

Signal number	Signal Type	Constellation	Carrier frequency (MHz)	RINEX v3.03 obs code
0	L1CA	GPS	1575.42	1C
1	L1P	GPS	1575.42	1W
2	L2P	GPS	1227.60	2W
3	L2C	GPS	1227.60	2L
4	L5	GPS	1176.45	5Q
5	Reserved			
6	L1CA	QZSS	1575.42	1C
7	L2C	QZSS	1227.60	2L
8	L1CA	GLONASS	$1602.00 + (\text{FreqNr} - 8) * 9/16$, with FreqNr as defined in section 4.1.9.	1C
9	L1P	GLONASS	$1602.00 + (\text{FreqNr} - 8) * 9/16$	1P
10	L2P	GLONASS	$1246.00 + (\text{FreqNr} - 8) * 7/16$	2P
11	L2CA	GLONASS	$1246.00 + (\text{FreqNr} - 8) * 7/16$	2C
12	L3	GLONASS	1202.025	3Q
13-14	Reserved			
15	L5	IRNSS	1176.45	5A
16	Reserved			
17	E1 (L1BC)	Galileo	1575.42	1C
18	Reserved			
19	E6 (E6BC)	Galileo	1278.75	6C
20	E5a	Galileo	1176.45	5Q
21	E5b	Galileo	1207.14	7Q
22	E5 AltBoc	Galileo	1191.795	8Q
23	LBand	MSS	L-band beam specific	NA
24	L1CA	SBAS	1575.42	1C
25	L5	SBAS	1176.45	5I
26	L5	QZSS	1176.45	5Q
27	Reserved			
28	B1 (L1)	BeiDou	1561.098	2I
29	B2 (E5b)	BeiDou	1207.14	7I
30	B3	BeiDou	1268.52	6I
31	Reserved			

4.1.11 Channel Numbering

Some blocks contain a reference to the receiver channel number. Channel numbering starts at one. The maximum value for the channel number depends on the receiver type.

4.1.12 Decoding of SBF Blocks

In order to decode an SBF block, one has to identify the block boundaries in the data stream coming from the receiver. This involves searching for the initial "\$@" characters that mark the beginning of each SBF block. Since the "\$@" sequence can occur in the middle of an SBF block as well, additional checking is needed to make sure that a given "\$@" is indeed the beginning of a block. The following procedure is recommended to decode SBF data stream.

1. Wait until the "\$@" character sequence appears in the data stream from the receiver. When it is found, go to point 2.
2. Read the next two bytes. It should be the block CRC. Store this value for future reference.