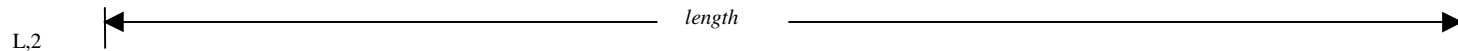


### Sample S2F42

S2F42 =[11800A022A8001000000580102210101010001B6]

Breakdown:

	Rbit 1=from tool	Wbit 1=expect reply	Ebit 1=last block								
length	devid	S2F42	block#	sys bytes	L, 2	binary	HCACK	L,1	CPNAME1	CPACK1	checksum
11	800A	022A	8001	00000058	0102	21	01	0101	00		01B6 ]



- L,2
  - 1. <HCACK>
    - Host Command Parameter Acknowledge Code, 1 byte
    - 0 = Acknowledge, command has been performed
    - 1 = invalid command
    - 2 = not in control mode - cannot perform now
    - 3 = At least parameter is invalid, equipment rejects the command
    - 4 = remote command accepted, will perform later
    - 5 = invalid for chamber type
    - ... etc.
- 2. L,n # of parameters
  - 1. L,2
    - 1. <CPNAME 1> parameter 1 name
    - 2. <CPACK 1> parameter 1 reason
    - 0x01 Parameter name (CPNAME) does not exist
    - 0x02 Illegal value specified for CPVAL
    - 0x03 Illegal format specified for CPVAL . . .
  - n. L,2
    - 1. <CPNAME n> parameter n name
    - 2. <CPACK n> parameter n reason

## Sample Message Exchange

Direct Serial Recording:

```

04 56 00 0A 82 29 80 01 00 03 C5 0C 01 02 41 06 53 45 4C 45 43 54 01 03 01 02 41 03 50 54 4E 41
03 4C 4C 41 01 02 41 04 50 50 49 44 41 10 53 34 53 50 45 2D 43 4C 4F 43 4B 20 20 20 20 20 01 02
41 04 4D 49 44 20 41 10 32 3F 3F 3F 3F 3F 20 20 20 20 20 20 20 20 20 10 3B 06 05 04 11 80 0A
02 2A 80 01 00 03 C5 0C 01 02 21 01 00 01 00 02 31 06 05 04 0A 00 0A 81 01 80 01 00 03 C5 0D 01
E2 06 05 04 1C 80 0A 01 02 80 01 00 03 C5 0D 01 02 41 06 43 2D 35 32 30 30 41 06 45 33 36 20 20
20 04 B9 06 05 04 6C 00 0A 81 03 80 01 00 03 C5 0E 01 18 69 02 0A 29 69 02 0A 2C 69 06 A0 02 06
A0 0A 06 A0 2E 06 A0 69 06 A0 02 06 A0 0A 06 A0
2D 06 A0 69 06 A0 02 06 A0 0A 06 A0 33 06 A0 69
06 A0 02 06 A0 0A...

```

Breakdown:

04  
EOT

```

56 00 0A 82 29 8001 0003C50C
length rbit devid Wbit,S2 F41 ebit,block# system bytes

```

```

0102 4106 53 45 4C 45 43 54
L,2 A,6 S E L E C T

```

```

0103 0102 4103 50 54 4E 4103 4C 4C 41
L,3 L,2 A,3 P T N L,3 L L A

```

```

0102 4104 50 50 49 44 4110 53 34 53 50 45 2D 43 4C 4F 43 4B 20 20 20 20 20
L,2 A,4 P P I D A,16 S 4 S P E - C L O C K <recipe name >

```

```

0102 4104 4D 49 44 20 4110 32 3F 3F 3F 3F 3F 3F 20 20 20 20 20 20 20 20
L,2 A,4 M I D A,16 2 ? ?

```

```

103B 06 05 04
checksum ACK ENQ EOT

```

```

11 80 0A 02 2A 80 01 0003C50C
length rbit devid wbit,S2 F42 ebit,block# system bytes

```

```

0102 2101 00 0100 0231 06 05 04
L,2 binary,1 HCACK L,0 checksum ACK ENQ EOT

```

```

0A 00 0A 81 01 8001 0003C50D 01E2 06 05 04
length rbit devid wbit,S1 F1 ebit,block# system bytes checksum ACK ENQ EOT

1C 80 0A 01 02 8001 0003C50D 0102 4106 43 2D 35 32 30 30 4106 45 33 36 20 20 20
length rbit devid wbit,S1 F2 ebit,block# system bytes L,2 A,6 C - 5 2 0 0 A,6 E 3 6

04B9 06 05 04
checksum ACK ENQ EOT

6C 000A 81 03 8001 0003C50E
length rbit,devid wbit,S1 F3 ebit,block$ system bytes

L,18 I2 I2 I2
0118 69 02 0A 29 69 02 0A 2C 69 06 A0 02 06

```

## Secs-I Data Formats

e.g.: 0xA9 0x02 0x00 0x00 means U2, 0    e.g. 0xA9 0x04 0x00 0x00 0x00 0x01 means U2, 0 1

Data Type	With 1 byte length	With 2 byte length	With 3 byte length
ASCII	41	42	43
Binary	21	22	23
JIS-8	45	46	47
1-byte integer	65	66	67
2-byte integer	69	6A	6B
4-byte integer	71	72	73
8-byte integer	61	62	63
1-byte unsigned	A5	A6	A7
2-byte unsigned	A9	AA	AB
4-byte unsigned U4	B1	B2	B3
8-byte unsigned	A1	A2	A3
4-byte floating point	91	92	93
8-byte floating point	81	82	83
Boolean	25	26	27
List	01	02	03

SEMI format code: Are bits 3 thru 8, expressed in octal, example:

U2 format code = 52 (octal) = 101 010; shift left by two to get bits 1 thru 8 = 101 010 00; regroup for hex = 1010 1000 = A8 for the 'U2' starting at 1 byte length, A9 for U2 with 2 bytes for the length byte, etc.

ASCII format code = 20 (octal) = 010 000 ; shift left 2 = 010 000 00 = 0100 0000 = 40 (hex) ; for ascii adding is different: A1 is 41 for 1 length byte, etc.

Item Format Codes

Binary	Bit	876543Octal	Meaning
000000	00	00	LIST (length in elements)
001000	10	01	Binary
001001	11	01	Boolean
010000	20	02	ASCII [1]
010001	21	02	JIS-8
011000	30	03	8-byte integer (signed) [2]
011001	31	03	1-byte integer (signed)
011010	32	03	2-byte integer (signed) [2]
011100	34	03	4-byte integer (signed) [2]
100000	40	04	8-byte floating point [3]
100100	44	04	4-byte floating point [3]
101000	50	05	8-byte integer (unsigned) [2]
101001	51	05	1-byte integer (unsigned)
101010	52	05	2-byte integer (unsigned) [2]
101100	54	05	4-byte integer (unsigned) [2]

