

PM6612

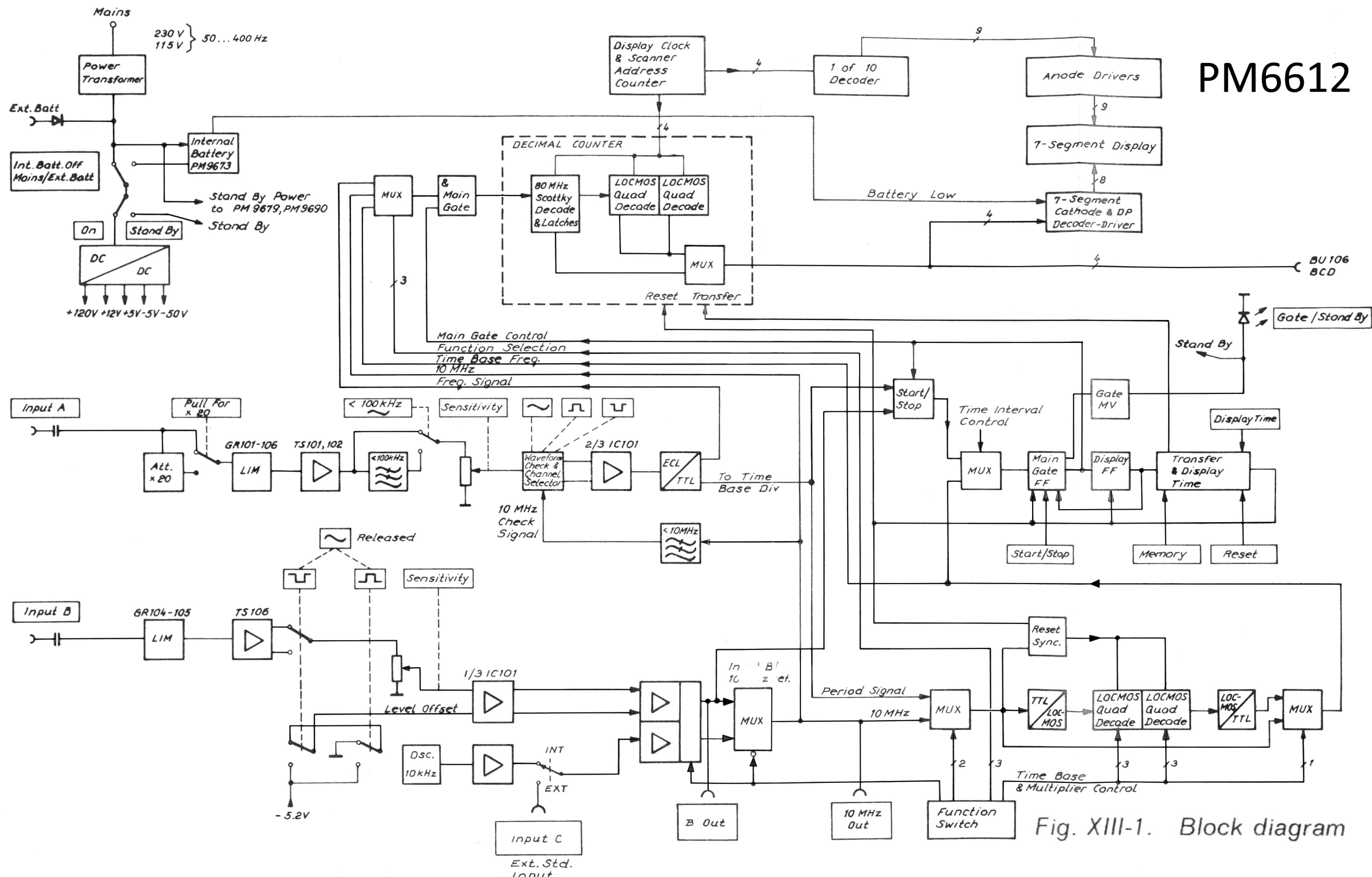


Fig. XIII-1. Block diagram

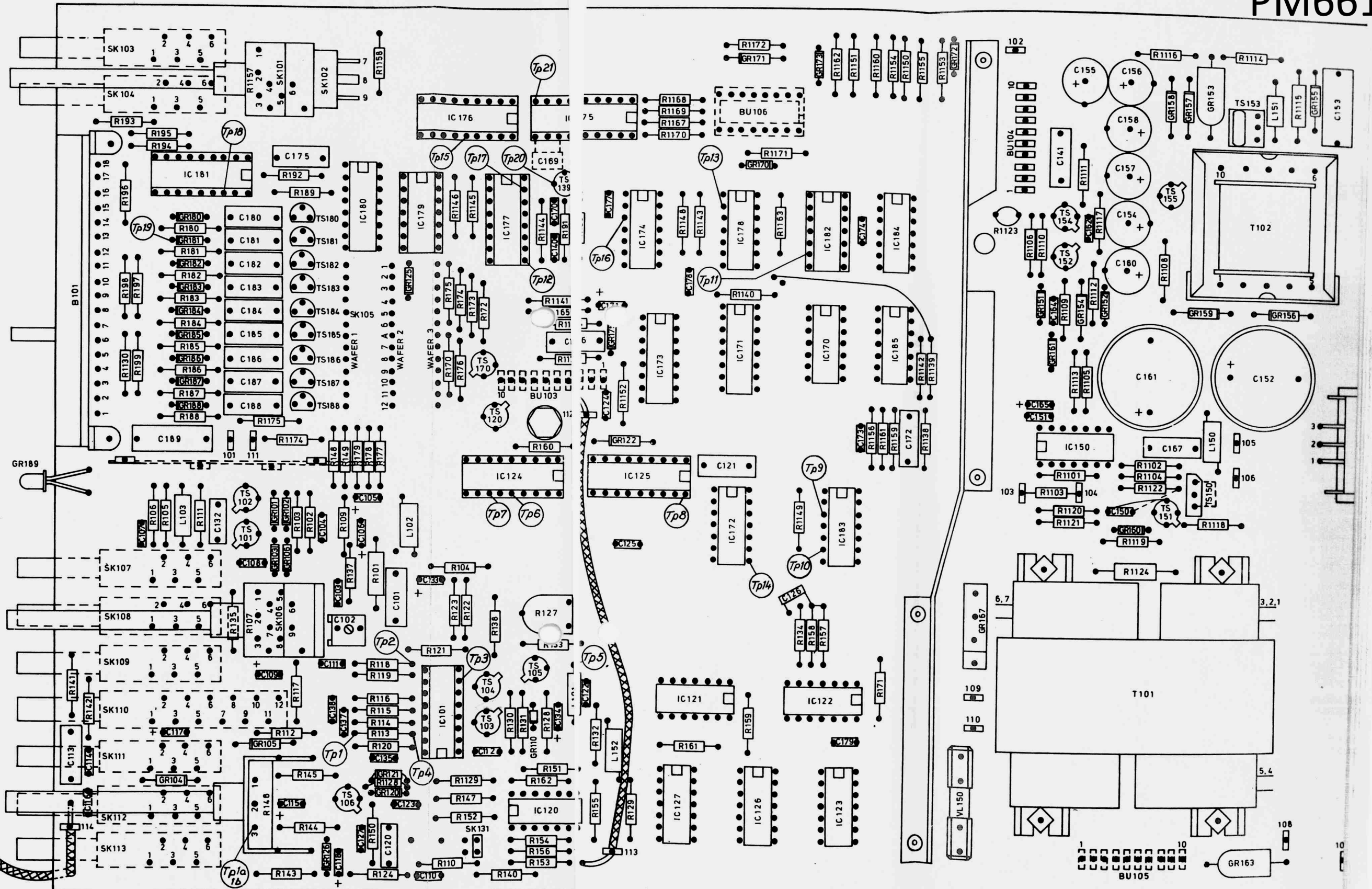
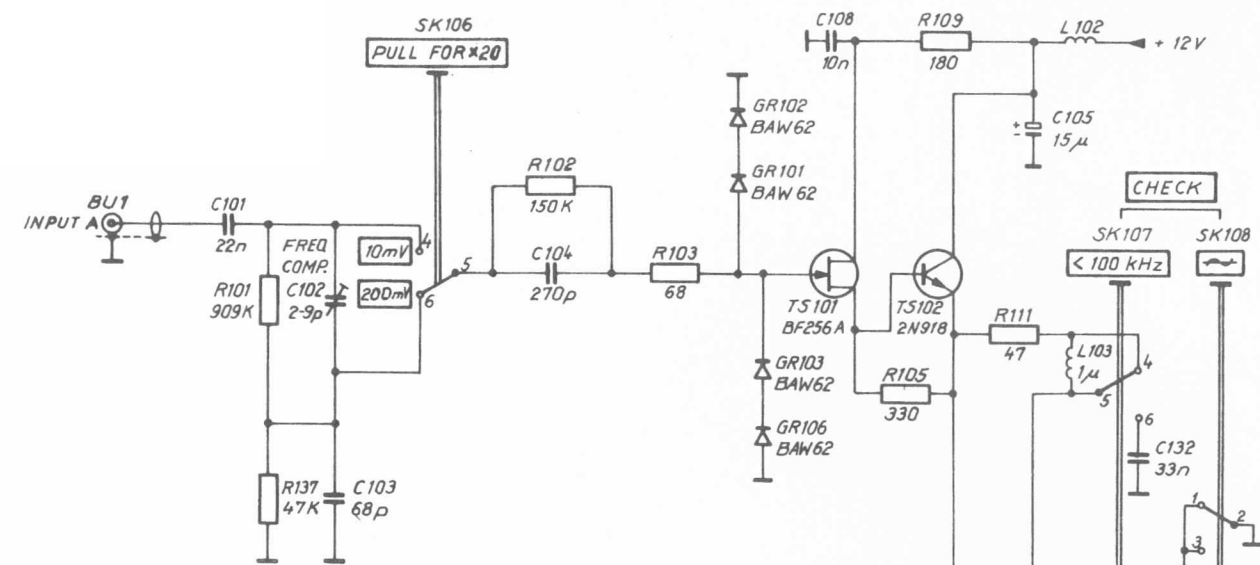
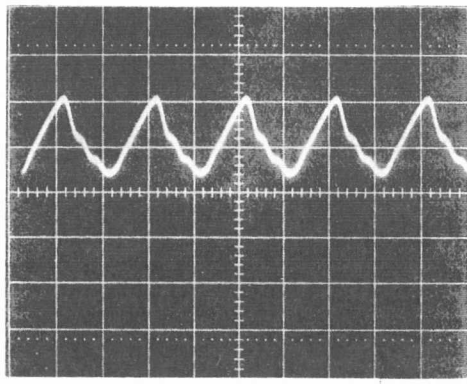


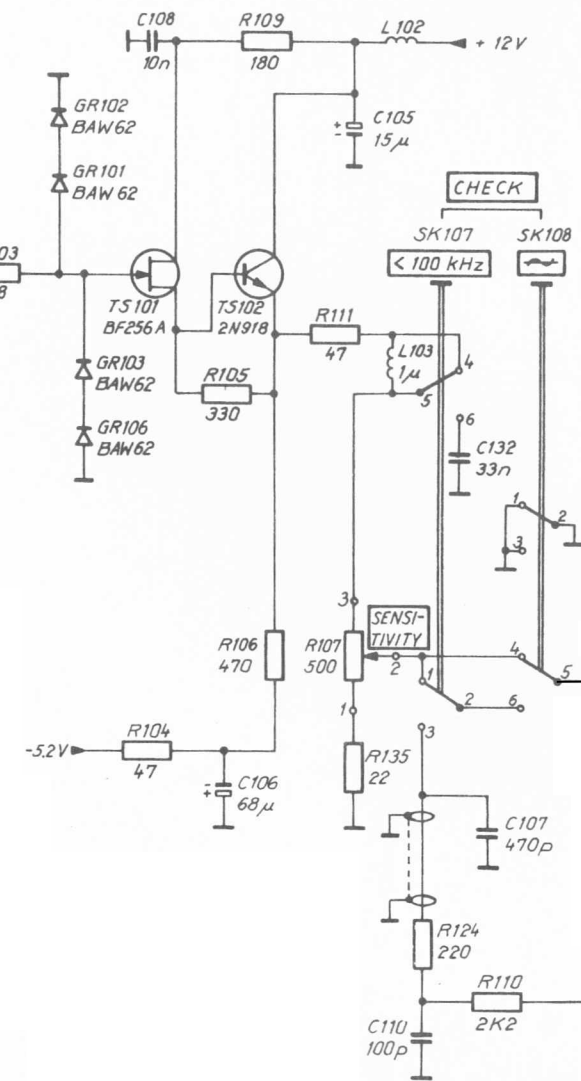
Fig. XIII-2. Component layout



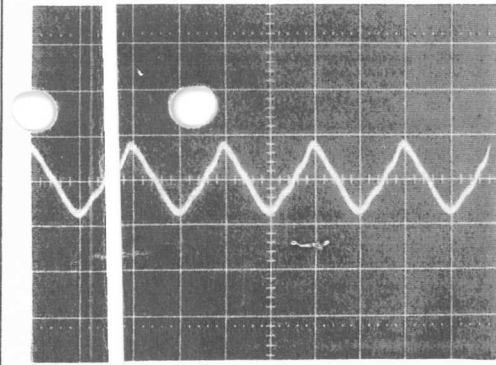
TP 1b



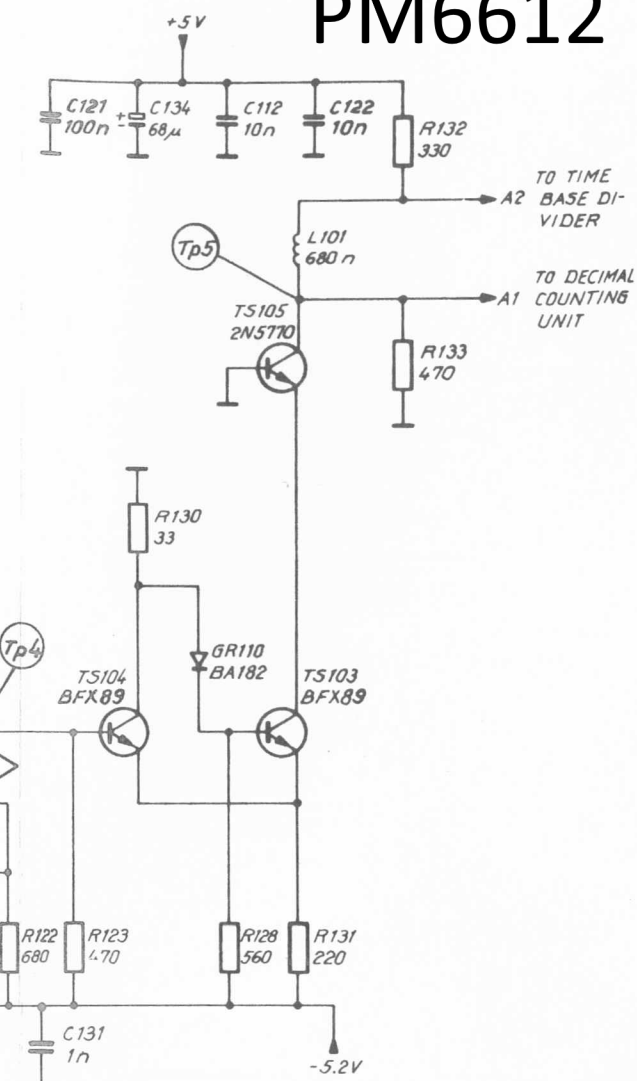
Normal signal after impedance converter.
Counter settings:
SK 113 depressed (neg. pulse).
Connect STD OUT to Input B.
Oscilloscope settings:
50 ns/div. and 0.5 V/div.



TP 1a



Normal signal after impedance converter.
Counter settings:
SK 112 depressed (pos. pulse).
Connect STD OUT to Input B.
Oscilloscope settings:
50 ns/div. and 0.5 V/div.



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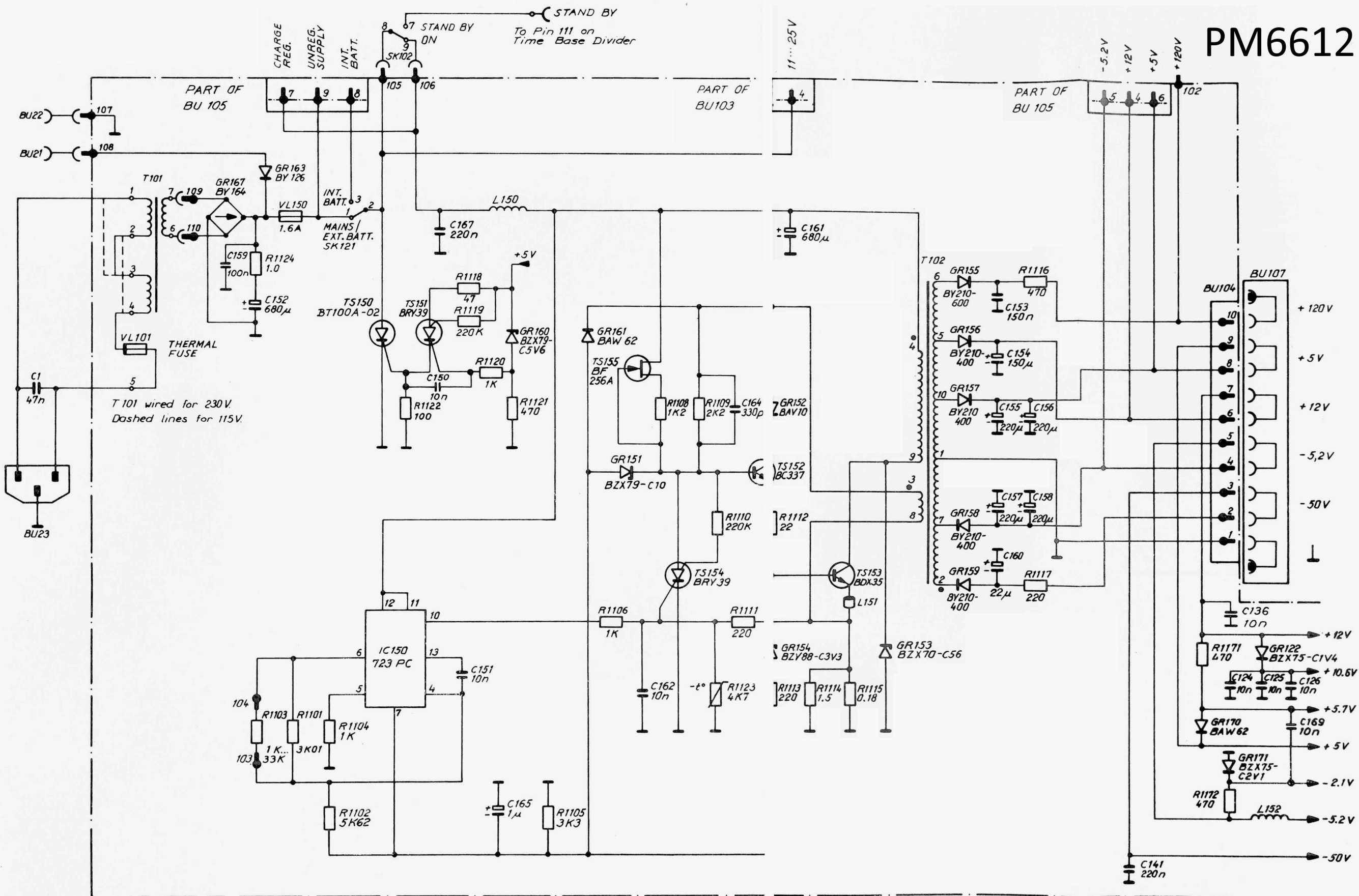
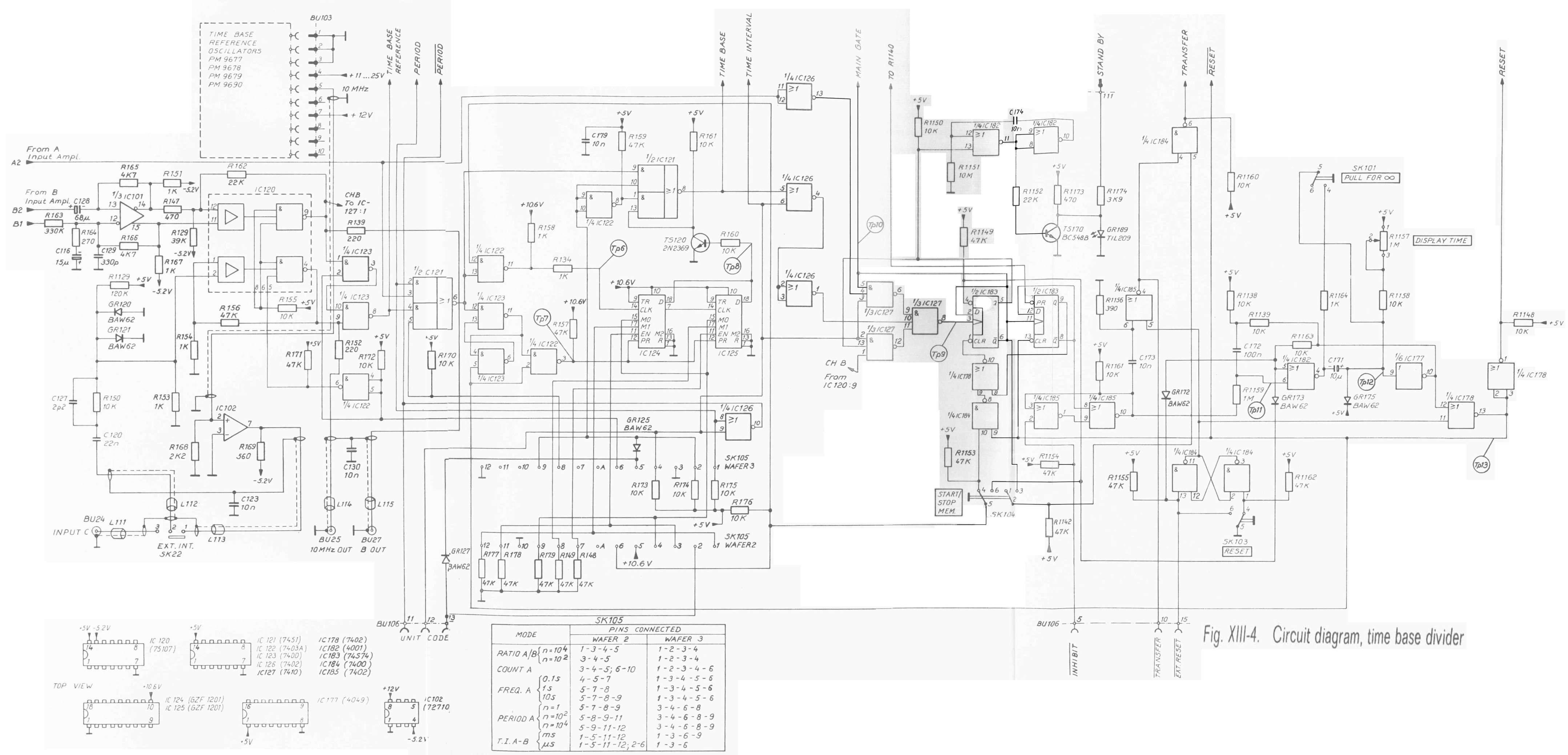


Figure XIII-6. Circuit diagram, power supply



PM6612

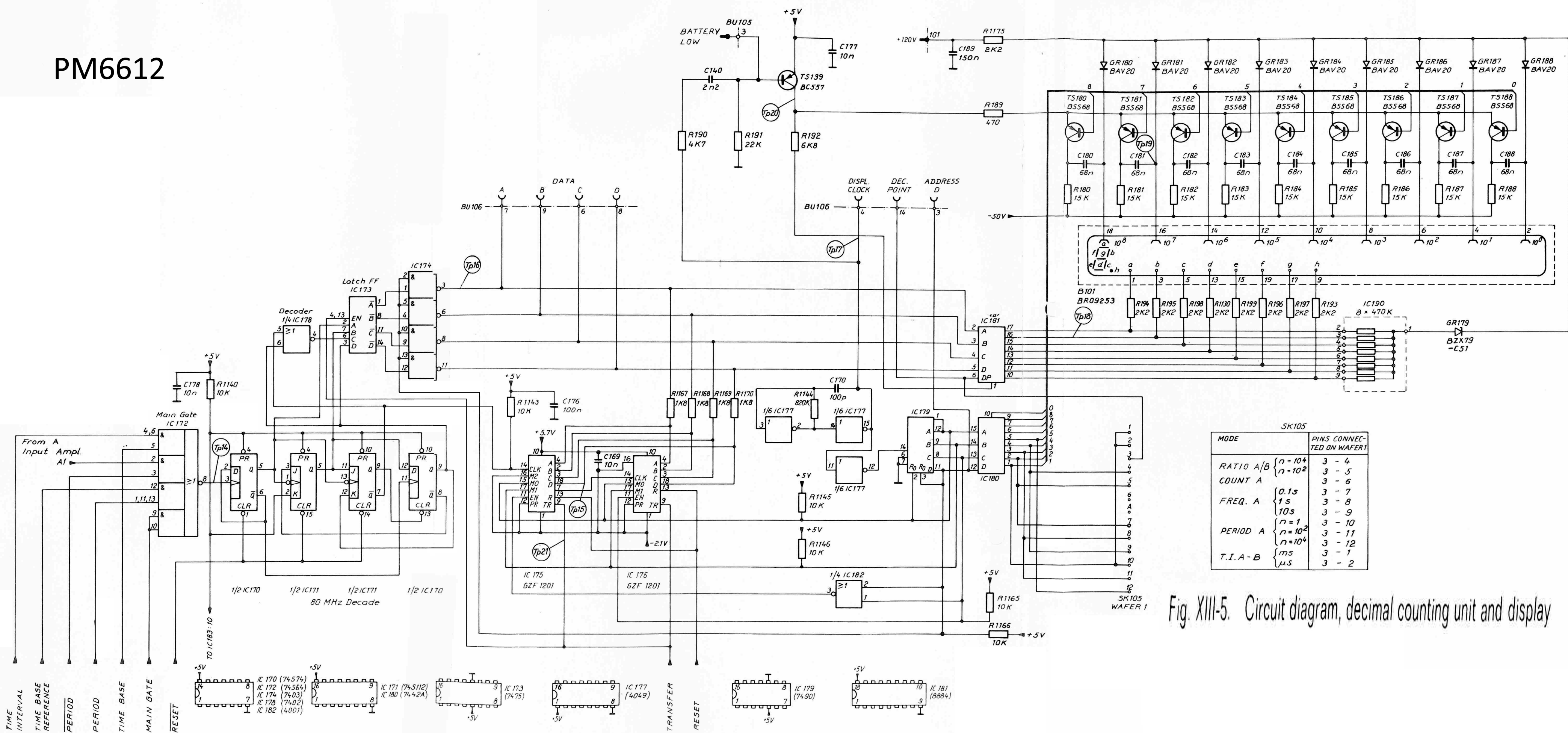
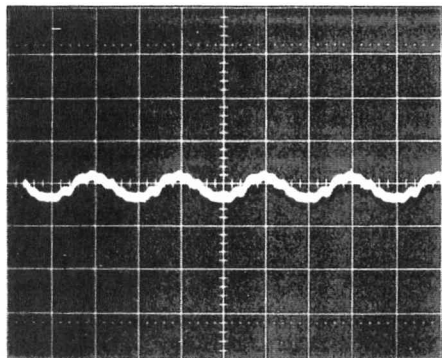


Fig. XIII-5. Circuit diagram, decimal counting unit and display

Testpoints 80 MHz input amplifier

The waveforms are recorded with a 50 MHz oscilloscope PM 3250 including passive 1:10 probe PM 9350 and with the counter set to FREQUENCY 10 Hz, self CHECK mode and min. DISPLAY TIME.
Use figure XIII-2 to identify the location of the test points.

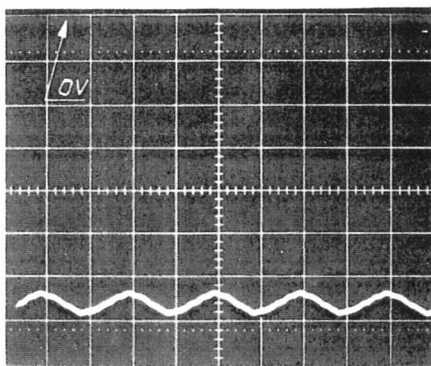
TP 1



Normal input signal to input amplifier at IC 101:9.

Oscilloscope settings:
2 mV/div. and 50 ns/div. A.C. coupled.
Use 10 MHz OUT from the counter as trigger signal.

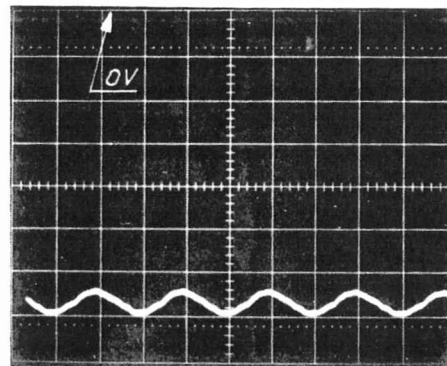
TP 2



Inverted input signal to input amplifier at IC 101:6.

Oscilloscope settings:
200 mV/div. and 50 ns/div.

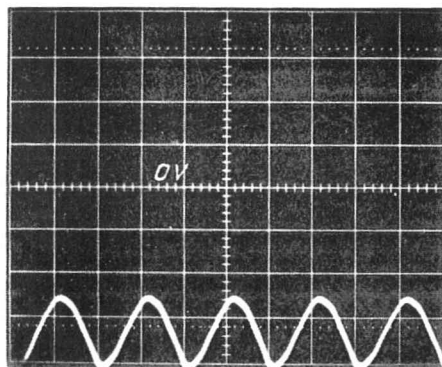
TP 3



Normal input signal to input amplifier at IC 101:7.

Oscilloscope settings:
200 mV/div. and 50 ns/div.
Use 10 MHz OUT from the counter as trigger signal.

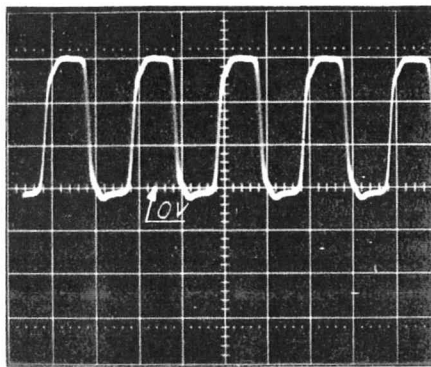
TP 4



Input signal to Schmitt-Trigger at IC 101:3.

Oscilloscope settings:
500 mV/div. and 50 ns/div.

TP 5



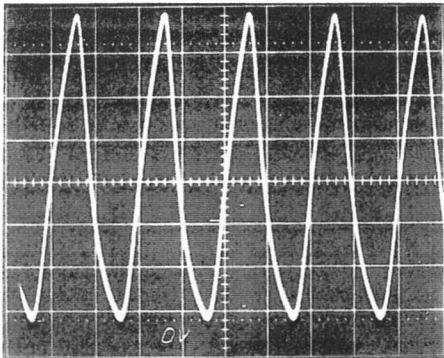
TTL output signal at collector of TS 105.

Oscilloscope settings:
1 V/div. and 50 ns/div.

Testpoints time base divider

The waveforms are recorded with a 50 MHz oscilloscope PM 3250 including passive 1:10 probe PM 9350 and with the counter set to FREQUENCY 10 Hz, self CHECK mode and min. DISPLAY TIME.
Use figure XIII-2 to identify the location of the test points.

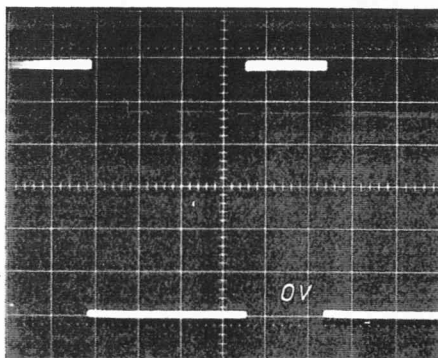
TP 6



Time base divider input signal at IC 124:14.

Oscilloscope settings:
1 V/div. and 50 ns/div.

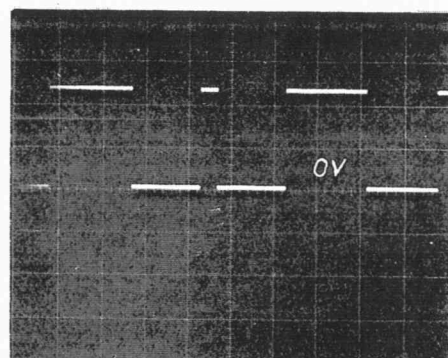
TP 7



Time base preset signal at IC 124:12.

Oscilloscope settings:
2 V/div. and 50 ms/div.

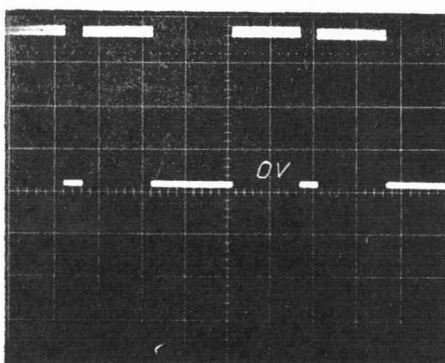
TP 8



Time base signal at IC 125:18.

Oscilloscope settings:
5 V/div. and 50 ms/div.

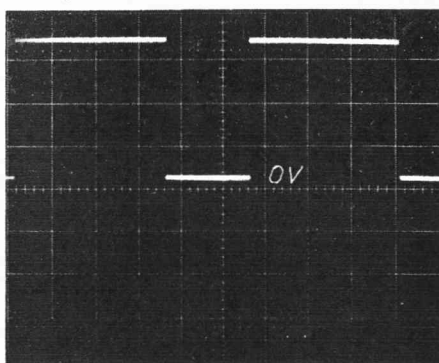
TP 9



Time base signal at IC 183:3.

Oscilloscope settings:
1 V/div. and 50 ms/div.

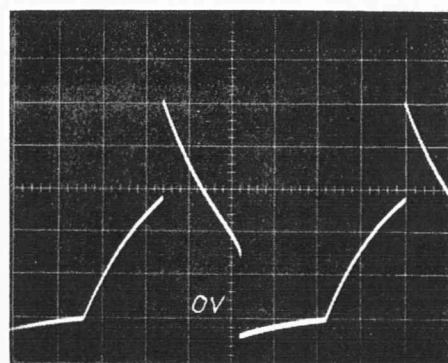
TP 10



Main gate signal at IC 183:6.

Oscilloscope settings:
1 V/div. and 50 ms/div.

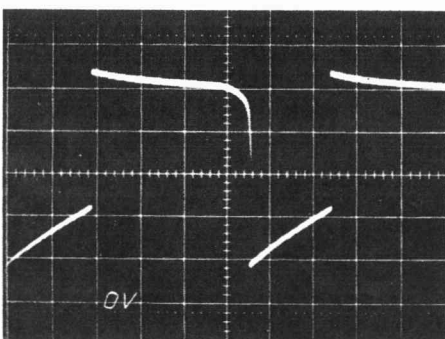
TP 11



Display time triggering signal at IC 182:6.

Oscilloscope settings:
1 V/div and 50 ms/div.

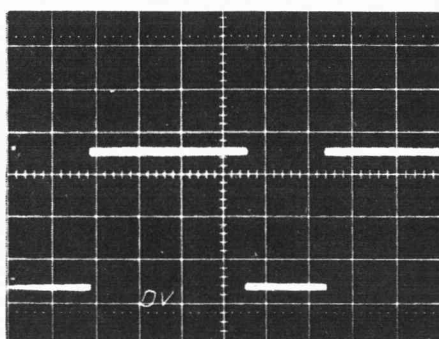
TP 12



Display time sweep signal at IC 177:9.

Oscilloscope settings:
1 V/div. and 50 ms/div.

TP 13



Reset signal at IC 178:2.

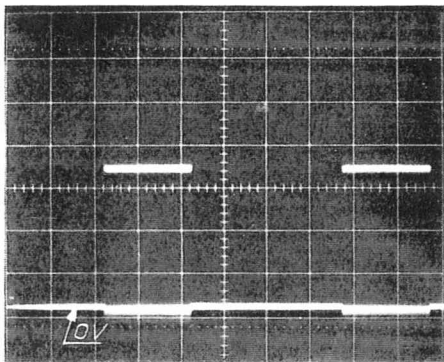
Oscilloscope settings:
1 V/div. and 50 ms/div.

Testpoints decimal counting unit and display

The waveforms are recorded with a 50 MHz oscilloscope PM 3250 including passive 1:10 probe PM 9350 and with the counter set to FREQUENCY 10 Hz, self CHECK mode and min. DISPLAY TIME.

Use figure XIII-2 to identify the location of the test points.

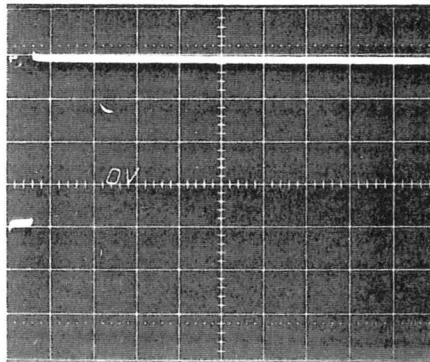
TP 14



Tested input signal at IC 172:8.

Oscilloscope settings:
1 V/div. and 50 ms/div.

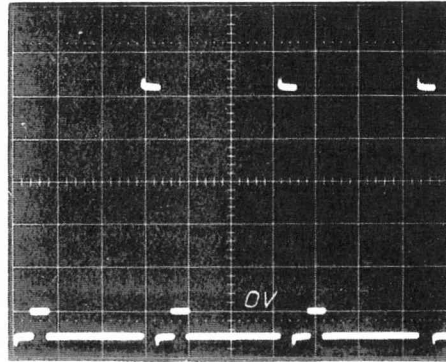
TP 15



Carry signal $1:10^5$ at IC 176:14.

Oscilloscope settings:
2 V/div. and 2 μ s/div.

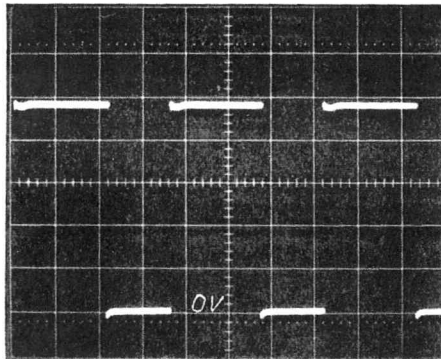
TP 16



Data A signal at IC 174:3 when last digit is zero.

Oscilloscope settings:
1 V/div. and 0.5 μ s/div.

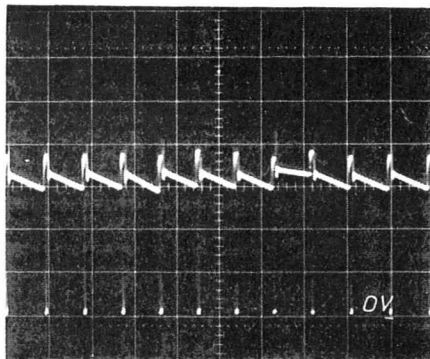
TP 17



Display clock signal at IC 177:15.

Oscilloscope settings:
1 V/div. and 50 μ s/div.

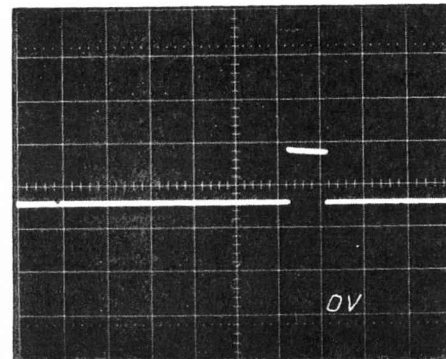
TP 18



Display cathode signal at IC 181:16 when last digit is zero.

Oscilloscope settings:
20 V/div. and 0.2 ms/div.
Use signal at IC 179:11 as trigger signal.

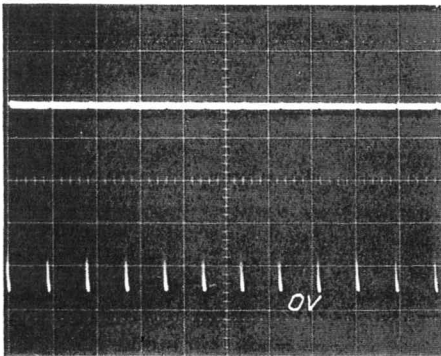
TP 19



Display anode signal at cathode of GR 181.

Oscilloscope settings:
50 V/div. and 0.2 ms/div.
Use signal at IC 179:11 as trigger signal.

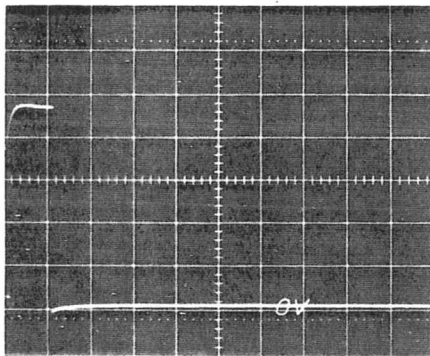
TP 20



Display blanking signal at collector of TS 139.

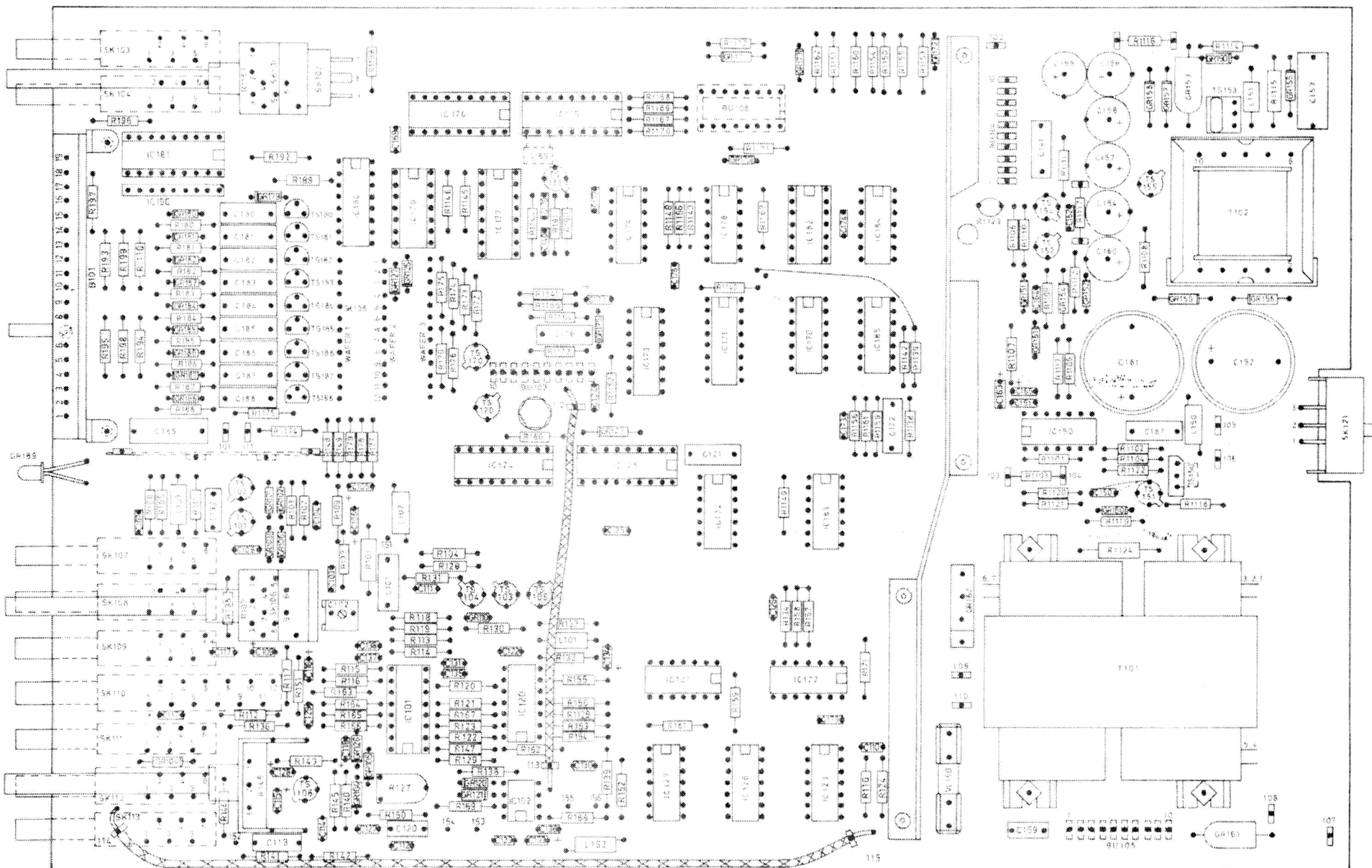
Oscilloscope settings:
1 V/div. and 0.2 ms/div.

TP 21



Transfer signal at IC 175:9.

Oscilloscope settings:
1 V/div. and 5 μ s/div.



Component layout for instrument
with serial number SM 2.