

SWUIS-A VULCANOIDS FLIGHT OPS CHECKLIST BOOK
V1.0/01 SEP 2001

SWUIS-A/VULCANOIDS MISSION PREP CHECKLIST

PAYLOAD SPECIALIST CHECKLIST:

**HELMET, HARNESS, G-SUIT CKS
PERSONAL GEAR IN FLIGHT SUIT
NEW A/C FAM
EGRESS REFRESHER (IF REQD)
PRE-FLIGHT SWUIS EQUIPMENT RE-FAM
PRE-FLIGHT A/C STOWAGE
GPS AND MISSION TARGETING PLAN
DETAILED FLIGHT PLANNING
WX BRIEF
PILOT BRIEF**

PAYLOAD ENGINEER CHECKLIST:

**DONUTS
SWUIS-A INTEGRATION & E-E TEST
GPS RECEIVER/TITLER SETUP
CAMCDR SETUP
VR STATUS
BOGEN MOUNT AXES β ALIGNMENT
INCLINOMETER CAL & LEVEL
LIGHT SHIELD FAB & INSTALLATION
DOCUMENTATION PHOTOS (AS REQD)**

SWUIS-A VULCANOIDS INSTALLATION

1. MECHANICAL

**MOUNT XYBION ON BOGAN PLATFORM
INSTALL FLIGHT FOREOPTIC/LENS
MOUNT LIGHT SHIELD ON XYBION LENS
MOUNT INCLINOMETER ON CAMERA
MOUNT PIB
MOUNT LCD MONITOR
MOUNT GPS
MOUNT CAMCDR**

2. ELECTRICAL INTERCONNECT

**PIB POWER
XYBION TO PIB (power/data)
PIB TO LCD MON, GPS, CAMCDR (power)
PIB TO GPS (video)
GPS TO CAMDCR (video)
CAMCDR TO LCD MON (video)
GPS ANT**

3. ELECTRICAL/MECHANICAL TEST

**MOUNT AND HARNESS CLEARANCES
MOUNT AND HARNESS INTEGRITY
XYBION IMAGING
E-E TAPE RECORDING**

4. STOWAGE/MISC PREP

**INSTALL VIDEO TAPES (2)
REPLACE INCLINOMETER BATTERY
INCLINOMETER CAL LEVEL
MEASURE XYB OFFSET FROM AZ=90 (i.e., β)
PS & MISC STOWAGE
CANOPY CLEANING**

SWUIS-A/VULCANOIDS FLIGHT EQUIPMENT STOWAGE LIST

Group A: SWUIS EQUIP

- Xybion Bogan Mount**
- Xybion**
- PIB + Cables (2)**
- Digital Inclinometer**
- LCD Mon + Cables (2)**
- Lens**
- Light Shield**
- Camcorder + Cables**
- GPS + Cables/Antenna**

Group B: PS GEAR

- C/L**
- Grey Tape (Secure)**
- Lap Board (Tethered)**
- Pens (Secure, No Caps)**
- Red Flashlight (Tethered)**

Group C: MISC

- Laptop**
- Lapboard**
- Light Curtain (Secure)**
- Stowage Foam (Secure)**
- Tool Kit (Tethered)**
- Voice Recorder w/Tape (Secure)**
- Video Tapes (2)**

PS EJECT/EGRESS REMINDERS

EGRESS:

**MAN SEAT OVERRIDE HANDLE (R)– ACTUATE
LAP BELT– DISCONNECT
SEAT KITS (L,R)– DISCONNECT
HARNESS(L,R)– DISCONNECT
G-SUIT HOSE– PULL
JET CANOPY? (IF REQD: FACEMASK DN)
STAND UP (O2 WILL DISCONNECT)
EGRESS**

EJECT:

**CLEAR EQUIP
VISOR DOWN
POSITION BODY (THIGHS ON SEAT, HEAD BACK HARD)
SKINNY!
EJECT**

ON CHUTE:

**CK RISERS, CANOPY; ADJUST AS REQ'D
VISOR UP
MASK– AWAY & THROW (DETACH REGULATOR!)
SEAT KIT– DEPLOY
POSITION FEET
STEER INTO WIND TO SLOW (IF REQD)

IF OVER-WATER: PULL LIFE VEST INFLATION (2)
IF LOW: DEPLOY SEAT KIT!**

SWUIS-A /PAYLOAD SPECIALIST SUIT & INGRESS CKS

SUIT PREP:

HELMET: COMM/O2 CKS, THEN KEEP WARM

SUIT STOWAGE

G-SUIT: WAIST, L/R LEG– SNAPS/ZIP (+ THIGH ZIPS)

HARNESS: ADJ FITTING; THEN SYNCH LATCHES (3)

IF OVER-WATER: LIFE PRESERVER FITTING, 1 LATCH

A/C INGRESS:

SEAT CKS: 2 PINS, EJECTION ARM– SAFE, O2– FULL

L LEG: BOOT & KNEE HARNESSING, NO TWISTS

R LEG: BOOT & KNEE HARNESSING, NO TWISTS

CK: STRAPS FLAT UNDER L,R LEGS

SEAT KIT: L,R D-RINGS ENGAGE

LAP BELT– FASTEN & TIGHTEN

CANOPY HARNESSES (2): ENGAGE

G-SUIT: CONNECT

O2 REGULATOR: MOUNT, CONNECT O2

CONNECT COMM (CAMCDR, A/C)

VTR ON– BOTH

E–E TEST & FOCUS

CK: F-STOP FULL OPEN (CCW)

CK: STOWAGE SECURE

HELMET– ON

GLOVES– ON

SEAT– DN

VISOR– DN

SEAT PIN– REMOVE, STOW

CANOPY PIN– REMOVE, STOW

SWUIS-A F-18 SETUP & C/O PROC (p 1 of 2)

1. CABIN PREP

INSTALL DI
DI- ON
RED FLASHLIGHT- ON
INTERIOR LIGHTS- DIM

2. START RECORDER & TIME CODE

VTR PWR- ON
VTR TIME CODE- ENA
VTR- RCD

3. SWUIS PREP, THEN TURN ON

CK: FOCUS- INFTY
CK: F/STOP- OPEN
CK: PWR- OFF
AUTO-AUTO-AUTO (3)
MON SEL- HV
INTGR- OFF
IMG- OFF
PWR- ON
LCD- ON
CAMCDR- ON
GPS- ON
CAMCDR- RCD

SWUIS-A F-18 SETUP & C/O PROC (p 2 of 2)

4. VERIFY E-E OPS

VERIFY LCD IMG

ADJUST GPS TEXT TO TOP OF LCD IMG

CK/OPT: FOCUS

CK: PIB VOLTAGES:

HV MON: 4.08 ± 0.3 V (~ 4.6 V DAYTIME)

IG: 8.92 ± 0.2 V

BLA: 2.45 ± 0.2 V

CVG: 2.06 ± 0.1 V

MITIGATE CABIN & LCD LIGHT LEAKS

CK & MITIGATE CANOPY ICING

5. SAFE SWUIS (OPTIONAL)

GPS- OFF

CAMCDR- OFF

PIB PWR- OFF

VTR- OFF

SWUIS-A F-18 VULCANOID SCIENCE RUN (p 1 of 2)

1. T-10 MIN: SYSTEM PREP

VERIFY: S&L FLIGHT AT 49K FEET

VERIFY: DI- ON

XYBION EL- 12.5 DEG (initial)

COCKPIT LIGHTS- OFF

PIB MON SELECT- IG

VERIFY: VTR RECORDING w/TIME CODE (RCD)

VERIFY: CAMCDR RECORDING

LCD MON: CK GPS TIME/POS DISPLAY

CK: CANOPY ICE?

CK: F/STOP- FULL OPEN (CCW)

CK: FOCUS- OPTIMAL

2. T-2 MIN: SCIENCE RUN PREP

PLT: A/C STROBE & POSITION LIGHTS- OFF

PLT: LOG TIME, POS, HDG, ALT EVERY 2 MIN

CK: VTR- RECORDING

CK: VTR TIME CODE- ON

CK: CAMCDR- RECORDING

SWUIS-A F-18 VULCANOID SCIENCE RUN (p 2 of 2)

3. T-0 MIN: TAKE VULCANOID DATA

PLT: FLY HDG- 340 DEG TRUE
XYBION EL- 12.5, 7.5, 2.5 DEG (1 MIN EACH)
PLT: FLY HDG- 345 DEG TRUE
XYBION EL- 2.5, 7.5, 12.5 DEG (1 MIN EACH)
PLT: FLY HDG- 350 DEG TRUE
XYBION EL- 12.5, 7.5, 2.5 DEG (1 MIN EACH)

4. SHUT DOWN

PIB- AUTO-AUTO-AUTO (3)
VTR- OFF
CAMCDR- OFF
GPS- OFF
LCD MON- OFF
PIB cb- OFF
A/C & COCKPIT LIGHTS- ON
DI- OFF
XYBION- HORIZONTAL
STOW DI
STOW MISC EQUIPMENT
FINAL LOG ENTRIES (VOICE, WRITTEN)

**F-18 SWUIS-A VULCANOID RUN
SCIENCE FLIGHT PLAN**

CLIMB TO 49K FEET:

CREW SYS RE-FAM (O2, COMM, SEAT)

S&L ON PRE-RUN HOLD:

**COCKPIT LIGHTS– OFF
MITIGATE LIGHT LEAKS, ICE (IF REQD)
ACQUIRE RANDOM STAR FIELD
CK FOCUS, F/STOP
CK GAIN OPTIMIZATION
CK VOLTAGES
CK VTR– RECORDING
CK VTR TIME CODE– ON
CK CAMCDR– RECORDING**

TAKE VULCANOID DATA:

**ACQ HDG (340, 345, 350 DEG TRUE)
XYBION EL SWEEP (12.5, 7.5, 2.5 DEG)
RUN THROUGH T+15 MINUTES
A/C & COCKPIT LIGHTS– UP**

SHUTDOWN/STOW

F-18 SWUIS-A RUN SCIENCE LOG

DATE & RUN NUMBER:

A/C & PILOT:

SWUIS OPERATOR:

FLT ALT:

HDG XYBION EL LOCAL TIME NOTES

[illegible]