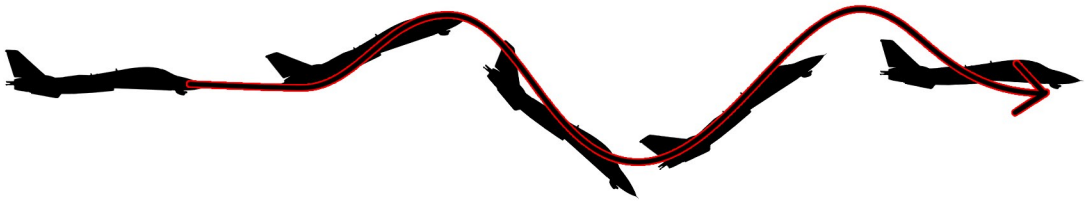
Turns Cheat Sheet 1

Basics

- All tactical formation turns, except check turns, involve ***switching sides.***
- Most turns can be performed with or without comms, so ***watch your lead.***
- Ziplip turns are 90° unless other signals given.
- Station keeping and not crashing into each other is the ***wingman's job.***
- Lead should state a speed and endeavour to maintain it.
- All turns should maintain speed and be as close to 4G as you can. If you're at 4G and accelerating, pull back throttles. If you can't hold 4G at mil power then pull to maintain speed.

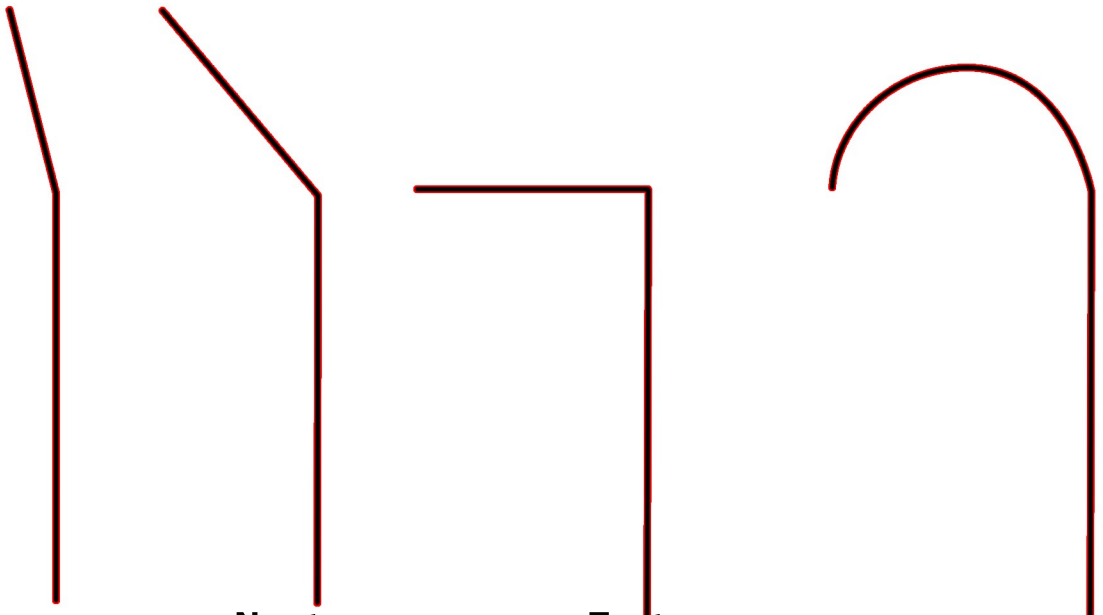
Porpoise - Increase formation distance

I.E. go from .3nm spread to 1nm line



Wing Rock (multiple) - Decrease formation distance

I.E. go from 1nm line to .3nm spread



Check turn

Nav turn
or Delay 45
(or whichever angle you want 20°-60°)

Tac turn
or Delay 90
(or whichever angle you want 70°-120°)

Hook turn
or Turn about
usually 180° but can be 130°+

Turns Cheat Sheet 1.5

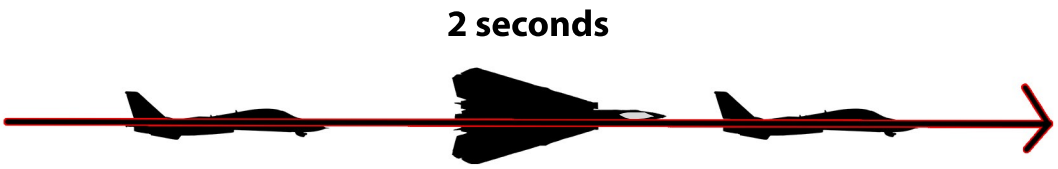
Basics

• Unless in fingertip or padlocked, all flight members should visually check each other and their 6 o'clocks very frequently. Max 10s between checks.

• A wingflash from lead means turn into me. Watch for a second to ensure lead isn't wing rocking.

Wing Flash - Turn into lead

Delay 90/Tac Turn unless other signals given

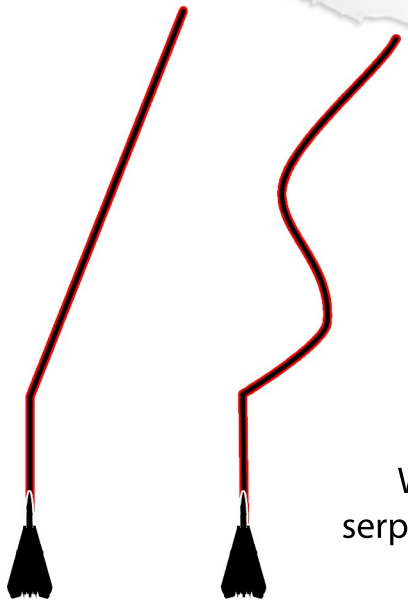


Turns Cheat Sheet 2

Check Turn

- Lead can call "flight check turn left 20" or "check turn 120"
- Lead can also say nothing and just turn. The flight should be frequently watching lead and adapting to any small changes in speed or direction.

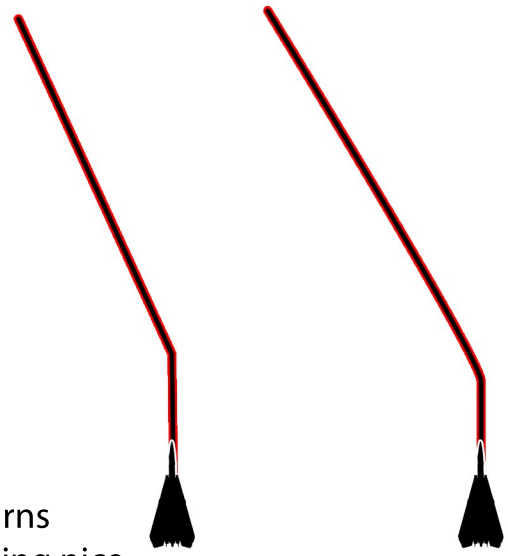
Check turn into wingman



Lead Turns

Wingman uses pitching up and serpentines to maintain formation

Check turn away from wingman



Lead Turns
If they're feeling nice, pull up and serpentine a little to slow down range travel

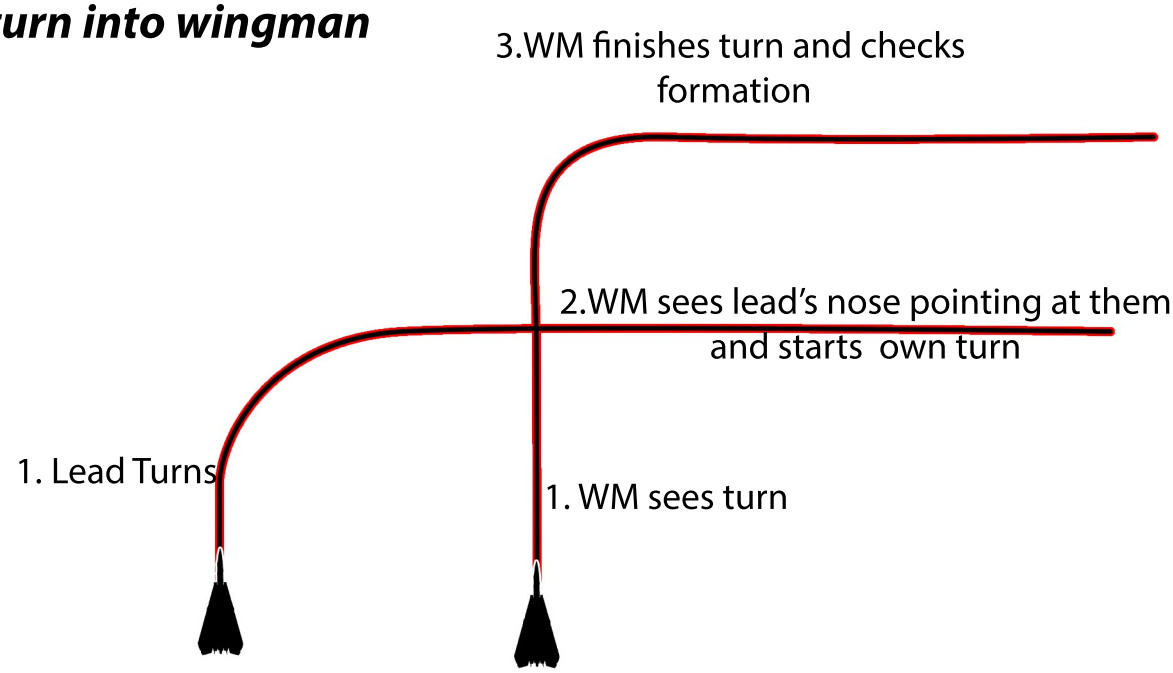
Wingman descends to accelerate and maintain formation

Turns Cheat Sheet 3

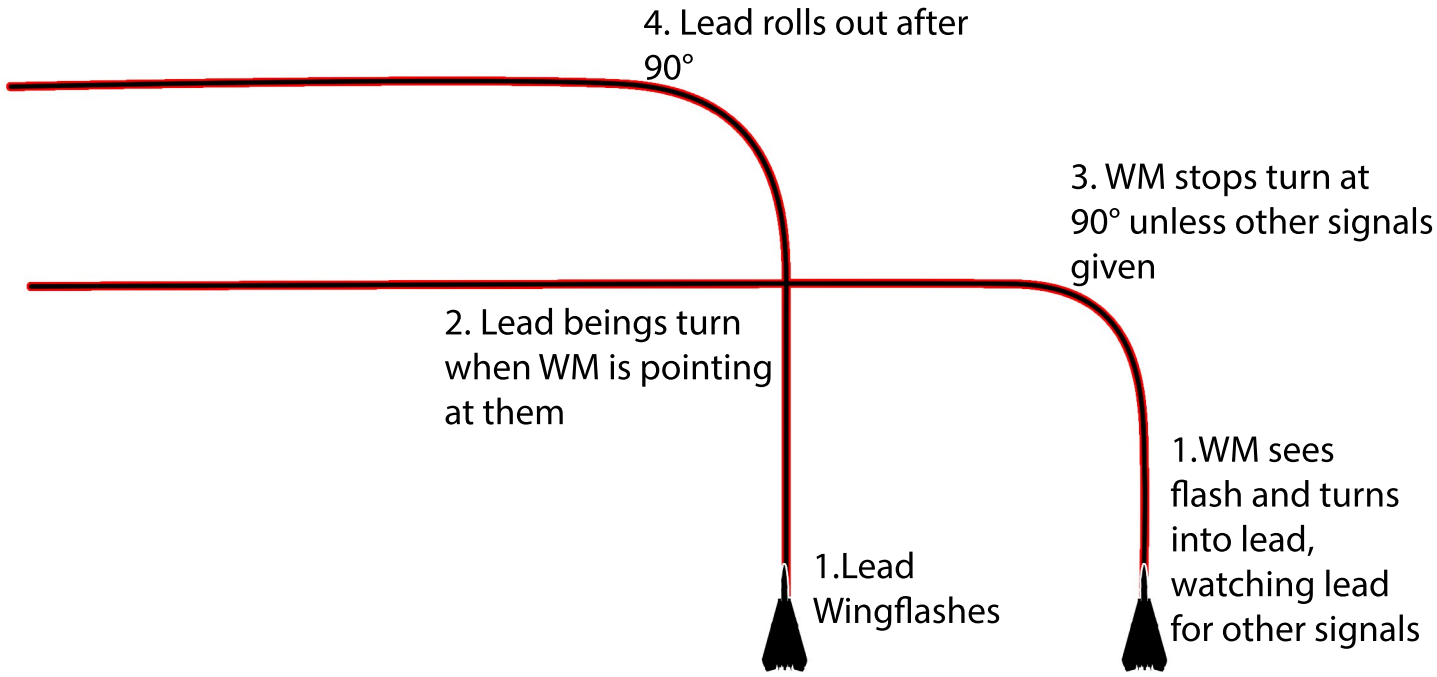
Tac Turn/Delay 90

- The most commonly used turn. Assumed 90° unless otherwise stated
- Lead can call "flight tac turn left, go" or "delay 90 right, go", or "flight, tac turn left 210, go".
- Lead can also say nothing and if turn is into wingman, just turn.
- If the wingman sees lead turning into them, they watch and continue straight, turning to follow just as lead points at them (pure pursuit).
- If the turn is away from wingman, a 2 second wingflash instructs the flight to turn into lead, the wingman then conducts a 90° turn into lead. Watching lead
- If in a wider than 1nm formation, turn after pure pursuit.

Tac turn into wingman



Tac turn away from wingman

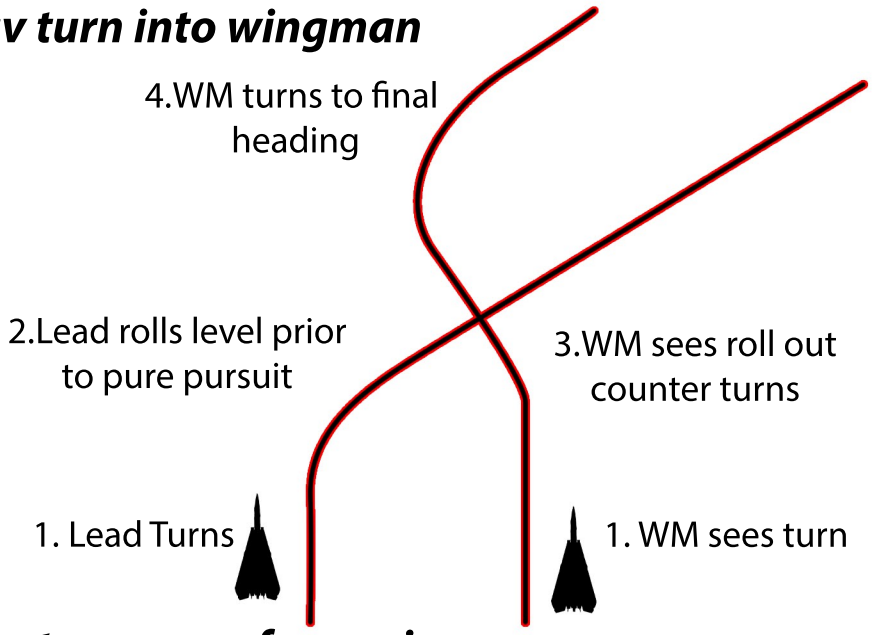


Turns Cheat Sheet 4

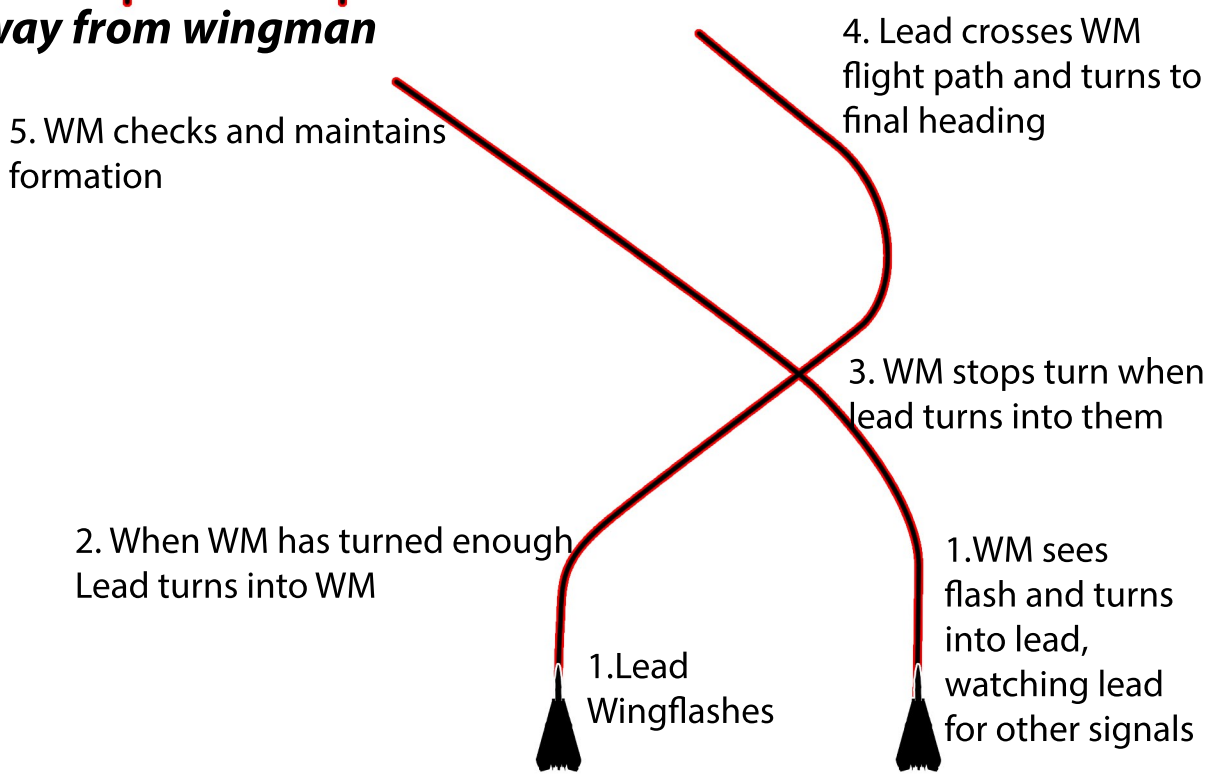
Nav Turn/Delay 45(ish)

- Can't be done by >2 ship lines. 4 ships can do it if in box or wedge.
- Lead can call "flight nav turn left 150, go" or "delay 30 right, go".
- Lead can also say nothing and if turn is into wingman, just turn.
- If the wingman see lead turning into them, they continue straight and watch. If lead rolls out prior to pure pursuit, it's a nav turn and they turn into lead for a 90° crossing. Once crossed leads flight path, they turn back to final heading.
- If the turn is away from wingman, a 2 second wingflash instructs the flight to turn into lead, the wingman then does so and watches lead. If lead turns into wingman, they roll wings level at that heading and lets lead finish the nav turn.

Nav turn into wingman



Nav turn away from wingman

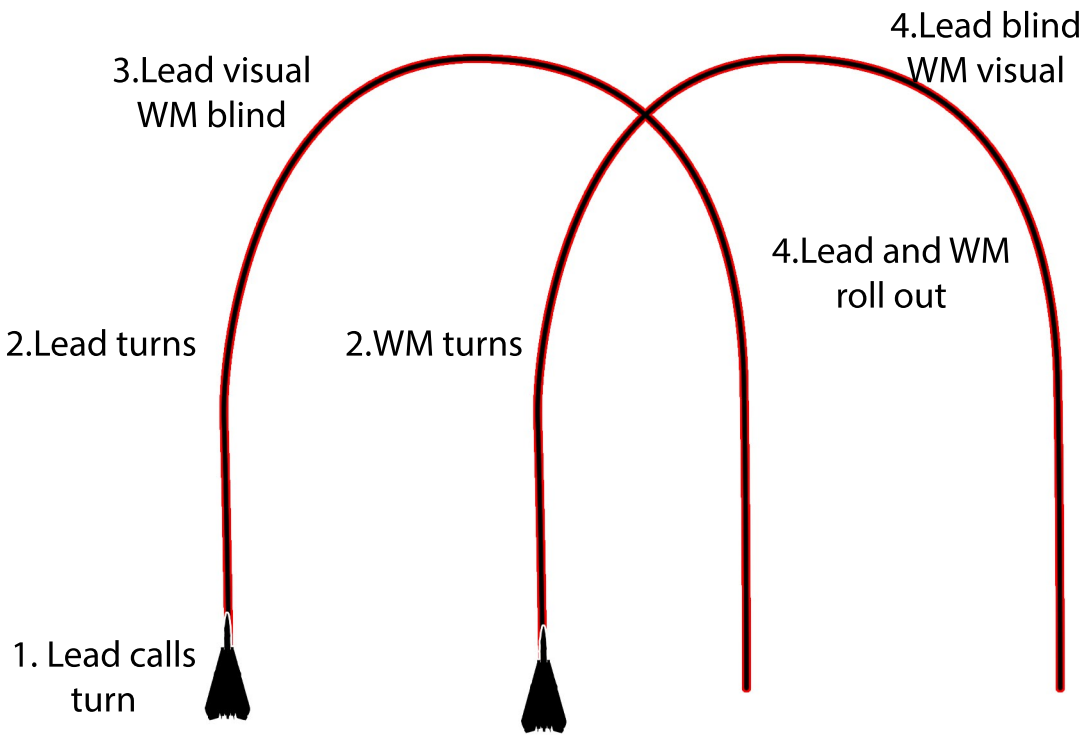


Turns Cheat Sheet 5

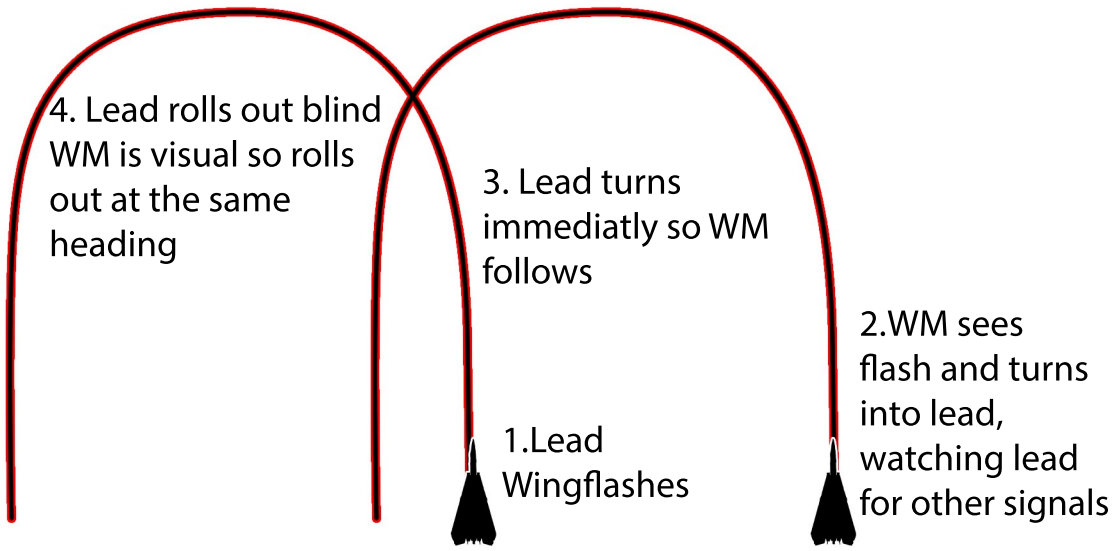
Hook Turn/Turnaround

- Simple 180° in same direction.
- Lead can call "flight hook turn turn left, go" or "hook turn right 050, go".
- If turn is away from wingman, lead can wingflash, and immediately turn as wingman does. WM will now follow lead through untill they roll level.
- Hook turns into wingman must be started with the radio.
- 4G/energy sustaining turns must be maintained to prevent formation loss

Hook turn into wingman



Hook turn away from wingman

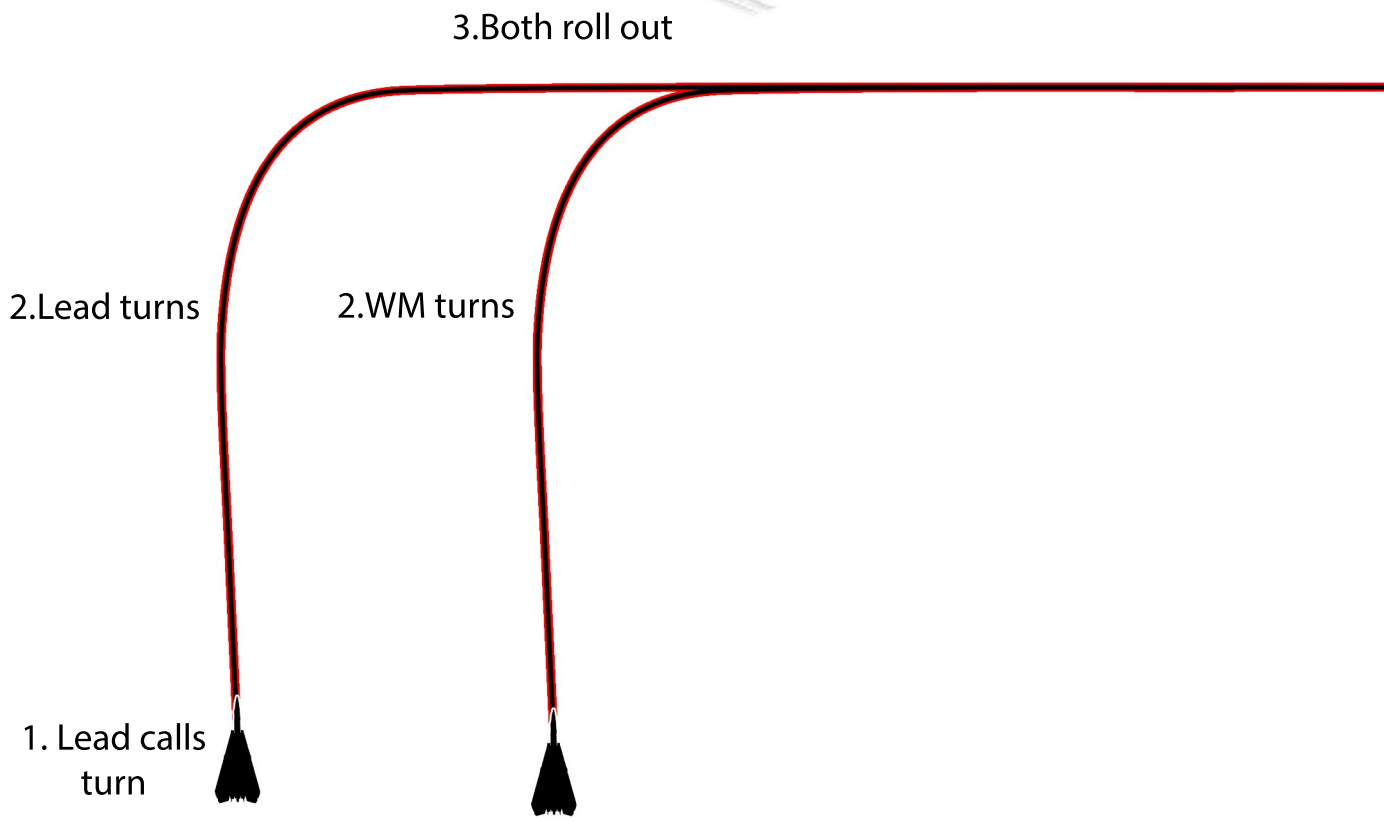
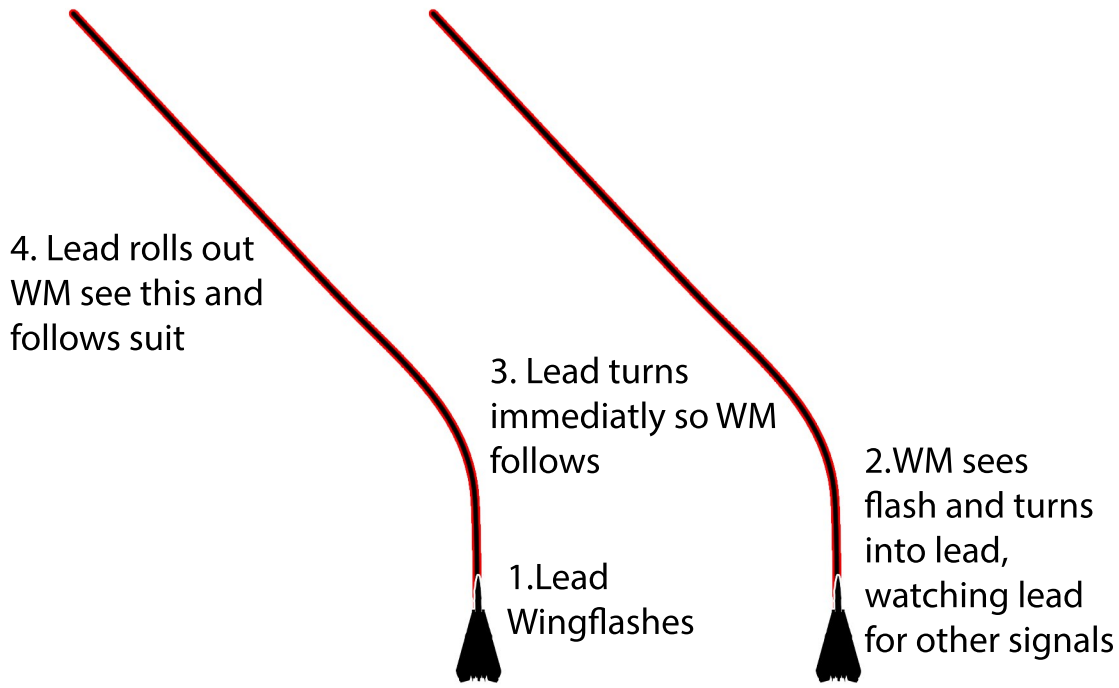


Turns Cheat Sheet 6

In place turn

- Same amount of turn at same time. Changes the formation.
- Lead can call "flight in place left 090, go" . Can be for turns of any amount.
- Useful for turning from line to trail, or when you want to quickly turn, then turn back into the same formation. E.G. turning from a head on line, to a staggered crank, back to a head on line, in a BVR engagement.
- An in place turn into wingman requires a radio call.

In place turn into wingman



In place turn away from wingman