



PR 22

(Including VXW 010, VXW 020 and PR 21)

Country of origin:
Czechoslovakia

REMARKS

The PR 22 was a fully transistorised VHF FM handheld or shoulder worn general purpose transceiver. It was developed by Tesla Pardubice for commercial communication, surveillance, Police, border guards, secret police etc. It was the third (much updated) version in a series of radios: VXW 020, PR 21 and PR 22, having an identical metal enclosure, similar mechanical internal construction and a very similar control panel. It should be noted that a forerunner of this series was the VXW 010. Being developed over a time span of almost 20 years, the differences were mainly the choice of newer technology: the VXW 010 and VXW 020 used germanium transistors, and the PR 21 and PR 22 silicon transistors. The PR 22 had a powerful RF output transistor and a MBA 810 AF output IC.

An optional selective tone calling unit, Selectic, could be fitted at the bottom of the PR 21 and PR 22.



Internal view showing the mechanical construction of the PR 21, which was the forerunner of the PR 22 with an almost identical external appearance.

With each of the VXW 100 and PR 22 series of radios a simple test lamp assembly was issued to check the RF output (right). Though physically similar, the VXW 100 had a 12V 100mA lamp, and the PR 22 version a 6V 50mA lamp.



DATA SUMMARY

Design/Manufacturer: Tesla Pardubice.

Year of Introduction: VXW 020 approximately 1968, PR 21 1975 and PR 22 1984.

Purpose: General purpose communication/surveillance.

Transmitter Receiver:

Frequency coverage: 33-35, 44-46, 73-84 or 146-174 MHz. Maximum 3 channels. Channel spacing 25kHz. FM. Simplex or semi-duplex operation.

Receiver:

Circuit features: Dual conversion superheterodyne. Crystal control; IF: 10.7MHz and 455kHz.

Sensitivity: 0.5 μ V at 20 dB signal-to-noise ratio.

AF output: 400mW. Audible alert tone 1750Hz.

Transmitter: Crystal control. PM. Nominal frequency deviation \pm 5kHz.

RF Power: 1W.

Tone signalling frequency: 1850, 1950 or 2160Hz.

Aerial: Vertical rod: long and short, and short wire aerial threaded through the carrying strap. Four variations were known depending the frequency band.

Power Supply: Battery pack with ten 1.2 Volt 225mAh NiCad batteries, 12V nominal. Operational voltage range 11-14.7V.

Power drain: Transmit 105mA; Receive 75mA; Stand-by 18mA.

Operating time: Standby: transmit: receive: (17:2:1) 8 hours.

Dimensions (mm) and weight:

Height 220, length 45, width 80; weight 1.3kg.

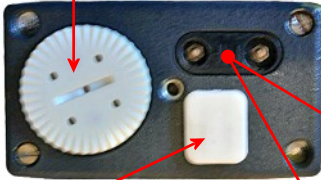


Wooden storage and transport box for a complete PR 22.



Bottom view of PR 21 or PR 22 (below) showing cover of battery compartment and covered socket for optional Selectic tone calling unit (above).

Battery cover.



Selectic tone calling unit socket cover.

External battery contacts.

For prolonged operation under extreme coldness, the battery, fitted in the charger case, could be worn under the clothing near the warmth of the human body connected to the external battery contacts at the bottom of the radio.

For each frequency band of the PR 22 series was a set of three aerials (long, short and short wire). These were distinguished by a coloured coded base. (See previous Chapter 275). All aerials were interchangeable for use with VXW 100, PR 11, VAW 010, VXW 010, VXW 020, PR 21 and PR 22.



The short wire aerial was threaded through the carrying strap (left).

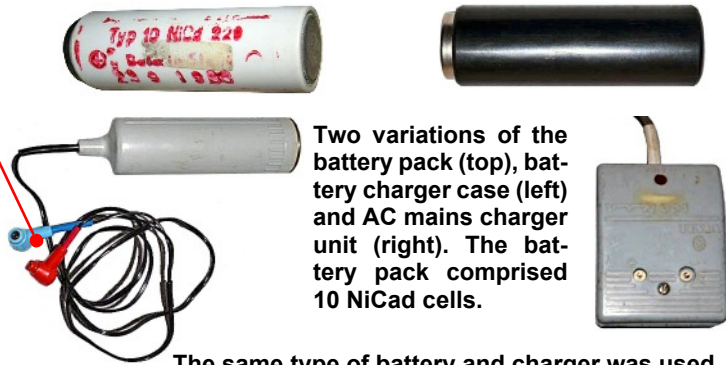


Test lamp.



Standard speaker-microphone QK 065 05 (left), and type DX 28 (right) with three buttons for optional Selectic tone calling (right). Though fitted with the same type of plug, not each microphone of the VXW 100 and PR 22 series was interchangeable. Note the test lamp unit connected to the aerial socket.

Batteries and charging



Two variations of the battery pack (top), battery charger case (left) and AC mains charger unit (right). The battery pack comprised 10 NiCad cells.

The same type of battery and charger was used with the VXW 010, VXW 020, PR 21 and PR 22.

References:

Photographs and information for preparing this chapter were retrieved from the PR 22 website at <http://pr-22.nazory.cz/> with kind permission of Jan Bednář, Czech Republic. Without his assistance this chapter would not have been possible.

Other sources:

- <https://www.facebook.com/Radiostanice-Tesla-722009397946545>
- <http://www.csla.cz/vyzbroj/spojovacicprostredky/vxw020.htm>
- http://cbnymbrk.wz.cz/clanky/vkv_radiostanice.htm
- <http://amtero.sweb.cz/prenosne.html>

Development: from VXW 020 to PR 22



The VXW 010 was the forerunner of a series of handheld radios developed and produced by Tesla Pardubice (See Chap. 281).



Three almost identical looking VHF FM radios: from left to right: VXW 020, PR 21 and PR 22. The knobs on the radios were different and identify a model at first glance: VXW 020 chrome plated, PR 21 aluminium and the PR 22 plastic. The functions differed slightly, for example the PR 22 volume control was in 3 fixed steps and the VXW 020 had not the Selectic option.