

X WORD 1

Tape Number:

Bits 9 through 16. Binary integer.

Unused Bits:

Bits 1 through 8. Undefined

X WORD 2

Record Number:

Binary integer (16-bit).

X WORD 3

Record Length:

Binary integer (16-bit). Number of words in the record. Set to 228<sub>10</sub>

• WORD 4

✓ Spacecraft Number:

Bits 1 through 8. Binary representation of spacecraft number (refer to 820-13, module OPS 6-6).

✓ Source Station:

Bits 9 through 16. Binary representation of DSS station number.

• WORD 5,6

✓ Predict Set ID:

Four ASCII characters.

WORD 7

Unused. Undefined

• WORDS 8,9

✓ Predict Base Frequency:

32-bit integer Hz. LSB is bit 16 of word 9.

WORDS 10 through 28

Unused. Udefined

• WORDS 29,30

✓ Day of Year

Bits 1 through 9 of word 29. Binary integer number.

✓ Time of Day

A 17-bit binary number representing the number of seconds since the start of the day. MSB is word 29, bit 16; LSB is word 30, bit 16.

Unused Bits

(U.T.)

Word 29, bits 10 through 15. Undefined

• WORDS 31,32,33

✓ POCA Frequency (displaced)

The contents of the POCA frequency registers, less the predict base frequency (see words 8-9). Formatted as a 48-bit binary number with the LSB =  $2^{-20}$  Hz (bit 16 of word 33). Value may be positive or negative (2's complement format).

• WORDS 34,35,36

POCA Ramp Rate

The POCA ramp rate in Hertz/second. Formatted as a 48-bit binary number, with the LSB (word 36, bit 16) equal to  $2^{-20}$  Hz/second.

WORD 37

Frequency Monitor Subassembly (FMS) Status

Bit 1: 0= FMS ON, 1= OFF

Bits 3,4: Test signal selection  
01= Input #1 (POCA)  
10= Input #2  
11= Internal Signal  
00= Spare (not used)

WORD 37 (cont.)

- Bit 7: Counter #1 signal selection  
1= Input #1 (POCA), 0= Test signal
- Bit 8: Counter #2 signal selection  
1= Input #2, 0= Test signal

Programmed Oscillator Control Assy (POCA) Status

- Bit 9: 1= Manual Control, 0= Computer Control\*
- Bit 10: 1= Ready\*, 0= Not Ready
- Bit 11: 1= Synth. Power On\*, 0= Off
- Bit 12: 1= Synth. In Lock\*, 0= Out-of lock
- Bit 13: 1= Limit Enable On, 0= Off\*
- Bit 14: 1= Track On\*, 0= Off
- Bit 15: 1= Acquisition On, 0= Off\*
- Bit 16: 1= Sweep On\*, 0= Off

\* Indicates normal state for Radio Science.

Unused Bits:

Bits 2,5,6. Undefined.

WORDS 38,39,40

Frequency Monitor #1 Data

Cumulative phase in cycles. Formatted as a 48-bit binary number, with the LSB (word 40, bit 16) equal to  $2^{-8}$  cycles.

WORDS 41,42,43

Frequency Monitor #2 Data.

Cumulative phase in cycles. Formatted as a 48-bit binary number, with the LSB (word 43, bit 16) equal to  $2^{-8}$  cycles.

WORDS 44,45,46

Predict Frequency (displaced)

The actual predict frequency, less the predict base frequency (see words 8-9). Formatted as a 48-bit binary number, with the LSB (bit 16 of word 46) equal to  $2^{-20}$  Hz. Value may be positive or negative (2's complement format).

WORDS 47,48

Unused. Udefined

WORDS 49 through 68

Same format as words 29 through 48, for second  $n + 1$ .

WORDS 69 through 88

Same format as words 29 through 48, for second  $n + 2$ .

WORDS 89 through 108

Same format as words 29 through 48, for second  $n + 3$ .

WORDS 109 through 128

Same format as words 29 through 48, for second  $n + 4$ .

WORDS 129 through 148

Same format as words 29 through 48, for second  $n + 5$ .

WORDS 149 through 168

Same format as words 29 through 48, for second  $n + 6$ .

WORDS 169 through 188

Same format as words 29 through 48, for second  $n + 7$ .

WORDS 189 through 208

Same format as words 29 through 48, for second  $n + 8$ .

WORDS 209 through 228

Same format as words 29 through 48 for second  $n + 9$ .