CW data format

CW data is composed of 15 characters witch is the housekeeping data part and 11-character call sign, as shown in Figure 1.

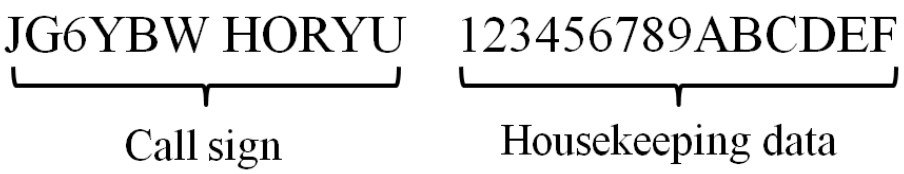

Fig1. CW data format

Housekeeping data

OBC data is composed of last 3 letters. It is separates 11data as shown in Fig.2. Flash of the data is used for normal data storage, send data storage and 300V mission storage. In addition, SW is for access to the FLASH memory switch.

1	2	3	4	5	6	7	8
Vref		BA T Top temp		BAT bottom temp		COM temp	

9	A	B	C	D	E	F
BAT current		BAT Voltage		OBC status		

Fig.2. Housekeeping data format

D			
12	11	10	9
Clock state normal : 1 abnormal : 0	FLASH－Main normal : 1 abnormal : 0	FLASH－Share normal : 1 abnormal : 0	FLASH－300 normal : 1 abnormal : 0

E			
8	7	6	5
SW share normal : 1 abnormal : 0	SW－300 normal : 1 abnormal : 0	debris normal : 1 change(Collision) : 0	Reserve Command Reserve : 1 Unreserve : 0

F			
4	3	2	1
Null	Operation state	Kill SW-Main	Kill SW-COM

	mission : 1 normal : 0	OFF : 1　ON : 0	OFF : 1　ON : 0

Fig.3.OBC status data format

Calibration equation

・Battery

OBC data	Equation
BAT current	I=1.596×[BAT current]－3309 [mA]
BAT Voltage	V = 1.22×[BAT Voltage]+63 [mV]

・Temp

$$Y = M0 + M1X + M2X^2 + M3X^3$$

Y=Temp、X=OBC data

OBC data	M0	M1	M2	M3
BAT Top temp	-18762.6337	20.1087835	-0.00721222547	8.65463839E-07
BAT bottom temp	-76833.1906	79.1616336	-2.7213206E-02	3.12158024E-06