

FALCON POPUP ATTACKS

This document was designed based off of the writings of Keith Rosenkranz in "Viper's in the Storm" (an excellent book I recommend to anyone). This document outlines low altitude pop-up attacks for all wingman positions. It is designed with a 4 ship in mind, but a two ship formation can be using Cowboy 11 and Cowboy 12 or Cowboy 11 and Cowboy 13 positions, either works and both are described in the book.

10-DEGREE LOW ATTACK (Cowboy11):

The 10-degree pop-up is used when a stealthy approach to a stationary target is necessary. It is designed to work when your wing executes a 10-degree low or 20-degree high attack. Throughout this maneuver it is important to keep your speed up and release chaff throughout pop-up and egress.

1. Before the initial point (IP) set up for your bombing run:
 - a. Select the desired RP (I use 900), Spacing (I use 175), and double/single release, and AD = 235.
 - b. Set your HUD so you have numerical and tape data (you need to be precise).
2. At IP:
 - a. Turn on your camera:
 - i. State, "Callsign: Camera check"
 - b. Turn weapons from Simulate to Armed
 - i. State, "Callsign: Weapons hot"
 - c. Check bomb release data and your range and bearing to target
 - d. Press the AG master mode:
 - i. Make sure you are in CCRP bombing mode and GM radar mode
 - ii. Use steerpoint mode with expanded view to select your specific target (use bullseye info from briefing).
 - iii. Then freeze radar so you are no longer emitting.
 - e. Change altitude scale from barometric to radar
 - f. Drop to 300-500' AGL and initiate TFR (if at night)
 - g. Make final corrections so you are at 0 bearing and closing with target at 540knots
3. At 10 miles DME (Use range from target in right lower HUD):
 - a. Activate ECM and AG radar
 - b. Double check you have your bomb release information correct
 - c. Check GPS on DED for accuracy
4. At 4.5 miles DME:
 - a. Place your FPM on the 15 degree pitchladder line
 - b. State, "Callsign: Up"
 - c. Note your bearing from target you will need to adjust for any errors during descent. Also make sure your speed is around 500knots
 - d. Begin releasing chaff
5. At 2500 feet altitude(use numbers not the tape & make sure it is radar alt):
 - a. Roll inverted (180 degree roll)
 - b. Execute a 5G pull until your nose (NOT FPM) is at -5 degrees

- c. State, "Callsign is in"
 - d. Roll upright your nose (NOT FPM) should drop to -10 degrees
6. On target:
- a. Keep nose on -10 degree
 - b. Manage speed to remain about 500 knots
 - c. Note heading
 - d. Make final adjustments to align FPM with bomb fall line
 - e. Switch to CCIP bombing mode
7. Releasing bombs:
- a. Let the CCIP pipper move up to your target then depress and hold the pickle button
 - b. The release must occur at 1200-1400 feet so make adjustments if you are slightly out of the release envelope
8. Bombs released:
- a. As soon as you hear the bombs leave the rack roll 120-130 degrees R or L (depending on route of egress) and execute a 5G turn until you are 90 degrees off your original heading
 - b. State, "Callsign is out"
 - c. Continue to dive until you are 300-500 feet AGL
 - d. Through all of this CONTINUE TO RELEASE CHAFF
9. Switch to A-A master mode and decrease to 450 knots and allow others to catch up.
10. Switch master arm to safe mode and switch off the camera.

10-DEGREE LOW ATTACK (COWBOY12) :

This attack will approach from a different angle. This confuses enemy radar and the delay of the offset allows Cowboy12 to avoid the fragment pattern of Cowboy11.

1. Before the initial point (IP) set up for your bombing run:
- a. Select the desired RP (I use 900), Spacing (I use 175), and double/single release, and AD = 235.
 - b. Set your HUD so you have numerical and tape data (you need to be precise).
2. At IP:
- a. Turn on your camera:
 - i. State, "Callsign: Camera check"
 - b. Turn weapons from Simulate to Armed
 - i. State, "Callsign: Weapons hot"
 - c. Check bomb release data and your range and bearing to target
 - d. Press the AG master mode:
 - i. Make sure you are in CCRP bombing mode and GM radar mode
 - ii. Use steerpoint mode with expanded view to select your specific target (use bullseye info from briefing).
 - iii. Then freeze radar so you are no longer emitting.
 - e. Change altitude scale from barometric to radar
 - f. Drop to 300-500' AGL and initiate TFR (if at night)
 - g. Make final corrections so you are at 0 bearing and closing with target at 540knots

3. At 10 miles DME (Use range from target in right lower HUD):
 - a. Activate ECM and AG radar
 - b. Double check you have your bomb release information correct
 - c. Check GPS on DED for accuracy
 - d. Turn 30 degrees off target (target should be at your 10 or 2o'clock)
4. At 6.0 miles DME:
 - a. Execute a 5G turn to bring the target to a bearing of 0 (off nose)
5. At 4.5 miles DME:
 - a. Place your FPM on the 15 degree pitchladder line
 - b. State, "Callsign: Up"
 - c. Note your bearing from target you will need to adjust for any errors during descent. Also make sure your speed is around 500knots
 - d. Begin releasing chaff
6. At 2500 feet altitude(use numbers not the tape & make sure it is radar alt):
 - a. Roll inverted (180 degree roll)
 - b. Execute a 5G pull until your nose (NOT FPM) is at -5 degrees
 - c. State, "Callsign is in"
 - d. Roll upright your nose (NOT FPM) should drop to -10 degrees
7. On target:
 - a. Keep nose on -10 degree
 - b. Manage speed to remain about 500 knots
 - c. Note heading
 - d. Make final adjustments to align FPM with bomb fall line
 - e. Switch to CCIP bombing mode
8. Releasing bombs:
 - a. Let the CCIP pipper move up to your target then depress and hold the pickle button
 - b. The release must occur at 1200-1400 feet so make adjustments if you are slightly out of the release envelope
9. Bombs released:
 - a. As soon as you hear the bombs leave the rack roll 120-130 degrees R or L (depending on route of egress) and execute a 5G turn until you are 90 degrees off your original heading
 - b. State, "Callsign is out"
 - c. Continue to dive until you are 300-500 feet AGL
 - d. Through all of this CONTINUE TO RELEASE CHAFF
10. Switch to A-A master mode, lock up and reform with lead.
11. Switch master arm to safe mode and switch off the camera.

20-DEGREE HIGH ATTACK (Cowboy13)

The 20-degree pop-up is used when a stealthy approach to a stationary target is necessary. It is performed in the same approach as Cowboy11. This approach ensures that you do not get caught in Cowboy12's bomb fragments.

1. Before the IP set-up for bombing run:

- a. Select the desired RP (I use 900), Spacing (I use 75), double or single release, and AD = 235.
 - b. Set your HUD so you have numerical and tape data (you need to be precise).
2. At IP:
- a. Turn on camera
 - i. State, "Callsign: Camera check"
 - b. Turn weapons from simulate to arm
 - i. State, "Callsign: Weapons hot"
 - c. Check bomb release data, as well as, range and bearing to target
 - d. Press the AG master mode:
 - i. Make sure you are in the CCRP bombing mode and GM radar mode
 - ii. Use steerpoint mode with expanded view to select your specific target (use bullseye info from briefing).
 - iii. Then freeze radar so you are no longer emitting.
 - e. Change altitude scale from barometric to radar
 - f. Drop to 300-500' AGL and initiate TFR (especially at night)
 - g. Make final corrections so you are at 0 bearing and closing with target at 540knots
3. At 10 miles from target (Use range from target in right lower HUD):
- a. Activate ECM and AG radar for any last minute corrections
 - b. Double check you have your bomb release information correct
 - c. Check GPS on DED for accuracy
4. At 4.5 miles DME:
- a. Place your FPM on the 30 degree pitchladder line
 - c. State, "Callsign: Up"
 - d. Begin releasing Chaff
 - e. Note your bearing from target you will need to turn to target. Also make sure your speed is around 500knots
5. At 4900 feet (radar not barometric):
- a. Roll 120 degrees towards target and execute a 5G turn until the CCRP bombfall line is straight up and down within your HUD.
 - b. State, "Callsign is in"
 - c. Roll wings level
 - d. Make any adjustments to insure that your nose (NOT FPM) is at -20 degrees on the pitch ladder.
6. On target:
- a. Keep nose on -20 degree mark on the pitch ladder
 - b. Manage speed to remain about 500 knots (preferably kill engines to reduce heat signature)
 - c. Note heading
 - d. Make final adjustments to align FPM with bomb fall line
 - e. Switch to CCIP bombing mode
7. Releasing bombs:
- a. Let the CCIP pipper move up to your target then depress and hold the pickle button

- b. The release must occur at 1200-1400 feet so make adjustments if you are slightly out of the release envelope
- 8. Bombs released:
 - a. As soon as you hear the bombs leave the rack roll 130-140 degrees R or L (depending on route of egress) and execute a 5G turn until you are 90 degrees off your original heading
 - b. State, "(Callsign) is out"
 - c. Continue to dive until you are 300-500 feet AGL
 - d. Through all of this CONTINUE TO RELEASE CHAFF
- 9. Switch to A-A master mode, lock up and reform with lead.
- 10. Switch master arm to safe mode and turn the camera off.

10-DEGREE LOW ATTACK (COWBOY14) :

This attack will approach from a different angle. This confuses enemy radar and the delay of the offset allows Cowboy14 to avoid the fragment pattern of Cowboy13.

- 1. Before the initial point (IP) set up for your bombing run:
 - a. Select the desired RP (I use 900), Spacing (I use 175), and double/single release, and AD = 235.
 - b. Set your HUD so you have numerical and tape data (you need to be precise).
- 2. At IP:
 - a. Turn on your camera:
 - i. State, "Callsign: Camera check"
 - b. Turn weapons from Simulate to Armed
 - i. State, "Callsign: Weapons hot"
 - c. Check bomb release data and your range and bearing to target
 - d. Press the AG master mode:
 - i. Make sure you are in CCRP bombing mode and GM radar mode
 - ii. Use steerpoint mode with expanded view to select your specific target (use bullseye info from briefing).
 - iii. Then freeze radar so you are no longer emitting.
 - e. Change altitude scale from barometric to radar
 - f. Drop to 300-500' AGL and initiate TFR (if at night)
 - g. Make final corrections so you are at 0 bearing and closing with target at 540knots
- 3. At 10 miles DME (Use range from target in right lower HUD):
 - a. Activate ECM and AG radar
 - b. Double check you have your bomb release information correct
 - c. Check GPS on DED for accuracy
 - d. Turn 30 degrees off target (target should be at your 10 or 2o'clock)
- 4. At 6.0 miles DME:
 - a. Execute a 5G turn to bring the target to a bearing of 0 (off nose)
- 5. At 4.5 miles DME:
 - a. Place your FPM on the 15 degree pitchladder line
 - b. State, "Callsign: Up"

- c. Note your bearing from target you will need to adjust for any errors during descent. Also make sure your speed is around 500knots
 - d. Begin releasing chaff
5. At 2500 feet altitude(use numbers not the tape & make sure it is radar alt):
 - a. Roll inverted (180 degree roll)
 - b. Execute a 5G pull until your nose (NOT FPM) is at -5 degrees
 - c. State, "Callsign is in"
 - d. Roll upright your nose (NOT FPM) should drop to -10 degrees
6. On target:
 - a. Keep nose on -10 degree
 - b. Manage speed to remain about 500 knots
 - c. Note heading
 - d. Make final adjustments to align FPM with bomb fall line
 - e. Switch to CCIP bombing mode
7. Releasing bombs:
 - a. Let the CCIP pipper move up to your target then depress and hold the pickle button
 - b. The release must occur at 1200-1400 feet so make adjustments if you are slightly out of the release envelope
8. Bombs released:
 - a. As soon as you hear the bombs leave the rack roll 120-130 degrees R or L (depending on route of egress) and execute a 5G turn until you are 90 degrees off your original heading
 - b. State, "Callsign is out"
 - c. Continue to dive until you are 300-500 feet AGL
 - d. Through all of this CONTINUE TO RELEASE CHAFF
9. Switch to A-A master mode, lock up and reform with Cowboy13. Switch master arm to safe mode and switch off the camera.