



(U) Russian Signal Troops



U.S. ARMY

(U) This informative infographic sheds light on the role and capabilities of the Russian Signal Battalion. The primary function of the Signal Troops is to establish and maintain communication systems for ground forces units, enabling efficient command and control in both wartime and peacetime scenarios. They also manage automated command and control systems, ensuring seamless information flow between various levels of military hierarchy. In line with global trends and technological advancements, the Russian Federation has identified the need to modernize and enhance the capabilities of its Signal Troops. The focus includes equipping them with advanced signal communications technology and sophisticated automated command and control systems. These systems are designed to deliver secure, swift, and encrypted communication throughout the chain of command, regardless of physical or climatic challenges, thereby ensuring operational effectiveness in all conditions.

Network-Centric Warfare

Command and control (C2) has long been a problem in both the Soviet and Russian militaries. At the tactical level, radio technology was generally lacking, and the ability to transmit digitally nonexistent. In the last few years, this has begun to change. The Russian Federation has made a great effort to develop a “network-centric” command and control system. Signal Troops appear to be the key to implementing this program, as they man the automated command and control systems, radios, and landline infrastructure required for this endeavor. This concept has led to the establishment of a national command center that will reportedly be connected to subordinate command centers at the operational strategic command (military districts) and Army Group level. At the tactical level, the Armed Forces are overcoming C2 problems and implementing network-centric warfare through a variety of new technologies including new tactical radios, a tactical digital mobile subscriber system, and tactical laptops and tablets.

R-142N Command Vehicle



Image Courtesy: Vitaly Kuzmin

R-149 Command Vehicle



Image Courtesy: Vitaly Kuzmin



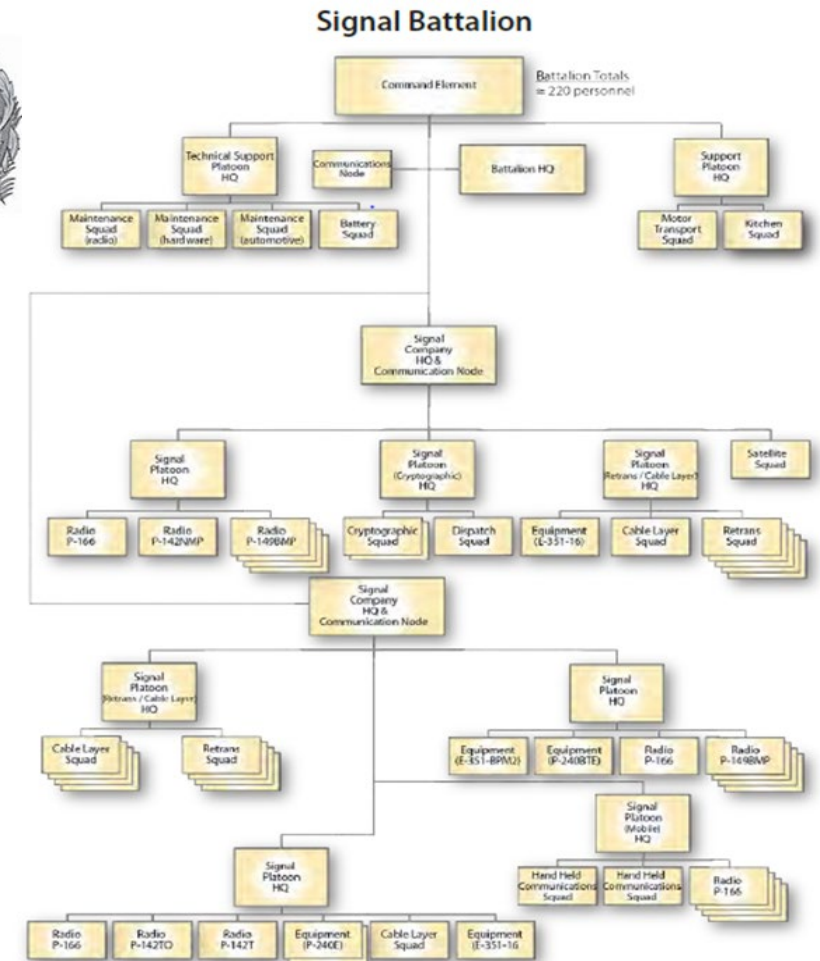
Image Courtesy: Vitaly Kuzmin



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Tactical Radio Communications

The Russian federation has made great efforts in transitioning away from Soviet era analog based equipment to digital equipment with substantial data transmission, encryption, and antijamming capabilities. The Russians are transitioning to Software-Defined Radio (SDR) technology that replaces some of the radio's components (mixer, filters, amplifiers, modulators/demodulators, detectors, etc.) with software solutions. The SDR technology allows the radios to have features such as multitasking, multiple waveband capability and better protection against surveillance and jamming. The Soviet Army lagged greatly behind the U.S./NATO in terms of tactical radio communications, the Armed Forces of today's Russian Federation do not.



Source:

<https://www.armyupress.army.mil/portals/7/hot%20spots/documents/russia/2017-07-the-russian-way-of-war-grau-bartles.pdf>

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