Sky Recorder User Manual
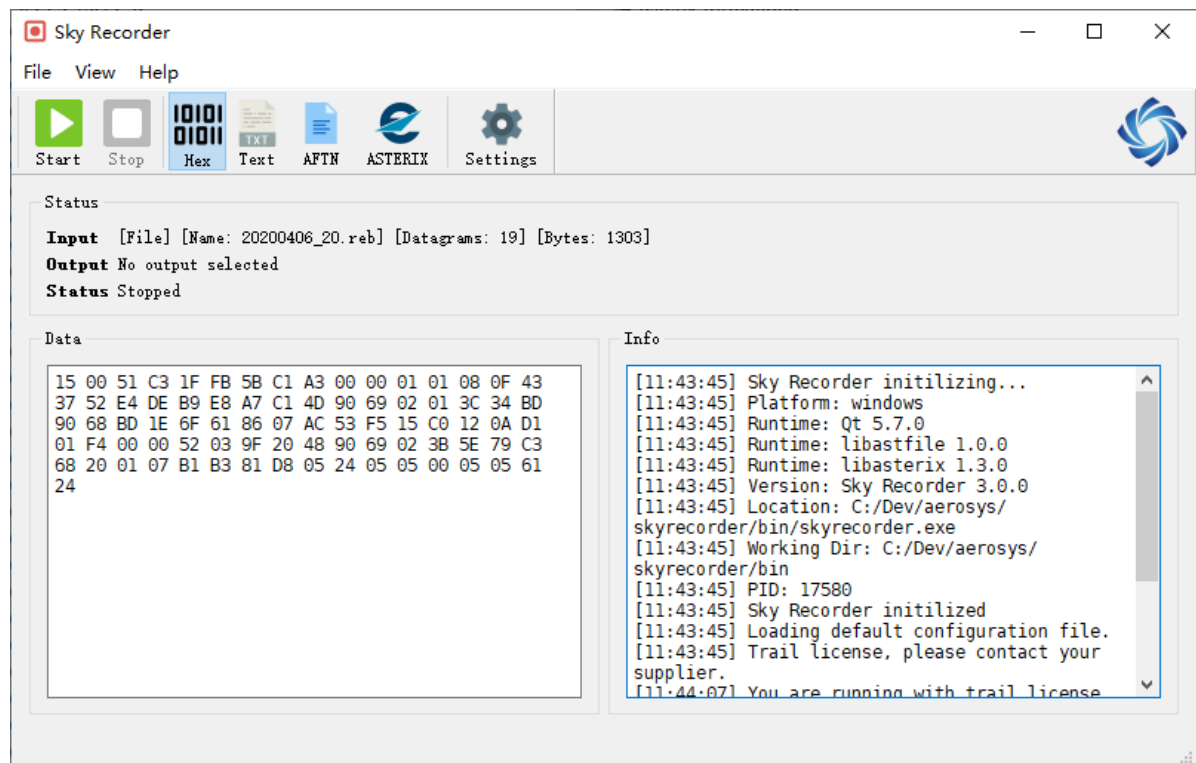
1. Introduction

1.1 Overview

Sky Recorder is a tool to record and replay binary or text data.

Sky Recorder supports different type of input and output interfaces, including serial, LAN, and files.

Sky Recorder is general purpose data recording and playback tool, it works with both binary and text data.

Sky Recorder has a set of data decoding functions, and can decode live data in different formats.
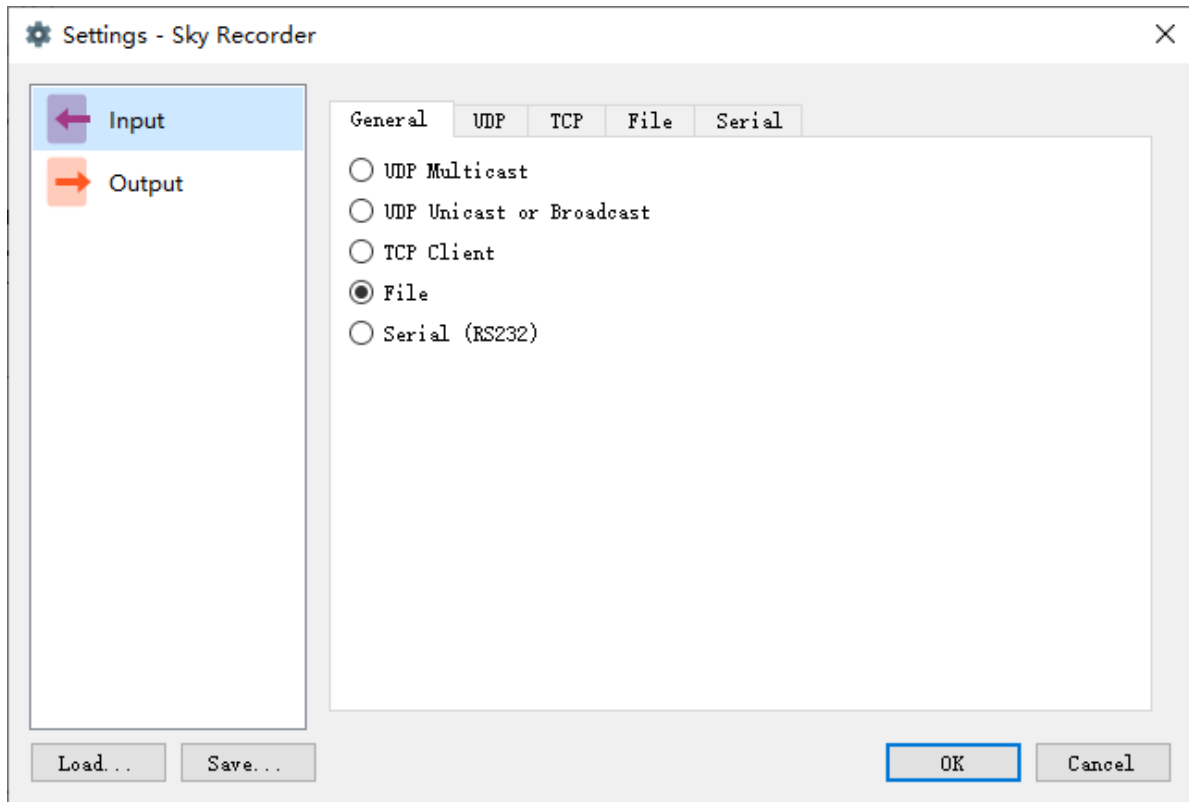
1.2 Input Interfaces

Sky Recorder supports the next types of input interfaces.

- UDP Multicast
- UDP Unicast

- UDP Broadcast
- TCP Client
- Serial Async (RS232)
- Serial Sync (HDLC)
- Recording Files

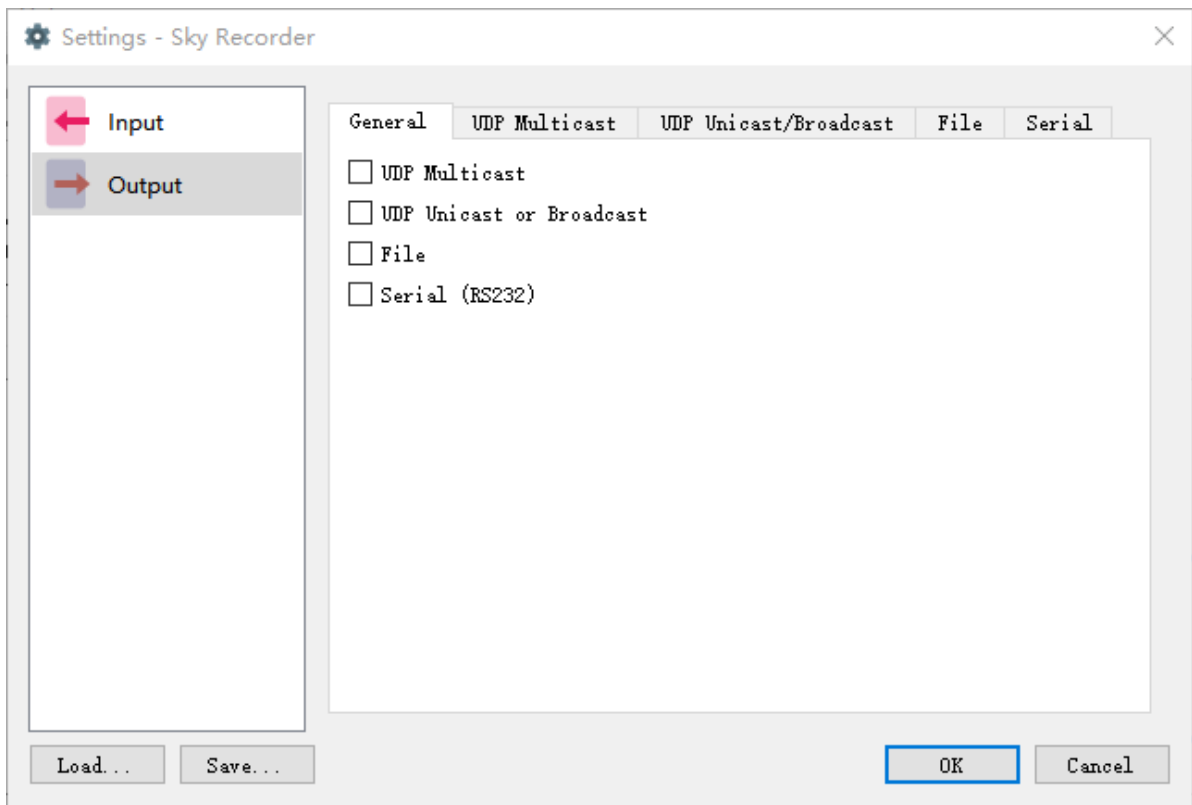*Note*: Serial interface need relative hardware.

1.3 Output Interfaces

Sky Recorder supports the next types of output interfaces.

- UDP Multicast
- UDP Unicast
- UDP Broadcast
- Serial Async (RS232)
- Serial Sync (HDLC)
- Recording Files

Note: Serial interface need relative hardware.

2. Trouble Shooting

2.1 Multicast on Windows

There is a known issue that when receiving UDP multicast on a windows PC with multiple LAN interfaces, sometimes even interface has been specified in config, it still cannot receive multicast input.

This is because IGMP message is not correctly sent to selected interface.

To solve this problem, we need to manually add relative routing.

For example, we want to receive multicast 224.0.1.5 on a interface with IP 192.168.0.100, we need to use command `route add 224.0.1.5 mask 255.255.255.255 192.168.0.100` to manually add route. And use command `route print` to verify.

Then we will be able to receive UDP multicast from desired interface.

```
Administrator: C:\Windows\System32\cmd.exe

C:\Windows\system32>route add 224.0.1.0 mask 255.255.255.0 192.168.0.100
 OK!

C:\Windows\system32>route print
===========================================================================
Interface List
 24...02 00 4c 4f 4f 50 ......Npcap Loopback Adapter
 19...18 60 24 a2 16 10 ......Intel(R) Ethernet Connection (2) I219-LM
 17...18 60 24 a2 16 11 ......Intel(R) I210 Gigabit Network Connection
 16...b4 96 91 30 f9 b3 ......Intel(R) Ethernet Server Adapter I350-T4 #4
 15...b4 96 91 30 f9 b2 ......Intel(R) Ethernet Server Adapter I350-T4 #3
 13...b4 96 91 30 f9 b1 ......Intel(R) Ethernet Server Adapter I350-T4 #2
 11...b4 96 91 30 f9 b0 ......Intel(R) Ethernet Server Adapter I350-T4
  1...........................Software Loopback Interface 1
 12...00 00 00 00 00 00 00 e0 Microsoft ISATAP Adapter
 14...00 00 00 00 00 00 00 e0 Microsoft ISATAP Adapter #2
 21...00 00 00 00 00 00 00 e0 Microsoft ISATAP Adapter #3
 22...00 00 00 00 00 00 00 e0 Microsoft ISATAP Adapter #4
 18...00 00 00 00 00 00 00 e0 Microsoft ISATAP Adapter #5
 20...00 00 00 00 00 00 00 e0 Microsoft ISATAP Adapter #6
 23...00 00 00 00 00 00 00 e0 Microsoft ISATAP Adapter #7
 25...00 00 00 00 00 00 00 e0 Microsoft 6to4 Adapter
===========================================================================

IPv4 Route Table
===========================================================================
Active Routes:
Network Destination        Netmask          Gateway       Interface  Metric
          0.0.0.0          0.0.0.0   192.168.50.111   192.168.50.125    266
        127.0.0.0        255.0.0.0         On-link        127.0.0.1    306
        127.0.0.1  255.255.255.255         On-link        127.0.0.1    306
  127.255.255.255  255.255.255.255         On-link        127.0.0.1    306
      169.254.0.0      255.255.0.0         On-link  169.254.236.172    286
  169.254.236.172  255.255.255.255         On-link  169.254.236.172    286
  169.254.255.255  255.255.255.255         On-link  169.254.236.172    286
     172.11.80.0    255.255.255.0         On-link     172.11.80.125    266
   172.11.80.125  255.255.255.255         On-link     172.11.80.125    266
   172.11.80.255  255.255.255.255         On-link     172.11.80.125    266
      192.168.0.0    255.255.255.0         On-link    192.168.0.100    266
    192.168.0.100  255.255.255.255         On-link    192.168.0.100    266
    192.168.0.255  255.255.255.255         On-link    192.168.0.100    266
      192.168.1.0    255.255.255.0         On-link    192.168.1.100    266
    192.168.1.100  255.255.255.255         On-link    192.168.1.100    266
    192.168.1.255  255.255.255.255         On-link    192.168.1.100    266
     192.168.50.0    255.255.255.0         On-link   192.168.50.125    266
   192.168.50.125  255.255.255.255         On-link   192.168.50.125    266
   192.168.50.255  255.255.255.255         On-link   192.168.50.125    266
        224.0.0.0        240.0.0.0         On-link        127.0.0.1    306
        224.0.0.0        240.0.0.0         On-link  169.254.236.172    286
        224.0.0.0        240.0.0.0         On-link     172.11.80.125    266
        224.0.0.0        240.0.0.0         On-link   192.168.50.125    266
        224.0.0.0        240.0.0.0         On-link    192.168.0.100    266
        224.0.0.0        240.0.0.0         On-link    192.168.1.100    266
        224.0.1.0    255.255.255.0         On-link    192.168.0.100     11
  255.255.255.255  255.255.255.255         On-link        127.0.0.1    306
  255.255.255.255  255.255.255.255         On-link  169.254.236.172    286
  255.255.255.255  255.255.255.255         On-link     172.11.80.125    266
  255.255.255.255  255.255.255.255         On-link   192.168.50.125    266
  255.255.255.255  255.255.255.255         On-link    192.168.0.100    266
  255.255.255.255  255.255.255.255         On-link    192.168.1.100    266
===========================================================================
Persistent Routes:
  Network Address          Netmask  Gateway Address  Metric
          0.0.0.0          0.0.0.0   192.168.50.111  Default
```