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| <b>Technical Support Bulletin 2009-02</b> | <b>Profile Termination Codes</b> | <b>September 3, 2009</b> |
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Alert Level: **INFORMATIONAL**

Instrument: MMP

Software Versions: All Versions

Subject: Profile Termination Code Definitions

**Summary:** Detailed descriptions and corresponding firmware versions are provided for the MMP profile termination codes in the engineering file.

**Technical Details:** The MMP engineering file contains codes to describe how each profile ends. These codes are included in TIMETAGS.TXT, a summary file generated by the Unpacker. Codes that are unpacked in human readable format are listed as termination definitions. Codes that are unpacked in machine readable format are listed as numerical codes.

The list of codes and definitions differ in some MMP firmware versions. This Technical Support Bulletin provides a complete list of all profile termination codes, definitions and corresponding MMP firmware releases.

**TIMETAGS.TXT and Profile Termination Codes**

TIMETAGS.TXT is generated by the Unpacker to provide the date/time of sensor starts and stops, date/time of profiler motion starts and stops and a termination condition for each profile. All of this information is contained in the engineering file. The MMP firmware versions listed below use termination codes 0 through 20.

| Rev C Electronics | Rev D Electronics | Rev C Electronics – Pattern Profiling |
|-------------------|-------------------|---------------------------------------|
| 3.02              | 4.03              | 4.20                                  |
| 3.16              | 4.04              | 4.21                                  |
| 3.17              | 4.05              | 4.22                                  |
| 3.18              | 4.06              | 4.23                                  |
| 3.19              | 4.07              | 4.24                                  |
| 3.30              | 4.08              | 4.25                                  |
| 3.31              | 4.09              |                                       |

| MMP Profile Termination Codes |                       |
|-------------------------------|-----------------------|
| Code                          | Definition            |
| 0                             | SMOOTH RUNNING        |
| 1                             | MISSION COMPLETE      |
| 2                             | OPERATOR CTRL C       |
| 3                             | TT8 COMM FAILURE      |
| 4                             | CTD COMM FAILURE      |
| 5                             | ACM COMM FAILURE      |
| 6                             | TIMER EXPIRED         |
| 7                             | MIN BATTERY           |
| 8                             | AVG MOTOR CURRENT     |
| 9                             | MAX MOTOR CURRENT     |
| 10                            | SINGLE PRESSURE       |
| 11                            | AVG PRESSURE          |
| 12                            | AVG TEMPERATURE       |
| 13                            | TOP PRESSURE          |
| 14                            | BOTTOM PRESSURE       |
| 15                            | PRESSURE RATE ZERO    |
| 16                            | STOP NULL             |
| 17                            | FLASH CARD FULL       |
| 18                            | FILE SYSTEM FULL      |
| 19                            | TOO MANY OPEN FILES   |
| 20                            | AANDERRA COMM FAILURE |



The MMP firmware versions listed below use termination codes 0 through 19.

| Rev C Electronics | Rev C Electronics – Patterned Profiling | Rev D Electronics |
|-------------------|---|-------------------|
| 3.10              | 3.20                                    | 4.00              |
| 3.11              | 3.21                                    | 4.01              |
| 3.12              | 3.20                                    | 4.02              |
| 3.13              | 3.22                                    | 4.10              |
| x3.13             |   |                   |
| 3.14              |   |                   |
| x3.14             |   |                   |
| y3.14             |   |                   |
| 3.15              |   |                   |
| a3.15             |   |                   |
| b3.15             |   |                   |
| d3.15             |   |                   |

| MMP Profile Termination Codes |                     |
|-------------------------------|---------------------|
| Code                          | Definition          |
| 0                             | SMOOTH RUNNING      |
| 1                             | MISSION COMPLETE    |
| 2                             | OPERATOR CTRL C     |
| 3                             | TT8 COMM FAILURE    |
| 4                             | CTD COMM FAILURE    |
| 5                             | ACM COMM FAILURE    |
| 6                             | TIMER EXPIRED       |
| 7                             | MIN BATTERY         |
| 8                             | AVG MOTOR CURRENT   |
| 9                             | MAX MOTOR CURRENT   |
| 10                            | SINGLE PRESSURE     |
| 11                            | AVG PRESSURE        |
| 12                            | AVG TEMPERATURE     |
| 13                            | TOP PRESSURE        |
| 14                            | BOTTOM PRESSURE     |
| 15                            | PRESSURE RATE ZERO  |
| 16                            | STOP NULL           |
| 17                            | FLASH CARD FULL     |
| 18                            | FILE SYSTEM FULL    |
| 19                            | TOO MANY OPEN FILES |

**Firmware 3.03 and 3.04 Profile Termination Codes**

MMP firmware versions 3.03 and 3.04 contain a profile termination code defined as ‘real-time telemetry’. The profile termination codes for these two firmware versions differ slightly from other MMP firmware versions as shown below.

**Note** – Real-time telemetry was a termination code only in these two releases. In other MMP firmware releases, telemetry and profiling are handled as two separate actions and therefore telemetry does not terminate a profile.

|                          |
|--------------------------|
| <b>Rev C Electronics</b> |
| 3.03                     |
| 3.04                     |

| <b>MMP Profile Termination Codes</b> |                     |
|--------------------------------------|---------------------|
| <b>Code</b>                          | <b>Definition</b>   |
| 0                                    | SMOOTH RUNNING      |
| 1                                    | MISSION COMPLETE    |
| 2                                    | OPERATOR CTRL C     |
| 3                                    | TT8 COMM FAILURE    |
| 4                                    | CTD COMM FAILURE    |
| 5                                    | ACM COMM FAILURE    |
| 6                                    | TIMER EXPIRED       |
| 7                                    | MIN BATTERY         |
| 8                                    | AVG MOTOR CURRENT   |
| 9                                    | MAX MOTOR CURRENT   |
| 10                                   | SINGLE PRESSURE     |
| 11                                   | AVG PRESSURE        |
| 12                                   | AVG TEMPERATURE     |
| 13                                   | TOP PRESSURE        |
| 14                                   | BOTTOM PRESSURE     |
| 15                                   | PRESSURE RATE ZERO  |
| 16                                   | REAL TIME TELEMETRY |
| 17                                   | STOP NULL           |
| 18                                   | FLASH CARD FULL     |
| 19                                   | FILE SYSTEM FULL    |
| 20                                   | TOO MANY OPEN FILES |