FlexAVR Serial Protocol

Notebook: daveakerman's notebook

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Commands ~<char>

Function	Command	Parameters	Response	Version
Show GPS	~GP	Non Zero = Enable GPS to host	* GPS=xxxx	1
Flight Mode Altitude	~GF	Altitude in metres (max 7999)	*	1
Host Priority Mode	~CH	1 = prioritise host. Times out after 2s	*	1
Set Payload ID	~CP	Payload ID	*	1
Set Field List	~CF	List of field numbers each single sigit 0-9 A-Z	*	1
Reset to Defaults	~CR		*	1
Save Settings	~CS		*	1
Show Version	~CV		VER=V1.01 *	1
Set LoRa Frequency	~LF	Frequency in MHz	*	1
Set LoRa Bandwidth	~LB	Bandwidth 7K8, 10K4, 15K6, 20K8, 33K25, 41K7, 62K5, 125K, 250K, 500K	*	1
Set LoRa Error Coding	~LE	Error Coding 5-8	*	1
Set LoRa Spreading Factor	~LS	Spreading Factor 6-12	*	1
Set LoRa Implicit/Explicit Mode	~LI	Not-Zero = Implicit; 0=Explicit	*	1
Set LoRa Low Rate Optimisation	~LL	Not-Zero = On; 0=Off	*	1

Set LoRa TDM Cycle Time	~LT	Cycle time 0 (off) to 60 seconds	*	1
Set LoRa TDM Slot	~LO	Slot -1 (off), 0 to 59	*	1
Set APRS Callsign	~AP	callsign max 6 chars	*	1
Set APRS Frequency	~AF	134 to 174MHz	*	1
Set APRS SSID	~AS	0 to 14	*	1
Set APRS Path Altitude	~AA	altitude above which wide2-2 is used	*	1
Enable Widw2-2 Mode	~AW	Non zero to enable	*	1
Set APRS interval	~AI	Interval in seconds	*	1
Set random APRS interval	~AR	Random +/- delta in seconds	*	1
Enable APRS pre-emphasis	~AM	Non-zero to enable	*	1
Set APRS telemetry count	~AT	Number of regular packets between telemetry	*	1
Clear SSDV Buffer	~SC		*	1
Append hex to SSDV buffer	~SP	partial packet in hex	SSDV= <length> *	1
Append binary to SSDV buffer	~SB	32-byte partial packet in binary	SSDV= <length> *	1
Get SSDV buffer status	~SS		SSDV= <length> *	1
Set SSDV image count	~SI	<low image count>, <high image count>, <high in m>	*	1

Transmissions <command>=<value>

Command	Parameters	When	Version
GPS	dd/mm/yyyy,hh:mm:ss,lat,lon,alt,sats	Every 1s	1
SSDV	used length of SSDV buffer	After ~SP / SB / SS	1

Field Numbers in Field List (for LoRa not APRS)

ID	Description	Version	Notes
0	Payload ID	1	
1	Sentence Counter	1	
2	UTC hh:mm:ss	1	
3	Latitude	1	
4	Longitude	1	
5	Altitude	1	
6	Satellites	1	
7	Speed	1	
8	Direction	1	
9	Battery Voltage mV	1	
A	Internal Temperature C	1	
B	External Temperature C	1	If external DS18B20 connected
C	Predicted Latitude	1	
D	Predicted Longitude	1	