BY ORDER OF THE SECRETARY OF THE AIR FORCE

AIR FORCE MANUAL 11-2AC-130J, VOLUME 3, ADDENDUM-A

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Flying Operations

AC-130J OPERATION CONFIGURATION/MISSION PLANNING

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This manual implements Air Force Policy Directive (AFPD) 11-2, *Aircrew Operations*, and AFPD 11-4, *Aviation Service.* It establishes procedures for the operation of the AC-130J aircraft to accomplish their worldwide operational and training missions and establishes basic gun deck configuration, standard equipment, and location of such equipment aboard the AC-130J aircraft. This manual applies to all civilian employees and uniformed members of the Regular Air Force and Air Force Reserve who operate or maintain AC-130J aircraft. This publication does not apply to the United States Space Force. This publication does not apply to the Air National Guard. It provides the most acceptable policies and procedures for most circumstances, but does not replace sound judgment. The authorities to waive wing/unit level requirements in this manual are identified with a Tier ("T-0, T-1, T-2, T-3") number following each compliance statement. See Department of the Air Force Instruction (DAFI) 33-360, *Publications and Forms Management*, for a description of the authorities associated with the Tier numbers. This publication may be supplemented at any level, but all direct supplements must be routed to the OPR of this publication for coordination prior to certification and approval. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the manual OPR for non-tiered compliance items. This Instruction requires the collection and or maintenance of information protected by the Privacy Act of 1974 authorized by Department of Defense Directive (DoDD) 5400.11, DoD Privacy Program. The applicable SORN F011 AF XO A, Military Automated Personnel Records Management System is available at **http://dpclo.defense.gov/Privacy/SORNs.aspx.** When personal information is collected, personnel will be provided with a Privacy Act Statement. The applicable Privacy Act System of

Records Notice (SORN), F011 AF XO A, Military Automated Personnel Records Management System (ARMS), is available at **http://dpclo.defense.gov/Privacy/SORNs.aspx**. Ensure the applicable records prescribed adhere to the records disposition described in the SORN. Ensure all records generated as a result of processes prescribed in this publication adhere to AFI 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through the appropriate functional chain of command.

Chapter 1

GENERAL GUIDANCE

1.1. General. This manual establishes basic gun deck configuration, standard equipment, and its location aboard the AC-130J aircraft. The gun deck limitations listed here are the most typically encountered on a daily basis.

1.2. Roles and Responsibilities. Operational plans must consider the most appropriate configuration that satisfies mission requirements and permits the minimum amount of variations and man-hours to change. USAF units performing services on AC-130J aircraft (i.e., maintenance, aerial port, and aircrew flight equipment) are responsible for configuring the aircraft in accordance with this addendum and as outlined in mission directives, to include equipment stowage/installation in accordance with the configuration and equipment tables. Aircrew Flight Equipment (AFE) personnel will ensure all life support equipment is positioned on the aircraft to meet mission requirements. **(T-3)**. Maintenance personnel will ensure all required and mission specific equipment is positioned aboard the aircraft to meet mission requirements. **(T-3)**. After departure from home station, the aircrew will accomplish all configurations with assistance by maintenance/aerial port personnel if available. **(T-3)**. During preflight, aircrew will ensure required mission equipment has been provided and is properly installed. **(T-3)**. When the aircraft configuration is not completed prior to aircrew show time, the Aerial Gunner will assist in the completion of the configuration, after accomplishing required predeparture duties (i.e., preflight, loading, etc.). **(T-3)**. Aerial Gunners have overall responsibility for configuration management and proper installation of equipment on the aircraft. **(T-3)**.

1.3. Modifications. The coded configurations of this regulation may require modification for a specific mission. Each modification must be carefully evaluated prior to mission execution to ensure maximum flight safety and compatibility with aircraft equipment. **(T-3)**. Each mission directive will identify the basic configuration by code and the modification, if necessary, to satisfy mission requirements. **(T-3)**. For example, a Ferry/Depot input mission may require additional equipment installed/removed.

1.4. Weight and Balance.

1.4.1. Configuration equipment and necessary supply changes affect aircraft weight and balance. To standardize equipment quantities and location, items shown in **Table 2.1** will be included in the aircraft basic weight and remain on the aircraft except for maintenance, inspection, and when directed by this manual. **(T-3)**. Equipment listed in **Table 1.1** will be added as necessary when computing the weight and balance and entered in Communications/Navigation/Identification-Management Unit (CNI-MU) and references 5, 6, or 7 of DD Form 365-4, *Weight and Balanc*e *Clearance Form F-Transport/Tactical*. **(T-3)**. The loadmaster will enter the weight contained in the required equipment table for the applicable configuration in the CNI-MU and when preparing the DD Form 365-4. **(T-3)**. Adjustments will be made when the actual onboard weight of these items vary from the data shown. **(T-3)**. Add aircraft armor **(Table 4.2)** into the DD Form 365-4 if armor is installed on the aircraft. **(T-3)**. Paratroop door armor moments need to be recalculated when armor is re-positioned. **(T-3)**. DD Form 365-4 will be completed in accordance with instructions in **Chapter 5** of this manual. **(T-3)**.

1.4.2. When a configuration change that removes items listed in **Table 2.1** is accomplished at a Forward Operating Location (FOL) and no Quality Assurance (QA) Branch weight and balance authority is deployed to the location, maintenance personnel will put an info note in the AFTO Form 781A, *Maintenance Discrepancy and Work Document,* indicating the weight and fuselage station of any equipment added or removed. **(T-3)**. The loadmaster will add or subtract the listed weight and moment from the last entry in the DD Form 365-3, Basic Weight and Balance Record, Chart C-Basic. **(T-3)**. Annotate the new weight and moment in Block 1 of DD Form 365-4. **(T-3)**. Configuration changes accomplished at home station require a QA update to the DD Form 365-3, Chart C. **(T-3)**. **EXCEPTION:** Minor equipment changes after crew reporting may be annotated on the DD Form 365-4 by the loadmaster.

1.5. Distribution. Commanders will bring this publication to the attention of all affected personnel. At least one copy (paper or electronic) will be maintained in the unit operations section. **(T-3)**. It will be readily accessible to operations and aircrew personnel. Additional distribution will be as follows: **(T-3)**.

1.5.1. Staff Operations, all levels.

1.5.2. All levels of aircrew standardization offices.

1.5.3. Command posts/operation centers.

1.5.4. Air terminal operations centers (ATOC).

1.5.5. Aerial Delivery Support Branch (ADSB)/Aerial Delivery Flight (ADF).

1.5.6. Aircraft maintenance squadron/units, Dash 21 equipment sections, Quality Assurance sections.

1.5.7. Aircrew Flight Equipment (AFE) sections.

1.5.8. One located in the supplemental weight and balance handbook binder on each aircraft.

1.6. Revisions. All revisions will consist of electronic interim change (IC) or new publication. **(T-3)**. Personnel at all echelons are encouraged to make recommendations to improve this manual. Direct proposed changes to AFSOC/A3V in accordance with AFI 11-202 Volume 2, *Aircrew Standardization/Evaluation Program*, and AFI 11-215, *Flight Manual Program*. Use AF Form 847, *Recommendation for Change of Publication*.

1.7. Changes. Recommendations for improvement to this manual are encouraged. AF/A3T is the approval authority for changes to this Addendum. Refer recommended changes and conflicts between this and other publications to HQ AFSOC/A3V, 100 Bartley Street, Suite 141W, Hurlburt Field, Florida 32544 on the AF Form 847, *Recommended for Change of Publication*. HQ AFSOC/A3V will forward changes to AF/A3T with an info copy to AF/A3TC for final approval prior to implementation. **(T-2)**.

1.8. Aircrew Life Support Equipment Configuration. AC-130J aircraft are configured with standard quantities of aircrew life support equipment (ALSE) in accordance with this manual. Configure aircraft as listed in **Table 1.1** During aircraft contingency/deployment generations, it is imperative that aircraft deploy with the full complement of ALSE. **(T-1)**. This equipment must be at forward operating locations to allow maximum mission flexibility when aircraft are away from home station. **(T-1)**. In the event installed ALSE inspection dates expire while the aircraft is on alert status or away from the operating location, place these items in the AFTO Form 781A

on a red dash until the aircraft goes off alert or returns to the operating location. **(T-1).** When the aircraft is released from alert or returns to the operating location, upgrade to a red X in accordance with TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*. **(T-2)**.

1.8.1. Aircraft Transfer Requirements. When transferring aircraft, position ALSE in accordance with permanent transfer configuration. The losing unit will contact the gaining organization's AFE section and initiate transfer of required aircraft-installed ALSE and inspection records. **(T-3)**. The gaining organization will conduct an acceptance inspection and forward a copy of discrepancies, to include any equipment shortages, to their respective major command (MAJCOM) in accordance with TO 00-20-1. **(T-3)**. Without documented coordination and approval, do not transfer aircraft with less than the required equipment. **(T-3)**. The losing organization must make up any shortages from on- hand assets to ensure transferring aircraft has required equipment. **(T-3).**

Table 1.1. Aircraft Installed Aircrew Life Support Equipment Configuration.

Minimum Required Equipment	**Quantity**	**Location**
Emergency Passenger Oxygen System (EPOS) **Note: : 1, 8**	As required (A/R)	A/R
Harness, Restraint, PCU-17/P with safety strap, HBU-6/P **Note: 1**	2	One on the flight deck, one in the gun deck
Kit, Protective Clothing (PCK)	A/R	A/R
MOP Oxygen hoses	4	1 each – short for WSO and SO 1 each – long for instructor stations
Kit, Survival, ML-4 **Note: 1, 3, 6**	18	Stowed A/R
Life Preserver Unit (LPU) 10/P **Note: 1, 2**	18	Life support bins
Quick Don **Note: 1**	2	Flight deck
Smoke Mask **Note: 1**	6	Collocated with each MA-1 portable oxygen bottle on the gun deck
Parachute, BA-22/LPP **Note: 1, 4**	18	Stowed A/R
Protective Breathing Equipment (PBE) **Note: 1**	3	Three on the gun deck.
Suit, Anti-exposure, CWU-16/P **Note: 1, 7**	A/R	A/R

Vest, Aircrew Body Armor	A/R	A/R
Vest, Survival **Note: 1, 5**	A/R	A/R

Notes:

1. Minimum life support equipment required in accordance with AFMAN 11-301 Volume 2.
2. For overwater flights, ensure a sufficient quantity of life preservers are onboard for all passengers and crewmembers. **(T-3)**.
3. Aircraft will be equipped with one ML-4 kit for each aircrew member. See AFI 11-2AC-130J Volume 3 for exception.
4. Aircraft will be equipped with one parachute for each aircrew member. **(T-3)**.
5. Not required for local training missions if ML-4 kits are onboard the aircraft. **(T-3)**.
6. Not required for local training missions if the mission will not fly overwater and survival vests are onboard. **(T-3)**.
7. Anti-exposure suits are required when overwater or beyond power off gliding distance from land and the water temperature is 60 degrees Fahrenheit (F) or below. **(T-3)**.
8. Each aircraft should have one Emergency Passenger Oxygen System (EPOS) per passenger. EPOS must be accessible. They do not have to be stationed at each seat. Do not exceed FL 250 if the number of passengers exceeds the number of EPOS onboard. **(T-3)**.
9. For Factory pick up, use periodic depot maintenance (PDM) input column in AFI 11-301 Volume 2, required Aircrew Flight Equipment Tables.

Chapter 2

CONSOLIDATED EQUIPMENT TABLES

2.1. General. Configure all models of the AC-130J aircraft with the equipment listed in **Table 2.1** The aircraft will be configured with all required equipment prior to deployment to support hostilities, PDM input and transfer for assignment. **(T-3)**.

2.1.1. Aircraft Returning From Off Station. Upon return from off station operations, maintenance personnel will ensure any mission specific equipment is removed from the aircraft at the earliest opportunity not to exceed five work days. **(T-3)**. The five work day rule does not apply if the aircraft will not be flown during that period. In this case the aircraft will be in the proper configuration prior to next flight. All added equipment will be removed; under no circumstances will an aircraft be flown in a partial configuration. **(T-2)**.

Table 2.1. Required Equipment.

Equipment	Quantity	Location
Aerial delivery system pendulum pivot arm cover	1	Stowed on Pivot Arm.
Air-conditioning plugs	2	Secured A/R when not installed.
Aircraft protective armor kit	1	Required on combat/contingency missions. Stowed in accordance with **Table 4.3.**
Auxiliary power unit exhaust plug	1	Secured A/R when not installed.
AVFUELS identiplate	1	Stowed in forms binder.
Axe, hand emergency	2	As prescribed by the flight manual.
Black out window covers	1 per window	Stowed near window or A/R.
Bolt Puller	1	Stowed A/R
Cargo door down locks	2	Stowed in overhead equipment rack or A/R.
Chain, tie-down 10,000 lbs	22	Stowed in bins aft of ramp hinge on the left side.
Crank, main landing gear and flap emergency	2	Stowed forward of each wheel well.
Device, tie-down 10,000 lbs	12	Stowed in brackets at flight station (FS) 245, 790 left side, and 925 right side.
Dunnage Bags, 30mm	9	Stowed at FS245
Ear plugs	1 (box)	Stowed A/R.
Engine intake & exhaust plugs	4/4	Stowed A/R when not in use.
Extinguisher, fire	5	As prescribed in the flight manual.
Fluid, hydraulic (Case)	1	Stowed in cargo net stowage box aft of the Auxiliary Hydraulic Pump.
Oil, engine (Case)	1	Stowed A/R.
Guard assembly, ramp actuator	2	Stowed on anchor cable center support braces aft of 105mm gun.

Gun tool kit: 1 - 12” screwdriver, flat tip 1 - ½” drive ratchet 1 - ½” drive universal joint 1 - ½” drive 5” extension 1 - Adjustable wrench 1 - 30mm multitool 1 - 30mm hand crank 1 - 30mm case extractor 1 - 105mm breech seal 1 - 105mm spanner wrench 1 - Rammer extractor tool 2 - 14mm deepwell socket 2 - 1/2” speed handle	1	Stowed as loose equipment.
Ground wires	2	Stowed A/R when not in use.
Interphone cord Flight Deck: 6 2 - Standard P/CP length 4 - 6ft (Coiled) Gun deck: 7 1 - 75ft 3 - 50ft 3 - 25ft MOP: 5 5 - 15ft	18	One at each aircraft interphone station. Excess stowed in cargo door storage bins.
Jack and tow fittings	2	Stowed in cargo door.
Jack pads	2	Stowed on bulkhead atFS 245.
Jugs, coffee/water	3	Galley
Kit, first aid aeronautical	10	Two on the flight deck, 8 stowed in the gun deck.
Kit, first aid combat	2	Stowed in the gun deck
Ladder, maintenance	1	Stowed A/R when not in use.
Latrine curtains	1	Configured for use or stowed in cargo door storage bins.
Life rafts **Note 2**	2	Stowed as prescribed in flight manual.
Onboard life support equipment stowage rack	1	Forward of left sidewheel well.
Light, emergency exit with Night Vision Imaging System (NVIS) filter	7	Stowed as prescribed by the flight manual.
Lock assembly, main landing gear	2	Stowed in the cargo door storage bins.
Locking kit, ground security	2	1 at side emergency escape, 1 at paratroop door. Stowed A/R.

Main landing gear emergency tie-down fixture	4	Stowed under multi function control display (MFCD)/Life Support rack.
Oven, microwave	1	Galley
Oxygen bottle, walk-around (Type MA-1)	8	Stowed as prescribed in the flight manual.
Paratroop door scanner seats	1	Installed on right paratroop door.
Pitot covers	2	Stowed A/R when not in use.
Rope, emergency escape	3	Stowed as prescribed in the flight manual.
Straps, tiedown 5,000 lbs **Note: 1**	22	Stowed in the cargo door. Straps removed for local training missions will not fall below levels required for restraint of loose equipment.
Sun visors	2	Stowed above pilot/copilot side windows.
Technical publications (G-file) **Note: 3**	1 set	Stowed above MFCD remainder in lower galley door.
Tool Box	1	Tool box (if on the aircraft) will be secured per TO 1C-130(A) J-9 *Cargo Loading Manual*.
Water container (Igloo) **Note: 3**	1	As required.
Wheel chocks	4	Secured A/R when not in use.
Wrench, main landing gear, emergency extension	2	Stowed left and right side 245

Notes:

1. Minimum equipment required. Units may add more equipment to meet specific mission or theater requirements. At all times, the amount of tie-down equipment required will include enough equipment to secure the landing gear in an emergency as well as secure all cargo and loose equipment. When additional equipment is added, QA will update the DD Form 365-3 (See exception in paragraph 1.5. of this manual.)
2. Minimum life support equipment required in accordance with AFI 11-301, Volume 2 Life Support Configurations for Cargo Aircraft.
3. This equipment is controlled by unit-designated personnel and will be entered on the DD form 365-4.

Chapter 3

FLOOR PLANS AND REQUIRED EQUIPMENT WEIGHT AND BALANCE DATA

3.1. Reserved for future use.

Chapter 4

REFERENCE DATA

4.1. General. This chapter contains reference data to assist personnel in load planning.

4.2. Emergency Exits and Safety Aisles. Load aircraft in the following manner to ensure emergency exits and safety aisles are available:

4.2.1. At no time will access to the paratroop door be blocked.

4.2.2. Equipment will not be positioned in a manner that obstructs the side emergency escape hatches. **(T-3)**. An obstruction is any equipment that prevents the effective means of rapid evacuation. Litters and seats erected across an emergency exit are not considered to be an obstruction.

4.2.3. Access to aft latrine facilities requires a 20-inch clear area on the forward right side of cargo loaded on the ramp.

4.2.4. On all missions, cargo will be loaded in such a way that the crew will have access to the rear of the aircraft.

Table 4.1. Standard Weights.

Item	Weight/lbs
Crew member (with professional gear)	200
Passenger (without baggage)	175
Anti-exposure suit CWU-16/P	6
Body armor w/o plates (Eagle Vest)	29
Emergency Passenger Oxygen System (EPOS)	2
Hydraulic fluid (case)	52
Ladder, maintenance	42
Life raft, 20 man(2)	173
Life support equipment demonstration kit	5
LPU, adult/child life preserver	1.5
LPU-10/P life preserver	4
LPU-5/P life preserver	4
LPU-6/P life preserver (infant cot)	4
Liquid container w/contents	25
Liquid container w/o contents	9
Oil, engine (case)	52
Oxygen bottle, portable	6
Oxygen mask, 358-1506 Quick Don	3
Parachute (back) (with/without high pressure bottle and personnel lowering device (PLD)	32/27
LPP	30/32
Personnel restraint harness, PCU 17/P	9
Protective Breathing Equipment (PBE) (EEBD)	5
Protective clothing kit	40

Smoke Mask	3
Stanchion, seat/litter	30
Survival kit, ML-4 (with LRU-16/P life raft)	19.5
Tie-down, chain, MB-1/CGU-4/E (10,000 lb)	7
Tie-down, device, MB-1/CGU-4/E (10,000 lb)	3.5
Tie-down, strap, CGU-1/B (5,000 lb)	4
Tie-down, strap, CGU-1/B (10,000 lb)	4
Water, container (2-gallon, Igloo (w/contents))	25
Water, container (5-gallon, Igloo (w/contents))	50
Water, drinking, per gallon	8
Wheel chock (20-inch)(4)	52

Table 4.2. Protective Armor.

Location	**Weight**	**Station**	**Moments**
Flight station	1,259 LBS	FS 173	219
Nose wheel well and LOX bottle	195 LBS	FS 149	29
Gun deck (paratroop door)	256 LBS	FS 717	184
Crew door	180 LBS	FS 223	40
Total weights/moments	1890 LBS	N/A	472
Note: If QA is available, add armor to Chart C; if QA is not available, add armor to line 7 (extra equipment) of the DD Form 365-4 when armor is installed on the aircraft.			

Table 4.3. Weapon Systems Equipment/Munitions.

Gun Weapon System (GWS) Items	**Weight (lbs)**	**Full Weight (lbs)**
Ammunition Can (Empty w/ Foam)	23	N/A
Bolt Puller	43	N/A
Dunnage Bag	9	72 (full bag)
Expended 30mm round casing w/ link	0.5	N/A
Gun Tool Kit	32	N/A
PGU-13 (30mm HEI) w/ link	1.7	74 (full can)
PGU-15 w/ link	1.8	77 (full can)
PGU-46 (30mm HEI) w/ link	1.9	80 (full can)
105 clearing round	13.5	N/A
105 Round	43	N/A
Expended 105mm case	7	N/A
Shovel	2	N/A
Precision Guided Munitions (PGM) Items	**Weight (lbs)**	N/A
CLT (Griffin)	48	N/A
CLT (Empty)	13	N/A
BRU-61/A	320	N/A
GBU-39B	267	N/A
GBU-39A/B	264	N/A
AGM-114N4	106	N/A
AGM-114R	108	N/A

AGM-114P4	99	N/A
AGM-114P2	104	N/A
AGM-114R2	108	N/A
AGM-114R9E	115	N/A
M299	146	N/A

Table 4.4. Aircraft Defensive System Equipment.

Location	**Weight(Lbs)**	**Station**	**Moments**
Nose dispensers (Fossil)	94	FS 221	21
Nose dispensers (paperclip)	93	FS 221	21
Mid dispensers(Fossil)	270	FS 600	162
Mid dispensers(Paperclip)	269	FS 600	161
Tail dispensers(Fossil)	88	FS 1081	95
Tail dispensers(Paperclip)	88	FS 1081	95
Wing and Nacelle(Fossil)	176	FS 610	106
Wing and Nacelle(Paperclip)	176	FS 610	106
Total WT/MOM Fossil	628	FS 611	384
Total WT/MOM Paperclip	626	FS 612	383
Retained WT/MOM	119	FS 571	68
Individual Defensive Equipment	**Weight(Lbs)**		
M211 Decoy Flare	0.67		
MK-206 Flare	0.44		
MJU-64/66 Flare	0.83		
RR-180 Chaff (1X1/2)	0.51		
RR-170/188Chaff (1X1)	0.41		
Empty Magazine	6.6		
Note: : Some units add chaff and flares into the basic weight. Re-adjustments need not be made as individual flares/chaff are dispensed. Adjustments must be made if the weight has been added and then the dispensers subsequently removed.			

Chapter 5

WEIGHT & BALANCE INPUTS AND DD FORM 365-4 INSTRUCTIONS

5.1. Introduction. The Aerial Gunner is responsible for entering weight and balance data into the CNI-MU Wt and Bal pages, and when required transferring that information onto the DD Form 365-4, *Weight and Balance Clearance Form F – Transport/Tactical*. This can either be accomplished manually, or electronically utilizing the Automated Form F (AFF) program and printer. Additional information regarding the AFF programs can be found in TO 1-1B-50, *Aircraft Weight and Balance*. **(T-3)**.

5.2. Load Planning. The cargo load must be planned so the center of gravity of the loaded aircraft will be within the specified forward and aft limits for any given operating condition. Consideration must also be given to aircraft limitations, and emergency jettisoning. **(T-3)**. Math charts contained in TO 1C-130(A)J-5-1, *Basic Weight Checklist* and TO 1C-130(A)J-5-2, *Loading Data Manual*, are tools, which may be used for load planning. When the fuel load is unknown, load plan for a 20-22 percent of Mean Aerodynamic Chord (MAC) zero fuel. **(T-3)**.

5.3. General Instructions. These instructions apply to Tactical Form F using simplified moments. Copy the information from the data entered in the CNI-MU Weight and Balance pages and handwrite, type, or computer generate a copy of the DD Form 365-4. When required, a copy of the completed DD Form 365-4, shall be attached to the flight plan, or given to the controlling ground agency, quality assurance, transient alert, maintenance, etc.

5.4. Instructions for Tactical Form F. Use DD Form 365-3, TO lC-130(A)J-5-1, TO lC-130(A)J-5-2, and 1 SOG / Det 2 Aerial Gunner in-flight guide to assist in the completion of the DD Form 365-4.

5.4.1. DD Form 365-4 Heading. Enter date, call sign (mission), aircraft type, serial number, departure and destination station (name or International Civil Aviation Organization (ICAO) identifier), home station of aircraft, and pilot's rank and last name.

5.4.2. Reference 1. Enter basic weight and moment (minus 14,000 lbs. / 7,000 mom) from the last entry of the certified copy of DD Form 365-3 (Chart C), *Aircraft Weight and Balance Handbook*. Note: Maximum allowable BOW entry on the PERF INIT WEIGHT page is 99.9 thousand pounds. Due to this limitation, the 14,000 lbs. / 7,000 mom will be entered into the PAYLOAD page and copied to reference 6 to ensure that BOW, PAYLOAD, and airplane gross weights displayed on the PERF INIT WEIGHT page match the BOW, PAYLOAD, and airplane gross weights displayed on the WT + BAL menu.

5.4.3. Reference 2. Leave blank.

5.4.4. Reference 3. Enter the item description, number, weight and moment (copied from OPERATING WT page) of all nonexpendable items not in the basic weight, such as crewmembers, baggage, additional equipment, etc.

5.4.5. Reference 4. Total of references 1 thru 3.

5.4.6. Reference 5. Enter the ammo type, quantity, and weight and moment (copied from PAYLOAD page).

5.4.7. Reference 6. Enter bombs / missile type, chaff / flare type, cargo description, quantity, and weight and moment (copied from PAYLOAD page). Reference 6 may be used for continuation of ammo load if additional space is needed.

5.4.8. Reference 7. Copy takeoff total fuel weight and moment from the FUEL page. **Note**: In remarks section, copy the breakdown by tank of takeoff and landing fuel weight and moment from the FUEL page.

5.4.9. Reference 8. Leave blank.

5.4.10. Reference 9. Copy TO gross weight (GWT) from the WT + BAL page.

5.4.11. Reference 10. Copy TO % MAC and ARM from the WT + BAL page. **Note:** References 11, 12, and 13 are left blank if corrections are not required.

5.4.12. Reference 11. When applicable, enter correction from computations in the corrections block.

5.4.13. Reference 12. Total of reference 9 and 11, as required.

5.4.14. Reference 13. Enter corrected center of gravity (CG) in inches and percent of mean aerodynamic chord (MAC), as required.

5.4.15. Reference 14. Copy the takeoff fuel weight and moment from reference 7. Consider all ammo, missiles, bombs, MKs, flares, and chaff as being expended (except clearing rounds). Less expendables: Use the PAYLOAD page compute the weight and moment of all retained ammo residue and containers from references 5 and 6 and label with description and quantity. Below the retained ammo and containers total all expended weight and moment from references 5 and 6

5.4.16. Reference 15. Copy the estimated landing fuel (ELF) weight and moment from the FUEL pg. Calculate ELF by determining estimated FBO subtracted from total mission fuel. Minimum estimated landing fuel will not be less than 4,000 pounds plus reserve fuel.

5.4.17. Reference 16. Copy the LDG GWT/MOM from the WT + BAL page. Calculate the estimated landing condition by replacing the weight and moment of expendable items from references 5 and 6 with the retained weights from reference 14.

5.4.18. Reference 17. Copy LDG % MAC and ARM from the WT + BAL page.

5.4.19. Remarks Section. Enter the total takeoff and landing fuel weight to the nearest 100 pounds and moments using the CNI-MU. Additionally, annotate projected air-to-air refueling (AAR) and fuel burn off (FBO). Minimum estimated landing fuel will not be less than 4,000 pounds plus reserve fuel.

5.4.19.1. AC-130J standard FBO rate is 5,000 pounds per hour (PPH) - first hour of flight (climb out) and 4,000 PPH - normal flight at altitude.

5.4.19.2. AAR will be the weight of anticipated AAR fuel onload.

5.4.19.3. FBO for the entire mission is computed by multiplying the standard FBO rate by the estimated flying time.

5.4.19.3.1. Air-to-air refueling missions are computed in the following manner: Total AAR fuel weight is added to the takeoff fuel. FBO weight is subtracted from the

combined takeoff fuel and AAR total. Estimated landing fuel (ELF) is the sum of takeoff fuel, AAR, and the subtracted FBO.

5.4.20. Limitations Column. Enter the appropriate weight and CG limits for the planned mission using the following criteria: The maximum gross weight and center of gravity limits specified in TO 1C-130(A)J-1 will not be exceeded. Gross weights may also be limited by operating conditions; i.e., obstacle clearance, rate of climb, weather conditions, altitude, runway/taxiway bearing capacity, or any other published restrictions. The pilot will inform the loadmaster of any gross weight restrictions prior to mission planning.

5.4.20.1. Takeoff. Unless other restrictions are imposed, use 164,000 pounds for takeoff.

5.4.20.2. Landing. Unless other landing restrictions such as maximum effort landings are imposed, use 164,000 pounds. Subtract operating weight plus estimated landing fuel (references 9 and 23). Refer to the TO 1C-130(A)J-1, *AC-130J Flight Manual* for assault landing limitations.

5.4.20.3. Permissible CG Takeoff and Landing. Compute the forward and aft center of gravity limitations using the center of gravity table in the appropriate TO 1C-130(A)J-5-2. Leave the block entitled "Permissible CG Zero Fuel Wt" blank.

5.4.21. Signature Blocks:

5.4.21.1. Computed by: Signature, rank, and organization on original and duplicate.

5.4.21.2. Weight and Balance Authority: Leave blank.

5.4.21.3. Pilot: Signature, rank, and organization on original and duplicate.

Figure 5.1. DD Form 365-4 Tactical Form F Instructions.

WEIGHT AND BALANCE CLEARANCE FORM F - TACTICAL
(Use reverse for transport missions)

FOR USE WITH T.O. 1-1B-40, NAVAIR 01-1B-40, AND TM-55-1500-342-23

DATE *(YYYYMMDD)* 20161020	AIRCRAFT TYPE AC-130J	FROM KHRT	HOME STATION KHRT
MISSION Ghost 91	SERIAL NO. 5772	TO KHRT	PILOT Maj. Pain

CORRECTION/MOST FWD/MOST AFT *(Ref. 11)*

COMPT	ITEM	CHANGES (+ or -) WEIGHT	INDEX OR MOM/
TOTAL WEIGHT ADDED		+	+
TOTAL WEIGHT REMOVED		-	-
NET DIFFERENCE *(Ref. 11)*			

REMARKS

T/O FUEL		ELF
16000	OB	11500
14500	IB	10500
5000	AUX	0
500	EXT	0
36000 / 19844		22000 / 12109

A/R = 5000 / FBO = 19000 @ 4.5 hrs

CNI Math

LIMITATIONS

GROSS WEIGHT TAKEOFF *(lb.)* 164,000	GROSS WEIGHT LANDING *(lb.)* 164,000	
PERMISSIBLE C.G. - TAKEOFF *(% M.A.C. or in.)* 28.4%	FORWARD 22%	AFT 30%
PERMISSIBLE C.G. - LANDING *(% M.A.C. or in.)* 25.9%	FORWARD 20%	AFT 30%

COMPUTED BY SIGNATURE
John Doe SSgt 1 SOG, Det. 2

WEIGHT AND BALANCE AUTHORITY SIGNATURE

PILOT SIGNATURE

REF	ITEM	WEIGHT	INDEX OR MOM/1000
1	BASIC AIRCRAFT *(From Chart C)*	90896	48456
2			
3 DISTRIBUTION OF LOAD	COMPT / CREW NO. / CREW WEIGHT / CARGO/MISC		
	404 / 9 / 200 / Crew	1800	727
	250 / 1 / 50 / Stew. Equip	50	13
	498 / - / 833 / Emer. Equip	833	415
4	OPERATING WEIGHT	93579	49611
5 AMMO	PGU-13 A/B x 510rnds @ FS 377	867	327
	PGU-13 A/B x 6 Cans @ FS 345	444	153
	PGU-44 x 80 @ FS 650	3440	2236
6 BOMBS, MISSILES, ETC.	105mm Clearing Rnds @ FS 860	27	23
	Chaff / Flare (Fossil)	628	384
	Basic Weight pt. 2	14000	7000
7 FUEL	T/O Fuel	36000	19844
8	MISC. VARIABLES		
9	TAKEOFF CONDITION *(Uncorrected)*	148985	79578
10	TAKEOFF C.G. IN % M.A.C. OR IN	28.4% / 534.1	
11	CORRECTIONS *(if required)*		
12	TAKEOFF CONDITION *(Corrected)*		
13	TAKEOFF C.G. IN % M.A.C. OR IN		
14	TAKEOFF FUEL	36000	19844
LESS EXPENDABLES	30mm Brass x 690 @ FS 257	345	89
	30mm Empty Cans x 6 @ FS 345	138	48
	105mm Brass x 80 @ FS 650	560	364
	Chaff and Flare buckets	119	68
	Ref. #5 / #6 Expended	-5379	-3100
15	ESTIMATED LANDING FUEL	22000	12109
16	ESTIMATED LANDING CONDITION	130768	69312
17	ESTIMATED LANDING C.G. IN % M.A.C. OR IN	25.9% / 530.0	

DD FORM 365-4 (BACK), AUG 96

JOSEPH T. GUASTELLA Jr., Lt Gen, USAF
Deputy Chief of Staff, Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 11-215, *Flight Manual Program,* 25 March 2019

AFI 33-322, *Records Management and Information Governance*, 23 March 2020

AFMAN 11-301, Volume 2, *Management and Configuration Requirements for Aircrew Flight Equipment (AFE),* 13 February 2020

AFMAN 11-2AC-130J, Volume 3, *AC-130J General Operations Procedures,* 12 November 2019

AFPD 11-2, *Aircrew Operations,* 31 January 2019

AFPD 11-4, *Aviation Service,* 12 April 2019

DAFI 33-360, *Publications and Forms Management,* 1 December 2015

TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures,* 11 September 2019

TO 1-1B-1, *Aircraft Weight and Balance*, 1 August 2019

TO 1C-130(A) J-1, *Flight Manual,* 30 November 2019

TO 1C-130(A) J-5-1, *Basic Weight Checklist*, 30 November 2020

TO 1C-130(A) J-5-2, *Loading Data Manual*, 31 May 2020

TO 1C-130(A) J-9, *Cargo Loading Manual*, 31 May 2020

Adopted Forms

DD Form 365-3, *Basic Weight and Balance Record, Chart C-Basic*

DD Form 365-4, *Weight and Balance Clearance Form F - Transport/Tactical*

AF Form 847, *Recommendation for Change of Publication*

AFTO Form 781A, *Maintenance Discrepancy and Work Document*

Abbreviations and Acronyms

A/R—As Required

ACL—Allowable Cabin Load

ADF—Aerial Delivery Flight

ADSB—Aerial Delivery Support Branch

AFE—Aircrew Flight Equipment

AFF—Automated Form F

AFI—Air Force Instruction

ALSE—Aircrew Life Support Equipment

AFSOC—Air Force Special Operations Command

ATOC—Air Terminal Operations Center

CG—Center of Gravity

CNI-MU—Communications/Navigations/Identification-Management Unit

EEBD—Emergency Escape Breathing Device

EPOS—Emergency Passenger Oxygen System

FOL—Forward Operating Location

FS—Fuselage Station

ICAO—International Civil Aviation Organization

LPU—Life Preserver Unit

MAC—Mean Aerodynamic Chord

MAJCOM—Major Command (for the purposes of this manual, includes ANG)

MFCD—Multi-Function Control Display

NVIS—Night Vision Imaging System

PBE—Protective Breathing Equipment

PCK—Protective Clothing Kit

PDM—Periodic Depot Maintenance

PLD—Personnel Lowering Device

PPH—Pounds Per Hour

QA—Quality Assurance

Terms

Allowable Cabin Load (ACL)—The maximum payload that can be carried on an individual sortie.

Local Training Mission—A mission scheduled to originate and terminate at home station (or an off-station training mission), generated for training or evaluation and executed at the local level.

Pounds Per Hour (PPH)—The amount of fuel, in pounds, that is used per hour of flight.