

**DCS-A-10C-CL**

# **CREW CHECKLIST NORMAL OPERATIONS**

**AIR FORCE SERIES  
DCS A-10C  
AIRCRAFT**

Serno 76-00259 and subsequent

**NOT FOR REAL WORLD OPERATIONS THIS DOCUMENT IS MADE FOR USE  
WITH DIGITAL COMBAT SIMULATOR SERIES DCS: A-10C WARTHOG**

This manual supersedes DCS-A-10C-CL-2, dated 3 June 2011,  
including all changes.

**HEADQUARTERS,  
DEPARTMENT OF THE DCS AIR FORCE**

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**Approved for release to all DCS A-10C Pilots**

**DCS-A-10C-CL**

**SCOPE.** This checklist contains the operators checks to be accomplished during normal DCS A-10C operations. For emergency operation refer to the appropriate Emergency Checklist.

**GENERAL.** The checklist contains: normal procedures, weapons employment, hot refuel, rearming, repairs and air to air refueling. This checklist reflects the systems which are modeled and functioning in the simulation. If a system is not modeled then it is not checked or actioned in this checklist.

When a checklist continues on a following page, it will be noted at the bottom of the page by “continued”.

**TERMINOLOGY.** “Set.” There is a setting of a switch or grouping of switches pertinent to that phase of flight. “As req’d.” There is more than one position for the switch or switches.

**NORMAL CHECKLIST PHILOSOPHY.** Checklists are used as verification to ensure that certain critical steps have been completed. This checklist is configured as a Do-list. In this method, the checklist is used to “lead” and direct the pilot in configuring the aircraft using a step-by-step, “cook book” approach.

**SYMBOLS.** The \* symbol indicates steps mandatory for all flights, including “thru” flights. Thru flights are flights where repairs, hot pit refueling or rearming has been carried out or any flight where the after landing checklist has been actioned.

**SUMMARY OF CHANGES.** See page 42 for a list of changes in this revision.

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**COCKPIT CHECK**

Throttles.....OFF  
Speed brake.....set to center pos'n  
Flap lever.....set to flap pos'n  
APU.....OFF  
Engine operate switches.....NORM  
Engine fuel flow switches .....NORM  
EAC.....OFF  
RDR ALTM.....DIS  
APU GEN.....OFF  
AC Gen L & R.....PWR  
Battery.....PWR  
Inverter.....STBY  
Signal lights.....tested  
Fire detection system.....tested  
Fuel.....tested/qty check  
Oxygen supply.....ON/tested  
Boost pumps main.....ON  
Boost pumps wing.....ON

**BEFORE START**

APU.....START

*NOTE: Monitor that APU EGT stabilizes between 400-450° c and APU RPM at 100% before turning APU gen on (PWR).*

APU Gen.....PWR  
 CDU.....ON  
 EGI.....ON  
 VHF/FM.....TR/set  
 UHF.....MAIN/set  
 VHF/AM.....TR/set  
 Seat.....adjust  
 Request eng start.....ATC on VHF/AM (fwd)  
 Master exterior lights switch .....cycled/aft  
 Position lights.....FLASH

*CAUTION: Attempting to start with ITT above 150° c will result in a hot start.*

Left engine.....start  
 Left eng instruments & hyd.....check  
 Right engine.....start  
 Right eng instruments & hyd.....check

*NOTE: Transient ITT of up to 900°C for no more than 12 seconds is acceptable during start.*

**BEFORE TAXI pg. 1/2**

- \*Intercom selector.....VHF
- \*Flaps.....cycle/MVR set
- Speed Brakes.....check
- Flight Controls.....check
- Yaw & Pitch SAS.....ON
- \*T/O Trim.....pushed/green
- \*CMSP mode switch.....STBY
- \*CMSP subsystems (MWS/JMR/RWR).....as req'd
- \*CMSP PROG.....[as req'd \(see pg 31\)](#)

*Wait until EGI INS alignment indicates complete by: T = 4.0. 0.8 on the CDU*

- CDU align page.....NAV LSK
- \*Nav mode select panel.....EGI & STR PT
- Steering bars.....as req'd
- IFFCC test switch.....TEST pos'n
- JTRS.....ON
- CICU.....ON
- MFCD L & R.....ON
- Standby Attitude.....uncage
- \*G-Meter.....reset
- Altimeter.....set
- MFCD LOAD ALL OSB.....select
- \*TGP switch.....as req'd
- Engage IFFCC preflight BIT test.....enter
- IFFCC switch (when BIT complete).....ON
- \*Stick master mode.....as req'd
- Waypoint advance.....MAN/AUTO (UFC FUNC 5 FPM)
- CDU.....WP PAGE (UFC FUNC 3 WP>CDU OSB 7 WP)

continued

**BEFORE TAXI pg. 2/2**

ALT ALRT.....UFC set as req'd  
 \*LMFCD.....TAD  
 \*RMFCD.....CDU  
 \*Steerpoint switch.....FLT PLN  
 TAD FLT PLN.....confirm FLT PLN WP's loaded  
 WP.....set as req'd (HUD SOI>DMS FWD)  
 TAD datalink network configuration.....as req'd  
 SADL OWNERSHIP ID.....as req'd  
 SADL GROUP ID.....as req'd  
 TAD flight member symbols.....confirm on TAD  
 Cursor slew rate.....adjust as req'd  
 \*DSMS wep profiles.....[configured as per pages 10-11](#)  
 \*TGP laser code.....set  
 \*Latch on.....as req'd  
 \*MSL OSB missile control page.....EO ON  
 \*LMFCD.....TAD  
 \*ILS.....PWR/set  
 \*TACAN.....TR/set  
 \*APU Gen.....OFF/RESET  
 \*APU.....OFF  
 EAC.....ARM  
 RDR ALTM.....NRM  
 Ladder.....stowed  
 \*Takeoff speed.....see chart on pg 8

Notes:

1. Cursor slew rate: STAT page 2 scroll to THRTL and adjust slew rate for cursors on TAD, TGP and HUD. Use UFC for numerical values then hit SLEW OSB to enter the value.
2. The ALT ALRT on the UFC can be set for terrain avoidance when not actively engaging a target, i.e. when the MRS/MRC aren't displayed or usable. It can also be used to avoid known/suspected threat WEZ..(MRS/MRC are set via weapons profile.) To change ALT ALRT select ALT ALRT on UFC and choose AGL, MSL or Ceiling alert as desired. Change value with UFC DATA rocker. Fourth press of ALT ALRT button exits the function.

## **TAKEOFF AND APPROACH SPEED CHARTS**

### **DIRECTIONS FOR USE OF CHARTS:**

Enter the appropriate chart in the left column at the desired flap configuration and proceed right to the aircraft gross weight. (Data derived from T.O. 1A-10A-1-1)

### **VR/TAKEOFF SPEEDS KIAS**

0°	103/113	113/123	123/133	132/142	140/150	149/159
7° MVR	99/109	109/119	118/128	127/137	135/145	144/154
	25000	30000	35000	40000	45000	50000

### **FLAPS VS GROSS WEIGHT LBS**

- Notes:**
- 1) Normal takeoff is at flaps 7° (MVR).
  - 2) Rotation speed (VR) is the airspeed at which the pilot initiates back (aft) stick pressure to achieve a rotation rate that will result in a takeoff attitude of 10° at the recommended takeoff speed (approximately 10 KIAS prior to takeoff speed).

### **APPROACH/TOUCHDOWN SPEEDS KIAS**

0° S/E	145	150	155	160	165	170
0°	120/110	130/120	140/130	150/140	160/150	170/160
20°	110/100	120/110	130/120	140/130	150/140	160/150
20° min run	100	110	120	130	140	150
	25000	30000	35000	40000	45000	50000

### **FLAPS VS GROSS WEIGHT LBS**

- Notes:**
- 1) Subtract 10 kts from two eng approach speed to obtain touchdown speed. (except for min run landing)
  - 2) Single engine (S/E) final approach speed is maintained until landing is assured.
  - 3) For crosswind components in excess of 20 kts add 10 kts to approach and landing speeds. (except S/E)



**TAXI**

- \*NWS.....ON
- \*Request taxi.....ATC/VHF/AM (fwd)
- \*Taxi Light.....ON
- \*Brakes.....check
- \*Turn needle.....check
- \*Flaps.....MVR
- \*Speed Brakes.....CLOSED
- \*Canopy.....CLOSED/light out
- \*Ejection seat.....ARMED

**BEFORE TAKEOFF**

- \*Position Lights.....STEADY
- \*Anti-Collision.....FLASH
- \*Request T/O.....ATC/VHF/AM (fwd)
- \*Landing light.....ON

**LINEUP CHECK**

*“Flaps, lights, APU, anti-skid, seat & heat”*

- \*Flaps.....confirm at MVR
- \*Lights.....confirm ON
- \*APU.....confirm OFF
- \*Anti-Skid.....ON
- \*Seat.....confirm ARMED
- \*Heat (pitot).....ON
- \*Engine runup.....90% core
- \*Eng instruments & caution lights.....checked
- \*Throttles.....max
- \*NWS.....off at 50 kts

**WEAPON PROFILE SETTINGS:**

DSMS - INV - Bomb Laser Code.....set as req'd  
 Release type.....select (OSB 6)  
 Fuze Type.....select (OSB 7)  
 Ripple quantity.....select (OSB 8)  
 Ripple Interval.....set (OSB 9)  
 Release mode.....as req'd  
 Auto-lase.....as req'd (OSB 6)  
 Lase time.....12 sec (OSB17)  
 MIN ALT warning.....set in PROF  
 HOT (Height Over Target).....(Flares)HOT (OSB 20)  
 Escape Manouver (SEM).....set (OSB 20)  
 CCIP CONSENT OPT.....5 MIL or 3/9 as req'd  
 SAVE new profile (OSB 3) & return to STAT page (OSB 1)

**Configure TGP:**

RMFCD - TGP .....select A-G mode (OSB 1)  
 LATCH ON/OFF.....as req'd  
 LSS (laser spot search).....code set as req'd (OSB 17)  
 L (Laser designation code).....code set as req'd (OSB 18)

[return to BEFORE TAXI checklist \(pg 2/2\)](#)

Notes:

1. *Fuze type:* If a MK82AIR is selected, setting the fuze to NOSE will have the bomb drop without the ballute deploying (low drag). If you select N/T or TAIL, the bomb will be dropped as a high drag bomb with the ballute deploying.
2. *Ripple interval has more to do with the weapons you are using than the target spread.*  
*Suggested ripple intervals: Mk-82 = 75' Mk-84 = 150' CBU-87 = 500' CBU-97 = 600'.*
3. *To chng CBU HOF: DSMS > INV > select stn to adjust > CBU > choose CBU type > HOF OSB to cycle.*
4. *Adjust the DSMS MIN ALT setting as required in order to determine the appropriate MRS (minimum range staple) for weapon release. To set min alt: DSMS > SEL desired stn > PROF > CHG SET > enter desired min alt on scratch pad > MIN ALT OSB > SAVE OSB > STAT.*
5. *CCRP mode only uses 5 MIL mode (MAN and 3/9 modes not valid)*
6. *Latch on/off - When set to ON, selecting the NWS button once will fire the laser and second press will discontinue it. When latch off, will only fire as long as nws button held.*
7. *Set the laser code that the laser will fire. If self-designating, you will want to make sure this code matches the laser code set for the weapon in the DSMS Inventory Store page. (By default both bomb and TGP will be set to code 1688) If buddy-lasing for another aircraft, this code will need to match the code the other aircraft is searching for in Laser Spot Search (LSS) mode. To set TGP laser code: select TGP > A-G > CNTL page > enter code on UFC > OSB 22 (L).*
8. *To set the laser code for the LGB store: select DSMS > INV > GBU-12 > GBU > GBU-12 > enter code on UFC > OSB 7 (LSR CODE).*

**EDITING WEAPON PROFILES NOTES:**

**1. Temporary change to stored profile:** If you select weapons using the MFCD OSB's on the main DSMS page an "M/" will be displayed in front of the weapon profile name. This "M/" indicates you are creating a temporary manual profile that WILL BE LOST once you deselect that profile.

**2. Edit stored profile:** To edit and change a stored profile, ensure no weapons are selected on the DSMS page. Press the PROF button (OSB 1) to list stored DSMS profiles. The profile names are listed in the left column. Select the profile you wish to edit by pressing OSB 19 and 20 (up/down arrows). Press the VIEW PRO button (OSB 3) and edit the profile as desired. When finished making changes to the profile, press SAVE (OSB 3). You have now changed the stored profile and saved it to DSMS memory, while keeping its original name.

**3. Create new profile:** This method involves editing a stored profile, renaming and saving it as new. A new profile will be added to the list, without changing or deleting the original profile. Ensure no weapons are selected on the DSMS page. Press the PROF button (OSB 1). You will see a list of stored profiles. Select the profile you want to edit by pressing OSB 19 and 20 (up/down arrows). Now press the VIEW PRO button (OSB 3) and edit the profile as desired. (select RET to return to PROF MAIN page, if you were on CHG SET page). Now create a name for your new profile by typing it into the CDU scratchpad and then press [ ]NEW (OSB 18). (or use the UFC by pressing LTR and then typing in the new name on the UFC scratchpad and then [ ]NEW.) Now save your new profile by pressing SAVE (OSB 3). You have now stored the profile in DSMS memory and will see it has been added to the profile list. When you select left or right DMS with the HUD as SOI, you will see your profile in the cycle. You can store up to a total of 20 weapon profiles in the DSMS.

**4. Multiple profiles:** based on attack type not just each weapon. ie A profile for Mk-82 20° low angle low drag delivery, another for Mk-82 medium alt toss, another for Mk-82 45° high alt dive bomb. A profile for Mavericks and one or two for rocket profiles.

**FENCE IN**

TACAN/NAV.....as req'd  
 Fuel check.....balance/BINGO  
 Ext Lights.....OFF (mid)  
 CMSP switches (MWS/JMR/RWR).....ON  
 CMSP mode selector.....MAN/SEMI/AUTO as req'd  
 CMSP PROG.....as req'd  
 ECM PROG.....as req'd  
 Master arm.....ON  
 GUN/PAC.....ARM/GUNARM as req'd  
 TGP.....ON  
 Laser arm.....ON  
 DSMS.....set as per briefing  
 AGM.....MSL (OSB 2)  
 AGM EO.....confirm ON  
 AIM9 cool.....MSL>OSB 19 (OFF) select  
 Contact JTAC.....as req'd

**FENCE OUT**

Stick master mode.....NAV  
 TACAN.....as req'd  
 Master arm.....SAFE  
 GUN/PAC.....SAFE  
 TGP.....OFF  
 Laser arm.....SAFE  
 CMSP mode selector.....STBY  
 AGM EO.....OFF  
 Ext Lights.....ON (aft)/STDY FLASH  
 Flight Check.....damage/fuel

**Note :** Complete FENCE IN check prior to entering the combat area. In actual combat, most of the items in the fence check should be done prior to or right after takeoff.

## GAU-8

### Configure weapon:

GUN/PAC.....ARM/GUNARM as req'd

Set HUD as SOI.....Coolie Hat Up Short

MIN ALT.....set as req'd in IFFCC 30mm menu

### Weapon Employment:

- 1) Stick master mode GUNS
- 2) Gunsight select as req'd DMS left short
- 3) Place pipper on target and pull trigger to PAC-1 to stabilize.
- 4) In range with pipper on target, pull trigger to PAC-2 to fire.

#### Notes:

1. Complete FENCE IN check prior to entering the combat area. (pg 12)
2. If GUN/PAC switch set to ARM, PAC will be engaged with the first stage of the trigger and will attempt to keep pipper over target. Second stage of trigger will fire gun. If set to GUNARM, PAC is disabled. Use GUNARM for strafing along length of a convoy.
3. CCIP gun reticle is default. To cycle to the other gunsights set HUD as SOI then press DMS Left Short.
4. If "CCIP INVALID" message appears on HUD during a gun run, you have two options a) Increase altitude above target altitude or min alt warning in IFFCC 30mm menu. b) Switch to 4/8/12 gun reticle or 4000' wind corrected gun cross.
5. To set min alt in IFFCC 30mm menu: IFFCC switch to TEST> on HUD menu SEL WEAPONS>ENTER>SEL 30MM>ENTER>SEL MIN ALT>SEL STORE>ENTER>SEL EXIT>ENTER.IFFCC switch to ON.
6. GAU-8 gunsights, there are four available gunsights. The first is the default CCIP GUN RETICLE and provides the most aiming info of the four. With CM ammo selected there will be two pippers in the center of the reticle. The center most pipper is for armour piercing (AP) rounds, the one to the lower right is for high explosive incendiary (HEI) rounds. If a min alt other than 0 has been entered in the IFFCC 30MM menu, the min range cue indicator will be displayed to the right of the reticle. The second sight is the CCIP GUN CROSS. Much like the CCIP gun reticle, but more compact and removes the analog range bar and moving target indices. Third sight is the 4/8/12 GUN RETICLE. When accurate target elevation is not available, this reticle provides three pippers (from the top ) calibrated to 4000', 8000' and 12000' slant ranges. The fourth sight is the 4000' GUN CROSS. It provides a 4000' wind corrected slant range solution.
7. To switch between the four available gunsights use DMS left short.

## ROCKETS

### Weapon Employment:

- 1) Stick master mode CCIP
- 2) Set HUD as SOI
- 3) DMS left/right to select desired profile
- 4) Place the CCIP Rocket Reticule over target by manoeuvring the aircraft.
- 5) Within 2 nm of target, the range bar in the reticle starts to unwind.
- 6) At around 1 nm, press and hold pickle to launch rockets.

#### Notes:

1. Complete FENCE IN check prior to entering the combat area. (pg 12)
2. In Rocket sight mode ("RKT" indication on bottom of reticule), the HUD will display the CCIP gun cross sight to follow a rocket attack with gun strafe.
3. Rocket time of flight indicated at top of HUD data block, bottom left corner of HUD.
4. To set min alt: DSMS>SEL desired stn>PROF>CHG SET>enter desired min alt via UFC scratch pad>MIN ALT OSB>SAVE OSB>STAT.
5. When releasing a ripple of rockets, they will land centered around the pipper aim point.
6. DO NOT select weapons using the MFCD OSBs on the main DSMS page. Use either the DMS (left/right short) with HUD as SOI, or select rocker on the UFC or the profile page on the DSMS and the activate profile OSB.

## UNGUIDED BOMBS (CCIP) MAN REL

### Weapon Employment:

- 1) Stick master mode CCIP
- 2) Set HUD as SOI
- 3) DMS left/right to select desired profile
- 4) Set the desired dive angle (10-45°) with the TVV.
- 5) Make lateral corrections as req'd to put the PBIL on the target.
- 6) Allow Pipper to track upwards along the PBIL toward the target.
- 7) Pickle when the Pipper is on the target.

#### Notes:

1. Complete FENCE IN check prior to entering the combat area. (pg 12)
2. Adjust the DSMS MIN ALT setting as required in order to determine the appropriate MRS (minimum range staple) for weapon release. To set MIN ALT: DSMS>SEL desired stn>PROF>CHG SET>enter desired min alt on scratch pad>MIN ALT OSB>SAVE OSB>STAT.
3. DO NOT select weapons using the MFCD OSBs on the main DSMS page.
4. Enter ripple interval via UFC scratch pad. Left side of HUD shows countdown to first bomb impact. Bombs will land centered around pipper aim point.
5. Fuze type: If a MK82AIR is selected, setting the fuze to NOSE will have the bomb drop without the ballute deploying (low drag). If however you select N/T or TAIL, the bomb will be dropped as a high drag bomb with the ballute deploying.
6. Ripple interval has more to do with the weapons you are using than the target spread. The Mk-82 as an example, you're ripple spacing is 75ft. Because 75ft between each bomb is the spacing at which the explosive yield of the Mk-82 produces the most damage. Any closer and you are not making the most of the weapons capability, any further and you're spreading your bombs too thin, and will be less effective as a result. Suggested ripple intervals: Mk-82 int = 75' Mk-84 int = 150' CBU-87 int = 500' CBU-97 int = 600'. Ripple single for soft targets. Ripple pairs for armoured targets.

## UNGUIDED BOMBS (CCIP) CR

### Weapon Employment:

- 1) Stick master mode CCIP
- 2) Set HUD as SOI
- 3) DMS left/right to select desired profile
- 4) Set the the desired dive angle with the TVV.
- 5) Make lateral corrections to place dashed reticle and pipper on target.
- 6) Press and HOLD the pickle button.
- 7) Make lateral corrections to place the PBIL on the Solution Cue
- 8) Maintain the dive angle, or make a gentle pull to "toss" the weapon.
- 9) The bomb(s) will come off as CCRP Aim Point flies through the Pipper.

#### Notes:

1. Complete FENCE IN check prior to entering the combat area. (pg 12)
2. Adjust the DSMS MIN ALT setting as required in order to determine the appropriate MRS (minimum range staple) for weapon release. To set MIN ALT: DSMS>SEL desired stn>PROF>CHG SET>enter desired min alt on scratch pad>MIN ALT OSB>SAVE OSB>STAT.
3. DO NOT select weapons using the MFCD OSBs on the main DSMS page.
4. Enter ripple interval via UFC scratch pad. Left side of HUD shows countdown to first bomb impact. Bombs will land centered around pipper aim point.
5. To set CCIP CR (consent to release) >IFFCC switch test>HUD menu> UFC DATA rocker cycles CONSENT OPT: OFF, 5 MIL & 3/9>IFFCC switch back to ON.
6. Fuze type: If a MK82AIR is selected, setting the fuze to NOSE will have the bomb drop without the ballute deploying (low drag). If however you select N/T or TAIL, the bomb will be dropped as a high drag bomb with the ballute deploying.
7. GBU-10/12's and CBU-97 are not eligible for the 5 MIL release inhibit.



## UNGUIDED BOMBS (CCRP)

### Weapon Employment:

- 1) Stick master mode CCRP
- 2) Set HUD as SOI
- 3) DMS left/right to select desired profile
- 4) Set desired target/location as SPI using one of the following methods:
  - a) HUD TDC over target and press TMS Fwd Long
  - b) TGP cursor on target, laser on, press TMS Fwd Long, laser off
  - c) Lock target with Maverick and press TMS Fwd Long
  - d) Hook TAD object TMS FWD Short then make SPI with TMS Fwd long
- 5) When the SPI has been set, the Azimuth Steering Line (ASL) on the HUD will indicate heading to SPI (target).
- 6) Designated target SPI will have SPI locator line extending from it to the TVV, or the TVV will have SPI locator line extending to the target, depending on if the SPI target is within the HUD field of view.
- 7) Manoeuvre the aircraft to align the IAM Reticle on the ASL.
- 8) The Release Cue will move from 12 o'clock of the IAM Reticle counter clockwise and when Release Cue is between the Max and the Min Range Caret, MAN REL will appear in the In Range Indication field. When In Range, HOLD DOWN the pickle button to drop weapon. Do not tap pickle button or this could result in a hung store.

#### Notes:

1. Complete FENCE IN check prior to entering the combat area. (pg 12)
2. DO NOT select weapons using the MFCD OSBs on the main DSMS page.
3. Hook means to select an object on the TAD. Valid objects to hook are: aircraft symbols, steerpoint symbols, transmitted SPI symbols, bullseye symbols and, MARK symbols.
4. With SPI set, the Azimuth Steering Line (ASL) on the HUD will indicate heading to SPI (target).
5. Time to Release Numeric (TTRN) next to the Solution Cue on the ASL will indicate the time in seconds until the weapon should be released.
6. When releasing a ripple of bombs, they will land centered around the pipper aim point.
7. CCRP mode only uses 5 MIL mode (MAN and 3/9 modes not valid)
8. Time to impact of first bomb displayed on left side of HUD once weapon away.
9. Abort on MRS.

## LASER GUIDED BOMBS (LGB)

### Designate Target:

- 1) RMFCD select TGP > A/G OSB
- 2) RMFCD make SOI
- 3) China Hat Aft Long slave to SPI
- 4) Crosshair slew to target
- 5) TMS Fwd Short. Select AREA/POINT
- 6) DMS UP/DOWN zoom in/out
- 7) Laser on, create SPI (TMS Fwd Long), laser off

### Weapon Employment:

- 1) Stick master mode CCRP
- 2) Set HUD as SOI
- 3) DMS left/right to select desired profile
- 4) Both the Azimuth Steering Line (ASL) and the SPI will indicate the proper heading to reach the target.
- 5) Manoeuvre the aircraft to align the PBIL on top of the ASL.
- 6) As range to target decreases, Time To Release Numeric (TTRN) will appear next to the Solution Cue and display time in seconds til bomb release.
- 7) When approx. 6 seconds from release, the ASL and Solution Cue will drop down the HUD, then HOLD DOWN the pickle button till solution cue passes through CCRP Bombing Reticule, the bomb(s) will then be released.
- 8) With the bomb(s) released, press the NWS button to fire the laser if AUTO LASE is not set ON. If laser firing, the "L" on the left side of the HUD will flash.

#### Notes:

1. Complete FENCE IN check prior to entering the combat area. (pg 12)
2. As the bomb guides to target, ensure that the targeting pod has an unobstructed line of sight to the target. Avoid any masking of the target by the aircraft. If there is masking, the M indication will be visible on the HUD. A high altitude and keeping the targeting pod on the same side as the target will reduced masking probability. Use the situational awareness cue on the TGP display to monitor this.
3. To the left of the laser status indication is the countdown timer of bomb time to impact.
4. DO NOT select weapons using the MFCD OSBs on the main DSMS page.
5. Lase 8-10 seconds for static targets. longer (ie 12 sec) for moving targets.

### JDAM GBU-38 (Designation via TGP)

LMFCD – DSMS.....select desired station  
 TGP.....RMFCD make TGP SOI  
 Slew TGP to WP.....china hat fwd long  
 Zoom TGP.....china hat fwd short  
 Slew TGP.....onto desired target  
 Laser.....on (NWS)  
 Create SPI.....TMS Fwd Long  
 Laser.....off (NWS)  
 Master mode switch.....set to CCRP

### JDAM (IAM) GBU-38

#### (Designation via mission planner and WP over known fixed target)

Set the steerpoint as SPI.....TMS aft long  
 DSMS.....select GBU-38  
 Master mode switch.....set to CCRP

#### Weapon Employment:

- 1) When the SPI has been set, the Azimuth Steering Line (ASL) on the HUD will indicate heading to the SPI (target).
- 2) Designated target SPI will have a SPI locator line extending from it to the TVV, or the TVV will have a SPI locator line extending to the target, depending if the target is within the HUD field of view.
- 3) Manoeuvre the aircraft to align the IAM reticule on the ASL.
- 4) The release cue will move from the 12 o'clock of the IAM reticule counter clockwise. When the release cue is between the Max and Min range caret, MAN REL will appear in the range indication field.
- 5) When in range, HOLD down the pickle button to drop the weapon. DO NOT tap the weapon release button as this can cause a hung store.

#### Notes:

1. Complete FENCE IN check prior to entering the combat area. (pg 12)
2. Fly straight and level towards long line.
3. Method 2 good for attacking target with known coordinates through an overcast cloud layer. WP must be placed over target in mission editor.
4. DO NOT select weapons using the MFCDS OSBs on the main DSMS page.

## AGM-65 MAVERICK

LMFCD.....set to TGP>A-G  
 RMFCD.....set to MAV  
 Swap MFCD's.....coolie hat down short  
 TGP.....RMFCD make TGP SOI  
 Slew TGP to WP.....china hat fwd long  
 Zoom TGP.....china hat fwd short  
 Slew TGP.....onto desired target  
 TGP to Point or Area Mode.....TMS up short  
 Laser on, create SPI (TMS Fwd Long), laser off

### Weapon Employment:

- 1) Set HUD as SOI
- 2) DMS left/right to select desired profile
- 3) Set MAV as SOI on LMFCD.
- 4) Slew MAV to SPI with china hat fwd long
- 5) Zoom view as desired with china hat fwd short
- 6) Lock MAV to target with TMS fwd short. (locked if crosshair flashing)
- 7) Keep hitting TMS fwd short until a valid lock is achieved.
- 8) When lock is achieved, press pickle button to launch MAV. Call "Rifle".
- 9) If more targets in same SPI area, repeat steps 4-9.

#### Notes:

1. Complete FENCE IN check prior to entering the combat area. (pg 12)
2. Lock on indicated by cross hair slightly vibrating.
3. It may take several attempts to lock Maverick even within range.
4. Switch to TGP as SOI and repeat above steps for next target.
5. If there are other targets nearby you can return to SPI by pressing china hat forward long and then slew the sensor onto a nearby target. It should snap onto them. I
6. TGP should be loaded on the right wing (stn 10), TGP should be displayed on RMFCD, MAV on LMFCD. This is why we swap MFCD's. Orbit to the right, towards the TGP.
8. To switch MAV seeker to boresight, china hat aft short. Then use MAV or HUD as SOI and slew MAV seeker as desired.
9. Ground stabilize MAV with TMS down short. (this will also break a bad MAV lock)  
 Space stabilize MAV with TMS left long.
10. DO NOT select weapons using the MFCD OSBs on the main DSMS page.

## AIR TO AIR WEAPONS

### Gun Use

Master mode control.....A2A mode (press and hold)

HUD as SOI.....Coolie Hat UP

Cycle AAS options.....DMS left or right short

#### Weapon Employment:

Place target wingtips in funnel & squeeze trigger to fire.

### AIM-9

To lock the seeker on to a target, you have several options:

- a) Boresight: Uncage seeker with china hat fwd short
- b) Target set as SPI, Slave all to SPI with China Hat Fwd Long
- c) Initiate a seeker conical scan with TMS Fwd Short

#### Weapon Employment:

- 1) Lock seeker to target.
- 2) When good tone, press and hold pickle button.

#### Notes:

1. Complete FENCE IN check prior to entering the combat area. (pg 12)
2. When the missile has acquired a target, the tone changes to a higher pitched 'growl'. The pitch will vary according to the quality of the IR lock.
3. **Boresight mode:** (default) Seeker fixed to boresight line. When attacking a target in boresight mode, uncage seeker prior to launch to confirm seeker has a good lock. Seeker will track if IR intensity is strong enough; otherwise seeker will start to drift and will need to be recaged. Manoeuvre aircraft to place reticle over target for a valid lock prior to launch.
4. **Uncaged mode:** Seeker no longer bound to boresight line and floating around the scan zone.
5. **Conical scan mode:** Seeker performs a conical scan pattern around boresight line to cover a greater volume of airspace ahead of aircraft.
6. HOTAS commands, Track =TMS fwd , Break Lock =TMS aft , Missile Reject =China Hat aft , Uncage Seeker = China Hat fwd.

## ILLUMINATION FLARES

### Weapon Employment:

- 1) Stick master mode CCRP
- 2) Set HUD as SOI
- 3) DMS left/right to select desired profile
- 4) Set desired target/location as SPI using one of the following methods:
  - a) HUD TDC over target and press TMS Fwd Long
  - b) TGP cursor on target, laser on, press TMS Fwd Long, laser off
  - c) Lock target with Maverick and press TMS Fwd Long
  - d) Hook TAD object TMS FWD Short then make SPI with TMS Fwd long

### Flare Employment:

- 1) Stick master mode CCRP
- 2) Set HUD as SOI
- 3) DMS left/right to select desired profile
  1. At 6 seconds on the TTRN, the Solution Cue will start fall down the ASL.
  2. Manoeuvre so that the Solution Cue falls through the CCRP pipper.
  3. When Solution Cue falls through the CCRP pipper, press the pickle button.

#### Notes:

1. Complete FENCE IN check prior to entering the combat area. (pg 12)
2. Hook means to select an object on the TAD.
3. In order to "hook" an object, there must be one there in the first place! Valid objects to hook are: aircraft symbols, steerpoint symbols, transmitted SPI symbols (mini wedding cakes), bullseye symbols and, MARK symbols.
4. With SPI set, the Azimuth Steering Line (ASL) on the HUD will indicate heading to SPI (target).
5. Time to Release Numeric (TTRN) next to the Solution Cue on the ASL will indicate the time in seconds until the weapon should be released.
6. Unlike bombing CCRP, you must manually press the weapon release button and not simply hold it down for automatic release when solution is achieved.
7. DO NOT select weapons using the MFCD OSBs on the main DSMS page.

## CLEARING HUNG STORE

Flight conditions.....Level flight/AP On  
 Wep station/class/type.....note on MFCD DSMS page  
 INV page.....select (OSB 5)  
 Hung station OSB.....select  
 Weapon class.....select  
 Weapon type.....select  
 LOAD station.....select (OSB 9)  
 STAT page.....select (OSB 1)  
 On DSMS main page.....select STAT (OSB 12)  
 Up/Down arrows.....scroll to hung station store  
 POWER OSB.....cycle OFF then ON  
 OSB 12 Press/Hold til.....DISPLAY PROGRAM page  
 LOAD OSB.....select  
 OSB 12.....select to designate as LOAD  
 OSB 12.....select again to access DTS Upload page  
 LOAD ALL OSB 10.....select to reload DTS (dots)  
 DSMS OSB.....select & check hung stn is now green

Note:

1. Hung store indicated oby red DSMS station.
2. HOLD DOWN the pickle button to drop weapon.
3. In order to avoid getting a hung store remember to press and hold the pickle until you hear or see that the store is released. Do not tap pickle button as this can result in a hung store.
- 4.The length of time pressing and holding the weapon release button is generally for 2-3 seconds.

### JTAC DATA

#### **Method 1** (manually enter JTAC coordinates in CDU)

CDU.....WAYPT MODE  
 OSB 9?.....make WPT  
 WP name.....entered  
 OSB 7.....save name  
 OSB 10.....switch to UTM  
 Grid check.....37T or 38T  
 Coordinates.....enter in CDU  
 OSB 16.....save WPT  
 STEER PT dial.....MISSION  
 TGP slave all to SPI.....china hat fwd long

#### **Method 2** (hook JTAC target data red triangle on TAD)

Make TAD SOI.....coolie hat left  
 Cursor.....slew onto JTAC target (red triangle)  
 Hook JTAC target.....TMS fwd Short  
 Make hooked JTAC target SPI.....TMS fwd Long  
 Slave all to SPI.....China hat fwd long

CAS 9-LINE BRIEFING.....[proceed to card \(pg 33\)](#)

#### **CREATING OVERHEAD MARKPOINTS:**

CDU MK (Mark Point) button.....press

or

#### **CREATING DESIGNATED MARKPOINT:**

HUD TDC, TAD, TGP or MAV seeker.....TMS right short

#### Notes:

1. With either overhead or designated markpoints set STEER PT dial MARK
2. CDU +- rocker to cycle mark points
3. To delete markpoints: TAD as SOI> Slew TAD cursor over map object (markpoints, red triangles etc.)>TMS up short to hook>Press OSB 17 on the TAD.
4. 25 markpoints available. If all used first will be overwritten.
5. To clear JTAC data target red triangle from TAD, use CNC (OSB 7). CNC = Cancel



## AIR REFUELING (AR)

Contact tanker VHF/AM.....request refueling  
 TACAN.....REC/tanker freq set  
 Master arm.....SAFE  
 GUN/PAC.....SAFE  
 TGP.....OFF  
 Laser arm.....SAFE  
 DSMS status page.....deselect all stns

### PRECONTACT:

CMSP mode switch.....STBY  
 RCVR LT.....as req'd  
 Exterior lights.....as req'd  
 Air refuel control lever.....open/READY light on  
 Contact tanker.....request contact on VHF/AM

### CONTACT:

Air refuel status lights.....LATCHED  
 Fuel flow.....confirm on gauge

### DISCONNECT:

Refuel/reset.....press/hold (NWS button)  
 Air refuel status lights.....DISCONNECT

### POST AIR REFUELING:

Air refuel control lever.....CLOSED  
 Fuel quantity.....checked  
 RCVR LT.....OFF  
 Exterior lights.....as req'd

#### Notes:

1. For another contact press refuel/reset button (NWS) confirm READY light on.
2. Pre-contact position is 1 nm behind tanker, in trail.
3. Ready light will stay illuminated 3 minutes after refuel control lever closed
4. When air refuel contact lever is open the EAC is disabled and autopilot will not work.

## REPAIRS

### HOT PIT:

AFTER LANDING checks.....[complete checklist \(pg 29\)](#)  
 NWS.....OFF  
 APU generator/APU.....OFF  
 DSMS status page.....deselect all stns  
 Intercom control rotary selector.....INT  
 Contact ground crew.....request ground power  
 Engines.....shut down

*(Wait for Repairs to be completed. When repaired continue checklist below)*

Request eng start.....ATC on VHF/AM (fwd)  
 Left engine.....start  
 Left eng instruments & hyd.....check  
 Right engine.....start  
 Right eng instruments & hyd.....check  
 Contact ground crew.....ground power disconnect

**REARMING**.....[proceed to checklist \(pg 28\)](#)

or

**REFUELING**.....[proceed to checklist \(pg 27\)](#)

or

**Takeoff without rearm/refuel**, go to checklist below:

**BEFORE TAXI (\* items)**.....[proceed to checklist \(pg 6\)](#)

#### Notes:

1. The airfield must belong to your coalition for it to rearm, refuel, repair. If unsure use F11 and check bottom left colour block. blue=friendly, grey=neutral, red=enemy.
2. Ask for ground power to keep CDU and other flight computers online during the time your engines are not providing electricity. (Going from APU power will cause some systems to reset)
3. Wait approximately 3 minutes for repairs to commence.
4. All panels will open, the jet goes up on invisible jacks, and repairs commence. Once the jet is lowered back to the ground, all panels close, and you are ready to rearm/refuel as req'd.
5. Engine ITT has to be at 150c or lower to start. Monitor your engines till ITT less than 150c.
6. If proceeding to the before taxi checklist, complete only items preceded by a \*

## HOT REFUELING

### HOT PIT:

AFTER LANDING checks.....[complete checklist \(pg 29\)](#)

NWS.....OFF

APU generator/APU.....OFF

DSMS status page.....deselect all stns

Canopy.....as desired

Fuel display selector.....MAIN

Intercom control rotary selector.....INT

Contact ground crew.....request fuel load

### When refueling complete:

Fuel display.....confirm fuel load

**REARMING**.....[proceed to checklist \(pg 28\)](#)

**Takeoff without rearm** continue to checklist below:

**BEFORE TAXI (\* items)**.....[proceed to checklist \(pg 6\)](#)

#### Notes:

1. Do not turn on TGP until clear of hot pit area.
2. The airfield must belong to your coalition for it to rearm, refuel, repair. If unsure use F11 and check bottom left colour block. blue=friendly, grey=neutral, red=enemy.
3. If proceeding to the before taxi checklist, complete only items preceded by a \*

## HOT REARM

### HOT PIT:

AFTER LANDING checks.....[complete checklist \(pg 29\)](#)  
 NWS.....OFF  
 APU generator/APU.....OFF  
 DSMS status page.....deselect all stns  
 Canopy.....as desired  
 Intercom control rotary selector.....INT  
 Contact ground crew.....request desired payload

### When rearming complete:

DSMS.....update per new load as below  
 OSB 12 Press/Hold til.....DISPLAY PROGRAM page  
 LOAD OSB.....select  
 OSB 12.....select to designate as LOAD  
 OSB12 .....select again to access DTS Upload page  
 LOAD DSMS OSB 18.....select to reload DSMS

REFUELING.....[proceed to checklist \(pg 27\)](#)

or

**Takeoff without refueling** continue checklist below:

**BEFORE TAXI (\* items)**.....[proceed to checklist \(pg 6\)](#)

#### Notes:

1. Do not turn on TGP until clear of hot pit area.
2. The airfield must belong to your coalition for it to rearm, refuel, repair. If unsure use F11 & check bottom left colour block. blue=friendly, grey=neutral, red=enemy.
3. If proceeding to the before taxi checklist, complete only items preceded by a \*

## AFTER LANDING

Speed brakes.....closed  
Flaps.....UP  
Anti-skid switch.....OFF  
Landing/taxi light.....as required  
TGP.....OFF  
Ejection seat ground safety lever.....SAFE  
Canopy.....as desired  
CMSP MODE switch.....STBY  
CMSP system switches.....OFF  
CMSP.....OFF  
Pitot heat.....OFF  
Position lights.....FLASH  
Anti-collision lights.....OFF

**REPAIRS**.....[proceed to checklist \(pg 26\)](#)

or

**REARMING**.....[proceed to checklist \(pg 28\)](#)

or

**REFUELING**.....[proceed to checklist \(pg 27\)](#)

or

**SHUTDOWN**.....[proceed to checklist \(pg 30\)](#)

## SHUTDOWN

Landing/taxi light.....OFF  
 NWS.....OFF  
 Standby attitude indicator.....cage  
 MASTER armament switch.....SAFE  
 GUN/PAC armament switch.....SAFE  
 LASER armament switch.....SAFE  
 TGP.....OFF  
 CICU.....OFF  
 JTRS.....OFF  
 IFFCC switch.....OFF  
 MFCD (L/R).....OFF  
 EGI switch.....OFF  
 CDU switch.....OFF

*(After 5 minutes at idle. Taxi time may be included if core rpm < 80%)*

Left throttle.....OFF  
 Right throttle.....OFF  
 Canopy.....OPEN  
 Inverter switch.....OFF  
 Battery switch.....OFF  
 Boarding ladder.....deploy

### CMSP DISPENSE PROGRAMS

PROG	CHAFF	FLARE	INTERVAL	CYCLE	THREAT
A	2	0	1 sec	10	RDR
B	4	0	0.5 sec	10	RDR
C	0	4	1 sec	10	IR
D	2	2	1 sec	10	RDR/IR
E	2	2	0.5 sec	10	RDR/IR
F	4	4	1 sec	10	RDR/IR
G	4	4	0.5 sec	10	RDR/IR
H	1	0	1 sec	1	RDR
I	2	0	1 sec	1	RDR
J	0	1	1 sec	1	IR
K	0	2	1 sec	1	IR
L	1	0	1 sec	20	RDR
M	0	1	1 sec	20	IR
N	2	1	2.25 sec	2	RDR/IR

[Return to BEFORE TAXI checks \(pg 6\)](#)

#### Notes:

There are six general types of dispense programs:

1. Mix of chaff and flares released in a fast interval to defend against an incoming missile of unknown type (infrared or radar guided). (i.e. PROG E)
2. Mix of chaff and flares released at a low interval over a long period of time. When entering a target area, you may wish to activate such a program to act as a preventative measure against both infrared and radar guided air defense systems. (i.e. PROG F)
3. Chaff-only released at a fast interval. Use this program to defend against an incoming radar guided air defense system. (i.e. PROG B)
4. Chaff-only released at a low interval over a long period. When entering a target area, you may wish to use such a program to act as preventative measure against radar guided air defense systems. (i.e. PROG L)
5. Flares-only released at a fast interval. Use this program to defend against an incoming infrared guided missile system. (i.e. manually program 1 flare, every .50 sec, x20).
6. Flares-only released at a low interval over a long period. When entering a target area, you may wish to use such a program to act as preventative measure against infrared guided missile systems. (i.e. PROG M)

*Modifying a CMSP program. Use the NXT rocker to select which of the 26 available PROG's you want to modify. (PROG's O-Z are all identical so it is best to only manually program these slots!). Now right click DISP switch to go to menu, use SET buttons to select value, use NXT rocker to adjust selected value, when finished push RTN button to save the modified program and left click DISP switch x2 to exit menu.*

## RWR THREAT CHART

RWR SYMBOL	WEAPON NAME	GUIDANCE	ENGAGEMENT MAX RANGE	ENGAGEMENT MAX ALT	ECM PROG
--	ZU-23	OPT	1.0nm	6500'	--
--	SA-18 "IGLA"	IR	2.5nm	7000'	--
--	SA-9 "STRELA-1"	IR	6.5nm	11000'	--
--	SA-13 "STRELA-10"	IR	2.7nm	15000'	--
A	ZSU-23 "SHILKA"	RADAR	1.5nm	6500'	AAA
S6	SA-19 "TUNGUSKA"	RADAR	4.0nm	16000'	SAM2
03	SA-3 "GOA"	RADAR	8.5nm	59000'	SAM1
06	SA-6 "KUB"	RADAR	13.0nm	33000'	SAM1
08	SA-8 "OSA"	RADAR	5.0nm	21000'	SAM1
10	SA-10 "S-300" Tracking Radar	RADAR	32.0nm	98000'	SAM2
BB	SA-10 "S-300" Search Radar	SEARCH	32.0nm	98000'	SAM2
11	SA-11/17 "BUK"	RADAR	19.0nm	73000'	SAM2
15	SA-15 "TOR"	RADAR	6.5nm	26000'	SAM2
50	A-50U	RADAR	--	--	AIR
23	Mig-23	RADAR	--	--	AIR
25	Mig-25	RADAR	--	--	AIR
29	Mig-29/Su-27/Su-33	RADAR	--	--	AIR
30	Su-30	RADAR	--	--	AIR
31	Mig-31	RADAR	--	--	AIR
34	Su-34	RADAR	--	--	AIR
F4	F-4	RADAR	--	--	AIR
M2	Mirage200-5	RADAR	--	--	AIR
U	Tornado	RADAR	--	--	AIR

Notes: 1)Max engagement range/alt tested using player controlled A-10C. (exceptions were the SA-3, SA-10, SA-11 as these weapons reach well beyond the ceiling of the A-10C).

2)Plan flight to stay outside or above the engagement envelope of the threat weapon.

3) For an IR only threat such as the SA-18 "IGLA" consider manually programming a flares-only, fast release program.



**CAS 9-LINE BRIEFING**

1. IP: \_\_\_\_\_

2. Heading: \_\_\_\_\_

Offset: \_\_\_\_\_

3. Distance: (IP to Target in NM) \_\_\_\_\_

4. Target Elevation (in Feet/MSL) \_\_\_\_\_

5 Target Description: \_\_\_\_\_

6 Target Location: \_\_\_\_\_

(Lat/Long, Grid, Offset or Visual)

7. Target Mark: \_\_\_\_\_

(WP, Laser, IR, Beacon)

Code: (actual Code) \_\_\_\_\_

8. Location of Friendlies: \_\_\_\_\_

Position Marked By: \_\_\_\_\_

9 Egress: \_\_\_\_\_

REMARKS:

JTAC COORDINATES.....[return to checklist \(pg 24\)](#)

## WEAPON PROFILE Z-DIAGRAM CHARTS

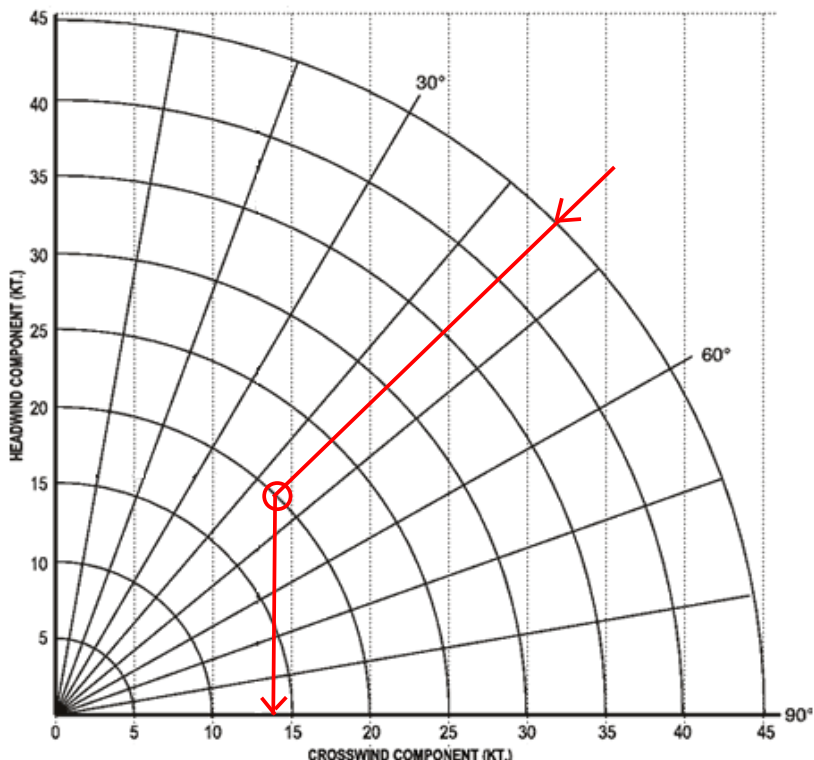
<b>DELIVERY TYPE</b> ie "30 LAHD" <b>WEAPON TYPE</b> ie "CBU-87" 			<b>NOTES:</b> VLD (Visual Level Delivery). Level delivery. Less than 5° climb or dive at release LAHD (Low Angle High Drag). Dive less than 30° for high drag or CBU weapon. LALD (Low Angle Low Drag). Dive of less than 30° for low drag weapon. DB (Dive Bomb). Dive of 30° or greater. HADB (High Altitude Dive Bomb). Dive of 30° or greater. HARB (High Altitude Release Bomb). Dive of 30° or more. LAT (Low Altitude Toss). Release altitude is below 10,000' AGL. MAT (Medium Altitude Toss). Release altitude is 10,000' AGL or higher. LAR (Low Angle Rocket). Dive of 15° or less. HAR (High Angle Rocket). Dive of more than 15°. LR (Loft Rocket). Release angle of level to 45° of climb.					

## WEAPONS & CAPABILITIES GUIDE

NAME	GUIDANCE	TARGETS	NOTES
30 mm CM (GAU-8 )	N/A	Soft skinned up to armor	Combat mix of 1 HEI every 5 AP
30 mm HEI (GAU-8)	N/A	Soft skinned	High explosive incendiary
Mk1 (training rocket)	N/A	<b>Training only</b>	Inert warhead practice round
Mk5 (Rocket)	N/A	Armour	High explosive anti-tank round
Mk61 (training rocket)	N/A	<b>Training only</b>	Inert warhead practice round
M151 (Rocket)	N/A	Personnel	Anti-personnel fragmentation
M156 ( WP rocket)	N/A	Target marking	White phosphorus smoke
M274 (training rocket)	N/A	<b>Training only</b>	Training smoke marker
M257 (Illumination rocket)	N/A	Battlefield illumination	Para-flare warhead, 100 sec burn
Mk-82 (unguided bomb)	N/A	Unarmored & lightly armored targets	LDGP 500 lb. Mount on TER or SER
Mk-82AIR (unguided bomb)	N/A	Unarmored & lightly armored targets	500 lb. ballute high or low drag Mount on TER or SER racks
Mk-84 (unguided bomb)	N/A	Armored targets	2000 lb. SER only
CBU-87 (cluster bomb)	N/A	Anti-Armour/personnel	950 lb All purpose cluster bomb
CBU-97 (cluster bomb)	N/A	Armour	1000 lb. 40 IR sensor skeets
BDU-50LD & HD (training bomb)	N/A	<b>Training only</b>	Inert version of Mk-82LD & HD
BDU-33 (training bomb)	N/A	<b>Training only</b>	Inert. Mimics Mk-82 ballistics
LUU-2 (paraflare)	N/A	Battlefield illumination	Visible spectrum, 4.5 min burn 8 LUU-2 per Suu-25 dispenser
GBU-10 (guided bomb)	Laser (LGB)	Mobile hard, fixed soft, fixed hard	2500 lb, LGB version of Mk-84. SER only
GBU-12 (guided bomb)	Laser (LGB)	Mobile hard, fixed soft, fixed hard, armour	600 lb, LGB version of Mk-82 SER or TER capable
GBU-38 (guided bomb)	GPS (JDAM)	High priority fixed	Day/night, all weather, fire & forget version of Mk-82.
GBU-31 (guided bomb)	GPS (JDAM)	High priority fixed	Day/night, all weather, fire & forget version of Mk-84.
CBU-103 (guided cluster bomb)	Inertial Nav	As per CBU-87	CBU-87 with WCMD via INS
CBU-105 (guided cluster bomb)	Inertial Nav	As per CBU-97	CBU-97 with WCMD via INS
AGM-65D (guided missile)	IIR seeker	Armour, air defence, fortified	Day/night/all weather, 125 lb shaped charge warhead.
AGM-65G (guided missile)	IIR seeker	Hardened tactical	Day/night/all weather 300 lb blast penetrator fragmentation
AGM-65H (guided missile)	EO CCD TV seeker	Armour, air defence, fortified	Day/good weather, 125 lb shaped charge warhead
AGM-65K (guided missile)	EO CCD TV seeker	Large Hardened	Day/good weather. 300 lb blast penetrator fragmentation
TGM-65D/G/H & CATM-65K	As per AGM-65D/G/H/K	<b>Training only</b>	Inert training versions of the AGM-65D/G/H/K
AIM-9M (guided missile)	IIR seeker	Aircraft/Helo's	Mounted on dual rail

**AIRPORT DATA**

AIRPORT	ELEV	RUNWAY	LENGTH	TACAN CH	ILS	TOWER FRQ
Gudauta	82'	15/33	8200'	--	--	130.00
Soganlug	1469'	13/31	7800'	--	--	139.00
Vaziani	1492'	14/32	8200'	22X	108.75	140.00
Kobuleti	59'	07/25	7800'	57X	RWY 07-111.5	133.00
Kutaisi	148'	08/26	8200'	44X	RWY 08-109.8	134.00
Senaki	39'	09/27	7800'	31X	RWY 09-108.7	132.00
Batumi	36'	13/31	7800'	16X	RWY 13-110.3	131.00
Sukhumi	39'	12/30	8200'	--	--	129.00
Tbilisi Lochini	1528'	13/31	9800'	--	RWY 13-110.3 RWY 31-108.9	138.00
Anapa	148'	04/22	9500'	--	--	121.00
Gelendzhik	82'	04/22	5900'	--	--	126.00
Maykop	590'	04/22	10500'	--	--	125.00
Krasnodar Center	98'	09/27	8200'	--	--	122.00
Krasnodar Pashkovsky	112'	05/23	10100'	--	--	128.00
Novorossiysk	131'	04/22	5800'	--	--	123.00
Krymsk	66'	04/22	8500'	--	--	124.00
Mineralnye Vody	1050'	12/30	12700'	--	RWY 12-111.7 RWY 30-109.3	135.00
Nalchik	1410'	06/24	7500'	--	RWY 24-110.5	136.00
Beslan	1771'	10/28	9800'	--	RWY 10-110.5	141.00
Sochi Adler	98'	06/24	10100'	--	RWY 06-111.1	127.00
Mozdok	499'	08/26	10100'	--	--	137.00
Nellis	1870'	03L/21R 03R/21L	10100' 10000'	--	--	--
Reserved						
Reserved						
Reserved						

**CROSSWIND CHART****DCS A-10C CROSSWIND LIMITS (Maximum)**

Dual hydraulic system operating	35 knots
Single hydraulic system operating	30 knots
Manual reversion (two engines)	20 knots
Manual reversion (single engine)	10 knots (only if ejection not possible)
Formation take-off & landing	15 knots (steady or gust)
External fuel tanks	25 knots
X-wind greater than 20 knots	Add 10 knots to approach and landing speeds (unless single engine)

*Example: Runway in use is rwy 27, winds are 315 at 20 kts. The winds are 45 degrees off the runway heading. (315 minus 270 = 45) Enter chart at 45° and follow it down until it intersects the 20 kt arc. Where it intersects drop straight down to read the crosswind component of approx. 14 knots. To convert m/s to kts multiply m/s x 1.943844.*

## MISSION DATA CARD

CALLSIGN		FLT 1/		TASK		FUEL WT Lbs			T/O WT		VR	
OWNID		GROUPID				WEAPONS WT Lbs			BINGO FUEL			
CM	HEI	TP	WEAPONS LOADOUT (STNS L-R) QTY/DI						CHAFF	FLARES		
1	2	3	4	5	6	7	8	9	10	11		
PRI TARGET		STP	WEAPON		DELIVERY		THREATS		CM/ECM PROG		MIN SAFE ALT	
SEC TARGET		STP	WEAPON		DELIVERY		THREATS		CM/ECM PROG		MIN SAFE ALT	
TANKER CS			TANKER WP			TANKER TCN		TANKER FRQ		TANKER ALT		
DEPART FIELD		TWR FRQ		STP	TCN		ILS/RWY		RWY LENGTH		WX	
HOME FIELD		TWR FRQ		STP	TCN		ILS/RWY		RWY LENGTH		WX	
DIVERT FIELD		TWR FRQ		STP	TCN		ILS/RWY		RWY LENGTH		WX	
TGP LASER CODE			LASER SS CODE			GBU LASER CODE			BULLSEYE			
AWACS (CS/FRQ)			SEAD (CS/FRQ)			CAP/ESCORT (CS/FRQ)			JTAC (CS/FRQ)			
NOTES												

## DRAG INDEX CHART

### Suspension Equipment

### DI

DRA/LAU-105 (AIM-9 Dual Rail Adapter).....	0.23
LAU-117 (Maverick Single Rail).....	0.20
LAU-88 (Maverick Triple Rail).....	0.50
BRU-42 TER (Bombs).....	0.74
LAU-131 (Rockets/Full).....	0.29
LAU-131 (Rockets/Empty).....	0.80
SUU-25(Flare Launcher).....	0.98

### Stores Drag Index (Suspension equipment not included)

LITENING (TGP).....	1.17
ALQ-131 (ECM).....	1.18
MXU-648 (Baggage Pod).....	0.75
600 Gal Tank.....	1.45
BDU-33.....	0.02
MK-82LD.....	0.14
MK-82AIR.....	0.38
GBU-12.....	0.51
GBU-38.....	0.14
MK-84.....	0.40
GBU-10.....	1.46
GBU-31.....	0.40
CBU-87/97/103/105.....	1.17
AGM-65.....	0.82
AIM-9M.....	0.40

#### *Notes:*

- DI = Drag Index.
- Interference drag exists and is included in the Individual drag indexes, where significant.
- Baseline aircraft is clean with 11 pylons installed; leading edge slats retracted, and chaff/flare with cover plate installed. (Baseline aircraft drag index = 0)
- Drag of flares is included with SUU-25 flare launcher.
- Drag of 2.75 inch rockets is included with LAU-131.

### DCS A-10C FUEL PLANNING WORKSHEET

FUEL LOAD =		TOTAL GROSS WEIGHT AT STARTUP =						
Phase of Mission	Power Setting	Altitude Feet	Airspeed KIAS	Distance NM	Time Min	Fuel Flow lbs/hr	Fuel Burn lbs	Total Gross Wt. Lbs.
Start/ taxi & take-off	MAX	SL	---	2 NM	1 MIN	---	500	
Climb								
Cruise								
Playtime (Loiter)								
Tanker Anchor Point (In)								
Tanker Anchor Point (Out)								
Combat	Max							
Climb								
Cruise to Home Field								
Cruise to divert Field (at VBR)								
<b>RESERVE FUEL =</b>							1500	
<b>BINGO FUEL</b> (Bingo fuel = climb + cruise + divert + reserve.) =								

**Notes:**

-Data basis: Standard day, zero wind conditions.

-Max Internal fuel = 10,700 lbs

-Assumes all bombs, missiles, ammo and flares expended in combat.

-Bingo fuel. A pre-briefed fuel state that allows the aircraft to return to base or alternate, if required, using preplanned recovery parameters and arriving with normal recovery fuel as defined below.

-Normal recovery fuel. The fuel on initial or at the final approach fix (FAF) at the base of intended landing or alternate. Establish fuel quantity as per operational directive or 1,500 lbs, whichever is higher.

-VBE = maximum endurance speed. (17.5 units AoA)

-VBR = maximum range speed. (15.6 units AoA)

-This document made for DCS A-10C simulation. Not suited for real world operations.



### **Author Notes and Acknowledgments**

Originally a rough collection of notes and tips gleaned from the manuals, forums, training guides, video's and checklists for my own personal use. I've tidied it up a bit and am putting it out for anyone who would like to use it for non-commercial use.

#### **Reasons for this checklist/QRH (Quick Reference Handbook):**

- 1) I wanted a checklist that was formatted to more closely resemble the checklists used in my flt ops dept.
- 2) I've gone through the lessons and used many of the superb community based training guides and checklists. I'm getting comfortable with the location of the various switches and controls in the virtual A-10C, and as such wanted a checklist that reflected this and was presented in a more abbreviated format.
- 3) The checklist should be in a format that works equally well as both a printed and electronic document. Designed to fit in standard plastic approach plate protectors 5.5x8.5" (ie the ASA 7-Ring Approach Plate Sheet Protectors), this PDF also works very well on the IPAD being fully indexed with hyperlinks and return to index link on each page.
- 4) I am not able to fly the sim every day, so it was important that the checklist would guide me (acting as a refresher) and help me to take a cold jet through to takeoff, fence in/out checks, after landing and shutdown checks. After landing if you need repairs, refuel or rearm you stay in the checklist and it will flow you all the way back to take-off. As well the checklist would incorporate quick reference guides for weapons employment, air refueling, hot pit rearming, refueling and repairs.
- 5) The checklist includes items on TM Warthog HOTAS to ensure it is properly configured prior to start.
- 6) For calculating unknown factors in the fuel planning worksheet I suggest the following charts from T.O. 1A-10A-1-1; Figure A4-1 (Optimum Cruise Altitude for Short Range Missions), Figure A3-1 (Maximum Thrust Climb, 2 sheets), Figure A4-3 (Constant Altitude Cruise, two sheets), and A6-2 (Combat Fuel Flow).

I can not take credit for all of the information in this document. My contribution is to a certain degree, the assembling and reformatting information it into a single document.

This checklist would not be possible without the invaluable help found on the DCS and SimHQ forums, as well as the training documents and checklists created by the community. With this in mind I would like to thank the following in particular: BlueRidgeDx, Derelor, EinsteinEP, James "Eddie" Knight, MemphisBelle, nemises, paulrkii, shu77, toby23, War Hawks, WarriorX. Special thanks to the teams at Eagle Dynamics and Digital Combat Simulator, for an amazing simulation. Any errors in the document are mine.

Cheers

Lobo

### Combined Arms Quick Reference

Ammunition maintenance interrupt	"LCtrl - LShift - R"	Ammo maintenance
Ammunition reloading manual start	"LCtrl - R"	Ammo maintenance
Rearming	"LAlt - I"	Ammo maintenance
Chat read/write All	"LShift - Tab"	General
Multiplayer chat - mode All	"Tab"	General
Multiplayer chat - mode Allies	"LCtrl - Tab"	General
Group Control Mode	"G"	Ground unit
Launch Green Flare	"LAlt - 2"	Ground unit
Launch Red Flare	"LAlt - 1"	Ground unit
Launch White Flare	"LAlt - 3"	Ground unit
Cruise control	"T"	Moving
Autopilot	"C"	Moving
Vehicle Accelerate	"W"	Moving
Vehicle Brake	"S"	Moving
Vehicle Shift Gear Down	"Z"	Moving
Vehicle Shift Gear Up	"X"	Moving
Vehicle Turn Left	"A"	Moving
Vehicle Turn Right	"D"	Moving
Hand Brake Toggle	"H"	Moving
Communication menu	"\	Radio Communications
High Voltage/Emission Toggle	"LShift - I"	Sensors
IFF test	"I"	Sensors
Night Vision Gain Down	"RAlt - N"	Sensors
Night Vision Gain Up	"RCtrl - N"	Sensors
Night Vision ON/OFF	"N"	Sensors
Plan Position Indicator	"RCtrl - F10"	Sensors
Radar scale in	"RCtrl - ="	Sensors
Radar scale out	"RCtrl - -"	Sensors
Rangefinder Activate	"L"	Sensors
Rangefinder Reset	"RCtrl - L"	Sensors
Sight Elevation Correction Decrease	"End"	Sensors
Sight Elevation Correction Increase	"Home"	Sensors
Sight Reticle Alternate	"LCtrl - F"	Sensors
Sight Reticle Light Toggle	"F"	Sensors
Sight Zoom In	"="	Sensors
Sight Zoom Narrow (press and hold)	"O"	Sensors
Sight Zoom Out	"_"	Sensors
Rotate turret left	"Left"	Targeting
Rotate turret right	"Right"	Targeting
Track Target On/Off	"RShift - L"	Targeting
Turret down	"Down"	Targeting
Target Lock	"Enter"	Targeting
Target Unlock	"Back"	Targeting
Turret to hull align	"Num5"	Targeting
Turret up	"Up"	Targeting
Binocular view	"B"	View
Isometric view	"Insert"	View
Toggle Driver/Gunner Role	"LCtrl - C"; "V"	View
Fire Secondary Weapon	"LShift - Space"	Weapon
Fire Selected Weapon	(mouse)	Weapon
Fire selected weapon	"Space"	Weapon
Turret select	"Q"	Weapon
Turret weapon select	"E"	Weapon
Select feed slot #1	"1"	Weapon
Select feed slot #2	"2"	Weapon

**SUMMARY OF CHANGES****Revision # 8d**

Two versions of the checklist are now provided: Original black cover, and a new white (ink friendly) cover

Pg 32 Added Mirage 2000 to RWR threat chart

Pg 36 Added Tornado to RWR threat chart

Pg 36 Renamed Kopitnari to Kutaisi

Pg 36 Kutaisi ILS Frequency corrected to 109.8

42 Added combined arms quick reference key summary

Pg 43 Summary of changes page cleaned up

**Revision # 8c**

Pg 3 Index revised with addition of drag index and fuel planing pages

Pg 4 Added "APU GEN.....OFF"

Pg 13 Corrected Coolie hat up not China hat

Pg 20 TMS up short corrected to include area mode

Pg 27 & 28 Proceed to checklist pg # corrected

Pg 32 Corrections/additions to RWR threat chart

Pg 38 Added space to record weapon drag index for each station

Pg 39 Drag Index chart added

Pg 40 Fuel Planning worksheet added

Pg 41 Added note 6 regarding T.O. 1A-10A-1-1 performance charts

**Revision # 8b**

Pg 2 Note added regarding the summary of changes page

Pg 3 Index renamed "TABLE OF CONTENTS"

Pg 3 Hyperlink "Return to Index" on each page renamed "Return to TOC"

Pg 3 TOC updated with pages added for crosswind and weapon capabilities

Pg 6 Error in EGI INS alignment note corrected

Pg 6 Spelling error of CICU corrected

Pg 32 Corrected errors showing SA-9 and SA-13 displaying RWR symbols.

Pg 32 Changed color and order of RWR threats. Grouped based on guidance

Pg 35 Added weapons & capability guide for the A-10C

Pg 37 Added crosswind chart & max limits for A-10 under various conditions

Pg 42 Added summary of changes page

Pg 35-41 Pages reordered & renumbered

**Revision 8a**

Original public release version.

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