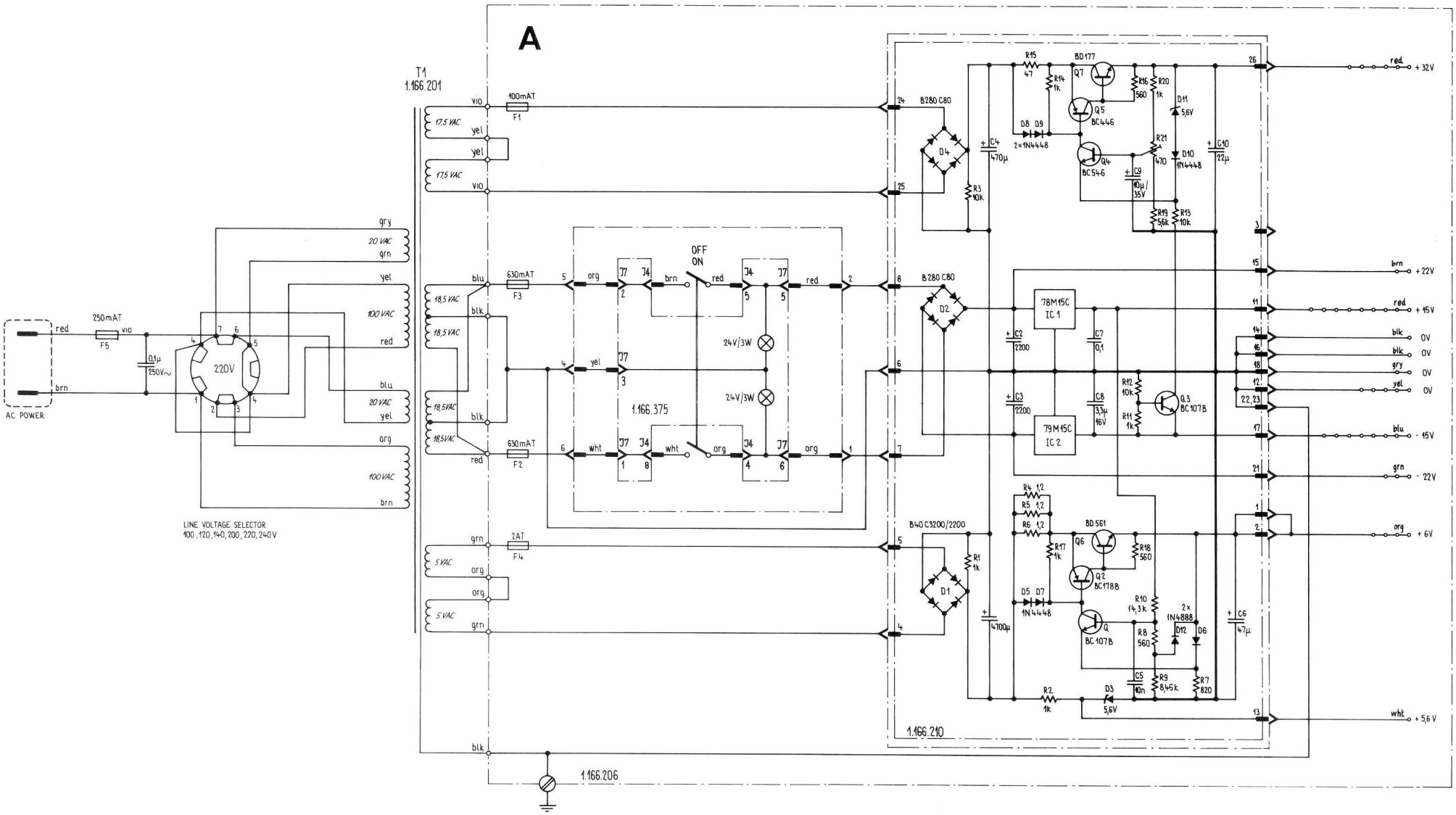
STUDER REVOX

13

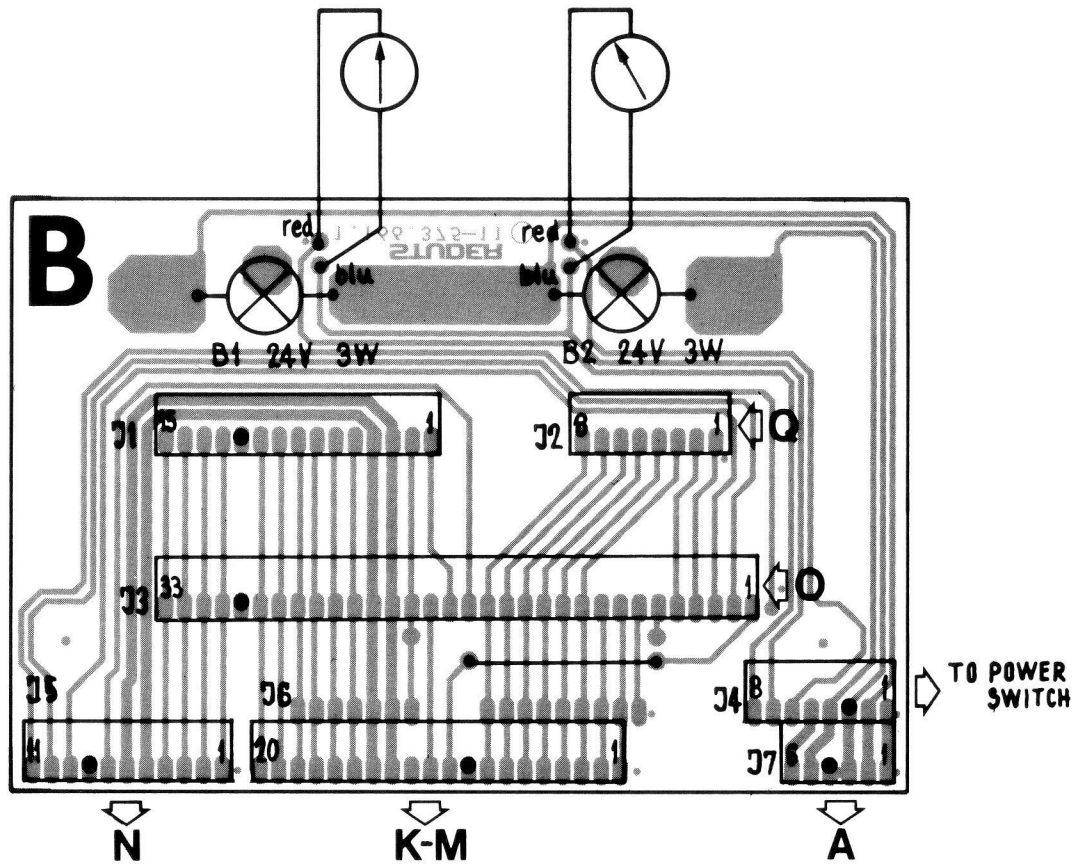
B 760

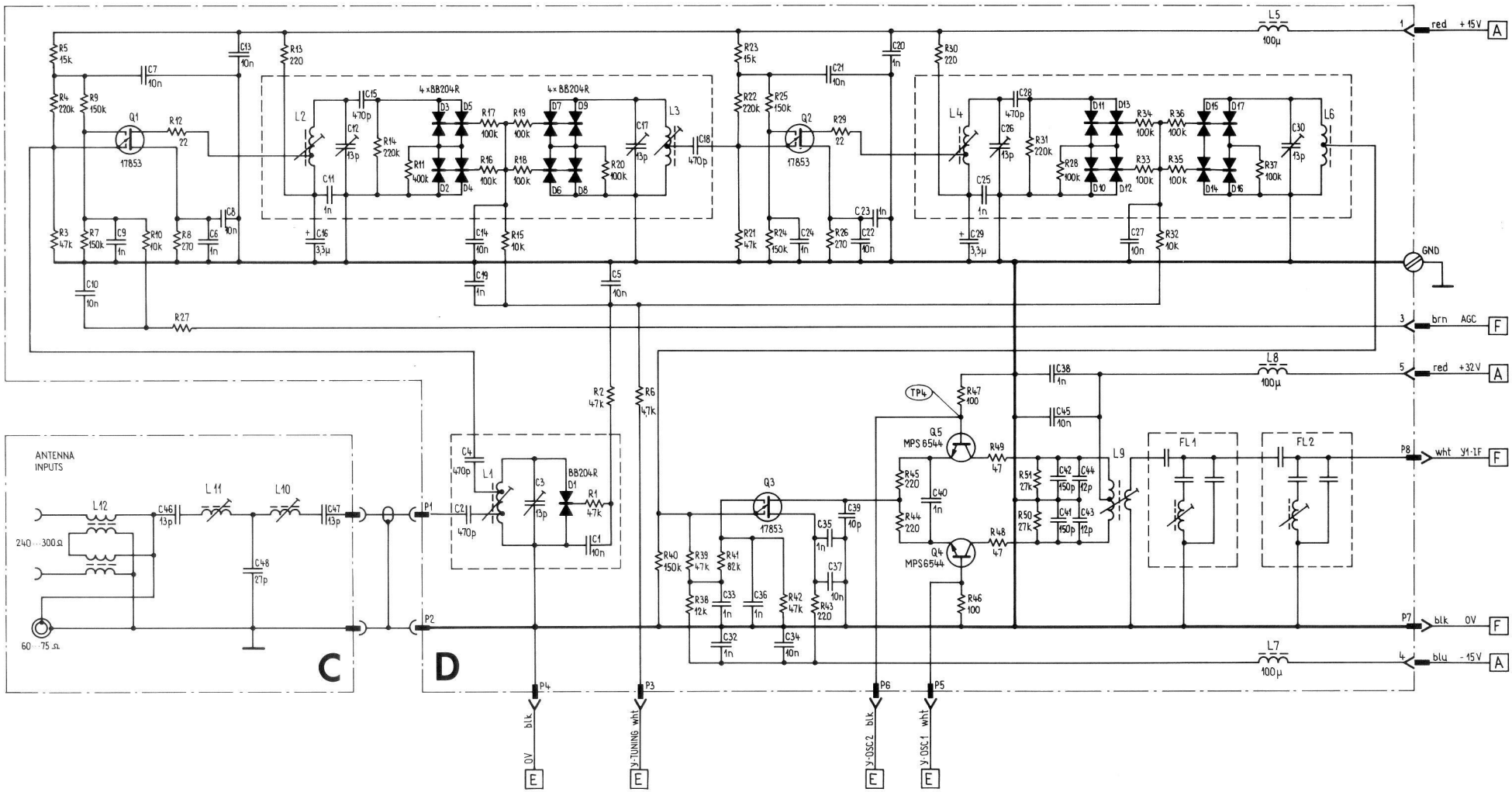
SET OF SCHEMATICS
SCHALTUNGSSAMMLUNG
RECUEIL DE SCHEMAS

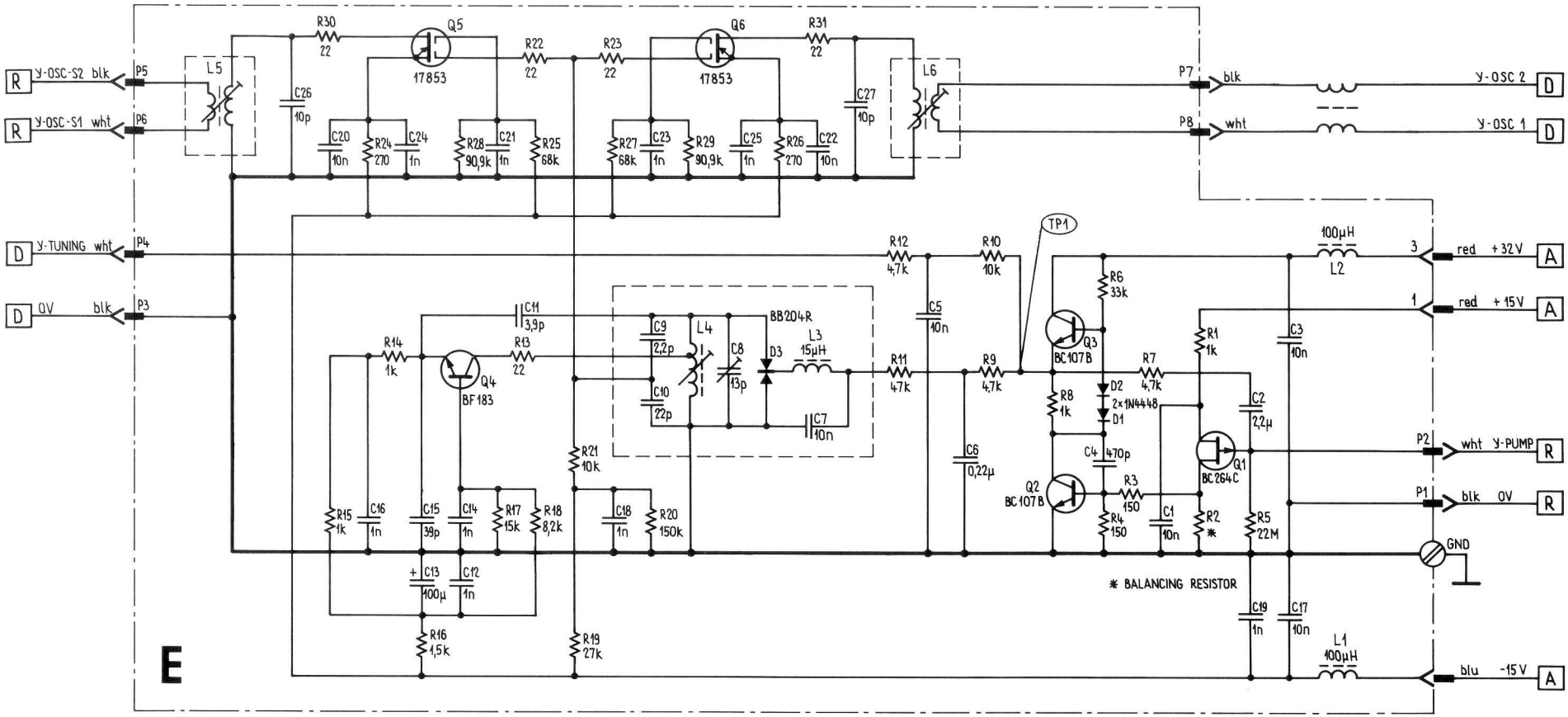
Änderungen vorbehalten
Sous réserve de modification
Subject to change

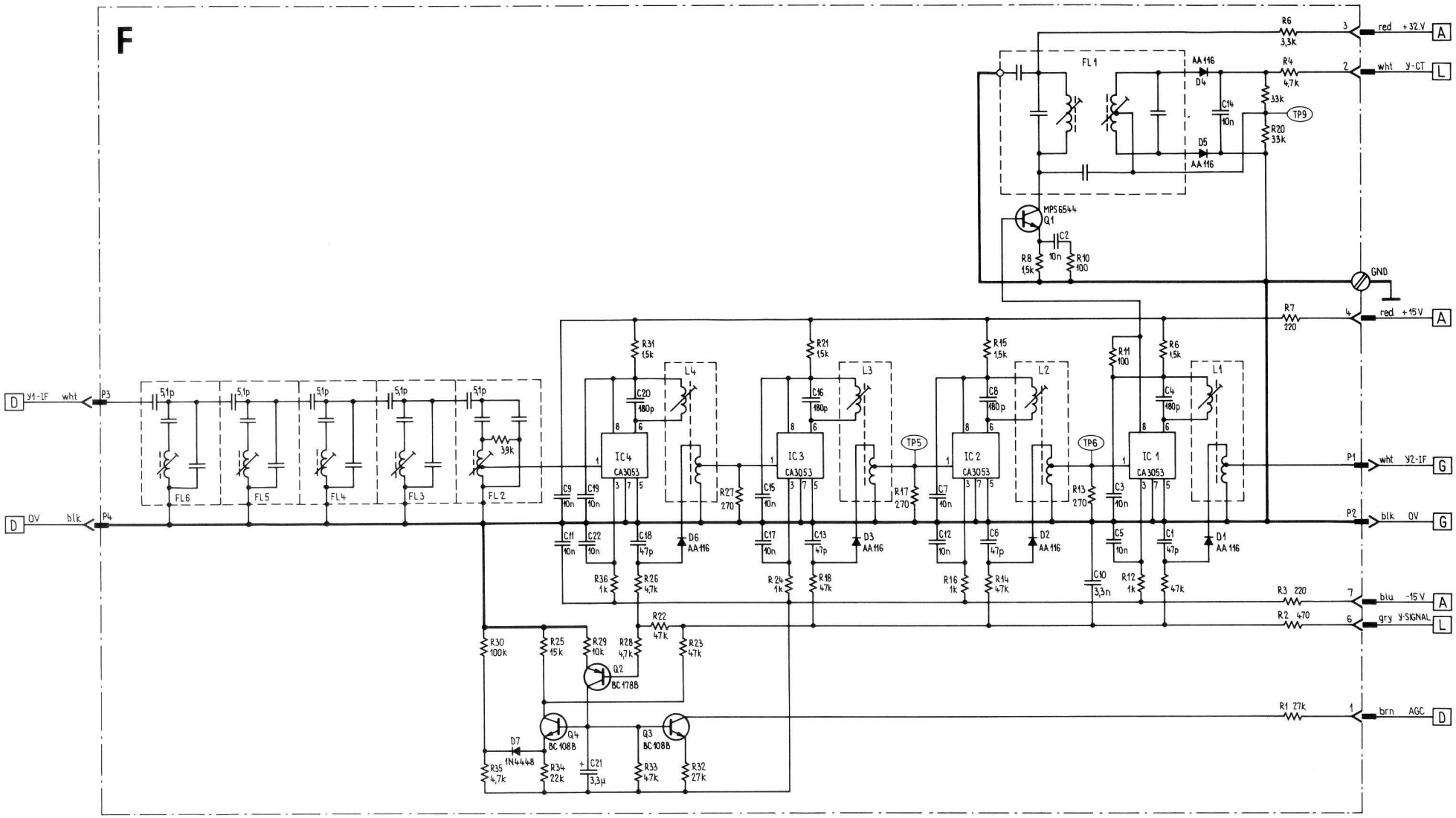


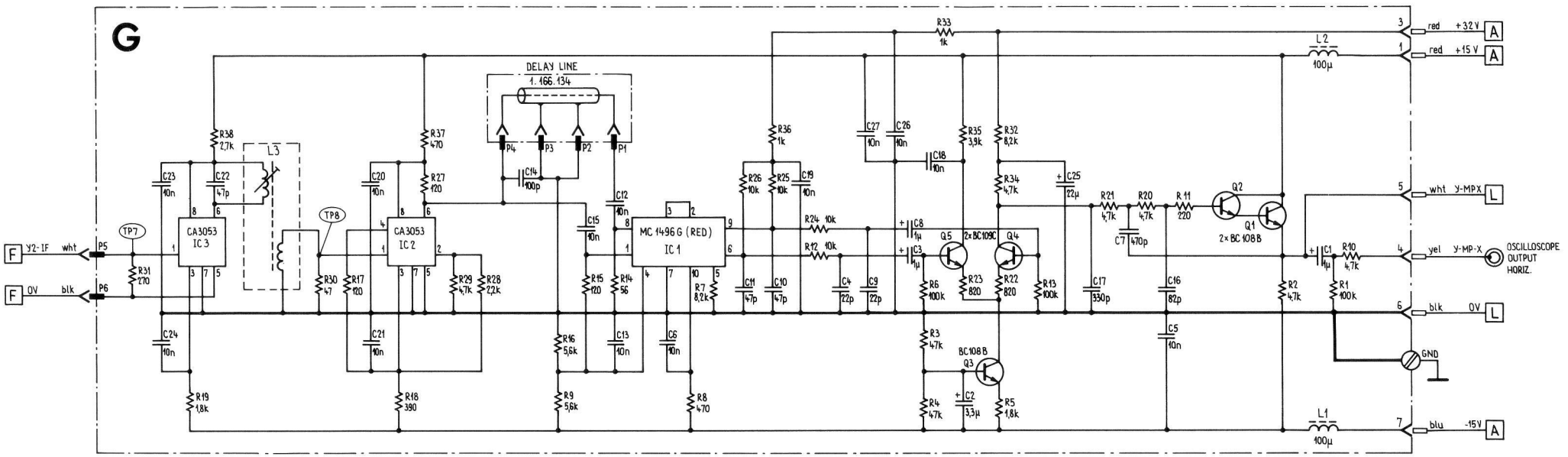
POWER SUPPLY 1.166.200

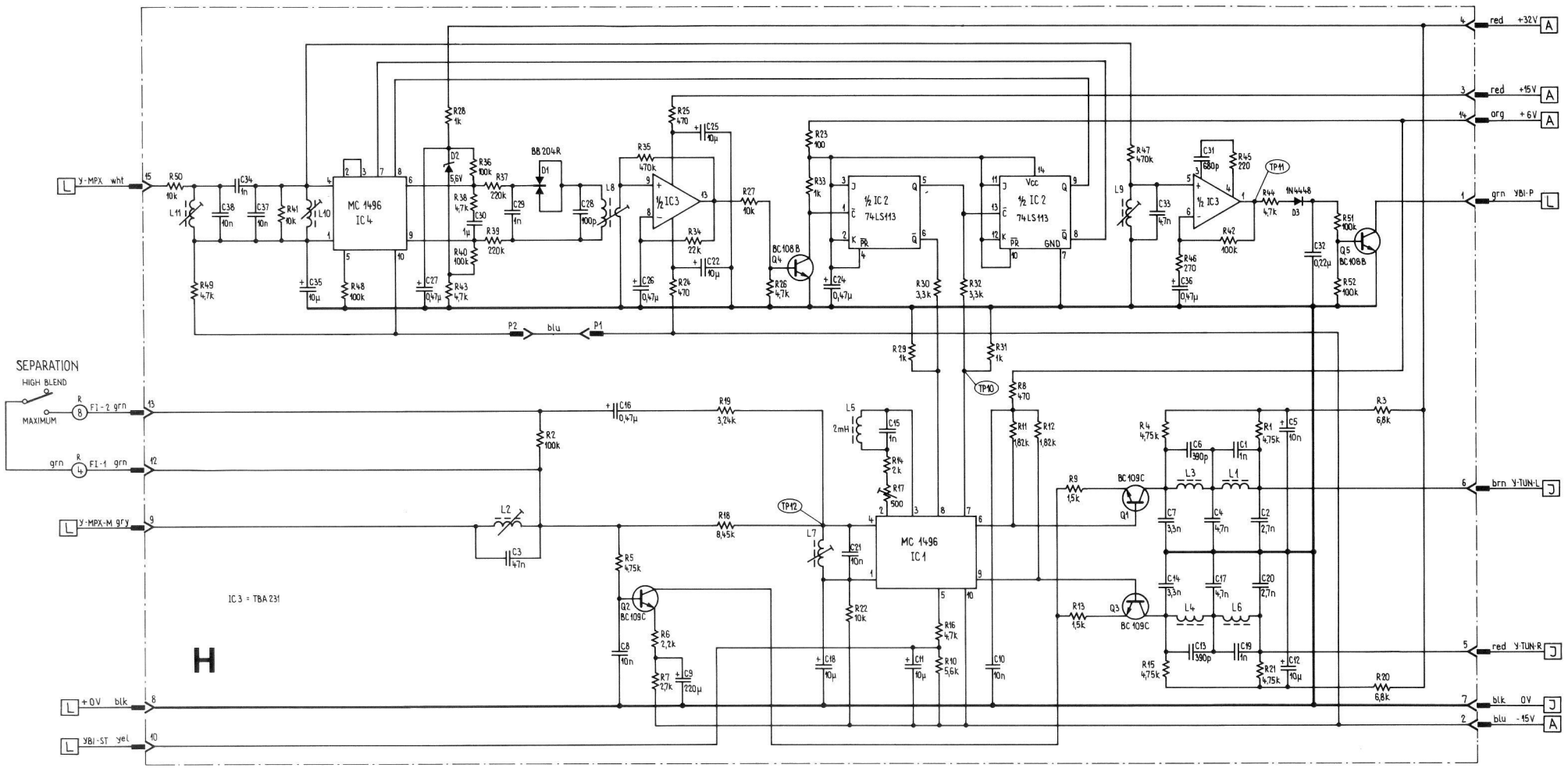

B
red
blu
red
blu
B1 24V 3W
B2 24V 3W
J1
25
1
J2
8
1
Q
J3
33
1
O
J5
14
1
J6
20
1
J4
8
1
J7
6
1
TO POWER SWITCH
N
K-M
A


ANTENNA INPUTS
240 ··· 300 Ω
60 ··· 75 Ω
C
D
4 x BB204R
4 x BB204R
17853
17853
MPS 6544
MPS 6544
TP4
FL 1
FL 2
GND
1 red +15V A
3 brn AGC F
5 red +32V A
P8 wht y1-IF F
P7 blk 0V F
4 blu -15V A
P4 blk 0V E
P3 wht y-TUNING E
P6 blk y-OSC2 E
P5 wht y-OSC1 E

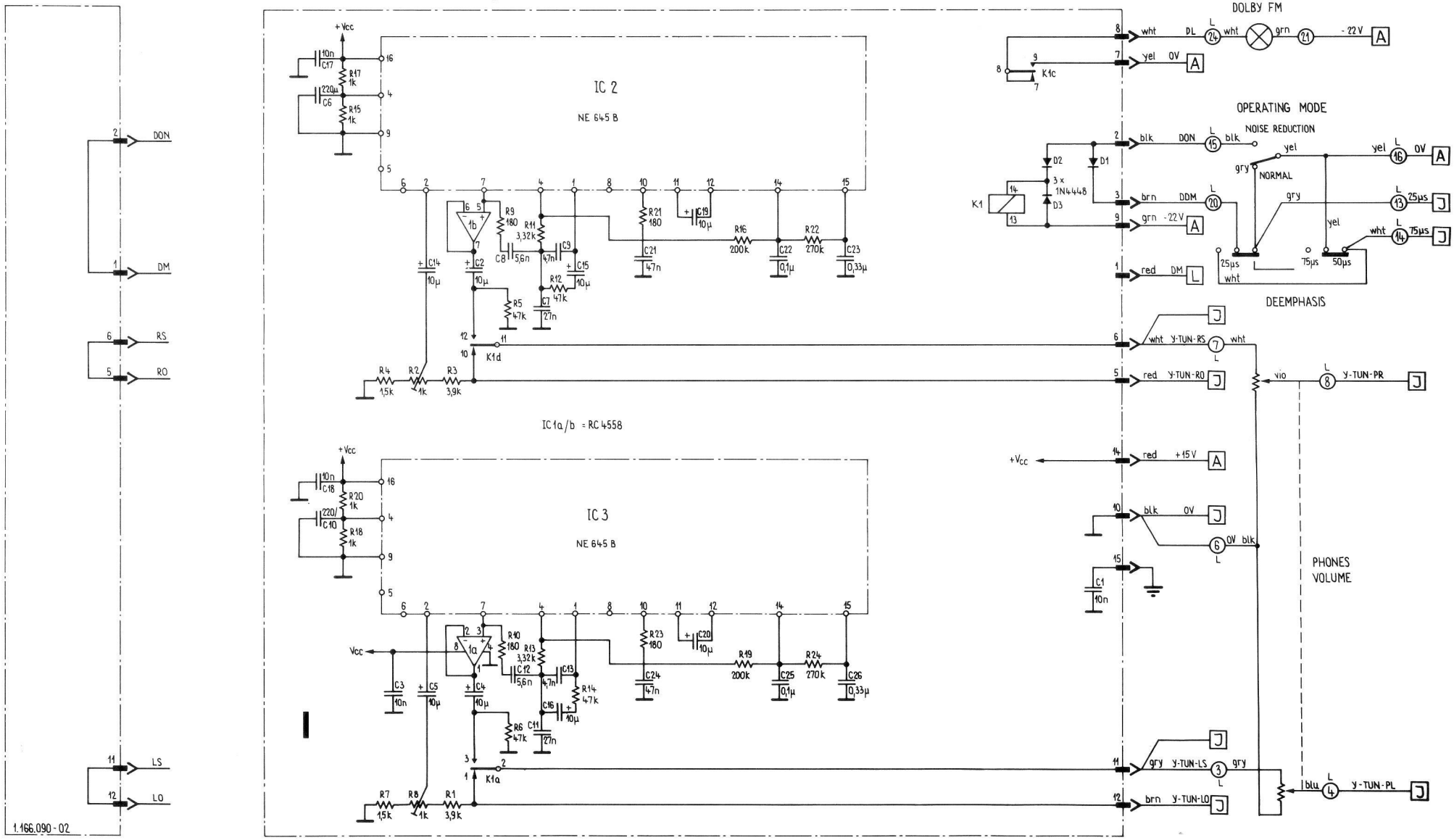

R
V-OSC-S2 blk
P5
R
V-OSC-S1 wht
P6
D
V-TUNING wht
P4
D
0V
blk
P3
L5
L6
R30
22
Q5
17853
R22
22
R23
22
Q6
17853
R31
22
C26
10p
C27
10p
C20
10n
R24
270
C24
1n
R28
90,9k
C21
1n
R25
68k
R27
68k
C23
1n
R29
90,9k
C25
1n
R26
270
C22
10n
P7
blk
V-OSC 2
D
P8
wht
V-OSC 1
D
TP1
R12
4,7k
R10
10k
100µH
L2
3
red +32V
A
1
red +15V
A
C11
3,9p
C9
2,2p
L4
C8
13p
D3
BB204R
L3
15µH
C10
22p
C7
10n
C5
10n
R14
1k
Q4
BF183
R13
22
R11
4,7k
R9
4,7k
R6
33k
Q3
BC107B
R7
4,7k
R1
1k
C3
10n
R8
1k
D2
2x1N4448
D1
C2
2,2µ
C6
0,22µ
C4
470p
Q2
BC107B
R3
150
R4
150
C1
10n
Q1
BC264C
P2
wht V-PUMP
R
P1
blk 0V
R
R21
10k
R15
1k
C16
1n
C15
39p
C14
1n
R17
15k
R18
8,2k
C18
1n
R20
150k
R2
*
R5
22M
GND
+ C13
100µ
C12
1n
* BALANCING RESISTOR
C19
1n
C17
10n
L1
100µH
R16
1,5k
R19
27k
blu -15V
A
E


F
FL 1
AA 116
D4
D5
AA 116
R6
3,3k
R4
4,7k
33k
TP9
R20
33k
C14
10n
MPS 6544
Q1
C2
10n
R8
1,5k
R10
100
GND
R7
220
red +32 V
wht y-CT
red +15 V
wht y2-IF
blk 0V
blu -15 V
gry y-SIGNAL
brn AGC
D y1-IF wht
D 0V blk
P3
P4
P1
P2
5,1p
FL6
FL5
FL4
FL3
FL2
3,9k
R31
1,5k
R21
1,5k
R15
1,5k
R11
100
R6
1,5k
L4
L3
L2
L1
C20
180p
C16
180p
C8
180p
C4
180p
IC 4
IC 3
IC 2
IC 1
CA3053
TP5
TP6
C9
10n
C19
10n
R27
270
C15
10n
R17
270
C7
10n
R13
270
C3
10n
C11
10n
C22
10n
C18
47p
D6
AA 116
C17
10n
C13
47p
D3
AA 116
C12
10n
C6
47p
D2
AA 116
C5
10n
C1
47p
D1
AA 116
R36
1k
R26
4,7k
R24
1k
R18
47k
R16
1k
R14
47k
C10
3,3n
R12
1k
47k
R3 220
R2 470
R22
47k
R30
100k
R25
15k
R29
10k
R28
4,7k
R23
47k
Q2
BC 178B
Q4
BC 108B
Q3
BC 108B
D7
1N4448
R35
4,7k
R34
22k
C21
3,3µ
R33
47k
R32
27k
R1 27k


G
DELAY LINE
1.166.134
CA3053
IC 3
CA3053
IC 2
MC 1496 G (RED)
IC 1
L3
L2
L1
100µ
100µ
TP7
TP8
P1
P2
P3
P4
P5
P6
F
Y2-IF wht
F
0V blk
R38 2,7k
R37 470
R27 120
R36 1k
R33 1k
R35 3,9k
R32 8,2k
R34 4,7k
R31 270
R30 47
R17 120
R29 4,7k
R28 2,2k
R26 10k
R25 10k
R24 10k
R12 10k
R23 820
R22 820
R13 100k
R6 100k
R7 8,2k
R3 47k
R4 47k
R5 1,8k
R19 1,8k
R18 390
R16 5,6k
R9 5,6k
R15 120
R14 56
R8 470
R21 4,7k
R20 4,7k
R11 220
R10 4,7k
R2 4,7k
R1 100k
C23 10n
C22 47p
C20 10n
C21 10n
C24 10n
C14 100p
C12 10n
C15 10n
C13 10n
C6 10n
C19 10n
C11 47p
C10 47p
C27 10n
C26 10n
C18 10n
C8 1µ
C3 1µ
C4 22p
C9 22p
C25 22µ
C17 330p
C7 470p
C16 82p
C5 10n
C1 1µ
C2 3,3µ
Q5 2×BC109C
Q4
Q3 BC108B
Q2
Q1
2×BC108B
GND
red +32V
red +15V
wht Y-MPX
yel Y-MP-X
OSCILLOSCOPE OUTPUT HORIZ.
blk 0V
blu -15V
A
A
L
L
A

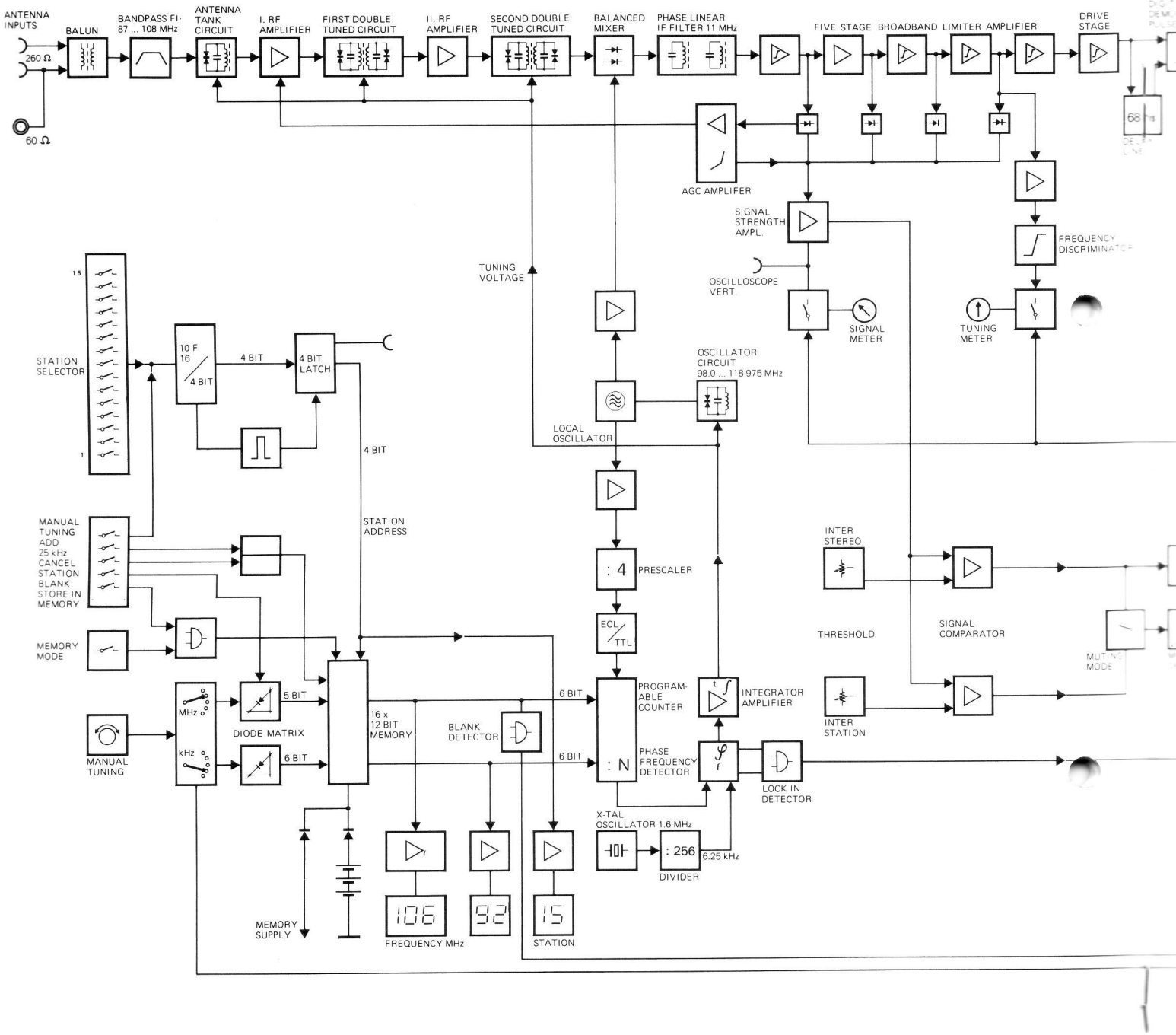


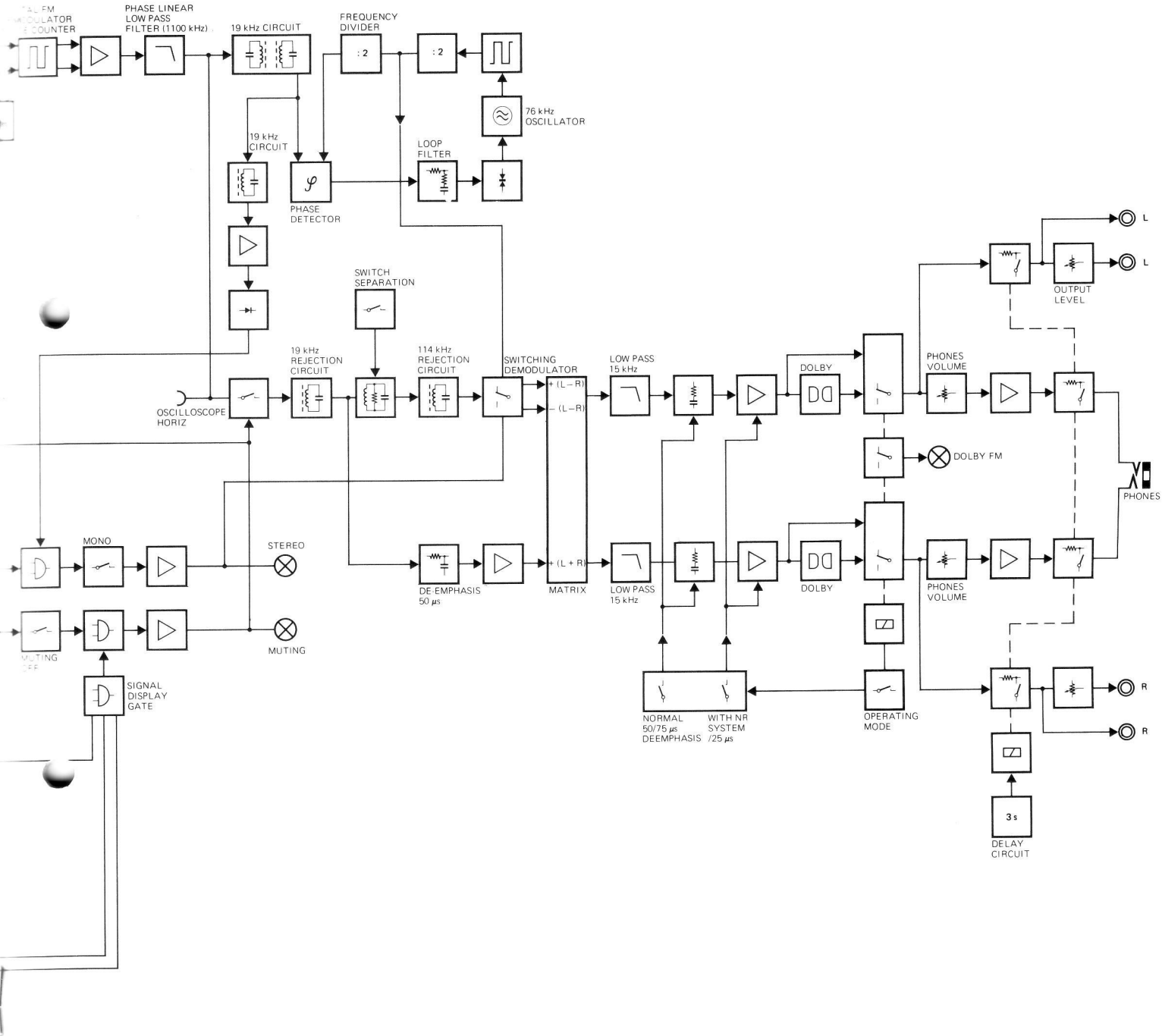
STEREO DECODER 1.166.150



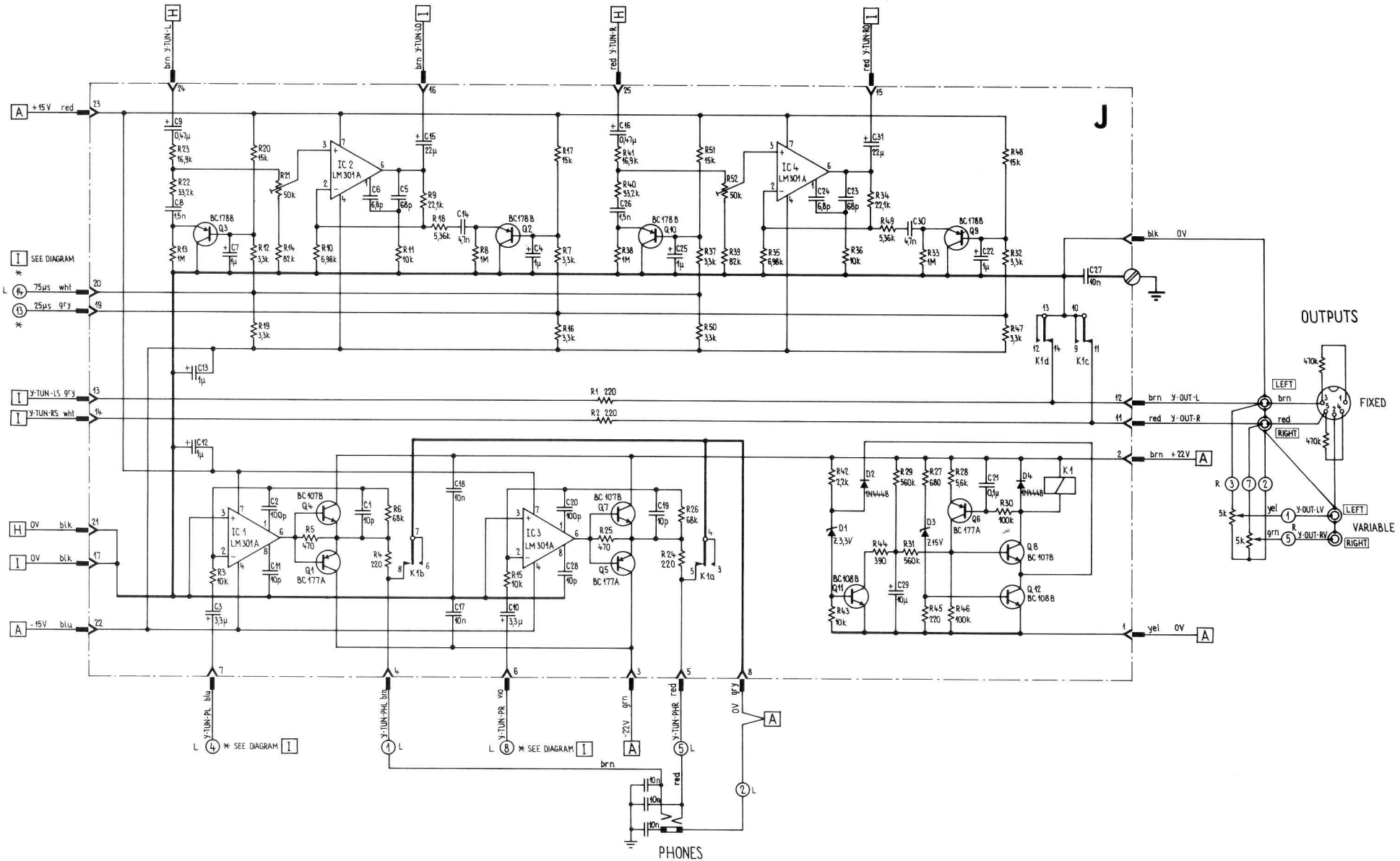
DUMMY PLUG 1.166.090

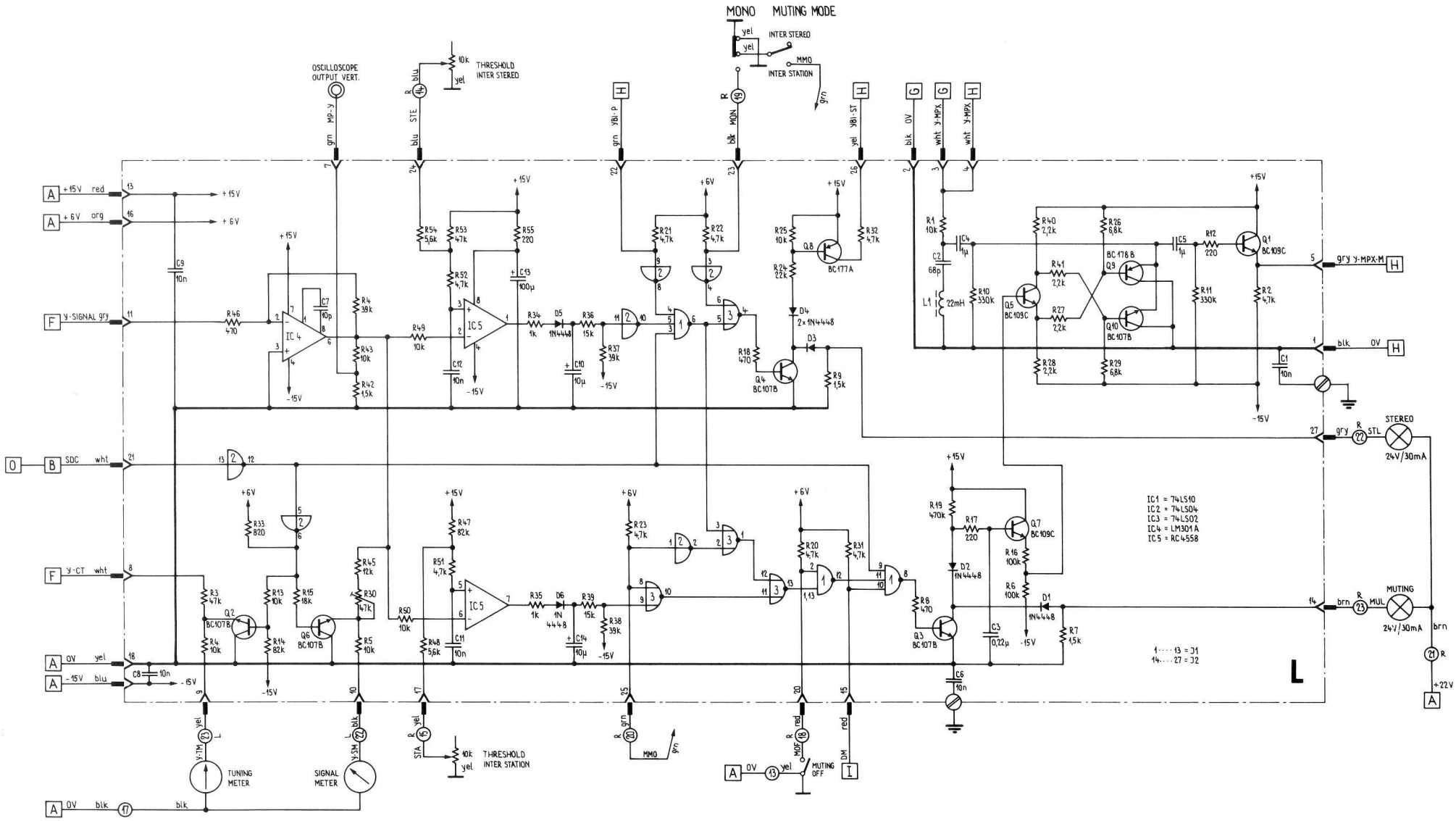
DOLBY PROCESSOR UNIT 1.166.400

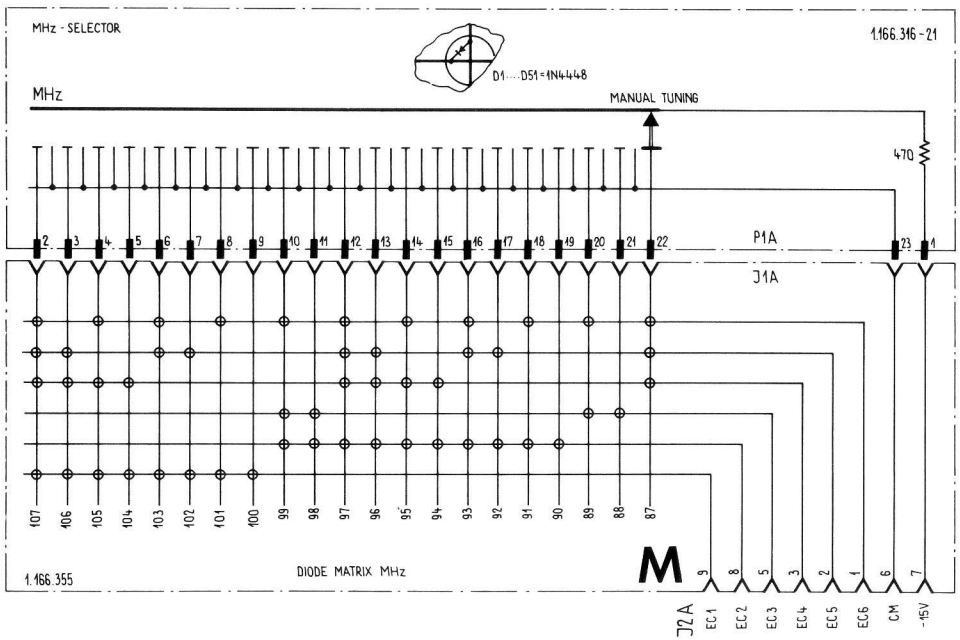

ANTENNA INPUTS
260 Ω
60 Ω
BALUN
BANDPASS FI· 87 ... 108 MHz
ANTENNA TANK CIRCUIT
I. RF AMPLIFIER
FIRST DOUBLE TUNED CIRCUIT
II. RF AMPLIFIER
SECOND DOUBLE TUNED CIRCUIT
BALANCED MIXER
PHASE LINEAR IF FILTER 11 MHz
FIVE STAGE BROADBAND LIMITER AMPLIFIER
DRIVE STAGE
AGC AMPLIFER
SIGNAL STRENGTH AMPL.
FREQUENCY DISCRIMINATOR
OSCILLOSCOPE VERT.
SIGNAL METER
TUNING METER
TUNING VOLTAGE
OSCILLATOR CIRCUIT 98.0 ... 118.975 MHz
LOCAL OSCILLATOR
STATION SELECTOR
15
1
10 F 16 / 4 BIT
4 BIT
4 BIT LATCH
4 BIT
STATION ADDRESS
MANUAL TUNING ADD 25 kHz CANCEL STATION BLANK STORE IN MEMORY
MEMORY MODE
MANUAL TUNING
MHz
kHz
DIODE MATRIX
5 BIT
6 BIT
16 x 12 BIT MEMORY
BLANK DETECTOR
: 4
PRESCALER
ECL / TTL
: N
PROGRAM-ABLE COUNTER
PHASE FREQUENCY DETECTOR
INTEGRATOR AMPLIFIER
LOCK IN DETECTOR
X-TAL OSCILLATOR 1.6 MHz
: 256
6.25 kHz
DIVIDER
INTER STEREO
THRESHOLD
SIGNAL COMPARATOR
INTER STATION
MUTING MODE
MEMORY SUPPLY
106
92
15
FREQUENCY MHz
STATION

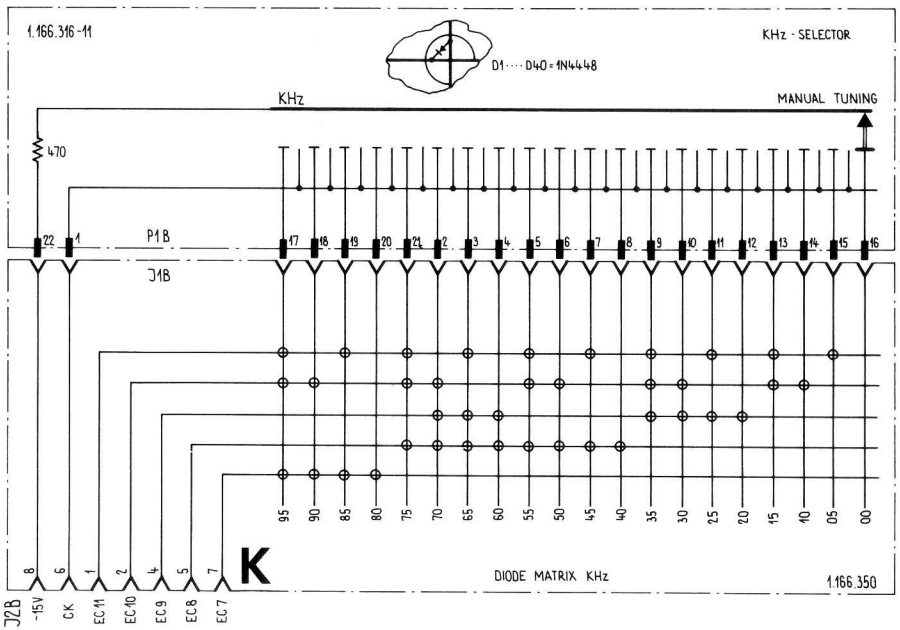


B 760 BLOCK DIAGRAM


J
OUTPUTS
FIXED
VARIABLE
LEFT
RIGHT
PHONES
SEE DIAGRAM
IC 1 LM 301 A
IC 2 LM 301 A
IC 3 LM 301 A
IC 4 LM 301 A
+15V red
-15V blu
0V blk
y-TUN-LS gry
y-TUN-RS wht
brn +22V
yel 0V
brn y-OUT-L
red y-OUT-R
y-OUT-LV
y-OUT-RV
75µs wht
25µs gry
brn y-TUN-L
brn y-TUN-LO
red y-TUN-R
red y-TUN-RO
y-TUN-PL blu
y-TUN-PHL brn
y-TUN-PR vio
y-TUN-PHR red
+22V grn
0V gry
K1a
K1b
K1c
K1d
BC 177A
BC 178B
BC 107B
BC 108B
1N4448
Z 3,3V
Z 15V


MONO MUTING MODE
INTER STEREO
MMO
INTER STATION
OSCILLOSCOPE OUTPUT VERT.
THRESHOLD INTER STEREO
THRESHOLD INTER STATION
TUNING METER
SIGNAL METER
MUTING OFF
STEREO
MUTING
24V/30mA
IC1 = 74LS10
IC2 = 74LS04
IC3 = 74LS02
IC4 = LM301A
IC5 = RC4558
1 ..... 13 = J1
14 ..... 27 = J2
L
LOGIC BOARD 1.166.180



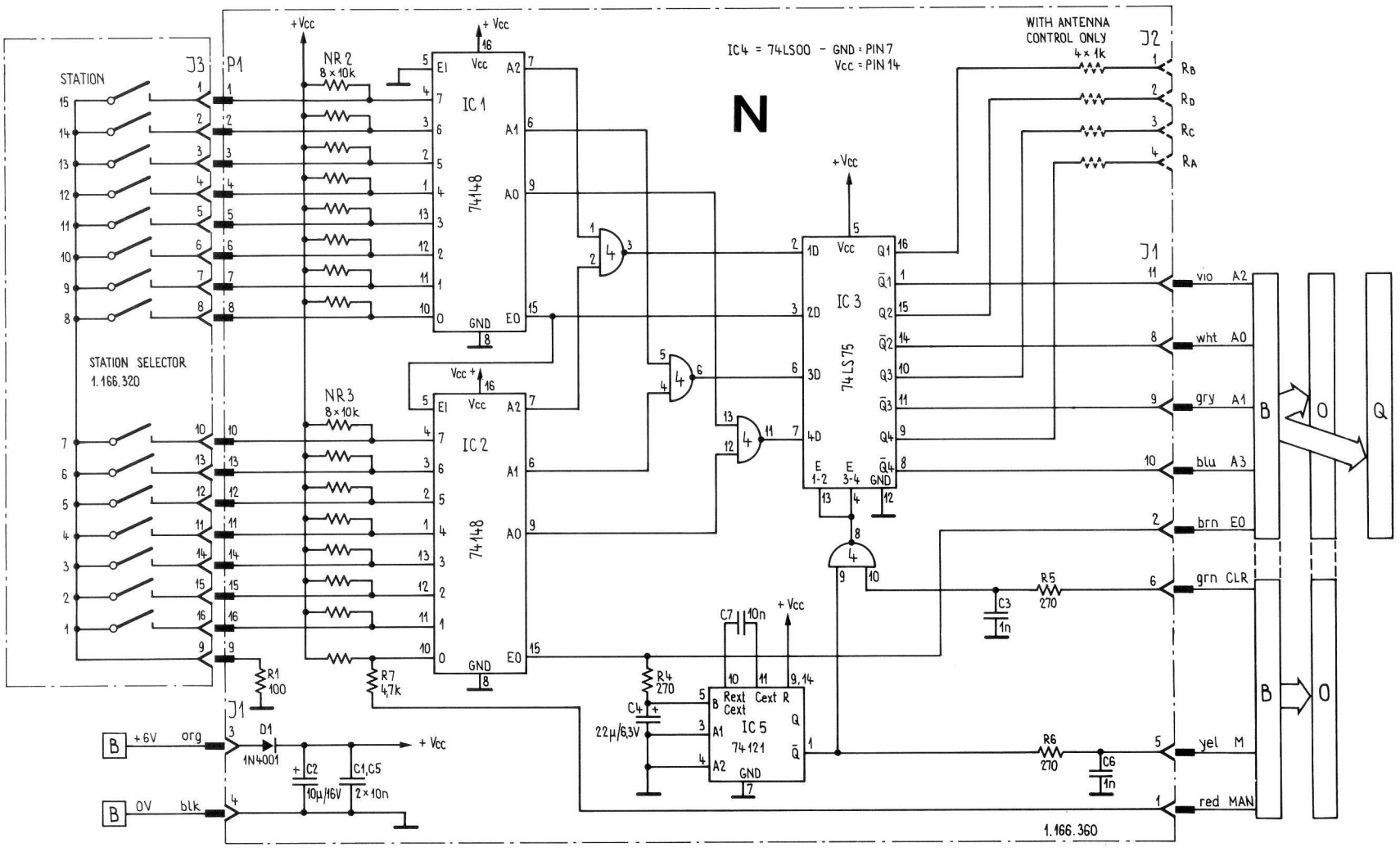


MHz SELECTOR 1.166.316–21

DIODE MATRIX MHz 1.166.355

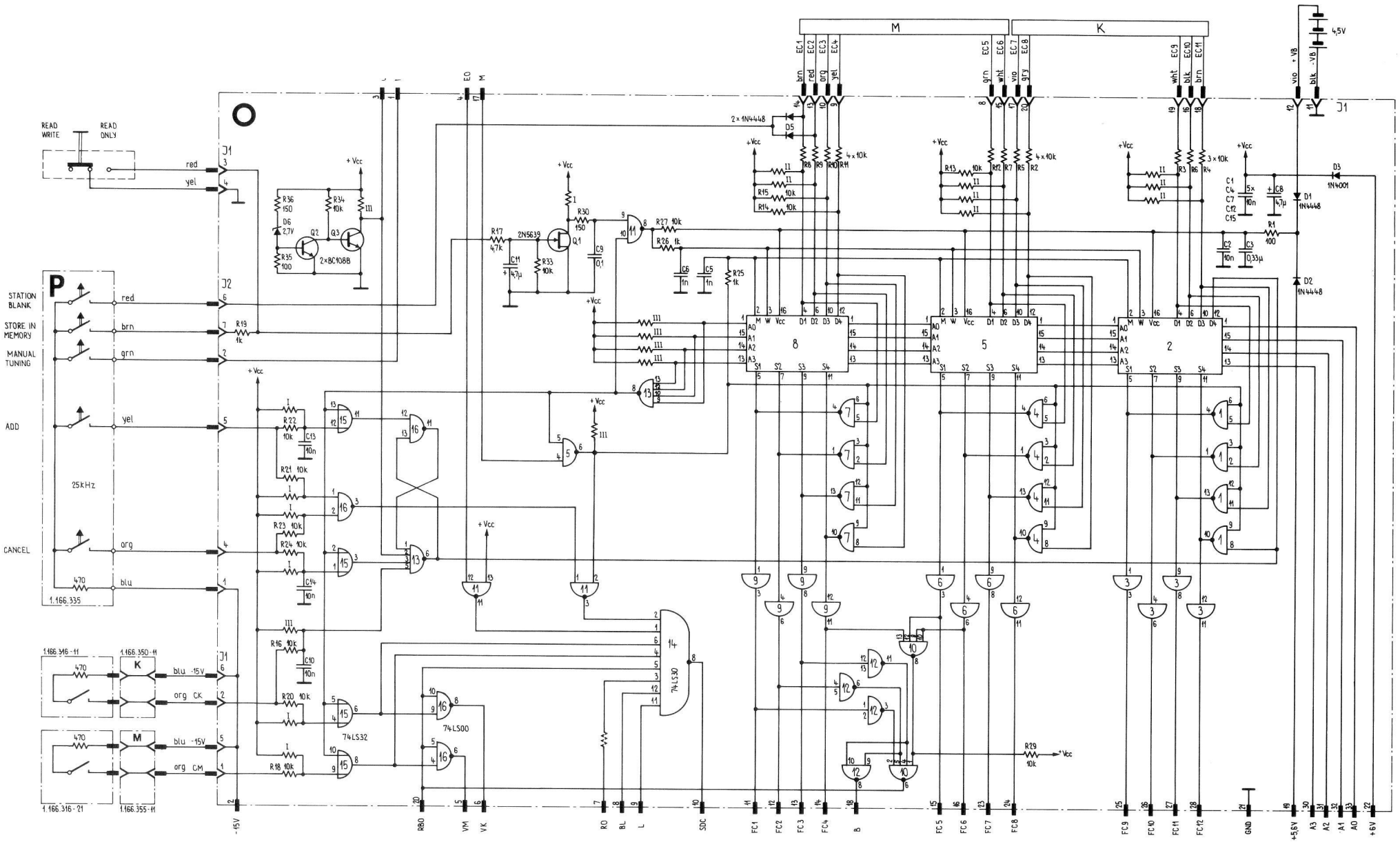
KHz SELECTOR 1.166.316–11

DIODE MATRIX KHz 1.166.350



STATION SELECTOR 1.166.320

STATION MEMORY 1.166.360



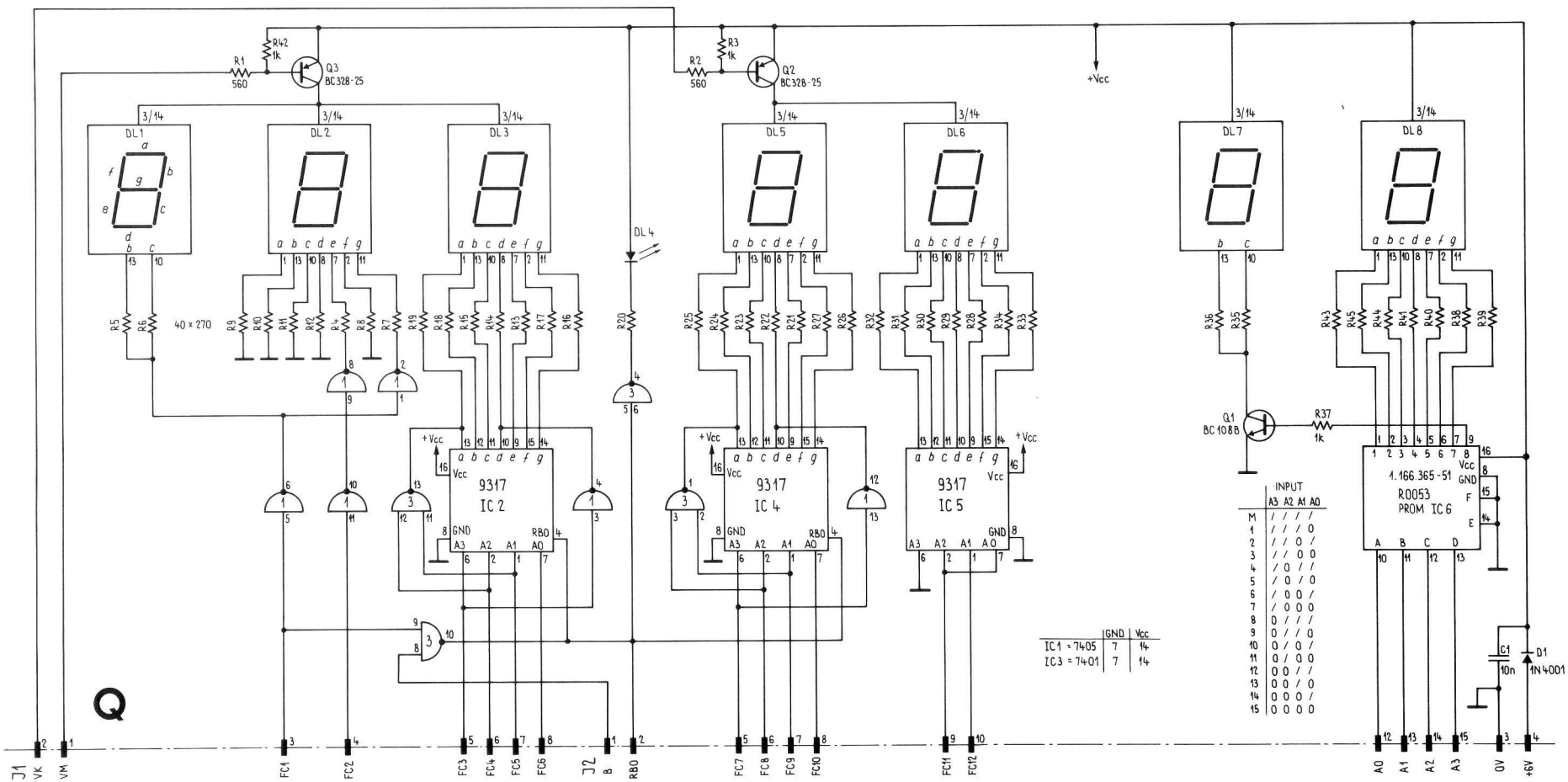
	GND	+Vcc
IC1,4,7 = 74LS01	7	14
IC2,5,8 = 4725	8	16
IC3,6,9 = 74LS08	7	14
IC10 = 7422	7	14
IC11 = 74132	7	14
IC12,16 = 74LS00	7	14
IC13 = 74LS20	7	14
IC14 = 74LS32	7	14
IC15 = 74LS32	7	14

I = R32
II = R28
III = R31
} RESISTOR NETWORK 8×10k

FREQUENCY MEMORY 1.166.370
FIVEELEMENT KEYBORD 1.166.335

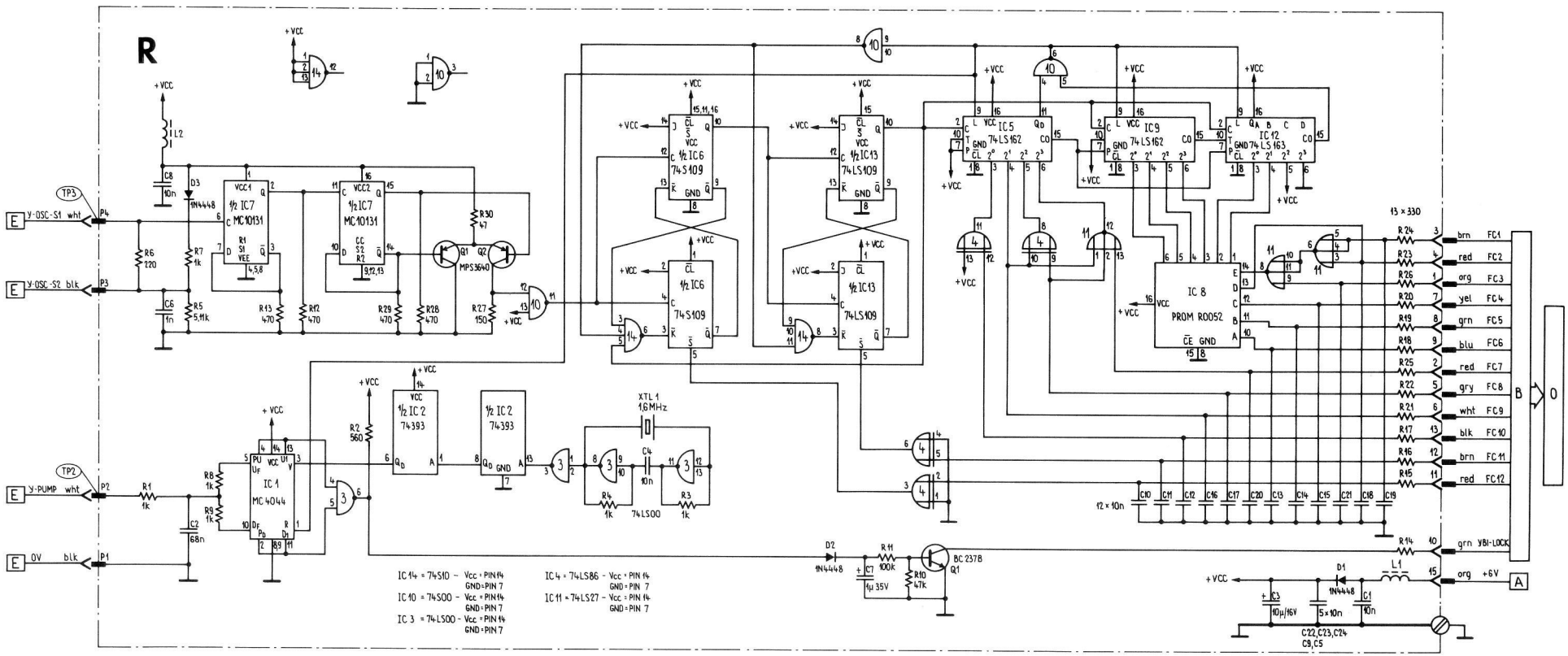
KEY BOARD 1.166.335

FREQUENCY MEMORY 1.166.370



	GND	Vcc
IC 1 = 7405	7	14
IC 3 = 7401	7	14

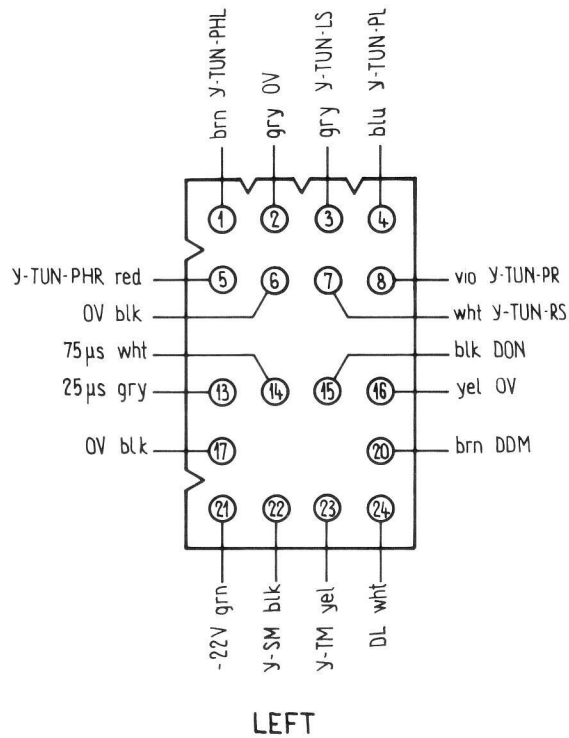
	INPUT A3	A2	A1	A0
M	/	/	/	/
1	/	/	/	0
2	/	/	0	/
3	/	/	0	0
4	/	0	/	/
5	/	0	/	0
6	/	0	0	/
7	/	0	0	0
8	0	/	/	/
9	0	/	/	0
10	0	/	0	/
11	0	/	0	0
12	0	0	/	/
13	0	0	/	0
14	0	0	0	/
15	0	0	0	0


R
+VCC
L2
C8 10n
D3 1N4448
IC 7 MC10131
R6 220
R7 1k
R5 5,11k
R13 470
R12 470
R29 470
R28 470
R27 150
R30 47
Q1 Q2 MPS3640
TP3
P4
Y-OSC-S1 wht
P3
Y-OSC-S2 blk
C6 1n
TP2
P2
Y-PUMP wht
R1 1k
C2 68n
P1
0V blk
R8 1k
R9 1k
IC 1 MC 4044
R2 560
IC 2 74393
XTL 1 16MHz
C4 10n
R4 1k
R3 1k
74LS00
IC 6 74S109
IC 13 74LS109
IC 5 74LS162
IC 9 74LS162
IC 12 74LS163
IC 8 PROM R0052
13 × 330
R24 R23 R26 R20 R19 R18 R25 R22 R21 R17 R16 R15
brn FC1
red FC2
org FC3
yel FC4
grn FC5
blu FC6
red FC7
gry FC8
wht FC9
blk FC10
brn FC11
red FC12
B
0
12 × 10n
C10 C11 C12 C16 C17 C20 C13 C14 C15 C21 C18 C19
D2 1N4448
R11 100k
C7 4µ 35V
R10 47k
BC 237B Q1
R14
grn YBI-LOCK
org +6V
A
D1 1N4448
L1
IC3 10µ/16V
5 × 10n
C1 10n
C22,C23,C24
C9,C5
IC 14 = 74S10 – Vcc = PIN 14 GND = PIN 7
IC 10 = 74S00 – Vcc = PIN 14 GND = PIN 7
IC 3 = 74LS00 – Vcc = PIN 14 GND = PIN 7
IC 4 = 74LS86 – Vcc = PIN 14 GND = PIN 7
IC 11 = 74LS27 – Vcc = PIN 14 GND = PIN 7

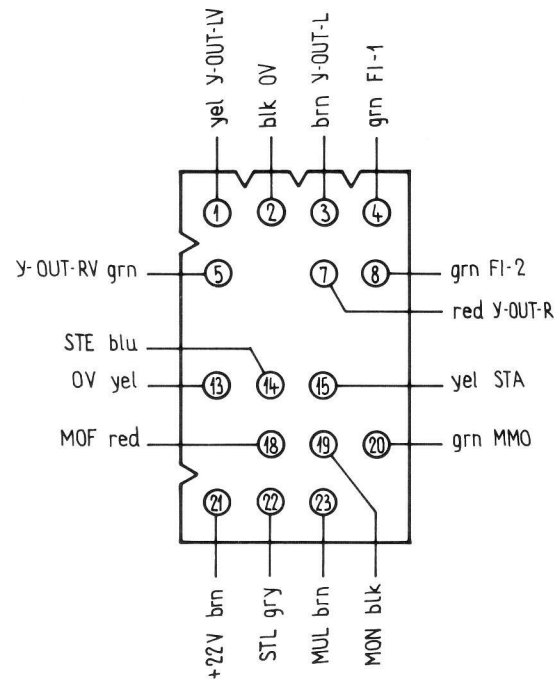
DIAGRAMS LIST

A	POWER SUPPLY	1.166.200	
B	BASIS BOARD	1.166.375	
C	ANTENNA INPUTS	1.166.195	
D	RF FRONT END	1.166.100	
E	LOCAL OSCILLATOR	1.166.110	
F	IF STRIP	1.166.120	
G	FM DEMODULATOR	1.166.130	
	STEREO DECODER	1.166.150	
I	DOLBY PROCESSOR UNIT	1.166.400	
J	AUDIO SECTION	1.166.170	
K	DIODES MATRIX KHz	1.166.350 and 1.166.316--21	
L	LOGIC BOARD	1.166.180	
M	DIODES MATRIX MHz	1.166.355 and 1.166.316--11	
N	STATION MEMORY	1.166.360 and 1.166.320	
O	FREQUENCY MEMORY	1.166.370	
P	KEY BOARD	1.166.335	
Q	DISPLAY UNIT	1.166.365	
R	SYNTHESIZER	1.166.140	
S	DUMMY PLUG	1.166.090	

MOLEX CONNECTORS



LEFT



RIGHT