

Weapons Footprints and allowed deliveries

1. F-16

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
20mm	LAS	400-550	75-2000	-15° to -5°	2500-4500 ft	1		
						2	280° to 330°, 140° to 200°	
						3	280° to 330°, 160° to 200°	3A – 280°-325°
						4	270° to 320°, 170° to 220°	
						5	280° to 320°, 170° to 210°	
						6		
	HAS	400-600	500-15000	-30° to -15°	5000-7000ft	1		
						2	280° to 340°, 140° to 200°	
						3	280° to 330°, 160° to 200°	All targets
						4	260° to 320°, 190° to 220°	
						5	280° to 320°, 170° to 210°	
						6		
70mm Rockets (Inert)	Dive	350-600	1000-10000	-30° to -20°	1632-19031ft	1		
						2	270° to 030°, 090° to 210°	
						3	280° to 350°, 110° to 210°	All targets
						4	260° to 330°, 090° to 180°	NIL 4C and 4D Only
						5		
						6		
	LATR	350-600	1000-8000	-30° to 0°	2035-15000ft	1		
						2	270° to 030°, 090° to 210°	
						3	280° to 350°, 110° to 210°	All targets
						4	260° to 330°, 090° to 180°	NIL 4C and 4D Only
						5		
						6		
	HATR	400-600	4000-15000	-30° to 0°	6378-25000ft	1		
						2	270° to 030°, 090° to 210°	
						3	280° to 350°, 110° to 210°	
						4	260° to 330°, 090° to 180°	NIL 4C and 4D Only

						5		
						6		
BDU-33	Dive	350-600	2500-10000	-60° to -30°	1081-12072ft	1	280° to 030°, 100° to 210°	
						2	270° to 030°, 090° to 210°	
						3	270° to 030°, 090° to 210°	
						4	260° to 030°, 080° to 210°	
						5	280° to 030°, 100° to 210°	
						6	280° to 030° 100° to 210°	
	45 HARB	420-580	11000-17000	-45° to -30°	7000-9000ft	1	280° to 030°, 100° to 210°	
						2	270° to 030°, 090° to 210°	
						3	270° to 030°, 090° to 210°	
						4	260° to 030°, 080° to 210°	
						5	280° to 030°, 100° to 210°	
						6	280° to 030° 100° to 210°	
	45 HADB	400-580	5000-15000	-45° to -30°	3688-3942ft	1	280° to 030°, 100° to 210°	
						2	270° to 030°, 090° to 210°	
						3	270° to 030°, 090° to 210°	
						4	260° to 030°, 080° to 210°	
						5	280° to 030°, 100° to 210°	
						6	280° to 030° 100° to 210°	
	Level	350-550	300-15000	-5° to +5°	1531-15000ft	1	280° to 010°, 100° to 220°	
						2	270° to 030°, 090° to 210°	
						3	270° to 020°, 090° to 220°	
						4	260° to 360°, 080° to 220°	
						5	280° to 010°, 100° to 210°	
						6	280° to 030°, 100° to 210°	

	LOFT 10 POP LALD	360-580	1300-1600	0° to 10°	4831- 15149ft	1	280° to 040° 100° to 220°	
						2	270° to 030° 090° to 210°	
						3	270° to 030° 090° to 220°	
						4	260° to 020° 080° to 200°	
						5	280° to 020° 100° to 210°	
						6	280° to 030° 100° to 210°	
	LOFT 20 HILD	360-580	3600-4200	0° to 20°	8043- 23046ft	1	280° to 360° 110° to 190°	
						2	270° to 030° 090° to 210°	
						3	270° to 010° 090 to 200°	
						4	260° to 350° 080° to 170°	
						5	290° to 350° 110° to 170°	
						6	280° to 030° 100° to 210°	
BDU-50 CF	Dive	370-600	2500-10000	-60° to -30°	1225- 12705ft	1	280° to 030°, 100° to 210°	
						2	270° to 030°, 090° to 210°	
						3	270° to 030°, 090° to 210°	
						4	260° to 030°, 080° to 210°	
						5	280° to 030°, 100° to 210°	
						6	280° to 030° 100° to 210°	
	Level	355-600	1000-10000	-5° to +5°	3485- 25000ft	1		
						2	285° to 330°	
						3	285° to 325°	All Targets
						4	285° to 325°	All Targets
						5		
						6	285° to 325°	
BDU-50 AIR	LD Dive	370-600	2500-10000	-60° to -30°	1219- 12613ft	1		
						2	090° to 180° 270° to 020°	
						3	090° to 160° 280° to 040°	
						4	080° to 160° 350° to 040°	
						5		

	HD Level	355-600	1000-3000	-5° to +5°	2630-5632ft	6	100° to 170° 280° to 030°	
						1		
						2	300° to 340° 150° to 180°	
						3	300° to 340° 150° to 180°	3A-3H
						4	300° to 340° 150° to 190°	4A and 4B only
						5		
						6		
BDU-56 CF	Dive	370-600	2500-10000	-60° to -30°	1225-12505ft	1		
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	3A-3H
						4	260° to 040° 080° to 220°	
						5		
						6	280° to 030° 100° to 210°	
	Level	355-360	1000-3000	-5° to +5°	3492-10103ft	1		
						2	270° to 030° 090° to 210°	
						3	270° to 010° 100° to 220°	3A-3H
						4	260° to 350° 150° to 210°	
						5		
						6	280° to 360° 100° to 210°	
Mk-82 CF Live	30HADB	350-500	7500-10000	-35° to -20°	6136-14688 ft	1		
						2	280° to 360°	
						3		
						4		
						5		
						6	280° to 360°	Req. Close Road
	45HADB	350-500	7500-10000	-50° to -35°	4190-10360 ft	1		
						2	280° to 360°	
						3		
						4		
						5		
						6	280° to 360°	Req. Close Road
	45HARB	350-500	10000-15000	-55° to -35°	4469-13805 ft	1		
						2	280° to 360°	
						3		
						4		
						5		
						6	280° to 360°	Req. Close Road

	30DB	350-500	3000-5000	-35° to -20°	3081-9685 ft	1		
						2	280° to 360°	
						3		
						4		
						5		
						6	280° to 360°	Req. Close Road
	LALD	350-500	300-2500	-25° to -5°	548-9668 ft	1		
						2	300° to 320°	
						3		
						4		
						5		
						6	290° to 315°	Req. Close Road
Mk-82 AIR Live	LAHD	355-570	700-1100	-10°	1911-3374 ft	2		NOTE: The attack headings for these footprints require recalculation. In case of intention to drop using these parameters before the next release of this document, contact the RCO for approved attack headings
						6		
	LALD	360-580	1400-2600	-10°	3630-8807 ft	2		
						6		
	LOFT 10 POP LALD	360-580	1300-1600	0° to 10°	4910-16606 ft	2		
						6		
	LOFT 20 HILD	360-580	3600-4200	0° to 20°	8158-25599 ft	2		
						6		
	Dive	370-580	3000-3600	-30°	3588-5530 ft	2		
						6		
	30 HARB	420-580	12100-13300	-30°	10517-15080 ft	2		
						6		
45 HADB	380-580	8300-9600	-45°	5369-8023 ft	2			
					6			
45 HARB	516-550	13900-15400	-45°	9162-11363 ft	2			
					6			
GBU-12 Live	DB	300-450	10000-20000	-30° to 0°	3632-12600 ft	2	330° to 335° 140° to 160°	
						6	140° to 160°	
GBU-12 Inert	DB	300-450	10000-20000	-30° to 0°	3632-12600 ft	1		
						2	320° to 350° 120° to 150°	
						3	330° to 360° 120° to 160°	3A-3H
						4	340° to 010° 120° to 160°	4A and 4B only
						5		

2. EF2000 Typhoon

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
27mm (FAP)	HAS (e-HIAT)	350-550		-33° to -12°	4000-6000 ft	1		
						2	280° to 320° 170° to 210°	

						3	270° to 290° 200° to 220°	3I and 3J only
						4	270° to 310° 190° to 220°	4C and 4D only
						5	280° to 310° 180° to 220°	
						6		
27mm (TP)	LAS/HAS (only 30° L/R, DEU 017 footprint) USE ONLY FOR LAS AT SPEEDS LESS THAN 450 KTAS	2 50-500	500-5000	-45° to -5°	490-3000 m	1		
						2	353° to 356°	
						3	349° to 353°	
						4	340° to 348°	4C and 4D only
						5	345° to 353°	
						6		
	HAS (Waiver für Übungsmunition)	Up to 480	2500 to 5000 490m to 2510m SR	-45° to -30°	490-3000 m	1		
						2	320° to 350°	
						3	315° to 345°	
						4	315° to 335°	
						5	310° to 350°	
						6		
Paveway IV INERT	Level (RMTK)	350 to 450	3000 to 25000	-5° to +5°	-	2	335° to 345° 150° to 170°	
GBU-16 INERT	Level Med Alt	300 to 450	5000 to 7000	-5° to +5°	7389 to 18100 ft	1		
						2	130° to 150°	
						3	130° to 150°	
						4	130° to 150°	
						5		
						6	130° to 150°	
	Level High Alt	350 to 500	10000 to 15000	-5° to +5°	12392 to 31122 ft	1		
						2	135° to 155°	
						3	130° to 150°	C,D,H,K ONLY
						4		
						5		
						6	130° to 150°	
	Ballistic (non guided)	300 to 375	5000 to 7000	-50° to 25°	2770 to 8530 ft	1		In conjunction with GBU-16 Inert 10-15k safety area
						2	130° to 150°	
						3	130° to 150°	
4								
5								
6						130° to 150°		

3. Hawk

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
3Kg Practice Bomb	Level and Dive	350-450	100-3000	-30° to 0°	31-2550 m 102-8364 ft	1	280° to 360° 200° to 220°	
						3	270° to 330° 190° to 220°	
						2		

						4	260° to 300° 180° to 220°	
						5	200° to 220° 280° to 340°	
						6		

4. Tornado

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
27mm TP	LAS/HAS (only 30° L/R, DEU 017 footprint) USE ONLY FOR LAS AT SPEEDS LESS THAN 450 KTAS	250-500	500 to 5000 490m to 1910m SR	-45° to -5°	490-3000 m	1		
						2	353° to 356°	
						3	349° to 353°	
						4	340° to 348°	4C and 4D only
						5	345° to 353°	
						6		
	HAS (Waiver für Übungsmunit ion)	Up to 480	2500 to 5000 490m to 2510m SR	-45° to -30°	490-3000 m	1		
						2	320° to 350°	
						3	315° to 345°	
						4	315° to 335°	
						5	310° to 350°	
						6		
	LAS/HAS (RMTK)	450-550	200 to 21000	-45° to -5°	-	1		
						2	300° to 340°	
						3	300° to 340°	
						4	300° to 340°	
						5	290° to 330°	
						6		
DM38 / BDU-33 D/B	HALD (DEU 007)	350-520	300-10000	-45° to -15°	-	1	280° to 040° 100° to 220°	
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
						4	260° to 040° 080° to 220°	
						5	280° to 040° 100° to 220°	
						6	280° to 030° 100° to 210°	
	LALD (DEU 006)	350-520	0-4500	-15° to -5°	-	1	280° to 350° 140° to 210°	
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
						4	260° to 040° 080° to 220°	

						5	280° to 330° 140° to 220°	
						6	280° to 030° 100° to 210°	
	HARB <small>(DEU 009/4)</small>	350-520	10000-15000	-15° to +5°	-	1	290° to 360° 110° to 180°	
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
						4	260° to 040° 080° to 220°	
						5	300° to 340° 120° to 160°	
						6	280° to 030° 100° to 210°	
	MARB <small>(DEU 009/3)</small>	350-520	4500-10000	-15° to +5°	-	1	280° to 040° 100° to 220°	
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
						4	260° to 040° 080° to 220°	
						5	290° to 360° 110° to 180°	
						6	280° to 030° 100° to 210°	
	LOFT <small>(DEU 004)</small>	350-520	Depending on the event		-	1	300° to 350° 120 to 170°	
						2	270° to 030° 090° to 210°	
						3	280° to 350° 100° to 170°	
						4	260° to 040° 080° to 220°	
						5	310° to 340° 130° to 160°	5A and 5B only
						6		
	Mini-LOFT <small>(DEU 005)</small>	440-520	Depending on the event		-	1	280° to 335° 140° to 220°	
						2	270° to 030° 090° to 210°	
						3	270° to 340° 120° to 220°	
						4	260° to 040° 080° to 220°	4C and 4D only
						5	280° to 320° 140° to 180°	
						6		

DM18S /DM28 (Mk106)	Level (DEU 002, DEU 001)	440-550	≥ 300	-1° to +1°	-	1	280° to 040° 100° to 220°	
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
						4	260° to 040° 080° to 220°	
						5	280° to 360° 100° to 180°	
						6	280° to 030° 100° to 210°	
		440-550	< 300	-1° to +1°	-	1	280° to 340° 130° to 220°	
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
						4	260° to 040° 080° to 220°	
						5	280° to 320° 140° to 180°	
						6	280° to 030° 100° to 210°	
	LAHD (DEU 003)	350-520	300-1500	-15° to -1°	-	1	280° to 040° 100° to 220°	
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
						4	260° to 040° 080° to 220°	
						5	280° to 040° 100° to 220°	
						6	280° to 030° 100° to 210°	
BDU-50 Air (BSU-49)	HARB (DEU 016/4)	350-520	10000-15000	-15° to +5°	-	1		
						2	310° to 020° 110° to 160°	
						3	320° to 030° 100° to 150°	
						4	330° to 040° 090° to 140°	
						5	330° to 350° 100° to 140°	
						6	320° to 020° 100° to 150°	
	HADB (DEU 016/3)	350-520	4500-10000	-15° to +5°	-	1		
						2	280° to 020° 090° to 170°	
						3	300° to 030°	

							090° to 150°	
						4	320° to 040° 080° to 150°	
						5	330° to 010° 100° to 150°	
						6	290° to 030° 100° to 160°	
	HALD (DEU 016/2)	350-520	1000-10000	-45° to -15°	-	1		
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 190°	
						4	260° to 040° 080° to 170°	
						5	290° to 010° 100° to 180°	
						6	280° to 030° 100° to 210°	
	LALD (DEU 016/1)	350-520	1000-4500	-15° to -1°	-	1		
						2	270° to 350° 120° to 210°	
						3	280° to 320° 140° to 180°	
						4	270° to 300° 120° to 160°	
						5	300° to 020° 160° to 220°	
						6	280° to 330° 130° to 200°	
	LvL HD (DEU 013)	420-520	≤ 1000	-1° to +1°	-	1		
						2	270° to 360° 110° to 210°	
						3	280° to 330° 130° to 220°	
						4	260° to 310° 110° to 220°	
						5	280° to 030° 140° to 190°	
						6	280° to 340° 130° to 210°	
	LAHD (DEU 014)	350-520	≤ 1500	-15° to +1°	-	1		
						2	270° to 030° 090° to 210°	
						3	280° to 340° 110° to 220°	
						4	260° to 320° 100° to 220°	
						5	280° to 330° 130° to 220°	
						6	280° to 010° 110° to 210°	

Mk-82 AIR (BSU-49)	LAHD (DEU 012)	350-520	≤ 1500	-15° to +1°	-	1		
						2	345° to 355° 165° to 175°	
						3		
						4		
						5		
						6		
MATRA 250Kg	LAHD (DEU 010)	350-520	≤ 1500	-15° to +1°	-	1		
						2	330° to 010° 150° to 190°	
						3		
						4		
						5		
						6		
Mk-82 CF	Dive (RMTK)	450-510	1800-8000	-50° to -15°	-	1		
						2	330° to 020° 140° to 190°	
						3		
						4		
						5		
						6		
MC 540lb Mk XX	Dive and Toss (RMTK)	300-500	500-25000	-45° to +30°	-	2	320° to 360°	
Paveway IV INERT	Level (RMTK)	350-450	3000-25000	-5° to +5°	-	2	335° to 345° 150° to 170°	
Litening III	Training LASER Combat LASER	Flight profile IAW Appendix B						
GBU-16 INERT	Level Med Alt	300 to 450	5000 to 7000	-5° to +5°	7389 to 18100 ft	1		
						2	130° to 150°	
						3	130° to 150°	
						4	130° to 150°	
						5		
						6	130° to 150°	
	Level High Alt	350 to 500	10000 to 20000	-5° to +5°	12392 to 31122 ft	1		
						2	135° to 155°	
						3	130° to 150°	C,D,H,K ONLY
						4		
						5		
						6	130° to 150°	
	Ballistic (non guided)	300 to 375	5000 to 7000	-50° to 25°	2770 to 8530 ft	1		

5. JAS-39

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
27mm	Strafe	350-450	0-5000	-10° to -20°	≤2500m	1		
						2	320° to 005°	
						3	320° to 005°	3I and 3J only
						4	320° to 005°	4C and 4D only
						5	320° to 005°	
						6		

6. A-10

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
30mm	LAS	250-375	200-2000	-15° to -5°	2000-12234ft	1		
						2	270° to 340°, 130° to 190°	
						3	270° to 320°, 165° to 205°	All tgts
						4	260° to 320°	All tgts
						5	280° to 310° 160° to 210°	
						6	280° to 330° 150° to 200°	
	LAS 3deg	275-300	200-2000	-3° to 0°	2527-12814ft	1		
						2	270° to 340°, 130° to 190°	
						3	270° to 320°, 165° to 205°	All tgts
						4	260° to 320°	All tgts
						5	280° to 310° 160° to 210°	
						6	280° to 330° 150° to 200°	
	HAS	250-400	500-15000	-60° to -15°	3000-15639ft	1		
						2	270° to 340°, 130° to 190°	
						3	270° to 320°, 165° to 205°	All tgts
						4	260° to 320°	All tgts
						5	280° to 310° 160° to 210°	
						6	280° to 330° 150° to 200°	
70mm Rockets Inert	LATR	275-400	1000-8000	-35° to 0°	1360-15000 ft	1		
						2	280° to 020° 090° to 210°	
						3	270° to 360°	3A-3H

							100° to 220°			
						4	260° to 340° 100° to 220°	4C and 4D only		
						5				
						6				
	HATR	275-400	4000-15000	-35° to 0°	5330-23000 ft	1				
						2	280° to 020° 090° to 210°			
						3	270° to 360° 100° to 220°			
						4	260° to 340° 100° to 220°	4C and 4D only		
						5				
						6				
AGR-20 Inert	LASER Rocket	250-400	5800-12500	-35° to -19°	7490 to 13300 ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.		
						2				
						3				
						4				
						5				
						6				
BDU-33	Level	275-400	300-15000	-5° to +5°	1531- 15000 ft	1	280° to 040° 100° to 220°			
						2	270° to 030° 090° to 210°			
						3	270° to 040° 090° to 220°			
						4	260° to 040° 080° to 220°			
						5	280° to 040° 100° to 220°			
						6	280° to 030° 100° to 210°			
	LOFT	250-450	1000-8000	+10°to+45°	7000- 9000 ft	1	280° to 040° 100° to 220°			
						2	270° to 030° 090° to 210°			
						3	270° to 040° 090° to 220°			
						4	260° to 040° 080° to 220°			
						5	280° to 040° 100° to 220°			
						6	280° to 030° 100° to 210°			
DB 30; DB 45;	275-400	2500-10000	-30° to -20°	2458- 11883ft	1	280° to 040° 100° to 220°				
						-45° to -20°	1654- 11886ft	2	270° to 030° 090° to 210°	
								3	270° to 040° 090° to 220°	

	DB 60			-60° to -20°	1081-11886ft	4	260° to 040° 080° to 220°	
						5	280° to 040° 100° to 220°	
						6	280° to 030° 100° to 210°	
	30HADB	250-350	6400-14000	-20° to -18°	5667-13451ft	1	280° to 040° 100° to 220°	
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
						4	260° to 040° 080° to 220°	
						5	280° to 040° 100° to 220°	
						6	280° to 030° 100° to 210°	
45HADB	225-350	8000-14000	-45° to -42°	3714-8904 ft	1	280° to 040° 100° to 220°		
					2	270° to 030° 090° to 210°		
					3	270° to 040° 090° to 220°		
					4	260° to 040° 080° to 220°		
					5	280° to 040° 100° to 220°		
					6	280° to 030° 100° to 210°		
10LAHD	275-300	800-1700	-10° to -8°	2054-4465 ft	1	280° to 040° 100° to 220°		
					2	270° to 030° 090° to 210°		
					3	270° to 040° 090° to 220°		
					4	260° to 040° 080° to 220°		
					5	280° to 040° 100° to 220°		
					6	280° to 030° 100° to 210°		
10LAHD 15POP	275-300	800-1700	-10° to +15°	2054-7650 ft	1	280° to 040° 100° to 220°		
					2	270° to 030° 090° to 210°		
					3	270° to 040° 090° to 220°		
					4	260° to 040° 080° to 220°		
					5	280° to 040°		

							100° to 220°	
						6	280° to 030° 100° to 210°	
	20LALD	275-325	1900-4100	-20° to -18°	2812-6289 ft	1	280° to 040° 100° to 220°	
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
						4	260° to 040° 080° to 220°	
						5	280° to 040° 100° to 220°	
						6	280° to 030° 100° to 210°	
BDU-50 CF	DB 30;	275-425	2500-20000	-30° to -20°	2694-12705ft	1		
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
	DB 45;	275-425	2500-20000	-45° to -20°	1825-12705ft	4	260° to 040° 080° to 220°	
						5		
						6	280° to 030° 100° to 210°	
	DB 60	275-425	1000-20000	-5° to +5°	3486-19950ft	1		
						2	270° to 340° 100° to 210°	
						3	270° to 340° 100° to 210°	
	LVL	275-425	1000-20000	-5° to +5°	3486-19950ft	4	270° to 340°	
						5		
						6	280° to 350° 100° to 210°	
	VLD	275-400	500-5000	-5° to +5°	1825-13904ft	1		
						2	270° to 350°	
						3	270° to 340°	All Targets
						4	270° to 340°	All Targets
						5		
						6	280° to 340°	
10LAHD	275-375	800-1700	-10° to -8°	2064 to 5498ft	1			
					2	270° to 030° 090° to 210°		
					3	270° to 010° 090° to 220°		
					4	260° to 350°		
					5			
					6	280° to 030° 100° to 210°		

	20LALD	275-325	1900-4000	-20° to -18°	2829-6397ft	1		
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
						4	260° to 040° 080° to 220°	
						5		
						6	280° to 030° 100° to 210°	
	30HADB	250-350	6400-14000	-35° to -30°	4403-11827ft	1		
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
						4	260° to 040° 080° to 220°	
						5		
						6	280° to 030° 100° to 210°	
	45HADB	225-350	8000-14000	-35° to -42°	3790-9271ft	1		
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
						4	260° to 040° 080° to 220°	
						5		
						6	280° to 030° 100° to 210°	
BDU-50 Air	LVL HD	275-425	1000-3000	-5° to +5°	2630-5003ft	1		
						2	280° to 340°	
						3	280° to 330°	
						4	280° to 330°	
						5		
						6		
	DB LD	275-425	2500-20000	-60° to -30°	1219-10531ft	1		
						2	100° to 160°	
						3	100° to 150°	
						4	080° to 140°	
						5		
						6	095° to 155°	
	LVL LD	275-425	1500-4000	-5° to +5°	4414-13093ft	1		
						2	270° to 030° 090° to 170°	
						3	320° to 020° 090° to 160°	
4						080° to 150°		
5								

						6	280° to 030° 090° to 170°	
	VLD HD	275-400	500-5000	-5° to +5°	1585-5351ft	1		
						2	280° to 295°	
						3	280° to 295°	
						4	280° to 310°	
						5		
						6	280° to 295°	
	10LAHD	275-375	800-1700	-10° to -8°	1785 to 3326ft	1		
						2	270° to 030° 090° to 210°	
						3	270° to 010° 090° to 220°	
						4	260° to 350°	
						5		
						6	280° to 030° 100° to 210°	
GBU-12 Inert	LVL	300-425	5000-7000	-5° to +2°	4677-15652ft	1		
						2	100° to 160° 330° to 010°	
						3	100° to 140°	
						4	100° to 140°	
						5		
						6	100° to 160° 330° to 020°	
	LVL 10k ft	300-425	10000	-5° to 0°	10496 – 18093 ft	1		
						2		
						3		
						4	110° to 120°	
						5		
						6		
	DB	300-425	5500-20000	-50° to -20°	2426 – 15430 ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2	110° to 150°	
						3		
						4		
						5		
						6		
	30HADB Balistic	300-375	5000-7000	-50° to -25°	2770 - 8530ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2	270° to 030°	
						3		
						4		
						5		
						6		

7. Su-22

Weapon	Event	Speed (Km/h)	Altitude (ft/m AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
LBOB-100	HALD/ LALD	200-1200	500-2950ft 150-900m	-10° to -30°	-	2	290° to 330°	No shp, just image
						6	290° to 330°	
S-5 HE	H/LAR	600-1000	1150-2950ft 350-900m	-10° to -40°	-	2	310° to 340°	
						3	310° to 330°	
30mm inert	HAS/LAS	600-1000	1000-2600ft 300-800m	-10° to -40°	4500 m to 610 m	2	310° to 340°	All tgts
						3	310° to 330°	
						5	305° to 325°	
клен-54	LRF	Flight profile IAW Appendix B						Combat Laser not approved

8. F-18

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
20mm	LAS	275-300	200-2000	-15° to -5°	2000-7000 ft	1		All tgts
						2	280° to 330°	
						3	280° to 330°	
						4	260° to 320°	
						5	280° to 320°	
						6		
	LAS 3deg	275-300	200-2000	-3° to 0°	2517-7000 ft	1		All tgts
						2	280° to 330°	
						3	280° to 330°	
						4	260° to 320°	
						5	280° to 320°	
						6		
	HAS	275-300	200-2000	-60° to -15°	2000-7000 ft	1		All tgts
						2	280° to 330°	
						3	280° to 330°	
						4	260° to 320°	
						5	280° to 320°	
						6		
	LAS	275-300	200-2000	-15° to -5°	2000-7000 ft	1		
						6		
	Dive	350-450	1000-3000	-30° to -20°	1592 – 8097 ft	2		To be Calculated. Interim, use same headings as LAS 3Deg
						3		
						4		
						5		
6								

Mk-76	DB 15	400-500	3000-4500	-20° to -10°	4768 – 10885ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2		
	30	400-500	3000-5900	-40° to -20°	3160 – 8727ft	3		
						4		
						5		
						6		
	15 LALD	425-525	500-1500	-20° to -10°	4768 – 5688ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2		
						3		
						4		
						5		
						6		
BDU-50 CF	DB 30	400-500	3000-5900	-40° to -20°	3180 – 8953 ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2		
						3		
						4		
						5		
						6		
BDU-50 AIR	DB 45	400-500	3000-7700	-55° to -35°	1713 – 6400 ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2		
						3		
						4		
						5		
						6		
BDU-50 AIR	15 LAHD	425-525	500-1500	-20° to -10°	1063 - 3733 ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2		
						3		
						4		
						5		
						6		
Mk-82 CF	DB 30	400-500	3000-5900	-40° to -20°	3180 – 8953 ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2		
						3		
						4		
						5		
						6		
Mk-82 AIR	DB 45	400-500	3000-7700	-55° to -35°	1713 – 6400 ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2		
						3		
						4		
						5		
						6		
Mk-82 AIR	15 LAHD	425-525	500-1500	-20° to -10°	1063 - 3733 ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2		
						3		
						4		
						5		
						6		

9. B-52

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
BDU-50 CF BDU-56 CF	LVL	350-450	5000-25000	-5° to +5°	8702-31435ft	1		
						2	270° to 010° 090° to 190°	BDU-50 only
						3	270° to 030° 090° to 210°	String of 3 at 50ft AVBL 290-340
						4	260° to 040° 080° to 150°	
						5		
						6	280° to 350° 110° to 200°	
Mk-82 CF	LVL	350-400	5000-15000	-5° to 0°	8702-21022ft	1		
						2	280° to 320°	
						3		
						4		
						5		
						6	280° to 310°	

10. Helicopters (pintle mounted weapons)

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Firing Direction (M)	A/c Heading
12,7mm (.50Cal) Inert	Strafe (Forward) (Brass overboard)	60-90	10-600	-6° to 0°	2300-7800ft	1		
						2	290° to 330°	290° to 330°
						3	315° to 345°	315° to 345°
						4		
						5		
						6		
	Sidefire (Brass overboard)	60-90	100-300	-45° to 0°	985-2500ft	1		
						2	275° to 335°	215/035
						3	275° to 325°	210/030
						4	270° to 320°	205/025
						5	270° to 320°	205/025
						6		
7,62mm Inert (Door Gunner)	Sidefire Circling (Brass and No Brass Overboard)	0-100	20-200	-30° to 0°	100-400 m	1		
						2	250° to 340°	Circling
						3	260° to 320°	Circling
						4	260° to 320°	Circling
						5	240° to 320°	Circling
						6		

NOTES

- 1) For Tail Gunners, comply with all parameters, excluding "A/c Heading"

- 2) The approved firing directions above are based on US WZD tool. Users that are required to follow more stringent footprints are to contact the RCO for guidance.
- 3) Users intending to shoot non-pintle mounted rifles are to contact the RCO for guidance.

11. AH-64

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
30mm Inert Fixed	Hover, Running	0-100	50-500	-35° to -5°	300-800 m 984-2624 ft	1		
						2	230° to 070° 090° to 210°	
						3	270° to 360° 090° to 190°	
						4	250° to 350° 080° to 170°	
						5	290° to 340° 120° to 170°	
						6		
	Hover Long Range	0	100-1500	-15° to 0°	2414m 7920ft	1		
						2	270° to 030° 090° to 210°	
						3	270° to 360° 130° to 220°	
						4	260° to 340°	
						5	280° to 330° 150° to 220°	
						6		
30mm Inert Flex	Hover, Running	15-30	100-1500	-61° to -5°	529 – 3845 ft	1		Requires new footprints. Interim max +/- 15° from CL
						2	325°	
						3	300°	
						4	295°	
						5	295°	
						6		
	Hover Long Range	0	100-1500	-11° to 7°	1926-2145m 6319-7040ft	1		
						2	270° to 350°	
						3	270° to 330°	
						4	260° to 330°	
						5	280° to 320°	
						6		
70mm Rx (Inert)	Running Fire	50-100	50-500	-45° to -5°	1000-1641m 3280-5382ft	1		
						2	270° to 030° 090° to 210°	
						3	270° to 010° 090° to 220°	
						4	260° to 350°	
						5	280° to 360° 100° to 220°	
						6		

70mm Rx (Flechette M255)	Running Fire	60-90	50-500	-45° to -5°	1000-1641m	1		
						2	270° to 030°	090° to 210°
						3	270° to 010°	090° to 220°
						4	260° to 350°	
						5	280° to 360°	100° to 220°
						6		

12. F-15 (C and E)

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
20mm TP	HAS	400-500	3600-5000	-30° to -20°	5746-11094 ft	1		
						2	270° to 350°	
						3	270° to 330°	All tgts
						4	260° to 330°	
						5	280° to 320°	
						6		
Mk-82 CF	30DB	350-500	300-5000	-35° to -20°	3081-9124 ft	1		
						2	305° to 310°	
						3		
						4		
						5		
						6	300° to 305°	
	45HARB	350-500	10000-15000	-55° to -35°	4469-13710 ft	1		
						2	300° to 320°	
						3	280° to 310°	3C ONLY
						4		
						5		
						6	280° to 310°	
	30 HADB	350-500	7500-10000	-35° to -20°	6136-14583 ft	1		
						2	300° to 320°	
						3	290° to 310°	3B ONLY
						4		
						5		
						6	290° to 310°	
	45HADB	350-500	7500-10000	-50° to -35°	4190-10239 ft	1		
						2	300° to 330°	
						3	290° to 310°	3C ONLY
						4		
						5		
						6	290° to 310°	
GBU-12 Inert	LVL	300-450	2000-8000	-5° to +5°	4413-12600 ft	1		
						2	110° to 150°	
						3	110° to 140°	
						4	105° to 125°	
						5		
						6	110° to 150°	

	LOFT	300-450	2000-8000	-0° to +30°	4961-12600 ft	1		
						2	110° to 150°	
						3	110° to 140°	
						4	105° to 125°	
						5		
						6	110° to 150°	
	DB	300-450	10000-20000	-30° to -0°	7209-12600 ft	1		
						2	110° to 150°	
						3	110° to 140°	
						4	105° to 125°	
						5		
						6	110° to 150°	
GBU-12 Live	Level	300-450	2000-8000	-5° to +5°	4413-12600 ft	1		
						2	125° to 135°	
						3		
						4		
						5		
						6		
	LOFT	300-450	2000-8000	-0° to +30°	4961-12600 ft	1		
						2	125° to 135°	
						3		
						4		
						5		
						6		

13. MQ-9

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
GBU-12 Inert (Ground Lased)						1		
						2	280° to 310°	
						3	280° to 310°	
						4		
						5		
						6		
GBU-12 Inert (Self-lase /Buddy lase)	LVL	100-165	5000-15000	-5° to +5°	2805-9470 ft	1		
						2	280° to 020° 100° to 170°	
						3	295° to 350° 110° to 150°	
						4		
						5		
						6	290° to 030°	

14. B-1

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
BDU-56 CF	LVL	450-550	2000-15000	-5° to +5°	6323-31938 ft	1		
						2	290° to 320°	
						3	290° to 320°	
						4	290° to 320°	
						5		
						6	290° to 320°	
		490-590	15000-25000	-5° to +5°	21854-42145 ft	1		
						2	280° to 030°	
						3	300° to 330°	
						4		
						5		
						6	280° to 350°	
BDU-50 CF	LVL	450-550	2000-15000	-5° to +5°	6300-23871 ft	1		
						2	280° to 350°	
						3	270° to 330°	
						4	270° to 330°	
						5		
						6	270° to 330°	
		490-590	15000-25000	-5° to +5°	21510-39993 ft	1		
						2	280° to 030°	
						3	300° to 330°	
						4		
						5		
						6	280° to 350°	

15. R-44

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Firing Direction (M)	A/c Heading
7,62mm Inert Sniper	Sidefire (Brass overboard)	0-60	10-500	-72° to -1°	50-450 m	1		
						2		
						3A	305° to 045°	085/265
						3B		
						3I		
						3J		
						4		
						5		
6								

16. AC-130

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Firing Direction (M)	A/c Heading
105mm TP	Sidefire Circling	180-200	6000-10000	-45° to -10°	5332-22539 ft	1		
						2	020° to 270° 210° to 100°	Circling
						3D, C, K	340° to 270° 220° to 130°	Circling
						3 (all)	220° to 150° NIL-NIL	Circling
						4		Circling
						5		Circling
105mm HE	Sidefire Circling	180-200	6000-10000	-45° to -10°	5332-22539 ft	1		
						2	020° to 270° 210° to 100°	Circling
						3		
						4		
						5		
						6	340° to 280° 210° to 130°	Circling
30mm TP	Sidefire Circling	180-200	6000-10000	-45° to -10°	5483-13910 ft	1		
						2	030° to 280° 210° to 100°	Circling
						3	030° to 260° 210° to 100°	Circling
						4	030° to 260° 210° to 100°	Circling
						5	030° to 260° 210° to 100°	Circling
						6	030° to 260° 210° to 100°	Circling
Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
AGM-176 Live and Inert	Level	210	8000-10000	0°	9000 – 12000 ft	1		
						2	125° to 140°	Incl Tgt 2B
						3		
						4		
						5		
						6	120° to 135°	

17. AV-8

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
Mk-76	Dive 10	450-500	1000 - 3000	-20° to -5°	2087 – 10862ft	1	280° to 040° 100° to 220°	
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
						4	260° to 040° 080° to 220°	
						5	280° to 040° 100° to 220°	
						6	280° to 030° 100° to 210°	
	Dive 20	450-500	1000 - 3000	-20° to -5°	2087 – 10862ft	1	280° to 040° 100° to 220°	
						2	270° to 030° 090° to 210°	
						3	270° to 040° 090° to 220°	
						4	260° to 040° 080° to 220°	
						5	280° to 040° 100° to 220°	
						6	280° to 030° 100° to 210°	
BDU-50 CF	Dive	450-550	3000-5000	-30° to -15°	3829-11135ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2		
						3		
						4		
						5		
						6		

18. L-39ZA

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
23mm	Strafe	220-350	700-2500	-30° to -10°	3000-4500ft	1		
						2	310° to 340°	
						3	305° to 325°	Except 3C and 3K
						4		
						5	300° to 320°	
						6		

19. B-2

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
BDU-56 CF	LVL	250-300	5000-20000	0° to 0°	6651-19110 ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2		
						3		
						4		
						5		
						6		
GBU-31	LVL Medium Alt	250-300	10000-14000	0° to 0°	7241-9639 ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2		
						3		
						4		
						5		
						6		
	LVL High Alt	250-300	16000-36000 (NOTE – Limited to FL300)	0° to 0°	8019-18330ft	1		Requires approval/ coordination via J7
						2		
						3		
						4		
						5		
						6		

20. F-35

Weapon	Event	Speed (KTAS)	Altitude (ft AGL)	Release Angle	Release Range	Tgt	Heading (M)	Rmks
GBU-12 Inert GBU-12 Inert	LVL Medium Alt	300 to 450	5000-7000	-5° to +5°	7307 to 17670 ft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2		
						3		
						4		
						5		
						6		
	LVL High Alt	350 to 500	10000 to 0000	-5° to +5°	12182 to 30003 ftft	1		Weapon/event approved. Headings still need to be calculated. Contact RCO.
						2		
						3		
						4		
						5		
						6		

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