



RED RADIALS

FAC BRIEF

RED RADIAL FAC OPERATIONS

INTRODUCTION

Close Air Support is the precision application of Air Power to support friendly ground forces when in close contact with the enemy. To provide for the safety of friendly ground forces, the best possible accuracy of delivered ordinance must be achieved. To that end, Close Air Support Operations (CAIRS), are generally controlled by a Forward Air Controller (FAC). Normally, the FAC will be airborne in an aircraft optimised for the role, however, although less effective, it is also possible for a FAC to control the engagement from the ground.

This brief is in no way an exhaustive treatment of FAC Ops. What we will cover here is a simplified version of FAC OPS designed for employment during Red Radials Deployments. Procedures developed for these deployments will closely align with the existing Flour Bombing Brief.

THE FAC.

A FAC is the most righteous aviator you will ever have the pleasure to meet. What does a FAC actually do though? A FAC will operate in the designated Area of Operation (AO) and liaise with friendly ground forces in close contact with the enemy to determine their tactical situation. As well as providing intelligence on enemy positions and movements, the FAC will determine what assets he has at his disposal eg, strike aircraft, artillery, naval gunfire, and come up with a strategy designed to neutralise the enemy whilst preserving the safety of friendly forces.

Of interest to Red Radials Ops, are tactics based on the use of strike aircraft armed with the Mk1 Flour Bomb.

After determining the position of friendlies and foe, the FAC will take into account the weapons available on the strike aircraft, and determine an attack direction, taking into account the minimum safe distance (MSD) that the available weapons can be deployed in proximity to friendlies. This distance will vary depending on whether the attack direction is parallel or towards the friendly line. As friendly positions are not necessarily in a straight line, this consideration can assume a high degree of complexion. Finally, the FAC will so far as possible try to mitigate risk to strike aircraft by determining optimum target ingress and egress tracking to minimising their exposure to enemy activity.

TACTICS.

CAIRS tactics are different depending on the threat level to the strike aircraft. In a low threat environment, attack options are more numerous, and time available for strike aircraft to acquire the target is greater. This allows the possibility for the FAC to set the strike aircraft up in a racetrack or wagon wheel pattern around the target with the opportunity to coordinate repeat attacks and also improve attack flexibility.

In a high threat environment, the strike aircraft will ingress to the target from the Initial Point (IP) at low level minimising exposure to enemy weapons envelopes. At the appropriate point they will pull up ('Pop') to achieve the required dive angle for their bombing pass, turning on to the required attack direction. Once the FAC has confirmed that the strike aircraft has correctly identified the target, he will clear it 'Live' for weapons release. After weapons release, the strike aircraft will make their 'switches safe' and manoeuvre aggressively off attack direction and then to the rendezvous

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point as designated to minimise any enemy tracking opportunity. The FAC will call bearing and distance of the weapons impact in relation to the target and after the last strike aircraft has completed their attack, the FAC will provide a Bomb Damage Assessment (BDA).

PROCEDURES.

These FACOPS have been developed specifically for Red Radials Operations, and should be read in conjunction with the Flour Bombing Mass Brief.

Red Radial scenarios involving CAIRS will generally be high threat, and as such, this brief will consider high threat ops only.

The strike package will be deployed to a designated IP. Approaching the IP, strike lead will contact the FAC and provide the following information.

Callsign/ number and type of aircraft/ ordinance/ position and altitude.

AUTHENTICATION

This is a simple challenge and response process where the initiator would say " Authenticate Dakota". The receiver would then look at his provided code table and respond back the required response "C47"

AUTHENTICATION TABLE

Challenge	Response
Dakota	C47
Brabazon	Bristol
Yeager	Chuck

This lets the FAC know that he is not being spoofed by the enemy and vice versa. If at any time the strike is concerned as to whether they are being spoofed, they too can ask the FAC to authenticate. Once the FAC has the strike aircraft details, he will transmit target details to the strike aircraft. This will be done in the form of a Nine Line Brief.

THE NINE LINE BRIEF

Strike info will always be delivered in the 9 line sequence/format. Strikers will copy the target info onto their pre formatted knee pad card.

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The info on the card is as follows:

- Line 1 IP designation
- Line 2 BRG from IP to Tgt
- Line 3 Dist IP to Tgt in nm.
- Line 4 Tgt Elev
- Line 5 Tgt description
- Line 6 Attack Direction
- Line 7 How the Tgt is marked
- Line 8 Friendlies position
- Line 9 Egress/Rendezvous position code name (pre briefed)

Red Radials		STANDARD 9 LINE CARD		Red Radials	
1 CALLSIGN / MISSION NUMBER <i>Fulcrum</i>		2 NUMBER / TYPE OF AIRCRAFT <i>2 x CJ6 Uber Changs</i>			
3 POSITION / ALTITUDE <i>Wyangala</i>		4 ORDNANCE <i>1 x MK1 Flour Bomb</i>			
5 PLAYTIME <i>10 mins</i>		6 ABORT CODE <i>KIO</i>			
1 IP/BP	<i>Stingray</i>				
2 BRG (IP TO TGT)	<i>014</i>				
3 DISTANCE (IP TO TGT, NM)	<i>5nm</i>				
4 TARGET ELEVATION (FT MSL)	<i>700</i>				
5 TARGET DESCRIPTION (GENERAL)	<i>Bunker</i>				
6 Attack Direction	<i>270</i>				
7 TARGET MARKINGS (LASER CODE)	<i>Smoke</i>				
8 FRIENDLY LOCATION (DIRECTION & DISTANCE)	<i>100m North</i>				
9 EGRESS DIRECTION (DIR & DEST)	<i>RV</i>				
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An example on how this information would be relayed from the FAC would be :

" Tsingtao Pause **Stingray** pause **014** pause **5.0** pause **700** pause **bunker** pause **270** pause **smoke** pause **100 mt north** pause **RV**".

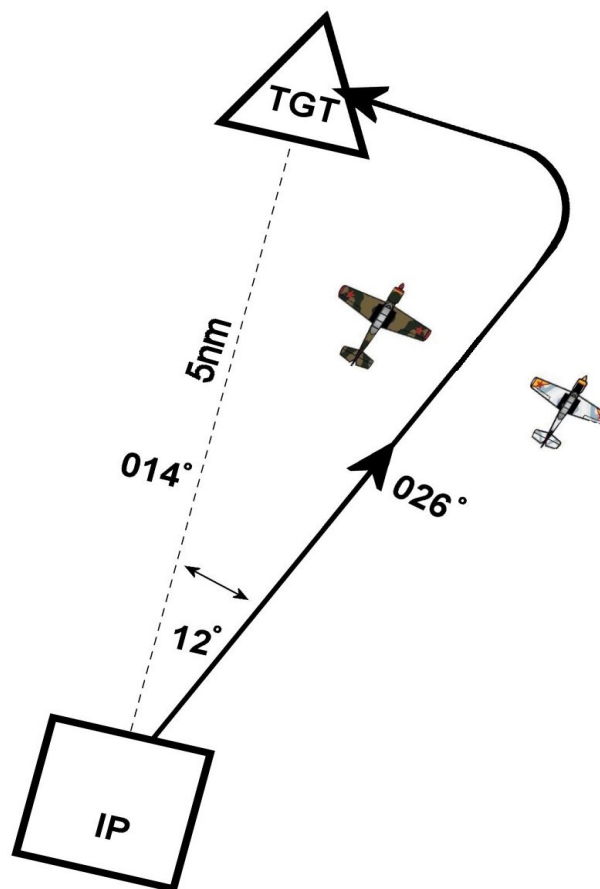
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There is a pause between each packet of information to allow the strikers to copy it onto their kneepad card and to clearly differentiate it from the next piece of info. The strike will then read back the info exactly as it was delivered to confirm correct copy.

Once the FAC has confirmed correct copy and is ready for the attack, he will tell the strikers to call departing the IP. As our fine Eastern Bloc attack aircraft are not equipped with any form of attack computer, you will be required to carry out a calculation using the 1:60 rule. The idea being that you will track with an offset from the IP, to allow a turn onto attack direction with at least 30sec on attack direction to allow the FAC to confirm that you have acquired the correct target and be cleared 'Live' for weapons release. This time for the run in on the target is a compromise between achieving correct line up, accurate weapons release, and spending minimum time on one heading in a high threat environment. For Red Radial operations, we will aim to achieve a 1 nm run in which at 110 kts will allow just over 30 sec on attack heading.

So how do we make the calculation of the offset required to achieve a 1nm attack run?

Let us assume we have an IP 5nm south of the target and we are looking to achieve an attack direction of 270deg. Using the 1:60 rule, we can see that if we want to achieve a 1nm lateral displacement over 60 nm, then a 1 deg heading change over that distance would generate the required offset. As our IP is only 5 nm from the target, (1/12 the distance) we can see that by offsetting our track 12 deg to the right, we would achieve the required offset to allow a 90 deg turn onto attack direction with the required minimum 30 sec run in. So if IP to tgt is 014 Degrees the required offset hdg is $014 + 12 = 026\text{deg}$



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Remember the FAC is your friend. He will not be asking for you to carry out overly complex calculations to resolve your attack solutions. It is important however to fly an accurate ground track and timing (allowing for wind) otherwise the attack geometry will be compromised. GPS is your friend here. A cunning Bomber Pilot would hack his clock departing the IP and use his GPS to achieve a ground speed of 120 kts and ensure his required track is accurately flown. For a 5 nm distance from the IP to target, the turn onto attack heading will be 2min 30 after departing the IP. Attack directions other than 90 deg off the bearing from IP to target can be accounted for in the turn onto the attack heading. The target will be marked by the FAC in a timely manner, allowing the probability of target acquisition prior to the turn onto attack heading.

Once the strikers have acquired the target, they will call "I see white (or colour) smoke". The FAC will confirm the target location in relation to that smoke. Once acquired the strikers will in turn call " Callsign in live". Once the FAC is satisfied that the Striker has the correct target, he will call "Callsign, clear live".

The best way to maintain mutual support in a pair, is to fly from the IP to the final turn in spread. By then using an inplace turn on to attack direction, you will be well positioned for a stream attack. Each aircraft in the pair will individually call in live, and will in turn be cleared live. It is important however to make sure that you are not too close whilst in spread, or the second striker will be too close to the lead for the attack. This will compromise the safety of the second aircraft as it could be exposed to the fragmentation envelope of leads weapons. Also, if there is not enough time for lead to call " off safe" then the second striker will not be cleared for the attack.

On exiting the target area. The FAC will " confirm switches safe " and provide you with a BDA. Once copied. The strikers will be directed to the predesignated egress point where the pair will RV and continue their mission or Return to Base (RTB). Once cleared to tactical frequency, interaction with the FAC will be complete.

CONCLUSION

FAC Operations can be a highly dynamic and time compressed operation. The best chance for a satisfactory outcome is prior preparation, clear and concise communication, and above all, maintenance of situational awareness. Well executed attacks are a righteous and truly rewarding experience.

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Red Radials		STANDARD 9 LINE CARD		Red Radials	
1 CALLSIGN / MISSION NUMBER		2 NUMBER / TYPE OF AIRCRAFT			
3 POSITION / ALTITUDE		4 ORDNANCE			
5 PLAYTIME		6 ABORT CODE			
1 IP/BP					
2 BRG (IP TO TGT)					
3 DISTANCE (IP TO TGT, NM)					
4 TARGET ELEVATION (FT MSL)					
5 TARGET DESCRIPTION (GENERAL)					
6 Attack Direction					
7 TARGET MARKINGS (LASER CODE)					
8 FRIENDLY LOCATION (DIRECTION & DISTANCE)					
9 EGRESS DIRECTION (DIR & DEST)					
Red Radials		Red Radials			