

# DESIGNER'S RESPONSE TO F&M *AIR WAR* REVIEW

by *Dave Isby*

One thing I think should be pointed out is that *Air War* is basically fun and easy to play, and you shouldn't be frightened off by the tons of paper. I should have included a scenario where you just fly a plane and put it through maneuvers and aerobatics. For those of you who think that putting a plane through its paces is too simple should note that even experienced gamers, such as Jim Dunnigan and Charlie Vasey, have 'crashed' in *Air War*. As they say, a doctor buries his mistakes, a pilot is buried with his.

In regards to other points raised in the Close-up on *Air War*, the game does distinguish between the bombing avionics systems of the different Aircraft - that is what the Accuracy Multiples of chart 28.3 are for. As for the Su-19 being the equal of the F-14, remember that the Su-19 is optimized as a bomber and that the Soviets are now turning out some sophisticated electronics - possibly with the design adapted, as in the MiG-23's radar, from recovered U.S. equipment left in Vietnam. This does point out that much of the quantification of electronic warfare devices in *Air War* is, by necessity, estimated. If the United States Air Force is willing to tell me exactly how effective an ALQ-119 is against various EW threats, I would be more than happy to modify my figures. But I have not heard any complaints so far. Bombing has been simplified - the Close-up review feels that perhaps the bombing aspect has been over-simplified. LABS was omitted because there are no Tactical Nuclear Weapons (this is a 'clean' game). The 'scatter' effect of area weapons, such as napalm, was actually built into tables 25.94, The Target Destruction Table and the Accuracy Multiples. We were quite aware of the physics - Greg Costikyan (the Developer) is

quite knowledgeable in the field - but we did not want to force the players to have to count out where their bombs would land. We tried to take the time lag into effect through 25.93, the Falling Table. The same applies to the glide angle for smart bombs. I plead simplicity. Had I the game to do again I would design it knowing I had more leeway to be complex. But Greg and I were always afraid that if we 'loaded down' our basic design too much, it would never get off the ground.

Rules 9.53 and 9.54 have been the cause of 60% of the game questions thus far on *Air War*. What they mean is that an Aircraft will lose Airspeed (a number of Movement Points) and altitude (one level) if it accumulates Turn Points at its maximum rate, which it can only do with its wings vertical. This is to reflect the difference between an Aircraft's maximum Instantaneous 'G' capability as opposed to its sustained 'G'. An Aircraft that can sustain 5G, such as the Su-19 for example, can pull a maximum of 7G, but this will cause the Aircraft to lose energy and hence speed and altitude. That is why an Aircraft moving 'faster than a speeding bullet' loses out in *Air War*. An F-4E Phantom (with slats) will lose over 50 knots Airspeed the instant it starts to pull hard 'G'. Sustain this for over 2.5 seconds and I think you'll see that *Air War* mandates that an Aircraft engaging in Air combat maneuvers should keep its Energy up, for it will be dissipated if you intend to fight to the limit. Energy is a function not only of Energy Points, but more importantly of Movement Allowance and Throttle Setting. I should also point out that Aircraft do climb and dive at different rates in game terms because while one Aircraft in a Type I climb may be in fact climbing at a 30

degree angle, another, less maneuverable plane, might only be at a 20 degree angle. Again, it was an attempt at simplicity. Remember, it only requires twelve-pages of rules reading to fly a plane in *Air War*. The key is to stick to the Sequence of Play - that's why we put one in the Rulebook and one in the Chartbook, so both players could have a copy close at hand.

There is going to be an *Air War* errata sheet (watch S&T for an announcement). Until then, players can remove the 'disadvantage' of turning and moving 'along the hexside' for Aircraft having an odd number of Movement Points by allowing players to 'carryover' from turn to turn. We considered this in playtesting, but dropped it due to mnemonics complications. Again, we were afraid of making an over-complicated game. The problem mentioned in the Close-up about the violently decelerating MiG-21 could be easily mitigated by the MiG-21 driver using rule 8.55, Fade-Back Deceleration. Incidentally, a violent pull-out from a dive kills off energy extremely quickly due to the tremendous amount of induced drag and the fact that the wings of the Aircraft have to generate more lift to pull all those tons of metal upwards, hence drag. There are a lot of other glitches too. The procedure for making Split-S's is confused, an important maneuver known as the 'Maximum Performance Turn' was omitted, the game examples got totally fouled up, although how this happened is totally beyond Greg and I - SPI sometimes works in mysterious ways.

It is interesting to note that the scenario that has proved the most popular is 30.23 - 'The Death of Colonel Tomb'. This battle has been described as 'the best dogfight since

Von Richthofen and Brown, 'as it pits three highly skilled and identifiable masters of Air combat in a literally life-or-death situation. Tomb was quite a pilot. Regrettably, most of the material the USAF has on him is classified 'Restricted'. Incidentally, one of Tomb's other Aircraft is now on display in Hanoi, Vietnam. It bears fourteen victory markings The Dragon scenario also has its proponents, however, and from most gamers I've spoken to, the Dragon seems to have a slight edge over the Air National Guard. One thing we didn't mention was that if the Dragon is shot down, he becomes a Left-Wing-

Culture-Hero.  
CHECKING SIX: The Designer Looks Back at *Air War*

*Air War* appeared in the S&T feedback because I wanted to design an updated Foxbat & Phantom that would reflect my ideas on what an Air game should be - as accurate as possible to represent the actual interaction of the Aircraft and weapons. Mindful that Air games were not always popular, I was surprised when *Air War* made it in the feedback. By September 1976, it had been decided that I would be the designer and Greg Costikyan the developer.

As do most SPI games (the good ones, at least) *Air War* got off to a slow start. The first research I did concentrated on radar and ECM, as I thought this would be the most difficult. I was wrong. There were more difficulties than I could foresee lying in the basic mechanics, let alone such extras as electronics. The basic game mechanics did not emerge until late November, with the first Aircraft (the early model F-4) flying a few weeks later. Air combats were taking place by Christmas.

Although we did not know it at the time, many of the decisions we made in the early stages of the game about basic concepts and procedures were to shape the form the game would finally take. The basic

elements and mechanics of the game had to become solidified much sooner than we had expected, for any alteration to such a fundamental part of the game would disturb the other rules that had been built on and around it. Our limited allocations of time and budget did not permit such major surgery except where urgent. We were, however, able to smoothly incorporate most of the major changes that came up during development (such as Greg's improved version of the twelve-point turning system). Other changes, especially those introduced at the tail end of the development process, did not fare as well. One of these was rule 9.44 - loss of speed and altitude when turning tightly. The need for this rule only became apparent after receiving reports from our blindtesters (out-of-house playtesters who go into a semi-finished game 'blind'), most of whom were experienced Aircrew. Reading the rules, you get the feeling that this important rule is not as integral a part of the whole as it might be. but the problems with this rule and others like it (and, believe me, there are others like it), are more of clarification rather than omission. Yet, considering when these changes and additions were made in terms of the game's evolution, it is surprising that they hang together so well. The problems encountered in testing and developing *Air War* were, in many ways, unique. Play testing allows an opportunity to find out what rules are effective and which are hard to understand or misleading. In *Air War*, we put additional emphasis on how the game would correspond with reality - which made it very important to find out what 'reality' was like. Because of our intense research effort we were able to watch test games to see what rules created unrealistic situations or rewarded inane acts.

In *Air War*, when something appeared to be wrong either in terms

of reality or construction, Greg and I had to arrive at a solution for the next week's playtesting - usually after much reference to research material or calling up one of the Aircrewman-blindtesters (usually the ever-enthusiastic Damian 'Captain Snake' Housman, herpetophile, navigator and weapons controller). Then we would try again.

And so it went, through the bitterly cold winter of 1976-77, and into the spring, and finally to summer, week upon week and rule upon rule. It was difficult to maintain interest in the whole thing, especially when the game was approaching completion, which meant seemingly endless routines of proofreadings, corrections, and more proofreading. Not very exciting.

One thing that should be made clear is the importance of playtesting and playtesters to any game. *Air War* was served well by its play testers. Attracted to the game either by their interest in the subject or by the persuasion/threats of the design staff, their number included both those who started gaming with *Tactics II* in '58 and those who began with *Strikeforce I* a few months before. In terms of experience with Aircraft, they ranged from a veteran of 220 combat missions to a lady librarian who once rode in an Airliner. Yet there was valid input from all these different perspectives - had I neglected one group of testers I would have gotten a slanted view of the game.

Today, considering what I learned during development, there are quite a few things I would have done differently had I to do *Air War* again. I would divide climbs and dives each into nine ten-degree increments instead of the over-neuterizing Type I, II, III, and Push/Pull Through system. I would also have distinguished between the rate and the radius of turn, rather than attempting to combine them together in a single turn mode. Both of these

original decisions were made in the name of simplicity. Quite a few other things were deliberately kept simple. The radar lock-on procedure, for example, was originally much more complex. It differentiated auto-acquisition mode from normal lock-on procedure, which required double-sided counters so you would not know whether you have locked onto the target, or onto the horizon, or some chaff. The visual search system is also a simplification of an original that was also more involved. So if anyone thinks *Air War* is complex, I would remind them that it is a simplification - some may say an oversimplification - of an extremely complex subject. That, incidentally, was what I was trying to project when I wrote the ad for *Air War* in S&T 62 - the complexity enabling you to take on the role of a modern pilot, using realistic tactics and technology. The ad itself was written very tongue-in-cheek, and to my great regret the 'fictionalized' dogfight in it was adopted as more-or-less standard for S&T ads, which I did not intend.

If nothing else, it would be apparent that *Air War* was a very research-intensive game. Despite being SPI's alleged *Air Warfare* expert, I had to learn a lot of important information very fast to do *Air War*. It was a very humbling experience, and showed that even egotistical s.o.b.'s such as myself are seldom as knowledgeable as they think they are. *Air War* required a lot of time and effort - about 370 man-hours on my part and 400 of Greg's. In addition to this, time was put in by other R&D staff members, such as Brad Hessel, Joe Balkoski, and by Bob Ryer, SPI's long-suffering copy editor, and the whole of the art department who tried to cope with the monster - there was no way any game, least of all *Air War*, is a one-man show.

As I write this, comments on *Air War* are still sparse - perhaps the recipients are still in a state of collective shock. Some who have seen the game have emitted the same long low whistle of disbelief that greeted the original manuscript as it entered the Art Department. An F-4

backseater thought it "Sierra Hotel" (the English translation of that is unprintable but enthusiastic). One enthused gamer sent in a long letter of appreciation, accompanied by two dollars - to buy drinks for Greg and me! The last time I can recall such a gesture was back in '70 when the gamers and SPI were a much smaller, closer knit community. Another gamer called in from California to praise the game - "with *Air War*, SPI has established Air Superiority". On the other hand, one SPI troll examined the components with a cry of "screw the F-4's, where's the dragon?", while his companion opined that considering the game included a dragon, a bridge, and a number of F-86s, the omission of a Rodan scenario was positively unforgivable. So much for intensive research. •