

# **GOLD, JUNO, SWORD (GJS)**

## **Close Combat V Invasion Normandy**

### **Design Notes Readme**

July 2002

Beta v3.31 Release

based on 5.01 “unofficial” patch

## **I. INTRODUCTION**

This modification (mod) of Close Combat V Invasion Normandy has been 15 months in the making. We have attempted to simulate the limitations and advantages of Allied and German forces located in the Caen sector of Normandy during June 1944. This mod encompasses Gold, Juno, and Sword beaches, the strategically important city of Caen, and the road network in this region of Normandy. The mod is an exhaustive remake of stock CC5 and incorporates several changes that have come along through the “unofficial patch” and various smaller mods, which we believe, have improved the play of the game. You will see all new graphics, hear new sounds, and experiences a different atmosphere with this modification of Close Combat V.

Why Gold, Juno, Sword? The American contribution to the Normandy Invasion has greatly overshadowed the significant role that British and Canadian forces played on D-Day. Throughout June 1944, the British 21<sup>st</sup> Army Group had notably more men, tanks, and equipment in Normandy than the Americans. British and Canadian forces engaged some of the most seasoned and elite forces in the German Third Reich, and faced the overwhelming majority of German tank deployment in Normandy. Caen, an Allied D-day objective, was very nearly occupied the evening of June 6th. However, the Germans reacted quickly, and the Allies did not anticipate the full strength of the enemy that rushed to fortify the area around the city. Caen would elude capture for another frustrating month, despite the fact that it was within approximately 12 kilometers of the Allied beachhead.

This mod was designed with a high degree of historical accuracy. However certain compromises were made in order to cope with game engine limitations.

**Please note:** Although this modification of Close Combat 5 Invasion Normandy includes the symbol of National Socialist Germany, we do not support nazi organizations or ideas. We are just fans of the CC series who enjoy the game and appreciate an accurate, historical perspective. If you are looking for nazi ideology in this mod, than you are looking in the wrong place. If you believe in nazi ideology than you are an unhappy dolt—you were severely abused by your father and/or mother, and you are trying to cope with your anger in an unhealthy way.

## **II. KNOWN ISSUES AND BUGS:**

1. Tank pathing is far from ideal, but it's the same as the stock CC5. You will have to micromanage tanks if you want them to follow a specific route. This is the cost of having tanks.

- 21
- MONTGOMERY
2. If a few units show a yellow or orange morale/health color when beginning the scenario please let us know. Units should show a green bar when beginning a battle. This is due to changes in Team data that affects the unknown values. This can be fixed.
  3. The Fpools were designed with the GJS H2H Grand Campaign specifically in mind. You can play other scenarios or design your own.
  4. Designating naval barrage could lead to some unexplained crashes to desktop in h2h operation or campaign play. Use this at both player's risk and understanding. This problem has occurred with stock CC5, and during playtesting has sometimes appeared with certain maps in GJS. Single person vs. the AI has not revealed any problems so fire away!
  5. The old version of the stratlayer brought one crash to desktop in an unusual move (4 battlegroups moving downward SINGLE FILE on the stratmap). The cause of this crash is a complete mystery, but has only been seen once in the **old** stratlayer version. Playtesting has thus far revealed no new or old stratlayer bugs that have resulted in crashes.
  6. On rare occasions battlegroups simultaneously moving onto the same map may pass each other. Map btds are not the problem. We can't find out why this happens. It is very rare, but may happen in a long campaign. Be prepared for it, and chalk it up to stealth or bad luck on the battlefield.
  7. There is a bug in stock CC5 that places invisible wrecks. You may find ghost wrecks when LOS and pathing are mysteriously blocked. Right-clicking over the suspected area to check the elements may reveal a wreck. This is aggravating, but uncommon.
  8. There is a "crushed hedge bug" in stock CC5 that you will also find in GJS. Vehicles may mysteriously "run aground" when passing through small hedges. This has nothing to do with losing a track or becoming immobilized. A mysterious square element sometimes appears, within the surrounding wooden debris elements, that has a wildly high elevation. This will stop vehicle movement and make infantry that cross it visible over the entire map. As if this was not enough, you may also occasionally see hedges explode and burst into flame as a tank passed through. Be calm, it's just fireworks.
  9. The reinforce bug. This is a stock/patched CC5 error where the Americans/Allies can reinforce multiple times. There is no predictability as to exactly when the reinforce option will be available to a battlegroup (BG) for the second, third time, etc within a given operation or campaign. There should be NO multiple reinforce. Players must agree ahead of time to decide on reinforce options and Allied player must honor the single or no reinforce option if they are chosen.
  10. There is a supply/reinforce bug whereby a BG out of supply, which loses it's last AT guns and tanks (last ones in req screen), will have them return for the next battle despite their loss. This only occurs for BGs out of supply. It is an annoying h2h CC5 bug, and must be negotiated between players.

### III. GAMEPLAY CHANGES

1. Team sizes--could be bigger than actual, but we limited this to 7 men—a manageable number with team sizes in CC5. With 8-10 men in a team, sprites get bunched up and can't organize themselves efficiently, take cover well, etc. Consequently, they tend to get shot up more easily. Despite the fact that full-strength British/Canadian infantry sections had 10 men, it may have been an uncommon situation to have front-line infantry at full strength after a short time into the Normandy campaign. One of the solutions we implemented in overcoming the 10-man problem was to split the integral Bren group from the Rifle group within the section. We

retained a “Bren Section” that has a Bren gun incorporated into a full section (though limited to 7 men).

2. All AT Gun top armour was increased from 8 to 15 to reduce vulnerability to mortars.
3. AT Gun size was decreased by one increment across the board. With easy spotting, AT guns can easily be wasted by mortars, or artillery/naval gunfire. This seems to help slightly and also balances out increased number of tanks in battlegroups.
4. AT crews are now more easily killed by infantry with a reduction of head armour for AT crews. Too often AT gun crews would be invincible to infantry, and infantry teams would suffer unbelievable casualties when firing at, or assaulting AT guns. This has proved to be a realistic compromise in gameplay: AT guns more resistant to mortars, but a little more vulnerable to infantry.
5. 7.5cm PAK fits in some buildings.
6. Hedge elements. These were changed as per Zeppo's recommendations, but large hedges still retain better cover and protection over small hedges. Hedges now behave more like hedges in CC3 WF/CS. You can now place AT guns right up against hedges. AT guns may hide a little better in them, so I can't stress the importance of infantry enough!
7. Reduced Tank MG accuracy. This is an old CC controversy, but seeing as this game will be full of tanks now... (1) I believe AFV MGs were less accurate than the infantry-operated variety--ESPECIALLY bow MGs. Both the Sherman and Stuart tanks had to site the bow MG using a telescopic site. The idea was to use the tracers to find the target as a "hose effect". (2) Even though some other tanks had better sighting overall, tanks were not the most efficient platforms to spot infantry from in close combat--especially when buttoned. (3) Tanks still slaughter infantry easily when infantry are without cover and/or on the move. Coaxial mg accuracy reduced from 350 to 298 all Bow mg accuracy reduced from 298 or 311 to 198.
8. PIAT has no back blast, and can be nearly impossible for a tank to spot if the PIAT is in good cover. The PIAT has an effective range of less than 100m and is not all that accurate beyond 40m.
9. 2pdr/50mm mortar effectiveness increased slightly to exceed grenade kill rating and blast radius.
10. Some explosion sizes graphics changed slightly for certain weapons.
11. Fixed small bug with stock CC5 where some German soldier sprites were not seen carrying/firing machine guns. In stock CC5 the MG34 and MG42 looked like rifled soldier sprites.
12. Mortars: accuracy reduced from 298 to 256. There was some concern during playtesting about open-topped AFVs and HTs getting killed far too easily when more than one mortar was employed.
13. Top armour on PzIII and PzIV (all variants) increased from 10 to 13 in order to avoid the chance of being knocked out by a 3" mortar. This was left over from CC5 data.
14. Small caliber mortars have slight increase in kill rating to at least match those of a hand-held grenade.
15. Naval barrage allotment increased for Allies from 2 per day to 3 per day for the first week of the campaign. German mortar barrage is increased from 3 to 4 in the middle of the campaign
16. Naval barrages are available beyond the coastal maps on a few inland maps. For issues concerning h2h campaign play and use of naval barrages see “Known Issues and bugs”
17. Halftracks and armoured cars can't move through hedges.
18. Allied air strikes are limited to RAF Spitfire and Typhoons. The Typhoons either carry rocket or bombs (in addition to 20mm Hispano cannon fire) while the Spitfire is limited to 20mm Hispano cannon fire.

19. TNT charges (used by engineers and commandos) were changed to increase the minimum range and reduce the blast radius. This will reduce the number of friendly casualties caused when placing charges.

#### IV. GRAPHIC AND SOUND NOTES

This following is a ROUGH overview of the work completed with some explanation as to why.

**The following graphics files were substantially changed:**

**CC5.exe:** new uniforms for Allies and Germans

**CCImages:** new interface graphics

**GameGadg:** consistent with changes in ScrnGadg

**Guns:** new allied and German AT guns

**ScrnGadg:** new interface graphics, some new unit icons, new leader pics, new bgunit pics, new stratmap images, etc.

**Shadows:** consistent with changes to Tanks.azp

**Tanks:** all new vehicles, nearly everything was changed due to my great displeasure with the stock CC5 graphics.

**Terrain:** Union Jack repaced Stars and Stripes

**uniticons:** all new.

**Wrecks:** new graphics here too.

##### Screen and Game Gadgets

Soldier gadgets from the original CC5 were retained and repainted in some cases. Tank and vehicle gadget graphics from Commonwealth Summer Mod (CC3) and the Western Front Mod (CC3) were adapted. Photographs were used to identify BG units. Many of the photographs were taken in Normandy or NW Europe. Others--especially many German unit photographs were from other fronts.

##### Vehicles

I erred in favor of historical color instead of tank visibility. In stock CC5 the pendulum had swung too far the other way IMHO. For the allies, No. 16 deep bronze green and No. 15 olive drab (khaki-drab) were used, but slightly altered so tanks did not appear too dark, or mix too well with the maps. Some allied tanks had No.2 khaki brown and No.1A dark earth schemes left over from their training/station in England.

The **White Star** was applied to some vehicles and not others. It was used by British and Canadian tanks/vehicles. Some stars were painted on the top of vehicles before the invasion, some stars were displayed on cloth panels that could be removed, and some vehicles appeared at the front without stars. As the White Star was the symbol used by Allied forces in NW Europe, it will remain to represent the British and Canadian forces on the stratmap tiles and in the game interface.

German tanks were a mixed bag of camouflage schemes. Some German tanks are based on actual camo schemes used by German Pz divisions in Normandy; others are a best guess of what was available, or artist interpretation of plates and photographs. I don't make any claims of perfection, only interpretation.



A few of the tanks are significantly modified from work previously done by the CC4 GrogBob graphics team, CC3 WF graphics team, and tanks from the Commonwealth Summer mod.

### Uniforms

Stock CC5 German uniforms were a poor approximation of the reality. The CC5 stock gray-blue was not the norm in Western Europe circa 1944. Most German uniforms are a flat, reed/grass green as per M1943 Field Gray uniform color. There are camo smocks as well for SS and a mixed uniform set of standard/camo for regular panzergrenadiers or others. Some units will have a mix of regular and camo smocks, as was the reality in Normandy. Most panzer/vehicle crews have black uniforms, while SS crews have the later camo-pattern panzer uniforms.

Canadian and British regulars have slightly different color uniforms. The Canadians had a more khaki-green tone to their battledress.

One problem that may arise with uniforms is the confusion between German soldiers wearing camo smocks and the Dension smocks used by British Airborne. The maroon ("berry") berets on some British Airborne soldiers should help clarify, but other troops have helmets. Also, British regulars may be difficult to distinguish from SS soldiers due to similarities in uniform hue and size of soldier sprites. Ah, the confusion of battle! Use your soldier outlines if this seems confusing to you.

### Sound

**erusvox:** all new voice file for British which is mostly old cc2 voice cues plus a few new ones--sorry, but there's no Canadian voices. In CC5 there are no additional allied voice cue file in CC5, eh. I went for all British sound cues since there's only three Canuck battlegroups... Some attempts at British voice cues may be poor to native speakers in the British Isles. If someone can do better, please send me the voice cues (16bit, stereo, signed, .wav at 11025mhz).

**Sound:** this is a blend of FUTURE's CC5 sound mod, stock CC5, with the addition of British weapons, new FT sound, a couple altered main gun sounds, some new background sounds, and new aircraft sounds.

## V. DATA

### Elements

1. Retaining wall element changed to prevent movement and increase cover and protection. Element name changed to "fortified wall". This element is used for bunker walls, specifically on the new Gold map.
2. Only tanks can move through small hedgerows. Large hedgerows remain impenetrable to vehicles.

### Weapons

German:

1. German Grenade launcher problem "fixed". This seemed more like a limitation in the soldier/weapon files than a real bug. The K 98k Schiessbecher will fire both grenades and bullets however there can only be one sound and one clip arrangement per weapon. The soldier with the

grenade launcher appeared to have 60 rounds of grenade ammo—certainly not realistic. He did in fact carry bullets and grenades, but the game limitations made all rounds appear and sound like they were grenades.

2. Gewehr43 series rate of fire increased to reflect semi-automatic fire. The soldier will expend his ammo rapidly, but this rifle now fires much faster.
3. Fixed an incorrect element radius for the 37mm PAK, a bug from the patched 5.01 CC5 data.
4. Reduced PIAT accuracy from 298 to 256
5. Reduced Pzschreck accuracy from 398 to 311

#### Penetration values

This topic was very controversial in the heady days of CC forums. Armor penetration values were changed in GJS based on a myriad of armour/gun sources. The sources do not all agree, but the most reputable ones were compared and used to make consistent, relative values for weapons based on ammunition types used in June 1944 by both German and Allied forces. If you look at CC4/5 weapon data you will notice that some identical guns differ between the games. Some weapons are consistent, while others are not. This was probably done for game balance. If you analyze the CC4/5 AT/tanks weapon data within the individual games and compare the *relative* values, they are not consistent with the comparative *relative* values from reputable sources on armour penetration. The goal was not to translate exact source values into the game, but to streamline the comparative relative values of the guns.

For example, a 88mm L/56 had 87% of the penetration value of a 75mm L/70 at 100m. The figure of 87% was used to adjust the relative penetration value of the L56 at 100m. The 75mm L70 was used as the baseline comparison for all other ordnance.

You will rarely see a Sherman destroy a Panther unless it is very close shot to the side or rear. At medium to long ranges against the frontal armour of a Panther, the Sherman is next to useless. I could go on with this subject, but the more detail I delve into, the more trouble I may cause. Play the mod, give it a chance, then you may rant if you feel a great injustice has been done.

**A final note**...weird things happen in the CC series when it comes to tanks and AT guns firing at each other. We've all seen Panthers fire round after round into Shermans without much effect, but most of the time, the Shermans are quickly dispatched. Intended outcomes are more common than not, but exceptions are noticed, and made bigger than mathematical truth.

added the following weapons:

Sten Mk V (used by Airborne troops)

Sten Mk II (most abundantly produced Sten, and most common Sten in service circa June 1944.

Slightly less accurate and more prone to jam than Mk V)

Enfield No. 4 Mk I Rifle (this model was standard British infantry issue in NW Europe)

Enfield No. 4 (T) Rifle with No 32 Mk I Telescope for Snipers

Bren LMG Mk I

Vickers .303

Enfield No. 2 Revolver (most common British-issue pistol that mostly replaced the Webley by 1944)

Enfield No. 2 Mk II. Two versions of the Enfield No.2 Pistol (Mark I & II) The Mk II had the thumb spur removed. This version was issued to some special forces and tank crews--in this case the hammer did not snag on anything inside the close quarters of a tank.

PIAT

2-pdr (for Tetrarch tank)

6-pdr AT gun

6-pdr gun (for Churchill)

17-pdr AT gun (higher rate of fire for AT gun and M10-17pdr)

17-pdr gun (for Sherman Firefly)

2" mortar (converted from 60mm mortar)

3" mortar (converted from 80mm mortar)  
 95mm Howitzer (used by Centaur IV, Royal Marine tanks)  
 290mm Spigot Mortar (for Churchill AVRE "Petard")

### Gammon Grenades

Special grenades are not in the weapons data per se. They seem to be incorporated in the game engine and only appear in the soldier file. With the exception of Grenade (1), and Garand grenade (56), specialized grenade data exists in the weapons file but is meaningless (1s and 0s only). Gammon grenades were simulated by giving some soldier types a grenade under "grenade special". When soldiers have this "special grenade" they have a green AT bar in their soldier monitor. I suspect this was the intention for American Airborne in original cc5 by giving them "special grenades" (American Airborne also used Gammons in Normandy). The game seems to model this well. You can expect Allied infantry to fail in most cases when assaulting tanks. However, you will also see the odd success when assaulting a medium tank. Employing Gammon grenades was extremely difficult and involved a lot of courage to get close enough to place/toss the charge on a tank.

Sten (all Marks) have 30 instead of 32 rounds per clip. Probably there were only 28 rounds per clip used in a magazine capacity off 32 b/c of the Sten's tendency to jam when the clip was fully loaded. Some sources say 30 rounds, some say 32, but AB seemed to be a definite 28.

### Miscellaneous notes on weapon use...

British service pistols were varied, and I don't have them all here (missing Webley Mk IV and Browning FN-Inglis No2 Mk I). Webley was on the wane in 1944, but was possibly still around and the Inglis did not see widespread use until the fall of 1944). The Colt .45 is in there, and was used extensively by commandos and a bit by airborne.

The Thompson SMG was used by Commandos instead of the much-maligned Sten. This weapon might be used with some armour crews to replace some Stens, as some AFVs were stocked with a Thompson if they were not pinched by someone along the line before the crews got their tanks. This was mostly the case with American-made AFVs, but some Churchills had Thompsons as well, in addition to a Bren. The Churchill was one roomy tank.

### A note on tank AP ammunition types:

Panzergranate (PzGr) 39 was the most widely available AP round available by 1944. PzGr 40, or the tungsten-cored round, was nearly depleted for large caliber weapons by 1944 since production of this round ceased in 1943 (Germans were deprived of their tungsten sources by then). Henceforth you will not find it in this mod except for smaller caliber weapons like the 3.7cm and 5.0cm PAKs which were nearly obsolete without this round, and in which there were still significant stocks in 1944 for these caliber weapons.

The British tanks and AT guns have APCBC (Armour Piercing Capped Ballistic Capped). APDS rounds were not available in limited supplies until August 1944. A limited supply of APDS (Armour Piercing Discarding Sabot) was however available for 6pdr AT guns, giving them significantly better armour penetration.

### Teams

#### Allied Teams

There were many changes, most historical, some based on gameplay. For the British and Canadian I will not go into extensive details. I will mention the standard organization for British/Canadian

## MONTGOMERY

platoons in NW Europe circa 1944. One platoon is broken into 3 sections of 10 men. One section is comprised of a 7-man rifle group and a 3-man Bren group. Both rifle groups and bren groups are in the teams file. A Bren Section is also included that incorporates the Bren into a larger infantry unit. Sometimes the Bren advanced with the rifles, and sometimes it was deployed as fire support or defense. This is reflected in the availability of teams. You will have options for both in all allied battlegroups. You will see lend-lease tanks in this mod: M-10, M-10/17pdr (not called Achilles at time of Normandy Invasion), M9 Halftracks (very similar to American M3, but lend-lease version), Stuarts, Sherman variants, Firefly (considered a secret weapon at the time of the Normandy Invasion), A27M Cromwell, the few Churchill variants ("Hobart's Funnies") used by 79<sup>th</sup> Armoured Div., and more.

errata:

- Heavy AT guns and self-propelled AT guns (M-10 and M-10/17pdr) were organized under Royal Artillery--hence name in ALTeams
- pioneer teams (British and Cdn) are there for gameplay variation despite the fact they were not really used as assault infantry historically.
- commandos structured on typical British section but with more automatic weapons--in this case Thompsons

What is NOT there for British:

1. **Sexton and Priest** (SP Artillery) and **25pdr Howitzer**. These units were not close combat units.
2. **Stuart Mk VI (Stuart M5A1)**. As of June 1944 this latest Stuart version was found only in the Guards Armoured Division, 6th Guards Tank Brigade, both of which did not enter the mod timeframe until last days of June. Since the vehicle data was getting crowded, I did not add this tank.
3. **Churchill Tank**. With the exception of the 79th Armoured "funnies" this tank existed outside of mod timeframe but exists in British forcepools nonetheless. The Churchill was deployed via Independent Tank Brigades that arrived end of June or early July. The "regular" Churchill is available with the 43rd "Wessex" Infantry Division only. In the Grand Campaign this division does not arrive until near the end of June.
4. Units like the **40mm Bofors**, **Valentine AA**, **Humber Scout Car**, etc. just could not be rationalized against other units within the 20 competing battlegroup slots.
5. ...and no doubt many other items, but could not be employed within the scope and limitations of this mod.

### German Teams

Generally, the German infantry team of WWII comprised 10 men, a group leader with an SMG, 7 riflemen, one machine gunner and one rifleman with a rifle grenade launcher or a number of hand grenades. German doctrine demanded that this group would be split into a 7 men rifle team and a 3 men MG team acting somewhat independently and giving fire support. This has been the CC concept ever since, has not been changed and is represented in the team file with 3 men MG teams and 6 to 7 men infantry teams.

The major problem of modeling German infantry in CC is always that German infantry teams in reality varied considerably from the official TO&E's. This was due to chronic lack of everything and large amounts of war booty being employed. Later in the war, this situation worsened and by June 44, you



## MONTGOMERY

could find a large variety of weapons in German use in France. So the aim had to be to try to represent the German situation at that time by creating a variety of infantry teams, with different weapons, war booty material (especially Soviet and French equipment), composition, experience and strength.

There are different kinds of teams in this mod:

-SS, all of them are SS Panzergrenadiere and usually have a much better morale (to reflect political indoctrination), some more experience and also have slightly better and heavier equipment (heavier as they were supposed to be mechanised or at least motorised)

-PG or PzGren: Wehrmacht Panzergrenadiere; have somewhat better morale and experience (having been some kind of élite in the earlier years) and also have slightly better and heavier equipment (heavier as they were supposed to be mechanised or at least motorised)

-Wehrmacht troops of that time employ a hodgepodge of weapons and have a variety of experience & morale levels (as it could vary considerably in reality)

-Osttruppen are foreign conscripts with worse equipment and a poor morale in 1944

The teams:

**Zugführer:** leader teams, come in Trupp (2 men) and Gruppe (5 men)

**Panzerjäger, Panzerabwehrtrupp, Panzerfaust** all represent small anti tank or tank hunter teams with a variety of short range AT weapons (PzF, Grenade Bundle, Molotov, HHL) as they were employed by the Germans

**Aufklärer, Späher:** small infantry teams (5 and 3 men) for scouting and reconnaissance, usually created from regular infantry teams, have light equipment

**Grenadiere:** regular Infantry

**Grenadiertrupp:** Infantry half team, representing teams split to cover more frontline or depleted teams

**Veteranen:** regular Infantry with combat experience, may have gathered slightly better equipment

**Landeschützen:** representing 2<sup>nd</sup> line security units, have mainly rifles and low morale

**Ersatz** teams: representing recently arrived replacements with little training and various equipments

**Panzergrenadiere:** slightly better teams, might have an additional LMG (taken from their halftrack)

**Schützen:** ad-hoc teams created from “cooks & clerks”

**Pioniere:** Pioneers, coming in groups, troops and with or without flamethrower

Armour

The Tiger I is in GJS, and was available in mod timeframe. Tiger tanks show up in only two battlegroups: 130/Lehr and SS Pz Abt. 101. All Panther variants are available and were present in Normandy. The Ausf A was the overwhelmingly common Panther variant in Normandy. The Ausf H was the primary Pz IV variant in Normandy. You will also see Becker's SP guns, modified from captured French tanks. A handful of Somua tanks show up with 21. Pz. Div.

What is not there for the Germans:

1. No **Königstiger** in the German forcepools (exist in GJS data and graphics). Only schwere Panzer-Abteilung 503 had Tiger IIs and 1. Kompanie had 12 of these. The Tiger IIs from this battalion did not even arrive until late July/early August—until the final fighting around Falaise. At least 6 of these had to be destroyed during the retreat from the Falaise pocket. It's generally assumed that all were lost in the retreat, or could not be transported across the Seine.

## MONTGOMERY

2. **Jagdpanthers** were also excluded from the forcepools (exist in GJS data and graphics). The only Jagdpanthers to appear in Normandy were with schwere Panzerjäger-Abteilung 654. This battalion was attached to Panzer Lehr sometime in late June, and after that to Panzergruppe West. It is doubtful that Jagdpanthers saw much if any action in Normandy before July 1944.
3. **Sd Kfz 234/1** (service date post June 1944).
4. **Sd Kfz 234/3** (service date post June 1944).
5. **Pz IVG** (service date post June 1944).
6. **Jagdpanzer IV L/70** (service date post June 1944).

## Vehicles

1. vehicle.adb sizes increased overall
2. reduced rotation rate for 88mm FLAK gun--this was a bug from the stock and patched CC5. The 88mm FLAK rotation was set for "0". It was changed to 18. No more whip lashed guncrews--phew could that puppy whip around!
3. Reduced rotation and movement rate for PAK 43 (88mm).
4. 7.5cm PAK, 3.7cm PAK, 5.0cm PAK fit in buildings.

german additions...

**PzIVF** (short barreled 75mm L/24) 21 Pz had several PzIV short barreled variants--may have been Ausf D, E, or F, or all three.

**JagdpanzerIV/L48**

several **PzIVH** camo schemes

several **Pz V** camo schemes (Ausf D,A,G graphics with Ausf A camo variants)

**76.2cm PAK (r)** used by 346 Infanterie Div. (captured Russian field gun)

miscellaneous vehicle notes...

**SdKfz 234/2 Puma** were very rare--only 101 of this variant made, PzLehr, 2 Pz, and 1st SS were the only divisions with these vehicles in Normandy within mod timeframe.

**Jagdpanzer IV L/48** used by PzLehr, 2 Pz, and 12th SS only.

## Battlegroups

Certain decisions had to be made about the composition and appearance of certain battlegroups for both the Allies and the Germans. For the most part only those divisions appearing in the beachheads of Gold, Juno, and Sword and inland until June 30 were included. However, minor exceptions to this rule were made in order to expand the possibilities of gameplay, or allow a greater role for those divisions that did play a central role during the first month of the Normandy campaign.

Allied reinforcement in campaign play is tweaked. After Day 0 (June 6), the three allied battlegroups with DD Shermans will have Sherman IIIs available as reinforce replacements. Furthermore, commando teams are reduced to zero reinforce after June 6 which highlights their historic role as initial assault troops. The 6<sup>th</sup> Airlanding Brigade will have Tetrarch tanks available for reinforce only after Day 0 (June 6). Also, commando teams will be available as reinforcements after Day 0 to mimic the arrival of commando units that appeared late in the day on June 6<sup>th</sup> to bolster the defenses at Pegasus Bridge. The British faced an increasing manpower shortage as the Normandy Campaign unfolded. Infantry casualties approached 80% (beyond expectations). To illustrate the difficulty the British faced in finding adequate infantry reinforcements, and the serious shortage of seasoned troops,

many battlegroups will reinforce with fewer experienced infantry units, and more green infantry units—especially as the month progresses.

## VI. STRATEGIC MAP

The strategic map is one of the most important changes in GJS. It is designed to show the Commonwealth sector of the Normandy fighting with Gold, Juno, and Sword representing the starting point for the Allies. This sector was dominated by the city of Caen, which was described by various Allied and German generals as being the key to Normandy. As this part of the beachhead was closest to Paris, and most suitable for tank warfare, the Germans put their best armored formations in the line here. During June 1944, the timeframe of the mod, a number of large-scale attempts by the Allies to capture the city failed. Heavy fighting occurred in many small Normandy hamlets, places which are well known by those who have an interest in the Normandy fighting. Pegasus Bridge, Villers Bocage, Tilly-sur-Seulles, Buron, will be linked forever with those fateful days during June 1944.

### Landscape

The landscape around Caen is notably different from the landscape of the Cotentin Peninsula, the setting of the original CloseCombatV. The latter is mostly bocage, with a few large towns like Cherbourg and Carentan. From Gold beach inland, to Tilly-sur-Seulles and Villers Bocage, the countryside consists of dense bocage terrain dotted with small villages. Hard to advance through as every hedge could be a hiding place for machineguns and anti-tank guns.

From Juno and Sword beach towards the city of Caen, the landscape is more open. Rolling plains with small hamlets and sturdy Normandy farms. The defensive tactics employed by the Germans in this area were learned on the Eastern Front; the villages were transformed in hedgehog positions bristling with 88's and machineguns while the countryside in between was left empty. Any attack had to cross open ground and proved to be bloody business, be it for the Germans as well as for the Allies.

On the opposite side of the river Orne the British 6th Airborne established a bridgehead during D-Day. The Orne River confined airborne positions, and the German held Bois du Bouvent, and the flooded areas behind the bois, on the other side. This part of the beachhead wasn't enlarged substantially before the ill-fated Goodwood offensive in July. The German 21st Panzer division held dominating positions in the Bois du Bouvent and the Colombelles steelworks. Behind Caen, the landscape was dominated by small rises in the landscape such as the Bourguebus ridge, and Hill 112 which provided the defenders with a dominating view over the whole invasion area.

### Maps

The battles in the Commonwealth sector during June 1944 were driven by the Allied need to take the city of Caen, and the German necessity to hold it. The GJS strategic map is an attempt to make Caen the focus of the grand campaign. There are two concentric rings of maps around Caen. The first one has 4 maps facing the beaches: Carpiquet, Abbaye d'Ardenne, Buron and Colombelles. These maps are all large, at 3600x3600 pixels each. The idea behind this is that it will take longer to conquer these large maps. This is a way to recreate the heavy and prolonged fighting that took place in these areas; the Allies were pinned down in this line for the better part of June 1944. The river Orne can only be crossed at four places; Pegasus, Caen, and further inland at Tourmouville-Gavrus and Villers Bocage-Aunay-sur-Odon. These places constrain battlegroup movement; enlarging the airborne bridgehead will be a difficult task for the British forces. The density of maps behind Caen and around Bourguebus is notably less than the area in front of the city. Most of the fighting in this area took place out of the time frame of Gold-Juno-Sword.

## VII. CREDITS

For original CC5 Invasion Normandy work and credits see “Credits” button on your introduction screen.

### Gold, Juno, Sword

#### *Mod concept*

Atila

#### *Web site design and mod coordination*

Atila

#### *Design notes*

Cathartes with contributions from Luer and Atila

#### *Data editing*

##### *ALsTeams.adb*

Cathartes

##### *BGroups.adb*

Cathartes

##### *CC5.exe*

Cathartes, Atila

##### *CCResourceDLL.dll*

Cathartes

##### *Elements.adb*

Cathartes with helpful suggestions from Zeppo

##### *Fpools.adb*

Cathartes with a great editing tool provided by IChrist

##### *GETeams.adb*

Cathartes (armour), Luer (infantry and support),

##### *Soldiers.adb*

Cathartes, Luer

##### *USNames*

CSO\_Rennie (replaced American names with British names)

##### *Vehicles.adb*

Cathartes

##### *Weapons.adb*

Cathartes, Luer

#### *GJS graphics*

##### *Gamegadgets*

Cathartes

##### *ScrnGadgets*

Cathartes



## MONTGOMERY

***Guns.vfx***

Cathartes

***CCImages.pix***

Cathartes

***Soldier Medals*** (in ScrnGadgets)

Dynomite

***Tanks.vfx***

Cathartes (a few tanks modified from GROGSBOB tanks and original CC3 WF tanks)

***uniticons***

Cathartes

***Wrecks.vfx***

Cathartes

***Sound******Music.sfx***

modified from the Commonwealth Summer mod for CC3/WF (originally by CSO\_Rennie/GS\_Marcks), edited by Cathartes

***sound.sfx***

Cathartes (adaptation of FUTURE's CC5 sound mod with the addition of British weapon sounds (some modified) from CC2)

***erusvox.sfx***

Cathartes (stock CC2 British voice cues and additional homemade voice cues)

***Video***

Atilla

***Map contributors***

Atilla, BobD, Cathartes, Dynomite, Ichrist, Moloch, Oxcart

***Stratlayer******Stratlayer design***

Atilla, Cathartes

***Stratlayer Image***

CSO\_Darter 2

***Stratlayer and BTd editing***

Atilla

***Historical research***

Atilla, Cathartes, CSO\_Rennie

***Beta testers***

Atilla, Boar, Cathartes, CSO\_Darter2, Ichrist, Ima Pseudonym, Oxcart, CSO\_Rennie, Whistler, Ruiner

*Special thanks goes to these individuals who helped us with specific questions, data issues, or granted permission to use/modify some of their past hard work:*

CplFilt, FUTURE, GROGSBOB graphics team, Luer, Mick(Xe5), Moloch, SgtWilson, Zeppo

Finally, though the sun may be setting on the CC community (really?), we can say that this mod would not be possible without the years of collective experience, insight, and contributions from the entire community. The individuals are too numerous to mention, but their contributions are here indirectly. If you have bothered to read this far you might know who some of them are.

## VII. BIBLIOGRAPHY

### WEBSITES

*This is a woefully incomplete list of the many sites researched. Websites come and go. Some of these may no longer be in existence:*

[http://british-forces.com/site\\_index.html](http://british-forces.com/site_index.html) (Equipment and OOB)  
<http://www.britwar.co.uk/lists/index.htm> (British OOB, equipment lists)  
<http://www3.sympatico.ca/chjohnson/index.htm> (Royal Canadian Armoured Corps, Chris Johnson)  
<http://www.magma.ca/~tracks/stags.htm> (information on Staghound Armoured Cars)  
<http://www.onwar.com> (tank spec references)  
<http://www.dean.usma.edu/history/dhistorymaps/WWIIPages/WWIIEurope/ww2el55.htm>  
<http://www.custermen.net/nahvert/nah.htm>  
<http://www.glcoupar.freemove.co.uk/battleoflingevres1944/>  
<http://www.fortunecity.com/marina/reach/175/sdkfz234.htm>  
[http://www.army.mod.uk/army/business/informat/rank\\_insig.htm](http://www.army.mod.uk/army/business/informat/rank_insig.htm)  
<http://www.forces70.freemove.co.uk/index.htm>  
[http://www.freeport-tech.com/WWII/011\\_germany/\\_ranks\\_army.htm](http://www.freeport-tech.com/WWII/011_germany/_ranks_army.htm)  
<http://normandy.eb.com/>  
<http://members.aol.com/sturmpnzt/>  
<http://www.spitfires.flyer.co.uk/marks.html>  
[http://www.deltaweb.co.uk/spitfire/rtn\\_frnc.htm](http://www.deltaweb.co.uk/spitfire/rtn_frnc.htm)  
<http://www.britishairborne.org/>  
<http://members.nbci.com/dicemanrick/gerpg/gerl.htm>

### ARTICLES and other

*21st Army Group Tanks, British Tanks in Europe 1944-45, AFV News, Peter Brown.*

### BOOKS

*British Tanks of WWII, David Fletcher, Concord Publications, Hong Kong, 2000.*

*D-Day, R.W. Thompson, Standaard Uitgeverij Antwerpen, Antwerpen, Belgium, 1991*

*D-Day Tank Warfare, Steven J. Zaloga and George Balin, Concord Publications, Hong Kong, 1994.*

*D-Day, van de Normandische stranden tot de bevrijding van Parijs, Stephen Badsey, Rebo Productions, Lisse, the Netherlands, 1994*

*Decision In Normandy, Carlo D'Este, HarperPerennial, NY, NY, 1991.*

*Encyclopedia of German Tanks of World War Two*, Peter Chamberlain and Hilary Doyle, Arms and Armour, London, 1978, 1991.

*For King and Country--British Airborne Uniforms, Insignia & Equipment in World War II*, Harlan Glenn, Schiffer Military History, Atglen, PA, 1999.

*From D-Day to VE-Day--The British Soldier, Organisation, Armament, Tanks and Vehicles, Volume 2*, Jean Bouchery, Histoire & Collections, Paris, France.

*The German Army 1939-45 (5), Western Front 1943-45*, Andrew & Thomas, Osprey Military Press, Oxford, UK, 2000.

*Gold Beach, Inland from King-June 1944*, Dunphie and Johnson, Combined Publishing, South Yorkshire, 1999.

*Goodwood, bombardement géant brise-panzers*, Georges Bernage, Editions Heimdal, Bayeux, France, 1992

*Hill 112, Battles of the Odon*, Tim Saunders, South Yorkshire, UK, 2001.

*La bataille du bocage*, Yves Buffetaut, Histoire & Collections, Paris, France, 1994

*Mourir pour l'Abbaye d'Ardenne*, Georges Bernage, Editions Heimdal, Bayeux, France, 1992

*Normandië*, Maj. Gen. H. Essame, Standaard Uitgeverij Antwerpen, Antwerpen, Belgium, 1991

*Normandy 1944--Allied Landings and Breakout*, Stephen Badsey, Osprey Military Press, Oxford, UK, 1990.

*Normandy 1944, The Canadian Summer*, McAndrews, Graves, Whitby, Quebec, 1994.

*Normandy 1944--German Military Organization, Combat Power and Organizational Effectiveness*, Niklas Zetterling, J.J. Fedorowicz Publishing, Inc, Manitoba, Canada, 2000.

*Panzers in Normandy then and now*, Eric Lefèvre, Plaistow Press Limited, London, UK, 1996

*Pegasus Bridge Merville Battery*, Carl Shilleto, Combined Publishing, Wiltshire, UK, 1999.

*Six Armies in Normandy*, John Keegan, Penguin Books, NY, NY, 1994.

*So Few Got Through, With the Gordon Highlanders from Normandy to the Baltic*, Martin Lindsay, Col. Oliver Lindsay, 2000.

*Sword Beach--British 3rd Infantry Division/27th Armoured Brigade*, Tim Kilvert-Jones, Leo Cooper, South Yorkshire, 2001.

*Tanks of World War 2*, Jean Restayn, Paris, France.

21

*Le Tommy de la Liberation--de la Normandie a la Baltique-Coiffures, Uniformes, Insignes, Equipements, Tome 1, Jean Bouchery, Histoire et Collections, Paris, France.*

*Tommy--Uniforms, Weapons and Equipment of the Airborne Forces, Volume 1, David Gordon, Pictorial Histories Publishing Co., Missoula, Montana, 1998.*

-Cathates, Summer 2002.

[gaviota@qnet.com](mailto:gaviota@qnet.com)

