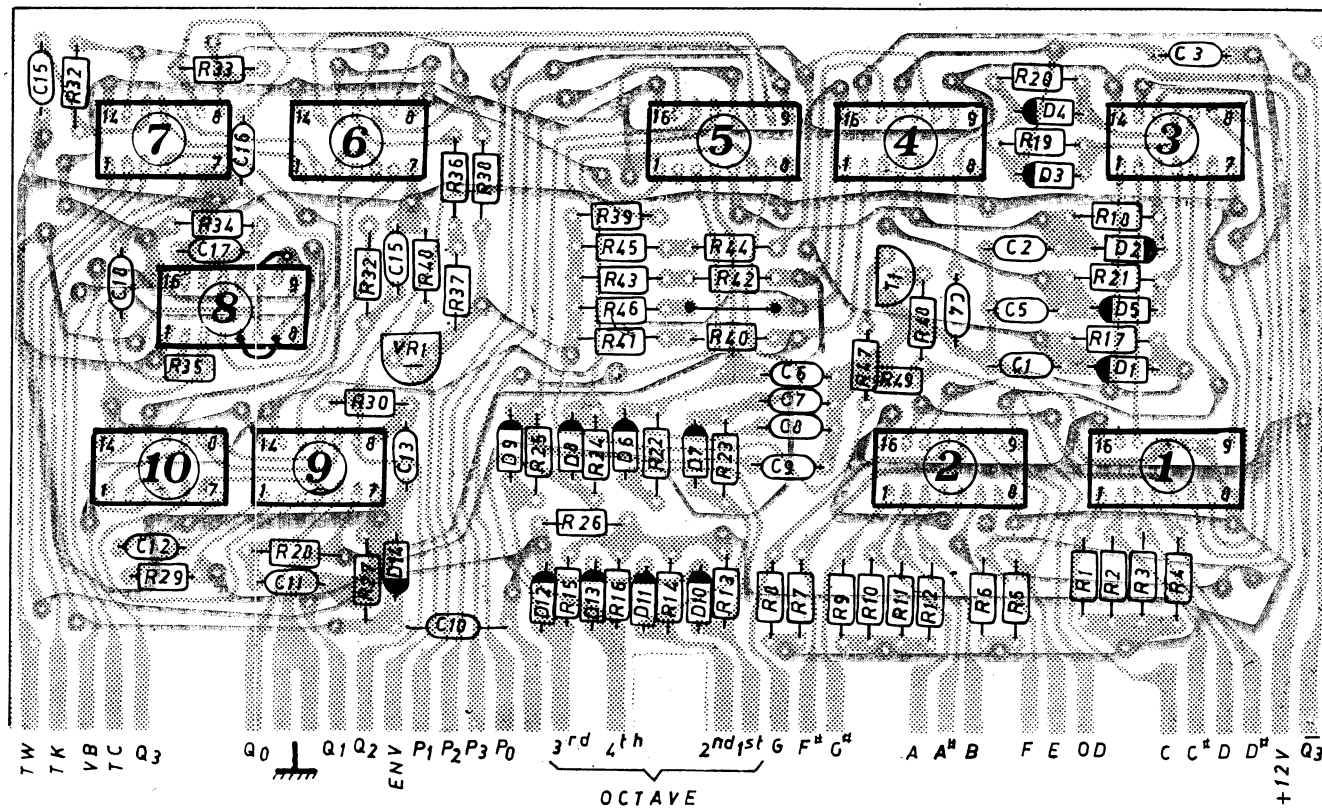
410CST0733

410CST0734

	Model	Object:	Sheet No. 31-60
	X-705	Variations	Date 6-10-77

410CST0722

(427GR07220)



THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS.



Model
X-705

Object
Assembly of
Printed Circuit

Sheet No 32-60

Date 1-6-77

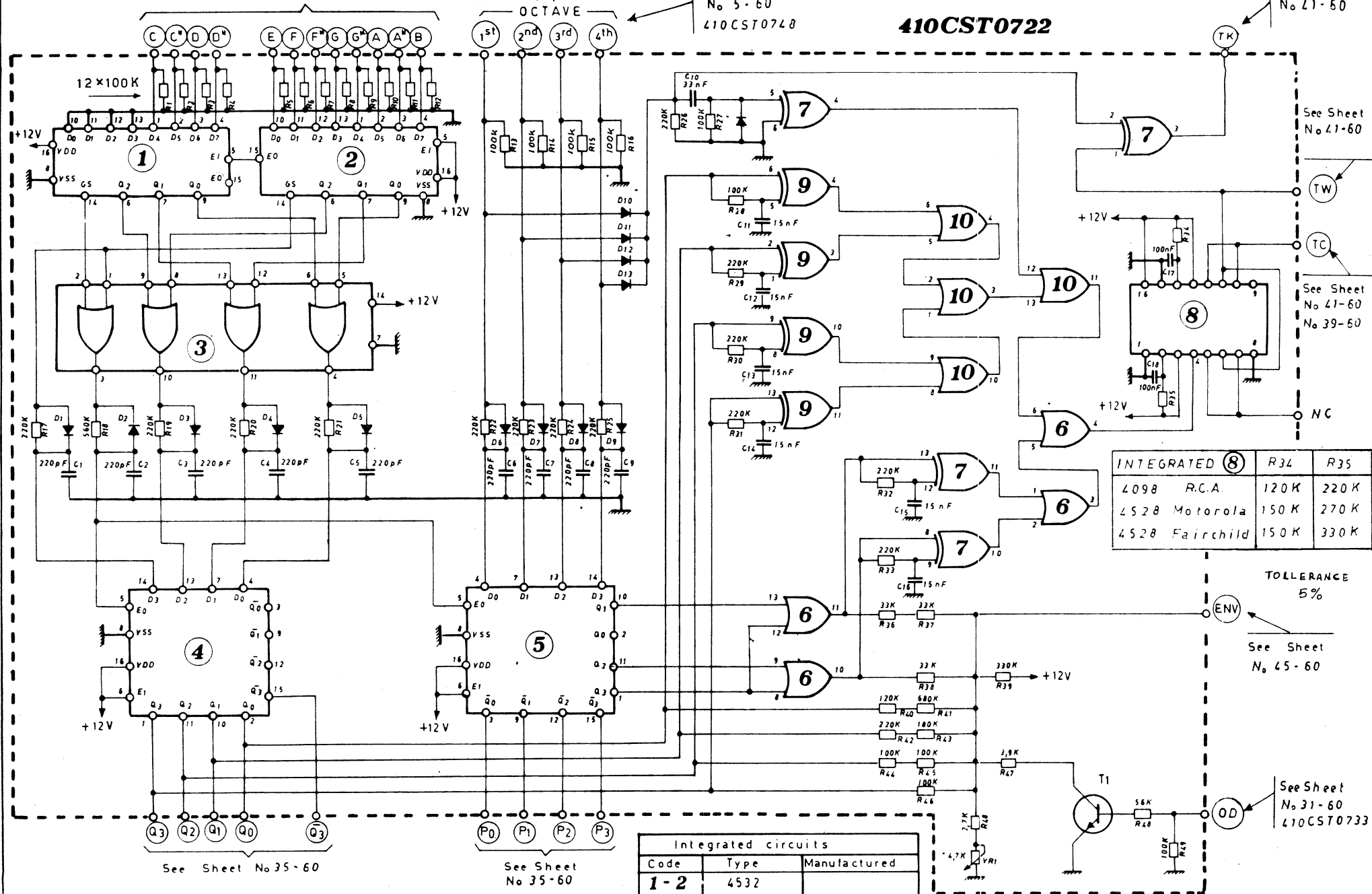
See Sheet No 5-60 (410CST074)
See Sheet No 5-60 (410CST074)

See Sheet No 23-60
410CST0871

See Sheet
No 5-60
410CST0748

410CST0722

See Sheet
No 41-60



See Sheet
No 41-60

See Sheet
No 41-60

See Sheet
No 41-60

See Sheet
No 41-60

See Sheet
No 41-60

See Sheet
No 41-60

See Sheet
No 41-60

See Sheet
No 41-60

See Sheet
No 41-60

See Sheet
No 41-60

See Sheet
No 41-60

See Sheet
No 41-60

See Sheet
No 41-60

Code	Type	Transistors
T1	NPN	BC173

3-6-10 } Pin 7 = GND
7-9 } Pin 14 = +12V

Integrated circuits		
Code	Type	Manufactured
1-2	4532	
3-6-10	4071	
4-5	4042	
7-9	4030	
8	4528	

INTEGRATED ⑧		
	R34	R35
4098 R.C.A.	120K	220K
4528 Motorola	150K	270K
4528 Fairchild	150K	330K

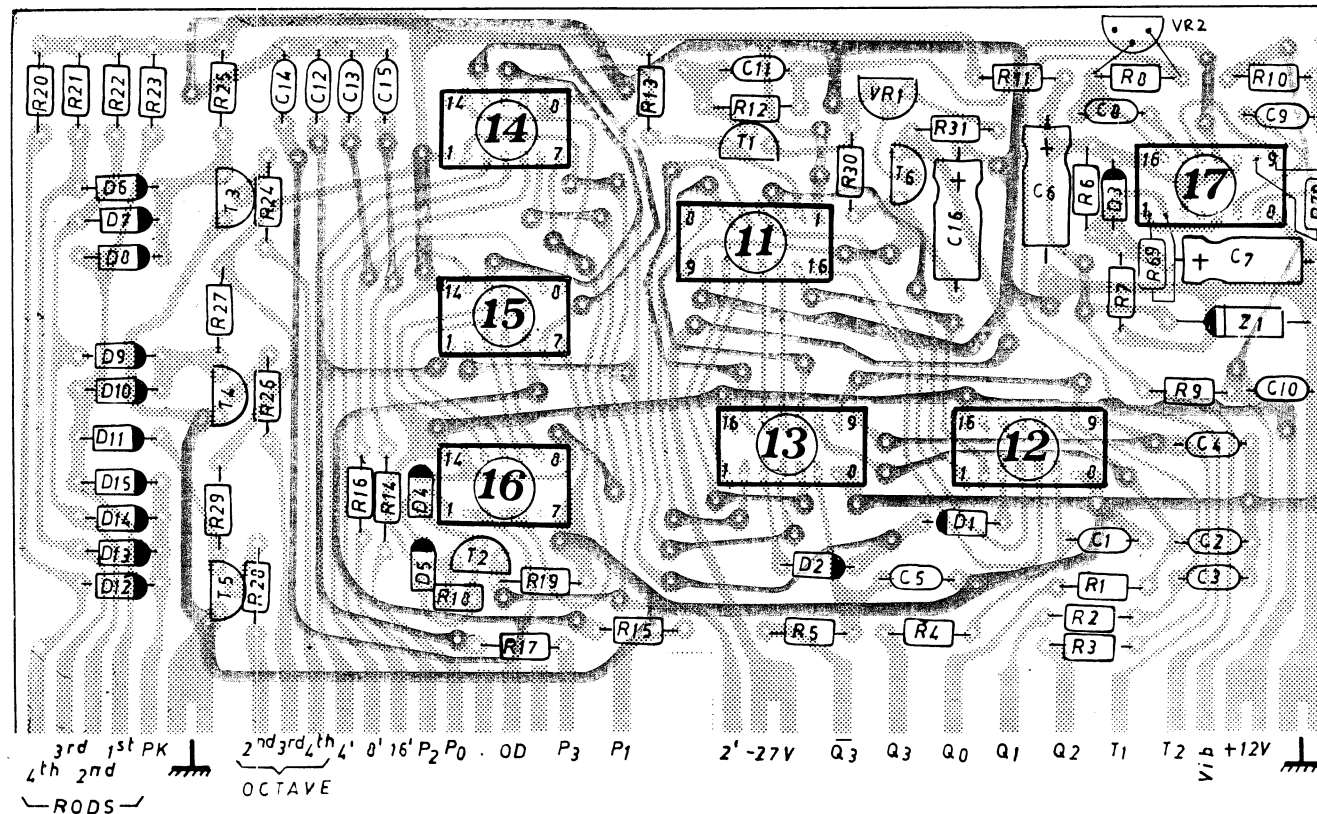
TOLERANCE
5%

See Sheet
No 45-60

See Sheet
No 31-60
410CST0733

Model	Object	Sheet No 33-60
X 705	Encoder Puls generator D/A converter	Date 6-5-77

410CST0723 (427GR07230)



THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS



Model
X-705

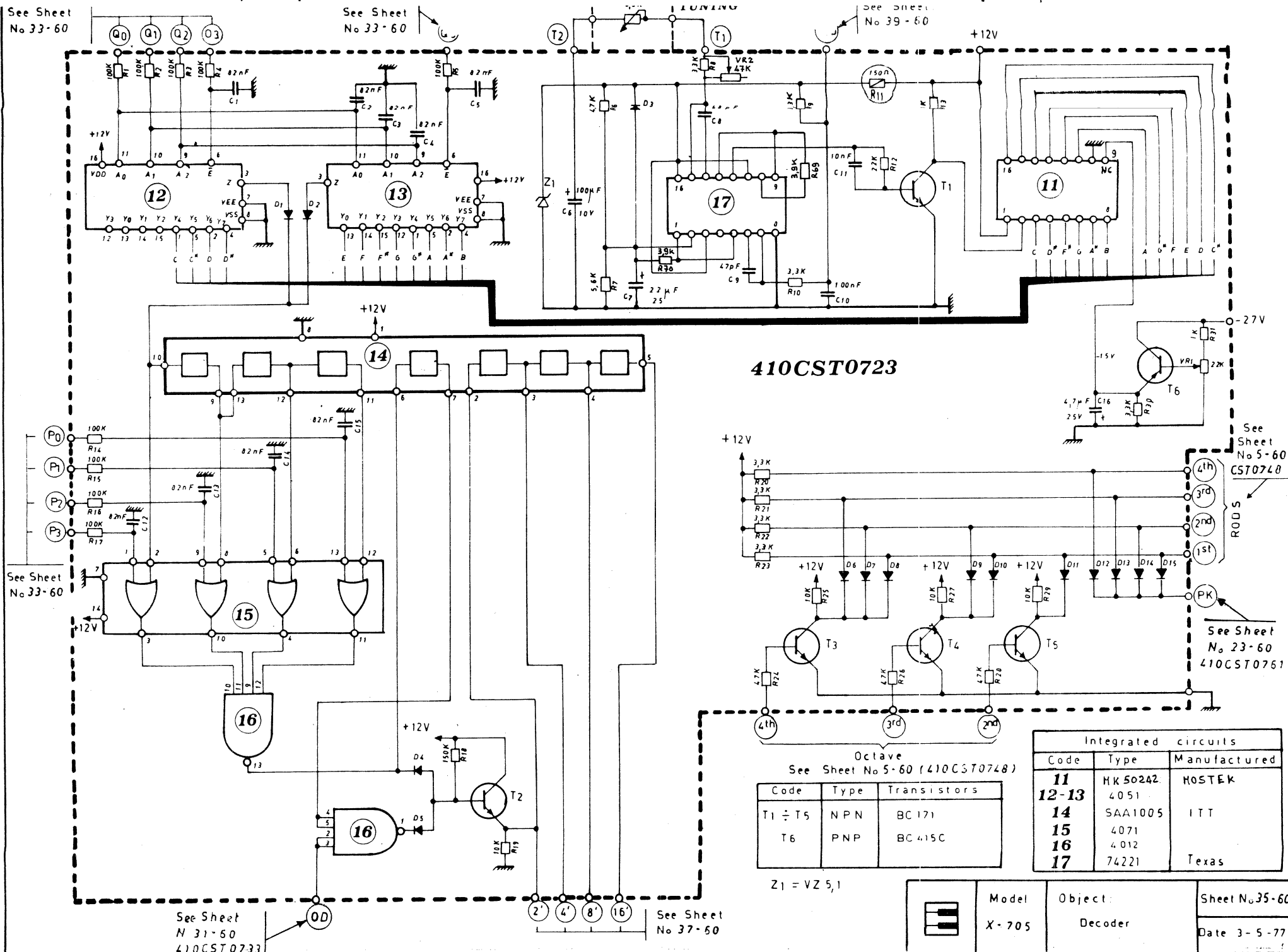
Object
Assembly of
Printed Circuit

Sheet No 34-50
Date 1-6-77

See Sheet
No 33-60

See Sheet
No 33-60

See Sheet
No 39-60



410CST0723

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

+12V

Octave
See Sheet No 5-60 (410CST0748)

Code	Type	Transistors
T1 ÷ T5	NPN	BC 171
T6	PNP	BC 415C

Z1 = VZ 5,1

Integrated circuits		
Code	Type	Manufactured
11	HK 50242	ROSTEK
12-13	4051	
14	SAA1005	ITT
15	4071	
16	4012	
17	74221	Texas



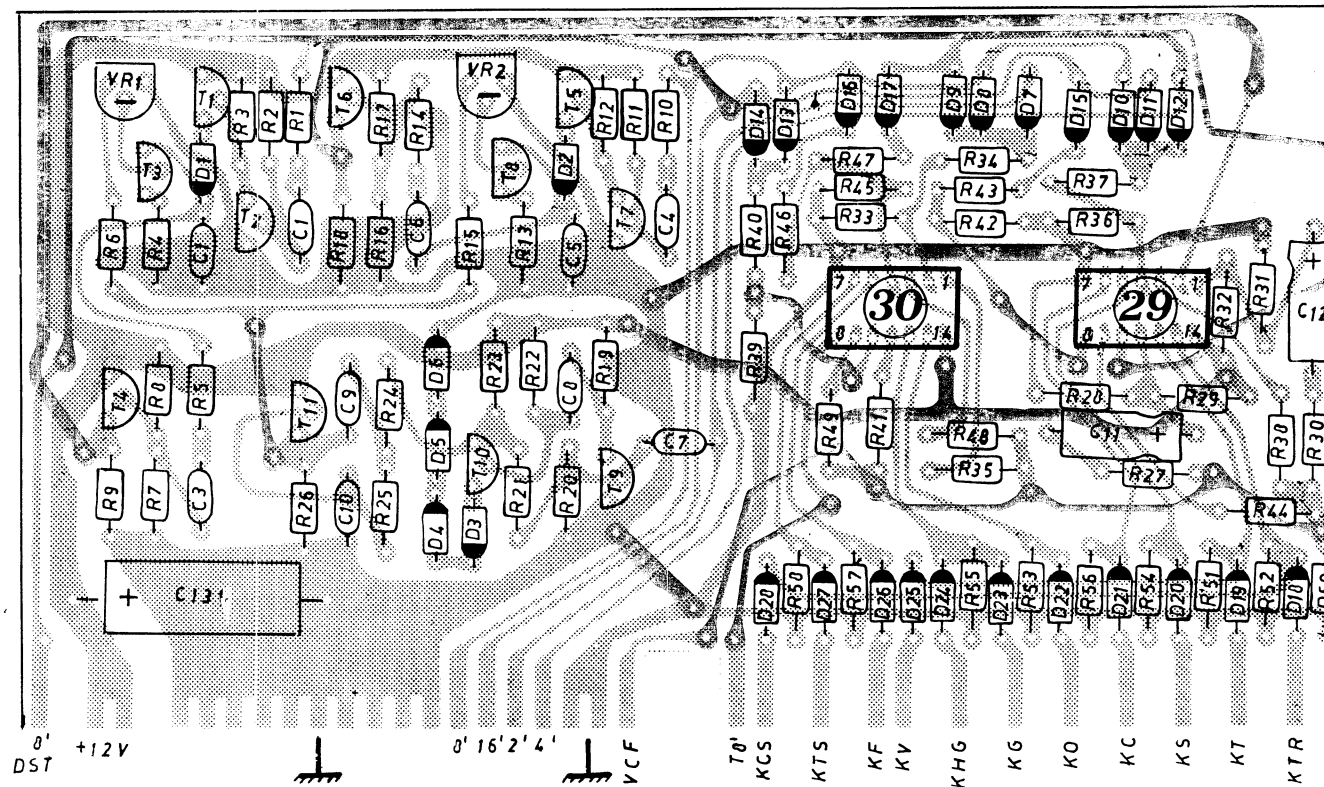
Model
X-705

Object
Decoder

Sheet No 35-60
Date 3-5-77

410CST0724

(427GR07240)



THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS.

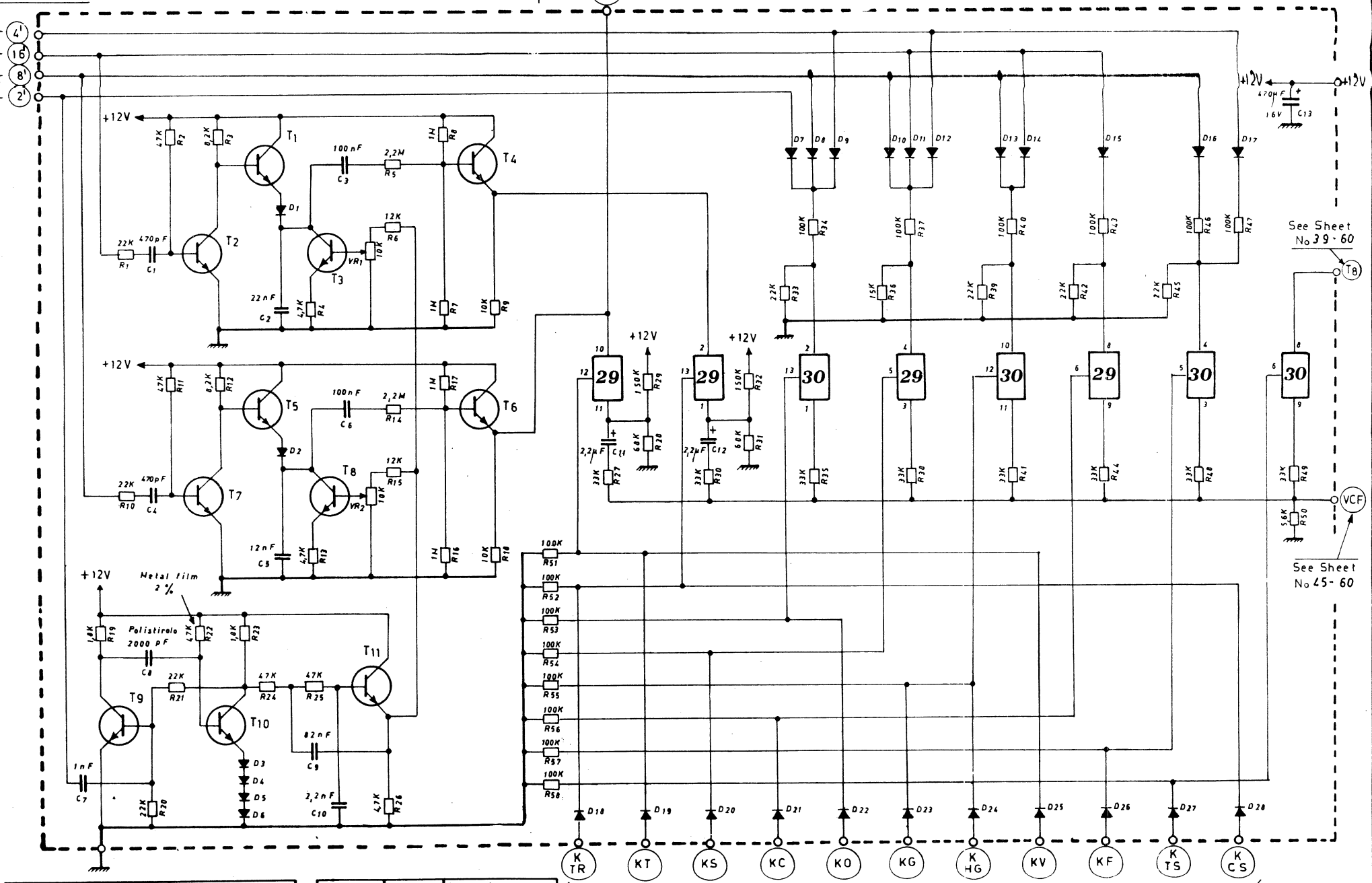


Model
X-705

Object
Assembly of
Printed Circuit

Sheet No 36-50

Date 2-6-77



Integrated circuits		
Code	Type	Manufactured
29 - 30	4016	

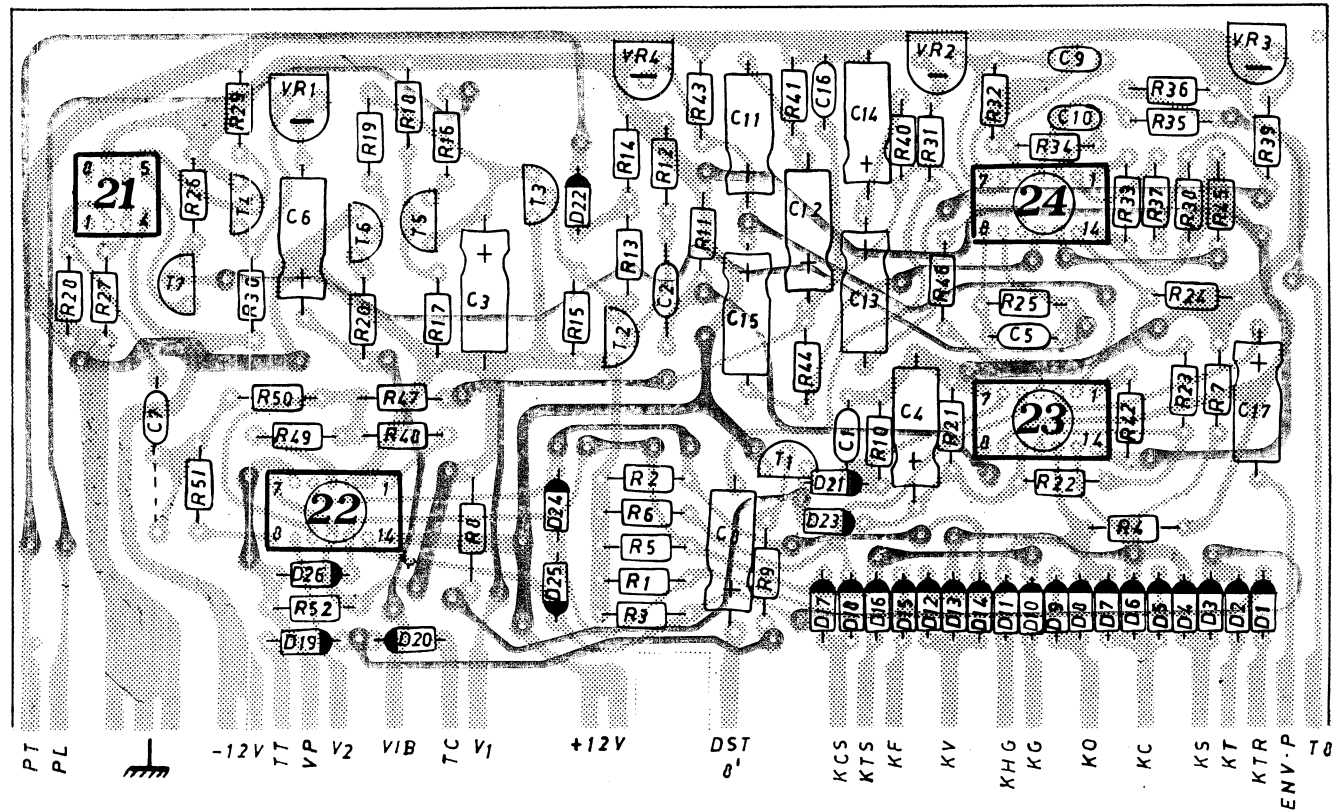
Code	Type	Transistors
T1 - T11	NPN	BC 173

4016 { Pin 7 = GND
Pin 14 = +12V

	Model	Object:	Sheet No 37-60
	X-705	Wave form generator	Date 28-7-77

410CST0725

(427GR07250)



THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS.

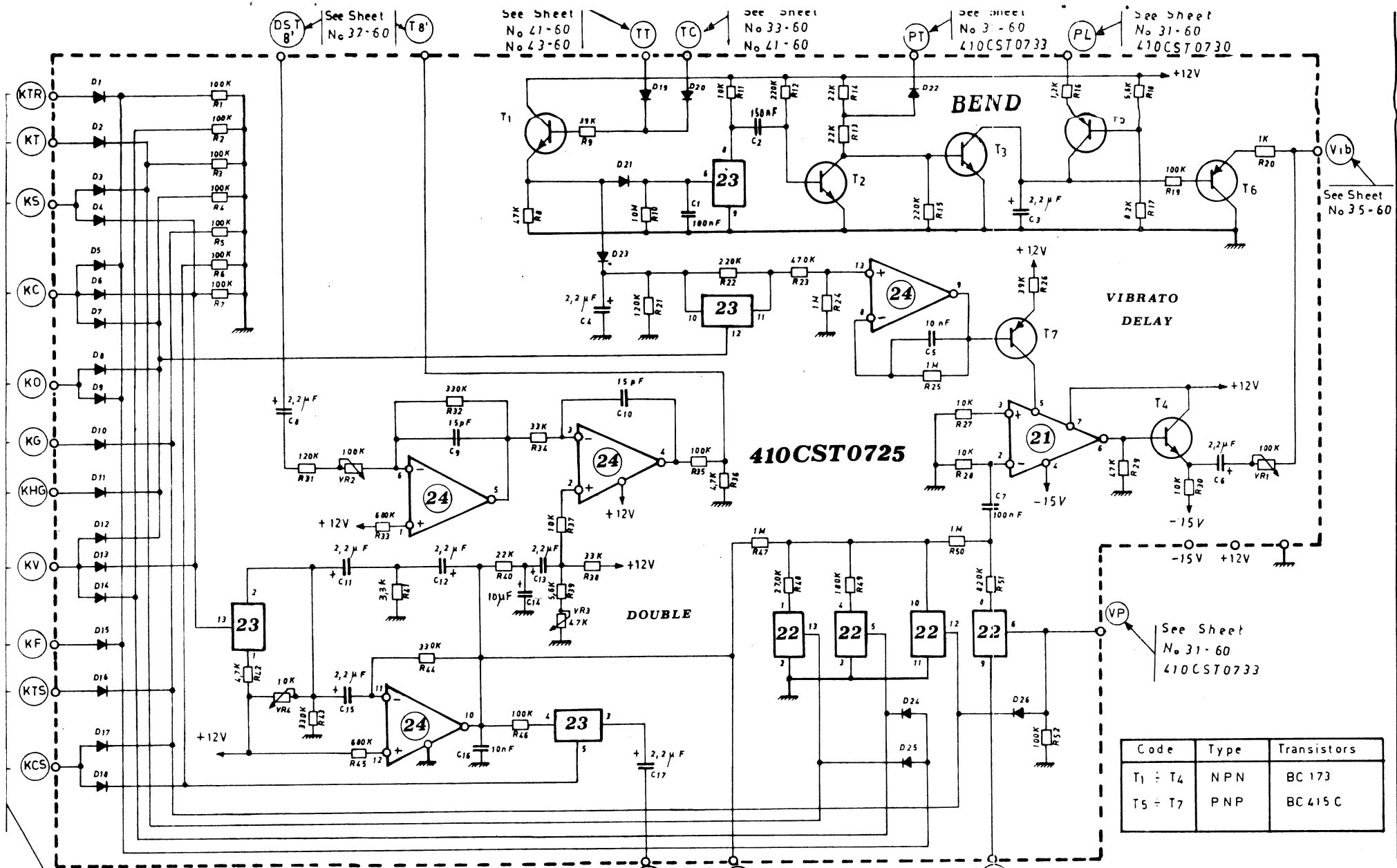


Model
X-705

Object
Assembly of
Printed Circuit

Sheet No 38-60

Date 2-7-77



See Sheet
No 31 - 60

Integrated Circuits		
Code	Type	Manufactured
21	CA 3080	R.C.A.
22-23	4016	
24	3301	Fairchild

See Sheet No 41 - 60
No 43 - 60

4016 | Pin 7 = GND
Pin 14 = +12V

See Sheet
No 31 - 60
410CST0730

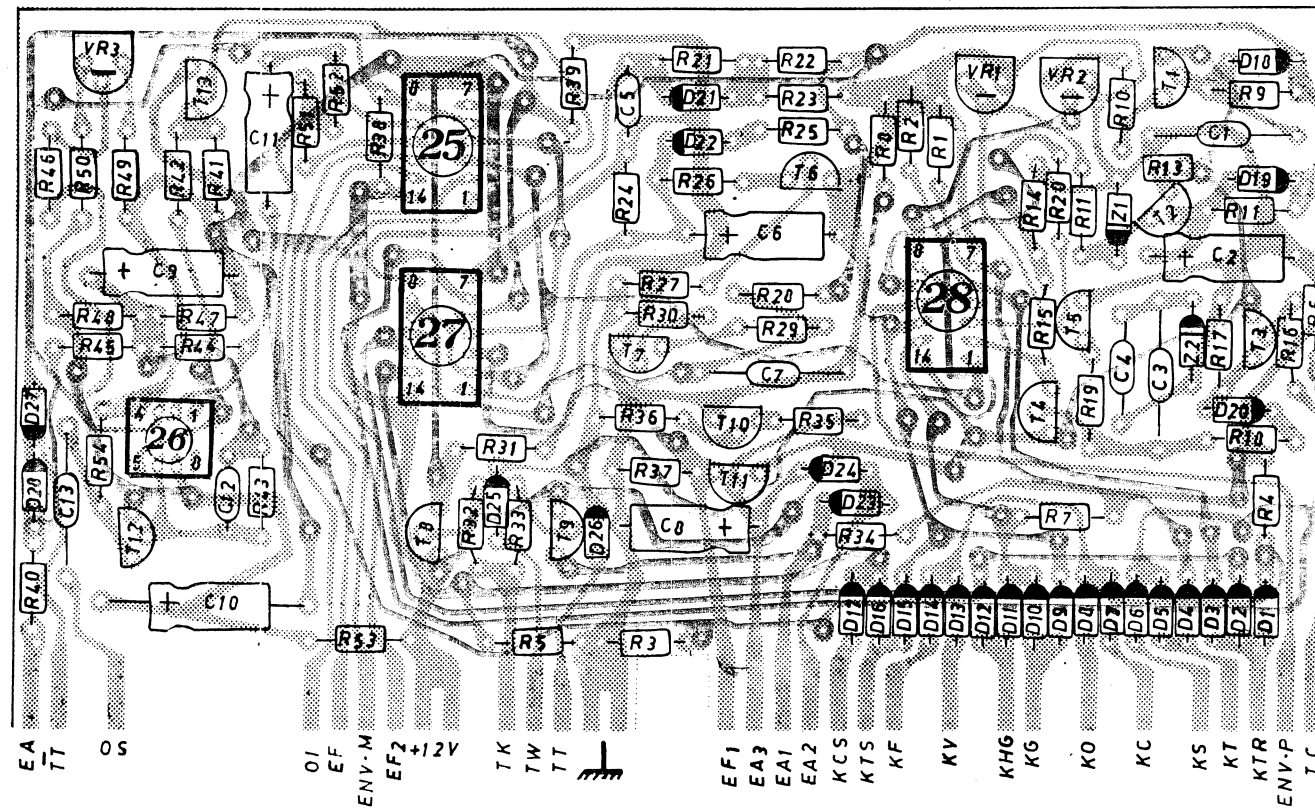
Code	Type	Transistors
T1 ÷ T4	NPN	BC 173
T5 ÷ T7	PNP	BC 415 C

C11 - C12 - C15 → SELECTED

	Model X - 705	Object: Vibrato Telstar Pitch band circuit	Sheet No 39-60
			Date 22-0-77

410CST0726

(427GR07260)



THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS.



Model
X 705

Object
Assembly of
Printed Circuit

Sheet No 40-60

Date 3-6-77

See Sheet
No 33-60 No 39-60

See Sheet
No 33-60

See Sheet
No 31-60
L10CST0730

Sheet
No 33-60

See Sheet
No 39-60
No 43-60

See Sheet
No 31-60
L10CST0730

See Sheet
No 45-60

410CST0726

SOLO
VOLUME
410CST0765

To Reverb
See Sheet
No 15-60
L10CST0781
See Sheet
No 25-60
L10CST0755

See Sheet
No 43-60

See Sheet
No 31-60
L10CST0733

T_L Selected WHITE point

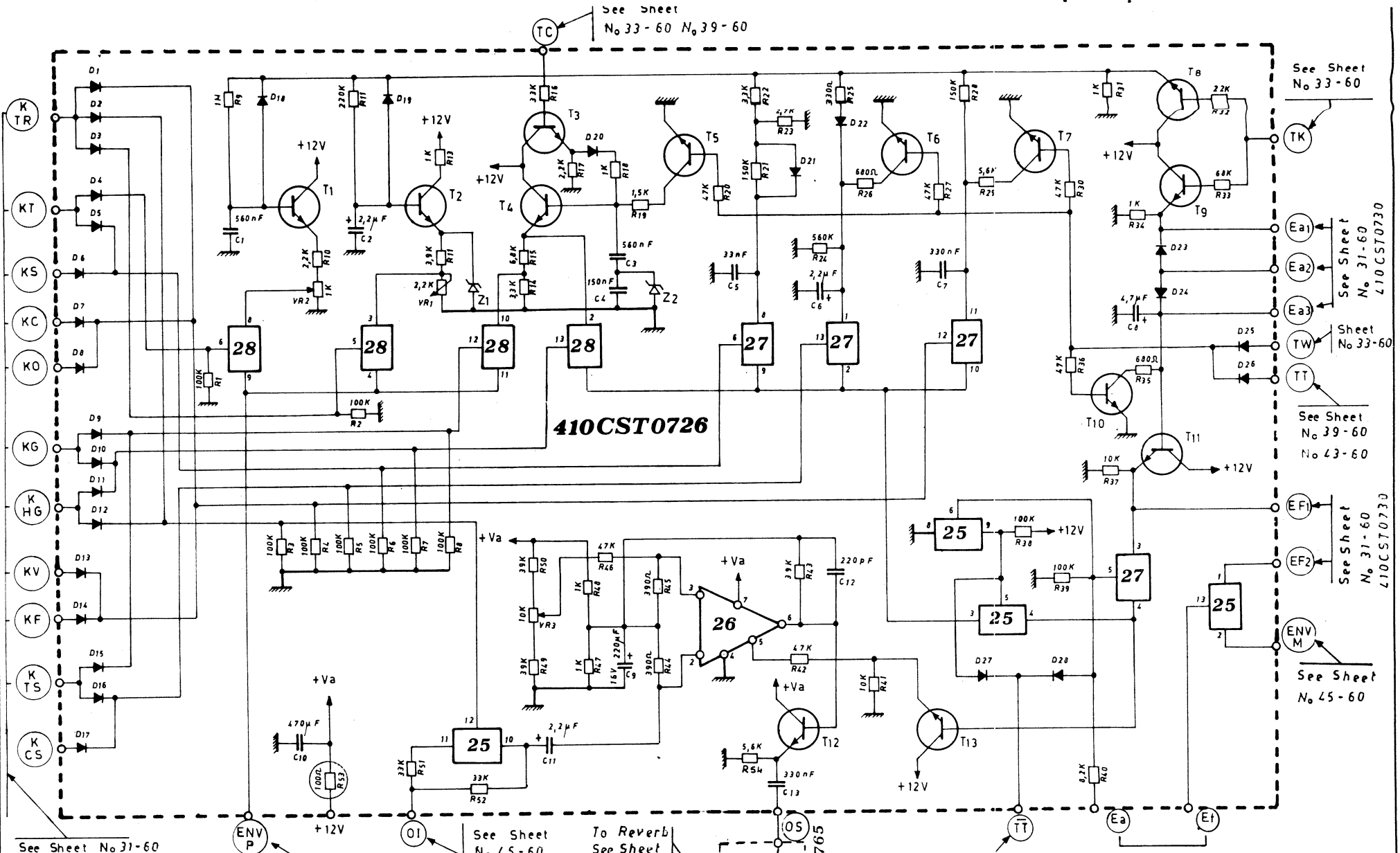
Code	Type	Transistors
T ₁ ÷ T ₁₃	NPN	BC 173

	Model X-705	Object: VCA - VCF Controls	Sheet No 41-60 Date 22-8-77
---	----------------	----------------------------------	--------------------------------

Integrated circuits		
Code	Type	Manufactured
25-27-28	4016	R.C.A.
26	CA 3080 E	

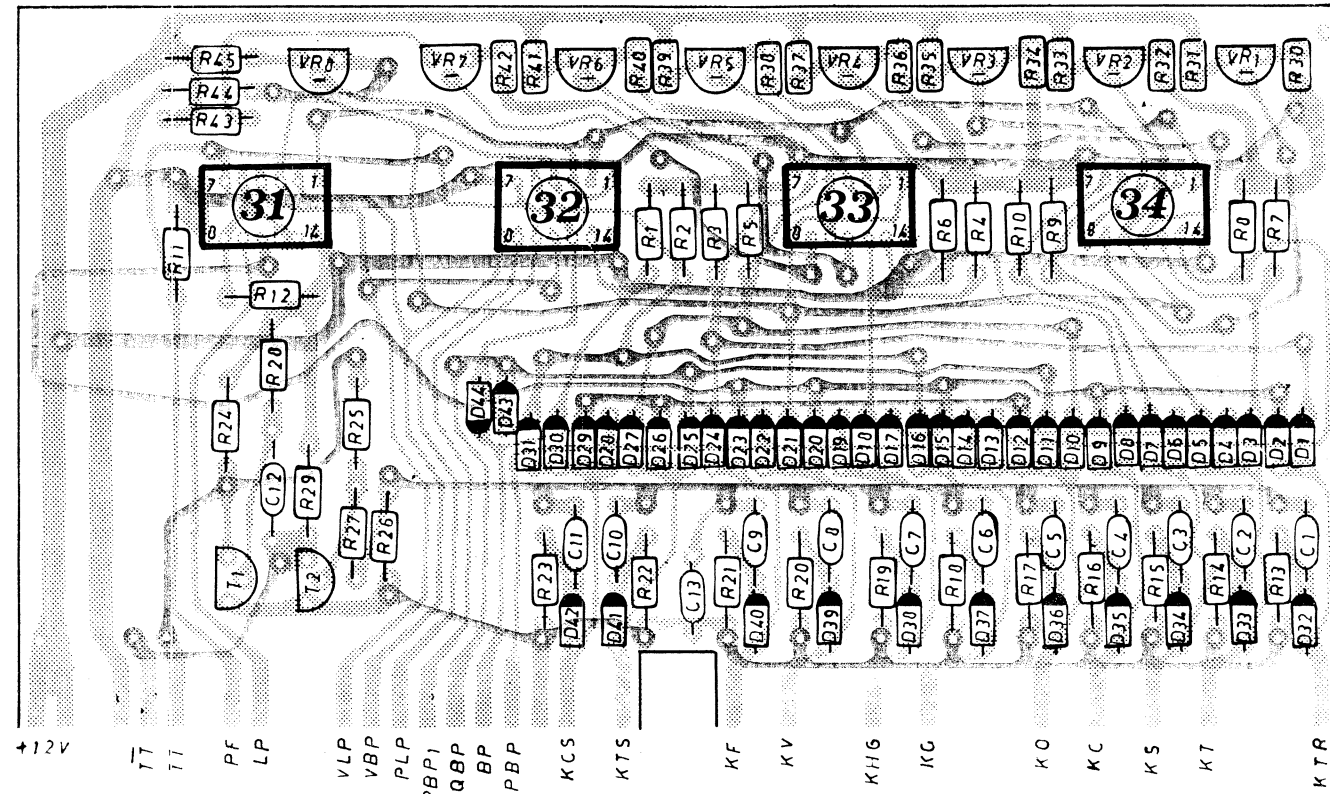
4016 { Pin 7 = GND
Pin 14 = +12V

Z₁ = Z₂ = 5,1V



410CST0727

(457GR07270)



THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON ASSEMBLED
BOARDS



Model
X 705

Object:
Assembly of
Printed Circuit

Sheet No 42-60
Date 25-10-77

See Sheet
No 39 - 60
No 41 - 60

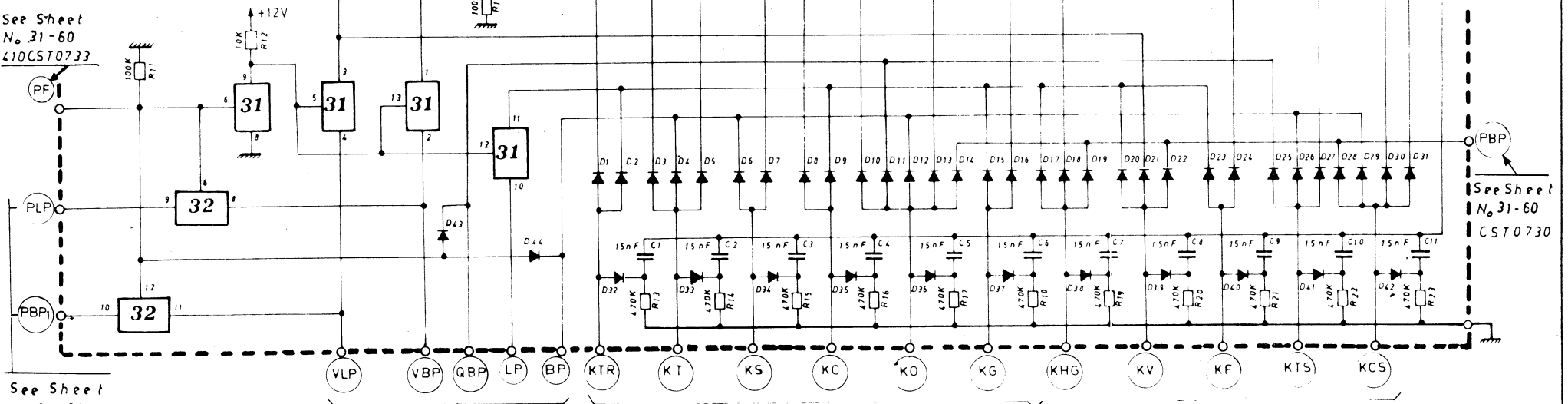
410CST0727

See Sheet
No 31-60
410CST0733

See Sheet
No 31-60
410CST0730

See Sheet No 45-60

See Sheet No 31-60 (410CST0753)



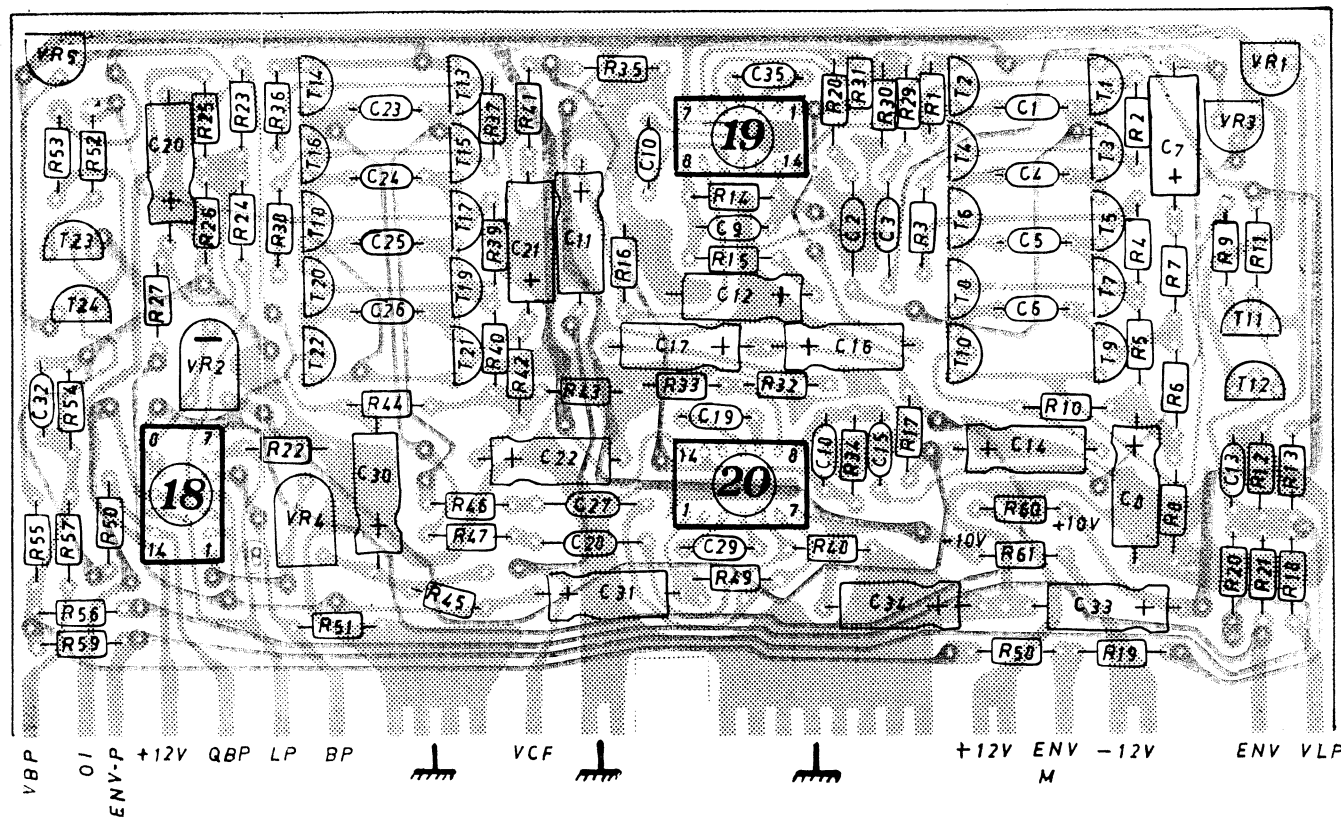
Code	Type	Transistors
T1 - T2	N.P.N.	BC 173

4016 { Pin 7 = GND
Pin 14 = +12V

Integrated circuits		
Code	Type	Manufactured
31 ÷ 34	4016	

Model	Object	Sheet No 43-60
		Date 23-0-77
X-705	Timbre control	

410CST0728 (427GR07280)



THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE COMPONENTS.
BOARDS.



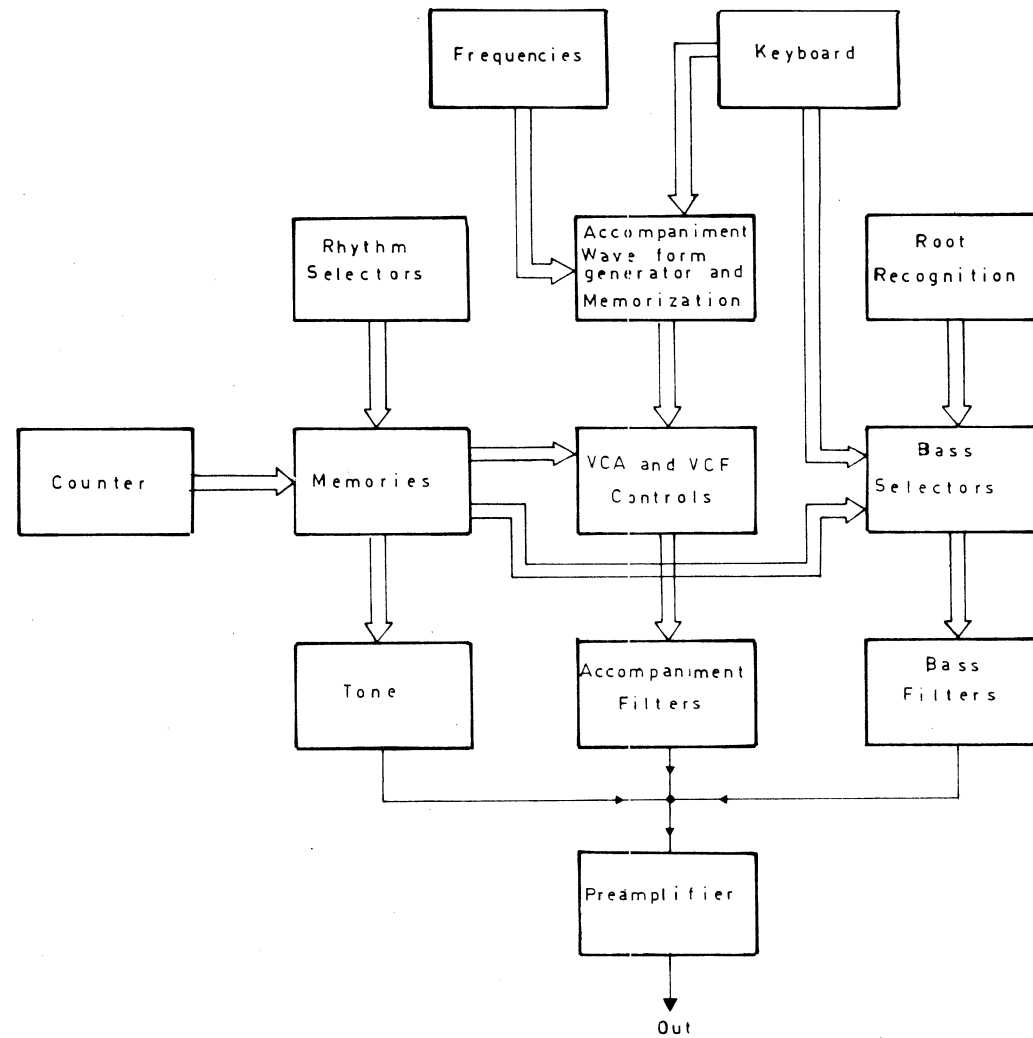
Model
X-705

Object
Assembly of
Printed Circuit

Sheet No. 44-50

Date 6-6-77

RHYTHM UNIT

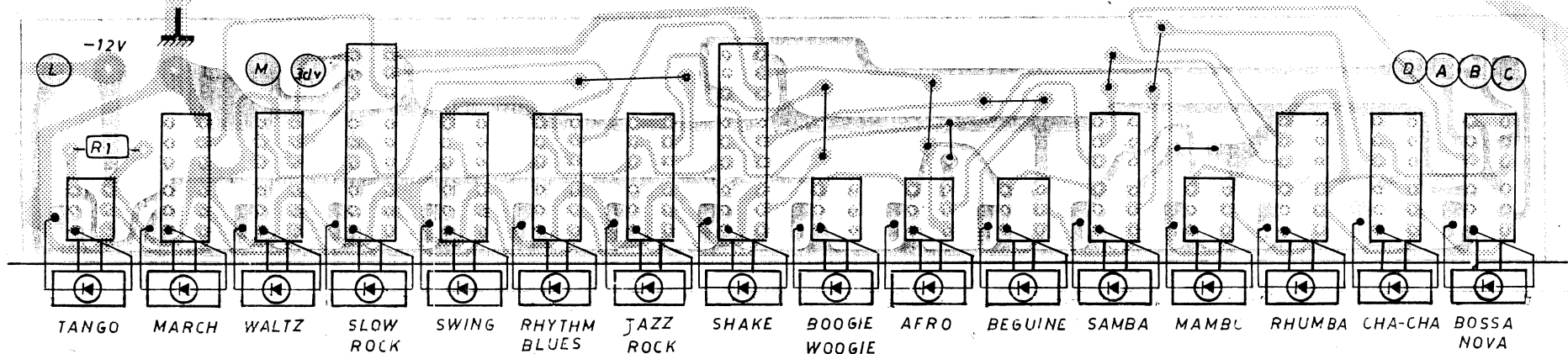


Model
X-705

Object:
Block Diagram

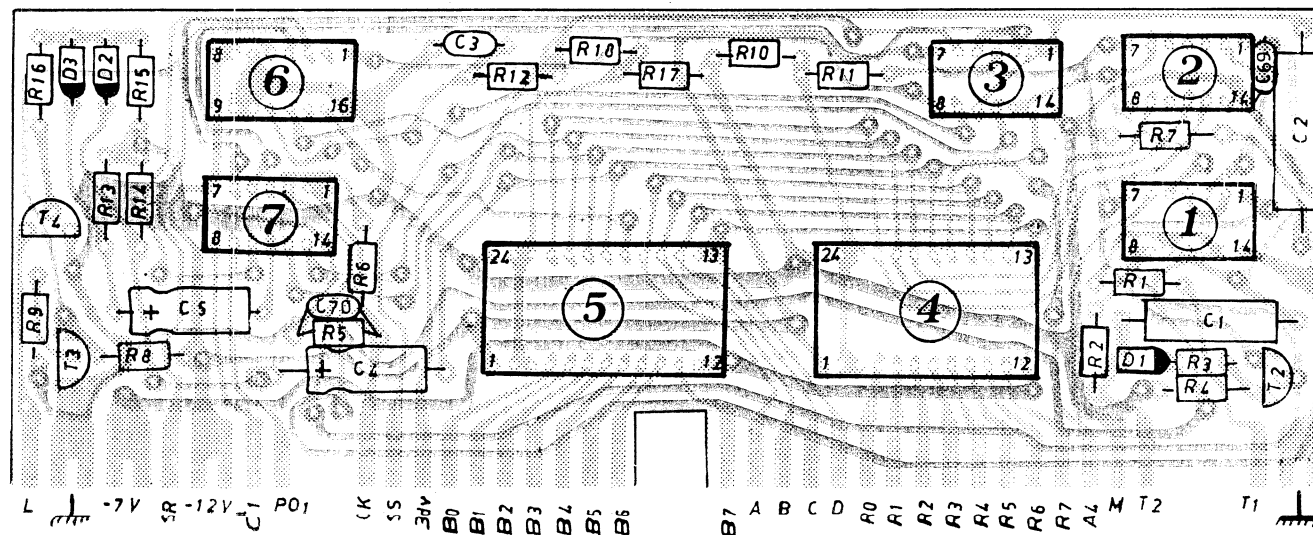
Sheet No 47-60

Dat 25-7-77



410CST0740

(427GR07400)



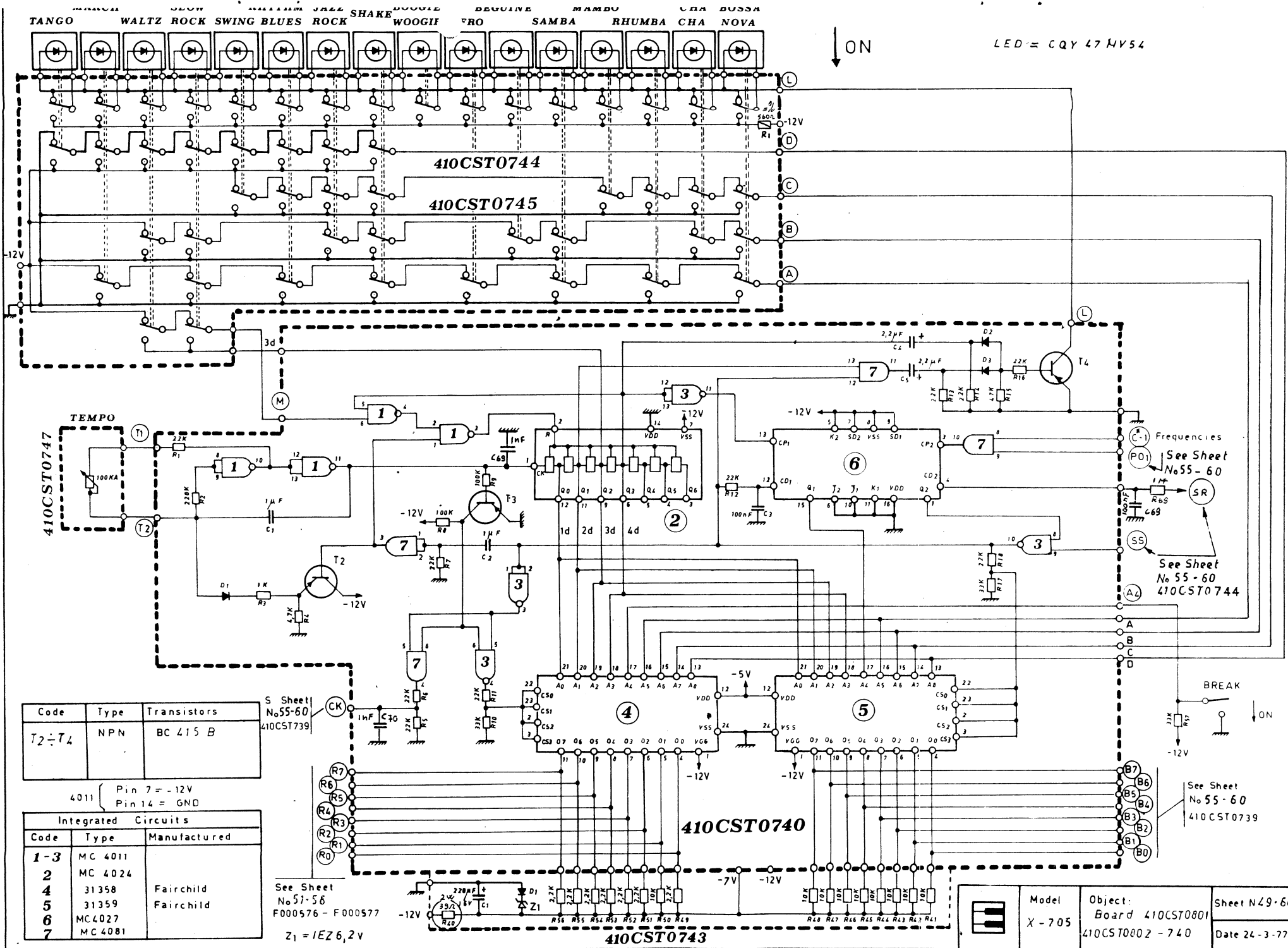
THE NUMBERS IN BRACKETS REPRESENT THE ELKA CODES OF THE ASSEMBLED BOARDS WHILST THE OTHERS REPRESENT THE ELKA CODES OF THE NON-ASSEMBLED BOARD.



Model
X-705

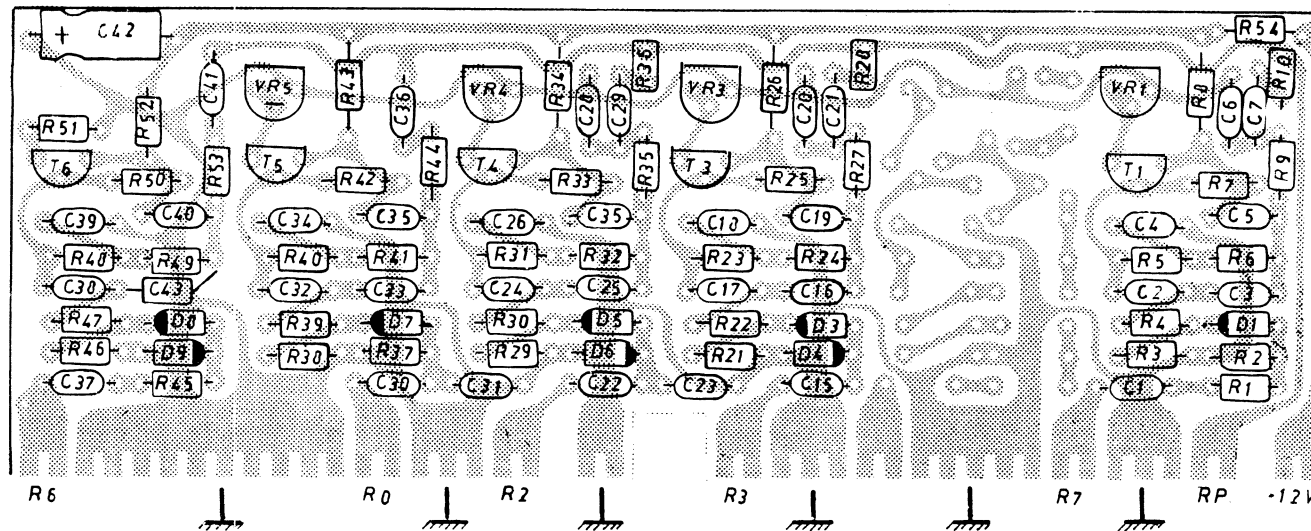
Object
Assembly of
Printed Circuit

Sheet No 48-60
Date 21-4-77



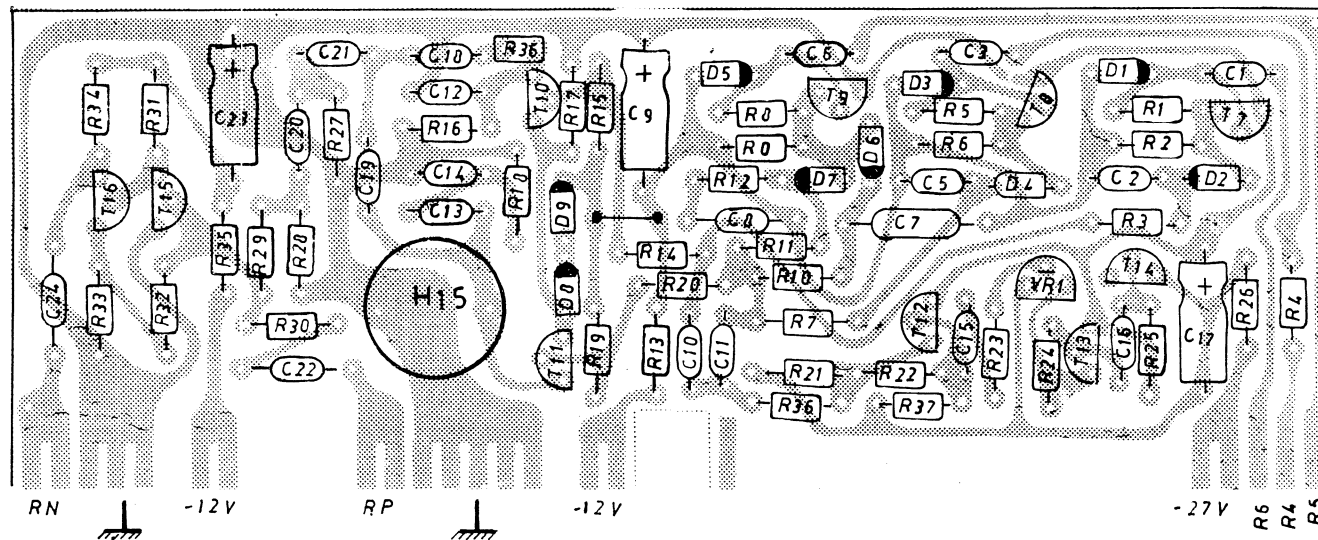
F000576

(427GR05764)



F000577

(427GR05774)



THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS, WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS.



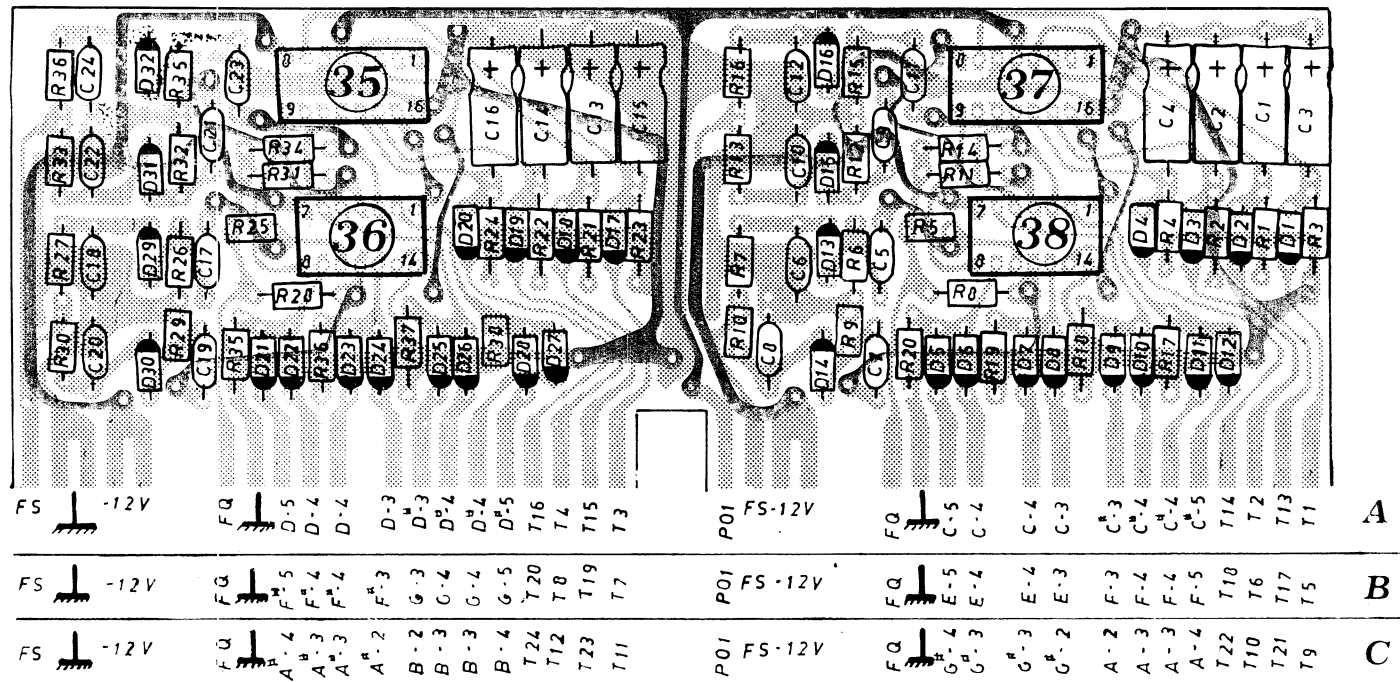
Model
X-705

Object
Assembly of
Printed Circuit

Sheet No 50-60
Date 5.5.77

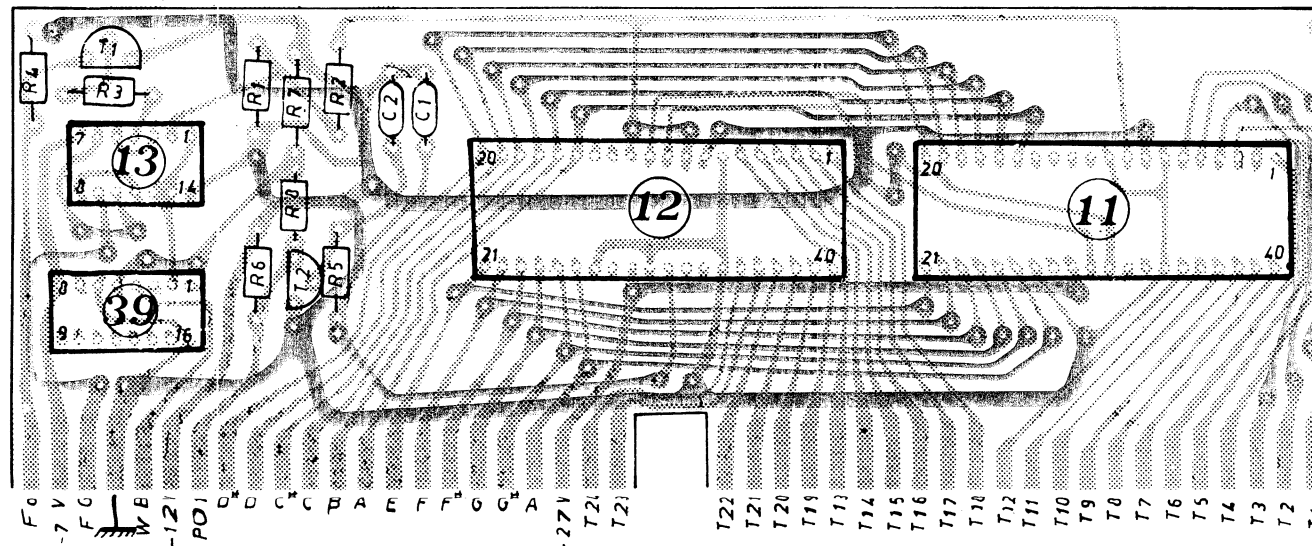
410CST0735

(427GR0735A-B-C)



410CST0736

(427GR07360)



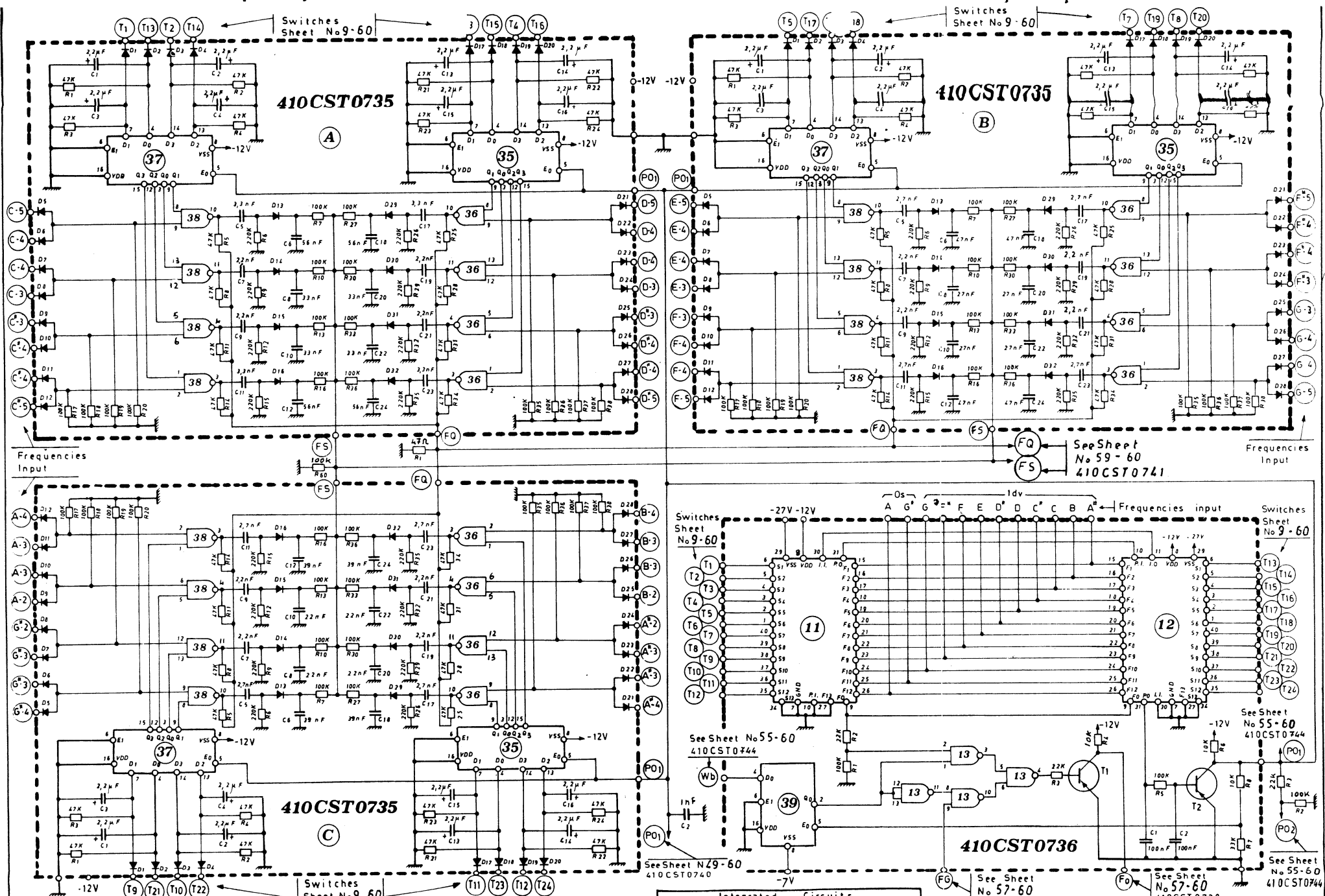
THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE COMPONENTS.



Model
X-705

Object
Assembly of
Printed Circuit

Sheet No 52-60
Date 21-4-77

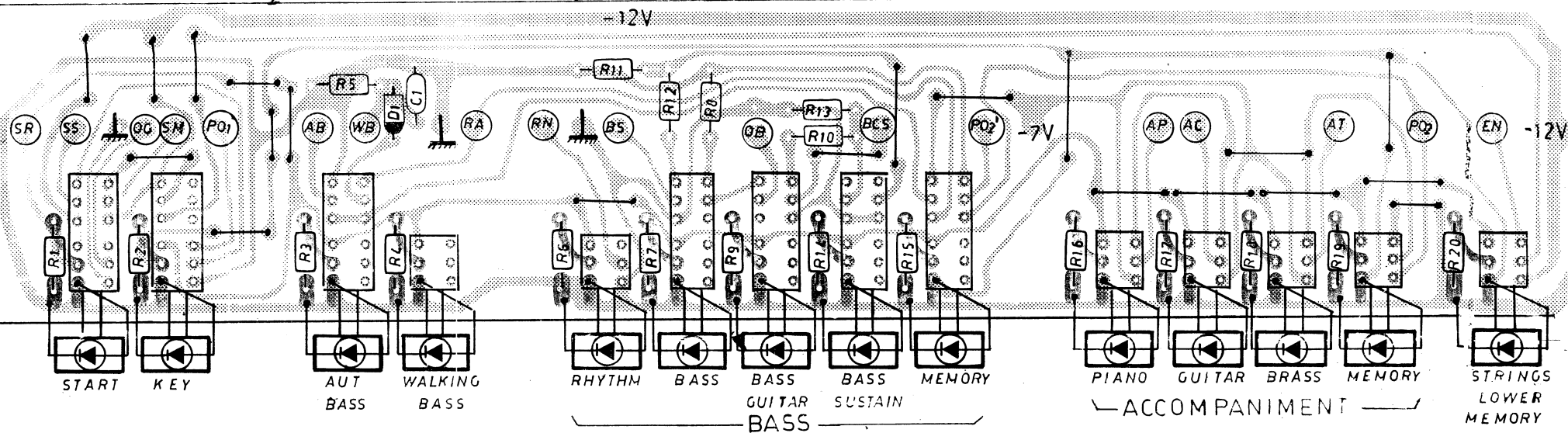


Code	Type	Transistors
T1 - T2	PNP	BC 415

36	Pin 7 = -12V
38	Pin 14 = GND
13	Pin 7 = -7V
	Pin 14 = GND

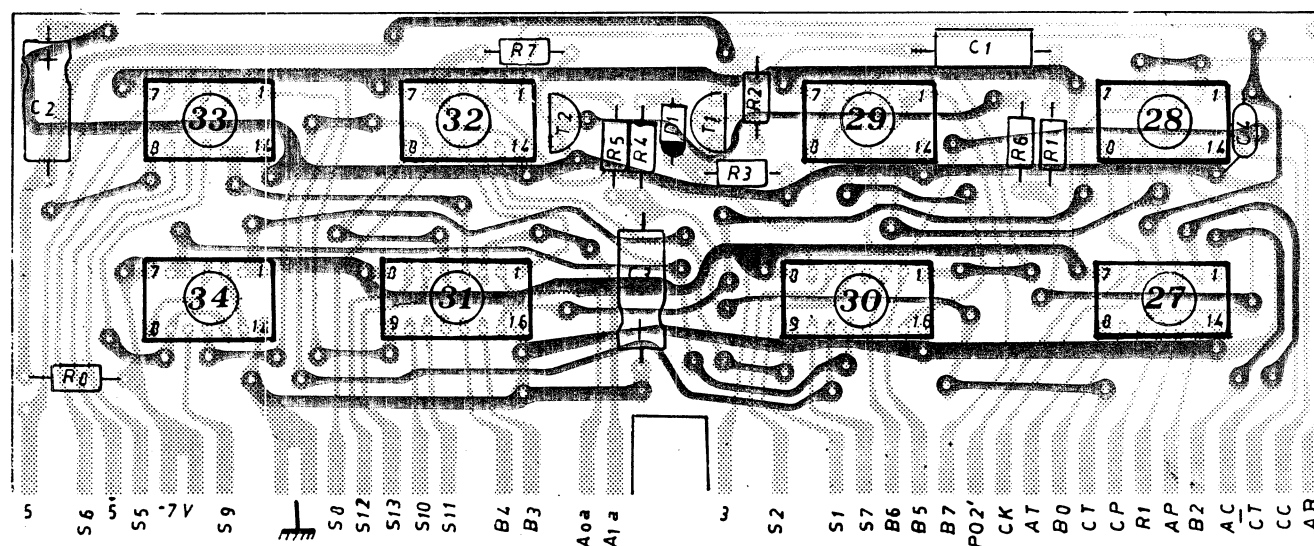
Integrated Circuits		
Code	Type	Manufactured
36-38-13	MC 4011	
35-37-39	MC 4042	
11 - 12	AY-1 - 13-13	G. I. E.

Model	Object:	Sheet No 53-60
X-705	Board	
	410CST0735-736	Date 4-4-77



410CST0739

(427GR07390)



THE NUMBERS IN BRACKETS REPRESENT THE ELKA CODES OF THE ASSEMBLED BOARDS WHILST THE OTHERS REPRESENT THE ELKA CODES OF THE COMPONENTS.



Model

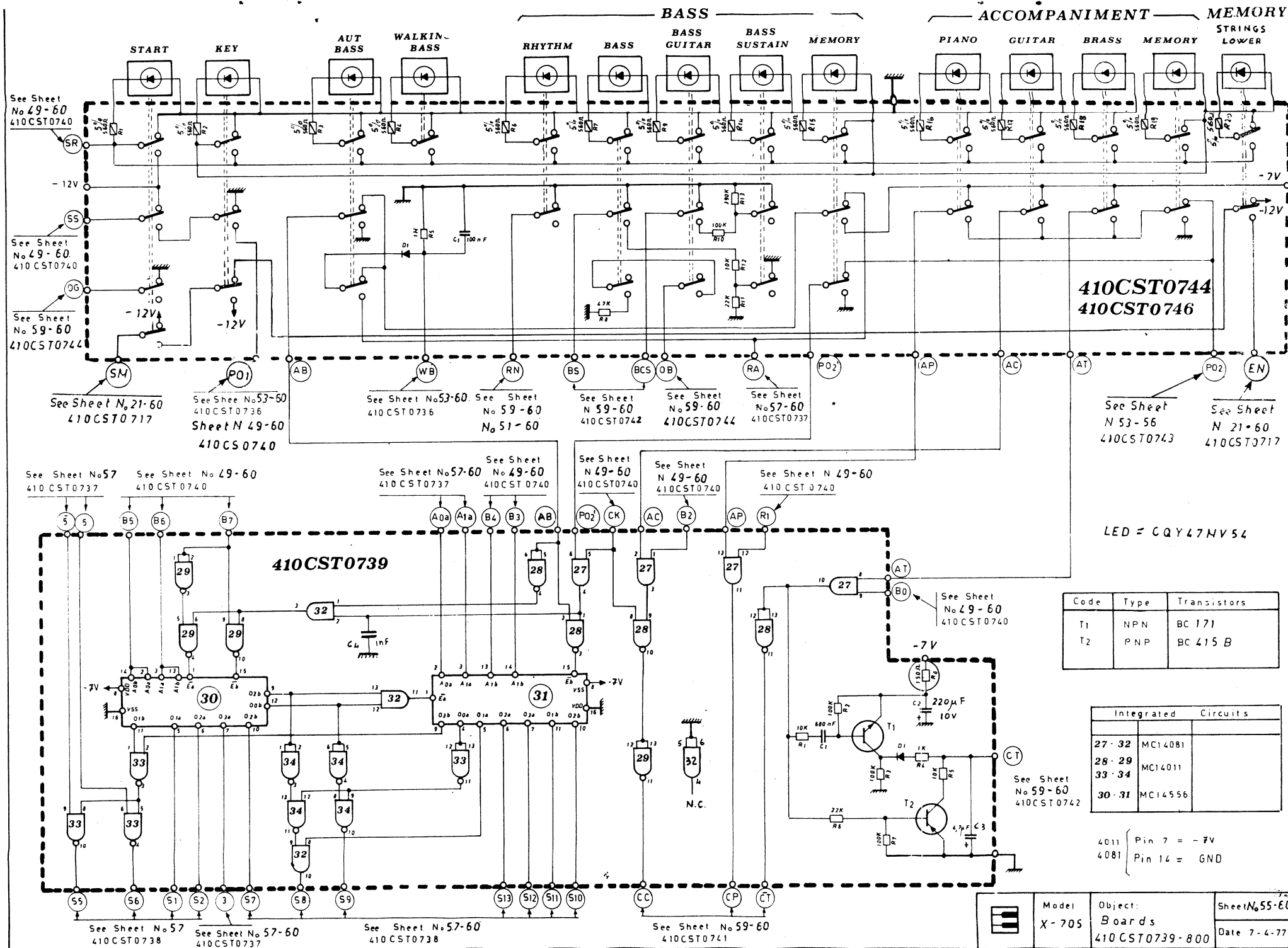
X-705

Object

Assembly of
Printed Circuit

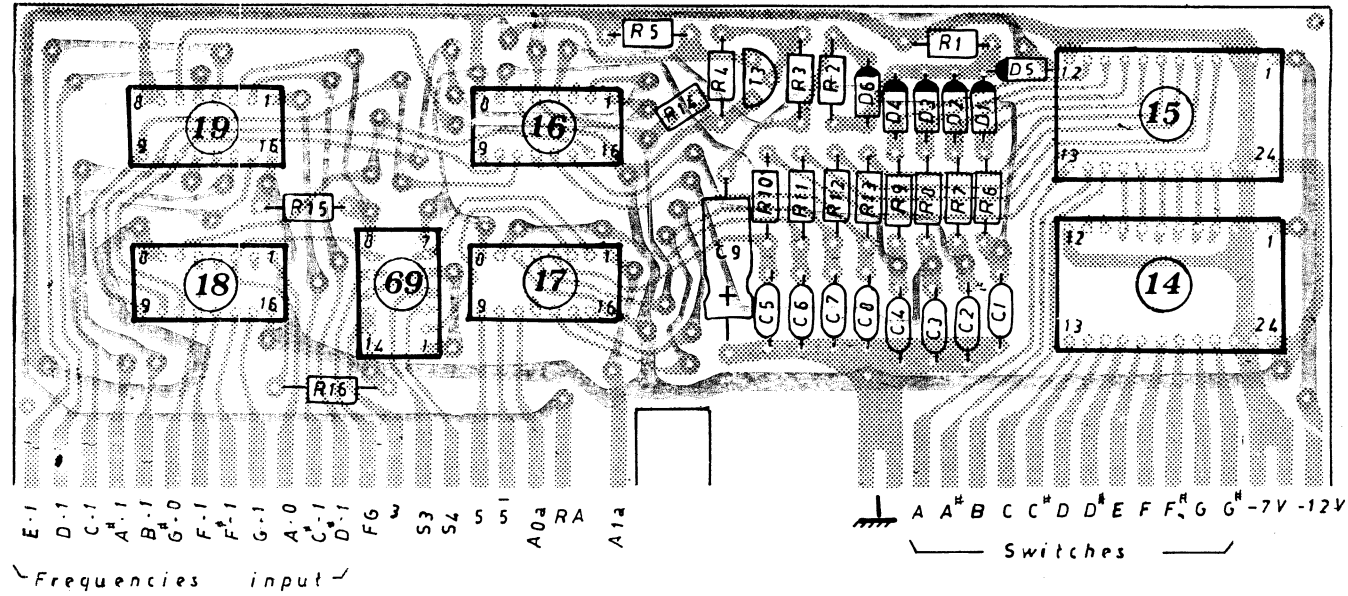
Sheet No 54-60

Date 22-4-77



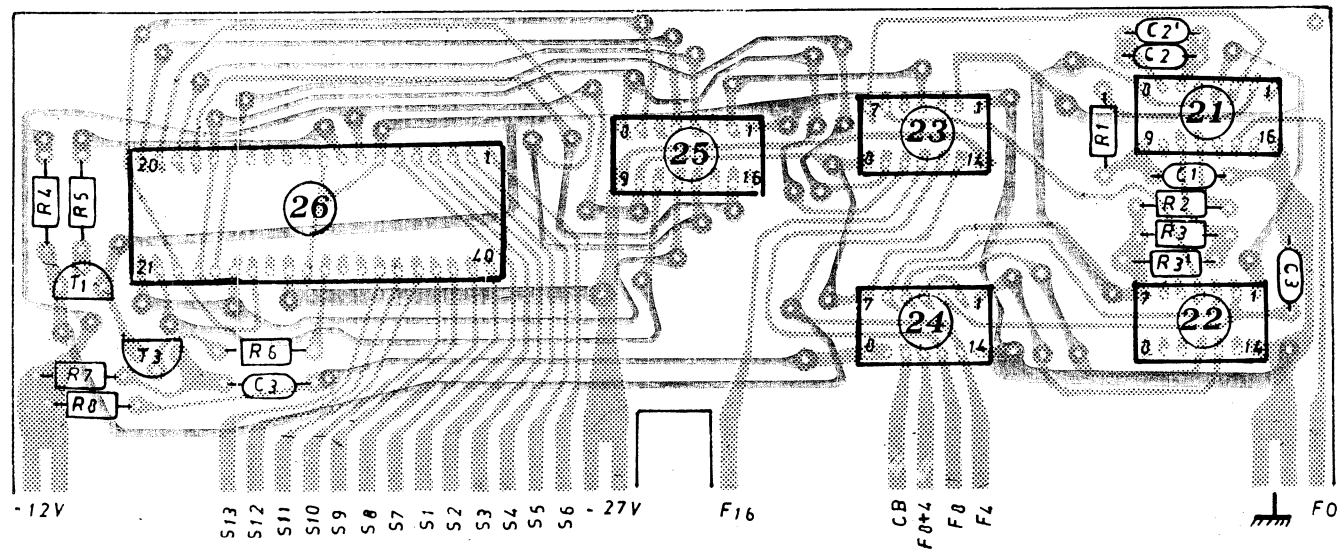
410CST0737

(27GR07370)



410CST0738

(427GR07380)



THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NONASSEMBLED
BOARDS



Model
X-705

Object
Assembly of
Printed Circuit

Sheet No 56-60
Date 26-4-77

See Sheet
No. 55-60
410CST0739

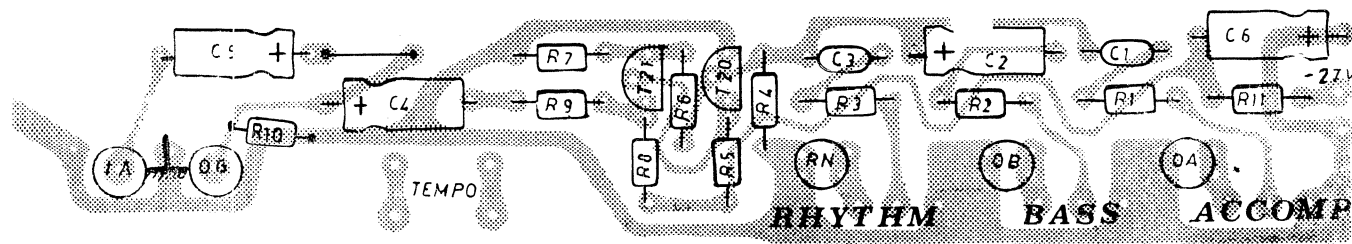
69 { Pin 7 = - 7V
Pin 14 = GND

24 { Pin 7 = - 12V
Pin 14 = GND

Code	Type	Transistors
T1 ÷ T3	PNP	BC 415 B

1/3

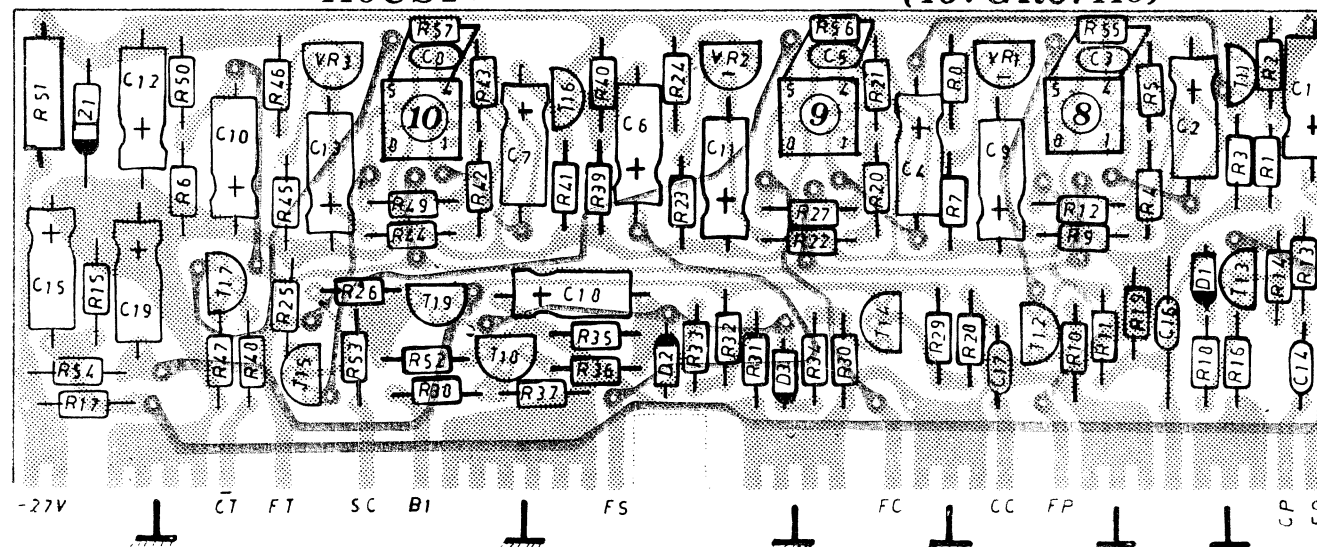
410CST0744



(457GR07441)

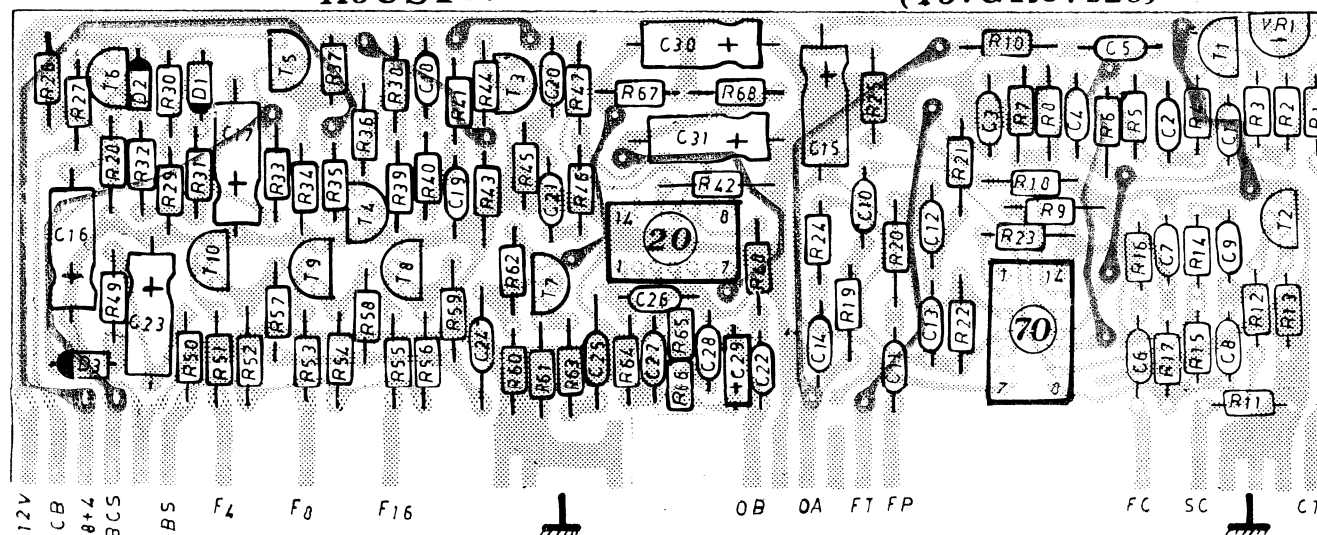
410CST0741

(457GR07410)



410CST0742

(457GR07420)



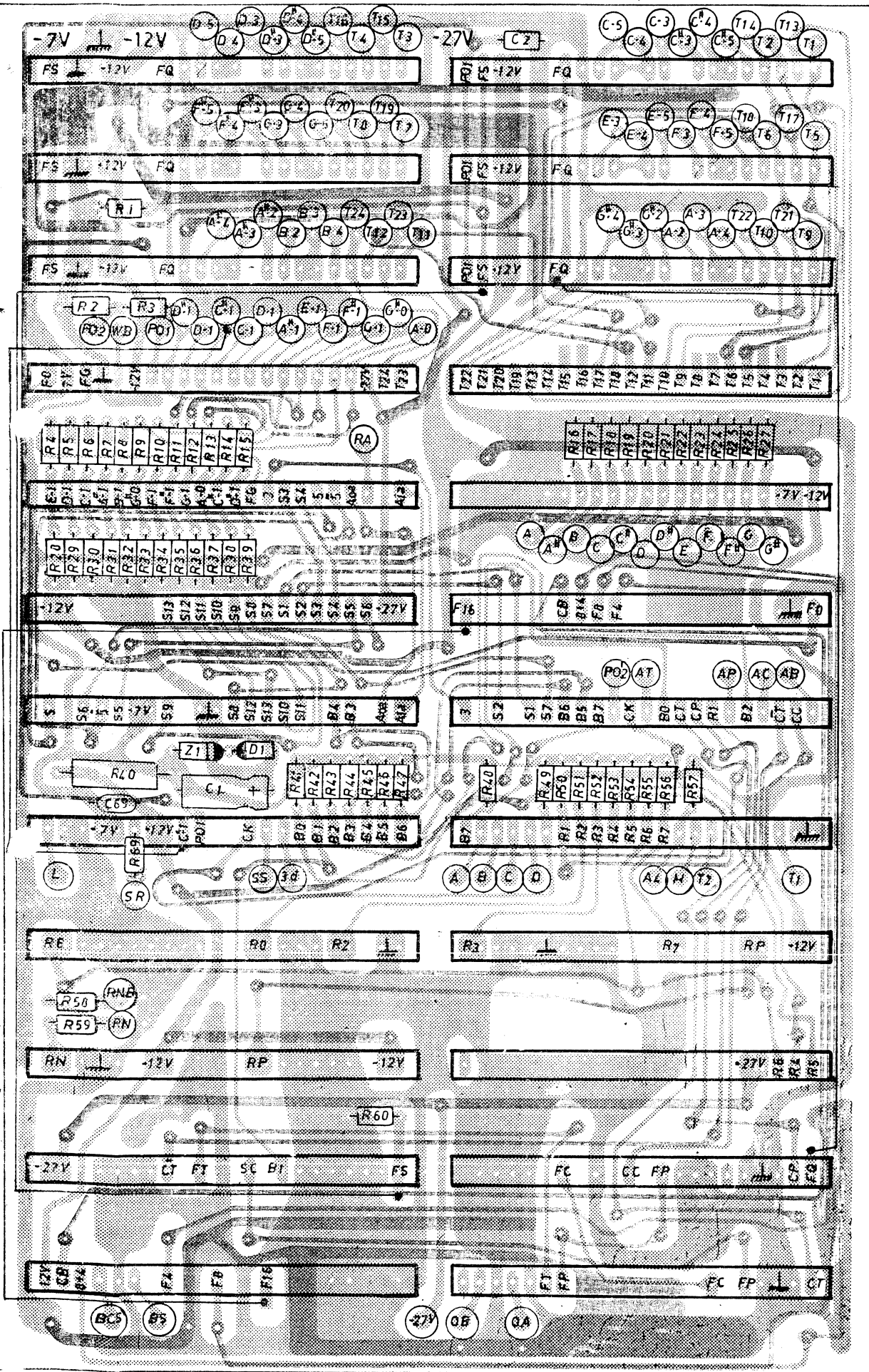
THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS. WHILE
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS.



Model
X-705

Object
Assembly of
Printed Circuit

Sheet No 50-60
Date 25-10-77



735 A

735 B

735 C

736

737

738

739

740

576

577

741

742

THE NUMBERS IN BRACKETS
REPRESENT THE ELKA CODES OF
THE ASSEMBLED BOARDS WHILST
THE OTHERS REPRESENT THE ELKA
CODES OF THE NON-ASSEMBLED
BOARDS.

Sheet No. 60-50
Date 14-6-77

Object
Assembly of
Printed Circuit

Model
X-705

