



Flying Operations

H-1 HELICOPTER CREW BRIEFING GUIDE/CHECKLIST

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AIRCREW BRIEFINGS

GENERAL AIRCREW BRIEFING

Use this briefing for most operational and training missions. Use the Aircrew Briefings, Specialized Briefings or Checklists if applicable. Brief only those items applicable to your profile.

1. Roll Call

2. Risk Assessment

3. Briefing Classification

4. Mission

- 4.1. Primary and alternate
- 4.2. Sequence of events
- 4.3. Passengers
- 4.4. Special requirements

5. Flight Planning

- 5.1. Weather (takeoff, enroute, destination)
- 5.2. IMC avoidance
- 5.3. Aircraft number, call sign
- 5.4. Aircraft load/configuration
- 5.5. Fuel load, bingo fuel
- 5.6. Weight and balance
- 5.7. Performance data/told
- 5.8. Time hack, station/start/takeoff times, duration
- 5.9. NOTAMs, FCIF

6. Hazards To Flight

7. Crew Duties (pilot flying, pilot not flying, flight engineer, other crew members)

- 7.1. Changing control of aircraft
- 7.2. Emergencies (critical/non-critical, takeoff, enroute, landing)
- 7.3. Crash landing/ditching
- 7.4. Inadvertent IMC
- 7.5. Scanning
- 7.6. Anti-hijacking procedures
- 7.7. Stopovers

8. Equipment

- 8.1. Flight publications/maps
- 8.2. Emergency/survival equipment
- 8.3. Mission requirements (headsets, tie downs, lights, etc.)
- 8.4. Personal equipment (ID tags, helmet/ear protection, vest, flashlight, checklists, survival equipment, jewelry/scarves removed and beepers secured)

9. Applicable Specialized Briefing(s)

MISSION AIRCREW BRIEFING

Use this briefing when flying tactical, low-level formation, or known contingency missions. Brief only those items applicable to your profile.

1. Roll Call

2. Risk Assessment

3. Briefing Classification

4. Situation/Intelligence

5. Mission

- 5.1. Primary and alternate
- 5.2. Sequence of events
- 5.3. Passengers
- 5.4. Special requirements

6. Flight Planning

- 6.1. Weather (takeoff, enroute, destination)
- 6.2. Aircraft numbers, call signs, positions (lead and designated alternate), lead changes
- 6.3. Aircraft/load configuration
- 6.4. Fuel load, mission capable fuel, bingo fuel
- 6.5. Weight and balance
- 6.6. Performance data/told
 - 6.6.1. Mini TOLD
 - 6.6.2. Confirmation if 10% or less
- 6.7. Time hack, station/start/takeoff times, duration
- 6.8. NOTAMs, FCIF, deconflict and post route

7. Predeparture

- 7.1. Parking plan
- 7.2. Communication check-in
- 7.3. Contingencies (aborts, delays)

8. Departure

- 8.1. Taxi and line-up procedures
- 8.2. Lights/transponder configuration
- 8.3. Type takeoff
 - 8.3.1. Wing/delayed
 - 8.3.2. Airspeed/rate of climb/altitude
 - 8.3.3. Power check
- 8.4. Join up

9. Enroute

- 9.1. Route (way points, initial point, objective point)
 - 9.1.1. Type formation
 - 9.1.2. Altitude/airspeed/MSA
 - 9.1.3. Fuel management
- 9.2. Communications plan
- 9.3. Lost visual and rejoin procedures
- 9.4. Evasive tactics/rejoin
- 9.5. Contingencies (PLs, aborts, lost, late/early, lost communications)

10. Objective

- 10.1. TOT
- 10.2. Communication/authentication
- 10.3. Deceleration points (altitude/airspeed)
- 10.4. Approach and landing
 - 10.4.1. Type formation
 - 10.4.2. Landing area/site eval/AIE

- 10.4.3. Go-around procedures
- 10.5. Departure
- 10.6. Contingencies (alternate LZ, improper authentication)

11. Termination

- 11.1. Egress/route of flight
- 11.2. Recovery/taxi and parking plan

12. Hazards To Flight (W_x, Obstacles, Threats)

13. Crew Duties (pilot flying, pilot not flying, flight engineer, other crew members)

- 13.1. Changing control of aircraft
- 13.2. Mission execution
- 13.3. Emergencies (critical/non-critical, takeoff, enroute, landing)
- 13.4. Crash landing/ditching
- 13.5. IMC avoidance/inadvertent IMC
- 13.6. Scanning
- 13.7. Anti-hijacking procedures
- 13.8. Stopovers

14. Equipment

- 14.1. Flight publications/maps/chum
- 14.2. Emergency/survival equipment
- 14.3. Special mission requirements (headsets, tie downs, lights, etc.)
- 14.4. Personal equipment (ID tags, helmet/ear protection, vest, flashlight, checklists, survival equipment, weapons jewelry/scarves beepers removed)

15. Applicable Specialized Briefing(s)

NVG AIRCREW BRIEFING

Use this briefing when flying an NVG mission or training flight. Brief only those items applicable to your profile.

1. Roll Call

2. Risk Assessment

3. Briefing Classification

4. Situation/Intelligence

5. Mission

- 5.1. Primary and alternate
- 5.2. Sequence of events
- 5.3. Passengers
- 5.4. Special requirements

6. Flight Planning

- 6.1. Weather
 - 6.1.1. Sunrise, sunset (as applicable)
 - 6.1.2. Moon rise, moon set, angle and illumination
 - 6.1.3. Cloud cover
 - 6.1.4. Winds
- 6.2. Aircraft number, call sign
- 6.3. Aircraft/load configuration
- 6.4. Fuel load, mission capable fuel, bingo fuel
- 6.5. Weight and balance
- 6.6. Performance data/TOLD
 - 6.6.1. Mini TOLD

- 6.6.2. Confirmation if 10% or less
- 6.7. Time hack, station/start/takeoff times, duration
- 6.8. NOTAMs, FCIF, deconflict and post route

7. Departure

- 7.1. Cabin security
- 7.2. Donning goggles
- 7.3. Contingencies (aborts, delays)

8. Navigation Route

- 8.1. Way points, initial point, objective
- 8.2. Altitude / airspeed / MSA
- 8.3. IMC avoidance
- 8.4. Fuel management
- 8.5. Area(s) of operations
 - 8.5.1. Landing area/site eval/AIE
 - 8.5.2. LZ lighting
- 8.6. Contingencies (PLs, lost, alternate LZ, lost comm)

9. Termination

- 9.1. Egress/route of flight
- 9.2. Removing goggles

10. Hazards To Flight

11. Crew Duties (pilot flying, pilot not flying, flight engineer, other crew members)

- 11.1. Changing control of aircraft
- 11.2. Emergencies (critical/non-critical, takeoff, enroute, landing)
 - 11.2.1. Aircraft malfunctions
 - 11.2.2. Goggle malfunctions
 - 11.2.3. Inadvertent IMC

- 11.3. Crash landing/ditching
- 11.4. Scanning
 - 11.4.1. Enroute
 - 11.4.2. Approaches
 - 11.4.3. LZ operations
- 11.5. Anti-hijacking procedures
- 11.6. Stopovers

12. Equipment

- 12.1. Preflighted goggles/spare batteries
- 12.2. Personal lights
 - 12.2.1. Flashlight or equivalent
 - 12.2.2. Finger/lip light
 - 12.2.3. Chem sticks
- 12.3. Maps and Nav logs
- 12.4. Tape
- 12.5. Gunner's belt(s)
- 12.6. IR filter for searchlight
- 12.7. Flight publications/maps/chum
- 12.8. Emergency/survival equipment
- 12.9. Special mission requirements(headsets, tie downs, lights, etc.)
- 12.10. Personal equipment (ID tags, helmet/ear protection, vest, flashlight, checklists, survival equipment, weapons jewelry/scarves removed)

13. Applicable Specialized Briefing(s)

POST FLIGHT AIRCREW BRIEFING

- 1. Roll Call**
- 2. Briefing Classification**
- 3. Mission Profile Review**
 - 3.1. Mission accomplishment
 - 3.2. Training objectives achieved
 - 3.3. Lessons learned
 - 3.4. Areas for improvement
- 4. Comments/Questions**
- 5. Forms Completion**

INSTRUMENT BRIEFINGS AND CHECKS
INSTRUMENT COCKPIT CHECK

- 1. Publications**
- 2. Airspeed Indicator** - At Or Near Zero
- 3. Attitude Indicator** - Check Limits And Set
- 4. VVI** - At Or Near Zero
- 5. Turn And Slip** - Static Position
- 6. Heading And Magnetic Compass** - Check And Compare
- 7. Altimeter** - IAW AFM 11-217, Vol 1
- 8. Clock** - Set And Running
- 9. Defroster/Pilot Heat/Anti Ice** - As Required
- 10. Navigation Equipment** - Check

TACAN/VOR (AT GROUND CHECKPOINT)

- 1. Tune And Identify**
- 2. Nav Mode Switch** - As Required
- 3. Bearing Pointer** - Points To Station (+/- 4° error from TACAN/VOR ground checkpoint)
- 4. DME** - .5 Mile Or 3% Error, Whichever Is Greater

5. CDI - Check Centered, (+/- 4° error from known checkpoint)

6. Check To-From Ambiguity

ILS (AT AN AIRFIELD WITH AN ILS)

1. Tune And Identify

2. Check Marker Beacon Volume Control On

3. Nav Mode Switch - VOR

4. Select Proper Approach Course

5. Check CDI And GSI Indications

VOR SELF TEST

1. Tune A Valid Receivable VOR Frequency

2. Nav Mode Switch - Select VOR

3. Set 315° In The CI

4. Press And Hold The MB/VOR Test Switch

5. All MB Lights Illuminate

6. BDHI Bearing Pointer Rotates To 315°

7. CDI Centers

8. TO-FROM Indicator Displays “TO”

TACAN SELF TEST

- 1. Function Switch In T/R**
- 2. Nav Mode Selector Switch - Select TACAN**
- 3. Set 180° In CI**
- 4. Allow 90 Seconds For Warm-up**
- 5. Depress The Test Button**
 - 5.1. Light for 1 second
 - 5.2. For 7 secs DME off flag and bearing pointer 270°
 - 5.3. For next 15 seconds:
 - OFF flags gone, DME 0 +/- 0.5
 - Bearing pointer 180 +/- 3°
 - CDI centered +/- half dot
 - TO-FROM indicator displays TO
 - 5.4. If light stays on - system failure (repeat test in REC mode and, if good, only the transmitter is bad)

RADAR ALTIMETER

- 1. Indicator set control knob - rotate past detent**
- 2. Allow 30 seconds for warm-up**
- 3. Set VALI to 400 feet**
 - 3.1. Test by pressing and releasing the set knob
 - 3.2. For 1.5 seconds
 - Pointer moves to 500 feet
 - Digital readout displays 88888
 - R/T light illuminates low light illuminates
 - As analog pointer passes below 400 feet

VALI setting pointer moves to 300 feet and
Digital readout displays 300 +/- 10 feet

3.3. Reset VALI as required

INSTRUMENT DEPARTURE BRIEFING

- 1. Navigation/Communication Radio Settings** (set for SID, radar departure or emergency return)
- 2. Restrictions/Clearance**
- 3. Hazardous Terrain/Obstacles**
- 4. Emergency Intentions**
- 5. Emergency Return Approach**
 - 5.1. Type of approach/page/TCN
 - 5.2. DH/MDA
 - 5.3. Inbound course
 - 5.4. Emergency safe/sector altitude

INSTRUMENT APPROACH BRIEFING

- 1. Weather At Destination Airfield**
- 2. Type Of Approach/Page #/TCN**
- 3. Weather Required For The Approach**
- 4. Navigation/Communication Radio Settings**
- 5. DH/MDA**
- 6. Altimeter (Barometric/Radar)**
- 7. Missed Approach Point And Intentions**
- 8. Review Descent Rate**
- 9. Minimum Safe Altitudes (min sector/emergency safe)**
- 10. Aerodrome Sketch (alignment, lights, obstacles, elevation)**
- 11. Crew Duties**
- 12. Lost Communications Intentions**
- 13. Backup Approach**
- 14. Heading And Attitude Systems**
- 15. Before Landing Checklist**

Note: when accomplishing successive approaches, only the items that have changed need be briefed.

SPECIALIZED BRIEFINGS

To be completed as the last step of a Basic Flight Briefing.

DV AIRLIFT

- 1. Takeoff And Pickup Times**
- 2. Passenger On And Off Load**
- 3. Landing/Takeoff Site Coordination (Ppr)**
- 4. Site Folder**
- 5. Plaque**

TRANSITION/EMERGENCY PROCEDURE BRIEFING

- 1. Transition Area**
- 2. Traffic Pattern**
 - 2.1. Direction
 - 2.2. Altitudes and airspeeds
- 3. Transition Maneuvers**
- 4. Practice Emergency Procedures**
- 5. Boldface And Ops Limits Review**

ALERT/STANDBY CREW BRIEFING

- 1. Alert/Standby Period**
- 2. Response Time**
- 3. Notification Procedures**
- 4. Launch / Scramble Procedures**

SEARCH BRIEFING

- 1. Objective**
- 2. Search Area**
- 3. Weather** (enroute, on scene, recovery)
- 4. Search Pattern, Track Spacing, Altitude, Airspeed**
- 5. Bingo Fuel**
- 6. On Scene SAR Forces**
- 7. Communications** (with SAR forces, controlling agency)
- 8. Actions Upon Sighting Objective**
- 9. Recovery Location**

CARGO SLING BRIEFING

- 1. Load Description**
- 2. Sling Length/Hover Height**
- 3. Radar Altimeter Setting**
- 4. Power Available/Power Required**
- 5. Sling Arming/Dearming**
- 6. Hand Signals**
- 7. Hookup**
 - 7.1. Grounding
 - 7.2. Eye protection
 - 7.3. Restraint devices
 - 7.4. External lighting
- 8. En Route Airspeed And Altitude**
- 9. Release**
- 10. Emergency Actions**
- 11. Safety Considerations**

FIRE BUCKET BRIEFING

Complete after the general aircrew briefing. This briefing replaces the sling briefing when using the fire bucket.

- 1. Fire Location**
- 2. On-Scene Forces**
 - 2.1. Call signs
 - 2.2. Frequencies
- 3. Aircraft Configuration**
 - 3.1. Cabin seats/seat belts
 - 3.2. Cargo tie downs
 - 3.3. External lighting
 - 3.4. Fly-away/TDY kit
- 4. Cargo Hook Arming/Dearming**
- 5. Armament Panel Configuration**
- 6. Hand/Ground-To-Air Signals**
- 7. Radar Altimeter Setting**
- 8. Bucket Load/Fuel Burn Off Time**
- 9. Power Available/Power Required**
- 10. Enroute Altitude/Airspeed/MSA**
- 11. IMC Avoidance**
- 12. Water Source (If Known)**

13. Refuel Location

14. Emergency Actions

15. Safety Considerations

ALTERNATE INSERTION/EXTRACTION BRIEFING

1. Device To Be Used

- 1.1. Equipment/personnel preparation
- 1.2. Load/CG
- 1.3. Hover height

2. Power Available/Power Required

3. Communications

- 3.1. Air to ground
- 3.2. Intercom
- 3.3. Hand signals

4. Hazards (Terrain, Wind, Weather)

5. Emergency Procedures

- 5.1. Aircraft malfunctions
- 5.2. Equipment malfunctions
- 5.3. Oscillations/pendulum action
- 5.4. Communication failure

6. Sequence Of Events

7. Scanner Duties

AIRDROP-EQUIPMENT/PERSONNEL BRIEFING

- 1. Type Of Drop**
- 2. Drop Zone**
 - 2.1. Markings
 - 2.2. TOT
 - 2.3. Visual signals
- 3. Communications**
 - 3.1. Air to ground
 - 3.2. Intercom
 - 3.3. Hand signals
- 4. Drop Procedures**
 - 4.1. Altitude/airspeed
 - 4.2. Track
 - 4.3. Drop order
 - 4.4. Door procedures
- 5. Crew Coordination**
- 6. Emergency Procedures/Hung Jumper/Bundle**
- 7. Post Deployment Procedures**

CHECKLISTS

TACTICAL/LOW-LEVEL INGRESS CHECKLIST

1. **Radio Responsibilities** - Assume
2. **Mission Capable Fuel** - Verify
3. **Bingo Fuel** - Review
4. **Power Available/Required** - Compute/Confirm
5. **Exterior Lights** - As Required
6. **Transponder** – As Required
7. **Shoulder Harness** - As Required
8. **AIE Checklist/Equipment** - As Required
9. **Before Landing Checklist** - Complete

TACTICAL/LOW-LEVEL POST-EGRESS CHECKLIST

1. **Exterior Lights** - As Required
2. **Shoulder Harness** - As Required
3. **AIE Checklist/Equipment** - As Required
4. **Transponder** – As Required
5. **Shoulder Harness** - As Required
6. **Exterior Lights** - As Required

FIRE BUCKET INGRESS CHECKLIST

Complete Part A or B first as applicable to the fire situation.

Part A: (complete prior to flying with the bucket suspended)

1. **Water Release Mechanism**—Check
2. **Bucket Load**—Set Percentage
3. **Cargo Release Switch**—Arm
4. **Sacksafoam Panel**—Configure
5. **Armament Panel**—Configure
 - 5.1. Master switch—ARM
 - 5.2. Armament selector switch—ROCKETS
 - 5.3. Pod arm switch—RIGHT
6. **Radar Altimeters**—Set
7. **Power Available/Required**—Compute/Confirm
 - 7.1. Mini TOLD
 - 7.2. Confirmation if less than 10%
8. **Water Release Mechanism**—Check (after filling bucket)

Part B: (to be completed prior to fire area entry)

1. **Controlling Agency**—Contact
2. **Bingo Fuel**—Review
3. **Radio Responsibilities**—Assume
4. **Shoulder Harness**—As Desired

5. Before Landing Checklist—Complete

FIRE BUCKET EGRESS CHECKLIST

- 1. Controlling Agency—Notify Off Fire**
- 2. Shoulder Harness—Unlocked**

SMOKE/FLARE DROP CHECKLIST

- 1. Gunner's Belt - ON**
- 2. ICS - SET**
- 3. Gloves - ON**
- 4. Door - OPEN**
- 5. Smoke/Flare Device - PREPARED**
- 6. Smoke/Flare Drop Checklist - "COMPLETED" (HO/AG)**

HELICOPTER ROPE SUSPENSION PROCEDURES
ROPE LADDER PROCEDURES

ROPE LADDER PREFLIGHT

- 1. Anchor Cable - CHECKED.** Inspect cable for abrasions, bird caging, broken wires and kinking. Check terminal ends for cracks and stamping. (IAW AFI 11-202, V3 & TO 1-1A-8)

- 2. Cargo Tie-Down Fittings - CHECKED.** Inspect for cracks, security and serviceability.

- 3. Cabin Floor And Lower Doorframe - CHECKED.** Inspect for sharp edges and tape as necessary. Ensure cabin floor is clean of oil, grease and solvents.

- 4. Ladder Attachment Straps And Snap Hooks - CHECKED.** Inspect for serviceability, webbing for cuts, fraying, kinks and knots. Check snap hooks for cracks and corrosion; ensure snap hook gates are free and spring-load to the closed position.

- 5. Ladder Base Plate Assembly - CHECKED.** Inspect for corrosion, cracks, loose or missing hardware and serviceability.

- 6. Release Handle And Control Shaft Assembly - CHECKED.** Inspect release mechanism for proper operation, corrosion and cracks. Fastener pins for corrosion, cracks and serviceability. Pip-pin for proper operation and security. Ladder eyelet's for corrosion, cracks, security and proper engagement.

WARNING: When reassembling ladder eyelet's into base plate assembly ensure eyelet's are placed underneath bolt heads. Failure to do so will cause eyelet's to bind on fastener pins during jettison sequence, preventing ladder from being jettisoned.

7. Standoff Wheel Assemblies - CHECKED. Inspect for corrosion, cracks, and freedom of movement, serviceability and locking nuts for security.

8. Ladder Nylon Webbing - CHECKED. Inspect entire length for cuts, fraying, kinks, knots and twisting.

9. Ladder Rungs - CHECKED. Inspect for corrosion, cracks, and security. Pay close attention to the rivet areas, rivet heads and washers for corrosion, cracks and loose or missing hardware.

ROPE LADDER PREDEPLOYMENT CHECKLIST

1. Anchor Cable - INSTALLED. IAW AFI 11-2H-1, Vol. 3.

2. Snap Hooks And Attachment Straps - ATTACHED.
Secure to both the anchor cable and tie-down fittings.

3. Rope Ladder - POSITIONED AND RIGGED FOR DEPLOYMENT.

CAUTION: Maintain rope ladder security using body weight or seat belt.

4. Conduct Check On Hot Mike "Rope Ladder Predeployment Checklist Completed, One _____ Foot Rope Ladder Ready For Deployment". (FE) Pilot And Copilot

Acknowledge By Saying “Loud And Clear”. Acknowledgment completes this checklist.

ROPE LADDER EMERGENCY PROCEDURES

AIRCRAFT EMERGENCY - MEMBER(S) ASCENDING ROPE LADDER:

- 1. Signal member(s) to ABORT, and AIRCRAFT EMERGENCY.**
- 2. Have member(s) hold on as aircraft settles.**
- 3. Upon ground/water contact member(s) immediately clear(s) off rope ladder and area beneath aircraft (move to the 3 or 9 o'clock positions).**
- 4. Time permitting FE jettisons rope ladder once members are clear.**

AIRCRAFT EMERGENCY - MEMBERS ON THE GROUND:

- 1. Signal members to: HOLD, and AIRCRAFT EMERGENCY.**
- 2. Time permitting FE jettisons rope ladder immediately.**
- 3. FE assumes crash position and prepares for emergency egress.**

LOST COMMUNICATION/ICS FAILURE - MEMBERS ON ROPE LADDER:

- 1. Allow ascending roper to continue his/her climb.**
- 2. Signal remaining members on the ground to HOLD, or ABORT, and LOST COMMUNICATION.**
 - 2.1. Check connections, ICS control panel or swap comm cords. If malfunction still exists:
 - 2.2. Go to hand signals and clean up evolution.
 - 2.3. Terminate rope ladder operations.
- 3. If malfunction is corrected rope ladder operations may be continued.**

LOST COMMUNICATION/ICS FAILURE - ALL MEMBERS ON THE GROUND:

- 1. Signal members to: HOLD and/or ABORT, and LOST COMMUNICATION.**
- 2. Attempt to correct malfunction.**
 - 2.1. Check connections, ICS control panel or swap comm cords. If malfunction still exists:
 - 2.2. Go to hand signals and clean up evolution.
 - 2.3. Terminate rope ladder Operations.
- 3. If malfunction is corrected continue with rope ladder operations.**

FOULED/ENTANGLED ROPE LADDER

- 1. Immediately notify crew and team of situation.**
- 2. Suspend rope ladder operations.**
- 3. Attempt to unfoul or untangle fast rope by:**
 - 3.1. Shaking rope ladder.
 - 3.2. Retrieve rope ladder and untangle.
 - 3.3. If possible land aircraft, retrieve rope ladder then and unfoul or untangle ladder
 - 3.4. If able to clear rope ladder, resume operations.
- 4. If unable to clear, untangle or retrieve rope ladder, or land, jettison the rope ladder.**

WARNING: Do not use the helicopter to pull the rope ladder free.

HUNG CLIMBER

- 1. Immediately notify crew of situation.**
- 2. Signal climber(s) HOLD ON or LOCK-IN.**
- 3. If possible, have aircraft descend to lower altitude lowering climber(s) to the ground.**
 - 3.1. Clear climber(s) off rope ladder.
 - 3.2. Land and load climber(s) into aircraft.
 - 3.3. If unable to land, resume rope ladder operations.
- 4. If unable to descend to lower altitude and power requirements and flight characteristics allow, accomplish the following:**
 - 4.1. Have climber(s) lock or tie into ladder.

- 4.2. Once locked or tied in, transition to forward flight
- 4.3. Fly to safe landing area.

WARNING: Do not exceed 60 KIAS.

HELICOPTER GAINS ALTITUDE OR DRIFTS

- 1. Immediately notify pilot on the controls.**
- 2. Have members on rope ladder continue ascent.**
- 3. Redirect helicopter over correct area and/or down to correct altitude.**
- 4. Once in proper position, resume rope ladder operations.**

FAST ROPE PROCEDURES

FAST ROPE PREFLIGHT

- 1. Hoist Operator's Checklist** (Breeze Eastern®/Lucas Western®) - COMPLETED.
- 2. Cabin Floor** - CHECKED. Ensure cabin floor is free of oil, grease and solvents.
- 3. End Cap Assembly** - CHECKED. Inspect metal cylinder, shackle, and torpedo pins and steel ring for corrosion, cracks, dents, sharp edges and security.
- 4. Safety Cable** - CHECKED. Inspect cable for abrasions, broken wires, bird caging, kinking and security. Check cable swedge for security and indications of slippage.
- 5. Fast Rope** - CHECKED. Lay rope out full length and inspect entire length for abrasions, cuts, excessive fraying and

unraveling. Twist the rope at various intervals along its length looking between the strands for small stones, dirt, twigs etc.

Note: Never stand, walk or step on a fast rope. This can force sand or dirt into the strands, which causes fraying and weakens it.

FAST ROPE PREDEPLOYMENT CHECKLIST

- 1. Hoist Operator's Before Pickup Checklist** (Breeze Eastern®/Lucas Western®) - COMPLETED.
- 2. End Cap Ring And Safety Cable** - ATTACHED TO HOIST HOOK.
- 3. Fast Rope** - POSITIONED FOR DEPLOYMENT. Rope may be positioned in the doorway or handed to the first roper in the stick.

CAUTION: Maintain fast rope security by using body weight, seat belt or by having a roper hold it.

- 4. Conduct Check On Hot Mike** "Fast Rope Predeployment Checklist Completed, One _____ Foot Fast Rope Ready For Deployment". (FE) Pilot And Copilot Acknowledge By Saying "Loud And Clear". Acknowledgment completes this checklist.

FAST ROPE EMERGENCIES PROCEDURES

AIRCRAFT EMERGENCY - ROPER(S) ON FAST ROPE:

- 1. Have roper descend as rapidly as possible.**
- 2. Roper clears off rope and immediately clears area beneath aircraft** (move to the 3 or 9 o'clock positions).
- 3. FE cuts fast rope using Hoist Cable Cut Switch and straps in.**
- 4. FE Assumes crash position.**

AIRCRAFT EMERGENCY - ROPER(S) IN AIRCRAFT:

- 1. Signal ropers(s) to ABORT, STRAP IN, and AIRCRAFT EMERGENCY.**
- 2. Assume crash position and prepare for emergency egress.**
- 3. FE cuts fast rope using the Hoist Cable Cut Switch.**
- 4. FE assumes crash position.**

LOST COMMUNICATION/ICS FAILURE - ROPER(S) ON FAST ROPE(S):

- 1. Allow descending roper to continue descent.**
- 2. STOP/ABORT remaining fast rope descents and attempt to correct malfunction.**
 - 2.1. Check connections, ICS control panel or swap comm cords. If malfunction still exists:
 - 2.2. Go to hand signals and clean up evolution.
 - 2.3. Terminate fast rope operations.
- 3. If malfunction is corrected, fast rope operations may be continued.**

LOST COMMUNICATION/ICS FAILURE - ALL ROPERS IN AIRCRAFT

- 1. Signal ropers to HOLD or ABORT and LOST COMMUNICATIONS.**
- 2. Attempt to correct malfunction.**

- 2.1. Check connections, ICS control panel or swap comm cords. If malfunction still exists:
- 2.2. Go to Hand Signals and clean up evolution.
- 2.3. Terminate fast rope operations.

3. If malfunction is corrected continue with fast rope operations.

FOULED/ENTANGLED FAST ROPE

1. Immediately notify crew and team of situation.

2. Suspend fast rope operations.

3. Attempt to unfoul or untangle fast rope by:

- 3.1. Shaking fast rope.
- 3.2. Retrieve fast rope and untangle.
- 3.3. If possible land aircraft to retrieve fast rope then unfoul or untangle fast rope.
- 3.4. If able to clear fast rope, operations may be resumed.

4. If unable to clear or untangle fast rope, or land:

- 4.1. Disconnect fast rope from hoist hook and release fast rope.
- 4.2. If unable to disconnect fast rope due to tension, cut the fast rope by using Hoist Cable Cut Switch.

WARNING: Do not use the helicopter or hoist to pull rappel rope(s) free.

HELICOPTER GAINS ALTITUDE OR DRIFTS

- 1. Immediately notify pilot on the controls.**
- 2. Signal roper on fast rope to HOLD.**
- 3. Signal roper(s) inside the aircraft HOLD.**
- 4. Redirect helicopter over correct area and/or down to correct altitude.**
- 5. Once in proper position, resume fast rope operations.**

RAPPELLING PROCEDURES

RAPPELLING EMERGENCY PROCEDURES

AIRCRAFT EMERGENCY - RAPPELLER(S) ON ROPE(S):

- 1. Have rappeller descend as rapidly as possible.**
- 2. Rappeller clears off rope and immediately clears area beneath aircraft (move to the 6 o'clock position).**
- 3. FE/Rope Master cuts rappel lines and STRAPS IN.**
- 4. Assume crash position.**

AIRCRAFT EMERGENCY - RAPPELLER(S) IN AIRCRAFT:

- 1. Signal rappeler(s) to ABORT, STRAP IN and AIRCRAFT EMERGENCY.**
- 2. Rappellers assume crash position and prepare for emergency egress.**
- 3. FE/Rope Master cuts rappel lines and STRAPS IN.**
- 4. FE assumes crash position.**

LOST COMMUNICATION/ICS FAILURE - RAPPELER(S)
ON ROPE(S):

- 1. Allow descending rappeler to continue descent.**
- 2. STOP/ABORT remaining rappel descents and attempt to correct malfunction.**
 - 2.1. Check connections, ICS control panel or swap comm cords. If malfunction still exists:
 - 2.2. Go to hand signals and clean up evolution.
 - 2.3. Terminate rappel operations.
- 3. If malfunction is corrected rappel operations may be continued.**

LOST COMMUNICATION/ICS FAILURE - ALL
RAPPELLERS IN AIRCRAFT

- 1. Signal rappellers to HOLD or ABORT, and LOST COMMUNICATIONS.**
- 2. Attempt to correct malfunction.**
 - 2.1. Check connections, ICS control panel or swap comm cords. If malfunction still exists:
 - 2.2. Go to hand signals and clean up evolution.
 - 2.3. Terminate rappel operations.
- 3. If malfunction is corrected rappel operations may be continued.**

HUNG RAPPELLER

- 1. Immediately notify crew and team of situation.**
- 2. If possible, have aircraft descend to lower altitude lowering individual to the ground.**
 - 2.1. Have rappeler unhook from rappel line.
 - 2.2. Clear rappel line.
 - 2.3. If rappel line is cleared rappel operations may resume.
 - 2.4. If unable to clear rappel line, terminate rappel operations.
- 3. If unable to descend with aircraft, lower a safety line to hung rappeler.**
 - 3.1. Tie off hung rappeler into safety line.
 - 3.2. Once tied off, remove tension from hung rappel line and have hung rappeler attempt to clear problem.
 - 3.3. If hung rappeler cannot clear problem, cut and remove hung rappel line.
 - 3.4. Using safety line, the rope master/FE lowers hung rappeler to the ground.

FOULED/ENTANGLED RAPPEL LINE

- 1. Immediately notify crew and team of situation.**
- 2. Suspend rappel operations.**
- 3. Attempt to unfoul or untangle rope by:**
 - 3.1. Shaking rope.
 - 3.2. Retrieve rope to untangle.
 - 3.3. If possible land aircraft to retrieve rope and unfoul or untangle rope

3.4. If able to clear rope, rappel operations may be resumed.

4. If unable to clear or untangle rope, or land:

4.1. Untie ropes from anchor points and release ropes.

4.2. If unable to untie ropes due to tension, cut the rappel ropes.

WARNING: Do not use the helicopter to pull rappel rope(s) free.

Note: V-blade knife must be readily throughout rappel operations.

HELICOPTER GAINS ALTITUDE OR DRIFTS

- 1. Immediately notify pilot on the controls.**
- 2. Signal rappeller immediately BRAKE and LOCK-IN.**
- 3. Signal rappellers inside the aircraft HOLD.**
- 4. Redirect helicopter over correct area and/or down to correct altitude.**
- 5. Once in proper position, resume rappel operations.**

MISCELLANEOUS
NVG INSPECTION AND INITIAL ADJUSTMENT
PROCEDURES

- 1. Inspect Helmet**

- 2. Inspect Mount Assembly** - Check Overall Condition And Adjustment Knobs For Free Movement

- 3. Load Batteries And Inspect Battery Box** - Connect Power Cord To Mount Assembly

- 4. Inspect Binocular Assembly** - Check Overall Condition And Adjustment Knobs For Free Movement. (Clean lenses with lens paper only.)

- 5. Set Diopter To Zero Or Known Setting**

- 6. Set Eye Relief Full Forward Away From Eyes**

- 7. Center Tilt**

- 8. Set Inter Pupillary Distance (IPD)**

- 9. Set Vertical At Centered Position**

10. Attach NVGs And Don Helmet

11. Practice Mounting And Removing The NVGs

NVG ADJUSTMENT AND ASSESSMENT PROCEDURES

1. Room Lights - OFF

2. Goggle Power - ON. Check main and spare battery power.

3. Alignment Procedures

- 3.1. Adjust vertical
- 3.2. Adjust tilt
- 3.3. Adjust eye relief
- 3.3. Assess IPD
- 3.4. Evaluate image

4. Focusing Procedures - One eye at a time (close other eye or cover lens).

- 4.1. Focus objective (outer) ring
- 4.2. Focus diopter (inner) ring
 - 4.2.1. Counterclockwise until blurred
 - 4.2.2. Clockwise until just sharpened. Readjust objective focus if necessary

5. Assessment Of Function - Evaluate visual acuity with both eyes open using the Resolution Chart. Note IPD and diopter settings.

6. Cockpit Procedures

- 6.1. Confirm IPD and diopter settings
- 6.2. Refocus to infinity

6.3. Practice emergency removal

VISUAL DETECTION CHART

(ranges shown in miles)

Equipment Item	Down Sun	Cross Sun	Up Sun	Over-cast	Night
Yellow life raft (1- or 7- man)	1.9	1.4	1.1	1.0	--
Signaling mirror	6.3	7.0	4.8	--	--
Dye marker	3.8	2.5	2.2	--	--
Smoke	8.3	7.4	7.1	6.7	--
Life Jacket	0.2	.18	.16	.15	--
Life Jacket Light	--	--	--	--	0.5
2 cell flashlight	--	--	--	--	2.4
Handheld star signal	--	--	--	--	32.0
Very cartridge	--	--	--	--	17.5

DISTRESS AND EMERGENCY FREQUENCIES

40.50 MHz	Fox Mike VHF-FM Emergency
121.5 MHz	International Aeronautical Emergency
123.1 MHz	NATO/ICAO Scene of Action
156.8 MHz	International Maritime Distress Channel (16)
243.0 MHz	International Aeronautical Emergency
282.8 MHz	International Scene of Action SAR

EQUIPMENT REQUIRED FOR FLIGHT
(AFI11-202, Volume 3, AFI 11-2H-1, Volume 3)

ALL FLIGHTS:

1. **Altimeter** (pilot side)
2. **Attitude Indicator** (pilot side)
3. **Heading Indicator** (pilot side)
4. **Airspeed Indicator** (pilot side)
5. **Instrumentation to provide adequate assessment of engine performance**
6. **An operable radio**
7. **Transponder**
8. **Seat Belts/Restraining Devices for all crew and passengers**
9. **Operative Position, Anticollision Lights**

OVER WATER:

1. **Life Rafts**
2. **LPU**s
3. **HEED**s

NIGHT/NVG:

- 1. Operative Landing/Searchlight** (one required for unaided missions/both with IR filter on searchlight for NVG missions)
- 2. Cockpit Instrument Lights**
- 3. Each crewmember carries an operable flashlight**

IMC:

- 1. Operative Pilot Heat**

ECHO CODES

(Use when transmitting patient status)

CODES	Patient Status
Alpha	Negative injuries
Bravo	Minor injuries, need medical attention
Charlie	Serious injuries, need immediate hospitalization
Delta	Deceased

HOIST HAND SIGNALS

(Commands are highlighted in bold letters.)

- 1. Aircraft Movement** - Open Palm of hand indicating aircraft direction of movement.
- 2. Survivor in and Secure, Ready for Takeoff or Go-Around** - Index finger in a circling movement overhead and point in the direction of flight.
- 3. Stop Aircraft, Cable Movement or Hold Hover** - Clenched Fist.
- 4. Hoist Cable Up / Down** - Clenched fist with thumb pointing up or down.
- 5. Hoist Boom Left / Right** - Clenched fist held horizontally with thumb pointing left or right.
- 6. Cut Cable** - Make clenched fist with left hand, have right hand making a horizontal slashing movement underneath left hand.
- 7. Hoist Power Switch Placed in Opposite Position** - Two fingers extended while moving lower arm forward and backward at head height.

HRS EMERGENCY HAND SIGNALS

EMERGENCY COMMANDS AND HAND AND ARM SIGNALS.

The following commands are not part of the normal HRS sequence of events. They are used to either suspend or terminate HRS operations whenever unsafe or questionable situations arise. These commands and signals are general in nature and can and will be applied to all UH-1N HRS operations.

(Commands are highlighted in bold letters.)

Abort - Signal is moving a hand horizontally, fingers extended, palm down, back and forth in front of the neck in a slashing motion.

Aircraft Emergency - Signal is a hand with fingers extended and palm down is raised and lowered above the head.

Crash Landing - Signal is both hands, each with fingers extended and palms down, raised and lowered above the head in unison.

Cut Rope - Signal is a hand with fingers extended and joined moving in a chopping motion against the opposite wrist.

Entanglement - Signal is forearms raised laterally to the front at shoulder height, clasping hands with palms facing inward and fingers interlocking.

Hold - Signal is a forearm raised vertically (as in taking an oath) with a clenched fist in front of the face.

Lost Communications - Signal is hands placed at the ears with palms open and forward.

Rope Deployment - Signal is a sweeping horizontal motion of the hand with the index finger extended towards the exit.

Strap In - Signal is double clenched fists waist height moving back and forth from your sides to your belt buckle.

SAMPLE HRS BRIEFING

1. Personnel Roll Call

- a. HRS Master:
- b. Assistant HRS Master:
- c. # HRS Personnel:
- d. Aircraft Commander:
- e. Copilot:
- f. Flight Engineer:

2. Operational Data

- a. Takeoff Time:
- b. Insertion/Extraction Time:
- c. Location of Insertion/Extraction:
- d. Hover Altitude:
- e. # Insertion/Extraction:
- f. # Personnel Per Insertion/Extraction:

3. Penetration/Approach Route

- a. Check Points
- b. Location/ID
- c. Heading
- d. Distance
- e. Time

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