

P20 - Opt 2 (PTC/Orb rate)

- 1 F 04 06 V37E 20E
R1 00024 TRACKING OPTION
R2 00000
Load 2 in R2
PRO
- 2 F 06 78 AXIS YAW, AXIS PITCH, OMICRON (.01°)
Load values (OMICRON ignored)
PRO
- 3 F 06 79 RATE, DEADBAND, Blank (.0001°/sec, .01°)
Load desired values
PRO
- 4 F 06 34 START TIME (hrs,min,.01 sec)
Load desired GET
(all 0's for present time)
PRO

5 Maneuver starts at requested GET

Selection of the following programs will
not stop rotation:

P21, P22, P24, P27, P29,
P30
P52, P54
P72-P75

DATE 12/8/71

PTC/ORB RATE

PASSIVE THERMAL CONTROL (G&N)

RHC - Locked
 FDAI SCALE - 5/1
 RCS DAP - Activated

1 V48E (Select 0.5° DB)
 V37E OOE
 V49E

2 F 06 22 Load PTC Attitude R - Present
 P - 90° (TLC) or 270°
 Y - 0° (TEC)
 PRO

3 F 50 18 BMAG MODE (3) - RATE 2
 SC CONT - CMC
 CMC MODE - AUTO
 PRO

4 06 18 AUTO MANEUVER
 F 50 18

5 Damp vehicle rates:
 ENTR
 Disable all jets on two adjacent quads

Wait 20 minutes for rates to damp
 AUTO RCS SEL (2)-MNA or MNB as follows:

+ROLL -ROLL

A1,C1 A2,C2

or B1,D1 or B2,D2

Remaining AUTO RCS SEL (14) - OFF
 MAN ATT (ROLL) - RATE CMD

6 Perform P20, opt-2 (p. G/8-1)
 Use 0,0,0 in N78
 Use .42/sec and .5° in N79
 Prior to final PRO: cycle CMC
 MODE - FREE/AUTO
 After one jet firing:
 MAN ATT (ROLL) - ACCEL CMD

7

Disable RCS and Term. P20
AUTO RCS SEL (16) - OFF
ROT CONTR PWR DIR (2) - OFF (verify)
V56E

To exit G&N PTC to new att:

1. CMC MODE - FREE
2. AUTO RCS SELECT (12) - MNA/B
3. Verify P00
4. MAN ATT (3) - RATE CMD
5. CMC MODE - AUTO
(PTC rates will stop)
6. V49E to new att.

PASSIVE THERMAL CONTROL (SCS)

SCS - operating
S/C CONT - SCS
ROT CONTR PWR NORMAL #2 - AC/DC

1

MAN ATT (3) - RATE CMD
LIMIT CYCLE - on(up)
DEADBAND - MIN
RATE - LOW
BMAG MODE (3) - ATT 1/RATE 2

2

AUTO RCS SEL -
Configure for single jet operation
(Wait 20 min to allow rates to damp)

3

FDAI SCALE - 5/1
MAN ATT (ROLL) - ACCEL CMD or MIN IMP
DEADBAND - MAX
RATE - HIGH

4

Enable jet couple in roll
Initiate Desired Roll Rate

5

AUTO RCS SEL (16) - OFF
ROT CONTR PWR DIR (2) - OFF (verify)
BMAG MODE (3) - RATE 2

DATE 3/15/72

TERMINATE PTC

AUTO RCS SEL (12) - MNA/B
Null Rates

PITCH ORBIT RATE MANEUVER (G&N)

Note: P20, opt 1 or 5 (p. G/3-1) may
also be used to achieve orb rate.

1. Establish initial attitude
2. Perform P20 Opt. 2 (p. G/8-1)
3. To terminate: V56E

PITCH ORBIT RATE MANEUVER (SCS)

ORDEAL - initialized (p G/7-5)
SCS - Operating

- 1 FDAI SCALE - 5/1
- 2 Maneuver to desired LCL Vert
Att (Roll = 7.25° or 187.25°)
- 3 BMAG MODE (3) - ATT 1/ RATE 2
DEADBAND - MAX
RATE - LOW
MAN ATT (ROLL, YAW) - RATE CMD
MAN ATT (PITCH) - MIN IMP
- 4 Establish desired Pitch Rate
using MIN IMP & ORDEAL FDAI
- 5 To terminate:
MAN ATT (PITCH) - RATE CMD

DATE 12/8/71

With active P20 opt. 2, the following MODES of suspension or termination have the effect shown

MODE	DB Centered	DB Source	Rates Nullled
V56E		DAP (R03)	X
V37E00E		DAP (R03)	X
SC CONT-SCS	X	SCS (Return to CMC re- establishes N79 db)	X (Return to CMC re- establishes N79 rate)
CMC MODE-HOLD	Not proper HOLD func. RHC deflection rec- ommended for HOLD	N79	(Jet firings pos- sible)
CMC MODE- FREE/AUTO	X	N79	
RHC deflection	X	N79	X
V46E	X	N79	
V48E, PRO		DAP (R03)	(Jet firings pos- sible)