

SCNS	
Normal Steering	1 Dot = 1.5NM
Sensitive Steering	1 Dot = 500 YDS
Enter Sensitive Steering	Past TP 15° TKE 1.5 Cross track
Hot Cursor	Past SCNS IP
OAP Listing	5
TOA	6
LZ	2
DZ	8
Waypoints	68
Ref. Library	450
Mark Pts	9 – A – I
Max Fails on Sys Status	16
Enhanced Alignment	Once per power cycle Hdg change > 70° Within 10min of Nav mode
Align Times	Deg Nav = 1.5 min EIA = 4 min MAA = 8 min
MAA CEA	.8 - .5 NM/HR
EIA CEA	.5 - .25 NM/HR
Altitude Gate	+/- 300 feet
High Latitude	85N or 85S
ETA Calculation	Current WP = Once per sec Future WPs = Once per min
Visual Update	Preplanned Target of Opportunity
Turn Types	Point-to-Point Curved Path ROT (pseudowaypts)
SCNS Modes	Flight Plan, Immediate, Hold, Rendezvous, Search
SCNS Switch	Powers IDCUS, BICU, DVS, INS
INS Battery	Nav's IDCU and INU
Crypto Load	Can load with/without power Full for 1-4 sec Power must be on to zeroize
Power interruption	5 +/- .3Sec, no change
AIR DROP	
Max Weight Over Ramp	42K #
Max CDS Bundle	2,238 #
Max CDS Drop	37,248 #
Max # CDS Bundles	16/8 Double
Min CDS DZ Size	400 x 400 yards
BSA Forward Restraint	3 Gs
Use BSA Weight	5,001 # or more
Use BSA + 10K # chains	26,001 # or more
CVR Vertical Restraint	2 Gs
CDS KIAS	140 > 120K # else 130
Min Rec Weight for CDS	104K #
Desired CDS Deck Angle	6-8 degrees
Tie Down Rings	Wall = 5,000 # Floor = 10,000 # Capped = 25,000 # Ramp = 5,000 #
Min HE DZ Size	600 x 1000 yards
Min/Max HE Drop Weight	2500/42K lbs
Min Personnel DZ Size	600 x 600 yards
Max Troopers on board	64 paratroopers 20 tailgate jumpers 1 cable
Wind Limitations (Pers)	13 Land 17 Tree 25 Water Non AF – Disc of DZSO
HALO	Drift = 500' per 1000' free fall Actuation Alt = Dep Alt + 500 D Value = Difference between True and Pressure altitude of A/C
Area DZ	< 15 NM Elevation change < 300 < 1/2 NM from centerline
Day VMC Drop Alt	IAW 11-231
Night VMC Drop Alt	500 or 400+countour 3NM, SD through escape
Min IFR Drop Alt	500 or 400+countour 3NM from DZ entry to DZ exit
Descent to Vis Drop Alt	After SD DZ in/Remain in sight Position Known Terrain Clearance Assured
Descent to SKE Drop Alt	Lead's Position Known Formation 3NM of Center Last AC Past DZ Entry
Min CDS Spacing	6000 VMC / 12000 SKE
DZ Escape SKE	1 Min (or briefed) from RL
Load Marking	Call sign and Date
Loadmaster on Harness	> 14K or < 600'
Min Use DZ time	3 sec
DZ Markings Day	J,R,A,C,S (H,O Circular)
DZ Markings Night	Block letter Flankers (optl) 250m L/R Trailing Edge (optl) 1000m or trailing edge (closest to PI)
High Altitude Drops	> 3000 AGL – 35K
100% Oxygen Needed	>10,000 MSL
Prebreathing Needed	>20,000 MSL
Latest to Airdrop Alt	2 min JMD pers 1 min pers Green Light, CDS/HE Non AF – Disc of DZSO
Forward Throw	C – CDS 550 H – HE 450 P – Pers 250 S – SATB 150

RWY/TAKEOFF/TAXI MINS	
Taxi Mins	25 ft w/o walkers 10 feet on Local Taxi line
Min Runway Width	No < 25ft when reversing Norm/Tac Non Asslt = 80' Tac/Assault = 60'
Min Taxiway Width	30'
Min Takeoff Length	CFL for normal or max effort No less than 3000 ft
IFR Climb Gradient	200 ft/NM 4 Engine 152 ft/NM 3 Engine
IFR Departure Options	SIDs ATC Departure Instructions Diverse Departure ODP MAJCOM Instructions VCOA
SYS WARMUP TIMES	
C-12 (Box) Compass	5 min
ADF	5 min
Radar Altimeter	1 min (16-32 calibration)
CMDS	5 sec
ALR-69	2 min
MWS Warm Up	None/BIT 20-30 sec
INSTRUMENT PROCEDURES	
Max Localizer	18 DME
Established on course	LOC – Full deflection NDB - 5° VOR – ½ scale deflection
Max Glideslope	10 DME
VOR Accuracy	+ 1°
TACAN Accuracy	.5 NM or 3% which is greater
Station Passage	VOR – To/From Flag TACAN – Min DME NDB – 90° inbound course
Altimeter Errors	75ft known elevation 75ft each other
Category Minimums	C = 121-140 KIAS D = 141-160 KIAS
Approach MSA	1K' (2K' mtns) for each sector
Standard Holding	Right turns 1 min legs < 14K 1.5 min legs 14K or more
Max Holding Speeds	0-6K = 200 KIAS 6-14K = 230 KIAS 14K+ = 265 KIAS
ILS PRM requirements	Pilot ILS/PRM certified 2 VHF radios Approach briefed as ILS/PRM Breakouts hand flown
NORDO Heading Priority	Assigned Vectored Expected
NORDO Altitude Priority	Filed Assigned MVA Expected
CREW DUTY TIME	
Alert Times	3+15 prior Latest 6 hrs of exp dep time AC waive to 8 hrs (12 deadhead)
Max FDP	Time from show to shutdown 12 Basic crew w/o Autopilot 16 hrs – Basic Crew 16 – Tac events done by 12 16 Aug w/o Autopilot 18 Augmented
Max CDT	18 – Basic 20 – Augmented
Waiver Authority	OG/CC – up to 2 hrs
Crew Rest	Msn > 16 hrs, enter 24 hrs prior and may perform duties first 12 OG/CC can waive first 12 hrs Enter 12 hrs before Alert Self Alert = 12 hrs before show Min Crew Rest is 12 16 hours shutdown to takeoff AC can extend 36 hrs after 3 consecutive max FDPs Re-enter if >4 hrs after T/O or >6 hrs from expected alert
Alpha Standby	Launch in 1 Hour Not > 48 hrs
Bravo Standby	Launch in 3 Hours Not > 48 hrs
Charlie Standby	Enter crew rest in 2 hours LFA in crew rest for 12 hrs Not > 72 hrs
Max Flying Time	7 consecutive days = 56 hrs 30 consecutive days = 125 hrs 90 consecutive days = 330 hrs
GENERAL	
ON TIME Take off deviation	-20 / +14 minutes
Outside clearing	< 18,000 MSL
C12 Compass Tolerance	1° known Heading 2° each other Within 4°, 3 min after turn DG procession 2° per hour #1 secondary source for AP Land > power off glide dist
Over water flight	Supports C-130 w/in 50 NM
Suitable Airfield	Does not meet Cat II req
Cat I definition	Position determined by overhead crossing of navaid once each hour with guidance
Cat I routes/portions of 3+ hrs	TAS Checks Maintain a log Compass deviation checks
Cat I requirements 5+ hrs from LSAF to FSAF	Wind Factors Equal Time Point Fuel Management

Equal Time Point (ETP)	Equal time from FSAF or LSAF Redo if 15 or more off for wind Required on Cat I where FSAF to LSAF is 5 hours or more
TAS Checks	Required on Cat I of 3+ hours 1 hours of level-off
Compass Dev Check	Cat I of 3+ hours = ASAP after level-off or coast out Recompute every 3 hrs, or 30° Cat I < 3 hrs 2 or more operable hdg systems Difference < 2°
Compass Checks not required on Cat I if	Record at T/O Record at L/O Regular times, max 1.5 hrs Formula method or RCC
Fuel Management	Record at T/O Record at L/O Regular times, max 1.5 hrs Formula method or RCC
Pre flight endurance	Subtract 1,300 lbs
Inaccurate CFP winds	30° or 24 knot error
Enroute fuel reserve	10% Cat I time Not to exceed 45 min Compute at Terminal FF 2 hrs remote destinations Last hour at cruise altitude
Terminal Fuel Flow	Last hour at cruise altitude
Max Unidentified Fuel	2,200 lbs
Cruise TAS	300 KTAS (adj TIT every hour) 280-290 KTAS Legs < 2hrs 210 KIAS short legs < 10,000' M
Max Continuous Power	970 TIT
Chart Requirements	Name and Date Chart Number/Edition Grid Reference Chum/CALF Date ONC, TPC, or JOG
Let Down Charts	T/O, low level, drop, appch, and landing
Critical Phases of Flight	T/O, low level, drop, appch, and landing
Plotting Position	ASAPractical after level off or coast out (latest) Record 30 min after first fix Plot every hour or 10 min after oceanic waypoint (first) Coast in ASAPractical
Airway width	Normally 4 either side (FAA)
ADIZ Tolerance	Over land = 5 min 10 NM CL Over water = 5 min 20 NM CL
EMERGENCIES/HAZARDS	
Notify Pilot	200ft altitude deviation 10 kts airspeed deviation Terrain Abandon Aircraft Ballout Brace for Impact Prep for Ditching/Landing Prep for Ballout Prep for Abandon
One Long Ring	Ballout Brace for Impact Prep for Ditching/Landing Prep for Ballout Prep for Abandon
6 Short Rings	Prep for Ditching/Landing
3 Short Rings	Prep for Ballout
Ballout Altitudes	Static Line 400ft Free Fall 2000ft
Ballout Airspeeds	Crew Door 150/Gear/Helmet
LPU's	Flight over water On Over Water < 2000 unless on departure/landing
Emergency Lights	7 (one each exit) 2.5 Gs Loss of DC Power 3 position switch
Lost Comm	7600
Hijacked	7500 "Trip (Callsign)" (CS) TRNSP 7500
HF Radiation Hazard	5ft
Fuel Dumping	>5,000A, not circular
Main Wheel-well Fire	Egress 300ft
Egress with Flares	600ft
Exposure to extinguisher	< 5 min
Min Recommended Jettisonable Load Wt.	2,500 #
WEATHER MINS/ALTERNATES	
Takeoff RVR	All others 1600 1000 if operational msn, dual RVR readouts (both 1000), CL lighting, 2 qual pilots
No RVR readout	1/2 NM or 800 meters
Formation Takeoff	Mins or 200/1, which is highest
Departure Alternates	Takeoff Less than Mins requires MAJCOM approval Req'd if ceiling or visibility is below landing mins for an available approach. If planning an ILS, Cat I mins will be used 30 Min -> approach mins or 200-1/2 (RVR 2400) for 1 hour 2 hrs -> at least 500-1 (600-2 Prec.) (800-2 Non Prec) Above mins for ETA + 1 hour
Thunderstorm Avoidance	FL 230 and up – 20NM Below FL 230 – 10NM Tactical 5NM temp > 0 Overflight 2000ft Approaches and Departures within 10NM permitted Lightning potential – clouds within 5000ft of or + 8° of freezing level
Thunderstorm Penetration	65+ Power Off Stall < 180KIAS
Avoid	Forecast or Reported Severe Icing or Turb Volcanic Ash 20 NM Forecast Moderate or greater mountain wave turbulence
Air Drop (AF)	300 ½
VFR ARA	1500 / 3
IFR ARA	300/1 or approved approach mins
Destination Mins	2000 / 3
Alternate Mins	500ft above lowest appch and vis 2 SM or published (greater)

Alternate Required if:	Radar required for all approach OCONUS – not required if intratheater flights < 3 hours or island Unmonitored NAVAID No Wx reporting facility Lowest appr mins > 1500/3
Two Alternates if	Forecast vis is less than DOD or NACO prec approach Forecast ceiling OR vis is less than for all other approaches Forecast surface winds exceed RCR-corrected limits
Selecting an Alternate	Forecast ceiling OR vis is less than for all other approaches Forecast surface winds exceed RCR-corrected limits
Cannot Be An Alternate If	GPS is only NAVAID Radar required for all approach Unmonitored NAVAID No Wx reporting facility A NA displayed on all apprch
BASIC PILOT STUFF	
Max Torque	19.6K lbs
RPM	98-102%
Oil Quantity	4-12 Gal
Oil Temp	Max Continuous = 85° Normal = 60-85° Min = 40°
Oil Pressure	Gearbox = 150-250 PSI Engine = 50-60 PSI Engine = Max 100 during start
TIT	Max 1083° (5 min) Normal 200-1083° Max Continuous 970°
Fuel Balance	500-1000 outboard > inboard 1000 Symmetrical 1500 Wing – Wing
Max Airspeeds	Gear Down = 165 Ramp/Door Open = 150 Door Open = 185 Troop Doors = 150 Troop Doors Up = 250 Air Deflector = 150 100% Flaps = 145 50% Flaps = 180
Milk Stool	Pallets > 2000 #
Assault Fuels	Externals Empty < 6200 outboards < 23000 mains GW < 130K OAT < 0° C Start 45 min prior to T/O LSGI until oil reaches 0° C No taxi or out of grnd idle until oil is 60° C
Cold Wx Ops	OAT < 0° C Start 45 min prior to T/O LSGI until oil reaches 0° C No taxi or out of grnd idle until oil is 60° C
DEFENSIVE SYSTEMS	
Safety Switch/Pins	1 on FS 245, 4 aft wheel wells
Sequencers	9
Dispensers	18
Max Expensables	540
CMDS Warm Up	5 sec
ALR-69 Warm Up	2 min
MWS Warm Up	None
MWS Sensors	4
ALR-69 Sensors	5
Minimum Egress w/ pyro	600 ft
Jettison Switch	All stores 3 sec
OXYGEN SYSTEM	
System Pressure	300 psi
Max Capacity	25 L
Min Oxygen	ETP to dest, or 5 L
Max Oxygen Time	96 man hours
In Use Pressure	270-340 psi
Static Pressure	270-455 psi
Unmodified O2 bottles	2 bottles min

Original compiled by Capt Bradley M Littleton, 53AS, LRAFB

Updated by Lt Nick Reinke, 165AS, KYANG

Changes annotated with black markupts

1C-130H-1 Change 7 21DEC12

3-3.C-130E/H Change 1 8JUN12

AFI 11-2C-130v013 23APR12

AFI 11-202v013 19NOV10

LRF LOCAL PROCEDURES	
Min RVR for Taxi	10
Latest Takeoff for Rejoin	25 min prior to TOT Must begin rejoin prior to GL
NVG Fluid Trail	45° off lead #2 = 2-4000ft #3 = 6-8000ft
Drop Altitude	FTU must be stable by 1 min
Low Level Fuel	<10K = 6000 #/hr
Orbit altitudes	Day = 1000ft A Night = 500ft + night leg altitude
Drop Safety Box	200 yards from each boundary Ld = +/- 2 sec #2 = 2E / 4L sec El Ld = +/- 2 sec
Load Marking	Callsign, Date, and TOT
Rock Ops	349.4
Downwind Recovery	Squawk = 0311 Day = 500A – 1500M Night = 1500M Pattern Alt = 1300M (<7 DME)
Overhead Recovery	Squawk = 0322 Day = 500A – 1500M Night = 1500M 1800M prior to initial
TAC VIS	
Element	2 ships #2 = 2-6K enroute No closer than 500' Night = Fluid trail NLT 2000' Airdrop #2 = 2K' offset right
Flight	2 elements 2nd element = 8K' enroute 4-6K' airdrop
Eight Ship Formation	2 flights
Very Low Altitude	Sfc – 1000' A
Low Altitude	1001' A – 10,000' A
Medium Altitude	10,001' A – 25,000' M
High Altitude	25,001' M – 40,000' M
Very High Altitude	40,001' M and up
Min Altitude Capable	Determined by crew
Day VMC Enroute Alt	300' modified contour
Night VMC Altitude	500' above obstruction Or 400' plus 1 contour 3 NM route centerline Includes point radius
Min Safe Altitude	500' above obstruction Or 400' plus 1 contour 5 NM (or tac corridor) rte ctrline Includes point radius
ESA	1000 (2000 mtns) 22 NM
Chart/CHUM Coverage	22 (ESA) 10 (Trimmed)
Segmented Altitudes	Limit legs < 10 NM in length
Start Climb Points	220 knots GS 240 knots in mountainous 1000 ft/min climb (or 2K)
Min Chart Annotation	Turnpoints, IP, DZ, Course line, Course Date, CHUM Date, ESA
Taxi Interval	1 w/4; 2 w/2 engines
Min Takeoff Interval	15 seconds
Climb Airspeeds	< 10,000 ft = 180 KIAS < 15,000 ft = 170 KIAS < 25,000 ft = 160 KIAS 25,000 ft + = Perf Charts
Airspeed Changes at Night	15 kts or more
Inadvertent Wx w/ SKE	Climb to ESA Base Hdg/Alt/Aspd Climb 1000 FPM Set SKE XTRK 1K safest dir Level – SKE Interval Slow 15 kts – 4K ft Reset SKE XTRK Contact ATC if no VMC
Inadvertent Wx w/o SKE	Climb to ESA Base Hdg/Alt/Aspd Climb 1000 FPM Wingman 30° away for 1 min 500' element stack, last lowest No change base alt in IMC
Rejoin	Formation + 500'
Downwind Recovery	Rollout NLT 150 feet
Overhead Recovery	Rollout NLT 150 feet
Landing Interval	20 sec (15 min)

TAC SKE	
Max C-130s on SKE	36 / 34 w/ Zone Marker 31 due to 10NM of Master 15 front and back of Master
SKE/TWS Limits	10 NM Master 4/ TWS
Priority of SKE Signals	Altitude, Hdg, AS
FCI Signals	10° hdg, 10 KIAS
Max Planned Turn	90°
Announce Passing Alt	Every 2000 ft
SKE Spacing	Ele Lead = 8K, 00 XTRK Wingman = 4K, 500 Right 1000' above obstruction 2000' mountainous 5 NM route centerline 10 NM outside CONUS unless authorized by MAJCOM/DO Rounded to next 100'
AWADS/SKE Max AOB	20/10 after SD Descent Below IFR Alt Ingress to Egress < 40 NM 500 or 400 + contour 3NM
Loss of SKE in VMC	Notify Lead Breakout or Maintain
Loss of SKE in IMC	All indications = will breakout Straight = climb 500' and turn 30° for 30 sec Turning = Roll out, climb 500'
SKE Overrun	Lead set additional 800' Wing set additional 300'
Element Lead Overrun	Turn toward XTRK If no XTRK turn safest dir Set additional 800' Announce Ele #, Base Hdg, and Alt Position by 1 Min or Abort Drop
Wingman Overrun	Turn Toward XTRK Set additional 300' Announce Positions Position by 1 Min or Abort Drop
SKE Lead Change	Leader turns 45° for 1 min Reset XTRK, Range, Ldr # Rejoing at end IMC, or briefed position VMC
DZ Entry	Fixed pt in IFR Corridor where formation can start descent Last aircraft at or past entry
Earliest Descent Pt	Allows 6 NM stabilization
Latest Descent Pt	Stabilization at GL
DZ Exit	Fixed pt on DZ escape where all aircraft are at min IFR alt Use 1000 FPM @ 140 KIAS Min 4NM from DZ edge
Run-in	Ele Ld on own appch when established on drop altitude and airspeed until the end of usable DZ or red light
DZ Winds	All use lead's winds
DZ Alignments	<3 Drift = out of leads wake 3 or > Drift = Lead's track
Element Stacking	Element stack 50' Lead lowest 8 or more A/C, flights stack 50' from preceding flights drop altitude
Procedure Turn	70° Nonmaneuver / 20° Man 1000ft above PT alt 170 KIAS if Holding 150 KIAS if no holding, or 3 min of IAF Inbound turn 18 / 36 sec Add 1 sec each 500' long 140 KIAS at FAF Land 6000/5000 Min
Straight In Approach	Approach Separation = #999 Slow 30 kts (NLT 150) Slow 150 inbound FAF 9 AC in 12 min
Formation ARAs	No less than 10 NM
Vis to SKE	"Assume IFR Interval" Slow 15 kts to 4/8000

NVG OPS	
NVG Altitude	500' above spot elevation Or 400' plus 1 contour line 3 NM route centerline Does not include point radius Climb to 500' above obstacle if not identified by 3 NM
NVG Corridor	CDI = 2 NM – Notify Pilot CDI = 3 NM – Climb to MSA, turn toward centerline or parallel
NVG Climb to MSA	C – CARA fails R – RADAR fails A – Altimeter fails P – Either Pilots NVGs S – SCNS fails
Navigator NVG/AL Calls	Inform Pilot of malfunction Take off and Go around = 50, 100, 200, 300, 400' A No turns below 400' A "100 Above Minimums", "Minimums" not required if pilot announces intention to land Cadence NLT MDA Discontinue dist to RWY calls 50, 25, 10' A
NVG Assault Speed	Entire apprch at threshold spd
Min Visual Acuity	20/45
Chart Annotation	NVG MSA = Single Square MSA = Double Square
IR lens on ground	< 2 min
NVG Bank Angles	500 – 1000 = 30 > 1000 = 45
Segmenting Legs	10 NM
Wx Minimums	Vis = 1500/3 Inst Appch = Appch mins Takeoff = Normal mins