GGAK Format description

Júlia M.   Aang23   Aweeri

SatDump   SatDump

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Document describing the format used by Russian satellites that carry GGAK.

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1 Elektro-L 2

				1792 bits		
Sync Word	Marker	Sub Marker	Times-tamp	Data Block	Filler	CRC 16
CCSDS Standard ASM	Used to differenci-ate each frame (se-quentially from 0-7)	Only used by the last frame (Marker 7)	Times-tamp of the current frame	Blocks of 50 bits	Filler 0xAA (Op-tional)	CRC 16
32 bits	4 bits	4 bits	64 bits	Varies	Varies	16 bits

Table 1: Elektro-L2 GGAK Frame Structure

Figure 1: Elektro-L 2 GGAK - Sync Word

32			35	36			39
Marker				Sub Marker			
0	0	0	0	0	0	0	0

Marker 0

32			35	36			39
Marker				Sub Marker			
0	0	0	1	0	0	0	0

Marker 1

32			35	36			39
Marker				Sub Marker			
0	0	1	0	0	0	0	0

Marker 2

32			35	36			39
Marker				Sub Marker			
0	0	1	1	0	0	0	0

Marker 3

32			35	36			39
Marker				Sub Marker			
0	1	0	0	0	0	0	0

Marker 4

32			35	36			39
Marker				Sub Marker			
0	1	0	1	0	0	0	0

Marker 5

32			35	36			39
Marker				Sub Marker			
0	1	1	0	0	0	0	0

Marker 6

32			35	36			39
Marker				Sub Marker			
0	1	1	1	0	0	0	0

Marker 7 and Sub Marker 0

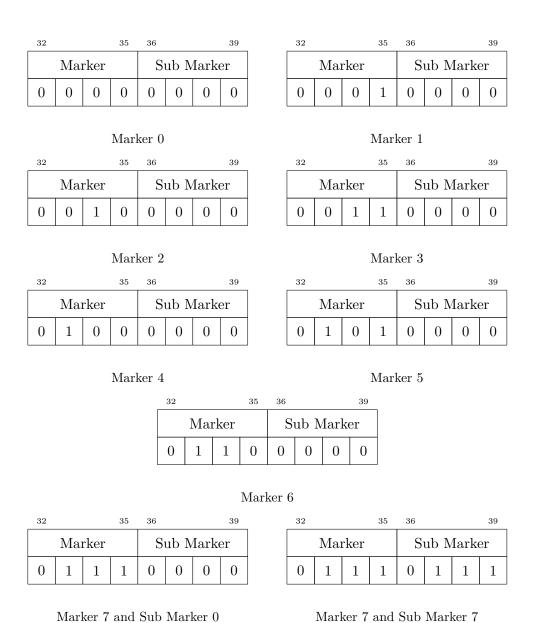| 32			35	36			39
Marker				Sub Marker			
0	1	1	1	0	1	1	1

Marker 7 and Sub Marker 7

Figure 2: Elektro-L 2 GGAK - Marker and Sub Marker