



Research and Intelligence

41. RESEARCH

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41.1 OVERVIEW:

41.11 Each major power except China receives Research Points (RPs) during the opening setup and in the 1940 and each subsequent YSS.

41.12 RPs are secretly assigned to specific research and production projects during the YSS and may be activated during the ensuing year. Any number of eligible production projects may be triggered in a single turn. RPs in a project which is not selected accumulate in that project and may be used in a subsequent year.

41.2 RESEARCH POINTS (RPs):

41.21 BASIC RP ALLOTMENTS: The basic allotment of RPs for each major power is:

A. GERMANY: 8.

B. ITALY: 2.

C. JAPAN: 6.

D. RUSSIA: 6.

E. BRITAIN: 6.

F. FRANCE: 3.

G. U.S.: 10 (once the U.S. is at war with both Germany and Japan).

41.211 AMERICAN RPs PRIOR TO ENTRY: During each YSS before it enters the war, the U.S. receives one RP for every ten USAT and USJT levels (combine both tension levels and round down). The effective tension levels for the winter turn are used.

EXAMPLE: At the end of 1941, the U.S. is at war with Japan and the effective USAT level is 39. In the 1942 YSS, the U.S. receives five RPs for the Pacific and three RPs for Europe, in addition to the RPs it receives for its BRPs and BRP growth.

41.212 CHINA: China never receives RPs, does not conduct research and may not use RPs for production.

41.22 ADDITIONAL RPs FROM BRP LEVELS: In addition to its basic RP allotment, in each YSS (but not during the opening setup of the Campaign game and 1939 scenarios) each major power receives one RP for every 50 BRPs in its BRP total.

41.221 AMERICAN RPs IN A EUROPEAN SCENARIO: In a European scenario, the U.S. receives one additional RP in the 1941 YSS, three additional RPs in the 1942 YSS, and five additional RPs in the 1943 and each subsequent YSS, to reflect RPs from the Pacific.

41.23 ADDITIONAL RPs FROM BRP GROWTH: Each major power receives one additional RP for every 25 BRPs of growth (round down) in each YSS. This additional RP is received for that year only and is based on BRP growth only for that year. The BRP growth itself is unaffected. Increases in the BRP value of Russian ICs and base increases from mobilizations (36.21) are not counted.

41.24 USE OF DPs AS RPs FOR INTELLIGENCE: The intelligence category as a whole is considered an eligible project for DP allocation. DPs allocated to intelligence act as RPs. A player may therefore allocate up to half his RPs (41.31A) and one-third of his DPs (49.31) to intelligence. The limit on the number of points (the total of RPs and DPs) allocated to each intelligence project, including general research, still applies (41.31B).

41.25 ADDITIONAL JAPANESE RPs FOR INTELLIGENCE: In addition to its normal RP allotment, during the 1939 opening setup and in each subsequent YSS Japan receives one additional RP which may only be allocated to intelligence projects. This RP is not taken into account in determining the number of Japanese RPs which may be assigned to other research categories (41.31A).

41.3 ALLOCATION OF RPs:

41.31 RESTRICTIONS ON RP ALLOCATION: The date restrictions for starting jet (6.31), advanced submarine (6.45) and rocket (6.52) research in *A World at War* are determined by the *Gathering Storm* research results for those projects. Otherwise the date restrictions in 41.31D apply.

A. CATEGORY LIMITS: No more than half (rounded up) of an alliance faction's allotted RPs may be placed in a single category (air, naval, military, atomic or intelligence) each year.

B. PROJECT LIMITS: Each year an alliance faction may allocate up to three RPs in a single research or production project, including general research, subject to the restrictions set out in 41.31C-E. This basic limit of three RPs per project per year is increased as follows:

- four RPs may be allocated if the alliance faction has achieved one or more general research breakthroughs in that category and one of its members has 400+ BRPs during the YSS.
- five RPs may be allocated if the alliance faction has achieved two or more general research breakthroughs in that category and one of its members has 500+ BRPs during the YSS.
- six RPs may be allocated if the alliance faction has achieved three or more general research breakthroughs in that category and one of its members has 600+ BRPs during the YSS, and so on.

EXAMPLE: In the 1944 YSS, the U.S. has 650 BRPs. The Western Allies may assign up to six RPs to any project in a category where they have three general research breakthroughs, five RPs to any project in a category where they have two general research breakthroughs, four RPs to any project in a category where they have one general research breakthrough, and the normal three RPs to any project in a category where they have no general research breakthroughs.

C. HIGH TECHNOLOGY LIMITS: High technology research and production projects:

- **Air:** Air range, jets;
- **Naval:** Anti-submarine warfare, advanced submarines;
- **Military:** Rockets;
- **Atomic:** Radar, controlled reaction, uranium separation, plutonium production, the atomic bomb, uranium plants and plutonium reactors;

are subject to the following limits: no more than one RP may be placed in the first year in which RPs are placed in the project; no more than two RPs may be placed in the second year in which RPs are placed in the project; and so on, with the number of RPs permitted increasing by one for each year in which RPs are placed in the project, up to the maximum number of RPs allowed for that year (41.31B).

D. DATE RESTRICTIONS: RPs may not be assigned to the following research and production projects until the indicated date. The 1942 YSS restriction for Western Allied and Japanese RPs applies regardless of when war breaks out between Japan and the Western Allies. Prohibited dates are indicated by shaded boxes on each alliance faction's research record sheets:

- 1939:
 - General research.

- Air Nationality DRM.
- Naval Nationality DRM.
- Combat Training.
- 1940:
 - European Axis torpedo research.
 - Western Allied ASW research.
- 1941:
 - Controlled reaction research.
 - Western Allied ASW production.
 - Western Allied transport production.
 - American Magic production.
- 1942:
 - Western Allied and Japanese submarine production.
 - Western Allied and Japanese port production.
 - Uranium plant production.
- 1943:
 - Western Allied torpedo research.
 - Japanese ASW research and production.
 - Japanese transport production.
 - Plutonium reactor production.
- 1944:
 - American Pacific strategic bomber production.
 - Uranium separation research.
 - Plutonium production research.
 - Atomic bomb research.

E. NATIONALITY RESTRICTIONS: RPs may not be placed in projects not listed on the research record sheets for the alliance faction in question. The alliance factions which may allocate RPs for specific projects and the major power to which results apply are indicated in the research tables. Similarly, nationality restrictions on production projects are set out in the description of each production project in rule 42 and in the research tables. All alliance factions may conduct general research if they may allocate RPs to at least one other research project in that category.

41.32 PREPARING PRODUCTION FACILITIES: Subject to the above restrictions, RPs may be allocated to the production of strategic bombers, uranium plants and plutonium reactors before the allocating alliance faction has achieved the research result required to begin production, but such RPs may not be triggered until the required research result has been achieved.

41.4 EFFECTS OF GENERAL RESEARCH:

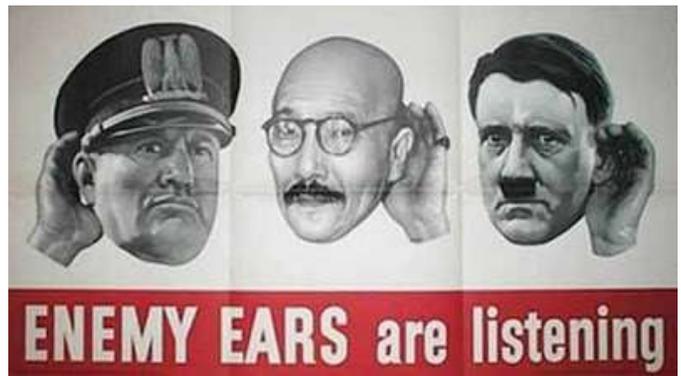
41.41 Five of the research projects represent general research areas (air, naval, military, atomic and intelligence). The remaining research and production projects are specific programs, each of which is related to one of the five general research areas.

41.42 General research does not yield immediate dividends, but instead generates modifiers which increase the chances for success in related research projects for all pooling nations and reduces the cost of force pool additions and other production projects. This allows each player to channel his resources into one or more general areas, or into specific projects in the hope of a quick result which will yield immediate military, economic or political benefits.

41.43 EFFECTS OF GENERAL RESEARCH BREAKTHROUGHS:

A. RESEARCH: Each breakthrough generates a +1 modifier for research die rolls for all other projects in that category. Breakthroughs in general research do not modify subsequent general research.

B. PRODUCTION: Each breakthrough reduces the cost of force pool additions and other production projects in that category by one. Because research takes place before production, breakthroughs reduce production costs in the turn in which they are achieved. Production projects always requires the investment of at least one RP for each increment of increase, regardless of the number of applicable breakthroughs.



41.5 SECRECY:

41.51 CODE NAMES: Each player must assign a code name to each research project in which he places one or more RPs. Each such project retains the code name it is assigned for the entire game. Once assigned, code names may not be changed. Research die rolls are announced using these code names and are open for all players to see. Thus a player might announce a die roll for project “Rattlesnake”, after which he makes his research die roll openly (although the number of RPs he allocated to that project would remain secret until the end of the game). No code names are assigned to production projects.

41.52 IMPLEMENTATION: The simplest way to implement the use of code names for research products is for each player to keep track of the die rolls made for each research project by code name. The opponent can consult this sheet whenever he likes. Alternatively, each player may record the other players’ code names and research die rolls as they are announced.

41.53 REVEALING RESEARCH RESULTS: General research results are never revealed. Other research results are announced when they actually affect play. The code name of successful research projects and the exact numerical result achieved are not revealed. For example, SW modifiers are revealed during the combat phase in which they apply. If one side develops the atomic bomb, this becomes known to the other side only when an atomic attack is made. For projects such as jets and rockets, which are implemented gradually, the opponent learns of the highest research result achieved only when it comes into effect (41.84).

EXAMPLE: During the opening setup, Russia allocates 1 RP to covert operations, secretly assigning the project the code-name “Beria”. At the start of the Fall 1939 turn, the Russian player announces that he is rolling for project Beria and openly rolls a 5. The die roll of 5, plus 1 for the RP assigned to project Beria, yields a “6” result on the covert operations table, allowing Russia to negate one enemy DP. The Russian player does not reveal this result until Germany announces a diplomatic die roll in a target and the Russian player elects to use his covert operation. Even when the covert operation is used, the Russian player does not reveal that his covert operations project has been assigned the code name “Beria”.

41.54 If a player is able to deduce the true nature of an opponent’s projects from the pattern of die rolls, he may do so. A record sheet for enemy research is provided to assist in such detective work.

It is sporting to assign code names which hint at the true nature of the project, but this is by no means mandatory. In any case, code names used for research projects reveal something of the personality of the player concerned.

41.6 POOLING RPs:

41.61 COOPERATION: German and Italian RPs are pooled and may be assigned to any eligible project. In some cases the benefits accrue to both Germany and Italy, while in other cases only one of the Axis major powers benefits. Similarly, Britain, France and the United States pool their RPs, with the benefits accruing to every Western Allied major power in some cases and to only one Western Allied major power in others. Russian and Japanese research is carried on separately.

41.62 The limits on the number of RPs which may be placed in any one category (41.31A) apply after RPs are pooled from the major powers in an alliance. Thus the European Axis as a whole may never put more than half their RPs in one category.

41.63 Once pooled, RPs lose their specific major power association and may be allocated to any project which any of the pooling major powers is eligible to select.

41.64 EFFECTS OF SURRENDER: RPs from major powers which surrender remain in play. France and Italy receive no RPs if they are

conquered. Britain continues to receive RPs after it surrenders. The Western Allies may use RPs to increase the British force pool after Britain surrenders, but may not bring back units which were removed from the British force pool as a result of Britain's surrender.



41.7 ACTIVATION OF RPs:

41.71 SELECTION OF RESEARCH PROJECTS: Immediately before the Axis player turn, the Axis, Western Allies, Russia and Japan may each select one research project from each of the five research categories. For the restrictions on the activation of RPs in Western Allied CTL research, see 41.77C; for the restrictions on the activation of RPs in production projects, see 42.13.

41.72 AT LEAST ONE RP REQUIRED: A project may not be selected unless it has at least one RP in it.

41.73 AXIS RESEARCH ROLLS MADE FIRST: The Axis make their research die rolls first. All research die rolls for a given alliance are simultaneous, so one research result (such as espionage) doesn't affect another research result (such as general research) until the following turn.

41.74 EFFECT OF BREAKTHROUGHS ON PRODUCTION: Because RPs in production projects are activated during the player turn, after research die rolls are made, breakthroughs affect production costs in the turn in which they occur (41.43B).

41.75 RESEARCH DIE ROLLS: Whenever the research rules refer to "die roll(s)", the rolling player rolls three dice and disregards the highest and lowest die rolls. The remaining die roll is used to determine what level of research result is achieved. The following modifiers are applied to the die roll and the resulting number is used to determine the research result achieved:

A. +1 for each unused RP in the project;

B. +1 for each breakthrough in the project's research category; and

C. +/-# for any modifier from a previous research result for the project, as indicated by a number in square brackets (" []") at the end of a research result (prewar results appear in square brackets in the 1939 column of the research record sheets).

D. Negative modifiers based on the alliance faction's current level for that project:

- **Air Nationality DRM:** -# for the Air Nationality DRM of the senior partner in the rolling alliance faction (-1 for an Air Nationality DRM of 1; -2 for an Air Nationality DRM of 2; and so on).
- **Air Range:** -# for the air range of the rolling alliance faction (-1 for one air range result; -2 for two air range results; and so on).
- **Strategic Bombers:** -1 for each strategic bomber result achieved by the rolling alliance faction (-1 for one strategic bomber result, including the initial Western Allied result; -2 for two strategic bomber results; and so on. The Western Allies do not incur a -1 modifier from their pre-war strategic bomber research result - 41.87B).
- **Air Defense:** -1 for each air defense result achieved by the rolling alliance faction (-1 for one air defense result; -2 for two air defense results; and so on).
- **Naval Nationality DRM:** -# for the Naval Nationality DRM of the senior partner in the rolling alliance faction (-1 for a Naval Nationality DRM of 1; -2 for a Naval Nationality DRM of 2; and so on).

- **Torpedoes:** -1 for each torpedo result achieved by the rolling alliance faction (-1 for one torpedo result; -2 for two torpedo results; and so on. Japan does not incur a -1 modifier from its pre-war torpedo research result - 41.87D).
- **ASW:** -1 for each ASW result achieved by the rolling alliance faction (-1 for one ASW result; -2 for two ASW results; and so on).
- **CTL:** -# for the CTL of the senior partner in the rolling alliance faction (-1 for a CTL of 1; -2 for a CTL of 2; and so on).
- **Radar:** -1 for each radar result achieved by the rolling alliance faction (-1 for one radar result; -2 for two radar results; and so on).

E. +/-# for any other modifiers listed in the research tables.

EXAMPLE: The European Axis have two air general research breakthroughs and place two RPs in Air Nationality DRM research, having achieved a "5" research result for Air Nationality DRM in the previous year (a "[+3]" result). Germany has an Air Nationality DRM of two. The modifiers are +2 (air general research breakthroughs) +2 (two RPs) +3 (the [+3] from the research result in the previous year) -2 (the modifier for the current German Air Nationality DRM level) = +5. The European Axis need to roll a "5" or "6" to achieve an Air Nationality DRM increase, although any roll will get them closer to their goal.

41.76 UNUSED RPs: Any RPs which have not been activated by the end of the year, including DPs used as RPs for intelligence projects, remain in the assigned project and are carried over into the following year (**EXCEPTION:** RPs allocated to conventional submarine and transport production (42.23A, 42.23C) must be activated during the year in which they are allocated). All RPs in a research project are eliminated when a die roll is made for that project. RPs in a production project are eliminated when used, but a player may elect to use only some of the RPs allocated, saving the remainder for future production.

41.77 RESTRICTIONS:

A. ONE CATEGORY PER TURN: Only one project from each of the five categories may be selected as a project for a research die roll each turn. It is therefore illegal to make a die roll for general research and a research project in the same category in the same turn.

B. ONE ROLL PER PROJECT PER YEAR: It is illegal to make two research die rolls for the same project in the same year, because the first die roll eliminates all the RPs in the project (41.76) and a project may not be selected unless it contains RPs (41.72).

C. WESTERN ALLIED CTL RESEARCH: The Western Allies may not roll for CTL research until the year after American ground forces first engage in attrition or offensive operations against opposing ground forces in the European theater, as either the attacker or defender, or 1943, whichever is earlier. This does not prohibit the Western Allies from allocating RPs to combat training research in earlier years.

41.78 REASSIGNMENT OF RPs DURING THE YEAR: Immediately after a research roll of "1" or "2" for any project, prior to making any other research rolls, the rolling alliance faction may reassign RPs to that project in order to increase the research roll to a maximum of "3", as follows:

A. One RP may be reassigned to a project for which a "2" was rolled; one or two RPs may be reassigned to a project for which a "1" was rolled. Each reassigned RP increases the research roll by one.

B. Reassigned RPs must have been allocated to research or production projects in the same category (air, naval, military or intelligence) as the project to which the RPs are being reassigned. RPs which have already been activated may not be reassigned.

C. RPs reassigned to increase a research roll are not subject to project (41.31B) and high technology (41.31C) limits.

D. DPs assigned to intelligence projects are treated as RPs and may be reassigned.

E. RPs in atomic research may not be reassigned.

F. The reassignment of RPs is secret and is only revealed if there is an enemy spy ring in that category and the reassignment of RPs removes all the RPs from a new project about which the opponent was previously informed.

41.8 RESEARCH RESULTS:

41.81 DIFFERENT TYPES OF RESEARCH RESULTS:

A. "*" RESULTS: If a result has a "*" by it, no further research in that project is permitted. The research tables contain the following "*" results:

- The best possible results for jets, advanced submarines, rockets, uranium separation, plutonium production, the atomic bomb and Anglo-French cooperation.

- Successful results for controlled reaction.
- Disastrous results for jets, advanced submarines, rockets and controlled reaction.

B. CUMULATIVE RESULTS: The effect of research in the following projects is determined by the number of successful results: general research, air nationality DRM, air range, strategic bombers, air defense, naval nationality DRM, anti-submarine warfare, torpedoes, combat training and radar.

C. NON-CUMULATIVE RESULTS: The effect of research in the following projects is determined by the highest result achieved; jets, advanced submarines, rockets, uranium separation, plutonium production, the atomic bomb and Anglo-French cooperation.

D. ONE-TIME RESULTS: Controlled reaction has only one result and no further research is required once success has been achieved.

E. DISPOSABLE RESULTS: Successful results in the following projects are exhausted once used, and additional research is required to attain another result: harbor attack, counter-intelligence, covert operations, espionage and subversion.

41.82 “[+#]” AND “[-#]” RESULTS: A “[+#]” or “[-#]” by a research result indicates the modifier which applies to the next research roll for that project. Such modifiers are not cumulative – the modifier achieved from the most recent research result applies to the next research roll for that project. A player may select a lesser result (41.86) in order to preserve a higher modifier for a future research roll in a project.

EXAMPLES: In Winter 1939, the Western Allies achieve a “5” research result for Espionage. The “[+3]” associated with the result means the Western Allies get a +3 modifier if they roll for Espionage in a subsequent year.

In Summer 1940, the European Axis achieve a “7+” research result for torpedoes. In addition to more effective torpedoes, the European Axis incur an adverse modifier for their next torpedo research roll, because of the “[-1]” associated with the “7+” research result. This has the incidental, but intended, effect of making it difficult to achieve repeated torpedo results (there are also negative modifiers for ASW research).

41.83 IMMEDIATE IMPLEMENTATION: Research results are implemented immediately (EXCEPTIONS: 41.84).

41.84 GRADUAL IMPLEMENTATION:

A. Results for jets, advanced submarines and rockets (“9” and greater) are implemented gradually, at the rate of one result per turn, until the highest result achieved takes effect. One jet factor, advanced submarine or rocket base is added to the successful alliance faction’s force pool each turn.

B. When an anti-submarine warfare research result of “8+” is achieved, the first result is implemented immediately, and the second result is implemented in the following turn.

41.85 RESULTS MUST BE ANNOUNCED TO BE EFFECTIVE: A player need not employ jets, anti-submarine warfare, or flying bombs/rockets for research improvements to apply, but turns in which such results are not announced are not counted and delay the implementation of the higher results. A player may thus not suddenly unleash long range rockets on his opponent without announcing the lesser versions of the final product on previous turns. This reflects the development aspect of research. ASW modifiers must be announced whenever they modify a submarine warfare, submarine attack or submarine harbor attack dice roll.

41.86 LESSER RESULTS: A player may choose to implement a lower-ranked research result if he wishes, including a “No Effect” result if it is available.

41.87 PREWAR RESEARCH: At the start of the campaign game:

A. EUROPE: All European major power research results and modifiers are determined by *Gathering Storm* research, including the starting *Gathering Storm* research results. The Western Allies do not incur a -1 modifier in *A World at War* from their pre-war strategic bomber research result.

B. JAPAN: Japan starts *A World at War* with the following research results: air range: [+5]; one torpedo result. Japan does not incur a -1 modifier in *A World at War* from its pre-war torpedo research result.

41.88 GENERAL APPLICABILITY OF WESTERN ALLIED RESEARCH RESULTS: Jet, air range, torpedo and ASW technology research tables list both Britain and the U.S. as eligible researching major powers. The Western Allies may only roll for each of these projects once per year, but the results apply to both Western Allied major powers.



41.9 NATIONALITY MODIFIERS AND CTLs:

41.91 AIR AND NAVAL NATIONALITY DRMs: When one side increases its Air or Naval Nationality DRM, it raises that DRM for all major powers, minor allies, associated minor countries and other non-partisan units in that alliance. A country which joins an alliance after a Nationality DRM research result is achieved immediately gains the benefits of that research result. A country which switches sides is affected only by the Nationality DRM research results of its new alliance partners.

EXAMPLE: If both the Axis and the Western Allies increased their Air Nationality DRM by one, there would be no net change in the air combat modifiers between the two alliances, although air attacks on naval units by the Axis and Western Allies would be more effective, and the Russians would fall behind Germany, Italy and all Axis minors in air combat. Both Russian and Japanese DRMs are distinct from those of the Axis and Western Allies, and their Air Nationality DRMs would be unaffected.

41.92 CTLs:

41.921 STARTING LEVELS: European Axis, Western Allied, Russian, Japanese and Nationalist Chinese CTLs are distinct. At the start of the game, the following CTLs are in effect:

A. TWO: Germany, Finland, Sweden, Vlasovs, Japan and Communist China.

B. ONE: All other nationalities, partisans.

41.922 INCREASING CTLs: Combat training level increases from research increase the CTLs of all major powers, minor allies, associated minor countries and other non-partisan units in that alliance. The CTL of countries which switch sides is governed by the number of CTL increases that have been achieved by their new alliance faction.

41.923 RESTRICTIONS ON CTL INCREASES: The Communist Chinese CTL of two, the Nationalist Chinese CTL of one and the partisan CTL of one may never be increased.

41.924 TEMPORARY CTL EFFECTS: The CTL of ground units is reduced by one in the following situations:

A. All ground units in partial supply or subject to army oil effects. This reduction is not cumulative if both conditions apply (30.522A, 33.61C).

B. All ground units subject to a winter effect of “7” (34.41).

C. Armor units exploiting from an invasion hex (16.15).

D. Russian armor units exploiting from a mud hex (34.221).

E. After a defensive atomic attack (43.424B).

41.925 EFFECTS OF CTLs: CTLs have the following effects:

A. ATTRITION: Attrition die rolls are increased or decreased by the difference in CTLs between the units involved (14.42B).

B. COMBAT ROUNDS: A CTL of one or less permits only one round of ground combat or seaborne invasion. A CTL of two allows a second round of ground combat or seaborne invasion. A CTL of three allows a third round of ground combat or seaborne invasion, and so on (15.82A, B).

C. BREAKTHROUGHS: Armor units with a CTL of zero may not create breakthroughs or exploit (15.82C).

D. EXPLOITATION MOVEMENT: Armor units with a CTL of one have their exploitation movement allowance halved (round up). Armor

units with a CTL of two or more may exploit normally.

E. EXPLOITATION ATTACKS: Infantry, replacements and partisans incur a -1 DM if attacked by at least one exploiting armor with a CTL of two or more, unless defending in a capital, objective hex, IC, bridgehead or railhead. Airborne, marine, commando, Chindit and armor units (subject to 15.331) are not subject to this -1 DM when attacked by exploiting armor.

F. REDUCED DM: Infantry and replacements with a CTL of zero or less incur a -1 DM unless defending in a capital, objective hex, IC, bridgehead or railhead; or in their home country. Canadian, South African and Free French units are considered to be “in their home country” when defending in Britain (82.13, 58.624).



42. PRODUCTION

42.1 PRODUCTION

42.2 PRODUCTION COSTS

42.3 FORCE POOL INCREASES

42.1 PRODUCTION:

42.11 EFFECTS OF GENERAL RESEARCH: RPs invested in production generate force pool increases or other results without the need for a die roll. Production costs are reduced by one for each general research breakthrough in the relevant category.

42.12 MINIMUM EXPENDITURE OF ONE RP REQUIRED: Regardless of the number of general research breakthroughs achieved or other factors reducing production costs (42.26D-F), at least one RP must be used for each factor, increment of force pool increase or other result. For example, after two air breakthroughs, the RP costs of air factor force pool additions (42.22A) in a single year are: one RP for the first five BRPs of air units; one additional RP for the next five BRPs of air units, two additional RPs for the next five BRPs of air units, and so on. Thus 15 BRPs of air units would cost four RPs, while 20 BRPs of air units would cost seven RPs.

42.13 SELECTION OF PRODUCTION PROJECTS: During their player turn (EXCEPTION: Ultra and Magic increases are triggered at the end of the research phase), the Axis, Western Allies, Russia and Japan may each select any number of production projects (EXCEPTIONS: No more than one of each of the following may be produced each turn: airbases, naval air training, shipbuilding, ports, fortifications, railheads, synthetic oil plants, ICs, uranium plants and plutonium reactors).

42.14 RPs in production projects are activated when they take effect. In most cases this will be during the unit construction phase.

42.15 An alliance faction may not name the same production project twice in the same year (EXCEPTIONS: Airbases, ports, fortifications and railheads).

42.16 PRODUCTION RESTRICTIONS:

A. PRODUCTION ALLOWED ONLY IN FULL YEARS OF WAR: Unless war breaks out in a *Gathering Storm* Winter turn, so that the first turn of *A World at War* is a Spring turn, production in the first year of war is prohibited (RPs may not be allocated to production until the first YSS occurs in *A World at War*).

B. LIMITS ON PRODUCTION RESULTS LIMITED BY YEAR: The number of increments of production that may be triggered in production projects that create air and military units is limited according to the year: 1936-41: one increment in each year; 1942: two increments; 1943: three increments; and so on. Up to five BRPs of surplus production may be carried over into a subsequent year (42.335). This restriction applies to the following production projects:

- Air:
 - Air production (army air, naval air, interceptors).
 - Strategic bomber production.
 - Air transport production.
- Military:
 - Military production (infantry, armor, flak).
 - Specialized unit production.

42.17 REVEALING PRODUCTION RESULTS: Production results are announced as follows:

A. FORCE POOL INCREASES: The triggering of RPs for force pool increases are announced during the unit construction phase in which the RPs are triggered, whether or not this results in an immediate force pool increase (EXCEPTION: Newly produced interceptors (42.22A) and strategic bombers (42.22B) are immediately placed in the SW box, provided the owning major power commits to their construction in the turn of production - 27.91A). A player may not conceal the triggering of RPs for force pool increases, even if the force pool increase itself is deferred (42.336).

B. NAVAL AIR TRAINING, SHIPBUILDING, OIL PLANTS, ICs: Increases in naval air training and shipbuilding are announced in the unit construction phase in which they are first applicable, whether or not they are used. Additional oil plants or industrial centers are announced the turn they are placed.

C. WINTER PREPARATION: Winter preparation results are announced in the first winter to which they are applied.

D. SHOCK ARMIES: Shock army results are announced when Russian 3-3 infantry units exceed normal stacking or attacking limits.

E. FORTIFICATIONS: The use of RPs for fortifications is revealed when the fortification is constructed.

F. ATOMIC FACILITIES: The construction of atomic facilities is not announced.

42.2 PRODUCTION COSTS

42.21 EXPLANATION OF PRODUCTION COSTS: The first number listed is the RP cost of the first factor or other increment added to the force pool or the first production result generated, the second number the RP cost of the second factor or increment, and so on. Three dots indicate the production profile continues for the fifth and subsequent increments, as set out on the research record sheets. The costs apply each year: force pool additions during a previous year have no effect on the cost of subsequent force pool additions.

42.22 AIR:

A. AIR FORCE POOL INCREASES: 2, 3, 4, 5... Each result allows the alliance faction to add five BRPs of army air, naval air or interceptors, in any combination, to the force pool of one or more eligible major powers in that alliance faction.

- Army and naval air units are added to the owning major power's force pool in the unit construction phase in which the RPs are triggered.
- Interceptors are added to the owning major power's force pool and placed in a SW box for immediate use at the end of the research phase in which the RPs are triggered, provided the provided the owning major power commits to their construction in the turn of production (27.91A).
- France may not produce naval air units or interceptors; Russia may not produce naval air units; Italy may not produce interceptors; China may not produce army air, naval air or interceptors.
- Remnants may be retained for future use (42.336).

B. STRATEGIC BOMBERS: 2, 3, 4, 5... only after a “9+” research result for strategic bombers. Each result allows the alliance faction to add five BRPs of strategic bomber factors to the force pool of one or more eligible major powers in that alliance faction.

- Strategic bombers are added to the owning major power's force pool and placed in a SW box for immediate use at the end of the research phase in which the RPs are triggered, provided the provided the owning major power commits to their construction in the turn of production (27.91A).
- Western Allied strategic bomber production in Europe is a separate production project from American strategic bomber production in the

Pacific. Western Allied strategic bomber production for European use may begin in 1940; American strategic bomber production for Pacific use may begin in 1944.

- Italy, France and China may not produce strategic bombers. See 24.23 and 42.331B for restrictions.
- Remnants may be retained for future use (42.336).

C. AIR TRANSPORTS: 3, 4, 5, 6... Each result allows the alliance faction to add an air transport factor to the force pool of an eligible major power in that alliance faction. Italy, France and China may not produce air transport units.

D. JETS: One jet factor is added to the force pool of the eligible major powers in the rolling alliance faction, at no additional RP cost, for each research result for jets. A “9” research result for jets adds one jet factor; a “10” result, two jet factors; an “11” result, three jet factors, and a “12+” result, four jet factors. Germany, Japan and Russia may create no more than four jet factors; Britain and the U.S. may each create no more than two jet factors; Italy, France and China may not create jets.

E. AIRBASES: 1, 1 for no more than two additional airbases each year, at the rate of one airbase per turn. Germany, Italy, Japan, Russia, Britain and the U.S. only.

42.23 NAVAL:

A. SUBMARINES:

- **CONVENTIONAL SUBMARINES:** 1 submarine factor for each RP, no limit. RPs allocated to conventional submarine production must be activated during the year in which they are allocated. Germany, Italy, Japan, Britain and the U.S. only.
- **ADVANCED SUBMARINES:** One advanced submarine factor is added to the German force pool, at no additional RP cost, for each research result for advanced submarines. A “9” research result for advanced submarines adds one advanced submarine factor; a “10” result, two advanced submarine factors; and so on, up to a maximum of six advanced submarine factors on a “14+” result. Germany only.

B. ASW: 2, 3, 4, 5... Each result allows an eligible major power to add one ASW factor to its force pool. Japan, Britain and the U.S. only.

C. TRANSPORTS: 1 transport for each RP, no limit. RPs allocated to transport production must be activated during the year in which they are allocated. Japan, Britain and the U.S. only.

D. NAVAL AIR TRAINING: 3, 4, 5, 6 for each level of naval air training, to a maximum increase of four per year, at the rate of one increase per turn. Germany, Italy, Japan, Britain and the U.S. only.

E. SHIPBUILDING: 2, 3, 4, 5 for each shipbuilding increase, to a maximum increase of four per year, at the rate of one increase per turn. All major powers except Russia and China.

- Each shipbuilding increase must be assigned to a specific shipyard controlled by the relevant alliance faction at the start of the game. The shipbuilding level of captured shipyards (27.713) may not be increased.
- The shipbuilding level of each shipyard may only be increased by production by one each year. This restriction does not apply to shipbuilding increases from mobilization.
- American shipbuilding may not be increased through production (as opposed to mobilization) in a theater until the U.S. is either at war in that theater or the U.S. tension level for that theater is greater than 50.

F. PORTS: 3 per port, for no more than two port counters each year, at the rate of one port counter per turn. Japan and the U.S. only.

42.24 MILITARY:

A. INFANTRY, ARMOR, AND FLAK FORCE POOL INCREASES: 2, 3, 4, 5... Each result allows the alliance faction to add five BRPs of infantry, armor and flak units, in any combination, to the force pool of one or more major powers in that alliance faction. See 42.332 and 42.333 for restrictions. Remnants may be retained for future use (42.336).

B. SPECIALIZED UNIT FORCE POOL INCREASES: 2, 3, 4, 5... Each result allows the alliance faction to add one factor of airborne, Chindits, marines or commandos to the force pool of an eligible major power in that alliance faction, up to the maximum allowed for each major power.

C. FORTIFICATIONS: 1 and five BRPs for each fortification, for a maximum of four fortifications per year, at the rate of one fortification per turn (EXCEPTION: Japanese fortifications do not require an RP

expenditure). Instead of a fortification, two beach defenses may be constructed (32.53) or an island group may be fortified (32.61); this decision is made when the RP is triggered. Germany, Japan, Russia, Britain, and the U.S. only.

D. RAILHEADS: 2 and five BRPs for each railhead, for a maximum of four railheads per year, at the rate of one railhead per turn. Germany, Italy, Japan, Russia, Britain, and the U.S. only.

E. ROCKET BASES: Research results for rockets allow rocket bases to be placed, at no additional RP cost, as set out in 26.61. A “9” research result for rockets allows two rocket bases to be placed; a “10” result, four rocket bases; an “11” or “12+” result, six rocket bases. Germany, Japan, Russia and the U.S. only.

F. SYNTHETIC OIL PLANTS: 5 for each oil plant, to a maximum of two plants per year, at the rate of one plant per turn. Synthetic oil plants are produced at the start of the owning player’s turn and thus may be used as an oil source in the turn they are produced. Germany only.

G. INDUSTRIAL CENTERS (ICs): 5 for each IC, to a maximum of two ICs per year, at the rate of one IC per turn. Russia only.

H. WINTER PREPARATION: 3, once per year, up to a maximum winter preparation level of six. In addition, the European Axis and Japan may achieve automatic winter preparation results (34.442). Such automatic results do not count against the production limit of one winter preparation result per year. Winter preparation results apply to all members of the alliance faction which achieves the result. Germany, Japan and the Western Allies only.

I. SHOCK ARMIES: 2, 3, with two results permitted each year, to a maximum of six results. Each shock army result allows the Russian player to designate one 3-3 infantry unit as a shock army each turn. Shock armies may overstack at the end of the movement phase and may attack in excess of the normal limit of two ground units from a hex, up to a limit of three shock armies (nine factors) per ground attack. Shock armies may be taken as combat losses in the same manner as other ground units, but otherwise are eliminated once ground combat is resolved, prior to advancing after combat, regardless of the outcome. Shock armies may not be used for overruns, seaborne invasions, exploitation attacks or attritions. Russia only.

42.25 ATOMIC:

A. URANIUM PLANTS: 8 for each uranium plant, at the rate of one plant per year. Uranium plants are a high technology project. RPs may not be invested in uranium plants until the 1942 YSS. Uranium plants do not begin to produce material for atomic bombs until an “8” or greater research result for uranium separation has been achieved. Germany, Russia and the U.S. only.

B. PLUTONIUM REACTORS: 6 for each plutonium reactor, at the rate of one plutonium reactor per year. Plutonium reactors are a high technology project. RPs may not be allocated to the production of plutonium reactors until the 1943 YSS. Plutonium reactors do not begin to produce material for atomic bombs until an “8” or greater research result for plutonium production has been achieved. Germany, Russia and the U.S. only.

42.26 INTELLIGENCE:

A. CODEBREAKING: European codebreaking (“Ultra”) and Pacific codebreaking (“Magic”) production results are achieved separately – the Western Allies may achieve one result of each type each year. Codebreaking production results are announced at the end of the research phase, immediately before Ultra and Magic cards are drawn (48.11).

B. ULTRA: 3, with one result permitted each year. Germany and Britain only.

C. MAGIC: 3, with one result permitted each year. Japan and the U.S. only.

D. RUSSIAN OCCUPATION POLICIES: 4, 5, 6, with a maximum of three results permitted each game. Each Russian occupation policies result permits Germany to build one Vlasov infantry factor each turn once Germany and Russia are at war. Germany only.

- The cost of Russian occupation polices is reduced by one if the Ukraine has activated as a German minor ally (a “10” diplomatic result for the Ukraine).

E. CHINESE OCCUPATION POLICES: 4, with a maximum of one result permitted each game. A Chinese occupation policies result permits Japan to build one Wang infantry factor each turn, up to a limit of one 1-2 and one 2-2 infantry unit for each of Peking, Nanking, Shanghai, Canton and Chungking controlled by Japan. Japan only.

- The cost of Chinese occupation policies is reduced if the Chinese resistance level is below zero (-1 for a Chinese resistance level of -1; -2 for a Chinese resistance level of -2; and so on).

F. INDIAN SUBVERSION: 4, with a maximum of one result permitted each game. An Indian subversion result permits Japan to build one Indian National Army infantry factor and one Indian partisan each turn up to a limit of one 1-2 and one 2-2 infantry unit for each of Calcutta, Colombo, Dacca and Rangoon controlled by Japan, plus two Indian partisans regardless of the number of objectives controlled (72.92B, 72.93B). Japan only.

- The cost of Indian subversion is reduced by one for each of Calcutta, Colombo, Dacca and Rangoon under Japanese control (-1 for one of the four objectives, -2 for two of the four objectives, and so on).

G. MOSLEM UNREST: 2, 3, with two results permitted each year. Each Moslem unrest result allows Germany to add one Middle Eastern partisan to its force pool. Germany only.

H. WESTERN ALLIED PARTISANS: 2, 3, with two results permitted each year. Each Western Allied partisan result allows the Western Allies to add one Western Allied partisan to their force pool. Western Allies only.

I. RUSSIAN PARTISANS: 2, 3, with two results permitted each year. Each Russian partisan result allows Russia to add one Communist partisan to its force pool. Russia only.



42.3 FORCE POOL INCREASES:

42.31 FORCE POOLS: Force pool increases may be generated either by mobilization (36.3) or by the investment of RPs in production (42.2).

42.32 TIMING: Force pool additions are announced during the unit construction phase following the result, whether or not they are constructed at that time.

42.33 FORCE POOL LIMITS: Each major power is limited to the number of units set out on its scenario card. In addition, the following restrictions apply:

42.331 AIR UNITS: Army and naval air units may be added to force pools by either mobilization or production. Interceptor, strategic bomber, air transport and jet force pools may be increased only by production, subject to the following restrictions:

A. JETS: Jets are produced, at no additional RP cost, when research results for jets are achieved.

B. STRATEGIC BOMBERS: Strategic bombers may not be produced by a major power which has not achieved at least one “9+” result for strategic bombers. The Western Allies begin with one “9+” result for strategic bombers and one British and one American strategic bomber factor already built. Western Allied strategic bomber force pool additions for European use must be allocated so the British and American strategic bomber force pools remain at equal strength, with any odd factor going to either major power at the Western Allied player’s discretion (24.23).

42.332 INFANTRY:

A. AXIS: No more than three Italian infantry factors may be added per year from production.

B. WESTERN ALLIES:

- No more than three British infantry factors may be added per year from production and no more than three British infantry factors may be added from production and mobilization in the same turn.

- The Australian and Indian infantry force pools may each be increased by up to three infantry factors of any denomination (one 2-2 and one 1-2; or three 1-2s) in any Allied player turn following the outbreak of war between Britain and Japan or in Spring 1942, whichever is earlier.
- If France has been conquered, Britain may add one Free French 2-3 infantry unit to its force pool from production for each French colony under Western Allied control. Once added, these Free French units remain in the British force pool even if the total number of French colonies under Western Allied control later decreases.

42.333 ARMOR:

A. GERMANY: Germany may produce:

- 3-6 or 4-6 armor units, up to its limit of 12 such armor units, if it did not mobilize these 12 armor units in *Gathering Storm*.
- 5-6 armor units:
 - in the year after the outbreak of war between Germany and Russia (two *Gathering Storm* German armor research results).
 - once war breaks out between Germany and Russia (15 or more steps of *Gathering Storm* German armor research results).

B. ITALY: Italy may mobilize or produce 2-5 armor units.

C. JAPAN: Japan may mobilize or produce 3-3 armor units.

D. BRITAIN: Britain may mobilize or produce 2-5 and 4-5 armor units.

E. FRANCE: France may not mobilize or produce armor units. If France has been conquered, Britain may produce one Free French 3-5 armor unit if Paris is under Allied control.

F. U.S.: The U.S. may mobilize or produce 5-6 armor units.

G. RUSSIA: Russia may mobilize or produce 4-5 and 5-6 armor units.

42.334 NAVAL UNITS: Fleet (destroyer, cruiser, named capital ships) and carrier (CVE, CVL, CV, CVB) units do not have force pools and may be constructed and repaired without any investment of RPs. Heavy and light ship construction is restricted only by the constructing major power’s shipbuilding rate and shipyard capacity. There is no limit to the extent of submarine, ASW and transport force pool additions.

42.3341 SUBMARINE FORCE POOL INCREASES: Western Allied and Japanese RPs may not be assigned to submarine production until the 1942 YSS.

42.3342 JAPANESE ASW FORCE POOL INCREASES: Japanese RPs may not be assigned to ASW production until the 1943 YSS.

42.3343 JAPANESE TRANSPORT FORCE POOL INCREASES: Japanese RPs may not be assigned to transport production until the 1943 YSS.

42.3344 PORT PRODUCTION: Western Allied and Japanese RPs may not be assigned to port production until the 1942 YSS.

42.335 SURPLUS PRODUCTION: An alliance faction may defer the use of up to five BRPs of force pool increases from production for each production project until a subsequent year. No more than five BRPs of production may be carried over from year to year for each production project. Deferred production is announced during the unit construction phase in which the RPs are triggered (42.17A). Deferred military production may be used to produce heavy armor units even if the heavy armor could not be built when the military production was deferred.

42.336 PRODUCTION AND MOBILIZATION: The deferral of force pool increases from production may be used in two ways:

A. Some or all of the deferred production may be used for production for the same project in a subsequent year, whether or not RPs are subsequently allocated to that project.

B. Some or all of the deferred production may be used in conjunction with mobilization points to mobilize one additional air factor or ground unit, as the case may be, in the current or a subsequent turn. No more than one additional air factor or ground unit may be mobilized in this manner each turn. When this is done, the air factor or ground unit generated is subject to the delay associated with mobilization.

42.337 RUSSIAN PREWAR FORCE POOL ADDITIONS: Until Russia and Germany have gone to war or the RGT level is 40 or more, Russia may produce no more than five BRPs of air and five BRPs of military production each year. These additional units may be deployed without restriction (63.51C).



43. ATOMICS

- 43.1 OVERVIEW
- 43.2 STRATEGIC ATOMIC ATTACKS
- 43.3 EFFECTS OF STRATEGIC ATOMIC ATTACKS
- 43.4 TACTICAL ATOMIC ATTACKS
- 43.5 MULTI-TARGET ATOMIC ATTACKS

43.1 OVERVIEW:

43.11 RESEARCH: Atomic bombs may only be constructed by Germany, Russia and the U.S. Atomic bomb production requires the research results set out below. All atomic research except atomic general research is subject to the restrictions on RP allocation which apply to high technology projects (41.31C):

A. CONTROLLED REACTION:

- RPs may not be allocated to controlled reaction research until the 1941 YSS.
- An “8+” research result for controlled reaction is required before a research roll made be made for plutonium production or the atomic bomb.

B. URANIUM SEPARATION:

- RPs may not be allocated to uranium separation research until the 1944 YSS.

C. PLUTONIUM PRODUCTION:

- RPs may not be allocated to plutonium production research until the 1944 YSS.

D. ATOMIC BOMB:

- RPs may not be allocated to atomic bomb research until the 1944 YSS.
- RPs allocated to atomic bomb research may not be activated until an “8+” research result for controlled reaction has been achieved and the material for at least one bomb is available.
- Provided the fissionable material is available, a “4-6” atomic bomb research result allows the construction of uranium bombs; a “7+” atomic bomb research result also allows the construction of plutonium bombs.

43.12 PRODUCTION OF FISSIONABLE MATERIALS: Atomic bombs require the production of fissionable material from uranium plants and/or plutonium reactors:

A. URANIUM PLANTS:

- Uranium plants are a high technology project. Each uranium plant costs 8 RPs. RPs may not be invested in uranium plant production until the 1942 YSS.
- Each uranium plant produces fissionable material for one atomic bomb either immediately or up to three turns after it is built, provided an “8” or greater research result for uranium separation has been achieved. The delay associated with receiving the fissionable material for the first atomic bomb depends on the research result for uranium separation.
- The rate at which uranium plants produce material for additional atomic bombs depends on the research result for uranium separation.

B. PLUTONIUM REACTORS:

- Plutonium reactors are a high technology project. Each plutonium reactor costs 6 RPs. RPs may not be invested in plutonium reactor production until the 1943 YSS.
- Each plutonium reactor produces fissionable material for one atomic bomb either immediately or up to three turns after it is built, provided an “8” or greater research result for plutonium production has been achieved. The delay associated with receiving the fissionable material for the first atomic bomb depends on the research result for plutonium production.
- Each plutonium reactor produces fissionable material for an additional atomic bomb every two turns after the material for the first bomb is produced.

43.13 USE: Once all research conditions are met and sufficient fissionable material is available, atomic bombs are immediately assembled and may be used against enemy strategic, military, air or naval targets. The method of delivery and effect depends upon the type of target selected.

Each atomic bomb may only be used once. Is a rule required to make this clear? Disputes have arisen over more obvious points...



43.2 STRATEGIC ATOMIC ATTACKS:

43.21 TIMING: Atomic attacks against strategic targets are made by the moving player immediately after resolving SW combat.

43.22 DELIVERY: Strategic atomic attacks may be made only by strategic bomber or rocket against any otherwise eligible target, or by German advanced submarine against the Atlantic U.S. box.

43.221 STRATEGIC BOMBERS: Only strategic bombers may be used to drop an atomic bomb. Army air units used for conventional bombing may not make atomic attacks.

43.222 ROCKETS: Rockets may be used to deliver atomic bombs at a range of three European (two Pacific) hexes if a “12+” research result for rockets is in effect.

43.223 WESTERN ALLIED ATOMIC ATTACKS: Both American and British strategic bombers and rockets may be used to deliver Western Allied atomic bombs.

43.224 ADVANCED SUBMARINES: Germany may make one strategic atomic attack against the U.S. for each advanced submarine factor in the Atlantic SW box.

43.23 TARGETS: Strategic atomic attacks may only be made against eligible bombing targets (26.3) within range of the required base.

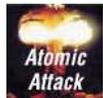
43.24 RESOLUTION OF ATOMIC ATTACKS BY STRATEGIC BOMBER: A strategic atomic attack may be made by strategic bomber if at least one strategic bomber factor is unaffected both by air combat with the defender's air units, if any, and the defender's SW combat dice roll. Once it is determined whether a strategic atomic attack by strategic bomber is permitted, the attacker announces whether he is making the attack.

43.25 RESOLUTION OF ATOMIC ATTACKS BY ROCKET: Atomic attacks made by rocket (43.222) may not be intercepted.

43.26 RESOLUTION OF ATOMIC ATTACKS BY ADVANCED SUBMARINES: Atomic attacks made by advanced submarines (43.224) may not be intercepted.

43.3 EFFECTS OF STRATEGIC ATOMIC ATTACKS:

43.31 ATOMIC ATTACK MARKERS:



43.311 PLACEMENT OF ATOMIC ATTACK MARKERS: A successful atomic attack results in the placement of an atomic attack marker on the target hex or in the attacked mapboard box, with the effects outlined below.

43.312 ONE STRATEGIC ATTACK PER HEX: Each hex may be subject to only one successful strategic atomic attack per game. If more than one atomic bomb is detonated in the same hex in the same turn, these additional atomic attacks are considered tactical atomic attacks against enemy air or naval units in the target hex (43.44) and have no political or resistance effects. Only one atomic attack marker would be placed. Similarly, subsequent atomic attacks against a hex which has already been subject to a successful strategic atomic attack have no political or resistance effects and do not result in the placement of an atomic marker.

43.32 POLITICAL EFFECTS:

43.321 SURRENDER AND RESISTANCE EFFECTS: Successful strategic atomic attacks trigger the following political effects:

A. GERMAN SURRENDER: The first successful strategic atomic attack against a target in Germany permanently reduces the German surrender level by three; the second such attack permanently reduces the German surrender level by an additional two; each additional attack permanently reduces the German surrender level by an additional one.

B. JAPANESE AND RUSSIAN RESISTANCE: The first successful strategic atomic attack against a hex in Japan or Russia permanently reduces the Japanese or Russian resistance level by three; the second such attack permanently reduces the target's resistance level by an additional two; each additional attack permanently reduces target's resistance level by an additional one.

C. BRITISH RESISTANCE AND U.S. ELECTION: The effect of a successful German strategic atomic attack against Britain or the U.S. depends on whether the Western Allies also have the atomic bomb. This is defined as having either a uranium bomb or a plutonium bomb which is assured of successful detonation.

- If the Western Allies also have the atomic bomb:
 - The first successful strategic atomic attack against a hex in Britain permanently reduces the British resistance level by three; the second such attack permanently reduces the British resistance level by an additional two; each additional attack permanently reduces the British resistance level by an additional one.
 - The first successful German strategic atomic attack against a hex in Britain or against the Atlantic U.S. box permanently reduces future U.S. election results by three; the second such attack permanently reduces future U.S. election results by an additional two; each additional attack permanently reduces future U.S. election results by an additional one.
- If the Western Allies do not have the atomic bomb:
 - In addition to the above effects, the first successful strategic atomic attack against a hex in Britain or against the Atlantic U.S. box causes the Western Allies to suspend hostilities against the European Axis at the start of the next Allied player turn should the European Axis player wish to do so (the European Axis player has the option of declining the Western Allied offer and continuing to fight). If hostilities are suspended neither side may engage in offensive operations against the other until the Western Allies resume hostilities. The Western Allies may resume hostilities at the start of any Western Allied player turn in which the Western Allies are guaranteed to obtain an atomic bomb which is sure to detonate. The suspension of hostilities between the European Axis and the Western Allies does not affect any hostilities between the European Axis and Russia or Japan and the Allies.

43.322 NOTIONAL HEX CONTROL: A hex containing an atomic attack marker is considered to be controlled by the attacker for the purposes of resistance level determination, DP calculations and surrender, but not for other purposes.

43.33 DIPLOMATIC EFFECTS:

43.331 ONE ADDITIONAL DP RECEIVED: For each successful atomic attack against an enemy target, the United States, Germany and Russia, as the case may be, receives one additional DP in all future YSS.

43.332 USAT EFFECTS: Each German atomic attack in Europe causes a deterioration in Germany's relations with the United States, as set out in the USAT Table.

43.34 ECONOMIC EFFECTS:

43.341 If a key economic area or IC is subject to successful strategic atomic attack, the owner immediately loses the value of the key economic area or IC; or 25 BRPs, whichever is less.

43.342 Each successful German strategic atomic attack against the Atlantic U.S. box or the Urals box causes the U.S. or Russia, respectively, to lose 25 BRPs.

43.343 For every three BRPs (round down) lost to a strategic atomic attack on a key economic area, IC or mapboard box, the construction limit of the defending major power is reduced by one in its next player turn.

43.35 OIL:

43.351 OIL CENTERS: An oil center which is subject to a successful strategic atomic attack incurs the maximum possible damage. Brunei and Palembang may not be subject to strategic atomic attack.

43.352 SYNTHETIC OIL PLANTS: A successful strategic atomic attack against a hex containing synthetic oil plants eliminates all the synthetic oil plants in that hex. Another synthetic oil plant may be built in the same hex for the normal expenditure of RPs.

43.36 ATOMIC ATTACK MARKERS PERMANENT: Atomic attack markers may not be removed.



43.4 TACTICAL ATOMIC ATTACKS:

43.41 NO RESTRICTION: Tactical atomic attacks may be made against any hex.

43.42 MILITARY ATTACKS:

43.421 OFFENSIVE: An atomic attack may be made by the moving player against enemy ground unit(s) during the regular combat phase immediately before making the first combat die roll to resolve an offensive ground attack of 1:1 odds or greater against those units. The defending units must be adjacent to a fully supplied attacking ground unit or in a hex which is the target of a seaborne invasion. Atomic attacks may not be made during overruns, by airborne units which have airdropped, or during exploitation.

43.422 DEFENSIVE: An atomic attack may be made by the defender immediately before the attacker makes the first combat die roll to resolve an offensive ground attack against fully supplied defending ground unit(s), after the attacker has announced any offensive tactical atomic attacks (43.421). The combat round is then completed, with an automatic "a" combat result (43.424B). Defensive atomic attacks are permitted in any round of ground combat and against airdrops and exploitation attacks, but not against overruns.

43.423 NO INTERCEPTION PERMITTED: Atomic attacks against adjacent ground units may not be intercepted.

43.424 EFFECTS: Tactical atomic attacks against enemy ground units have the following effects in the ground combat round for which they are made:

A. OFFENSIVE: The defender automatically incurs a "d" combat result in that combat round without the need for a combat die roll.

B. DEFENSIVE: The attacker automatically incurs an "a" combat result in that combat round without the need for a combat die roll and the CTL of all surviving attacking units is reduced by one until the ground combat is resolved. The combat round in which the defender used the atomic bomb counts against the limit on the number of attacks which may be made by the attacker (41.925B).

EXAMPLES: The Western Allies attack two German 3-3 infantry units in a fortified hex at odds of 24:18. The Western Allied player uses an atomic bomb to assist in the attack. The result in the first round of ground combat is a “d”, which means the Germans lose a 3-3 infantry unit in the first round of ground combat without the need for a combat die roll. If the Western Allies had a CTL of two or more, they could make a second attack at odds of 24:9, with a +1 modifier to their combat die roll.

If the German player used an atomic bomb in defense, the Western Allies would incur an “a” result in the first round of ground combat without the need for a combat die roll. The Western Allies would lose nine factors, and their CTL would be reduced by one. Unless the Western Allies had a CTL of three or more, they couldn’t continue the attack (41.925B). If they were able to continue the attack, the odds would be 15:18, with a +1 modifier to the combat die roll.

If both players used an atomic bomb in the first round of ground combat, the second round of ground combat would be 15:9, with a +1 modifier

Finally, if the Western Allies used two atomic bombs in the first round, they would win the combat unless the Germans used so many atomic bombs that they eliminated all the attacking units, because both German units would be eliminated (two “d” results), and any surviving Western Allied ground units could occupy the hex no matter what their CTL might be.

C. CUMULATIVE EFFECTS: If a player uses more than one atomic bomb in a single round of ground combat, the effects are cumulative. For example, if the attacker made two tactical atomic attacks in conjunction with a ground attack, the defender would incur two “d” combat results in that combat round.

D. MUTUAL ATOMIC ATTACKS: If both sides use atomic bombs in the same ground combat, each side suffers the effects set out in 43.424A and B. Thus both the attacker and defender could incur “a” and “d” results, respectively.

43.43 ADVANCED SUBMARINE ATTACKS:

43.431 TACTICAL ATOMIC ATTACKS: Tactical atomic attacks against naval bases and shipyards may be made by advanced submarine during the combat phase as set out below.

43.432 ADVANCED SUBMARINE BASING: Advanced submarines which attempt to make a tactical atomic attack must, at the start of their combat phase, be based in an operational port within 20 (Europe) hexes of the enemy base.

43.433 ADVANCED SUBMARINES IN AN SW BOX: Advanced submarines operating in an SW box may not attempt tactical atomic attacks.

43.434 AUTOMATIC SUCCESS: Tactical atomic attacks by advanced submarines automatically succeed.

43.435 RESOLVING ATOMIC ATTACKS BY ADVANCED SUBMARINE: A tactical atomic attack by advanced submarine permits the attacker to roll two dice using the “20” row for air squadrons on the Naval Attack Table (23.44) against ships in port, or the “20” row of the SW Combat Table (24.62) against ships under construction in a shipyard (26.76). A critical hit die roll is made for named ships damaged or sunk by an atomic attack (20.5241D).

43.436 ADVANCED SUBMARINE ATTACKS AGAINST MAPBOARD BOXES PROHIBITED: German advanced submarines may not make tactical atomic attacks against Allied naval units in mapboard boxes. For German strategic atomic attacks against the U.S. Atlantic box, see 43.2.

43.44 STRATEGIC BOMBER AND ROCKET ATTACKS:

43.441 RESOLVED AS ATOMIC ATTACKS AGAINST CITIES: Strategic bombers and rockets may make tactical atomic attacks against air and naval units in enemy bases or against naval units under construction in enemy shipyards. Atomic attacks against more than one of these three types of targets, or a strategic atomic attack against the same hex, require more than one atomic bomb. The delivery of atomic bombs against such targets is handled in the same manner as strategic atomic attacks (43.2).

43.442 EFFECTS AGAINST AIR AND NAVAL UNITS: For each successful atomic attack against enemy air or naval units, the attacker makes one unmodified dice roll using the “20” row for air squadrons on the Naval Attack Table (23.44) and applies the result as desired against any enemy air or naval units in the target hex. A critical hit die roll is made for named ships damaged or sunk by an atomic attack (20.5241D).

43.443 EFFECTS AGAINST SHIPYARDS: For each successful atomic attack against an enemy shipyard, the attacker makes one unmodified dice roll using the “20” row of the Strategic Warfare Combat Table and applies the result as desired against any enemy naval units in the shipyard (26.76).

43.5 MULTI-TARGET ATOMIC ATTACKS:

43.51 TARGET ANNOUNCED IN ADVANCE: If an atomic attack is directed against a hex containing more than one type of target, the attacker must announce his target in advance.

Hexes may be rich in atomic targets. For example, a German objective hex may also contain a synthetic oil plant, as well as air units. When an atomic attack is made against such a hex, the attacker must announce whether he is attacking the hex strategically or is attacking the air units in a tactical atomic attack. In this example, the synthetic oil plant would be destroyed by a successful strategic atomic attack against the objective hex, but would be unaffected by a successful tactical atomic attack against the German air units based in the hex.



44. INTELLIGENCE

44.1 THE INTELLIGENCE CATEGORY

44.2 INTELLIGENCE RESEARCH PROJECTS

44.3 INTELLIGENCE PRODUCTION PROJECTS

44.1 THE INTELLIGENCE CATEGORY:

44.11 The intelligence category of research and production projects includes many of the traditional spying and signals intelligence projects, as well as projects of a more political nature.

44.2 INTELLIGENCE RESEARCH PROJECTS:

44.21 COUNTER-INTELLIGENCE: The rules relating to counter-intelligence are set out in rule 45.

44.22 ESPIONAGE: The rules relating to espionage are set out in rule 46.

44.23 COVERT OPERATIONS: The rules relating to covert operations are set out in rule 47.

44.24 COMMUNIST SUBVERSION:

A. ELIGIBLE TARGETS: Each successful subversion research result allows Russia to apply a special modifier to one Axis or Russian diplomatic die roll for Hungary, Rumania, Bulgaria, Yugoslavia (or Croatia or Serbia, following a *Gathering Storm* partition of Yugoslavia), Albania (if unconquered by Italy in *Gathering Storm*) or Greece. Subversion may not be used to modify Western Allied diplomatic die rolls.

B. REPEATED SUBVERSION ALLOWED: Russia may subvert an eligible target more than once and may subvert more than one target in the course of the game, provided it achieves more than one subversion research result.

C. ADVERSE MODIFIER GENERATED: Subversion generates an adverse modifier for Hungary, Rumania, Bulgaria, Yugoslavia and Greece. Repeated subversion attempts generate cumulative adverse modifiers.

D. REACTION DIE ROLLS: The use of subversion to modify a diplomatic die roll permits a reaction die roll for the other potential subversion targets (49.634).

E. SUBVERSION RESULTS: A “3” subversion research result generates a -1 diplomatic modifier; a “4” subversion research result generates a -2 diplomatic modifier; and so on, up to a maximum subversion research result of “7+”, which generates a -5 diplomatic modifier.

44.241 WHEN RESULT REVEALED: Russia reveals a successful subversion research result when it applies the subversion modifier to a diplomatic die roll. This is done after the target has been announced and before the diplomatic die roll is made. The Axis may not decline to make a diplomatic die roll for an announced target in order to avoid a subversion modifier.

44.25 ANGLO-FRENCH COOPERATION:

A. A successful Anglo-French cooperation research project improves relations between Britain and France (53.2) and may affect the French Surrender level (58.21F).

44.251 WHEN RESULTS REVEALED: Any successful Anglo-French Cooperation result is revealed at the start of the Allied player turn following the research phase in which the result is achieved.

44.3 INTELLIGENCE PRODUCTION PROJECTS:

44.31 CODEBREAKING: The rules relating to codebreaking are set out in rule 48.

44.32 RUSSIAN OCCUPATION POLICIES:

A. **VLASOV CONSTRUCTION:** Each Russian occupation policies result permits Germany to build one Vlasov infantry factor each turn once Germany and Russia are at war, up to a maximum construction rate of three Vlasov factors per turn.

- Germany constructs Vlasov infantry factors (using 1-3, 2-3 or 3-3 counters) at the normal BRP cost.
- Vlasov units may be constructed in any fully supplied city in Russia or pre-war Poland controlled by the Axis at the start of their player turn, may only operate in those countries, and may not be rebuilt if eliminated.
- Germany may defer the construction of Vlasov infantry units in order to build a higher denomination Vlasov infantry unit in a subsequent turn. No more than two unbuilt Vlasov factors may be accumulated for future turns in this manner.
- Vlasov units are considered to be in their home country even when in Poland (15.33B).

B. **PARTISANS:** For each Russian occupation policies result the number of partisans allowed in Russia and eastern Poland is reduced by one, to a maximum reduction of three partisans. No Russian partisans are eliminated if Germany achieves one of these results once Russian partisans are on the board, but the result might prevent the rebuilding of one or more partisans once they are eliminated.

C. UKRAINE:

- For each Russian occupation policies result Germany receives a +1 modifier for the Ukraine diplomatic die roll, to a maximum modifier of +3.
- The research point cost of Russian occupation policies is reduced by one if the Ukraine has activated as a German minor ally (a "10" diplomatic result for the Ukraine).

44.321 WHEN RESULTS REVEALED: Russian occupation policies results are revealed during the Axis diplomatic phase if the Ukraine is selected for a diplomatic die roll or during the Axis unit construction phase in which Vlasov units are first constructed.

44.33 CHINESE OCCUPATION POLICIES:

A. **WANG CONSTRUCTION:** A Chinese occupation policies result (42.26E) permits Japan to build one Wang infantry factor each turn, up to a limit of one 1-2 and one 2-2 infantry unit for each of Peking, Nanking, Shanghai, Canton and Chungking controlled by Japan.

- Japan constructs Wang infantry factors (using 1-2 or 2-2 counters) at the normal BRP cost.
- Wang infantry may be constructed in any fully supplied city in China or Manchuria controlled by the Japanese at the start of their player turn and may only operate in those countries.
- Japan may defer the construction of a 1-2 Wang infantry unit in order to build a 2-2 Wang infantry unit in a subsequent turn. No more than one unbuilt Wang factor may be accumulated for future turns in this manner.

44.331 WHEN RESULTS REVEALED: The Chinese occupation policies result is revealed during the Japanese unit construction phase in which Wang units are first constructed.

44.34 INDIAN SUBVERSION:

A. **INDIAN NATIONAL ARMY AND PARTISAN CONSTRUCTION:** An Indian subversion result (42.26F) permits Japan to build one Indian National Army infantry factor and one Indian partisan each turn up to a

limit of one 1-2 and one 2-2 infantry unit for each of Calcutta, Colombo, Dacca and Rangoon controlled by Japan, plus two Indian partisans regardless of the number of objectives controlled (72.92B, 72.93B).

- For details of the Indian National Army, see 72.9.
- Japan may construct up to two Indian partisans in India, whether or not Japan and Britain are at war (11.353B). Indian partisans may not be constructed in the India box.

44.341 WHEN RESULTS REVEALED: The Indian subversion result is revealed during the Japanese unit construction phase in which Indian National Army units or Indian partisans are first constructed.

44.35 MOSLEM UNREST:

A. **INCREASED PARTISAN FORCE POOLS:** Each Moslem Unrest result allows the Axis to increase their Middle Eastern partisan force pool by one (11.341A).

- At the start of the game, Axis construction of Middle Eastern partisans is prohibited. Each Moslem Unrest result increases the number of Axis Middle Eastern partisans which may be built by expanding the force pools for one or more of the three Middle Eastern areas in which Axis partisans may be built (Egypt; Iraq, Kuwait, Palestine, Transjordan, Lebanon/Syria and Arabia; Persia). Once the force pool for an area is increased by a Moslem Unrest production result, the effect is permanent: the force pool cannot be reduced by Allied action and the Axis may not later switch the increase to another area.
- The Axis may build one Axis partisan in each of the three Middle Eastern areas each turn, provided there are partisans in the force pool for that area. Germany pays the construction cost for Middle Eastern partisans. Axis Middle Eastern partisans may not leave the areas in which they are built.
- The maximum size of the partisan force pool for each of the three Middle Eastern areas in which Axis partisans may be built is two per area.
- Axis partisans may be built in Persia only if the Allies have declared war on Persia or activated the Persian BRP route. Axis partisans may only be built and operate in Lebanon/Syria if it is Allied-controlled. Axis partisans may only be built and operate in Arabia if it has been attacked by the Allies.

44.351 WHEN RESULT REVEALED: A successful Moslem Unrest result is announced during the Axis unit construction phase in which the resulting Axis Middle Eastern partisan is first constructed.

44.36 WESTERN ALLIED PARTISANS:

A. **INCREASED PARTISAN FORCE POOLS:** Each Western Allied partisan result allows the Western Allies to add one partisan to their force pool.

- Additional Western Allied partisans may be built in any eligible location and, if eliminated, may be rebuilt in the same or a different location.
- The number of Western Allied partisans in each eligible location may not exceed the maximum limit set out in the Major Power Partisan and Minor Country Forces Tables.

44.361 WHEN RESULT REVEALED: A successful Western Allied partisan result is announced during the Western Allied unit construction phase in which the resulting Western Allied partisan is first constructed.

44.37 RUSSIAN PARTISANS:

A. **INCREASED PARTISAN FORCE POOLS:** Each Russian partisan result allows Russia to add one partisan to its force pool.

- Additional Russian partisans may be built in any eligible location and, if eliminated, may be rebuilt in the same or a different location.
- The number of Russian partisans in each eligible location may not exceed the maximum limit set out in the Major Power Partisan and Minor Country Forces Tables.

44.371 WHEN RESULT REVEALED: A successful Russian partisan research result is announced during the Russian unit construction phase in which the resulting Russian partisan is first constructed.

45. COUNTER-INTELLIGENCE

- 45.1 ELIGIBLE COUNTRIES
- 45.2 EFFECTS
- 45.3 TIMING
- 45.4 ACCUMULATION OF RESULTS PROHIBITED
- 45.5 RESTRICTIONS

45.1 ELIGIBLE COUNTRIES:

45.11 COUNTER-INTELLIGENCE: Counter-intelligence is an intelligence project which may be researched by Germany, Britain, Russia and Japan.

45.2 EFFECTS:

45.21 EFFECTS: A counter-intelligence result may be used:

- A. To eliminate an enemy major power or minor country spy ring (subject to 45.51A, B).
- B. To negate an enemy covert operation (subject to 45.52).
- C. To reduce the effect of an enemy harbor attack.

45.3 TIMING:

45.31 TIMING: A counter-intelligence result may be used at any of the following times:

A. At the end of any research phase, after both sides have announced the placement of any new spy rings and the initial effects of those spy rings (number of DPs in a minor country target, elimination of an enemy spy ring, code names of projects in a major power research category) have been resolved. A counter-intelligence result may be held and used to eliminate an enemy spy ring at the end of a subsequent research phase.

EXAMPLE: If Germany placed a spy ring in British naval research in Spring 1941, Britain reveals the code names of all its current naval projects, whether or not Britain uses counter-intelligence to eliminate the spy ring.

If Britain placed a spy ring in German naval research in Spring 1941, after Germany had completed its research phase, Germany would reveal the code names of its naval projects, even if it used a counter-intelligence result to eliminate the British spy ring in Spring 1941.

In both cases the counter-intelligence result used could have been achieved in the Spring 1941 or any earlier research phase.

- B. During either player's diplomatic phase, or when resolving a French or Italian surrender, immediately after the attempted play of a covert operation.
- C. During the opposing player turn, immediately before resolving an enemy harbor attack.

45.4 ACCUMULATION OF RESULTS PROHIBITED:

45.41 ONE RESULT MAY BE HELD IN RESERVE: A counter-intelligence result need not be used when it is first attained, but a major power may not make another research die roll for counter-intelligence until the counter-intelligence result being held has been used. A research roll for counter-intelligence is not allowed if the major power concerned holds a counter-intelligence result at the start of its research phase. RPs may be allocated to counter-intelligence in a YSS even if a counter-intelligence result is being held.

45.5 RESTRICTIONS:

45.51 SPY RINGS:

A. MAJOR POWER SPY RINGS: A current or future alliance partner may use counter-intelligence to eliminate a spy ring which has been placed in a major power in a different alliance faction. Thus Russia may use counter-intelligence to eliminate Axis or Japanese major power spy rings placed in the Western Allies, and Japan may use counter-intelligence to eliminate major power spy rings placed in the Axis.

B. MINOR POWER SPY RINGS: Japanese counter-intelligence may not be used to eliminate minor country spy rings.

45.52 COVERT OPERATIONS:

A. Russian counter-intelligence may only be used to counter German covert operations in minor countries in which Russia may place DPs. This restriction is lifted once Russia and Germany have gone to war or the RGT level is 50 or more (47.51).

B. Japanese counter-intelligence may not be used against covert operations.

45.53 HARBOR ATTACKS: Counter-intelligence results may not be used to oppose harbor attacks against another alliance faction.



46. ESPIONAGE

- 46.1 ELIGIBLE COUNTRIES
- 46.2 ESTABLISHMENT OF SPY RINGS
- 46.3 RESTRICTIONS
- 46.4 EFFECTS
- 46.5 ELIMINATION

46.1 ELIGIBLE COUNTRIES:

46.11 ESPIONAGE: Espionage is an intelligence project which may be researched by Germany, Japan, Britain and Russia.

46.2 ESTABLISHMENT OF SPY RINGS:

46.21 PLACEMENT OF SPY RINGS: A successful espionage research result of "6+" permits the immediate establishment of a friendly spy ring in either a minor country or a potential or actual enemy major power (EXCEPTION: Japan may only operate major power spy rings). The decision as to which type of spy ring to place and its location may not be deferred. The location of a spy ring is indicated by placing an espionage counter of the appropriate nationality in the target country.

46.22 TIMING: Spy rings are announced and placed immediately after all research rolls for that turn are completed, in the following sequence:

- A. The Axis place their spy rings.
- B. The Allies may use counter-intelligence results to eliminate Axis spy rings.
- C. The Allies place their spy rings.
- D. The Axis may use counter-intelligence results to eliminate Allied spy rings.

46.23 LOCATIONS FIXED ONCE PLACED: Once established, spy rings continue to operate until eliminated, but may not be shifted from one country or research category to another.

46.3 RESTRICTIONS:

46.31 RESTRICTIONS:

A. MINOR COUNTRY SPY RINGS: Each alliance faction may operate no more than one spy ring in each target minor country. Spy rings may be placed in the Ukraine prior to its activation.

B. MAJOR POWER SPY RINGS: The number of spy rings a major power may operate in an enemy alliance faction is limited only by the number of enemy research categories. A player may not establish spy rings in a current or potential major power ally. A major power may not assign more than one spy ring to each enemy research category at any given time.

Each alliance faction may place only one major power spy ring in each research category in an enemy alliance faction. Thus the Western Allies and Russia may each place a spy ring in Axis military research, for a maximum of two spy rings in Axis military research. This would not prevent either the Western Allies or Russia from also placing a spy ring in Japanese military



research. No spy rings may be placed in Russian naval research, as there are no Russian naval secrets to steal.

46.32 JAPANESE AND RUSSIAN MINOR COUNTRY SPY RINGS:

A. JAPAN: Japan may not operate minor country spy rings.

B. RUSSIA: Russia may only operate spy rings in minor countries in which Russia may place DPs. This restriction is lifted once Russia and Germany have gone to war or the RGT level is 50 or more. For the effects of Russo-Allied cooperation restrictions, see 46.411C.

46.4 EFFECTS:

46.41 EFFECT OF SPY RINGS: Spy rings have the following effects:

46.411 MINOR COUNTRIES:

A. INITIAL PLACEMENT: When a spy ring is first placed in a minor country, even if it is immediately negated by enemy counter-intelligence, all enemy DP allocations to that minor country are revealed. During each YSS in which minor country spy rings are operating, each side must reveal its DP allocations to minor countries containing enemy spy rings before any other DP allocations are made.

B. DIPLOMATIC MODIFIER: Any diplomatic die rolls for that minor country, including die rolls modified by Russian subversion, are modified by one in favor of the major power operating the spy ring.

C. WESTERN ALLIED AND RUSSIAN COOPERATION: British minor country spy rings never modify Russian diplomatic die rolls and Russian minor country spy rings never modify Western Allied diplomatic die rolls. Before Russia and Germany have gone to war or the RGT level is 50 or more, British and Russian minor country spy rings do not combine to modify Axis diplomatic die rolls. If both countries had spy rings in the same minor country, an Axis diplomatic die roll for that minor country would only be reduced by one. Once Russia and Germany go to war or the RGT level is 50 or more, British and Russian minor country spy rings are combined to modify Axis diplomatic die rolls.

46.412 MAJOR POWERS: When a spy ring is established in an enemy major power, the player establishing the spy ring assigns it to one of the enemy major power's research categories, with the following effects, even if the spy ring is immediately negated by enemy counter-intelligence:

A. The opponent must reveal the code names of all research projects, including general research, in the selected category to which RPs have been or are currently assigned. The actual names of the research projects, number of RPs assigned to each research project, current results and the assignment of RPs to production are not revealed.

B. While the spy ring continues to operate, the player establishing the spy ring receives a +1 modifier for his own die rolls for general research in the selected category and inflicts a -1 modifier on the opponent's die rolls for general research in the selected category. Since all research rolls are made before any spy rings are placed or removed, these modifiers do not take effect in the target category until the turn after the spy ring is placed, and the elimination of the spy ring by a counter-intelligence result achieved in the defender's research phase does not remove the adverse modifier in the target category until the following turn.

46.42 CONTINUING EFFECTS: The effects of spy rings continue until they are eliminated. Thus a spy ring placed in a minor country requires the opponent to reveal his DP allocation to that minor country in each subsequent YSS, and a spy ring placed in a major power requires the opponent to reveal the existence of new research projects in each subsequent YSS. Similarly, die roll modifiers continue indefinitely until the spy ring concerned is eliminated.

46.5 ELIMINATION:

46.51 ELIMINATION OF ENEMY SPY RINGS: Spy rings may be eliminated in three ways:

A. COUNTER-INTELLIGENCE: For spy rings operating in either a major power or a minor country, by the application of an enemy "5+" counter-intelligence result, either when the spy ring is first placed or at the end of the research phase, whether or not he achieved the counter-intelligence result in that research phase (46.22).

B. OPPOSING MINOR COUNTRY SPY RINGS: For spy rings operating in a minor country, by the placement of a spy ring in the same minor country by an enemy major power. DPs placed by the opponent are revealed, then both spy rings are eliminated.

C. ENEMY CONTROL OF A TARGET MINOR COUNTRY: For spy rings operating in a minor country, if that minor country comes under

control of an enemy major power, whether by diplomatic or military means. If the minor country was already under enemy control when the spy ring was placed, this method of eliminating minor country spy rings may not be used.

46.52 MARKER REMOVED: When a spy ring is eliminated, the counter indicating its existence is removed.

46.53 WHEN SPY RINGS NOT ELIMINATED: Spy rings are not eliminated when:

A. MAJOR POWER SURRENDER: Their creating major power surrenders; or

B. MINOR COUNTRY CONTROL: A minor country comes under the control of either the creating major power or one of its allies.

47. COVERT OPERATIONS

- 47.1 ELIGIBLE COUNTRIES
- 47.2 RESTRICTIONS AND EFFECTS
- 47.3 TIMING
- 47.4 COUNTER-INTELLIGENCE
- 47.5 RUSSO-ALLIED COOPERATION
- 47.6 ACCUMULATION PROHIBITED

47.1 ELIGIBLE COUNTRIES:

47.11 COVERT OPERATIONS: Covert operations are an intelligence project which may be researched by Germany, Britain and Russia.

47.2 RESTRICTIONS AND EFFECTS:

47.21 EMPLOYMENT: Covert operations allow a major power to trigger a favorable +/-1 modifier or change in:

A. A diplomatic target, regardless of which side selected the target;

B. The USAT level;

C. The French and Italian surrender levels.

47.22 USE INDEPENDENT OF DPs:

A. Covert operations may be used to modify a diplomatic die roll whether or not DPs were placed in the target.

B. Covert operations may be used to affect USAT whether or not DPs were activated for USAT in the turn in question.

C. Covert operations may be used to modify the French and Italian surrender levels whether or not DPs were placed in France or Italy.

47.23 DPs NOT ELIMINATED: Covert operations only apply once. They do not eliminate enemy DPs and therefore do not affect subsequent diplomatic die rolls in the year in which they are used.

47.24 DIPLOMATIC DIE ROLLS MUST PROCEED: Once announced, a diplomatic die roll must be made, regardless of the application of enemy covert operations. Covert operations may not prevent a diplomatic die roll, even if the modifiers generated by covert operations offset the modifiers from the enemy DPs in the target.

47.3 TIMING:

47.31 TIMING: Covert operations are announced immediately before diplomatic die rolls are made, with the moving player announcing first, after:

A. Diplomatic targets are announced and DPs in those targets are revealed;

B. A DP in USAT is activated; and

C. Russia announces any subversion result it is applying in that diplomatic phase.

47.4 COUNTER-INTELLIGENCE:

47.41 An enemy covert operation may be negated by the immediate use of counter-intelligence. Both the covert operation and the counter-intelligence research results are consumed and the covert operation has no effect.

47.5 RUSSO-ALLIED COOPERATION:

47.51 COOPERATION RESTRICTIONS: Before Russia and Germany have gone to war or the RGT level is 50 or more, the following restrictions apply. These restrictions are lifted once Russia and Germany go to war or the RGT level is 50 or more.

- A. Britain and Russia may not both use a covert operation in the same target in the same diplomatic phase.
- B. Russian counter-intelligence may only be used to counter German covert operations in minor countries in which Russia may place DPs.
- C. Russian covert operations may only be used in minor countries in which Russia may place DPs.
- D. Russian covert operations may not be used to increase USAT.

47.6 ACCUMULATION PROHIBITED:

47.61 ACCUMULATION OF COVERT OPERATION RESULTS PROHIBITED: A major power's covert operations capability may not exceed one. However, a major power could place RPs in covert operations during the YSS, in anticipation of employing its covert operations capability early in the year, then rolling for covert operations later in that or a subsequent year.



48. CODEBREAKING

- 48.1 OVERVIEW
- 48.2 MECHANICS
- 48.3 TIMING
- 48.4 SUBMARINE WARFARE AND ASW EFFECTS
- 48.5 TACTICAL EFFECTS
- 48.6 STRATEGIC EFFECTS
- 48.7 PEARL HARBOR
- 48.8 CARDS MAY ONLY BE USED ONCE

48.1 OVERVIEW:

48.11 INTELLIGENCE PRODUCTION PROJECT: Codebreaking is an intelligence production project. Each codebreaking result costs three RPs, reduced to two RPs after one breakthrough in general intelligence research, and reduced to one RP after two or more breakthroughs in general intelligence research. No more than one codebreaking result may be obtained for each theater each year. Codebreaking production results are announced at the end of the research phase, immediately before Ultra and Magic cards are drawn.

48.12 TERMINOLOGY:

- A. “Ultra” is used to describe codebreaking in the European theater.
- B. “Magic” is used to describe codebreaking in the Pacific theater.

48.13 ULTRA: The European Axis and the Western Allies may both place research points in Ultra. Ultra results only affect naval operations in the European theater involving the European Axis and the Western Allies, including Italian and German naval activities in the Indian Ocean. Ultra does not affect Russian naval operations.

48.14 MAGIC: Japan and the Western Allies may both place research points in Magic. Magic results only affect naval operations in the Pacific theater involving Japan and the Western Allies, including Japanese naval activities in the Indian Ocean. Magic does not affect Russian naval operations.

48.15 WESTERN ALLIES: Ultra and Magic are separate projects for the Western Allies. RPs are allocated to them separately, and those RPs must be triggered in different turns. For clarity, throughout the rules Britain is referred to in relation to Ultra and the U.S. is referred to in relation to Magic.

48.2 MECHANICS

48.21 OVERVIEW: The European Axis, Japanese, British and American codebreaking ability in each theater is determined at the start of every game turn as follows:

- A. The European Axis and Britain each have a distinct pool of Ultra cards, and Japan and the U.S. each have a distinct pool of Magic cards.
- B. Each turn, at the end of the research phase, the German and British players draw four Ultra cards from their respective Ultra pools. Immediately after either Japan or the U.S. declares war on the other, and at the end of the research phase of each subsequent turn, the Japanese and American players draw four Magic cards from their respective Magic pools.
- C. At the start of the game, the four Ultra and Magic card pools consist of eight Ultra or Magic cards each. Beginning in 1940, additional cards may be added to these pools by Ultra and Magic production.
- D. Each type of Ultra or Magic card may be played by the owning player at specific times during either his or the opponent's player turn.
- E. The effect of an Ultra or Magic card may be negated by the immediate play of a corresponding card by the opponent (submarine warfare cards are negated by ASW cards, and vice versa).
- F. At the end of each game turn, all Ultra and Magic cards are returned to their pools and the process is repeated in the following turn.



48.22 TYPES OF CARDS: There are six types of Ultra and Magic cards: submarine warfare, ASW, tactical, strategic, wild card and blank.

- A. **SUBMARINE WARFARE:** Increases the effectiveness of submarine warfare in an SW box or of on-board submarine attacks (Ultra: European Axis only; Magic: Japan, U.S.).
- B. **ASW:** Decreases the effectiveness of submarine warfare in an SW box or of on-board submarine attacks (Ultra: Britain only; Magic: Japan, U.S.).
- C. **TACTICAL:** Affects search chances for one naval combat round; increases Naval Nationality DRM for fleet combat in one naval combat round or for one on-board submarine attack; or modifies one harbor attack.
- D. **STRATEGIC:** Permits one additional die to be rolled for naval interceptions; increases or decreases raider die rolls (21.5341, 21.538) by one; permits automatic interception of Japanese offensive naval missions on the Pacific front (American Magic only); or affects the USJT level used to determine surprise at Pearl Harbor (American and Japanese Magic only - 48.71).
- E. **WILD CARD (American Magic only):** The American Magic wild card may be used as any other Magic card.
- F. **BLANK:** Blank Ultra and Magic cards have no effect when drawn.

48.23 INITIAL COMPOSITION OF CARD POOLS: At the start of the game, the composition of the card pools for each alliance faction are as follows:

Initial Codebreaking Cards - 48.23						
	Sub.	ASW	Tactical	Strategic	Wild	Blank
E. Axis (U)	1	Proh.	1	1	Proh.	5
Britain (U)	Proh.	1	1	1	Proh.	5
Japan (M)	1	0	1	0	Proh.	6
U.S. (M)	1	1	1	1	1	3

The European Axis are prohibited from having ASW and wild cards.
 Britain is prohibited from having submarine and wild cards.
 Japan is prohibited from having wild cards.

48.24 ADDING CODEBREAKING CARDS:

48.241 CARDS ADDED BY PRODUCTION: Each Ultra or Magic production result allows a player to add one Ultra or Magic card of any permitted type to his card pool. The player does not announce the type of card he adds to his card pool.

48.242 RESTRICTIONS: The addition of Ultra and Magic cards is subject to the following restrictions:

- A. The European Axis may not select an Ultra ASW card.
- B. Britain may not select an Ultra submarine warfare card.
- C. No one may select a wild card.
- D. A card pool may never contain more than three codebreaking cards of any one type.
- E. A player may not discard Ultra or Magic cards from his card pool; the addition of codebreaking cards by production increases the size of that player's card pool.

48.3 TIMING:

48.31 Ultra and Magic cards are played immediately before the resolution of the action which they affect:

A. SUBMARINE WARFARE: Submarine warfare cards are played:

- to increase the effectiveness of SW, immediately before the resolution of submarine warfare;
- to increase the effectiveness of on-board submarine attacks, immediately before the resolution of an on-board submarine attack.

B. ASW: ASW cards are played:

- to decrease the effectiveness of SW, immediately before the resolution of submarine warfare;
- to decrease the effectiveness of on-board submarine attacks, immediately before the resolution of an on-board submarine attack.

C. TACTICAL: Tactical cards are played:

- for search effects, immediately before search rolls are made;
- for Naval Nationality DRM increases:
 - immediately before the resolution of fleet combat; or
 - immediately before the resolution of an on-board submarine attack, after any submarine warfare and ASW cards have been played;
- to increase or decrease the effectiveness of a harbor attack, immediately before the resolution of a harbor attack.

D. STRATEGIC: Strategic cards are played:

- to improve the chances of naval interception, immediately before a naval interception attempt;
- to modify the chances of raiders being engaged, immediately before a raider die roll (21.5341, 21.538);
- to trigger Magic interceptions by the U.S., during the Japanese combat phase, immediately after Japan has announced its air and naval missions in the combat phase.

48.32 ORDER OF PLAYING CODEBREAKING CARDS: Codebreaking cards are played as follows:

A. SUBMARINE AND ASW CARDS:

- The player conducting submarine warfare or making an on-board submarine attack plays a submarine warfare card;
- The opposing player then has the option of countering the submarine warfare card with an ASW card;
- If he does, then the first player may play a second submarine warfare card, which then might be countered by a second ASW card, and so on;
- If this sequence ends with no modifier for the first player, or if the first player does not play a submarine warfare card, the opposing player may then attempt to gain an advantage by playing an ASW card. The first player then has the option of countering the ASW card with a submarine warfare card, the opposing player may then play a second ASW card, and so on.

B. TACTICAL CARDS:

- The intercepting or counter-intercepting player (search and fleet combat) or the attacker (on-board submarine attacks and harbor attacks) plays a tactical card;
- The opposing player then has the option of countering by playing a tactical card;
- If he does, the first player may play a second tactical card, which then might be countered by a second tactical card, and so on;
- If this sequence ends with no modifier for the first player, or if the first player does not play a tactical card, the opposing player may then attempt to gain an advantage by playing a tactical card. The first player then has the option of countering by playing a tactical card, the opposing player may then play a second tactical card, and so on.

C. STRATEGIC CARDS:

- The intercepting or counter-intercepting or raiding player plays a strategic card;
- The opposing player then has the option of countering by playing a strategic card;
- If he does, the first player may play a second strategic card, which then might be countered by a second strategic card, and so on;
- If this sequence ends with no modifier for the first player,
 - for interceptions and counter-interceptions, the sequence ends;
 - for raiding, the opposing player may then attempt to gain an advantage by playing a strategic card. The first player then has the option of countering by playing a strategic card, the opposing player may then play a second strategic card, and so on;
- For Magic interceptions, the U.S. player may play more than one strategic card to try to intercept with more than one TF. The U.S. player plays all his Magic interception strategic cards before the Japanese player counters with his own strategic cards. Each Japanese strategic card played in response negates one American strategic card. Once the Magic interception level is determined, the U.S. player decides which Japanese naval missions to intercept (48.61C).

48.4 SUBMARINE WARFARE AND ASW EFFECTS:

48.41 EFFECTS: Each submarine warfare or ASW card may generate one of the following effects:

A. SUBMARINE WARFARE: The play of a submarine warfare card, unless offset by the play of an opposing ASW card, generates a +1 modifier for submarine warfare in the affected SW boxes for that turn. Similarly, the play of an ASW card, unless offset by the play of an opposing submarine warfare card, generates a -1 modifier for submarine warfare in the affected SW boxes for that turn. The numbers of submarine warfare and ASW cards played are compared for each of the possible submarine warfare campaigns:

- **ATLANTIC AND INDIAN OCEAN (German submarines):** European Axis Ultra submarine warfare cards vs. British Ultra ASW cards.
- **PACIFIC AND INDIAN OCEAN (Japanese submarines):** Japanese Magic submarine warfare cards vs. American Magic ASW cards.
- **PACIFIC (American submarines):** American Magic submarine warfare cards vs. Japanese Magic ASW cards.

B. ON-BOARD SUBMARINE ATTACKS: The play of a submarine warfare card, unless offset by the play of an opposing ASW card, generates a +1 modifier for all on-board submarine attacks by the alliance faction playing the card in the player turn in which it is played. Similarly, the play of an ASW card, unless offset by the play of an opposing submarine warfare card, generates a -1 modifier for all on-board submarine attacks in the player turn in which it is played.

48.42 MAXIMUM +/-1 MODIFIER: The play of two or more submarine warfare or ASW cards more than the opponent still only generates a favorable +/-1 modifier for submarine warfare in the affected SW boxes or a favorable +1 or adverse -1 modifier for on-board submarine attacks for that player turn.

48.5 TACTICAL EFFECTS:

48.51 EFFECTS: Each tactical card may generate one of the following effects:

A. SEARCH: If one side plays more tactical cards than the other, the side with the greater number of tactical cards makes one additional search die roll, and his opponent makes one fewer search die roll, in one round of naval combat.

B. NAVAL NATIONALITY DRM INCREASE: If one side plays more tactical cards than the other, the side with the greater number of tactical cards has its Naval Nationality DRM increased by one for either:

- one round of fleet combat; or
- one on-board submarine attack.

C. HARBOR ATTACKS: If one side plays more tactical cards than the other, the side with the greater number of tactical cards receives a favorable +/-1 modifier for each target in one harbor attack.

48.52 MAXIMUM +/-1 MODIFIER: The play of two or more tactical cards more than the opponent still only generates one search effect, a single Naval Nationality DRM increase or one harbor attack effect. Additional tactical cards should therefore be saved for later use.

48.53 SUBMARINE MODIFIER: The Naval Nationality DRM tactical modifier in relation to a specific on-board submarine attack is distinct from the general on-board submarine attack modifier from submarine warfare and ASW cards. Either or both may apply to the same on-board submarine attack.

48.6 STRATEGIC EFFECTS:

48.61 EFFECTS: Each strategic card may generate one of the following effects:

A. NAVAL INTERCEPTIONS AND COUNTER-INTERCEPTIONS: If the intercepting or counter-intercepting player plays more strategic cards than his opponent, he rolls one additional die for all naval interception or counter-interception dice rolls for that player turn.

B. RAIDERS: If one player plays more strategic cards than the other with respect to raiders, all raider die rolls (21.5341, 21.538) for one SW box are increased or decreased one in favor of that player for that player turn.

C. MAGIC INTERCEPTIONS (U.S. Magic only): Immediately after Japan has announced its air and naval missions in the combat phase, the U.S. may play one or more strategic cards in order to automatically intercept Japanese naval missions during that combat phase. For each American strategic Magic card which is not negated by the play of a Japanese strategic Magic card, one American TF may intercept a Japanese naval mission without the need for an interception dice roll. The U.S. player decides which Japanese naval missions to intercept once the Magic interception level for that turn is determined (48.32C). Magic interceptions are subject to the following:

- The interception hex and the base of the intercepting American TF must be on the Pacific front. American TFs in a mapboard box may not conduct Magic interceptions.
- The interception hex must be within three hexes of the target hex of the Japanese mission.
- The intercepting American TF must be able to trace a path from an operational port no more than ten hexes from the interception hex; neither the extended range from the Hawaiian Islands (21.3615) nor the reduced range from jungle/mountain ports (21.3617) applies. Off-board ports in Alaska allow Magic interceptions in the Aleutian Islands.

- Magic interceptions may not be used to respond to Japanese patrols or sea transport missions, which occur in the movement, not the combat, phase.
- Magic interceptions are prohibited if Japanese surprise effects apply (51.72G).

When resolving a Magic interception:

- The intercepting American TF may not be attacked by Japanese land-based air units while en route to the interception hex, although such air units may participate in the ensuing naval combat.
- The intercepting American TF may not be counter-intercepted by Japanese naval forces, although the intercepted Japanese naval force may be supported by Japanese patrols (22.163).
- After naval combat is resolved, the intercepting American TF must return to its port of origin by whatever path is chosen by the American player.

48.62 TACTICAL EFFECT OF MAGIC INTERCEPTIONS: When one or more American TFs automatically intercept a Japanese naval mission using Magic, the American player is considered to have also played a tactical Magic card to gain a codebreaking search advantage in the first round of the ensuing naval combat (48.51A). This initial search advantage may be countered by a Japanese tactical codebreaking card, which in turn may be countered by an American tactical codebreaking card, and so on (48.32B).

48.63 MAXIMUM EFFECTS: Strategic cards may not modify raider die rolls by more than +/-1, may not increase the number of dice rolled for naval interceptions by more than one, and may not reduce the number of dice rolled for naval interceptions. There is no limit to the number American TFs which may conduct Magic interceptions each turn, other than the number of unopposed strategic cards played by the American player. No matter how many American TFs conduct a Magic interception, the initial search effect for each Magic interception is that of a single tactical card.

48.7 PEARL HARBOR:

48.71 PEARL HARBOR: If Japan makes a surprise attack against Pearl Harbor (51.3), the Japanese player may, at his option, reveal one or more of his strategic Magic cards drawn for that turn in order to try to change the column used on the Pearl Harbor Surprise Table. Whether or not the Japanese player reveals any cards, the American player may then secretly play one or more of the strategic Magic cards he drew that turn. The USJT level used to determine the applicable column on the Pearl Harbor Surprise Table is decreased by one for each Japanese strategic Magic card played and increased by one for each American strategic Magic card played, with no limit other than the number of cards played. Strategic Magic cards used in the Pearl Harbor attack may not be used for any other purpose.

48.8 CARDS MAY ONLY BE USED ONCE:

48.81 EACH CARD MAY BE USED ONLY ONCE: Each Ultra and Magic card may be used only once each turn.

48.82 DISCARDS: At the end of every game turn, all Ultra and Magic cards, whether they were used or not, are returned to their pools in preparation for the next turn's draw.