

Fifty Mission Crush Page

FIFTY MISSION CRUSH

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INTRODUCTION

Fifty Mission Crush, a role playing game, is designed to provide you the player, insight into the frustrations, excitement, boredom, and sometimes terror that made the life of a B-17F pilot in the 8th Air Force from November 1942 to December 1943. During this time the 306th bomb group flew 95 effective missions, consisting of 1472 sorties, averaging 15.5 aircraft per effective mission. Aircraft losses were 92, while crew losses were 803 killed or missing in action and 119 wounded. This set an average life of an aircraft at 16 missions and the average life of a crew member at 18.33 missions. Surviving 50 missions was not easy. You start as a young first lieutenant arriving at Thurleigh air force base just north of London, home of the 306th bomb group. You will remain with this group during your tour of assignment of twenty-five missions, and then out of necessity, your tour will be extended to fifty missions (if you survive). If you are lucky and prove yourself a resourceful pilot, you will be promoted and decorated. It is possible to complete fifty missions and ZI (return home) as a highly decorated Brigadier General if you are able to make the most out of any situation, if you are aggressive but not foolish, and last but not least, if lady luck smiles on you.

FIFTY MISSION CRUSH

A "fifty mission crush" is an Army Air Corps, or Air Force, service cap that has the stiffening ring removed, and is worn crushed and battered. This cap is obviously out of uniform, however steeped in tradition. This tradition was started by the 8th Air force flying personnel as a mark that separates the fledgling from the battle hardened survivor of 25+ combat missions. This mangled cap was frowned upon, but tolerated for those who earned the right to wear it. If you survived we will look the other way as you will have earned the right to wear the fifty mission crush.

GETTING STARTED (APPLE)

To begin the game, boot your game disk and the game will begin automatically. if you are using an Apple II with Pascal, you must first use Your BASiCS disk. If you are using an Apple III, you must first go into apple II emulation mode. If you are using an Apple IIe, be sure to press your CAPS LOCK key. You will need to initialize a disk for SSI use before you begin a game (follow the instructions given in the program). You will need one disk for each pilot (i.e. a disk may only contain information for one pilot).

GETTING STARTED (Atari)

First format a blank disk for use with your Atari system (any properly formatted Atari disk will do). Note that one disk must be formatted for each pilot (i.e. a disk may only contain information for one pilot). Next, begin the game by inserting the game disk into your disk drive; be sure that your

Basic cartridge is plugged into your computer. Turn on the computer and the game will begin automatically.

GETTING STARTED (Commodore 64)

Insert a BLANK disk in the drive and type OPEN 15,8,15 (return). Then type PRINT #15,"N0:SAVE,01", (return). When the red light on the disk drive is off remove this disk from the drive and mark it pilot #1. Note that one disk must be formatted for each pilot (i.e. a disk may only contain information for one pilot). Next place the program disk in the drive and type LOAD "*",8 (return). When the computer returns a READY prompt type RUN (return).

WARNING: When the computer asks you to assign a name to each of your crew members, make sure you enter at least one character for the name. If you do not, you may encounter difficulties later in the game.

SETTING UP

1) After the program loads, you will be asked if you wish to play with more than one player. If you elect to play with more than one player, each will control a pilot and the players will take turns flying missions (the players must decide on the order of play). If a pilot is killed during a multi-player game, the computer will once again ask if you wish to play a game with more than one player. If the players so desire, new pilots may be started to replace pilots that have been killed.

2) Remove the program disk and insert your player pilot disk as instructed. This disk will continue to update your pilot's records after each mission. you can quit playing after any mission and resume later where you left off, but only if you answer "yes" when asked if you want to save the game. Be sure not to stop a game in the middle of a mission, as this will automatically kill your pilot (only stop a game after you have responded "yes" to whether you wish to save the game).

3) You will be asked if this is your first mission if "yes," then you will be asked to enter the pilot's name. If "no," then the game will continue with your current pilot. At this time, you will be asked to enter the names of your crew members.

PLAYING THE GAME

1) You will be assigned a target and assembly altitude and will be asked how much fuel you wish to take. The more fuel you take, the less bomb load you will have. Type a number between 1 and 100 to represent the percentage of maximum fuel you wish to take on your mission. Entering a "1" will get you 1% of your maximum fuel (25 gallons), entering "50" will get you 50% of your maximum fuel (1260 gallons), entering "100" will get you 100% of your maximum fuel (2520 gallons), etc. After you have entered your fuel allocation, you will be given the option to fly overloaded. Flying overloaded will increase your bombload by 20%, but causes you problems if you lose an engine on takeoff.

2) Upon takeoff, the map will be displayed. Your B-17F will be a small flashing dot over your home base in England. Your plane will be at 5000 feet. You may move your plane by typing in the appropriate number:

- 1 = North
- 2 = NE
- 3 = E
- 4 = SE
- 5 = S
- 6 = SW
- 7 = W
- 8 = NW
- 0 = Hold position

3) After each move, you will be presented with a view of your plane. A menu listing your options can be found on the upper left of the screen; and below this, the computer will display the terrain you are currently flying over and the name of your aircraft. (if you lose your aircraft the computer will automatically assign you a new one; but if you lose more than 10 aircraft, you will be sent home in disgrace, so be kind to your equipment.)

At the bottom of the screen you will find a row of seven digits. Each digit informs you of the weather at each 5000 foot increment up to 35000 feet. The left most digit represents 5000 feet, while the right most digit represents 35000 feet. A "0" indicates that there are no clouds at that altitude, while a "1" equals light clouds. Numbers over 1 represent increasingly heavy layers of clouds. The weather is generally better towards the southern end of the map. A weather of "1" at 5000 feet indicates ground fog. Ground fog will not hamper take-offs, but it is better not to land during fog. Enemy fighters will not attack you if fog is present, or if you have any clouds (weather > 0) at your altitude. In addition, if you have clouds between you and the ground, flak will not fire and you will be unable to hit your target.

4) The menu items are explained below:

ALTxxxx = The altitude you are currently flying at.

FUEL xxxx GAL = fuel remaining in gallons.

ENG FIRE EXT 1-4 = To activate an engine fire extinguisher, type the number of the appropriate engine (you have two per engine).

HAND FIRE EXT 5 = To activate a portable fire extinguisher inside the plane, type "S" (you have 5 of these).

ALT U/D = Type U to climb 5000 feet or D to dive 5000 feet.

SALVO S = Type S to drop your bombs on the target.

MAP M = Type M when you are ready to move again.

TARGET POINTS = this will always be -1000 until you hit your target or it will show the number of victory points gained from bombing the target.

TOTAL POINTS = Accumulated victory points excluding target points from this mission.

ABORT A = Type A to abort the mission. This will leave you alone (the other bombers will continue to the target), but will save you 1000 points by setting the target points to 0.

5) When you type M, the map will be displayed and you will be able to make your next move. If your plane marker is a large dot, then you are at mission altitude and have joined up with your bomber group. When you are flying in formation, you will have the added protection of your comrades and will be confronted with significantly less enemy fighters. If you are flying alone, your location will be shown by a small dot.

6) You will continue to cycle through steps 2 - 5 until you have completed your mission and returned to base.

ENEMY FIGHTERS

1) As you move, you may encounter enemy fighters. The chance of facing enemy fighters varies depending upon your location, formation, and mission number. The map is divided into 4 zones A, B, C, and D (refer to the map on the back of this manual). No fighters will oppose you in zone A. In zone B, you may encounter light fighter opposition, but you will be protected well by your fighter escort. In zone C, you will encounter more enemy fighters and will only have a small amount of protection from your limited escort fighters. In zone D, you will encounter the most enemy fighters and will have no fighter escort (long range fighter escort didn't become a reality until later in the war). In zones B, C and D you will encounter more enemy fighters if you are not flying in formation with your bomber group. As the mission number increases (i.e. as time goes by), the amount of German fighter opposition will increase, as will the amount of friendly fighter protection.

2) Each time an enemy fighter begins a firing pass you will be presented with a tactical display. A list of all weapons capable of returning fired and the amount of ammo remaining in each weapon will be listed at the upper left corner of the display. Below is a list of all weapons available on your plane.

IdentifierNameType	AmmoCrewmember
NNoseGun Single 30 cal.*15	Bombardier
RRightCheek Gun Single 30 cal.*10	Navigator
LLeftCheek Gun single 30 cal.*10	Navigator

ETopTurret Guns Twin 50 cal.20Engineer
PPortWaist Gun Single 50 cal.10Port Gunner
SStbdWaist Gun Single 50 cal.10Starboard Gunner
BBallTurret Gun Twin 50 cal.20Ball Gunner
TTailGuns Twin 50 cal.20Tail Gunner

* There is a 5% chance after each mission that your 30 caliber guns will be upgraded to 50 caliber guns. If you lose your plane, your new plane will begin with 30 caliber guns, but the chance will increase to 10%. When upgraded, all three 30 caliber guns will become 50 caliber guns

3) There are up to 7 rounds of fire during each fighter pass. If you wish to fire a weapon during the round, type the letter of the available weapon. If you don't wish to fire, press any other key. If you fire a weapon, one ammo point will be subtracted from its ammo remaining (this will not be shown immediately on the screen). If your fire did not destroy (or at least claim to destroy) or drive off the enemy fighter, it will fire at you and then move closer to your bomber; and you will once again be given a chance to fire. As the enemy fighter moves closer to your B-17, it will be easier for both planes to hit the other with its weapons. The ability of your gunners to hit or drive away enemy aircraft will improve as they gain experience.

4) Your 30 caliber weapons are much less effective than your 50 caliber weapons at long range. As the range closes the difference in ability of your weapons decreases. There are 3 types of German fighters each with the abilities given below:

FW-190 -- This plane is the hardest to hit and has average firepower.

ME-109 -- This plane is average on defense and has the weakest firepwr.

ME-110 -- This plane is the easiest to hit but has the greatest firepwr.

FLAK

1) If you fly over a target or an A-A battery while at an altitude under 30,000 feet, you will receive flak if there are no clouds between you and the ground. The flak intensity will vary based on your altitude (the lower you are the heavier the flak). Four targets are protected by extra flak concentrations and will fire heavier flak than normal. The four heavy flak targets are La Rochelle, Lorient, Vegesack, and Wilhelmshaven.

2) If during flak a fire is started on your aircraft, you will receive additional flak (the flak batteries have seen that they have the range and will begin to concentrate on you).

BOMBING THE TARGET

1) Once over the target, you may drop your bombs. Once you have dropped your bombs, you will be subject to more flak and fighters.

2) You will not be able to hit your target if there clouds between you and your target.

3) When you drop your bombs on target you will first receive 1000 points to counteract the -1000 points you begin with each mission; and then you will receive up to an additional 1000 points based on the size of the bombload, the altitude of the bombing run, the experience of the key crew members, and the effect of any applicable damage to the plane and crew.

4) You may choose to bomb a target other than the one assigned to you; however, the points received for the bombing will be significantly less than those you would receive for bombing the assigned target.

ABORTING THE MISSION

At any time prior to dropping your bombs on target, you may opt to abort your mission. If you abort the mission, your bombs will be released and your target points will be set to 0. However, since you have elected to drop your bombs and return home, you will no longer be allowed to fly in formation with your bomber group. Al though you can wait to abort until you have returned to the safety of England (in effect recalling the entire bomber group), don't forget that as long as you have not dropped your bombs there is always a chance that an enemy fighter will detonate them and destroy the plane. You will also use more fuel while carrying your bombs.

FORCED LANDINGS AND BAILING OUT

1) If you are forced to land in water, you may be rescued. Your chance of being rescued will be lowered by certain types of damage to your plane and crew (see the section on damage). Ditching always causes the loss of the plane.

2) If you are forced to land on land other than your airbase, you may crash into a building. If you land in England and do not crash, your crew and plane will be available for your next mission (It is assumed that you landed at an emergency field). If you crash in England, your plane will be destroyed and you may lose some of your crew (including yourself). If you land on the continent, you will always lose your plane but you may escape capture and return to England (sometimes with your crew).

3) Occasionally you will be forced to bail out of your plane. If you bail out overwater, you may be rescued (but don't count on it). If you bail out over the continent, you may be captured. Your plane will always be destroyed when you bail out.

FUEL

In this game, time and distance are measured by the amount of fuel used (Example: since moving northeast (diagonal) uses more fuel than moving north, it is assumed that it also takes more time and thus allows more opportunities for enemy fighter attacks. Standard fuel consumption figures are given below (rounded down):

move diagonal 37

move non-diagonal 25

hold present position 20

These figures are assuming no bomb load. If you are carrying a bomb load, you will consume 5 additional gallons of fuel each turn. Each windmilling engine will consume an additional 7 gallons each turn. Each fuel leak will cause the loss of an additional 12 gallons each turn. Each time you climb 5000 feet you will use 15 gallons of fuel; while each time you dive 5000 feet, you will receive 10 gallons of fuel (to account for the use of less fuel during the dive). These consumption figures are displayed below:

windmilling engine 7

fuel leak 12

bomb load 5

climb 5000 feet 15

dive 5000 feet -10

DRAG POINTS

The combination of damaged engines and carrying a bomb load may restrict the ability of your aircraft and are accounted for by the use of drag points. The following adds drag points to your plane:

Carrying a bomb load = .5 drag points

Engine feathering = 1 drag point

Engine windmilling = 1.5 drag points

The effects of drag points are as follows:

1 drag point : No effect.

1.5 or 2 drag points : Speed reduced, cannot fly in formation with bomber group, and chance of additional German fighters intercepting.

2.5 drag points : Even greater chance of additional German fighters intercepting.

3 drag points : Aircraft will lose 5,000 feet per turn, and even greater chance of additional German fighters intercepting.

3.5 or more drag points : Aircraft forced to land.

CREW EXPERIENCE

Before each mission the computer will list the names of your crew along with the number of missions each crew member has survived; the greater the number of missions the greater the experience of the crew member. As a crew member's experience increases, so does his ability to perform his job. Thus an experienced radio operator will be able to increase your chances of rescue after ditching (he can quickly radio the proper SOS), while a gunner will be more likely to destroy or drive away an enemy plane. All crew members have

specific functions that will improve as they gain experience.

CALCULATING TARGET POINTS

The following formula determines the number of points received for bombing a target: $(OT * BOMB LOAD * BOMB LOAD * RANDOM NUMBER BETWEEN 1 AND 100) / (ALTiTUDE / 100)$ 100 times the bomb load percentage. OT is a reflection of the amount of plane and crew damage and is a number between 0 and 1 (a value of 1 reflects no damage to the plane or crew). When bombing any target other than that which was assigned the value of OT begins at .2 instead of 1. If the formula results in a number greater than 1000, the target points will be set to 1000.

DAMAGE

Some of the effects of damage are listed below.

CREW:

Crew Oxygen hit: The aircraft will lose 5000 feet a turn until it reaches 15000 feet. you will be unable to climb.

Heater hit: Each turn if you are at an altitude above 10000 feet the crew member may incur frostbite. The higher the altitude and the longer you remain above 10000 feet the greater the chance of frostbite. Frostbite will cause the crew member to become incapacitated for the remainder of the mission and will cost you mission points.

Light wound: No effect on crew member, however 2 light wounds on the same mission will cause a serious wound.

Serious wound: Incapacitates crew member and costs you mission points. Will be the last mission for all crew members except the pilot who may recover from his wounds to fly again.

Killed in Action (KIA): Costs you mission points and if the pilot is killed ends the game.

Loss of Navigator increases fuel usage when not flying in formation. Also reduces chance of survival alter ditching.

Loss of Radioman: Reduces chance of survival alter ditching.

Loss of Bombardier: Reduces bombing effectiveness.

Loss of Copilot: Increases the chance of a crash on landing.

GENERAL AIRCRAFT DAMAGE:

Norden sight: Reduces bombing effectiveness.

Gun hit: Makes the gun inoperable.

Fire in fuselage.: If put out causes no problem. The plane carries 5 portable fire extinguishers

Bomb controls: Reduces bombing effectiveness.

Autopilot: Reduces bombing effectiveness and increases the chance of a crash on landing due to pilot fatigue.

Control damage: Increases the chance of a crash on landing.

Wing root hit: Accumulated damage will destroy the aircraft.

Stabilizer root hit: Accumulated damage will destroy the aircraft.

Fuel tank leak: Loss of 12 gallons of fuel each turn for each fuel leak.

Landing gear hit: Increases the chance of a crash on landing.

Raft destroyed: Reduces the chance of survival after ditching.

Bomb release damage: Reduces bombing effectiveness.

Bomb bay doors damaged: Unable to drop bombs.

Bomb hit. Bombs detonate and kills entire crew.

Radio hit: Reduces the chance of survival after ditching.

ENGINE HITS

Engine runaway: Causes immediate bail out of crew.

Engine feathered: Adds 1 drag point.

Engine windmilling: Adds 1.5 drag points and consumes an additional 7 gallons of fuel each turn.

Engine fire: If put out causes no problem. There are 2 fire extinguishers per engine.

Engine oil leak: Will cause the engine to feather when the engine turns out of oil.

REWARDS

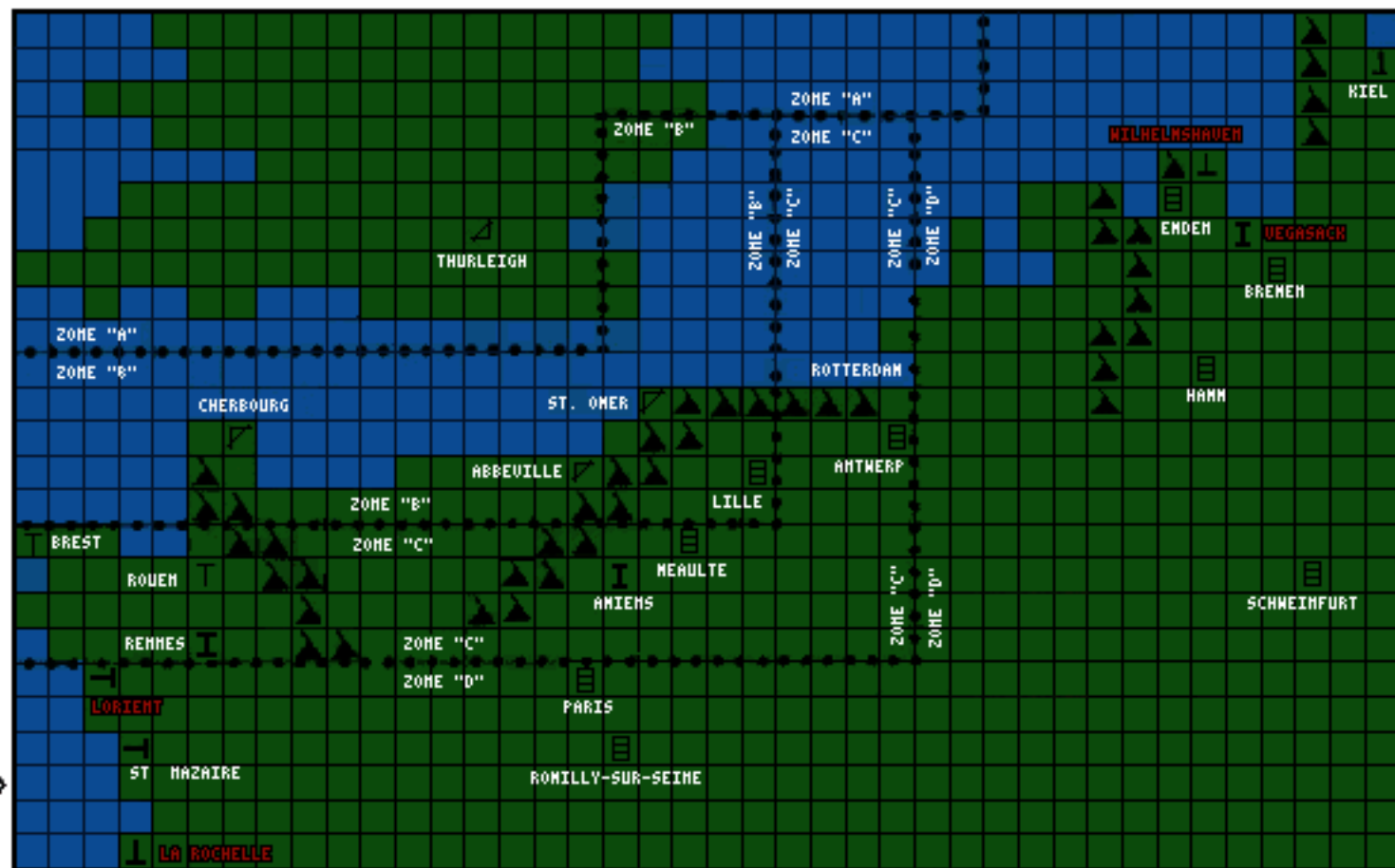
Your rank will increase as your total points increase as follows:

- 7000 points -- Captain
- 15000 points -- Major
- 25000 points -- Lieutenant Colonel
- 38000 points -- Colonel
- 55000 points -- Brigadier General

Each mission you will be given mission evaluation points based on the mission difficulty, your ability to follow orders, and your ability to perform your mission. These points are added to your total score and will aid in gaining promotion. If you receive enough ME points in a mission you will be awarded a medal. The following medals are possible:

- The Legion of Merit
- The Distinguished Service Medal
- The Air Medal
- The Distinguished Flying Cross
- Oak leaf Cluster

You will be awarded a purple heart if you are wounded during a mission.



- = INDUSTRY
- = RAILROAD CENTER
- = AIR BASE
- = SUB PEN
- = A-A BATTERY

← This row does not exist in the APPLE® and ATARI® versions. Subsequently, consider the last two rows to be moved up one row.

ABSOLUTE MINIMUM FUEL NEEDED FOR ROUND TRIP AT 5000 FT. ASSUMING BOMB LOAD DROPPED ON TARGET

ROUEN	760	CHERBOURG	550	PARIS	810	ANTWERP	830	BREMEN	1310
BREST	960	RENNES	880	ROMILLY-S-S	940	(HF) WILHEIMSHAVEN	1220	HAMM	1270
(HF) LORIENT	1010	ABBEVILLE	470	LILLE	630	EMDEN	1140	SCHWEINFURT	1590
ST. NAZAIRE	1090	ST. OMER	410	MEAULTE	660	KIEL	1580		
(HF) LA ROCHELLE	1260	AMIENS	660	ROTTERDAM	750	(HF) VEGESACK	1230		

(HF) = Heavy Flak