The following are optional enhancements to the Downtown game rules. They represent additional detail or counterfactual (alternative history) variants.

Use of these rules must be agreed by all players before the start of play as they may involve more book-keeping or result in play taking longer.

This is the only situation where two different aircraft types can be used in the same flight. In all cases the fighter is a typical CAP fighter for that raid. Note both aircraft types on the logsheet. The recon aircraft is always assumed to be #1 and its escort #2. The flight’s task is still Recon.

**EXAMPLE:** In an August 1966 scenario a USN player mixes aircraft in the recon flight. The carrier ID is O (for Oriskany). The recon ‘plane type is an RF-8G. The Oriskany’s CAP task type is an F-8E. The mixed flight finally comprises one RF-8G (#1) and one F-8E escort (#2).

The mixed flight obeys the following rules:

1. The fighter cannot obtain BDA. If the recon aircraft fails to recover but the fighter does, the recon mission is still a failure.
2. The recon aircraft cannot contribute to air combat. Do not count it when assessing the number of aircraft rolling on the Maneuver Table.
3. Use the lowest speed, maneuver and fuel values of either aircraft type for the flight.
4. If one aircraft type has defensive jamming then both have. Use the highest strength value.

### 9.4 DRV Airfields

DRV flights have their maneuver ratings reduced to 1 while taking off or landing. The penalty lasts from the moment takeoff commences and the flight is placed on the map to the end of the second Movement Phase of flight [9.43]. It also lasts from the moment landing begins until the aircraft is on the ground [9.44].

### 11 Air-to-Air Combat

#### 11.14 AIM-9J

**DESIGN NOTE:** The AIM-9J in the game is rated as being no better than the AIM-9B or E. In fact it was a superior missile, but faults and inadequate testing under non-combat conditions meant it performed disappointingly when deployed to Vietnam. The faults were fixed after the war, at which point the ‘Juliet’ became a reliable and effective weapon. This variant assumes the fault was detected and fixed earlier.

Treat AIM-9J IRMs as having a combat rating of 3.

### 14 Anti-Aircraft Artillery

#### 14.54 Medium Altitude Fusing

**DESIGN NOTE:** The DRV were known for setting traps in which heavy caliber AAA would fuse their shells for medium altitude or higher so that MiGs could orbit below the flak.

Once per raid, the DRV player may designate any one AAA concentration (only) as employing medium altitude fusing. Once designated, the concentration uses medium altitude fusing for the rest of the scenario.

AAA concentrations employing medium altitude fusing project a flak barrage [14.3] only at medium altitude or higher. US and DRV flights on the Deck and at Low altitude are unaffected by the concentration.
15 SAMs

15.53 Light SAM Battalions

**DESIGN NOTE:** The DRV operated ‘light battalion’ SAM units in specially-prepared ambushes. These units were comprised of just one or two missile launchers, with a fire control radar but no acquisition radar. These units were easy to move, taking less than a third the time of a regular battalion to move location.

Prior to set-up the DRV player may designate up to three SAM battalions as light battalions. These battalions set up hidden even if they would otherwise set up located. (Or in other words you can designate located SAMs as light battalions so they set up hidden.)

Light battalions only attempt acquisition using the ‘quick acquisition’ method [15.31]. If the unit fails to acquire a target its radar immediately shuts off. To reflect the ambush preparation, do not apply quick acquisition modifiers to light battalion units the first time they switch on their radar.

Light battalions only have one shot of ammo [15.44].

In campaigns, all light battalions may redeploy between the morning and afternoon raids. This is in addition to the allowance listed in the rule. Also, light battalions may redeploy up to 15 hexes away from their original location.

3. Beacon Jamming [19.54] has no effect on SA-3s.
4. SA-3 units have just two shots of ammo [15.44].

Because the DRV’s priority is the defense of the capital, all SA-3 units must be deployed within 4 hexes of downtown Hanoi (hex 2028).

17 Air-to-Ground Attacks

17.61 Cluster Bomb Units

**DESIGN NOTE:** Early cluster bombs could only be used at very low release altitudes. Later models of CBU permitted release from higher altitudes.

Up to Jun 66 CBU attacks may only take place on the Deck; attacks from any higher altitude have no effect. From Jul 66 onward CBU attacks may be made from any altitude except High.

17.64 Pave Knife

**DESIGN NOTE:** In 1972, USAF laser designation pods, codenamed Pave Knife, were in short supply. One would be allocated per flight to guide laser bombs to the target and without them the Air Force could not use LGB. Things were so tight that General Vogt, commanding 7th Air Force, told his pilots: “Don’t come back if you don’t have that pod with you when you return.”

In 1972 scenarios, USAF flights with LGB ordnance carry a Pave Knife pod to designate targets for LGB. The #1 aircraft is considered to carry the pod. If the #1 aircraft is damaged, crippled or shot down, the flight is considered to lose its pod and its LGB capability.

If a flight loses its Pave Knife pod the DRV scores an additional 2 VPs.

In any 1972 campaign the USAF only has 5 Pave Knife pods. If it runs out of Pave Knife it must use Zot Box designators instead.

17.65 Zot Box

**DESIGN NOTE:** The early USAF laser designators were known as ‘Zot Boxes’. They had to be used at lower altitudes than Pave Knife and required the designator aircraft to circle the target while guiding the bombs. Worse still, the designator aircraft could not carry bombs on the mission.

USAF flights using Zot Box designators for LGB ordnance may not attack from Medium altitude or higher. The flight must expend an additional MP in the target hex before it can attack. Do not move, turn or dive the flight when expending this extra MP. (It is assumed to be spent circling the target.)

Flights using Zot Box designators are considered to have one less aircraft when calculating the number of PGM shots [16.14].

**EXAMPLE:** A flight of four F-4D is using a Zot Box designator. Instead of the 4 LGB shots it would normally have (4 x 1 shots) it has 3 shots (3 x 1).
19  Electronic Countermeasures

19.56  Combat Martin

**DESIGN NOTE:** From Apr 67 to Oct 70 a small number of F-105Fs were equipped with VHF communications jamming capability under the Combat Martin program. The mission of Combat Martin aircraft was to jam MiG communications. Use of the jammers was never authorized by higher commands and eventually the equipment was removed from the aircraft. This variant permits players to use the system.

From Apr 67 to Oct 70 the #1 aircraft in a non-weasel F-105 flight may be equipped with comms jamming capability. The flight retains that capability so long as the aircraft is not damaged.

A DRV flight attempting engagement within 3 hexes of a comms jamming flight applies a modifier of –1 to its roll. The US player does not have to indicate which flight is comms jamming; they simply announce the modifier.

Do not assign more than one Combat Martin aircraft per raid.

19.57  Early Warning Jamming

**DESIGN NOTE:** Aside from blanking the approach of a raid, early warning jammers could cause temporary disruption to the DRV’s early warning radars.

Each Jamming Phase roll one die for each aircraft assigned to early warning jamming [27.5]. For each roll of 10, reduce the DRV’s Detection Level by one level [10.11] for the remainder of that game turn.

**EXAMPLE:** The DRV’s Detection Level is B. The USAF has three flights assigned to early warning jamming. In the Jamming Phase three dice are rolled, rolling a 3, 10 and 10. The DRV’s Detection Level is reduced to D for that turn only.

If this rule is used, the US player may not assign more than 3 jamming aircraft to Early Warning Jamming.

26  CSAR

26.1  Bailouts

**DESIGN NOTE:** The game is unduly harsh on bailouts from helicopters.

Modify bailout die rolls from helicopters by +1.

26.43  ResCAP

**DESIGN NOTE:** Flights assigned to ResCAP began to eat into their fuel reserve. They could not sustain the CAP indefinitely.

Aircraft assigned to ResCAP begin to expend fuel points at the rate of 1 for every 5 game turns after they are assigned as ResCAP.

Order of Battle, Table A

**DESIGN NOTE:** The order of battle tables are not the last word on the subject as variations in the makeup of packages were always possible. Here are some variants players might like to play with.

Post-Raid Forces

**DESIGN NOTE:** Early in Rolling Thunder, USAF recon aircraft would fly singly rather than in pairs. The risks to USAF recon birds from MiGs eventually grew so great that they began to receive their own fighter escort.

Prior to Aug 66, the post-raid recon mission comprises:

1x {1} [Recon], Recon

From Mar 67 add the following to the Recon Mission:

1x {4} [CAP], CAP