19870930I1-RADAR

E.5 Radar/Airborne Doppler Radar Scientist (On-board)

The on-board Radar Scientist (RS) is responsible for data collection from all radar systems on his/her assigned aircraft. Detailed operational procedures and checklists are contained in the operator's manual supplied to each operator. General supplementary procedures follow. (Check off and initial.)

E.5.1 Preflight

___ 1. Determine the status of equipment and report results to the on-board Lead Project Scientist (LPS).

___ 2. Confirm mission and pattern selection from the on-board LPS.

___ 3. Select the operational mode for radar system(s) after consultation with the HRD/RS and the on-board LPS.

___ 4. Complete the appropriate preflight calibrations and checklists as specified in the radar operator's manual.

E.5.2 In-Flight

___ 1. Operate the system(s) as specified in the operator's manual and as directed by the HRD/RS unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO/Flight Director or Aircraft Commander.

E.5.3 Postflight

___ 1. Complete the summary checklists and all other appropriate checklists and forms.

___ 2. Brief the on-board LPS on equipment status and turn in completed forms to the LPS.

___ 3. Hand-carry all radar tapes and arrange delivery as follows:

a. Outside of Miami - to the HRD operations center (FGOC).
b. In Miami - to MGOC or to AOML/HRD. [Note: all data removed from the aircraft by HRD personnel should be cleared with the OAO/Flight Director.]

___ 4. Debrief at the appropriate operations center (FGOC or MGOC).

___ 5. Determine the status of future missions and notify the appropriate operations center (FGOC or MGOC) as to where you can be contacted.

30 Sept 87

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# Radar Scientist Checklist

Flight ID 970930

Aircraft # 43

Operators Wiggert

Radar Tech ~~Wiggert~~ Terry Schricker

Number of digital magnetic tapes on-board ✓

Number of tape labels on-board ✓

Component systems up and checked:

RDSC ✓ DSC1 ✓

Computer ✓ DSC2 ✓

DMTR1 ✓ DMTR2 ✓

LF ✓ R/T# 101M

TA ✓ R/T# 201

Time correction between radar time and digital time +2 sec

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## Radar Postflight Summary

Number of digital tapes used DMTR 1 _____

DMTR 2 _____

Significant recorder downtime:

DMTR 1 _____ Radar LF _____

DMTR 2 _____ Radar TA _____

Other problems:

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# HRD RADAR TAPE LOG

FLIGHT 890930F1 AIRCRAFT 43 OPERATOR Wiggett SHEET ___ OF ___

| Tape # | Time On | Time Off | Source Radar TA | Source Radar LF | Comments |
|---|---|---|---|---|---|
| D1T1 | 1834 | 1900 | ✓ | ✓ | |
| D2T1 | 1900 | 1926 | ✓ | ✓ | |
| D1T2 | 1926 | ~1950 | ✓ | ✓ | |
| D2T2 | ~1950 | 2016 | ✓ | ✓ | |
| D1T3 | 2016 | 2041 | ✓ | ✓ | |
| D2T3 | 2041 | 2059 | ✓ | ✓ | |
| ~~D1T4~~ | | | | | |
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# HRD RADAR LOG

OPERATOR_____

SHEET____ OF ____

RADAR DOWN-TIME LOG

| ITEM | TIME DOWN | TIME UP | PROBLEM |
|---|---|---|---|
| | | | |

ITEM LIST: VTR, DMTR1, DMTR2, COMP, ROSC, LF, NO, TA, DSC1, DSC2

## E.5 Radar/Airborne Doppler Radar Scientist (On-board)

The on-board Radar Scientist (RS) is responsible for data collection from all radar systems on his/her assigned aircraft. Detailed operational procedures and checklists are contained in the operator's manual supplied to each operator. General supplementary procedures follow. (Check off and initial.)

### E.5.1 Preflight

1. Determine the status of equipment and report results to the on-board Lead Project Scientist (LPS).
2. Confirm mission and pattern selection from the on-board LPS.
3. Select the operational mode for radar system(s) after consultation with the HRD/RS and the on-board LPS.
4. Complete the appropriate preflight calibrations and checklists as specified in the radar operator's manual.

### E.5.2 In-Flight

1. Operate the system(s) as specified in the operator's manual and as directed by the HRD/RS unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO/Flight Director or Aircraft Commander.

### E.5.3 Postflight

1. Complete the summary checklists and all other appropriate checklists and forms.
2. Brief the on-board LPS on equipment status and turn in completed forms to the LPS.
3. Hand-carry all radar tapes and arrange delivery as follows:
   a. Outside of Miami - to the HRD operations center (FGOC).
   b. In Miami - to MGOC or to AOML/HRD. [Note: all data removed from the aircraft by HRD personnel should be cleared with the OAO/Flight Director.]
4. Debrief at the appropriate operations center (FGOC or MGOC).
5. Determine the status of future missions and notify the appropriate operations center (FGOC or MGOC) as to where you can be contacted.

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## Radar Scientist Checklist

Flight ID 870930H1

Aircraft # 43

Operators M. Black - ~~Doppler~~

Radar Tech T. Schricker

Number of digital magnetic tapes on-board 2 boxes * 10

Number of tape labels on-board mucho

Component systems up and checked:

RDSC ✓ DSC1 ✓

Computer ✓ DSC2 ✓

DMTR1 ✓ DMTR2 ✓

LF ✓ R/T# 101 m

TA ✓ R/T# 201

Time correction between radar time and digital time +2 sec

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## Radar Postflight Summary

Number of digital tapes used ~~DMTR 1~~ 3 doppler

DMTR 2 ✗

Significant recorder downtime:

DMTR 1 _____ Radar LF _____

DMTR 2 _____ Radar TA _____

Other problems:

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# HRD DOPPLER RADAR TAPE LOG

SEP 30 1987

FLIGHT 870930H AIRCRAFT 43 OPERATOR M. Black SHEET 1 OF 1

| TAPE NO. | TIME ON | TIME OFF | SOURCE* V | SOURCE* H | SOURCE* S | COMMENTS**(#pulses,scan rate, range) |
|---|---|---|---|---|---|---|
| 1 | 190417 | 193905 | | | ✓ | Tail rotating once per 9 sec<br>191640 - no Tail display<br>192400 - OK |
| 2 | 194135 | 203212 | ✓ | | ✓ | 201135 - sector scan 315°-45° |
| 3 | 203525 | | ✓ | | ✓ | Sector scan - Continuous near end |
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*Vertical, Horizontal, or Full Sweep Scan

** # of pulses averaged (32,64,128,256); scan rate(Min,Max); range resolution(150m, 300m)

# HRD RADAR LOG

OPERATOR_____

SHEET____ OF ____

## RADAR DOWN-TIME LOG

| ITEM | TIME DOWN | TIME UP | PROBLEM |
|---|---|---|---|
| | | | |

ITEM LIST: VTR, DMTR1, DMTR2, COMP, ROSC, LF, NO, TA, DSC1, DSC2