

MT100 – Metra Blansko

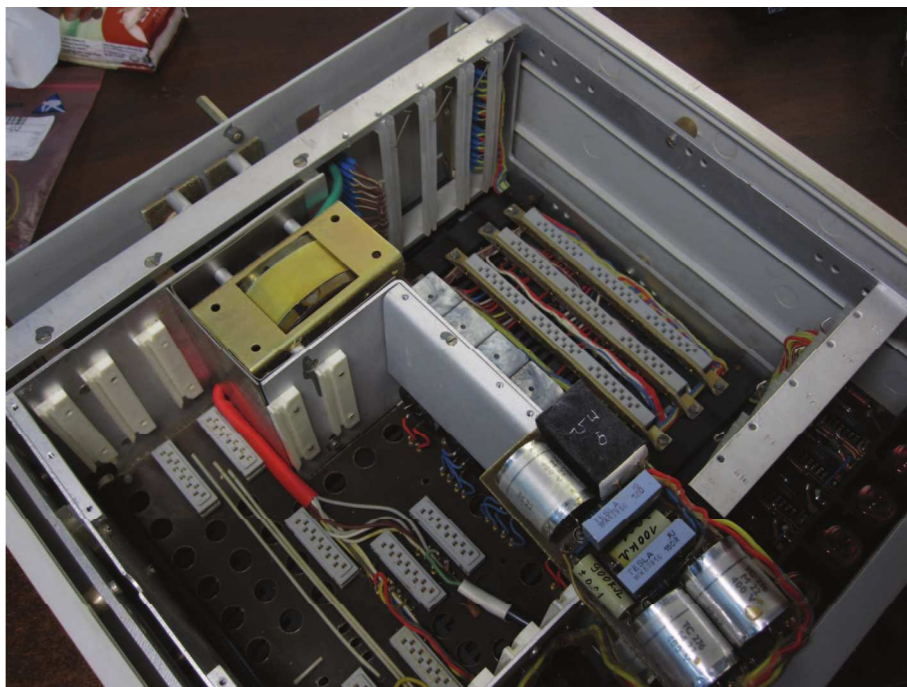


MT100 is a precious DC voltmeter made in years 1970-1980 in Metra Blansko. It has evolved of series of NRxx devices and this electronic unit is named NR60.

The first A/D converter unit made in Metra Blansko ever is NR10 and it consists of germanium transistors with vacuum tube comparators and amplifiers. This was in year 1967.

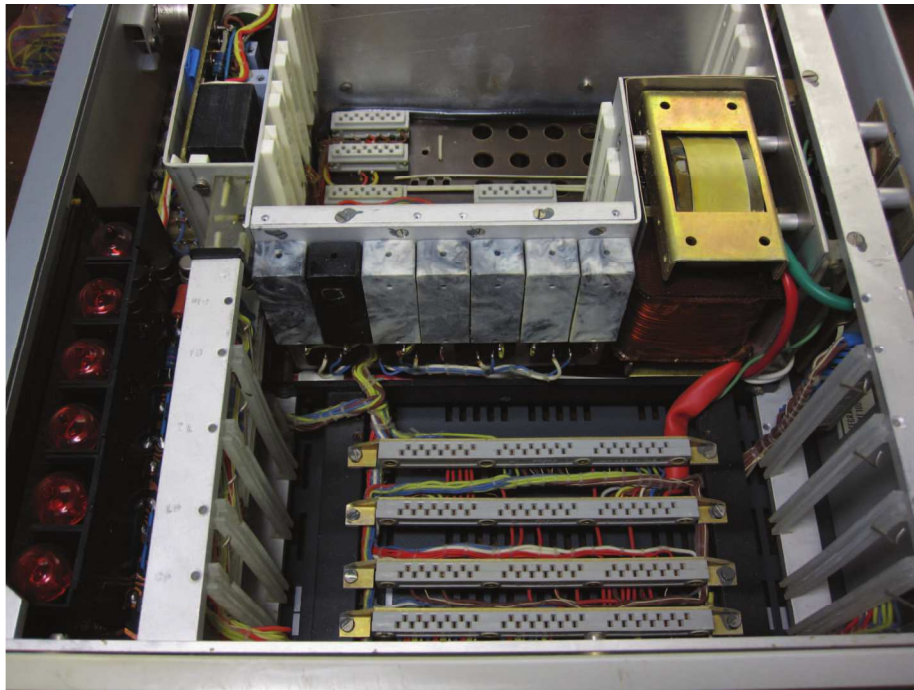
Voltmeter uses 2-stage integration and it is controlled by TTL logic. It is concipated as grounded non-floating section and floating unit with Guard shield. Communication of them are provided by ferrite transformers.

Range is 15mV – 1.5kV.

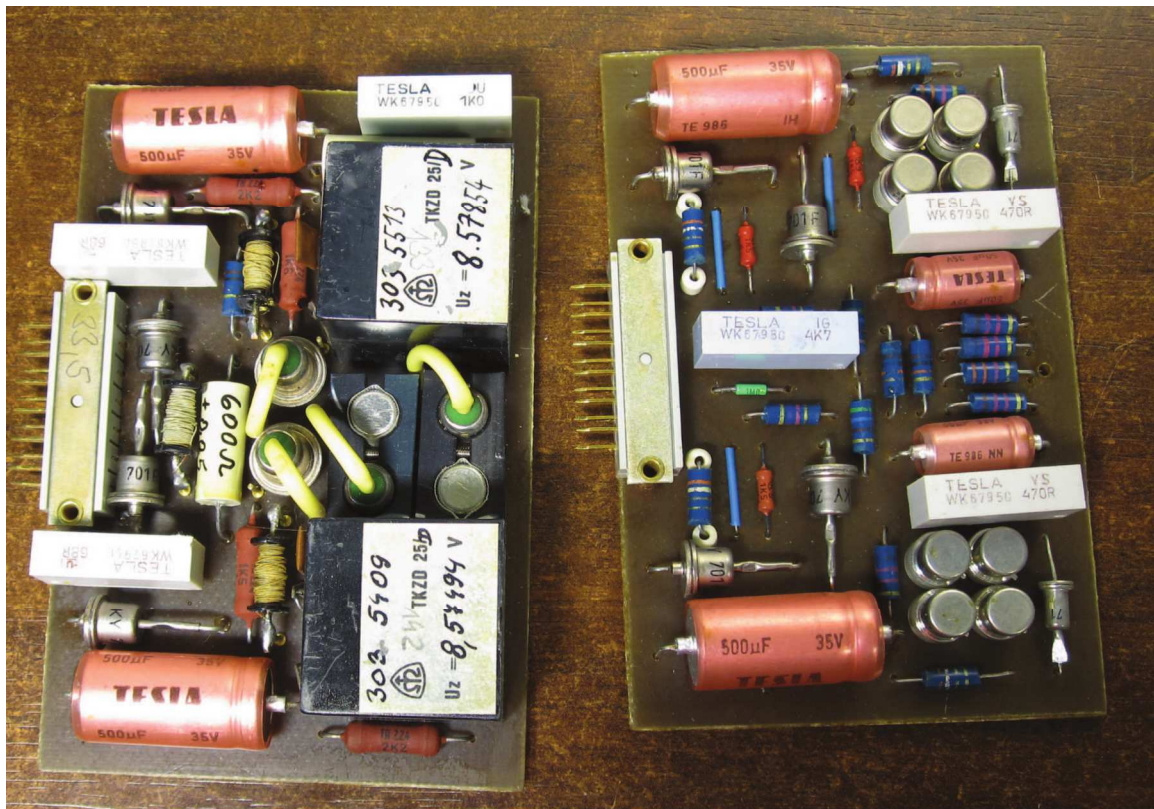


Aluminium skelet with boards off.

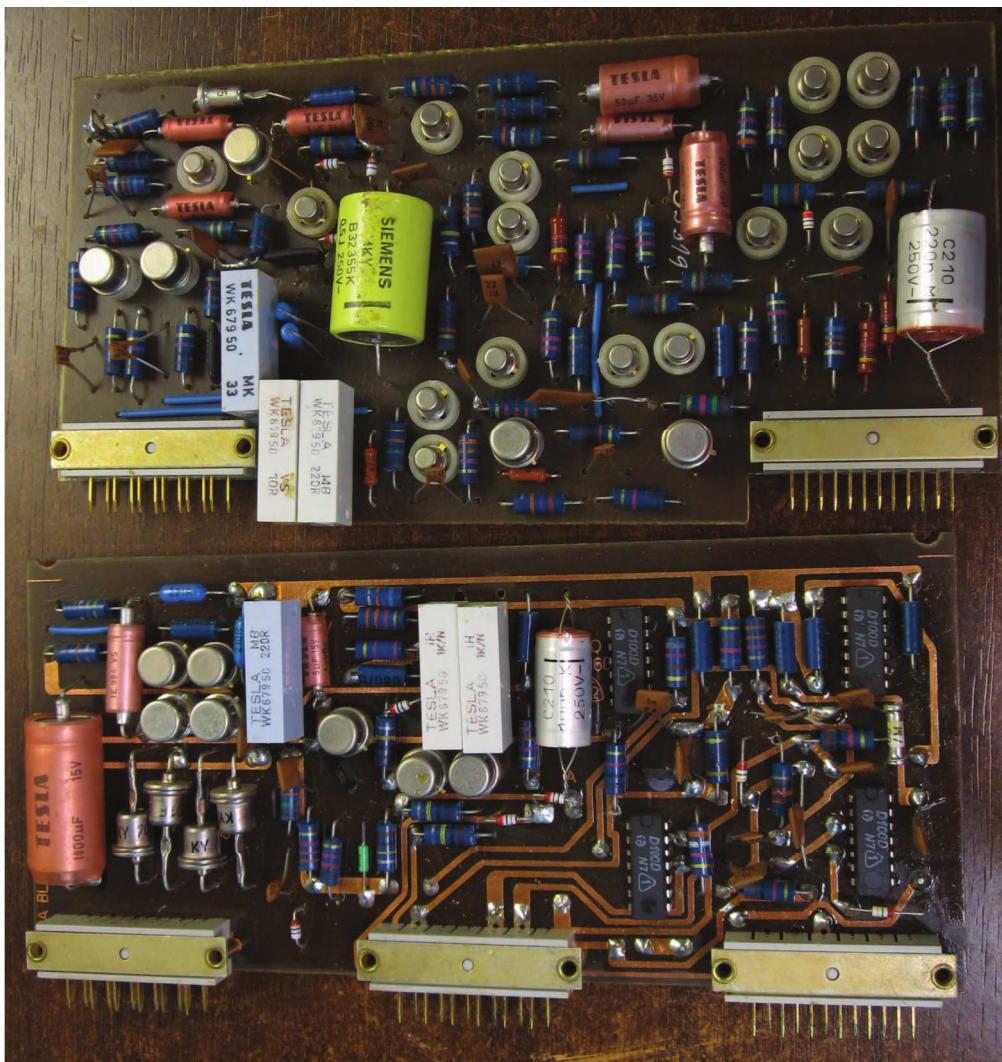
These gold-plated connectors were made in good quallity.



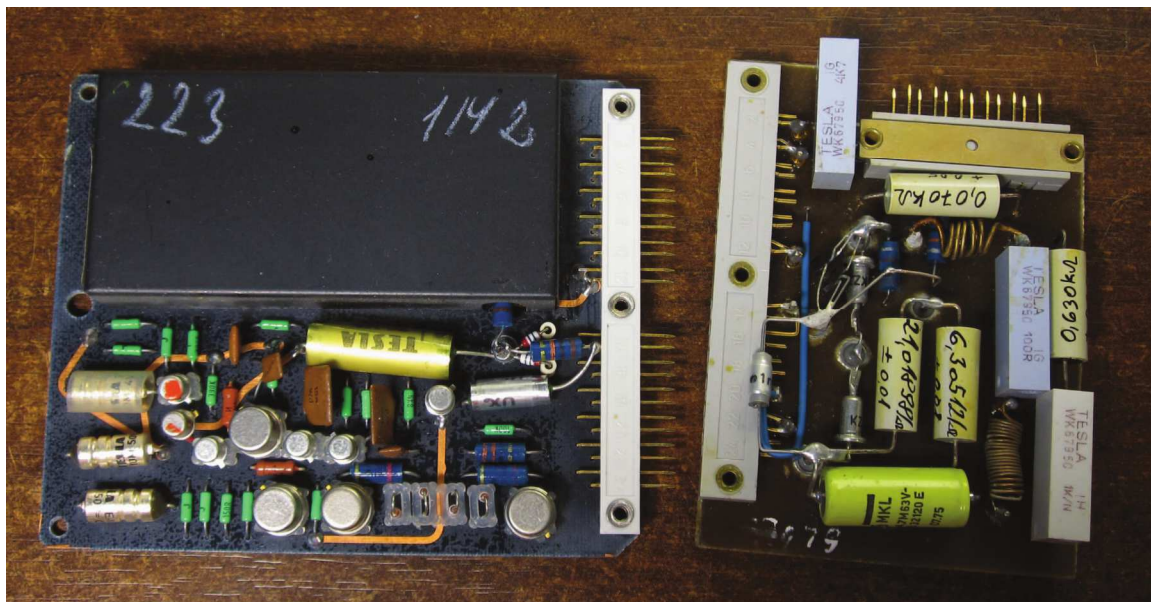
Data communication ferrite transformers.



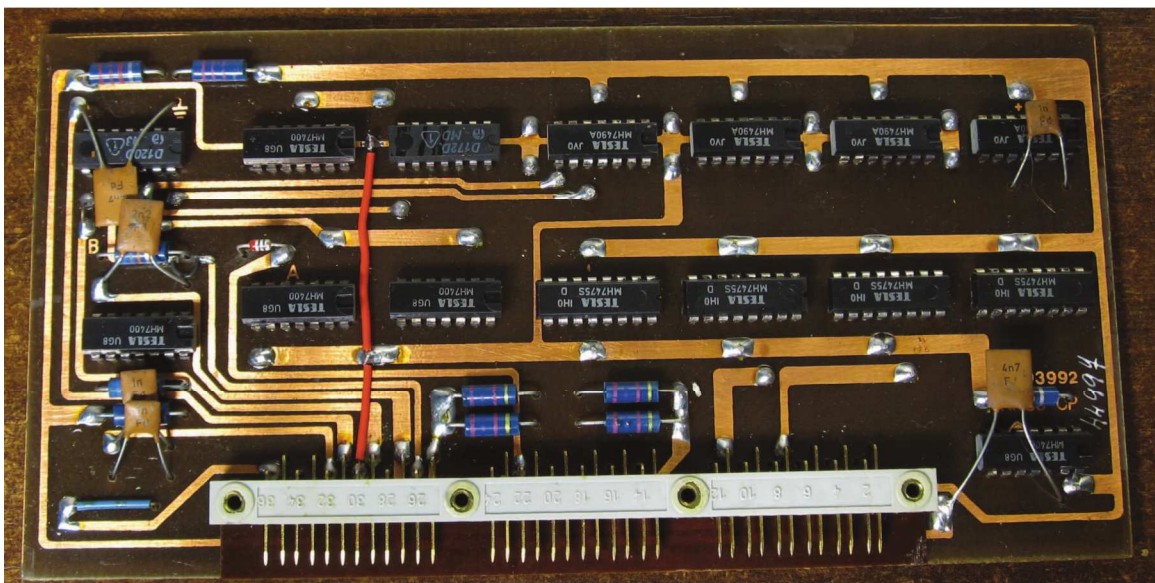
On the left: KN – Calibration supply and reference voltage supply.
On the right: AZ +/- 15V power supply and zero setting divider.



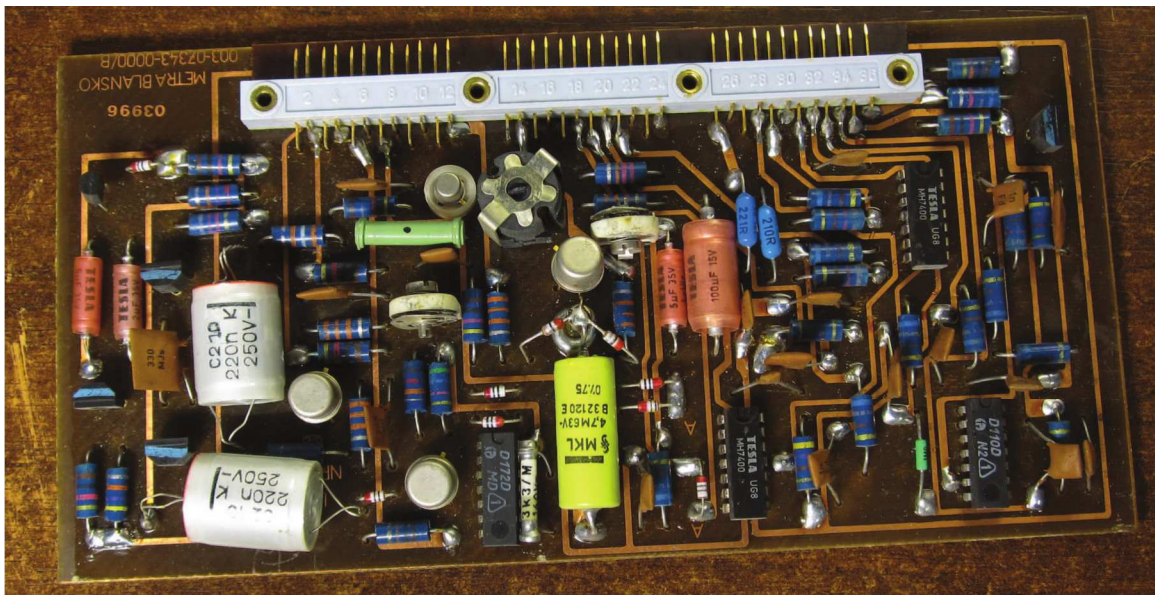
Up: IK – The integrator with switches, comparators and reference voltage switchers.
 Down: LO +5V power supply, limit comparator and some logic circuits.



OZ – Input amplifier and limiter



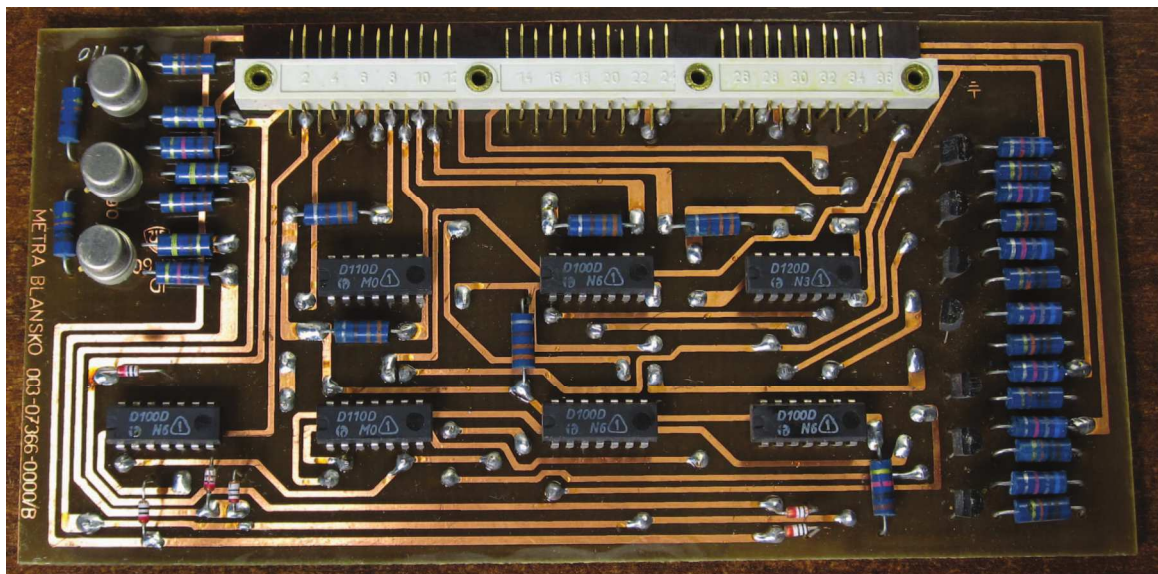
CP – This is the logic board, here is memory of received data and all necessary control circuits.



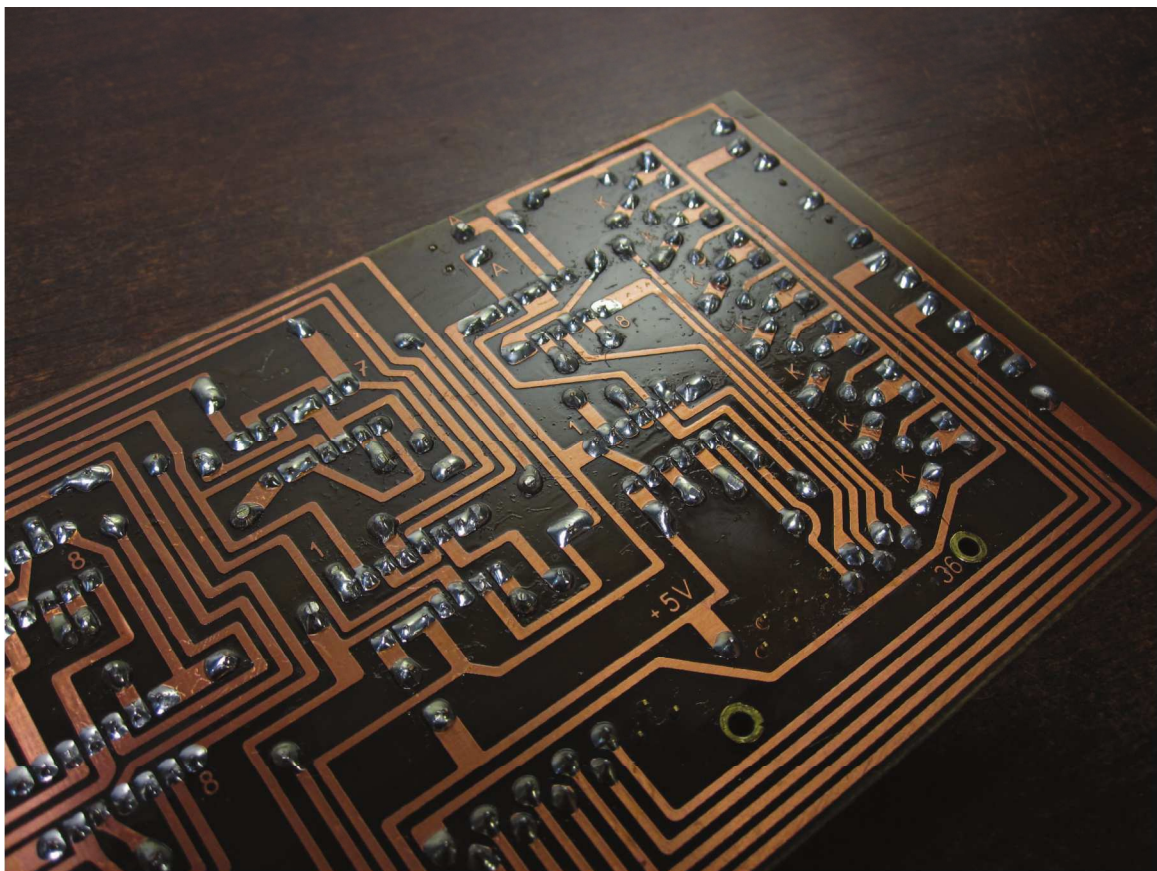
LP – Range control circuits, oscillator bounded on 50Hz network and star/stop impulse circuits.



ZL – power supplies of +/-15V, +5V and +200V for nixies.



ID – Range switching board and external communication unit with floating point switcher.



This is interesting. Metra didn't use in these years tin or silver plating. They just used flux laquer and all of boards were soldered manually in the manufactory.



All boards and floating section cover installed.



This unit works properly, perhaps it was never used. I bought it on international radio-meeting in Holice in Czech Republic. Including manual and schematics.