Amateur Radio Equipment Chapter 5

Microphone > connectors include push-to-talk and voltages for powering the microphone

Headphones > used in place of a regular speaker to help you copy signals in a noisy area

Power Supply > use a regulated power supply for communications equipment to prevent voltage fluctuations from reaching sensitive circuits

Transmitter Filters >

Low Pass filter is installed between the transmitter and the antenna to reduce **harmonic emissions**
Band-Reject filter is connected to a TV receiver as the first step in trying to prevent **RF overload** from a nearby 2 meter transmitter

Packet Radio Station > a transceiver and computer used for digital communications

Terminal Node Controller is connected between a transceiver and computer in a packet radio station
In digital communications the **computer sound card** provides audio to the microphone input and converts received audio to digital form

RF Grounding > **Flat strap** conductor is best to use for RF grounding

Audio Filters >

Ferrite choke is used to reduce RF current flowing on the shield of an audio cable
The **alternator** is the source of a **high-pitched whine** that varies with engine speed in a mobile transceiver's receive audio
A transceiver's power **negative connection** should be made at the **battery** or engine block ground

Transceiver Controls

VFO > The keypad or VFO knob can be used to **enter** the operating **frequency** on a modern transceiver

Microphone Gain > If a transmitter is operated with the microphone gain set **too high**, output signal becomes **distorted**

Squelch > The squelch control is used to **mute** receiver output **noise** when **no signal** is being received

Channel Memory > A way to enable quick access to a **favorite frequency** on your transceiver

Repeater Offset > The difference between the repeater's **transmit** and **receive** frequencies

Noise Blanker > Turn on the noise blanker to reduce **ignition interference** to a receiver

Receive Incremental Tuning > **RIT** or clarifier is used if the **voice pitch** of a SSB signal seems too high or low

Bandwidth Control > permits noise or interference reduction by selecting a bandwidth matching the mode

2400 Hz is an appropriate receive filter to minimize noise and interference for **SSB** reception

500 Hz is an appropriate receive filter to minimize noise and interference for **CW** reception

Digital Communications > Packet, PSK31, MFSK are digital communications

PSK31 > A low rate data transmission mode (**Phase Shift Keying)**

Parity Bit > An extra code element used to detect errors in received data

Packet digital communications includes;

Check Sum for error detection and automatic repeat requests
The Header includes the call sign of the intended station
Technician Licensed operators may used **219 to 220 MHz** for data

Automatic Position Reporting System > **APRS** uses a Global Positioning System receiver to report a radio location

Internet Radio Linking Project > IRLP is radio VoIP via a radio GATEWAY

Active Nodes can be found in a repeater directory
Select a specific IRLP Node by using your keypad to transmit the IRLP Node ID

Distorted Transmissions

High Pitched Whine > Car Alternator, Garbled > RF Feedback, Off Frequency, Location

Bite Error Rate (BER) in Data is distortion