

**BY ORDER OF THE  
SECRETARY OF THE AIR  
FORCE**

**AFMAN11-2CV-22V3CL-1**  
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*Flying Operations*

## **FLIGHT CREW CHECKLIST**

### **CHECKLISTS AND SIGNAL TABLES**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This checklist compliments AFMAN 11-2CV-22, Vol 3, *CV-22 Operations Procedures*, and is applicable to all subordinate AFSOC flying units that operate the CV-22 aircraft. Aircrew will use the abbreviated checklists during mission planning and execution. This manual applies to civilian employees and uniformed members of the Regular Air Force, Air Force Reserve and Air National Guard, unless explicitly otherwise provided. Additional notes and supplemental information may be added after review by AFSOC/A3V. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See AFI 33-360, Publications and Forms Management, for a description of the authorities associated with the Tier numbers. Refer recommended changes and questions about this publication to HQ AFSOC/A3V using the Air Force (AF) Form 847, *Recommendation for Change*

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## **General Aircrew Briefing**

### **1. Time Hack**

### **2. Roll Call**

### **3. Mission Introduction**

- a. Mission Name/Number
- b. Classification
- c. Overview of Area of Operations
- d. Inventory of References

### **4. Situation**

- a. Intelligence
  - (1) EOB, GOB, AOB
  - (2) Friendly Forces & Planned Operations
  - (3) Isolated Personnel Procedures
  - (4) Code Words/Procedures
  - (5) SPINS/ROE

b. Weather

- (1) Departure/En route/Objective/Destination
- (2) Sun/Moon Data
- (3) Sea State/Temperature
- (4) Limitations

c. NOTAMS/FCIF/Read File

**5. Mission Specifics**

- a. Primary and Alternate
- b. Go/No-go Criteria

**6. Pre-departure**

- a. Designated Lead/Alternate(s)
- b. Tail Numbers/Call Signs/Parking
- c. Aircraft Configuration & Load
  - (1) Passengers
  - (2) Vehicles/Equipment/Cargo

(3) Fuel On Board

(4) Special Mission Equipment/Configuration

d. Personal Equipment

e. Timeline

f. Comm Check

g. Taxi Plan

h. Bump Plan/Abort Criteria (min force)

**7. Departure**

a. Weight & Balance/Performance Data

b. Communications/Lighting

c. Takeoff & Departure

d. Contingencies

**8. En route (repeat as appropriate for en route phases)**

a. Description of route

b. Altitude and Speed

- c. Obstructions & Hazards/Threats
- d. Formation Geometry
- e. Communication/Lighting
- f. Radar Settings/Freq Band
- g. TF Considerations (terrain, nose cold areas)
- h. Crew/Wingman Duties
- i. Evasive Maneuvers/Scatter & Rejoin Plan
- j. IMC/Lost Visual Procedures
- k. Air Refueling
  - (1) Refueling Track (ARIP/ARCP/AREP)
  - (2) ARCT (time hack with tanker)
  - (3) Altitudes (joinup/refuel) & Altimeter Setting
  - (4) Airspeed
  - (5) Call Signs
  - (6) Comm/Lights & IFF/TACAN Settings

(7) Type Rendezvous & Tactics (option 1/2)

(8) Receiver Sequencing and Onloads

(9) Emergency Recovery Bases

(10) IMC/Lost Visual Procedures

l. Dual/Single Engine Performance

m. Contingencies

**9. Objective (brief for each objective/terminal phase) Multiple Approaches (patterns/training sequence)**

a. Ingress (IP to objective)

(1) Formation/Lights

(2) Communication/Authentication

(3) Altitude and Speed

(4) Decel/Beep/Convert Points

(5) TOT/Deconfliction Plan

(6) Time Calls/Team Leader Comm

b. Objective Description



- (1) Coordinates/DATUM Confirmed

- (2) Features/Markings

- (3) Hazards

- (4) Friendly & Enemy Forces

- (5) Weapons Employment

c. Actions on Objective

- (1) Final Approach Procedures

- (2) Aircraft Positioning

- (3) Performance Data & CG

- (4) Planned Operations

d. Air/Land Operations

- (1) On/Off-load Procedures

- (2) Special Equipment/Aircraft Markings

e. AIE Operations

- (1) Method/Device & Hover Height

- (2) CG Control Measures

- (3) Post Deployment/Extraction

- f. Helocast Operations

- (1) Cabin/Load Config

- (2) Hoist Preparation

- (3) Target Parameters

- (4) Safety Boat/Cover Ship

- g. Refueling Operations

- (1) Taxi/Sequencing & Onloads

- (2) Aircraft Marshalling

- (3) Hookup Procedures/Equipment

- (4) Post Refuel Actions

- h. Airdrop Operations

- (1) Drop Type(s)/Order

- (2) Parameters/Release Point(s)

(3) Drop Procedures

(4) Post Deployment

i. Crew Duties

(1) Go-around/Rejoin

(2) Comm Out

(3) Emergency Actions

j. Egress/Rejoin Plan

k. Contingencies

**10. General Crew Duties and Responsibilities**

a. Changing Control of the Aircraft

b. Emergency Actions

(1) Takeoff, En route & Landing

(2) Over Land/Water

(3) Medical Facilities

c. NVG Considerations

- d. Cabin NCOIC
- e. Passenger Handling and Communications

**11. Risk Assessment****12. Training**

- a. Threat of the Day
- b. EP of the Day

**13. Update Time/Location****14. Debrief**

- a. Mission Accomplished?
- b. Deviations from Plan/Standards

**15. Preparation/Briefing****16. Execution/Paperwork**

## **Team Brief**

### **Roll Call**

### **Time Hack**

### **Inventory of References**

#### **1. Aircraft Load**

- a. Timeline
- b. Location & Aircraft Markings
- c. Comm Check
- d. Cabin Config
- e. Static Training

#### **2. En route**

- a. TCSA Usage
- b. Troop Commander Antenna Connections/Usage

- c. Time Calls
- d. Personnel/Cargo Restraint Procedures during Approach

### **3. Objective Area**

- a. Description/Diagram/Imagery
  - (1) Confirm Coordinates/DATUM
  - (2) Reference Scheme (Bldg #s, Phase Lines, etc.)
- b. Team Markings
- c. Comm Plan
- d. Sequence of Events/Execution Checklist
- e. Coordination with Aircrew

### **4. Contingencies**

- a. Bump Plan/Min Force
- b. Priority Events and Max Timeline Slippage

- c. Alternate LZ
- d. Command & Control/Decision Authority
- e. Comm Out Signals
- f. Alternate Comm (Cell Phones, etc.)
- g. Aircraft Emergencies & Egress
  - (1) Over Land
  - (2) Over Water
- h. Injuries/Medical Emergencies

**5. Debrief**

- a. Time
- b. Location
- c. Attendees

**AIRDROP PREP CHECKLIST****WARNING**

When conducting airdrop operations, opening the ramp and door prior to reaching drop altitude and airspeed is authorized only when a valid mission requirement exists such as Rescue Airdrop Procedures outlined in AFI 16-1202, *Pararescue Operations, Techniques, and Procedures* and AFTTP 3-3. *Guardian Angel*, scanning for threats, or scanning for obstacles during low-level.

**1. Crew Briefing – “COMPLETED” (PF)****NOTE**

Limit climbs and descents to 5000 fpm with parachutists on board. Pilot will use the airdrop briefing guide and update DZ threats, winds, and release point. Ensure 10-minute and 6-minute calls are made regardless of time compression for jumper equipment checks.

**2. Altimeters/Radar Altimeter – “SET (STATE SETTING)”**  
(FE/PM)**3. Anchor Cable Strops – “SECURE” (S) (Static Line)****4. Bundle Marker Lights – AS REQUIRED (S)****5. Utility Isolation Valve – “OPEN” (FE)**



**6. Cargo Ramp and Door – “(STATE POSITIONS)” (S)****NOTE**

If at drop altitude and airspeed, Ramp and Door may be opened at this time with the RMWS stowed and SAFE/CLEAR.

**7. Airdrop Prep Checklist – “COMPLETE” (FE)**

**AIRDROP CHECKLIST**

**1. At Slowdown Point** – “ SLOW DOWN” (PM)

**2. Flaps** – “SET (STATE SETTING)” (PF)

**NOTE**

At or below 170KCAS:

Airplane Mode Airdrops – Flaps 40 Degrees

Conversion Mode Airdrops – Flaps Auto

**3. “TWO MINUTES”** (FE/PM)

**4. Defensive Systems** – “SET (STATE SETTING)” (FE/PM)

**5. “ONE MINUTE”** (FE/PM)

**NOTE**

Ensure all jumpers are disconnected from ICS cords.

**6. “10 SECONDS”** (FE/PM) (CRS Only)

**7. “GREEN LIGHT”** (FE/PM)

**8. “LOAD CLEAR/JUMPERS AWAY”** (S)

**NOTE**

Scanner will report any airdrop alibis or non-standard cabin configurations to crew immediately

**9. “RED LIGHT”** (FE/PM)

**10. Airdrop Checklist** – “COMPLETE” (FE)

**POST AIRDROP CHECKLIST**

- 1. Defensive Systems** – “SET (STATE SETTING)” (FE/PM)
- 2. Static Line** – “RETRIEVED”(If Required)(S)
- 3. Ramp and Door** – As Required (FE/S)

**CAUTION**

If the Ramp and Door are to remain open, DO NOT accelerate past 140 KCAS until D-BAGS are retrieved. (Static Line Only)

- 4. Flaps** – “AUTO” (PF)
- 5. Altimeters/Radar Altimeter** - “SET (STATE SETTING)”  
(FE/PM)
- 6. Utility Isolation Valve** – “CLOSED” (FE)
- 7. Parachutes** – DE-ARMED (As Required)

**NOTE**

Limit climbs and descents to 5000 fpm with parachutists on board.

- 8. POST AIRDROP CHECKLIST** – “COMPLETE” (FE)

## **APPROACH MODE GUIDE**

### **NOTE**

This guide is designed to be run in conjunction with The BEFORE LANDING CHECKLIST, and encompasses the steps that will satisfy the “COMM/NAV/FPD” step in the BEFORE LANDING CHECKLIST during a coupled approach.

### **NOTE**

Coupled Approaches are permitted with the following limitations:

1. Power Available greater than OGE +10.
2. Less than 10 kts crosswind and tailwind relative to course.
3. APPR operations permitted below 6,000 ft. DA.
4. TF transition from TF to APPR VG over other than flat terrain is prohibited from altitude APPR gate until final speed.
5. Landing area slope less than 6 degrees.

### **1. Crew Brief**

- a. Ingress/Egress corridor
- b. Terrain/obstacles
- c. MSA
- d. Go Around
- e. Crew Duties

**2. NAV/Flight Director Panel (FDP) Settings**

- a. Appr Leg – SELECTED
- b. Leg Type – SET (MANUAL/AUTO)
- c. Appr Type – SET (STRAIGHT/TURNING)

**NOTE:**

Turning approach can only be used with FPLN guidance and is prohibited with final range less than .5mi

- d. Guidance – SET (DIRECT/FPLN)
- e. Steering – SET (WPT/TACAN/VOR)
- f. Waypoint Elevation – SET
- g. Final Course – SET
- h. Final Range (Turning) – SET
- i. Final Speed – SET (should be 0)
- j. Final Altitude - SET (no lower than 50 feet)
- k. Approach Decel rate - SET (FAST/SLOW) (Fast Prohibited above 3000' DA)
- l. Approach Glideslope (GS) - SET (APPR G/S 10 Prohibited)

**3. IP to LZ**

- a. Couple - SELECTED
- b. APPR – VERIFY ARMED (once APPR leg is reached)
  - i. Auto-Nacelle armed
  - ii. Hvr Cpld (as rqd) (no lower than 30 feet)
- c. Run-in Altitude - SET (Baro/Contour/SCP)
- d. VG enable – VERIFIED( if TF is selected)
- e. Vertical Speed Hold – (as Rqd)

**IFR BRIEFINGS****Instrument Departure****1. Ground Checkpoint**

- a. TACAN/VOR Bearing/Course within 4 Degrees
- b. DME Within 0.5 or 3% (whichever is greater)
- c. Altimeters Within  $\pm 75$  Ft of Each Other and Field Elevation
- d. ILS Indications

**2. Departure Routing (Courses/Altitudes)****3. Comm/NAVAID Settings****4. Hazardous Terrain and Obstacles**

- a. Minimum Required Climb Gradient

**5. Emergency Return Approach**

- a. DH or MDA
- b. Inbound Course

**6. Emergency Safe and/or Sector Altitude**

**Instrument Approach**

- 1. Approach (name & page number)**
- 2. Weather (reported and required)**
- 3. Comm/NAVAID/FDP Settings**
- 4. Altimeters (barometric and radar)**
- 5. Sector Altitude (terrain and obstacles)**
- 6. DH/MDA**
- 7. Descent Rates**
- 8. Conversion Point**
- 9. Speeds**
- 10. Lighting/Airfield**
- 11. Crew Duties**
- 12. Missed Approach/Climbout**
- 13. Lost Comm Intentions**



**COMBAT CHECKLISTS****Combat Ingress (FENCE IN)****1. Personal Equipment – “Set” (P, CP, FE, S)**

- a. Eye Protection
- b. Body Armor
- c. CHEM Gear
- d. Harnesses
- e. Weapons & Survival Gear

**2. EMCON – “Set” (PM, FE)**

- a. Radio Responsibilities – Assign
- b. IFF/TCAS – As Required
- c. TACAN – As Required

**3. Performance and Fuel Planning – Review/Confirm (FE/PM)****4. MMR/RadAlt – As Required (PM, FE)**

- a. SCP – State Setting
- b. Mode/Options – State Setting
- c. TF – Active

**5. Defensive Systems – “Set” (FE/PM, S)**

- a. Aircraft Weapons – Arm/Test Fire/Weapons Control Status

**6. IBR – “Checked/Set” (FE/PM)**

- a. MATT Status – Keyed
- b. Frequencies – As Required
- c. Filters – Fixed/Moving/TOI/BFT
- d. Threat Distance (pop up)/Survivor Filter ON/OFF

**7. Digital Map – “Set” (P, CP)**

- a. Threat/Detection Rings - Set/Selected
- b. Intervisibility/Banding - Set/Selected
- c. Bulls-eye – As Required
- d. Symbology – As Required

**8. Crash Position Indicator – As Required (S)****9. Exterior Lights – “Set” (FE/PM)**

**Combat Egress (FENCE OUT)**

- 1. Aircraft Weapons** – As Required (S)
- 2. Defensive Systems** – As Required (FE/PM, S)
- 3. MMR/RadAlt** – As Required (FE/PM)
- 4. EMCON** – As Required (FE/PM)
  - a. IFF/TCAS
  - b. TACAN
- 5. Crash Position Indicator** – As Required
- 6. Exterior Lights** – As Required
- 7. Battle Damage Assessment** – As Required

## SIGNALS

**Table 1. En route Light Signals**

Sender gives attention signal.  
 Receiver acknowledges by giving "attention" signal in reply.  
 Sender passes signal.  
 Receiver acknowledges by sending signal back.  
 Sender verifies signal with a "Yes" signal or a "No" signal.  
 Sender gives "execute" signal, if needed.

Signal	Action/Meaning
Circular motion	Attention
Vertical movement	Affirmative
Horizontal movement	Negative
Single flash (tail position light)	Trail
Two flashes (tail position light)	Stagger left
Three flashes (tail position light)	Stagger right
..	Return to base
--	Prepare to take formation lead
Infinity figure (horizontal figure 8)	Execute/Execute lead change
- .	Decrease speed
. -	Increase speed
- - -	Increase position lights
. . .	Decrease position lights
. - .	Check light settings
. . . .	Lost comm - assume radio responsibilities

**Notes:**

1. A dot "." is a momentary flashlight flash.
2. A dash "-" is a two second flashlight hold down.
3. The recipient of a light signal will repeat the signal back to the sender. (T-2)

**Table 2. Swimmer Coordination Signals**

<b>Signal</b>	<b>Action/Meaning</b>
Crossed wrists	Need doctor or medical kit
Thumbs up	Affirmative (Swimmer or hoist operator)
Breast stroke motion	Deploy backup swimmer
Paddling motion	Deploy raft
Hands cupped, then arms outstretched	Deploy stokes litter
Climbing rope motion	Lower rescue cable without device
One arm extended overhead, fist clenched	Lower penetrator/rescue seat
Wave in or out	Helicopter move in or out
Closed fist, pumping arm, pointing with other arm	Parachute nearby
MK-13 flare and/or inflated LPU	Emergency
Aircrew member signaling from aircraft - circling arm overhead, finger pointing skyward	Swimmer recall
Hand-clapping motion	Sharks
Slashing motion across throat	Cease operations

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