Appendix A - Binary Radiosonde Packet Definition

PTU data packet:

offset	bytes	description
0	1	SOH = 0x01
1	1	PKT_ID = 0x01
2	2	PKT = packet number
4	3	P, mbs (P = n/100)
7	2	T, °C (T = n/100)
9	2	U, % (U = n/100)
11	1	Vbat, V (V = n/10)
12	2	CRC (16-bit)

packet size = 14 bytes
transmission time at 1200 baud = 117 mSec

PTU (enhanced) data packet:

offset	bytes	description
0	1	SOH = 0x01
1	1	PKT_ID = 0x04
2	2	PKT = packet number
4	3	P, mbs (P = n/100)
7	2	T, °C (T = n/100)
9	2	U, % (U = n/100)
11	1	Vbat, V (V = n/10)
12	2	Tint, °C (Tint = n/100)
14	2	Tpr, °C (Tpr = n/100)
16	2	Tu, °C (Tu = n/100)
18	2	CRC (16-bit)

packet size = 20 bytes
transmission time at 1200 baud = 167 mSec

GPS data packet:

offset	bytes	description
0	1	SOH = 0x01
1	1	PKT_ID = 0x02
2	4	Latitude, +/- deg (float)
6	4	Longitude, +/- deg (float)
10	2	Altitude, meters (Alt = n-5000)
12	1	nSat (0 - 12)
13	3	Time (hr,min,sec)
16	2	CRC (16-bit)

packet size = 18 bytes
transmission time at 1200 baud = 150 mSec

GPS (enhanced) data packet:

offset	bytes	description
0	1	SOH = 0x01
1	1	PKT_ID = 0x05
2	4	Latitude, +/- deg (float)
6	4	Longitude, +/- deg (float)
10	2	Altitude, meters (Alt = n-5000)
12	1	nSat (0 - 12)
13	4	East-West velocity, m/s (float)
17	4	North-South velocity, m/s (float)
21	4	Up-Down velocity, m/s (float
25	3	Time (hr,min,sec)
28	2	CRC (16-bit)

packet size = 30 bytes
transmission time at 1200 baud = 250 mSec

Extra data packet:

offset	bytes	description
0*	1	SOH = 0x01
1*	1	PKT_ID = 0x03
2*	1	N = number of data bytes to follow
...	...	Data (50 bytes max)
3 + N*	2	CRC (16-bit)

* = automatically generated by radiosonde
packet size = N+5 bytes (55 bytes max)

Ozonesonde data (using extra data packet):

offset	bytes	description
0*	1	SOH = 0x01
1*	1	PKT_ID = 0x03
2*	1	N = 8
3	1	Instrument_type = 0x01
4	1	Instrument_number (1-255)
5	2	Icell, uA (I = n/1000)
7	2	Tpump, °C (T = n/100)
8	1	Ipump , mA (255 mA max)
10	1	Vbat, V (V = n/10, 25.5 V max)
11*	2	CRC (16-bit)

* = automatically generated by radiosonde
packet size = 12 bytes
transmission time at 300 baud = 400 mSec, 1200 baud = 100 mSec