NOAA 11	137.62MHz	Not operating
NOAA 12	137.50MHz	
NOAA 13	137.62MHz	Not operating
NOAA 14	137.62MHz	
NOAA 15	137.50MHz	
NOAA 16	137.62MHz	Not operating
NOAA 17	137.62MHz	
NOAA beacons	136.77 and 137.77MHz	
METEOR 2-21	137.40MHz	
METEOR 3-5	137.30MHz	
OKEAN-O	137.40MHz	
RESURS O 1.1	137.85MHz	

Table 1 : Not all the satellites given are always active. Some of them are still flying on polar orbits, but their transmitters have been switched off. Some others do not transmit due to a failure, e.g. the modern satellite NOAA 16 only transmits in the mode HRPT at the frequency 1.698 GHz due to a defect. This is the fate of all artificial satellites, when they fail they can only be repaired using very costly methods. Not all the satellites are as important as the Hubble space telescope, which was repaired by the space shuttle that we watched with excitement and admiration.

See http://noaasis.noaa.gov/NOAASIS/ml/status.html

pictures from METEOR use inverse scale warm seas are white and cold cloud formations are black.

It is also possible to decode visual information from the receiver any time. To do this it is necessary to save the received modulated signal as a WAV sound file on a high quality recorder (we had the best results with SONY Minidisk). If you take holidays in distant countries, it is recommended that you use a portable and easily mounted Quadrifillar Helix antenna, see [19], take the receiver described below and a Minidisk. During your trip you can record exotic pictures from any of the meteorological satellites. When you return you can decode the saved WAV sound files in the same manner as during direct reception.

3.

Description of the receiver RX-137-141MHz

The receiver RX-137-141MHz has been designed for high quality reception of signals form polar meteo-satellites NOAA, METEOR, OKEAN and others. It is compatible with the converter from 1691MHz to 137.50MHz which is suitable for reception from geo-stationary satellite METEOSAT 7 [14, 23].

Looking at the Table 1, you will find that satellites in polar orbits transmit signals in the range of 137.30-137.85MHz, therefore a very narrow frequency range is sufficient. We have chosen, for practical reasons, a lower frequency of 137.00MHz and an upper frequency of 141MHz. No meteorological satellites transmit at frequencies above 137.85MHz but the frequency of