

Master of Magic - Community

Read me File – 19th May 2020

Version 1.52

Welcome.

Thank you for playing Master of Magic™! We are always looking for ways to improve your gaming experience. For the latest information on the game, please go to the Slitherine web site at slitherine.com.

Below you will find the latest and greatest information on Master of Magic™. Information in this document supersedes that in the official game manual.

Troubleshooting:

Ensure that your system meets the minimum system requirements. These are found in the game manual. Also, ensure that you have the latest video and sound drivers available for your system and that you have upgraded to the latest version of DirectX from Microsoft. The vast majority of reported problems are resolved by upgrading all drivers and DirectX to the latest versions.

If you are still experiencing problems with the game, please use our Help Desk at slitherine.com/helpdesk or post in the Master of Magic™ Support Forum at slitherine.com/forums. Please provide as much detail on your issue as you can.

To obtain optimum game performance, close all other applications before beginning a game.

How to use patch files:

1.52 comes with all the necessary patches already applied and can be played as is.

However, some players might not be satisfied with some of the patches, or might want to use some optional patches.

You can find all patches in the Patches folder. Patches under 140, 151 and 152 are patches already applied to the game files.

Patches in the "Optional" folder however aren't applied. Patches in the "obsolete" folder are patches that were replaced, reverted or made optional.

These are kept there to preserve information about the contents of each version.

To apply a patch, run the command FILESET.EXE <executable name> <patchname> in DOSBOX.

Executable name is wizards.exe for any patch file containing a W, and magic.exe for any patch file containing M.

To remove an already applied patch, first create a reversal patch using the command REVERSE.EXE <patch name> <reversed patch name>

then apply the reversed patch file using FILESET as normal.

Keep in mind that some patches are modified by later patches or require other patches to work. Always make a backup before

applying a patch or removing one and test the resulting game files to ensure it works as intended.

Important! The patches, the file you're patching and fileset.exe must be in the same folder.

Change History:

v1.52 – May 19, 2020

- The same contents as 1.51, but questionable changes from the 1.40 and 1.5x versions not suitable for an official release
- have been removed or made optional and the files have been properly organized.
- This is an official update, released by the new owner of Master of Magic, Slitherine, but still developed and updated by Seravy and Drake178.
- Future updates will be provided as necessary. Unfortunately, the original source code isn't available, which limits the possibilities.
- Please understand that some bugs might not be possible to fix this way.

v1.50, v1.51

- Developed by me, Seravy, this unofficial patches fix more bugs, improves AI, fixes diplomacy.
- 1.51 also contains patches contributed by Drake178.
- Save file format changed and is no longer compatible with previous versions.

- A detailed description of the contents can be found below or at https://masterofmagic.fandom.com/wiki/Unofficial_Patch_1.50 or within the organized patch files under Patches/151:
 - **Bug fixes**
 - ❖ Flying or non-corporeal ships can now transport units instead of being unable to move together with land units properly
 - ❖ If a default wizard had more than two types of Spellbooks, they were incorrectly displayed. Only relevant if default wizards are changed by editing. (004)
 - ❖ Towers are now generated at locations where both planes have land instead of only one of them, making them easier to use. (009)
 - ❖ Required Maximum Population for starting cities is now reduced greatly (reversal of an Insecticide change) to ensure the game does not crash frequently at the start due to poor terrain with insufficient proper locations. Minimum required is 6 (original was 8, Insecticide required 12). Insecticide change to avoid places near the edge of map where Tundra is abundant is left intact.(010)
 - ❖ Myrran nodes were placed where the Arcanus plane had a land tile, resulting in far more nodes on sea than intended on the Myrran plane. (012)
 - ❖ Fixed autosave happening at the wrong time, saving halfway through the end of turn, resulting in a game state where parts of the game already progressed to the next turn while others did not. (032)
 - ❖ Trying to build a unit when the town already has 9 in them no longer throws an error message, instead works as normal. (040)
 - ❖ Casting Nature Awareness no longer restores Diplomatic Contact with eliminated wizards, resulting in them showing up on Historian and Astrologer screens. (041)
 - ❖ Casting Nature Awareness no longer causes a Detect Magic spell to appear (Insecticide bug) (042)
 - ❖ When moving units, they will not lose their remaining movement for the turn if a unit with no movement left is with them or on the destination map tile. (043)
 - ❖ Planar Seal no longer prevents the player to target the other plane with spells (044)
 - ❖ Entangle no longer works on non-corporeal units (045)
 - ❖ A Wizard's gold and mana is now displayed so that books cannot cover it if the wizard has more than 11 of them. (047)
 - ❖ Displayed level of scouting now matches help text description instead of showing 1 higher number (049)
 - ❖ Summon Demon ability now shows the amount of demons remaining for the combat instead of the maximal. (050)
 - ❖ Unit view shows current presence of immunities, and various other abilities instead of what the unit would have without modifications from spell effects and items. (051)
 - ❖ Life Steal and Death Touch abilities show the save modifier (052)
 - ❖ Gift of the Gods Event no longer requires the item to be one the received can create. (053)
 - ❖ Diplomatic event "gold reward" no longer crashes the game - event was unimplemented in the older versions of the game so this bug was not known. (056)
 - ❖ When the AI offers a spell in exchange for accepting a treaty proposal the spell name is no longer missing from the text - Other bugs prevented the AI from offering anything in older versions so this bug was not known. (057)
 - ❖ "Declare War on" is no longer available in diplomacy if "Break Alliance with" is available instead : You have to first force them to break their Alliance, instead of skipping that step and immediately requesting war. (058)
 - ❖ When the AI requests the player to break an Alliance, the name of the target wizard is no longer missing or wrong. Other bugs prevented the AI from requesting anything in older versions so this bug was not known.(062)
 - ❖ Breaking a treaty no longer raises Hidden Relation instead of lowering it. (070)

- ❖ Fixed the AI never receiving spells offered as a bribe for a treaty, and the human player not receiving them if the spell id was 128+ (075)
- ❖ Fixed various other bugs with AI spell and gold offers, like receiving them when the offer was not even made (077)
- ❖ Fixes plenty of severe bugs in AI to AI Diplomacy (078)
- ❖ The AI can now properly initiate a conversation with the player (082,098)
- ❖ If the player fails a threaten roll and war starts the AI now uses the previously unused text group containing messages that react to the player declaring war on the AI, instead of more generic war declaration texts. (086)
- ❖ The AI no longer declares war on the wrong person (089, 090)
- ❖ Warnings of being too close to AI cities now use the proper text group to display (093)
- ❖ When the AI breaks a treaty due to repeated warnings, it now uses the proper text group that actually says the treaty is broken (096)
- ❖ Defeated wizards will no longer cast spells (102)
- ❖ Attacking a lawful wizard's capital no longer causes a negative overflow on Visible Relation. (106)
- ❖ Razing an Outpost now triggers the same effects as conquering a city. Therefore, the game will no longer crash if a wizard's Fortress was there, and there is a diplomatic penalty for the attack. (107)
- ❖ Units having a Wind Walking enchantment on them are no longer impossible to attack in combat using ground units. (108)
- ❖ Fixes Insecticide bug : all units have equal priority to take damage during strategic combat regardless of Icon Defense.png Defense or unit value. Instead, more valuable units are taking damage later in the queue. (111) Unfortunately this only works correctly on units with a cost divisible by 10, and there still is a mechanism that makes an already hit unit take damage again more often than the others do, which was overlooked. A future patch is needed.
- ❖ Fixes the healing bug that grants extra Icon Hits.png Health to units. Affects Regeneration, Life Steal, Healing, Mass Healing. (113)
- ❖ Spell Ward can now counter combat spells as the description implies. (125)
- ❖ Animate Dead and Raise Dead can no longer bring units carried by ships in naval combat into the battle (127)
- ❖ A Demon can no longer be summoned in combat if that would exceed the 9 unit limit. Due to limitations, nothing happens instead of warning the player that the ability is unavailable. Summoning a Demon which exceeds the 9 unit limit will crash the game if the total number of units exceeds 18. (129)
- ❖ Doom Bolt graphics are no longer misaligned (Insecticide bug) (131)
- ❖ Items found in treasure no longer require specific books to receive. If it's possible to award a predefined item, it'll be done at a much higher chance than in previous versions instead of awarding a randomly generated one. (134)
- ❖ The internal 0th item slot is no longer used - this slot was somehow responsible for the same item to appear at multiple locations at once. (135)
- ❖ The Merging item power now works. (136)
- ❖ Units with 0 health left entering combat will be set to 1 health remaining to prevent crashing. (138). 0 Health living units are possible though the malfunction of Lionheart and the removal of Charm of Life.
- ❖ Dispelling various spells now removes the associated ability granted by the spells. (139) Fixed spells include Icon Sorcery.pngGuardian Wind, Icon Sorcery.pngMagic Immunity, Icon Chaos.pngImmolation, Icon Death.pngWraith Form, Icon Life.pngTrue Sight.
- ❖ Units enchanted by Icon Sorcery.pngInvisibility are now always and everywhere invisible. (140)
- ❖ Icon Chaos.pngChaos Surge now works if cast by AI players. (141)
- ❖ Undead units now have the expected Illusion Immunity, Death Immunity, Cold Immunity, Poison Immunity. (144)

- ❖ Berserk now sets Icon Defense.png 0 instead of Icon Defense.png -20. More of a precaution than a bugfix, in case negative defense causes unexpected trouble. (145)
- ❖ Icon Death.pngBlack Sleep now causes units to lose all their movement types instead of remaining a Icon Movement Air unit, preventing attacks to it. (146)
- ❖ Dead units cannot die again, to prevent possible memory corruption (148). Many procedures that kill units, like drowning, do not actually check if the unit is still living or already dead waiting for the end of turn to clear it from the array.
- ❖ Thrown no longer ignores Weapon Immunity (152)
- ❖ Units no longer fail using Gaze or other special attack types if their associated attack strength is 0 (153), also known as the hidden ranged attack problem.
- ❖ Immolation no longer works with ranged attacks (no more shooting flaming arrows) (154)
- ❖ City Walls bonus is no longer applied in battles happening away from cities (155)
- ❖ Blur works as intended, no rolls are lost on successes and Illusion Immunity is no longer checked on the wrong unit (156)
- ❖ All units killed in the battle properly count for the Diplomatic Reaction generated instead of only one unit or none at all (159)
- ❖ Units carried on ships no longer have a 100% chance to die while fleeing, leaving only the ship alive (160),. As a side effect, if the ship is lost in battle, the carried units might still "flee" to adjacent land tiles if any exist.
- ❖ Game no longer crashes when attacking a wizard with only outposts left when calculating gold reward and dividing by zero. (162) Gold amount looted is now based on the town's production instead of the overall percentage of population and gold in treasury.
- ❖ Spell books found in treasure now provide the same number and rank of spells as the same book picked at the start of the game (170)
- ❖ Animate Dead and Raise Dead no longer crash the game if over 7 units are dead (172)
- ❖ Warp Creature no longer crashes the game if cast 4 times successfully on the same unit (174, 275)
- ❖ Wrack no longer does squared damage, also fixes Insecticide bug in this fix causing memory corruption (175)
- ❖ Call Lightning will now generate the intended amount of bolts instead of randomly failing to strike (176)
- ❖ Call Chaos will no longer disintegrate units that resist the spell (177)
- ❖ If a destroyed building is built again the same turn, the resulting building will now function correctly instead of being built but having no effect (210)
- ❖ Units with zero or fewer figures remaining can now heal naturally on the overland map. 0 or lower figure living units are possible though the malfunction of Lionheart and the removal of Charm of Life. (216)
- ❖ Evil Presence now works (218)
- ❖ AI will now target cities of wizards that do not have Death books instead of only those that have Death books when casting Evil Presence (219)
- ❖ Cities are able to lose population if their growth is negative but they've already reached the maximum population. Fixes an Insecticide bug (220).
- ❖ Miner's Guild now increases the effectiveness of Iron Ore and Coal by 50% as described, instead of 100%. (251)
- ❖ Evil Presence's graphics now correctly show up on city view for Cathedrals (253)
- ❖ Icon Sorcery.pngConfusion now always correctly returns control of the unit at the end of turns or when dispelled. (255)
- ❖ Icon Life.pngInvulnerability can now be dispelled in combat. (261)
- ❖ Confused units under AI control are now able to "move randomly" instead of ignoring that effect of the spell (262)
- ❖ When finding a hero in the lair, if the attacker already has 9 units, the hero will be received anyway, and pushed to the nearest free map cell, instead of not

received. (264)

- ❖ Spell Binding can no longer fail (269)
- ❖ Create Artifact now considers the correct cost when checking for resisting Suppress Magic instead of a much lower amount (270)
- ❖ AI will no longer attempt to target uncontacted or defeated players with curses (271)
- ❖ Depletion and New Mineral events can now happen (272, 273)
- ❖ New ore generated by Raise Volcano no longer gets immediately erased again (276)
- ❖ Summon Champion will now properly summon a Hero instead if no champions are available, instead of having a high chance of failure (285)
- ❖ When more than 6 items are received in a single combat (including own from dead heroes), the items no longer vanish, and are instead properly received (291)
- ❖ AI no longer equips shields in staff slots on heroes (293)
- ❖ Dispelling Web now restores the lost movement type (302)
- ❖ Lawful wizards are no longer more likely to raze cities if Hidden Relation is the starting value of 0, instead, only if lower. (310)
- ❖ Terror no longer considers various Resistance buffs twice (314)
- ❖ Floating Island is no longer "Sorcery Floating Island" - fixes an Insecticide bug (317)
- ❖ Icon Death.pngWraith Form no longer grants immunity against Icon Chaos.pngFlame Strike, Icon Death.pngDeath Spell, and Icon Life.pngHoly Word (318)
- ❖ Holy Weapon now has an effect if cast in combat (323)
- ❖ When cancelling a Spell Charge in an item, it no longer remains in the item without having a cost or counting towards the 4 item powers (325)
- ❖ Icon Sorcery.pngSpell Lock now works when cast in combat, will protect the Icon Sorcery.pngHaste enchantment, and will display the appropriate message when dispelled. (326)
- ❖ AI no longer considers units enchanted with Icon Life.pngInvulnerability as invalid targets for Icon Arcane.pngDispel Magic unless they also happen to be under a control-changing effect (328)
- ❖ AI walking units will no longer attack flying units during combat if such an attack is impossible (337)
- ❖ Units no longer continue moving on the overland map during Time Stop if a movement order was given to them before the spell was cast (347)
- ❖ The "ghost" central structure in a combat where there is none no longer prevents the AI from attacking the unit standing there with melee units (348)
- ❖ Items using an ID of 128+ no longer turn invisible when placed into the vault (349)
- ❖ Cursor now properly reverts to normal instead of staying hourglass when the AI asks something from the player during their turn (350)
- ❖ AI turn order is no longer bugged : Instead of : all AI players cast spells, then all AI players set their cities, taxes etc, then all AI players assign an order to their units, finally all AI player units move according to their order - in other words AI turns being simultaneous - now AI player 1 will do all of the above in the same order, then AI player 2 does so etc. This ensures the game state is preserved between an AI player deciding what to do, and actually executing the order and also makes sure the AI plays by the same rules as the human player regarding turn order. (351)
- ❖ "Unit enchantment dispelled" when maintenance is failed now shows the correct unit name (362)
- ❖ Disbanding a wind walking unit over sea no longer corrupts memory (363)
- ❖ Fixed various inconsistencies on checks for units being able to survive over water, like Wraith Form not counting etc - these bugs could cause units that should survive drown when fleeing over ocean or get disbanded by the AI, one of them even causes the game to crash! (368, 369, 433)

- ❖ Fixed bug : the player can not cast Icon Life.pngMass Healing while having Icon Life.pngTrue Light in effect (370)
- ❖ Completely rewritten way to find paths on the overland map for moving units - original sometimes caused units to be unable to enter map cells they should have been able to, like units being unable to leave a ship. (371, 411, 489)
- ❖ Hidden Relation no longer has the opposite effect of intended nor does it check the wrong player (372, 389, 390)
- ❖ Visible Relation can no longer overflow, causing it to turn from Hate to Harmony or the opposite (384)
- ❖ There is no longer inconsistency between the requirement of starting an audience and continuing it : The AI will no longer say they will listen then send you away immediately anyway (385)
- ❖ Entering the Threaten menu without actually doing anything and only selecting Cancel to return to the main menu during an audience no longer gives a massive diplomatic penalty (386)
- ❖ When the AI gives the player gold due to threats, they now lose the gold they have given instead of keeping it (387)
- ❖ Starting Relation can no longer overflow, turning into the opposite effect due to too many wars starting against the same wizard in a game (388)
- ❖ AI players no longer give a diplomatic penalty to each other if the human player has too many cities instead of towards the human player (391)
- ❖ Units controlled by the human player that cannot swim, fly, or are carried by another unit will now drown at the end of turn if standing over water (397)
- ❖ Fixed various bugs in how overland Movement Types stack - including Ability NonCorporeal Non-Corporeal units not being able to move together with Icon Movement AirFlying units over water, Icon Sorcery.pngFlight and Icon Nature.pngWater Walking possibly enabling extra units to be carried along with their targets, and replacing the botched Insecticide fix for Icon Death.pngWraithform items not granting Non-Corporeal movement. However, by default, this fix also enables all Non-Corporeal units to Icon Movement AirFly overland, and changes the default Movement Type for units that can do both anyway from Icon Movement AirFlying to Non-Corporeal, which is the opposite of how it is in the original game. (398)
- ❖ Attacking an AI player will no longer reduce their Hostility from warlike to annoyed. (401)
- ❖ Fixed various other Diplomacy bugs
- ❖ Units will no longer try to move through towers containing enemy units as though the cell was unoccupied (407)
- ❖ Units can no longer start the battle in the city tile for the central structure which cannot be entered (410)
- ❖ AI no longer cancels Spell of Return, ending up in a broken state where they still have units but cannot move them due to the spell using Move Fortress targeting logic, comparing existing fortress location with the potential targets - when no fortress exists! (416)
- ❖ Fixes Insecticide bug : Artificier no longer halves gold required for merchant offers - potentially causing negative remaining gold after purchase. (421)
- ❖ AI units moving together towards a target in a stack will now stay together instead of separating if they have different movement speeds (424)
- ❖ Neutral units can now gain resistance from Resistance to All (425)
- ❖ Icon Arcane.pngDispel Magic no longer has a 100% chance to remove Unit Curses. (431)
- ❖ Crusade no longer grants two levels to units for calculation of unit health (432)
- ❖ Death Immunity now protects from Terror (440)
- ❖ Monster value - and subsequently treasure - is now adjusted to match the shift through the addition and removal of a difficulty level in Insecticide. Prior to this, all difficulty levels below Extreme had one level fewer monsters than the 1.31

version. (442)

- ❖ Fixed Insecticide bugs of Runemaster not granting the dispel bonus, or the bonus being granted without the retort during combat (443, 459)
- ❖ Invulnerability can now be dispelled by Disenchant Area on the overland map (444)
- ❖ Combat movement no longer cost +0.5 diagonally in some instances of movement while not in others. Applying the extra cost in all cases causes other problems, so it had to remove it (445)
- ❖ The AI no longer gets a free extra turn when auto combat is turned off. (447)
- ❖ There is no extra "end of turn" before the start of the human player's first turn during combat (447)
- ❖ The player's turn to cast spells is no longer skipped if all their units are immobilized (451, 495)
- ❖ Fixed bug : some tiles in naval combat are only available for walking units (456)
- ❖ Floating Island is now visible in combat and covers the area where units start instead of a smaller area behind them (457)
- ❖ Ships in cities can now appear in combat if they are buffed by Wraith Form. (458)
- ❖ Ships on land (noncity) now do not appear in combat unless they are buffed by Flight or Wraith Form (458)
- ❖ Fixed bug : overland map displays units during enemy turns at the wrong location (464)
- ❖ Game will no longer crash from Call Lightning even if the sound effects are turned off (465)
- ❖ Fixed another possible memory corruption bug (467)
- ❖ Fixed bug : AI targets wrong with Fire Storm, Ice Storm, Black Wind, Stasis, hitting random, nonexistent, or even own units (468, 490)
- ❖ Illusion Immunity now allows using ranged attacks through Wall of Darkness (470)
- ❖ Melee units can now properly use their Wall Crusher ability on walls even if an enemy unit is behind it (476)
- ❖ No blood is displayed if attacking a wall (477)
- ❖ Fixed various bugs of flying ships and other units in a stack not being able to properly move together (479)
- ❖ AI no longer remembers enemy details from previous battles, resulting in wrong decisions (481)
- ❖ Game will no longer crash on the magic screen if finding the spell being researched after banishing a wizard (483)
- ❖ Fixed Insecticide bug: Arcanus starting Cities have Enchanted Roads under them. (484)
- ❖ Gaia's Blessing no longer changes Chaos Node to Hills (492)
- ❖ Gaia's Blessing no longer displays food gained that is not actually gained (493)
- ❖ Death Immunity now correctly prevents the raising of units as undead (496,498)
- ❖ Fixed bugs in Flying Fortress - due to an oversight, units can still attack into it if the caster is not AI 1, this will be fixed in a later patch (501)
- ❖ AI players can now find spells when banishing the human player (502)
- ❖ Raise Dead and Animate Dead no longer glitch the display (503)
- ❖ Fixed engineers building slower than reported or cancelling the road if movement is blocked (511)
- ❖ Fixed bug : Icon Life.pngProsperity on dwarf city displays more Icon Gold.png Gold than it should. (515)
- ❖ Fixed bug : Cities without City Walls appear on the overland map as though they had one. (523)
- ❖ Fixed bug : Surveyor calculates Wild Games wrong in the catchment of not-yet-settled locations. (528)
- ❖ Fixed bug : Icon Chaos.pngWall of Fire and Icon Death.pngWall of Shadows have no effect on Outposts. (541)

- ❖ Fixed bug : Icon Sorcery.pngFlying Fortress is not displayed during combat in Outposts. (541)
- ❖ Fixed bug : Swamps do not produce the 1/2 Icon Food.pngFood they are supposed to. (607)
- ❖ Fixed bug : Icon Sorcery.pngCreature Binding and Icon Death.pngPossession can be dispelled by their caster. (619)
- ❖ Fixed bug : Barbarian Swordsmen and Barbarian Spearmen can not appear as Raiders. (634)
- ❖ Fixed bug : Icon Movement SailingSailing Ships and Catapults ignore Weapon Immunity. (635)
- ❖ Fixed bug : Oracle overrides Icon Nature.pngNature's Eye when determining a Town's enemy detection range. (636)
- ❖ Fixed Insecticide bug : Weapon Immunity provides Icon Defense.png +50 instead of Icon Defense.png +10 against physical non-melee attacks (Icon Thrown.png Thrown, Icon Ranged Boulder.png Boulder, Icon Ranged Bow.png Missile). (637)
- ❖ Fixed bug : Icon Death.pngWeakness does not affect Icon Thrown.png Thrown attacks. (638)
- ❖ Fixed bug : Icon Chaos.pngShatter obscures the unit's original Attack Strength if successful. (639)
- ❖ Fixed bug : AI calculates research bonuses wrong when picking spells to research. (651)
- ❖ Fixed bug : Icon Arcane.pngDispel Magic can affect inactive units if they died on, or got recalled from the tile of its target. (655)
- ❖ Fixed bug : Icon Arcane.pngDisenchant Area can affect inactive units if they share the tile with an active one. (655)
- ❖ Fixed bug : Icon Nature.pngEarth to Mud can affect tiles outside the battlefield, allowing units to move there. (656)
- ❖ Fixed bug : Icon Life.pngPlane Shift crashes the game when the AI uses it on an invisible tile. (663)
- ❖ Fixed various bugs on the income breakdowns of the City Screen. (666 - 670)
- ❖ Fixed map exploration artifacts. (674)
- ❖ Fixed bug: Healers override natural healing for units created after them. (679)
- ❖ Fixed bug: Icon Life.pngLion Heart items do not grant extra Icon Hits.png Hits overland. (680)
- ❖ The graphics of Towns no longer clips over nearby units during overland movement, and displays properly for large Cities just off the left edge of the screen. (681)
- ❖ Fixed bug: the player gains more Icon Gold.png Gold and loses a different amount of Icon Fame.png Fame when razing Towns from the combat scroll ('R') versus the dedicated dialog. (682)
- ❖ Fixed a potential crash on trade/banishing Wizard if there are too many learnable spells. (683)
- ❖ Fixed bug: the dialog shown when finding spells in a conquered Wizard's Fortress corrupts memory. (684)
- ❖ Fixed bug: the combat map has (much) less trees than intended. (685)
- ❖ Fixed bug: the combat map creates the wrong amount of rock figures. (686)
- ❖ Fixed bug: Icon Nature.pngWall of Stone has no combat effect on Outposts. (687)
- ❖ Fixed bug: Fortresses still don't always show up during combat in Outposts. (687)
- ❖ Fixed bug: Unit Curses reveal the location of Invisible units. (688)
- ❖ Fixed bug: the "Spell" action is not locked out for Icon Mana.png 40 MP Casters that run out of Icon Mana.png Mana. (689)
- ❖ Fixed bug: 4-way crossroads don't display properly in combat. (690)
- ❖ Fixed bug: Icon Life.pngRighteousness items don't work against Icon Ranged Magic.png Ranged Attacks. (694)
- ❖ Fixed bug: destroyed City Walls still show up in battle until the end of the turn. (695)

- ❖ Fixed bug: Icon Death.pngWrack can only affect at most 40 Icon Figure.png figures at a time and can corrupt memory. (697)
- ❖ Fixed bug: movement enhancements apply in different order in combat than overland. (698)
- ❖ Fixed Insecticide bug: Icon Sorcery.pngWind Mastery has different effect in combat than overland - reversed the overland change. (699)
- ❖ Fixed bug: Life Stealing units ignore Irreversible Damage. (700)
- ❖ Fixed bug: Combat summons are not affected by battlefield-wide effects on the turn they are summoned. (701)
- ❖ Fixed bug: spellbook page titles sometimes disappear with Spell Book Ordering off. (703)
- ❖ Fixed bug: Icon Sorcery.pngWord of Recall can be cast at the Summoning Circle location in battle. (704)
- ❖ Fixed bug: selecting the "Spell" action strips a unit of short-range attacks (i.e. Axe of the Caster). (705)
- ❖ Fixed bug: Icon Figure.png figures sometimes move around in units during Teleport/Summon/Raise/Animate Dead animations. (711)
- ❖ Fixed bug: Oracles don't reveal terrain when conquered rather than built. (712)
- ❖ Fixed bug: the AI can't cast Icon Sorcery.pngResist Magic on units with Icon Death.pngWraith Form. (715)
- ❖ Fixed bug: the AI can cast Icon Arcane.pngRecall Hero at the location of its Summoning Circle. (717)
- ❖ Fixed bug: the combat spellcast message shows the wrong name for control changed Heroes. (719)
- ❖ Fixed bug: the Additional Power slider sometimes miscalculates the maximum amount that can be infused into spells if they are affected by Casting Cost modifiers. (720)
- ❖ Fixed bug: AI players can put more Icon Mana.png Mana into slider spells than their remaining Icon Mana.png Mana or Skill allows. (720)
- ❖ Fixed bug: Icon Nature.pngIce Bolt ignores Icon Death.pngEvil Omens. (720)
- ❖ Fixed bug: Ability Caster Caster units ignore Icon Death.pngEvil Omens. (720)
- ❖ Fixed bug: Heroes are not charged the extra Icon Mana.png Mana they channel into slider spells. (720)
- ❖ Fixed bug: Casting Cost reductions make the affected spells easier to counter in combat. (720)
- ❖ Fixed bug: Icon Death.pngEvil Omens makes the affected spells more difficult to counter in combat. (720)
- ❖ Fixed bug: having over Icon Mana.png 16,383 prevents players from casting spells when defending their Fortress. (720)
- ❖ Fixed bug: spells with a cost that exactly matches the player's remaining Icon Mana.png Mana are sometimes disabled in combat when the distance multiplier is x0.5, x1.5, or x2.5. (720)
- ❖ Fixed bug: Spell Charges allow opening the spellbook when no spells can be cast. (720)
- ❖ Fixed bug: control changed Heroes check the wrong records for Hero spells. (720, 728)
- ❖ Fixed bug: control changed Heroes can't use their item charges. (721)
- ❖ Fixed bug: control changed Heroes get the wrong Icon SpellSave.png -Spell Save modifiers. (722)
- ❖ Fixed bug: the combat counter message shows the wrong name for control changed Heroes. (723)
- ❖ Fixed bug: control changed Heroes check the wrong items for Icon Movement Ground Movement and Icon Life.pngEndurance bonuses. (724)
- ❖ Fixed bug: control changed Heroes use the wrong Ability Leadership Leadership and Ability Prayermaster Prayermaster skills. (725)
- ❖ Fixed bug: the human player can cast Icon Life.pngRaise Dead on recalled units

- ❖ if there is also at least one valid dead unit that could be targeted. (731)
- ❖ Rocks are no longer drawn over Icon SingleFigureUnit.png Single-Figure Units in battle. (732)
- ❖ Fixed Insecticide bug: Treasure claims and Hero summons are not randomized properly due to a short-sighted attempt at preventing reload re-randomization. (733)
- ❖ Fixed bug: spells that use a list selector crash the game if they have over 6 valid targets. (735)
- ❖ Fixed bug: Icon Chaos.pngCall Chaos crashes the game when cast by the AI outside of the defender's first turn. (737)
- ❖ Fixed bug: Icon Chaos.pngCall Chaos glitches the graphics when applying its effects. (737)
- ❖ Fixed bug: the Icon Life.pngHealing animation of Icon Chaos.pngCall Chaos is misaligned, and is not shown over the actual target. (737)
- ❖ Fixed bug: overland-only Unit Enchantments have 5 times the intended dispel resistance in combat. (738)
- ❖ Fixed bug: Disenchant spells make an extra dispel attempt against enemy Icon Chaos.pngMagic Vortices that are on the same tile as a unit when the Disenchant is cast. (740)
- ❖ Fixed bug: Combat Enchantments cast by neutral units can't be dispelled. (741)
- ❖ Fixed bug: Overland-cast Icon Death.pngWall of Darkness and Icon Chaos.pngWall of Fire are much easier to dispel in combat than intended. (742)
- ❖ Fixed bug: Combat-cast Icon Death.pngWall of Darkness and Icon Chaos.pngWall of Fire can not be dispelled. (742)
- ❖ Fixed bug: Icon Ranged Magic.png Ranged Magical Attacks are not always doubled correctly by Icon Sorcery.pngHaste. (744)
- ❖ Fixed bug: the Ranger and Elven Archer Heroes sometimes use Icon Mana.png Mana instead of arrows for one of their shots when Icon Sorcery.pngHasted. (744)
- ❖ Fixed bug: Ability FirstStrike First Strike Icon Figure.png figures slain by Ability DoomGaze Doom Gaze sometimes still participate in melee. (746)
- ❖ Fixed bug: Ranged Attacks don't use up all Movement Allowance as documented in the v1.2 patch notes. (747)
- ❖ Fixed bug: units with Icon Ranged Magic.png Ranged Magical Attacks don't always show their ammo count in the unit statistics window. (749)
- **AI changes**
 - ❖ AI will only target Silver Ore with Transmute
 - ❖ Changes to AI wizard Personality and Objective selected based on Spellbooks. Enables originally unused Objective of Pragmatist. (002)
 - ❖ New formula for Starting Relation (027)
 - ❖ AI Personality and Objective are influenced by the wizard's second realm of Spellbooks in addition to the first. (028)
 - ❖ AI wizards no longer receive guaranteed research of Basilisk, Unicorns, Shadow Demons, Unicorns or Phantom Beast depending on their primary realm. (028)
 - ❖ Changes to the effect of Retorts on AI wizard Personality and Objective (029)
 - ❖ The game no longer has an extremely high chance of placing Sss'ra as the Myrran wizard, instead every wizard has an equal chance of picking that trait. (031)
 - ❖ Changed Personality Modifier for diplomacy (035)
 - ❖ AI Personality has a stronger effect on wanting to cast "curse" type overland spells (036)
 - ❖ Diplomatic offer refusal flavor texts are shown more often (059)
 - ❖ AI players are now allowed to have a Peace Treaty between each other (066, 088)
 - ❖ AI now checks for the Need for War against other players every turn instead of only when positive diplomacy is conducted (076)

- ❖ AI no longer checks for units being close to their towns to break treaties vs other AI. (079)
- ❖ AI now declares war on their ally's enemy at a chance over time, observing Peace Treaties instead of immediately (080)
- ❖ There is a higher chance for the AI to go through with warning a player instead of remaining silent. (082)
- ❖ Fixed various other bugs in AI to Player Diplomacy
- ❖ Changed formulas in Need for War (089, 090). The AI now considers global military power instead of only units standing over their home continent.
- ❖ The AI is less likely to change their mind and not proceed with breaking a treaty when they want to (091)
- ❖ Repeated warnings escalate the change of war quicker (099)
- ❖ AI will prefer to offer a Peace Treaty to the human player if the human player has a stronger military strength, will avoid if they are much weaker. (100, 101)
- ❖ AI wizards will attempt to cast the Spell of Return if their casting skill is at least 25 instead of requiring 40 (104)
- ❖ AI will avoid targeting units of over Icon Resist.png 10 with Life Drain (116)
- ❖ AI will prefer undamaged units as targets for Fireball (117)
- ❖ AI will not cast Haste or Invisibility in combat on units already having it (118)
- ❖ AI will not target Icon Melee Normal.png 2 units with Shatter. (119)
- ❖ AI will not target Icon Resist.png 9 or higher units with unit curses (after factoring in the save penalty and modifiers) (120, 123)
- ❖ AI will not target Death Immunity units with Possession. (121)
- ❖ AI will not become randomly unable to cast Icon Chaos.pngFlame Strike or Icon Chaos.pngCall Chaos in combat, or become unable to cast Icon Life.pngMass Healing and Icon Life.pngHoly Word while having Icon Life.pngTrue Light in effect (122)
- ❖ Changes to AI use of Dispel Magic and target selection for it (124, 328 ...)
- ❖ AI will prefer to pump Counter Magic when able. (126)
- ❖ AI players can choose to remain idle with flying units if the enemy cannot reach them and they are too weak to win the battle. (130)
- ❖ AI will not skip the turn on Caster units in combat if they are low on mana (132)
- ❖ AI can no longer use Enchant Item or Create Artifact to add spell charges of spells they do not know. (134)
- ❖ If an AI player ends up with more than 9 units on a map tile, the unit with the lowest $\lceil \text{cost}/16 \rceil + \text{level}$ will be pushed away to an adjacent tile. (149)
- ❖ AI rates units slightly more accurately for decisions (151, 208, 316)
- ❖ Improved AI decision on which unit to attack in combat (158)
- ❖ AI will no longer think they have no units in combat if the units they have passed the turn - for example due to staying behind the City Walls. (164)
- ❖ AI will only consider itself significantly outnumbered in combat only if the enemy army is rated 5 times stronger instead of 3 times (165)
- ❖ Changes to how the AI rates the value of spells in trades (166)
- ❖ Adjusted how strong Diplomatic Reaction is generated by various overland curses. Corruption and Raise Volcano is no longer the most horrible spell imaginable, outranking Call the Void among others. (168)
- ❖ Adjusted Diplomatic Reaction to casting and maintaining various global enchantments for similar reasons. (169)
- ❖ Spell Binding now works as intended when used by the AI instead of doing nothing. (171)
- ❖ AI players are now able to pick predefined items when casting Create Artifact instead of always having to random generate them. (178)
- ❖ AI players are now able to cast multiple spells in an overland turn if their casting skill allows instead of being forced to stop casting after once spell. (179)
- ❖ AI has a larger preference of using various strong combat spells including : Doom Bolt, Mind Storm, Dispel Magic True, Banish, Word of Death, Dispel Evil, Earth

Elemental, Air Elemental, Phantom Beast, Crack's Call. This is only a small fraction of AI combat spell selection improvements in Caster of Magic due to compatibility limitations, unfortunately. (181)

- ❖ AI uses different weights for various spell groups depending on combat situation in combat (182)
- ❖ AI no longer has a "must do" level priority for disenchanting Call Lightning and Wrack, instead the chance is merely higher than normal. (183)
- ❖ AI now considers Web a spell that's best to cast when having a superior army in combat instead of equal. Priority boost to use against flyers is raised. The AI will have additional preference to use this spell if the combat drags out very long. (184)
- ❖ Various small adjustments of priorities for other combat spells (185, 186, 188, 190, 191, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 205, 206, 207, 257, 258, 289, 355, 382)
- ❖ Guardian Wind will never be used if the enemy has no missile units to defend against instead of rarely used (187)
- ❖ AI will consider Mind Storm the best to use when both sides are roughly equal instead of when heavily outnumbered (189)
- ❖ AI will now only disband obsolete units if the global unit cap is near instead of once every 25th turn. Disbanding is now "hero safe", no heroes or other valuable units will get disbanded. (217)
- ❖ AI distributes their power base smarter (224, 672)
- ❖ AI will no longer disband their units affected by Stasis (227)
- ❖ Fixes various bugs and improves details on how AI players decide which spell category to cast a spell from (229)
- ❖ AI players are less spammy with overland dispelling type magic. (230) Original priorities were so high that often all 4 enemy wizards started dispelling the same enchantment, wasting a lot of resources as well as making these enchantments not worth casting at all.
- ❖ AI players will no longer cast Nature's Wrath, Tranquility or Life Force if they already have it in effect (231)
- ❖ AI players will no longer cast Time Stop if they already have it in effect and will not do it unless having a large amount of mana crystals available. Also changes the priority of various overland curses.(232)
- ❖ AI will no longer cast Move Fortress, since they lack the ability to comprehend racial unrest, and their fortress is generally their most defended city to begin with. (233)
- ❖ AI now considers Spell Binding a way to dispel global enchantments instead of a "generic" enchantment that can be used at any time. (234)
- ❖ AI now targets the correct cities with Flying Fortress (235)
- ❖ AI is less likely to chose random realms for Spell Ward (236)
- ❖ AI no longer loses all their fantastic units to maintenance after using Time Stop. AI will not cancel Suppress Magic after a Time Stop - Insecticide already removed the cancellation of all other global enchantments but skipped this one for some reason. (237)
- ❖ AI will no longer ignore global enchantments that have a very high dispelling priority (238)
- ❖ When the AI casts Drain Power, Cruel Unminding, Subversion, the spells will properly work instead of sometimes being cancelled without an effect. (239)
- ❖ AI will check if their towns need more defending units every turn (243, 245)
- ❖ AI will be smarter when deciding which units to gather from where when building a new stack for offensive use. Cities, especially fortresses will never be left with weakened garrisons, not even temporarily. Units guarding nodes are no longer forgotten about, spending the rest of the game on the same node tile. (244, 333, 478) While this change goes in a somewhat different direction than Insecticide, prioritizing survival over offense, it should make the AI overall better. When

selecting what to send based on unit ratings, the correct value is used instead of an incorrect one (249). When sending the selected units, only as many are sent as needed, so movement does not fail due to the resulting stack getting larger than 9 (494)

- ❖ AI no longer considers units owned by the human player at 25% of their calculated strength : fixes an Insecticide bug. War targets are 10x more important than nonwar targets - reversal of Insecticide change which lowered this to 7. Peaceful and Lawful wizards will never consider a city a target unless they formally declared war to its owner. (246)
- ❖ AI will no longer disband all their fantastic units believing they cannot afford them if Time Stop is in effect. (248)
- ❖ AI will no longer avoid building with a Settlers if another player has a unit nearby. Reversal of Insecticide change (which raised the existing chance of not building to 100%) and a further step to the opposite direction, the Settlers will always build if able. The unit "threatening" the city might belong to an ally or even worse, might kill the settler before building, so waiting will not help! (250)
- ❖ Peaceful and Lawful wizards never get Hostile unless attacked or they declare War. (252)
- ❖ If an AI unit finds nothing they can attack in combat, they'll move into the area of the city to cause damage instead (254)
- ❖ AI wizards will not cast Disjunction against spells belonging to their allies (259,260)
- ❖ If an AI unit cannot find anything to attack in combat, and there is no city to damage, they'll move around randomly to try finding Invisible enemies and provide a harder target for a flying army. (263)
- ❖ AI now uses ships to transport units properly - fixed at least a dozen bugs here (265, 266, 274, 290, 319, 320, 330, 332, 338, 358, 392, 393, 400,)
- ❖ AI wizards will now allocate all their power on producing mana crystals while casting Time Stop (267)
- ❖ AI will always use alchemy to get rid of excess gold if gold is over 24000 (268)
- ❖ Multiple warnings from the AI increase the chance of a declaration of war. (278)
- ❖ The AI will no longer assign infinite priority to enemy capitals when selecting a city for curses. (279)
- ❖ The AI will now avoid Nature Warded cities by Earthquake instead of Chaos Warded and Consecrated cities (280)
- ❖ AI selects targets for Corruption and Raise Volcano better (286)
- ❖ AI no longer disbands their settlers and engineers after turn 200. (288)
- ❖ The AI can now store their items in the vault. The AI will look at, and rearrange all equipment on their heroes at the start of every turn the same way they do when receiving a new item, to ensure any new hero gets equipped immediately. (The AI does not pay mana for moving items though, nor do they check for water movement enablers, so they can still potentially drown their heroes by replacing water walk, wraith form or flight items with another) (294)
- ❖ The AI selects a continent to invade more frequently and smarter (295, 296, 297, 300, 301, 322, 331, 339, 361, 414, 462)
- ❖ Various fixes in Hostility (298,299)
- ❖ AI targets units with overland buffs smarter - complete rewriting of the Insecticide patch for this, which strongly favored heroes and capital - now still prefers those but considers many other factors, such as preferring to buff already buffed stacks more. Also considers effects of the buff and selecting an appropriate target, like not buffing a wind walker with Wind Walking, or casting two of that spell on the same stack. (303)
- ❖ AI players will not move their armies through tiles occupied by enemies as a shortcut - reversal of original behavior and Insecticide's amplification of it. (308)
- ❖ Improves how the AI calculates which realms they need protection from during combat by casting protective unit buffs (312, 313)

- ❖ AI will prefer to build Ship Wright's Guild faster on Tiny and Small landmass (321)
- ❖ AI selects a target for unit buffs in combat better (327)
- ❖ AI is now able to use ships to attack enemy units over sea! (334,359,415)
- ❖ AI produces more ships, depending on land size (335)
- ❖ AI will not override the selected target in combat with a different one based on the unit being the same type - same type units are not identical, they are at a different position in the battlefield and are under the effect of different spells (337)
- ❖ AI can use the Planar Travel and Plane Shift ability to travel to the other plane. (340, 380)
- ❖ AI can use the spell Astral Gate, and move units through it (341, 342, 343, 380)
- ❖ AI can use flying or swimming units to attack enemy units over sea! (344, 359, 395,415, 417, 417, 420, 486)
- ❖ AI will not target units enchanted by Spell Lock with Banish and Dispel Evil (346)
- ❖ AI now reconsiders what to do with a unit that was given an order to move towards a target in an earlier turn, instead of mindlessly marching towards a - potentially no longer existing - target. (357, 367, 373, 394, 396)
- ❖ AI will not attempt to build a new stack from units already being sent towards a target (360)
- ❖ Changes to how much temporal diplomatic variables increase at the end of turns (375)
- ❖ Confused units switching sides no longer makes the AI "panic" thinking they have no or not enough units in battle, triggering fleeing or casting spells that should be used in unwinnable situations (376)
- ❖ AI will not use Prayer if they already have High Prayer (383)
- ❖ AI will no longer try to rush enemy ranged units if behind a Wall of Darkness that disabled ranged attacks anyway (399)
- ❖ The AI will no longer cancel all their city curses if a Peace Treaty is formed. (402)
- ❖ Peace Treaty now lasts the same number of turns for both players involved (402)
- ❖ Attacking the AI or performing any other hostile action now reduces the Peace Counter, speeding up the end of the Peace Treaty. (403)
- ❖ The AI is now able to attack with units having a 0 attack power if they also have a thrown, breath or gaze attack that might still do damage anyway (408)
- ❖ AI can use flying or swimming units over sea to attack enemy units over land nearby! (413,415, 417, 418, 420, 478, 486)
- ❖ Triggering a Diplomatic Reaction no longer resets the Hostility timer.
- ❖ The AI now checks for the availability of Crack's Call when deciding to use Web. (426, 430)
- ❖ The AI will prefer spells that target heroes in combat - both buffs to own heroes and direct damage to the enemy. Note that this does not makes them actually want to target the heroes, but if they would get targeted, the spell is more likely to get chosen for casting than spells that do not target a hero. (429)
- ❖ AI will never disband a hero if low on gold (435)
- ❖ AI will prefer to target ores with Raise Volcano and Corruption (441) - not sure if also allows them to target hills and mountains since that is a CoM mod - if not, this change might not be all that useful.
- ❖ AI can now use Wind Walking units to carry the entire stack over sea (446, 466, 509)
- ❖ AI selected targets for settling better (448)
- ❖ The AI will now consider the target's military power when deciding on a Break Treaty or Declare War request (453)
- ❖ Personality now has a reversed effect on the AI's decision on a Break Treaty or Declare War request : more peaceful AI is less likely to accept instead of more likely. (453)
- ❖ AI now recognizes Wall Crusher and can use such units to attack walls (463)
- ❖ AI will target enemy stacks on the overland map with spells better (469, 485)
- ❖ AI will no longer attack flying units with melee units if their ranged attack is invalid

- ❖ (missile or magic immunity) (471)
- ❖ The secondary realm of the human player is now always correctly set at the start of the game, while it wasn't in earlier versions. (475)
- ❖ AI will not send a stack towards a target on the overland map if it cannot be reached due to all paths being blocked (478)
- ❖ AI units will no longer use a precalculated path for movement from earlier turns which can potentially cause them to bump into stuff like units or new outposts unintentionally (487)
- ❖ AI is now able to send multiple stacks towards the same nearby target on the overland map for a concentrated assault and more effective use of Towers of Wizardry (488)
- ❖ The AI will no longer try to attack the fortress of already banished wizards (504)
- ❖ AI can now find targets for Warp Node (510)
- ❖ The AI will no longer cast Icon Life.pngHoly Word when it would affect no targets. (643)
- ❖ The AI can now use Icon Sorcery.pngPsionic Blast against units with Illusions Immunity. (706)
- ❖ The AI can now target Icon Nature.pngEarth To Mud to create obstacles between its ranged units and enemy ground melee troops (instead of only trying to catch as many enemies in the middle of the effect as possible); and will no longer re-cast this spell if the best target tile is already mud. (714)
- ❖ The AI will no longer cast Icon Life.pngRighteousness in battle when it won't protect from anything. (716)
- **Gameplay and interface changes**
 - ❖ Adjustments in monster lair costs. Allows Werewolves and makes value more appropriate for strength of the monsters. (001)
 - ❖ Adds new land size option : Tiny. (003)
 - ❖ Minimal distance between Towers of Wizardry is 4 instead of 10 (009)
 - ❖ Adjustments of monster points for various types of Encounter Zones (013)
 - ❖ Encounter Zones no longer need to have at least one empty tile between each other. Required to make sure map generation does not crash on lower landmass settings where the land area available is insufficient for this kind of restriction. (014)
 - ❖ Encounter Zones can have up to 6 of the primary monster selected instead of up to 4. (015)
 - ❖ Treasure points per monster point in Encounter Zones is stable instead of being random. On Arcanus, treasure points are exactly the same as monster points, on Myrror there is a +25% bonus. Original game code sometimes produced completely invalid amounts of treasure for an unknown reason, which is also fixed by this change. (016)
 - ❖ Treasure points always receive a +75 additional bonus to avoid Encounter Zones that contain "Absolutely Nothing" (017)
 - ❖ Towers of Wizardry no longer bypass treasure point checks to include a Spell. However, if the points are insufficient for the chosen spell type, the Tower will not contain a spell. (018)
 - ❖ Treasure can contain larger sums of Gold or Mana. (019)
 - ❖ Higher amount of treasure points can be reserved for an Item in the treasure. This ensures items created by the player through Itemmake.exe will usually be possible to find. New cap is 6000 mana, items more expensive than that will not be possible to get this way. Original maximum was 3000. Furthermore, for each 100% treasure points spent, the actual item value added is 120%. (020)
 - ❖ Treasure points required to add a Prisoner to the treasure, and the amount of points spent are now identically 400. Originally, it required 400 points, but subtracted 1000 instead. (021)
 - ❖ Spell treasure rolls are no longer cumulative and cost more treasure points to prevent disproportional rewards. (022)

- ❖ Adjustment of the chance for Book/Retort treasure (023)
- ❖ Book/Retort treasure no longer disables all other treasure automatically (024)
- ❖ Adjustment of the chance for each treasure type (025)
- ❖ Alchemy can convert up to 10000 mana or power at once instead of 999 (046)
- ❖ Failing to find a retort or book due to having too many in treasure now grants twice as valuable items as replacement. (054)
- ❖ New formula for Threatening in diplomacy (060)
- ❖ Adjustments to diplomacy end of turn effects and relation shifts (061,094)
- ❖ If the AI's "break alliance" request is refused, relation is no longer instantly set to the lowest, instead a major loss of points happens. (063)
- ❖ New formulas for Player to AI Diplomacy treaty proposals. (064)
- ❖ Peace Treaty has a longer duration (067, 223)
- ❖ Various changes to Diplomatic Reaction including triggers to several previously unused AI texts, and the ability for the AI to be pleased or reward gold if the AI's enemies are being attacked by the player (068,069)
- ❖ Breaking a treaty no longer reduces Hidden Relation towards unrelated wizards (071)
- ❖ Offering tribute is more effective. (072)
- ❖ The AI players are more patient during trades (073)
- ❖ Favorable trades increase Visible Relations a bit more (074)
- ❖ Alliances allow the player to move their units in the AI's territory without penalties. (092)
- ❖ Banishing or defeating a wizard will only provoke a negative Diplomatic Reaction from the wizard's friends/allies. Their enemies will have a positive Diplomatic Reaction instead. (103)
- ❖ Banishing a wizard no longer lets players take half the other wizard's mana reserves. (105)
- ❖ The number of current turn is displayed during combat (109)
- ❖ If a unit has both ammo and mp, both are displayed during combat (110)
- ❖ Strategic combat spreads damage between units weighted by their cost instead of forming a queue and killing them off one at a time until enough damage was distributed. This results in more survivors for the winner, but also more wounded. (112)
- ❖ Improved calculation of a unit's offensive, defensive and ranged potential for strategic combat and AI decisions (114, 115)
- ❖ Specific bonus Icon ToHit.png To Hit limited to melee or ranged attacks only is now displayed on the units. If a unit has both, they're merged into a regular Icon ToHit.png To Hit bonus. (142)
- ❖ If a human player ends up with more than 9 units on a map tile, the new unit freshly produced will be pushed away to an adjacent tile instead of the one with the lowest maintenance. (149)
- ❖ Spell of Mastery can no longer be found in captured fortresses or traded for. (167)
- ❖ Icon Death.png Animate Dead no longer allows keeping raised enemy units after combat. (173)
- ❖ Grand Vizier no longer builds units, and will not chance the unit production orders (212)
- ❖ Excess population carries over instead of being lost when reaching the next 1000 (213)
- ❖ Astrologer and Historian shows more accurate ratings for players (221, 222)
- ❖ AI players can now request their human ally to declare War on their enemies. Refusal of this request results in a severe penalty to Visible Relation but the Alliance isn't automatically broken. (281, 282)
- ❖ Rampaging monsters can now destroy a player's capital, eliminating them from the game. (283)
- ❖ Unit view displays the spells heroes know (284)
- ❖ Vault has 8 slots instead of 4 (292)

- ❖ +X To Melee and To Range are displayed if a unit has melee only or ranged only hit bonus (304)
- ❖ Unit movement is displayed as a number (305)
- ❖ To Hit and To Defend are displayed even if they're negative (306)
- ❖ When scouting a lair, "a few" appears if there are 3 or 4 monsters. "many" is shown if 5 or more. Neither if only one or two. (307)
- ❖ Strategic Combat tries to keep heroes away from harm's way when able (309)
- ❖ if a Rare or Very Rare spell is to be awarded in treasure, the Arcane realm cannot be chosen as the reward - all spells in it are common or uncommon, so that would waste a potential good spell find.(329, 507)
- ❖ Units moving through an overland map tile containing a ship or other transport do not automatically set to patrol - prevent ships "catching" units halfway through their assigned movement, making them stop and get forgotten about (345)
- ❖ Maintenance costs on units are displayed as a number instead of that many small icons (352)
- ❖ Changes to Raider stack spawning and effect of Revolting Raiders option (364)
- ❖ Automatic Combat - aka Strategic Combat - can now raise undead for the winner, if they have Death spellbooks, or units with the Create Undead or Life Steal ability (381)
- ❖ Holy Bonus and Resistance to All now shows the bonus level (+1 or +2) (412)
- ❖ Astrologer and Historian graphs are updated (428) Magic Power is now Power Production, only contains power obtained. Spell Research is now Spell Power and contains both skill and research. The Historian graph is a sum of population, army strength and power production. Spell Power is not included since skill and research only makes spells available, but does not provide the actual power to use them.
- ❖ Heroes can no longer desert if low on gold, if any other unit is available, they'll desert instead, if only heroes are left, they'll not desert. I made this change mainly to help the AI, but since then I found that the AI units never desert due to low maintenance anyway - This change might be unnecessary? (434)
- ❖ City growth will always be reported (reversal of Insecticide change, 439)
- ❖ Declare War On requests will never succeed if there is a Peace Treaty between the two players. (449)
- ❖ Changes to the order units are placed on the battlefield in combat and in the order they get automatically selected : aim is to have all ranged units and all melee units in one "block" instead of alternating. (454)
- ❖ Weapon Abilities now show up on the unit view (460)
- ❖ There can be a maximum of 2000 total units in the game instead of 1000. (473, 499)
- ❖ Wizard names can be up to 16 characters (474)
- ❖ The generated terrain cannot contain closed water bodies cut off from sea, in other words there are no lakes. Lakes are impossible to handle for the AI and cause them to be unable to properly use ships to transport armies. (480)
- ❖ New option : Backup Saves : create a numbered save file after each turn played (508)
- ❖ When a city reaches maximum population and is set to Housing, it'll switch to producing Trade Goods at the end of turn. (512)
- ❖ Trying to cast Icon Life.pngDispel Evil with no opposing Icon Chaos.pngChaos or Icon Death.pngDeath units will prompt the correct error message. (677)
- ❖ Trying to cast a unit spell that only works on Normal Units in combat will now display the correct error if all "valid" units are dead. (678)
- ❖ Bonus Icon Hits.png Hits granted by magical effects are now always shown with Icon Hits Gold icons even overland, including those granted by Icon Life.pngCharm of Life. (680)
- ❖ The same unit can now display multiple Unit Curse animations in combat, not just one. (688)

- ❖ Rivers and Swamps now also appear in combat on a tile. (691)
- ❖ Towers of Wizardry now show the color of their last owner. (692)
- ❖ The combat unit display (top right corner when mousing over a unit) now shows modifiers Icon ToHit.png To Hit and Icon ToBlock.png To Block. (693)
- ❖ The combat unit display and active unit window (bottom middle) now show Icon Thrown.png Thrown and Icon Breath.png Breath Attacks. (696)
- ❖ Icon Death.pngWrack's visual now has a sound effect, and removes Icon Figure.png figures with more appropriate timing. (697)
- ❖ The Additional Power slider no longer appears when there is no Icon Mana.png Mana/Skill left to actually infuse into the spell being cast. (720)
- ❖ Combat spell targeting now also highlights the target tile for non-unit spells, if it is valid for the spell being cast. (729)
- ❖ Greatly improved the responsiveness of combat spell targeting. (729)
- ❖ Icon Chaos.pngMagic Vortices can now move to the tile of central structures in combat, consistent with the targeting mechanics of the spell, which allow them to be initially summoned there. (730)
- ❖ Icon Chaos.pngCall Chaos now uses the correct graphics for its Icon Chaos.pngDoom Bolt and Icon Chaos.pngFire Bolt effects, applies its effects with more appropriate timing, and no longer freezes all units while playing its animation. (737)
- ❖ Replaced the original 5-run linear feedback shift register RNG with a more appropriate full-cycle one. (739)
- ❖ Disenchanted Icon Death.pngWarp Node during combat now displays the appropriate dispel message. (741)
- ❖ Reversed Insecticide change: the Escape key is now again used to exit from advisors and list selectors instead of the Space key. (748)
- **Optional files**
- None of these are pre-applied in the 1.50 version, but the patch files are provided for use if desired.
 - ❖ Spells that use a slider are not available for enchanting into items, to prevent the "max slider for free" exploit. (I001, 324)
 - ❖ Enable Life and Death book picks at the same time. (005, 055)
 - ❖ Myrran costs only 2 picks (006)
 - ❖ Fewer neutral towns generated (026)
 - ❖ Peaceful is allowed for Death wizards, Maniacal for Life wizards at low chance (030)
 - ❖ Maximal combat duration halved (033)
 - ❖ Lightning bolts hit enemies during combat at the wizard's fortress proportional to casting skill (034)
 - ❖ Maintenance cost field in unit tables now works - has no effect unless modding is intended to actually chance the data in the field (037)
 - ❖ Buy cost is always 2x (038)
 - ❖ Towns can display up to 16 buildings for production - Only useful if modding the building tree (039)
 - ❖ Jewelry does not cost double mana for stat increasing abilities (133)
 - ❖ Undead fantastic creatures do not have an increased maintenance cost (147)
 - ❖ Ranged attacks cost all movement instead of 10 (157)
 - ❖ Leftover productionIcon Production.png is not lost but used for the next project (211)
 - ❖ Death units can heal naturally except undead, zombies and skeletons (215)
 - ❖ Raise Volcano allowed on Hills, Mountains (277)
 - ❖ Production can display more than 10 unit types - ever wondered why Spearmen sometimes disappear?(427)
 - ❖ Ships and Catapults have no food maintenance - Highly recommended for AI reasons (436)
 - ❖ Elementals and Phantoms can be raised as undead (497)

- ❖ Finding a Spellbook in Treasure interrupts Icon Arcane.pngSpell of Mastery research - only works if 055 is also applied. (582)
- ❖ Slightly improved readability for the spell being researched in the Apprentice (F3). (650)
- ❖ Icon Movement AirFlying overrides Ability NonCorporeal Non-Corporeal as the stack's default Movement Type, as in v1.31. (708)
- ❖ Ammo is displayed at its v1.31 location in combat. (709)
- ❖ Demons, Fire Elementals, and Earth Elementals use a more "appropriate" summoning animation. (713)
- ❖ The Additional Power slider is split more proportionately in combat (eg. with a max infusion of 1, it's split 50/50 rather than 99/1). (718)
- ❖ The AI will now consider Icon Sorcery.pngConfusion's temporary control change effect when assigning the Ability SummonDemons Summon Demons command - an over 18 units crash bug fix partial. (743)
- ❖ Icon Sorcery.pngHasted units no longer waste ammo on a second Ranged Attack if the first one already destroys their target - requires 744. (745)
- **Obsolete files**
- These have been replaced by a more complete fix, and are no longer included in the latest versions, but may still be around in older distributions.
 - ❖ When the AI or their heroes cast Call Chaos, the game no longer crashes. Note that unless the RC fix 592 is also applied, the spell will have no graphics displayed when cast by the AI (287 - replaced by 737)

V1.40

- Also known as Insecticide, this unofficial patch was developed by Kyrub between 2010 and 2015.
- This patch fixes several critical bugs but also introduces new bugs, questionable AI improvements and gameplay changes.
- This version didn't come with patch files originally and the changelog he published was far from complete, so the changes to the game made by Kyrub had to be analyzed and properly organized.
- A detailed description of the contents can be found here or at <https://masterofmagic.fandom.com/wiki/Insecticide> or within the organized patch files under Patches/140 :
 - **Bug fixes**
 - ❖ Game recalculates town data whenever there are no units selected to make sure the income information is up to date and accurate. (W \$43362)
 - ❖ Fixes Wind Walking bug, Total movement allowance of stack displayed does not always match windwalker's. (W \$4A313)
 - ❖ Fixes : Wraith Form items do not grant Non-Corporeal movement. Unfortunately, it also introduces a new bug whereby a single Hero with a Wraith Form item grants Pathfinding to the entire stack so long as they are the last unit in the stack (only the last Hero's item flags are actually stored, and that's what every unit is checking against). (W \$51B62)
 - ❖ Archmage retort now correctly displays the +50% SP gained.
 - ❖ Fixes the bug of found items in treasure being unlimited value. (\$62C11)
 - ❖ Fixes the bug of found items in treasure requiring the wizard to have enough books to be able to create the item. (\$62C11, \$8D9D5)
 - ❖ Fixes diplomacy bug : When proposing "Declare War on", bonus for having a Wizard's Pact is not added. (\$W 6400F)
 - ❖ Fixed one of the bugs in returning ownership of a unit after confusion. (W \$6B800)
 - ❖ Fixes bug : Item granted Invisibility is not considered when checking for visibility of a unit during combat AI targeting (W \$6D76A)
 - ❖ Fixes bug : Not building engineers count into building capacity - might only apply to second and later map squares in the road, not sure (W \$712D5)
 - ❖ Units owned by the human player on the overland map cannot move through

enemies unless that's the intended destination to avoid unintended combat. (W \$724DD)

- ❖ After strategic combat, items on heroes are no longer lost, but will be received by the winner. (\$ W7318B)
- ❖ Fixes bugs of how mana is being spent during Strategic Combat. (W \$7F0C6)
- ❖ Fixes strategic combat bug : effect of spellbooks of various realms overwrite each other instead of being added up. (\$7F181)
- ❖ Change to how "Defense rating" of unit is being calculated for Strategic combat and AI. (W \$7FF5F)
- ❖ Fixes bug : AI was able to target heroes with Possession. (W \$80D8E)
- ❖ Fixes some bug in Counter Magic (one variable was used for two different purposes it seems, W \$837D6)
- ❖ Maximal number of Icon Chaos.png Magic Vortices is limited to 4 to prevent memory corruption and crashing. (W \$846F6)
- ❖ Fixes bug : Dispel Evil can be cast on non-Death non-Chaos units. (W \$8603D)
- ❖ Fixes bug : You can target units with Life Drain even if they have Death Immunity. (W \$8613C)
- ❖ Back button on Create Artifact screen for item icons is removed, a new Exit button is added. Necessary because the back button causes crashes. (W \$8C304)
- ❖ Fixes : Icon Defense.png 3 from Chaos Channels is applied twice. (W \$90A0C)
- ❖ Fixes : Some spells are missing from heroes (W \$913A3)
- ❖ Overland spells no longer treat Icon Chaos.png Chaos Channeled units as Normal Units. (W \$986D7)
- ❖ Cloak of Fear now affects the correct unit. (W \$996C4)
- ❖ Ranged Icon ToHit.png To Hit bonus now also applies to short-range attacks. (W \$99B64)
- ❖ Fixes bug : To Defend Icon ToBlock.png not only increases success chance of Defense Rolls, but also reduces chance of enemy melee Attack Rolls, thus providing over twice the expected benefit for Melee Attacks. (Prayer, Lucky bug W \$99C3A)
- ❖ Fixes bug: Weapon Immunity overrides Missile Immunity, preventing the latter from taking effect. (W \$9A663) Introduces new bug: Weapon Immunity now raises Defense to Icon Defense.png 50 instead of Icon Defense.png 10 against non-melee weapon attacks (Icon Ranged Bow.png Missile and Icon Ranged Boulder.png Boulder, also Icon Thrown.png Thrown in v1.50) made by units with Icon Melee Normal.png Normal Weapons.
- ❖ City Walls bonus in strategic combat will only be applied if the walls are built. Bonus reduced from Icon Defense.png 3 to Icon Defense.png 2. (W \$9A995)
- ❖ Fixes bug, Regeneration prevents Word of Recall and Recall Hero from working properly.
- ❖ The defender no longer loses all its remaining movement for the turn after combat. Due to turn order, this prevented the AI from using those units for the turn at all. (W \$9D152)
- ❖ A variable during calculation of movement allowance wasn't initialized during combat (W \$9F151)
- ❖ Charismatic now properly checks for gold before presenting the hero, item and mercenary offer : When owning 50 gold, offers costing 100 gold can show up which will then have an effective cost of 50, instead of being limited to offers of 50 gold which are reduced to 25 due to the retort. (W \$A225D) New bug : when buying items, this change applies even to Artificer wizards, allowing them to buy items up to twice as expensive as they can afford. If bought, this results in negative remaining gold, causing various serious problems.
- ❖ Chaos Channels will no longer overwrite ranged/thrown attacks on units with a Breath attack. (W \$A4E5D)
- ❖ Disenchant Area will no longer dispel own spells when used by heroes. (W

\$A9143)

- ❖ Dispel-type spells no longer target the player's own unit spells when used by spellcasting units rather than a Wizard. (W \$A9911)
- ❖ Attempts to fix combat-cast Icon Sorcery.pngSpell Lock having no effect against dispelling. Unfortunately still has no effect. (W \$A9A6A)
- ❖ Attempts to fix overland-cast Icon Life.pngInvulnerability not being possible to dispel in combat. Unfortunately, it still isn't. (W \$A9DD6)
- ❖ Fixes bug: dispel-type spells check the wrong player for the presence of Icon Life.pngHoly Arms for skipping the removal of combat-cast Icon Life.pngHoly Weapon. (W \$A9E46)
- ❖ Attempts to fix combat-cast Icon Life.pngInvulnerability not being possible to dispel in combat. Unfortunately, it still isn't. (W \$AA093)
- ❖ New bug: Icon Death.pngPossession can now be dispelled by its caster without reverting control of the unit. (W \$AA5D4)
- ❖ Partially fixes the memory corruption caused by casting Icon Life.pngRaise Dead - by redirecting that corruption to a fixed location containing sound error messages. (W \$AB094)
- ❖ Unknown fix in Animate Dead, probably a crash bug. (W \$AB53A)
- ❖ Fixes bug in Animate Dead, if enemy unit is animated, new owner is not set on the overland unit. (W \$AB71D)
- ❖ Unknown change to dialog/warning of casting Summon Hero and Summon Champion (not sure what the bug here was, but seems functionally equivalent) (W \$ABA71)
- ❖ Attempts to fix Wrack bug (x^2 damage instead of x damage), has no effect, might corrupt memory due to wrong addressing, uses ES instead of DS. (\$AE2EA)
- ❖ Fixes : Wraith Form provides immunity to Call Lightning instead of Magic Immunity. (W \$AE4D5)
- ❖ Suppress Magic no longer counters Spell of Return (W \$B2A80)
- ❖ Fixes unknown bug in the procedure that builds a list of the spells available for casting during combat, specifically the calculation of skill/mana available. (W \$BC1FF)
- ❖ New bug : Cities are unable to lose population if having higher population than the maximum. (W \$C0F32)
- ❖ Great Wasting and Armageddon no longer removes all pacifying effect of buildings. (\$C2517)
- ❖ Lo Pan has 1 fewer Sorcery books because the total picks was over 11.
- ❖ The two heroes with no magical ranged attack cannot get Arcane Power (M \$48018)

○ **AI changes**

- ❖ Changes to the preferences of building each building group both base and objective related, see : Objective for details. (W \$2B4DD)
- ❖ AI gains the ability to find items in treasure. In 1.31, they do not receive the items they found. (W \$622EF)
- ❖ Change of unknown purpose in the way AI compares the forces on its home continent for the old Military Modifier when looking for the Need for War (W \$65AAF)
- ❖ Minor change to the difficulty modifier used in AI to AI diplomacy (W \$67b05)
- ❖ AI minimum difficulty to for various features in diplomacy changed to match changes in difficulty levels (addition of Extreme, removal of Intro)
- ❖ AI can unintentionally walk through units of other players, initiating combat, if relation is -20 or lower instead of -60 or lower, making the AI less smart and more aggressive. AI actually prefers doing so instead of moving through other tiles if the army in question is owned by the human player. (W \$724DD)
- ❖ AI is no longer allowed to flee during the first turn of combat. (W \$7B8A1)
- ❖ New bug : Icon Sorcery.pngHaste is ignored by the AI when deciding on what to

target with Icon Arcane.pngDispel Magic. Hasted units with no other enchantments are now invalid targets for dispelling (W \$81BC7)

- ❖ AI can use the Healing Spell ability of units in combat. Breaks the display position of AI used Doom Bolt because one additional byte was accidentally deleted. (W \$889F5)
- ❖ A rather big part of AI combat code is disabled for an unknown reason. Disabled code was used when the AI had ranged superiority and it was significantly simpler than the normal AI, most likely resulting in significantly dumber decisions. (W \$898A5)
- ❖ Fixes : AI calculated total ranged power of armies in combat incorrectly (W \$89795, \$9E533)
- ❖ Fixes bug: AI units with Illusions Immunity can't target Invisible units with Ranged Attacks. (W \$8A2C3)
- ❖ AI prefers to attack the more damaged enemy instead of the less damaged during combat. (W \$8A6BC)
- ❖ Removed additional upkeep discount for units received by the AI on the highest difficulty settings, as it already receives a major discount without this. (\$96303)
- ❖ Removed AI maintenance discount on building maintenance completely (\$95E33)
- ❖ During combat, AI will consider units exactly reachable in a turn as being too far, failing to prefer units that can be attacked, resulting in units walking around and ignoring enemies right next to them. (W \$9BAD8)
- ❖ AI prefers to attack more damaged units in combat if they can be reached that turn -note that the above change interferes with this improvement. (\$9BAE8)
- ❖ Fixes bug in how AI calculates total army strength in combat, used to base decisions - such as using spells or fleeing - on. (W \$9EBE6)
- ❖ Lawful wizards prefer to raze a city if Hidden Relation is equal to or less than zero instead of only when equal, meaning if they got betrayed previously. Since zero is the starting value, this should only happen is it strictly less than zero to have the intended effect. (W \$9F90D)
- ❖ AI wizards have a 10% lower chance to raze a city if was owned by another AI wizard. (W \$9F968)
- ❖ AI wizards now correctly prefer razing more if enemy forces are present in larger amount nearby, implying it's hard to keep the city, instead of the opposite, razing if own forces are superior. (W \$9FA87)
- ❖ AI will refuse offers from heroes if their ID is lower than the number of heroes they already own times 4, to preserve the slots for stronger heroes. (W \$A2A40)
- ❖ Fixes various bugs in AI use of Enchant Item and Create Artifact (W \$B0FA4)
- ❖ Changes to the AI table "priority of combat spell groups per combat situation". Defensive spells are now much less likely to be cast when the AI is losing, offensive buffs are more likely when at a slight advantage, and damage spells are less likely when the AI is winning. (W \$B9C95)
- ❖ Removes Icon Death.pngMana Leak from the must-do top priority disenchant list. No change compared to v1.31, as the value set here was never actually used there. (W \$B9DE8)
- ❖ Fixed the AI looking at the wrong spell Realms for deciding on casting Icon Life.pngBless, Icon Life.pngTrue Sight, Icon Nature.pngResist Elements, Icon Life.pngRighteousness, or Icon Nature.pngElemental Armor in combat. Since the modifier for this is still 0, it ultimately has no effect. (W \$B9DE6)
- ❖ The AI has less chance of trying to cast Icon Nature.pngWall of Stone in battle. Considering it is not even a combat spell, this has no actual effect. (W \$B9EB2)
- ❖ Changed the AI's category for Icon Nature.pngWeb (W \$B9ED4), Icon Nature.pngIron Skin (W \$B9ED4), Icon Sorcery.pngCounter Magic (W \$BA31A), Icon Sorcery.pngGuardian Wind (W \$BA3A3), Icon Chaos.pngWarp Wood (W \$BA3A3), Icon Chaos.pngDisintegrate (W \$BA9A1), Icon Life.pngInvulnerability (W \$BAC7F), Icon Death.pngBlack Prayer (W \$BAFEB), Icon Death.pngWall of Darkness (W \$BB1CE), and Icon Death.pngWrack (W \$BB285) to the group

originally containing the offensive buffs, which is the most independent of the AI's comparison of its own army strength with that of the enemy - most of these changes are rather insignificant, except that of the two damage spells, which will now no longer be cast when the AI is at an overwhelming disadvantage. That is normally a bug.

- ❖ New bug: the AI can no longer cast Icon Arcane.pngDispel Magic or Icon Sorcery.pngDispel Magic True if the human player has Icon Life.pngHoly Arms active. (W \$BA125)
- ❖ The AI has less chance of casting Icon Chaos.pngWall of Fire in combat. Unfortunately, since it is unable to do so anyway, this change has no actual effect. (W \$BA818)
- ❖ New bug: changed the AI's category for Icon Chaos.pngFlame Strike (W \$BA9BA), Icon Life.pngHoly Word (W \$BAE5C), Icon Death.pngDeath Spell (W \$BB350), Icon Sorcery.pngBanish (W \$BB8C3), and Icon Death.pngWord of Death (W \$BB9C3); and the secondary categories of Icon Sorcery.pngCreature Binding (W \$BA588) and Icon Death.pngPossession (W \$BB0B4), from damage/destruction to unit curse, preventing them from being cast when the AI is at an overwhelming disadvantage.
- ❖ The AI will not cast Icon Death.pngMana Leak after turn 3 in combat. (W \$BB01B)
- ❖ Icon Death.pngMana Leak gets a high casting priority if any type of wall is present. Unfortunately, this also introduces new bug: the AI can't cast this spell on its first turn when defending - the variable queried is not set up yet at its first spellcast. (W \$BB096)
- ❖ Changed the AI's category for Icon Death.pngTerror from unit curse to defensive spell, making it slightly less likely to be cast overall. (W \$BB14C)
- ❖ The AI now considers an opposing Icon Nature.pngCall Lightning or Icon Death.pngWrack spell a must-do top priority to disenchant. (W \$BB70D)
- ❖ Changed the AI's category for Icon Sorcery.pngVertigo (W \$BB8AD), Icon Chaos.pngWarp Creature (W \$BB8F5), Icon Chaos.pngImmolation (W \$BB909), and Icon Death.pngWeakness (W \$BB987) to the group originally containing the defensive spells - they are now less likely to be cast when losing.
- ❖ The AI has an increased chance to cast Icon Sorcery.pngHaste (W \$BB8CF) and Icon Life.pngHeroism. (W \$BB947)
- ❖ The AI is more likely to cast Icon Life.pngDispel Evil when there are more enemy Fantastic Units with an effective Resistance of Icon Resist.png 8 or less against it - regardless of whether they are valid targets or not though. (W \$BB94F)
- ❖ AI considers Immolation a lower threat of Chaos Realm for casting protective spells in combat. (W \$BBEC4)
- ❖ AI estimated threat level of realm associated attacks in armies is cut to one quarter, reducing the chance of using protective spells greatly. (W \$BC1A7)
- ❖ AI is able to buy items from merchants. AI pays 50% of the normal price for items. (W \$BE009)
- ❖ Changes to how AI decides which unit needs to be disbanded for being obsolete (W \$BF64F)
- ❖ AI can first hire mercenaries 10 turns earlier (40 instead of 50) (W \$CAAF7)
- ❖ New AI decision procedure for hiring mercenaries (W \$CAAFE)
- ❖ Changes to how AI distributes the power base between Mana, Research and SKill (W \$CB44D)
- ❖ Changes to when and how much AI uses Alchemy. (W \$CCC78)
- ❖ Changes to how AI sets the tax rate. (W \$CD0C4\$)
- ❖ AI is allowed keep 2 settlers or engineers instead of 1 past turn 200. (W \$CD45A)
- ❖ AI will not use previously chosen path for unit movement if distance is only 1 map cell (W \$CE54D)
- ❖ Changes to AI research selection (W \$DC699)
- ❖ AI will not cast expensive overland spells if it cannot afford it, instead doesn't cast

a spell that turn (W \$DCDAE)

- ❖ Fixing the AI internal list of spell types known to select from (W \$DDD3B)
- ❖ Changes to preferences of various overland spells. (\$DDE03)
- ❖ When AI runs out of mana, it won't automatically cancel ALL global enchantments, only Suppress Magic and Time Stop (\$E0D1C)
- ❖ Changes how the AI selects targets for overland unit enchantments (\$E1367), in general a major preference of heroes and anything at the fortress added.
- ❖ AI moves the Summoning Circle more often. (W \$E39F6)
- ❖ AI will not buy production unless at least some of it is already done (W \$E3FB6)
- ❖ Fixes bug in AI decision to select Trade Goods for production. (W \$E4017)
- ❖ AI will not build settlers if population in city is 1 (W \$E4163)
- ❖ Changes AI's preferences of when to produce a unit vs a building (W \$E429C)
- ❖ Fixes other bugs and changes preferences of building production (W \$E4321)
- ❖ Neutral cities produce buildings slightly more often (W \$E481D)
- ❖ Changes to AI's production purchase decision (W \$E4A3E)
- ❖ Fixes various bugs in the AI assigning movement orders to units (W \$E5226)
- ❖ AI generally prefers keeping fewer defenders in cities and sending out larger amounts of units to build stacks, including the capital (W \$E54DB defense, E9034 stack building)
- ❖ When sending out units from the fortress to build stacks, send weakest instead of strongest but if the remainder for the current turn divided by 4 is 1, send strongest anyway. (\$E90D4)
- ❖ Changes to how AI uses settlers, contains new problems : Expansionist wizards will always prefer to settle the other plane even if they haven't settled their own, Settlers will never build if a unit of another wizard -even if ally!- is close. (\$E9852)
- ❖ When AI looks at strength of potential targets on the overland map for an attack, the human player's units are calculated at 25% of their effective strength instead of 125%, often resulting in unreasonable attacks from the AI. (\$W7482)
- ❖ AI will not immediately disband units if income is negative, unless gold or mana reserves are too low to afford the negative income for 32 turns. (W \$E87D2)
- ❖ Partial fix for AI units to board ships. (W \$E6B2B)
- ❖ AI is able to summon certain units they were unable to before on the overland map.
- ❖ Changes to the AI's preference of spell picks at the start of the game. Also affects the default spells selected when the human player is starting the game. (M \$27178)
- ❖ The AI is allowed to pick any race on any difficulty instead of being restricted to the best races on high levels. (M \$37140)
- ❖ Fixed the guaranteed uncommon spell AI wizards get at hard or higher difficulty (was not received in Non-Nature realms if the wizard already had the Basilisk spell)
- ❖ Changes to the effect retorts have on the AI wizard's Personality and Objective.

○ **Gameplay and interface changes**

- ❖ Unit view displays bonus To HitIcon ToHit.png and To DefendIcon ToBlock.png in the top right corner. To Hit was previously listed as an ability, and To DefendIcon ToBlock.png was hidden. (W : \$10D4C)
- ❖ Trireme and Galley has a transport capacityIcon Movement Ground of 8. (W : \$29B3C)
- ❖ Cost of units to be placed in lair updated, but in the wrong file, so no effect. (W : \$2AD7A)
- ❖ Floating Island loses Death Immunity and gains the flag "display race" so it shows as "Sorcery Floating Island" in the game. Probably unintended. (W \$2B10E)
- ❖ Added Extreme difficulty (+300% bonus for AI resources), removed Intro difficulty. All difficulty levels are shifted below Extreme, but not everything is moved, due to this, some hardcoded exceptions based on Difficulty appear at 1 higher level than they should, for example 100% fleeing success rate of Intro and Easy instead

- applies to Easy and Normal. (W \$2B48E)
- ❖ Addition and change of various hotkeys (many locations).
- ❖ Addition of new option : Revolting Raiders
- ❖ Addition of new option : Monsters Gone Wild
- ❖ "X" button on city screen moves to the next city (W \$3AD39)
- ❖ Removed option "End of turn wait" and "Auto Unit Info" they are always enabled.
- ❖ Casting Nature Awareness automatically casts Detect Magic - New bug. Was probably intended for the RVL cheat and debugging but was left in the released version. (W \$45AFD)
- ❖ Unknown purpose change of the order units get autoselected on the overland map if towers are where they are standing. (W \$471ED)
- ❖ When entering an Encounter Zone, "many" is displayed if there are 4 or more of that type of enemy inside. (W \$6247B)
- ❖ New strategic combat bug : All units have an equal chance to take damage regardless of defense, unless they have 50+ def. I assume this was intended to weight damage better but was left incomplete. (W \$7ECD4)
- ❖ Spell Save modifier works with Life Drain (W 81FD3h)
- ❖ Spell Save modifier works on Death Spell, Holy Word (W \$82780)
- ❖ Runemaster and True spells result in 4x total effectiveness instead of 6x for some spells : Dispel Magic True and Disenchant True. (W \$82916)
- ❖ Change to the Spell Save procedure, for unknown purpose, I assume for easier editing through the Tweaker. (W \$84DFF)
- ❖ Change to Conjurer maintenance discount rounding - cost to pay is going to be rounded down if effective cost is x-x.50 and up for x.75 instead of always up. (W \$9682E)
- ❖ Wind Mastery doubles ship speeds and does not slow down enemy ships. (W \$98698)
- ❖ Central squares of city behind City Walls adds Icon Defense.png 3 as though the wall was intact there. (\$W 99F2A)
- ❖ Icon Chaos.pngChaos Channeled units can gain Icon Experience.png Experience after combat. (W \$9D3AB)
- ❖ Icon Arcane.pngArcane spells appear in a more limited quantity in research options. (W \$A2E49)
- ❖ Changes to priorities of spells used when finding spells in a defeated wizard's fortress, or by the AI when trading. (W \$A3148)
- ❖ Merging provides immunity to Crack's Call (W\$AA657)
- ❖ Unknown changes for storing and reloading RND seeds.
- ❖ Population growth is not reported if city size>8. (W \$BDC6E)
- ❖ Cap of chance for finding heroes increased to 20%. (W \$BE959)
- ❖ Changes to the generation of raiders and rampaging monsters. (W \$E6B2B)
- ❖ New landmass option : Huge. (M \$30CF0)
- ❖ New Magic Power options : 0.5 to 2.5 instead of the original Weak (0.5), normal (1) and Powerful (1.5)
- ❖ Restricted the Y coordinate of the starting location for wizard towns to avoid the area that contains too much Tundra. Various other changes on how the fortresses are placed.
- ❖ Minimal Max Population for fortress location increased from 8 to 12. This makes it possible for the generation to fail : on less optional maps, there might not be enough suitable areas. In this case the game freezes in a loop.
- ❖ Base encounter budget for Normal Lairs increased by 200 on Arcanus and 150 on Myrror. (M \$39584, \$39598)
- ❖ Encounter budget for Weak Lairs tripled on both Planes (multiplier changed from 10 to 30). (M \$3967B)
- ❖ Colored Lairs (Abandoned Keep, Dungeon, Monster Lair, and Mysterious Cave) now feature Icon Chaos.pngChaos monsters 50% of the time. 1.31 code is botched and yields Icon Nature.pngNature enemies all the time (instead of its

intended ratio of 40% Icon Death.pngDeath, 40% Icon Chaos.pngChaos, and 20% Icon Nature.pngNature). (M \$39951, \$3996C, \$3A151)

- ❖ Divisor roll maximum range for secondary monsters in Encounter Zones reduced by 1 (9-[primary count] instead of 10-[primary count]). Slight increase in average secondary monster strength at the cost of a decrease in variety. (M \$39B6F)
- ❖ New bug : There are enchanted roads under the Arcanus starting cities.
- ❖ Greatly increased cost reduction of Spell of Mastery for 11 book wizards.

v1.31

- The last official update from Mircroprose.