



This receiver is micro-processor controlled. It covers any 2 MHz band between 138 and 175 MHz. An adjacent 2 MHz band can be included as an option.

The receiver includes 40 programmable channels, and it also includes a scanner function for the programmed channels.

The PERDIX VHF receiver has one external antenna socket.

The frequency is set by a knob to the closest 1 kHz. Also fine trimming of the frequency (tone) and the gain is controlled by knobs. The frequency set is shown on a LCD.

The strength of the signal received is indicated on a LED array and also by a loudspeaker or earphone. The receiver is powered by 2 alkaline or NiMH (rechargeable) batteries.

The robust PERDIX VHF receiver Tracking Receiver is designed and manufactured for field use, to withstand adverse weather conditions.

## Standard Features Include:

- 40 programmable channels
- Scanner function
- 2 MHz coverage
- Extremely light weight - 390 grams
- 6 digit, LCD frequency display (to 1 kHz)
- Operates for 12-15 hours on 2 AA alkaline batteries
- Adjustable gain for precise directionality at very close range
- Diodes light to indicate signal strength and with peak detector
- Earphone jack and speaker

## Optional:

- Additional 2 MHz band (nearby) covered





## Operating instructions

To turn the receiver ON or OFF press and hold the push-button for 2 sec.

It will start either in frequency mode or in channel mode. Frequency mode will display a frequency and channel mode will display a channel number (two digit number from 01 to 40) and the corresponding frequency. The receiver will start in the same mode that it was in when it was previously turned off.

In case of low voltage "LOW BAT" is seen on display. If the FREQ knob on the front is pushed the display is illuminated for 6 seconds or as long as the knob is moved. The knob must be pressed down and released to be able to change the frequency.

To toggle between modes, press and hold the FREQ knob until the mode changes. This can be seen on the LCD.

## Frequency Mode

### Changing the frequency:

To change the frequency from the one displayed begin by pressing, then releasing the FREQ knob. The rightmost digit will be underlined. Change that digit by rotating the knob. To move to the next digit to the left, press and release the knob again. Continue changing the frequency using the method described.

## Channel Mode

### Setting the channel frequency:

1. Utilise the frequency mode to tune the receiver to the desired frequency according to the method described above.
2. Press and hold the FREQ knob until the text "Channel xx" is displayed. XX represents a two-digit number ranging from 01 to 40.
3. Turn the FREQ knob until the desired channel is displayed. If too much time elapses between pushing the dial and rotating the dial you must begin again. The indication that too much time elapsed is that the line under the channel number will disappear.
4. To set the new frequency of the channels quickly press and release the On/Off button. This must be done before the background light goes off. Note that the receiver will turn off if the button is press and held.





## Including and excluding channels in the scan:

1. In channel mode, select the channel to include in the scan.
2. Change to frequency mode.
3. Press and hold the **FREQ** knob until the channel number is displayed and a star "\*" appears after the channel number. The star identifies the channel as selected and it will be included in the scan.

To exclude channels, repeat this process but press and hold the **FREQ** knob until the star disappears.

## Start the scan function:

1. Make sure the receiver is in frequency mode.
2. Press and hold the **On/Off** button and immediately press the **FREQ** knob while still holding down the **On/Off** button. The display will show "Please Wait". Release the **On/Off** button and the **FREQ** knob.

After a few seconds the display will show "Scan Chxx 1s". 1 s is the time (in seconds) for which a channel will be scanned before moving on to the next channel included in the scan. Change this value by turning the **FREQ** knob slowly. Values from 1 to 9 can be used.

Interrupt the scanning function by pressing the **FREQ** knob.

Point (preferably horizontally) with the front of the external directional antenna at the transmitter.

To set the transmitter frequency press the **FREQ** knob (and release it) to change the 1 kHz digit (underlined) by turning the **FREQ** knob. Push the **FREQ** knob again to change the 10kHz digit (underlined) and set the frequency by turning the knob. In the same way the 100 kHz and the MHz can be changed. When the light goes out after 6 seconds the **FREQ** knob can be turned without changing the frequency.

Turn the **GAIN** knob until the diodes and the speaker indicates that a signal is received.

Turn the **TONE** knob to adjust the fine frequency for maximum signal strength. If necessary, change the gain setting to get the **PEAK DETEC- TOR** (topmost diode) to be visible only when the receiver is pointing at the transmitter.

When "LOW BAT" is seen on the display open the battery compartment on the back of the receiver and replace the two batteries. The batteries should be taken out during prolonged storage.





## Tracking:

Turn around to find the proper direction as indicated by the diodes and heard from the loudspeaker or the earphone (plugged in at the bottom, disconnects the loudspeaker). The strongest signal should be received when the top points at the transmitter. A weaker signal is normally heard in the opposite direction.

As a rule, one should move around a little during the tracking process to reduce the reflecting and dampening influence from the nearby terrain or objects. Try to find elevated and free areas for taking bearings, if possible. Do not stand near reflecting objects like a car or a big rock.

Theory and practice don't always coincide, but, as a rule the vertical position of the receiver may give a stronger signal in a forested terrain. However, the direction of the signal received may be very false.

Tracking from short distance from the transmitter is normally a problem for the inexperienced person. However, the PERDIX VHF receiver has good dynamic properties, which makes it easy to use even close to a strong transmitter.

## Care:

As mentioned above, do not keep the batteries in the receiver during prolonged periods of non-use.

If the receiver has been used in heavy rain and there is moisture inside, open the battery compartment, take out the batteries and let the receiver remain open over night in a dry and warm place. This normally will restore any performance of the receiver that may be affected by penetrating water.

## Technical Specifications:

Frequency coverage	any 2 (4) MHz band within 138 - 175 MHz
Frequency stability	+/- 4ppm, -25 to +40°C
Sensitivity	-135 dBm at (S+N)/N=10dB
Dynamic range	-30 to -145 dBm
Power	2 x 1.5V alkaline battery
Current drain	140 mA
Operating temperature	from -35°C to +50°C
Dimensions	146 x 57 x 32 mm
Weight	390 grams (including batteries)
Earphone	150 ohm, 3.5 mm telephone plug
Speaker	Waterproof
Antenna sockets	LEMO (type 00)

