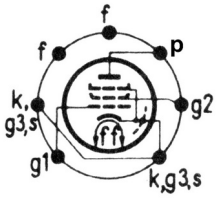
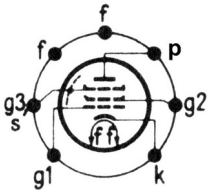
«6K4»
remote cutoff (vari-mu) pentode



7BD

The prototype for this tube is the Russian 6K4P (6К4П) which is electrically a 6BA6/EF93 (base 7BK), but with pins 2+7 interconnected through the shield. A 6BA6/EF93 can thus be used as long as inside the radio both pins are interconnected - originally not the case in the 221-1.

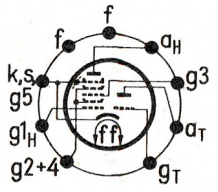
«6K7»
sharp-cutoff pentode



7BK

For the Chinese 6K7 no data or equivalent was found. Internal construction – it looks like the 6K4 – indicate that it is the sharp cutoff version thereof. This leads to a look at the 6AU6/EF94. DC curve and radio tests showed this to be the correct and useful type. The Russian 6AU6/EF94 is the 6Ж4П (6SH4P aka 6J4P ≠ US the 6J4 triode).

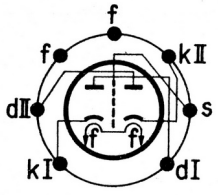
«6U1»
triode-heptode



9CA

The prototype for this tube is the Russian 6И1П (6I1P) which is based on the ECH81/6AJ8. The triode-heptode mixer was common in Europe, in the US radios rather a 6BE6/EK90 pentagrid converter was used.

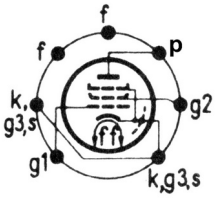
«6H2»
double diode



6BT

The prototype for this tube is the Russian 6Х2П (6СН2Р aka 6H2P) which is based on the 6AL5/EAA91.

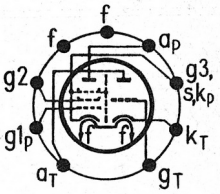
«6J1»
sharp cutoff pentode



7BD

The prototype for this tube is the Russian 6Ж1П (6SH1P aka 6J1P) which is based on the 6AK5/EF95.

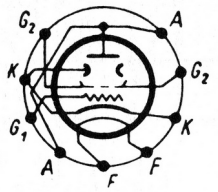
«6F2»
triode-pentode



9AE

For the 6F2 no equivalent is found listed (there is no Russian 6Ф2П). Usually the 6U8/ECF82 is given as an alternative. DC curve tests showed the triode to be ok but the pentode running lower currents. It is ok for use in the 221-1 (audio section) however.

«6P1»
beam power tube



6P1

The prototype for this tube is the Russian 6П1П (6P1P). It evolved from the 6AQ5/EL90 (7BZ base) but with a 9pin base (unique) and thus a larger envelope. The US type 6CM6 has the same concept, but has a different base (9CK). With a suitable adapter a 6AQ5/EL90 can be used.

Notes:

- «Röhren-Taschen-Tabelle» Franzis Verlag, München, 1966/67 and 1994.
- «Electronic Universal Vade-Mecum», Wydawnictwa Naukowo-Techniczne, Warszawa, 2nd ed. 1994.
- «RCA Receiving Tube Manual», RCA Victor Company Ltd., Montreal, 1966
- Russian tube numbering & equivalents e.g. http://www.jogis-roehrenbude.de/Russian/russ_roehre_rue_dat.pdf, R. Buettner, 2003.
- 221-1 pics & data form S. Johnston, wd8das http://wd8das.net
- Tests made on the bench and using 221-1 s/n 24931, Model C, built 1976-5.
- Scans made and edited by author, EIA base designations used.
- All comments are welcome. YMMV.