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Chapter 1 : B tail gunner - The aircraft that helped win WW II - Pictures - CBS News

Each B was crewed by a team--ten men--and each of them was a gunner. On the ceiling of the Flying Fortress and directly behind the pilot in a rotating Plexiglas bubble were mounted the twin fifties of the Top Turret, usually manned by the senior enlisted crewman and aircraft ENGINEER.

Choose from one of the above catagories to browse this site. I began to test fire my guns I fired a few rounds and it jammed. I looked out and saw an ME coming in a sideward sweeping motion about yards away. I was very sick, my gun was jammed and an enemy fighter was attacking. I had to do something fast since the other guns on our ship were engaged with other enemy fighters and my gun was the only one that could be trained on the fighter. I was very scared and gagging and I knew that it would be fatal to pick up the cover of my gun and attempt to fix it. Jerry can easily see with open waist windows and he knows when something is wrong. Then I did the only thing there was to do and it later proved successful. I waved my gun up and down and back and forth as if I was tracking him. There were quite a few things that impaired his ability to do so, however. This made maneuvering inside the tight confined of the aircraft difficult. Many times the gunners would bump into one another causing poor aim. This also led to another major problem at high altitude, lack of oxygen. If this went un-noticed during combat, the affected gunner would first get dizzy then pass out. If oxygen was not restored quickly, he would turn black and die from anoxia, a lack of oxygen. Left waist gun on BG Sentimental Journey The worst problem about the waist position was not fear of loosing oxygen, rather it was frostbite. Exposure to this extremely cold air for even a few seconds could leave one with a mild frostbite. To battle this enemy, waist gunners wore layers of heavy clothing and an electrically heated suit. However this equipment had to be put on before reaching the high altitude and, while the aircraft was climbing, the waist gunners had to be careful not to sweat because the sweat would freeze once the higher altitudes were reached making their task even more miserable. This cold would also cause ice to form in the oxygen masks of the gunners. This had to be cleared frequently as it would block oxygen flow if went unchecked. Two other problems faced waist gunners. The first of these two was attempting to actually hit a German aircraft. It did not take the Germans long to figure out that the best way to attack a Fortress was from dead ahead. If he chose even to come it from As such, the waist gunners soon found themselves only able to get off short bursts as the enemy aircraft zoomed past the formation. Another thing that made it difficult to hit a German aircraft was the fact that the gunners had to manhandle the large. Waist gunners had to fight the guns themselves to try and aim at fighters coming in from the front half of the formation. This problem was later solved by adding a power assisted mount to the waist gunner positions in the BG. There was one other factor that lead to the difficulty of downing an enemy plane. The sights of the. This meant that if the gunner was not looking through the sight at exactly the proper angle, his aim would be off. Looking through the "ball-in-ring" gun sight on a BG Waist gun. Here you can also see the powered pivot just below and to the left of the gun sight. The last problem that faced not just waist gunners, but all crewmembers on the B, was stress. Even if not a single enemy aircraft actually fired upon the plane, the gunners were always anticipating the next attack. Sometimes it was more stressful to wait to be attacked than actually being under attack. The suspense was almost harder to endure than the heat of battle. On top of his duties as gunner, the waist gunners also had other jobs. They would call out fighter positions so that other gunners knew where to expect the next attack and so that the navigator could log the number of enemy aircraft that attacked the formation in his log. The waist gunners would also call out any enemy fighters that were believed to be damaged or destroyed, Bs that went down and the number of chutes seen to come from these falling bombers. This was done for the benefit of the navigator and radio operator so that they could report these losses at the debriefing. If a crewmember was injured in the aft section of the plane, it was either a waist gunner or the radio operator who applied first aid. This was due to three prime factors. One, it was difficult for anyone in the nose of the aircraft to make his way through the bomb bay to get to the rear of the aircraft. Second, the radio room gun was the least effective weapon to down enemy fighters. Lastly, if one of the waist gunners left his position, the other waist gunner had to cover both waist guns. The waist gunners also reported damage to the pilot and would assist the flight engineer in making

repairs to the aircraft while in flight. Usually if this happened, it was because if the problem was not fixed, the aircraft would prove extreamly difficult, if not impossible, to fly. Waist gunners were enlisted men usually with a rank of Sergeant or higher.

Chapter 2 : 8th Air Force Combat Losses in World War II ETO Against the AXIS Powers

Waist gunner positions in an original WWII BG Flying Fortress.

Sperry ball turret[edit] Interior of the Sperry ball turret of a preserved B This section possibly contains original research. Please improve it by verifying the claims made and adding inline citations. Statements consisting only of original research should be removed. July Learn how and when to remove this template message Sperry and Emerson Electric each developed a ball turret, and the designs were similar in the nose turret version. Development of the spherical Emerson was halted. The Sperry nose turret was tested and preferred, but its use was limited due to poor availability of suitable aircraft designs. The Sperry-designed ventral system saw widespread use and production, including much sub-contracting. The ventral turret was used in tandem in the Convair B , successor to the B Ball turrets appeared in the nose and tail as well as the nose of the final series B The Sperry ball turret was very small[clarification needed] in order to reduce drag, and was typically operated by the smallest man of the crew. To enter the turret, the turret was moved until the guns were pointed straight down. The gunner placed his feet in the heel rests and occupied his cramped station. He would put on a safety strap and close and lock the turret door. There was no room inside for a parachute, which was left in the cabin above the turret. A few gunners wore a chest parachute. The gunner was forced to assume a fetal position within the turret with his back and head against the rear wall, his hips at the bottom, and his legs held in mid-air by two footrests on the front wall. The cocking handles were located too close to the gunner to be operated easily, so a cable was attached to the handle through pulleys to a handle near the front of the turret. Another factor was that not all stoppages could be corrected by charging cocking the guns. In many cases, when a stoppage occurred, it was necessary for the gunner to "reload" the gun, which required access to the firing chamber of the guns. Normally, the gunner accessed the firing chamber by releasing a latch and raising the cover to a position perpendicular to the gun but this was not possible in the ball turret. To remedy that, the front end of the cover was "slotted". The gunner released the latch and removed the cover which allowed space to clear the action. Small ammunition boxes rested on the top of the turret and additional ammunition belts fed the turret by means of a chute system. The directional control was by two hand control grips with firing buttons. The left foot controlled the reflector sight range reticle. The right foot operated a push-to-talk intercom switch. The turret was electrically powered in azimuth and altitude. An emergency hand crank could be attached to reposition the turret from inside the aircraft fuselage. In the event of a power failure another crewman would use this to crank the turret into the vertical position to allow the gunner to exit. However, the gunner did not enter the turret until well into the air, in case of landing gear failure. During take-off and landing, the turret had to be positioned with its guns horizontal, pointing aft. As the guns had to be vertical before the gunner could enter or leave the turret, a set of external controls were fitted so the turret could be repositioned while unoccupied. Earlier designs appeared in other patrol seaplanes. It served a double purpose, defense against bow attacks as well as fire suppression and offensive strafing in antisubmarine warfare. Since this turret is of the ball type, the gunner moves with his guns and sight in elevation and azimuth by means of control handles. Among the earlier designs was the Martin SH bow turret of the PBM-3 twin-engined patrol flying boat which had many points of similarity in design and action.

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Chapter 3 : B Gunner: Air War Over Germany Review - GameSpot

Find great deals on eBay for b waist gunner. Shop with confidence.

Choose from one of the above catagories to browse this site. I was being very cautious, and was patrolling to the rear and the sides in my top turret. I noticed a speck which turned out to be a It flew around out there for a while, sizing things up, and finally decided to attack. Of course all the top turrets, right waist guns, and any other gun that could get on it was firing. It was the perfect target and there was no way it could get through all those. My right waist gunner, Kurt Backert, saw it crash in the woods with field glasses. The flight engineer on the B was like a flying ground crewman. He had to know the intricate workings of the Flying Fortress and would assist the pilots with monitoring the mechanical operation of the aircraft. He could transfer fuel if a fuel tank began to leak. Any fires that started in the bomb bay or on the flight deck were attended to by him. If a control cable had a problem, he would be the one to run back into the aircraft and try to make the repair. A good flight engineer sometimes meant the difference between a plane making it home or not. View from just below the top turret. Here you can see the turret controls in the bottom of the picture. At the top left and top right sides of the picture are the. Towards the center you can see the ammunition feeds for the guns. On top of this, the flight engineer had to be a crack gunner as well for he manned perhaps the most crucial defensive position in the entire aircraft, the top turret. This position was so vital because it was the only one that could cover the front, rear and both sides of the aircraft from level on up. Since enemy fighters usually liked to approach a target from above, this made the top turret a very important position indeed. Usually he held a higher rank than the other enlisted men but this was not always the case. The flight engineer would watch engine gauges and alert the pilots to any potential problems during the mission. Because of the demands of formation flying, the flight engineer was a much needed extra set of eyes for the heavily worked pilots. He would check the barrels before each flight and stow them away after every mission.

Chapter 4 : B Flying Fortress--Queen of the Skies

Training to Fly - Military Flight Training Item Preview remove-circle B and gunner locations Camera bombing with simulated targets

Bs Join Group In flight over town and farmland. Note unusual white-bordered or possibly yellow-bordered roundel. Six engines being serviced in foreground. The st was based at Ridgewell Airfield in Essex. Later used in Aphrodite mission. Launched against V-1 site at Pas-de-Calais, but impacted short of target. Assigned to 97th BG, crashed in Greenland Jun 27, Armed with six 0. Updated January 21, In , the Army issued specs for a "multi" engine bomber, which Boeing interpreted as four engines. While the Martin B bomber seemed adequate at the time to defend the continental United States, with great foresight Boeing designed an altogether heavier, faster, higher-flying, and longer-range bomber, which proved to be invaluable in the strategic air battles over Germany. Boeing started design work on its Model in June, ; just over a year later the first flight of the prototype took place at Boeing Field, July 28, Despite this accident, which was traced to human error - not a design flaw, the Air Corps recognized the potential of the Model aka XB , and orderd thirteen service-test models Y1B for evaluation. Among the most influential views were those of Billy Mitchell and his bomber advocates. For them, the B was a godsend - the manufactured, tangible embodiment of a "Flying Fortress. Fighter escort was considered impractical, and even undesirable by the bomber advocates. In a way, any admission that fighter escort was necessary would imply that enemy fighters posed a real threat and that the Flying Fortresses were not invulnerable. More improvements followed in the BC: Even though all these increased the weight of the "C" model to 49, pounds, the installation of the 1, Wright Cyclones made the "C" capable of MPH, the fastest of all B variants. BD This was a slightly modified BC, with different engine cowling flaps and an extra pair of machine guns, bringing its total armament to six. While only 42 model "D"s were built, by the time of Pearl Harbor the existing "C" models had been upgraded to "D" specifications. The first BD flew on February 3, Most were sent to Hawaii and the Philippines. BE The "E" model introduced some significant changes from the earlier versions, the most visible being the addition of a dorsal fin forward of the now-larger tail, greatly thickening the profile view of "E" and later versions when compared to earlier models. These features increased flight stability, especially during high-altitude bomb runs. Equally significant was the addition of a pair of. The addition of the tail turret required a completely redesigned rear fuselage, resulting in a six foot longer aircraft. The third big change was the installation of powered turrets in the ventral and dorsal positions. The navigator or bombardier used the nose gun, and the flight engineer operated the dorsal turret With the same hp engines, these add-ons made for a somewhat slower, but eminently more defensible, BE. Boeing produced "E"s. Because of the pressing demand for the Flying Fortress, Boeing provided blueprints and cooperation for the B to be built at the Douglas plant in Long Beach and the Vega plant in Burbank. Altogether, they would turn out BFs: The first BF flew in May, From the outside, the "F" closely resembled the "E;" only the unframed, bubble-style plexiglass nose appeared different. Internally, over changes made the BF a better bomber: The stage was set for the BG, the definitive variant of the Flying Fortress. BG This version fairly bristled with defensive firepower: Chin, dorsal, ventral, and tail turrets each mounted a pair of guns 8. Left- and right- side guns in the cheeks and waist added 4 more. And a single, rear-firing gun on the top of the fuselage made No wonder Luftwaffe pilots suffered from "vier motor schreck" "four-engine fear". The most distinctive change was the "chin" turret, sticking out below the nose. It looks like an after-thought, and it was. With 8, produced between July and April , the "G" was the most numerous B variant: The vast majority of surviving Bs are "G"s. Sixteen were in the Canal Zone. And, as every student of the attack on Pearl Harbor knows, six more Bs were approaching Hickam Field on the morning of December 7th. They touched down wherever they could. In the Japanese attack that morning, five Bs were destroyed and eight were damaged. In the Philippines, an odd drama unfolded. The bombers at Clark Field were stationed there as a deterrent. Plans were in place for an immediate strike against Japanese bases on Formosa in the event of war. The next day, the Japanese struck Clark Field and destroyed or damaged all but one of them. A few damaged planes were repaired and joined up with the

squadrons at Del Monte. He died on landing, but won great acclaim and a DSC. Postwar research indicated that he had slightly damaged a cruiser. Crews lived in makeshift accommodations with swarms of insects, disease, poor food, and lack of spare parts. They battled furious tropical storms as much as the enemy and flew incredibly hazardous missions, often at night. The strategic choices, the debates over daylight "precision" bombing vs. Indeed the story of the air war in Europe HAS filled volumes. What follows here is very summary. The first BE arrived in Britain on July 1, Six weeks later, August 17, eighteen Flying Fortresses launched their first raid against Nazi Europe, hitting rail yards at Rouen. Light opposition continued for the next ten missions. It was an ineffective campaign; the thick concrete pans were difficult to damage and the many aircrew were lost. As the heavy bomber demands of the North African campaign eased in the winter of , the air war in Northwest Europe accelerated. On January 27, , for the first time, American bombers hit inside of Germany itself, the submarine facilities at Wilhelmshaven. On the 17th of August, a large force of bombers raided Schweinfurt and Regensburg. At that rate, the Eighth Air Force could not continue. The appalling wastage continued: September 6 - Over bombers attacked the Stuttgart ball-bearing plant; 45 were lost. October 14 - Schweinfurt again. January 11, - German aircraft industry targets. Because of bad weather, only reached Germany; 60 were shot down. German industrial capacity proved remarkably resilient. Armaments Minister Albert Speer mobilized German and captive labor and decentralized critical production. In his Inside the Third Reich: Memoirs , Speer told of his efforts "After the second heavy raid on Schweinfurt on October 14, , we again decided to decentralize. Some of the facilities were to be distributed among the surrounding villages, others placed in small, as yet unendangered towns in eastern Germany. This policy of dispersal was meant to provide for the future; but the plan encountered The Gauleiters did not want new factories in their districts for fear that the peacetime quiet of their small towns would be disturbed. But the ultimate answer, the P Mustang , which could reach Berlin, only appeared in March, Its losses in the air were almost as damaging as the destruction of the factories. The following month, March , Mustangs escorted the Bs all the way to Berlin. As Goering later said, when he saw Mustangs over Berlin, "he knew the jig was up. In retrospect it seems that the Allies shifted the focus of their bombing too often. First submarines, then ball-bearings, the aircraft builders, then in May, oil. Both Galland and Speer, in their memoirs, suggested that continued concentration on one of these industrial jugular veins might have yielded better results. Perhaps by May of , the Allied analysts thought that enough damage had been done to the aircraft industry. They turned their attention to oil production, oil refineries, and synthetic oil plants. In four February missions, the th sent out 36, 18, 18, and 25 bombers, losing 4. Fifteen somewhat larger raids in April, typically with 24 planes, hit airfields and rail marshalling yards; the shift toward these tactical targets in anticipation of D-Day. In May - 19 raids of similar size, suffering two percent losses. With D-Day in June, the th flew 23 missions, mostly against tactical targets, airfields, and marshalling in northern France. These missions included sorties, with only nine planes lost. In the last five months of , the th ran 87 missions, about sorties per month , and lost 66 planes 13 per month , for a monthly loss ratio of 2. Higher than earlier in the year, but far below the unbearable experience of You can read more details about the th at the excellent th Bomb Group website. More than any other airplane, the big Boeing bombers brought the war to the Germans.

Chapter 5 : Pin by jonspitfiremk9 Watsapp on B17 Flying Fortress | Pinterest | Aircraft, Plane and Aviation

B Gunner: Air War Over Europe is essentially an arcade shooter in which you take the role of a gunner on a B Flying Fortress bomber as it flies bombing missions over Europe in World War II.

Up to 1, of these heavy bombers would take part in a raid - the planes flying in a three dimensional formation in which boxes of aircraft were stacked one above the other to take full advantage of their combined defensive firepower. It was not until long-range fighter aircraft capable of escorting the bombers to and from their targets were made available that losses dropped to an acceptable level. Manned by a crew of 10, the many heavy machine guns that bristled from the front, back, top, bottom and sides of the four-engine Bs fly in formation. Overhead, vapor trails trace the weaving path of their fighter escort. B prompted its nickname, the "Flying Fortress. They would then be taken to their planes and await the signal to take off. Once aloft, brightly colored "lead-ships" would direct the bombers to pre-determined points where they would organize themselves into their attack formations. Missions that penetrated deep into enemy territory could last up to eight hours and be filled with anxious anticipation as all eyes searched the skies for enemy defenders. They could expect attacks by fighters armed with machineguns, canon and rockets as well as heavy antiaircraft fire from the ground and even bombs dropped from above. The bombers were expected to maintain their positions at all costs - in order to provide the most effective defensive fire and to assure the most devastating results once their bombs were dropped. The planes were unheated and open to the outside air. The crew wore electrically heated suits and heavy gloves that provided some protection against temperatures that could dip to 60 degrees below zero. Once above 10, feet they donned oxygen masks as the planes continued to climb to their operational level that could be as high as 29, feet. Nearing the target, each crew member would don a pound flak suit and a steel helmet designed to protect against antiaircraft fire. Parachutes were too bulky to be worn all the time, but crewmen did wear a harness that allowed them to quickly clip on their parachute when needed. As a measure of the hazards they would encounter, it is estimated that the average crewman had only a one in four chance of actually completing his tour of duty. Hallock dropped out of college to enlist in the Army Air Force in June After training as a bombardier, he arrived in England in November and began his combat career on the last day of the year: A little sick, maybe, but not scared. That comes later, when you begin to understand what your chances of survival are. A bombardier sits right in the plexiglas nose of a Fort, so he sees everything neatly laid out in front of him, like a living-room rug. We made our run over the target, got our bombs away, and apparently did a good job. Then, on the The BG way home, some Focke-Wulfs showed up, armed with rockets, and I saw three B-I7s in the different groups around us suddenly blow up and drop through the sky. Just simply blow up and drop through the sky. Though he was blind, he was still able to use his hands, and I ordered him to fire his guns whenever he heard from me. When I got back to the nose, the pilot told me that our No. Gradually we lost our place in the formation and flew nearly alone over France. This meant that Lt. Hallock and his buddies, each of whom had been counting down each mission, now had five additional to fly. We pick up his story as he begins his 27th and worst mission: We made our runs and got off our bombs in the midst of one hell of a dogfight. Our group leader was shot down and about a hundred and fifty or two hundred German fighters swarmed over us as we headed for home. Then, screaming in from someplace, a twenty millimeter cannon shell exploded in the nose of our Fort. It shattered the plexiglas, broke my interphone and oxygen connections, and a fragment of it cut through my heated suit and flak suit. I could feel it burning into my right shoulder and arm. My first reaction was to disconnect my heated suit. I crawled back in the plane, wondering if anyone else needed first aid. I found that two shells had hit in the waist of the plane, exploding the cartridge belts stored there, and that one waist gunner had been hit in the forehead and the other in the jugular vein. The pilot assured him that I was only wounded. Then I crawled back to the nose of the ship to handle my gun, fussing with my wounds when I could and making use of an emergency bottle of oxygen. The German fighters chased us for about forty-five minutes. I went back to the left nose gun and fired that gun till it jammed. It was turning into a question of whether we could sneak home without having to bailout. The plane was pretty well shot up and the whole oxygen system had been cut to pieces. The pilot told

us we had the choice of trying to get back to England, which would be next to impossible, or of flying to Switzerland and being interned, which would be fairly easy. He asked us what we wanted to do. We saw four fighters dead ahead of us, somewhere over France, and we thought we were licked. After a minute or two we discovered that they were Ps, more beautiful than any woman who ever lived. It was getting close to the end and my luck was bound to be running out faster and faster. Over Saarbriicken he was wounded in the foot by a shell, and I had to give him first aid. He acted more surprised than hurt. That was only the beginning for him, but it was the end for me. How To Cite This Article: Hallock received the Distinguished Flying Cross for his actions during the Augsburg raid.

Chapter 6 : 92nd Bomb Group Fame's Favoured Few | American Air Museum in Britain

Title B waist gunner Summary Drawing shows a World War II gunner wearing an oxygen mask as he stands before an open slot in a B airplane firing his machine gun during the Battle of Guadalcanal.

Duties should be studied, altered if necessary to agree with any modifications, memorized, and practiced until each member of the crew performs them instinctively. Upon acknowledgment, crew members remove parachutes, loosen shirt collars and remove ties and oxygen masks unless above 12, feet. When preparations for ditching are begun above 12, feet, main. All crew members wearing winter flying boots should remove them. No other clothing should be removed. Releases on life rafts should not be pulled until the plane comes to rest. Beware of puncturing rafts on wing and horizontal surfaces after launching. The dinghies should be tied together as soon as possible. Injured men should get first consideration when leaving the airplane. Life vests should not be inflated inside the plane unless the crew member is certain that the escape hatch through which he will exit is large enough to accommodate him with the vest inflated. When personnel are in dinghy, stock of rations and equipment should be taken by the airplane commander or copilot. Strict rationing must be maintained. Flares should be used sparingly and only if there is a reasonable chance that they will be seen by ships or aircraft. Lash the life rafts together. Landing crosswind is recommended unless the wind exceeds about 30 mph, in which case land into the wind. In executing the crosswind landing, the pilot will line up with the lines of the crests, at any convenient altitude, adjust flaps, power settings, trim, and make the approach with a minimum rate of descent with a minimum forward speed. Land on a crest parallel to the line of crests or troughs. Crabbing will be necessary to remain over the crest while making the approach. Open and close window to insure freedom of movement. Place ax handy for use in case of possible jamming. Order radio operator to ditching post. Order tail gunner to lower the tailwheel by cranking about 10 turns. Release safety harness and parachute straps. Exit through side window when airplane comes to rest. Proceed to left dinghy, cut tie ropes. Copilot Assists pilot to fasten safety harness. Fastens own safety harness, opens and closes right window to insure freedom of movement. Releases safety harness, parachute straps, exits through right window when plane comes to rest. Proceeds to right dinghy, cuts ropes. Navigator Calculates position, course, speed, giving this information to the radio operator. Gathers maps and celestial equipment. Gives wind and direction to the pilot. Proceeds to radio compartment. Closes radio compartment door. Attaches rope on emergency radio equipment and signal set if radio is stored in radio compartment. Hands the following items in the order given to the bombardier, who is already out: Exits through radio hatch and goes to left dinghy. Takes first-aid kits to radio compartment. Takes position, partially inflates life vest by pulling cord on one side. Directs and assists exit of men through radio hatch. Stands above and forward of hatch and receives equipment from navigator and hands it to crew members as follows: Assists flight engineer in making exit. Goes to right dinghy. Flight Engineer Jettisons ammunition and loose equipment, turns top turret guns to depressed position pointing forward. Goes to radio compartment. Lowers the radio hatch and moves it to the rear of the plane, jettisons loose equipment in radio compartment, and slides back top gun. Stands with back to aft door of radio compartment and assists other members out by boosting them. Goes to left dinghy. Receives signal kit and emergency radio from bombardier. Assists with dinghy inflation and inspects for leaks. Ball Turret Gunner Turns turret guns aft, closes turret tightly, goes to radio compartment with first-aid kits and ration kits. Pulls, both dinghy releases as aircraft comes to rest. Right Waist Gunner Jettisons his gun, ammunition, all loose equipment. Closes right waist window tightly, goes to radio compartment, collecting emergency radio and signal box in fuselage if radio is stored elsewhere than in radio compartment. Assists in inflating right dinghy, inspects for leaks, applying stoppers if necessary. Left Waist Gunner Jettisons his gun, ammunition, loose equipment, closes left waist window, goes to radio compartment. Receives pigeon crate from bombardier. Tail Gunner Jettisons ammunition; goes forward, cranks down tailwheel about 10 turns; collects emergency ration pack stowed in fuselage ; is last to enter radio compartment. Takes position, partially inflates life vest. Carrying ration pack, goes to left dinghy, assists with dinghy inflation, inspects for leaks. On water 2 impacts will be felt, the first a mild jolt when the tail strikes, the second a severe shock when the nose strikes the

water. Positions should be maintained until the aircraft comes to rest. Emergency equipment for use in the dinghy should be, carried to crash positions. Any equipment carried free must be held securely during ditching to prevent injury. Parachute pads, seat cushions, etc. Jettison bombs, ammunition, guns and all loose equipment and secure that equipment which might cause injury. Close bomb bay doors and lower hatches. If there is not enough time to release bombs or depth charges place them on "SAFE. Navigator calculates position, course, and speed and passes data to radio operator. Radio operator also turns IFF to distress and remains on intercom; clamps down key on order to take ditching post. These tips will help you determine wind direction and speed:

Chapter 7 : People | American Air Museum in Britain

The worst problem about the waist position was not fear of loosing oxygen, rather it was frostbite. Until the "G" model, waist windows on the B were open to a mph, below zero, slipstream of air.

You are now an airplane commander, charged with all the duties and responsibilities of a command post. You are now flying a man weapon. It is your airplane, and your crew. You are responsible for the safety and efficiency of the crew at all times--not just when you are flying and fighting, but for the full 24 hours of every day while you are in command. Your crew is made up of specialists. Each man -- whether he is the navigator, bombardier, engineer, radio operator, or one of the gunners -- is an expert in his line. But how well he does his job, and how efficiently he plays his part as a member of your combat team, will depend to a great extent on how well you play your own part as the airplane commander. Get to know each member of your crew as an individual. Know his personal idiosyncrasies, his capabilities, his shortcomings. Take a personal interest in his problems, his ambitions, his need for specific training. See that your men are properly quartered, clothed, and fed. There will be many times, when your airplane and crew are away from the home base, when you may even have to carry your interest to the extent of financing them yourself. Remember always that you are the commanding officer of a miniature army -- a specialized army; and that morale is one of the biggest problems for the commander of any army, large or small. Crew Discipline Your success as the airplane commander will depend in a large measure on the respect, confidence, and trust which the crew feels for you. It will depend also on how well you maintain crew discipline. Your position commands obedience and respect. This does not mean that you have to be stiff-necked, overbearing, or aloof. Such characteristics most certainly will defeat your purpose. Be friendly, understanding, but firm. Know your job; and, by the way you perform your duties daily, impress upon the crew that you do know your job. Keep close to your men, and let them realize that their interests are uppermost in your mind. Make fair decisions, after due consideration of all the facts involved; but make them in such a way as to impress upon your crew that your decisions are to stick. Crew discipline is vitally important, but it need not be as difficult a problem as it sounds. Good discipline in an air crew breeds comradeship and high morale, and the combination is unbeatable. You can be a good CO, and still be a regular guy. You can command respect from your men, and still be one of them. But it is discipline just the same -- and the kind of discipline that brings success in the air. Keep abreast of their training. Know his job, and try to devise ways and means of helping him to perform it more efficiently. Each crew member naturally feels great pride in the importance of his particular specialty. You can help him to develop his pride to include the manner in which he performs that duty. He must be familiar enough with every one of your duties -- both as pilot and as airplane commander -- to be able to take over and act in your place at any time. He must he able to fly the airplane under all conditions as well as you would fly it yourself. He must he extremely proficient in engine operation, and know instinctively what to do to keep the airplane flying smoothly even though he is not handling the controls. He must have a thorough knowledge of cruising control data, and know how to apply it at the proper time. He is also the engineering officer aboard the airplane, and maintains a complete log of performance data. He must be a qualified instrument pilot. He must he able to fly good formation in any assigned position, day or night. He must he qualified to navigate by day or at night by pilotage, dead reckoning, and by use of radio aids. In formation flying, he must be able to make engine adjustments almost automatically. He must be prepared to take over on instruments when the formation is climbing through an overcast, thus enabling you to watch the rest of the formation. Always remember that the copilot is a fully trained, rated pilot just like yourself. He is subordinate to you only by virtue of your position as the airplane commander. The B is a lot of airplane; more airplane than any one pilot can handle alone over a long period of time. Therefore, you have been provided with a second pilot who will share the duties of flight operation. Treat your copilot as a brother pilot. Remember that the more proficient he is as a pilot, the more efficiently he will be able to perform the duties of the vital post he holds as your second in command. The importance of the copilot is eloquently testified to by airplane commanders overseas. There have been many cases in which the pilot has been disabled or killed in flight and the copilot has taken full command of both

airplane and crew, completed the mission, and returned safely to the home base. Usually, the copilots who have distinguished themselves under such conditions have been copilots who have been respected and trained by the airplane commander as pilots. Allow him every chance to develop his ability and to profit by your experience. He must know the exact position of the airplane at all times. Navigation is the art of determining geographic positions by means of a pilotage, b dead reckoning, c radio, or d celestial navigation, or any combination of these 4 methods. By any one or combination of methods the navigator determines the position of the airplane in relation to the earth. The importance of accurate pilotage cannot over-emphasized. In combat navigation, all bombing targets are approached by pilotage, and in many theaters the route is maintained by pilotage. This requires not merely the vicinity type, but pin-point pilotage. During the mission, so long as he can maintain visual contact with the ground, the navigator can establish these pin-point positions so that the exact track of the airplane will be known when the mission is completed. Dead Reckoning Dead reckoning is the basis of all other types of navigation. Dead reckoning can be subdivided into two classes: Dead reckoning as a result of a series of known positions obtained by some other means of navigation. For example, you, as pilot, start on a mission from London to Berlin at 25, feet. For the first hour your navigator keeps track by pilotage; at the same time recording the heading and airspeed which you are holding. According to plan, at the end of the first hour the airplane goes above the clouds, thus losing contact with the ground. By means of dead reckoning from his last pilotage point, the navigator is able to tell the position of the aircraft at any time. By computing track and distance from the last pilotage point, he can always tell the position of the airplane. When your airplane comes out of the clouds near Berlin, the navigator will have a very close approximation of his exact position, and will be able to pick up pilotage points quickly. Dead reckoning as a result of visual references other than pilotage. When flying over water, desert, or barren land, where no reliable pilotage points are available, accurate DR navigation still can be performed. By means of the drift meter the navigator is able to determine drift, the angle between the heading of the airplane and its track over the ground. The true heading of the airplane is obtained by application of compass error to the compass reading. The true heading plus or minus the drift as read on the drift meter gives the track of the airplane. At a constant airspeed, drift on 2 or more headings will give the navigator information necessary to obtain the wind by use of his computer. Groundspeed is computed easily once the wind, heading, and airspeed are known. So, by constant recording of true heading, true airspeed, drift, and groundspeed, the navigator is able to determine accurately the position of the airplane at any given time. For greatest accuracy, the pilot must maintain constant courses and airspeeds. If course or airspeed is changed, notify the navigator so he can record these changes. Radio Radio navigation makes use of various radio aids to determine position. The development of many new radio devices has increased the use of radio in combat zones. However, the ease with which radio aids can be jammed, or bent, limits the use of radio to that of a check on DR and pilotage. The navigator, in conjunction with the radio man, is responsible for all radio procedures, approaches, etc. Celestial Celestial navigation is the science of determining position by reference to 2 or more celestial bodies. The navigator uses a sextant, accurate time, and many tables to obtain what he calls a line of position. Actually this line is part of a circle on which the altitude of the particular body is constant for that instant of time. An intersection of 2 or more of these lines gives the navigator a fix. These fixes can be relied on as being accurate within approximately 10 miles. One reason for inaccuracy is the instability of the airplane as it moves through space, causing acceleration of the sextant bubble a level denoting the horizontal. Because of this acceleration, the navigator takes observations over a period of time so that the acceleration error will cancel out to some extent. If the navigator tells the pilot when he wishes to take an observation, extremely careful flying on the part of the pilot during the few minutes it takes to make the observation will result in much greater accuracy. Generally speaking, the only celestial navigation used by a combat crew is during the delivering flight to the theater. But in all cases celestial navigation is used as a check on dead reckoning and pilotage except where celestial is the only method available, such as on long over-water flights, etc. Instrument Calibration Instrument calibration is an important duty of the navigator. All navigation depends directly on the accuracy of his instruments. Correct calibration requires close cooperation and extremely careful flying by the pilot. Pilot-Navigator Preflight Planning Pilot and navigator must study flight plan of the route to be flown and select alternate air fields. Study the weather

with the navigator. Know what weather you are likely to encounter. Decide what action is to be taken. Know the weather conditions at the alternate airfields.

Chapter 8 : Ball turret - Wikipedia

It was strong, reliable, and feared by its enemies. This is the Boeing B Flying Fortress. 1) In , one B bomber cost a little over $, to produce. That's over $3 million in today's currency.

Of the 13 YBs ordered for service testing, 12 were used by the 2nd Bomb Group of Langley Field, Virginia, to develop heavy bombing techniques, and the 13th was used for flight testing at the Material Division at Wright Field, Ohio. A 14th aircraft, the YBA, originally destined for ground testing only and upgraded with the turbochargers, [57] was redesignated BA after testing had finished. To enhance performance at slower speeds, the BB was altered to include larger rudders and flaps. While models A through D of the B were designed defensively, the large-tailed BE was the first model primarily focused on offensive warfare. The XB was an engine test bed for Allison V liquid-cooled engines, should the Wright engines normally used on the B become unavailable. The only prototype XB to fly crashed on its ninth flight, and the type was abandoned. The Allison V was allocated to fighter aircraft. Additional armament included an additional dorsal turret in the radio room, a remotely operated and fired Bendix-built "chin turret" and twin. The ammunition load was over 11, rounds. The YBs with their numerous heavy modifications had trouble keeping up with the lighter bombers once they had dropped their bombs, so the project was abandoned and finally phased out in July The BG was the final version of the Flying Fortress, incorporating all changes made to its predecessor, the BF [57] , and in total, 8, were built, [64] the last by Lockheed on 28 July The operation, which involved remotely flying Aphrodite drones onto their targets by accompanying CQ "mothership" control aircraft, was approved on 26 June , and assigned to the th Bombardment Group stationed at RAF Fersfield , a satellite of RAF Knettishall. Blast damage was caused over a radius of 5 miles 8. British authorities were anxious that no similar accidents should again occur, and the Aphrodite project was scrapped in early The 19th Bombardment Group had deployed to Clark Field in the Philippines a few weeks before the Japanese attack on Pearl Harbor as the first of a planned heavy bomber buildup in the Pacific. Kenney when he arrived in Australia in mid The Bs were primarily involved in the daylight precision strategic bombing campaign against German targets ranging from U-boat pens, docks, warehouses, and airfields to industrial targets such as aircraft factories. The defense expected from bombers operating in close formation alone did not prove effective and the bombers needed fighter escorts to operate successfully. Their first operation, against Wilhelmshaven on 8 July was unsuccessful, [75] [76] but on 24 July they attacked the Scharnhorst , anchored in Brest , and inflicted considerable damage on the vessel. A Fortress from No. They could also pose as ground controllers themselves with the intention of steering nightfighters away from the bomber streams. The bombardier essentially took over flight control of the aircraft during the bomb run, maintaining a level altitude during the final moments before release. As the raids of the American bombing campaign grew in numbers and frequency, German interception efforts grew in strength such as during the attempted bombing of Kiel on 13 June [90] , such that unescorted bombing missions came to be discouraged. Eaker and the Eighth Air Force placed highest priority on attacks on the German aircraft industry, especially fighter assembly plants, engine factories, and ball-bearing manufacturers. The 8th Air Force then targeted the ball-bearing factories in Schweinfurt , hoping to cripple the war effort there. The first raid on 17 August did not result in critical damage to the factories, with the attacking Bs being intercepted by an estimated Luftwaffe fighters. The Germans shot down 36 aircraft with the loss of men, and coupled with a raid earlier in the day against Regensburg , a total of 60 Bs was lost that day. Of 2, men in the crews, about did not return, although some survived as prisoners of war. Only 33 bombers landed without damage. These losses were a result of concentrated attacks by over German fighters. At the same time, the German nightfighting ability noticeably improved to counter the nighttime strikes, challenging the conventional faith in the cover of darkness. Lieutenant General James Doolittle , commander of the 8th, had ordered the second Schweinfurt mission to be cancelled as the weather deteriorated, but the lead units had already entered hostile air space and continued with the mission. Most of the escorts turned back or missed the rendezvous, and as a result, 60 Bs were destroyed. Losses to flak continued to take a high toll of heavy bombers through , but the war in Europe was

being won by the Allies, and by 27 April , 2 days after the last heavy bombing mission in Europe, the rate of aircraft loss was so low that replacement aircraft were no longer arriving and the number of bombers per bomb group was reduced. The Combined Bomber Offensive was effectively complete. An onboard fire burnt the aircraft in two shortly after landing on 7 December One crewman was killed by Zero attack. Navy was giving the flight a gun salute to celebrate the arrival of the bombers, after which he realized that Pearl Harbor was under attack. The Fortress came under fire from Japanese fighter aircraft, though the crew was unharmed with the exception of one member who suffered an abrasion on his hand. Enemy activity forced them to divert from Hickam Field to Bellows Field. On landing, the aircraft overran the runway and ran into a ditch, where it was then strafed. Ten of the 12 Fortresses survived the attack. The antennae mounted upon the nose were used for radar tracking surface vessels. Brereton sent his bombers and fighters on various patrol missions to prevent them from being caught on the ground. Brereton planned B raids on Japanese air fields in Formosa , in accordance with Rainbow 5 war plan directives, but this was overruled by General Douglas MacArthur. By the time the Bs and escorting Curtiss P Warhawk fighters were about to get airborne, they were destroyed by Japanese bombers of the 11th Air Fleet. The FEAF lost half its aircraft during the first strike, [] and was all but destroyed over the next few days. Nonetheless, this deed made him a celebrated war hero. Kelly was posthumously awarded the Distinguished Service Cross. One B broke up in the air, and its crew was forced to take to their parachutes. Japanese fighter pilots machine-gunned some of the B crew members as they descended and attacked others in the water after they landed. Arnold had decided that the B was unsuitable for the kind of operations required in the Pacific and made plans to replace all of the Bs in the theater with Bs and later, Bs as soon as they became available. Although the conversion was not complete until mid, B combat operations in the Pacific theater came to an end after a little over a year. Special airdrop Bs supported Australian commandos operating near the Japanese stronghold at Rabaul, which had been the primary B target in and early A number of BGs, redesignated BHs and later SBGs, were used in the Pacific during the final year of the war to carry and drop lifeboats to stranded bomber crews who had been shot down or crashed at sea.

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Chapter 9 : B Waist Gunner position | Every Man a Gunner The foot,â€¦ | Flickr

B prompted its nickname, the "Flying Fortress." On days that a mission was planned, the airmen would be awakened in the early morning hours and fed a hearty breakfast followed by a briefing describing the mission.

Last updated by Bruce Grey on Jun 4, There is no flight simulation aspect to the game: You simply man the guns and shoot down enemy fighters. Each mission begins with your squadron already in the air, and the mission ends before you land. Bombing runs are a point-and-click affair. Gameplay in B Gunner is exceedingly straightforward. Six positions in the B are modeled: Your job is to man these guns and protect your plane from enemy fighters. As your squadron loses escort planes, the enemy comes to focus increasingly on you. When you approach it, you are automatically shifted to the bombsight view and must center and release the bombs on the target you were shown in the mission briefing. At the end of each mission, you obtain a score based on successful bombing and defense of your aircraft. The goal is to live through 25 missions and be sent home. An indicator at the lower right of the screen shows your position in the plane. When gun positions get "knocked out," they become inaccessible. Some guns have very limited deflection for example, at the nose and waist positions , and the persistent cloud layer really limits the effectiveness of the ball turret. Since enemy planes tend to attack from high positions, this is the most effective defensive strategy. Unfortunately, it gets fairly boring. Sticking to the top turret is the way to go. The missions are essentially all the same, no matter what your target is or how deep it is inside Germany. Bombing is simply a case of squeezing the trigger while the crosshairs are over the target. The aircraft is shot down only when all the gun positions have been eliminated. None of the six gunner positions in the plane make for much fun. Despite the lack of detailed graphics and absence of any need for a flight model, B Gunner stutters worse than some detailed flight sims that tax the computer far more than this simple arcade game. This stuttering persisted on two test systems that more than met the minimum hardware requirements, even after full hard-drive defragmentation and reinstallation. Considering the limited appeal of the gameplay in the first place, this is a crippling flaw.