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Current guide version is for Amethyst from 16.01.2023 (the latest one)

AmeEdit is a tool to customize creature configs in order to change them to your liking using Amethyst plugin. This guide aims to explain what each of its flags/fields does, so you can configure the creature as you see fit. Note however, that we won't cover the .txt stats here as those become self-explanatory once you open the respective file with TxtEdit.

So, in *basic flags* category (on the left part of the window) we have:

1) **DOUBLE_WIDE-occupies 2 cells** – just what it says. Makes a creature take 2 hexes on the battlefield. Also makes it take double damage from Fire Wall spell.

2) **flying** – makes creature ignore obstacles on the battlefield, makes it unable to benefit from *jousting bonus* and speeds up its moving animation. Do <u>NOT</u> set this flag if your creature is going to be teleporter – the "*isTeleporter*" flag I'll explain below already allows ignoring obstacles, and for movement to be instant, the "*flying*" flag needs to be disabled.

3) **shooter** – allows creature to perform ranged attacks and automatically applies -50% damage penalty for melee hits, -50% damage penalty for shooting enemies behind walls, and -50% damage penalty for shooting at range higher than 10 hexes away. If you set this flag, your creature must have:
- shooting frames in battle def at three respective categories
- projectile (shotXXX.def of $40 type)
- SXXXSHOT.wav sound
If you don't have any of these the game will crash on shooting attempt. It will also crash if climax frame for this creature in cranim.txt is greater than the actual amount of frames for this shooting direction. Should be equal or lower to avoid crashes, but the best visual result is achieved by setting it to the frame projectile is actually fired. I.e. Gogs have 8 frames for shooting but projectile is fired on 6th, so set 6 as climax and animation will "freeze" on this frame until it reaches the target.

4) **extended attack radius (two cells)** – creature will damage a hex behind the main target like most dragons do. Doesn't care if ally or enemy stands there, and even though the additional taget gets the same damage, it won't be affected by any possible post-attack effects. This flag is mutually exlusive with "*hits all enemies around*" one which has higher priority so if both are set, only the latter will work.

5) **living creature** – creature can be affected by Resurrection, Demonology, Sacrifice, Poison, Disease, Age, Blind, Death Ripple, Death Stare, Death Cloud and Life Drain.

6) **CATAPULT – can destroy walls** – creature will be able to target castle walls with its ranged attack. It should have one first, so it's useless without "*shooter*" flag above.

7) **SIEGE_WEAPON** – creature will be considered war machine in battle (0 speed, 0 retaliations). Not recommended since this flag alone won't get you a new war machine, you should connect it with other mechanics through scripting.

8) **KING_1** – creature will be affected by Slayer spell of any level.

9) **KING_2** – creature will be affected by Slayer spell of advanced and expert levels, not counting for basic one.

10) **KING_3** – creature will be affected by Slayer spell of expert level only.

11) **Mind spell immunity** – creature won't be affected by mind spells, specifcially Berserk, Blind, Forgetfulness, Frenzy, Hypnotize, Mirth and Sorrow. It will also take halved damage from Psychic elementals.

12) **Ray Shooting** – creature will shoot with a straight ray like Beholders. One would think the ray color is determined by projectile def, since Beholders have Zealot projectile which is white, and so is their ray (same for Arch Magi). But from my tests, no matter what colors is projectile for other creatures, the ray for them will be always black. This flag is useless without "*shooter*" one and provides only visual effect.

13) **No Melee penalty** – shooter creature won't get a -50% damage penalty when performing a melee attack. For creatures that can't shoot this flag doesn't matter. Better set it to storm elementals tho, since even though their description states they don't have melee penalty, they don't posess this flag by default so penalty is actually there which can be considered a SoD bug.

14) **---** - this flag has no in-game effect and is unused, but in MoP it was serving for raid boss mechanic, so technically in ERA with some scripting it is possible to make it useful as well.

15) **IMMUNE_TO_FIRE_SPELLS** – creature will become immune to all fire spells (including mines on Tower moat) and will ignore the damage from fire shield ability (actually it is the only protection from it since it doesn't count as a level 4 spell).

16) **Attacks twice** – after first melee/ranged attack and received retaliation, creature will perform another one.

17) **No Enemy Retaliation** – enemies won't retaliate on melee attacks of this creature. However, enemies with "*RangedRetaliation*" flag will still retaliate on ranged ones it if their ammo allows.

18) **No Morale Penalty** – creature morale will be always 0 since this flag removes not only morale penalties, but benefits too.

19) **Undead** – creature will be lowering allies morale by 1 in battle, will become immune to Bless and Curse spells, but could be affected by Animate Dead and Destroy Undead. That's actually all this flag does – every other undead immunity/mechanic is achieved by either disabling "*living creature*" flag, or activating "*no morale penalty*"/"*mind spell immunity*"/"*fearless*" etc.

20) **hits all enemies around** – just what it says, hits multiple targets but only the main one could possibly be affected by post-attack effects. This flag is mutually exlusive with "*extended attack radius (two cells)*" one and has higher priority over it so if both are set, only the former will work. Beware that this flag disables ATT_VAMPIRE effect.

21) **extended radius of shooting units** – does nothing by itself, but is required for "Missile*"* field to work (see below).

22) **stack killed? 41E617** – despite question mark this flag does exactly that – marks entire creature stack as killed. Not recommended for using.

23) **Summoned** – creatures with this flag don't leave corpse upon dying and will disappear from your army after battle ends.

24) **Clone** – marks creature as clone, it will be colored in blue and will perish from any damage.

25) **already had morale** – grants creature a first turn among all others in battle (regardless of their speed), but prevents additional morale-caused turn from happening. This flag lasts only the first round of each battle and will be reset when second one starts.

26) **were(already) waiting** – disables waiting possibility for the first combat round for this creature. When second round starts flag will be reset.

27) **already moved** – creature won't be able to act in first combat round. When second round starts flag will be reset.

28) **defending** – if creature was hit before its turn came, it will act the same as if defend button was pressed – will play defending animation and defense bonus will be applied. Doesn't actually skip the creature turn in this round (as the real defend button would).

29) **Sacrifice** – creature won't leave corpse upon dying. This flag doesn't prevent creature from being a target of Sacrifice spell itself.

30) **Don't Change Color** – creature won't change color when petrified or cloned, but Bloodlust spell will turn it red, removing the effects of this flag (clones will become first red, then blue).

31) **Shades of Gray** – creature will always be colored grey as if it was petrified, and so will its clones.

32) **dragon nature** – creature will be affected by Vial of Dragon Blood artifact, Mutare hero speciality and "*isDragonSlayer*"/"*isDragonResistant*" special flags.

In *special flags* category (on the middle part of the window) we have:

1) **hasSantaGuards** – at the beginning of each battle creature will be surrounded with guards. Type of guard creature is 1st level of owner hero's faction, unless you specify the guards number ID in the respective field. For guard to show up creature should have at least 1 cast point in .txts, which is spent on their summon. Don't use 2-hex creatures neither as guards, nor the ones who should have them. Also don't set guards to same ID as owner creature, it will reach the limit of 20 summoned stacks at the battle start, which is both OP and needless.

2) **isRogue** – grants creature Rogue's ability to act as a permanent Visions spell for hero army.

3) **isGhost** – grants creature a WoG's Ghost ability to add the number of killed creatures to its own amount. The number can be customized more precisely at Ghost Fraction field at the bottom right.

4) **isEnchanter** – grants creature an Enchanter's ability to automatically cast massive spells on it's turn, while still being able to act. Spell power can be affected by factors set in respective fields. However it won't work if you set any number in Mana Drain field which has higher priority.

5) **isSorceress** – grants creature a WoG Sorceress ability to apply debuffs after attack, amount of which depends on the stack strength difference with victim. Spell power can be affected by factors set in respective fields.

6) **hasFirewall** – grants creature a WoG Hell Steed ability to leave a 2-hex firewall after melee attack. The firewall will appear only if target has survived the attack. If creature won't be able to perform attack due to quicksand or landmine, the wall will still appear. After wall worns out, the hexes it used to occupy will become passable, so you can destroy battle obstacles this way (but not castle walls).

7) **Always + Morale** – creature morale will never drop below +1 unless some hero has Spirit of Opression which will set it to 0.

8) **Always + Luck** – creature luck will never drop below +1 unless some hero has Hourglass of the Evil Hour which will set it to 0.

9) **Fear** – creature will have 10% chance to make enemy skip his turn. These chances are not stackable.

10) **Fearless** – creature will ignore "*Fear*" flag of enemy creatures.

11) **NoWallPenalty** – ranged creature won't get -50% damage penalty for shooting at targets behind castle walls. All other battle obstacles in game don't even apply that penalty. Flag is useless without "*shooter*" one obviously.

12) **Sharpshooters** – ranged creature won't get -50% damage penalty for shooting at range higher than 10 hexes away. Flag is useless without "*shooter*" one obviously.

13) **ShootingAdjacent** – ranged creature will be able to shoot even if surrounded by adjacent enemies. It seems like only human player could benefit from it – AI still attacks in melee in such situation with this flag. Like the two above, is useless without "*shooter*" flag.

14) **StrikeAndReturn** – after melee attack creature will return to previous position.

15) **JoustingBonus** – each hex of distance between initial creature position and the one it attacks from will give 5% damage boost. Doesn't work on flyers, and is not taken under consideration by AI while controlling any creatures aside from Cavaliers/Champions.

16) **JoustingImmune** – creature will ignore "*JoustingBonus*" flag of enemy creatures.

17) **MagicAura** – creature will grant 20% of dwarven magic resistance to all adjacent allies. This flag doesn't provide any for the creature itself though.

18) **MagicMirror** – creature will have a chance to reflect hostile spell on random enemy (doesn't count as spell and can't be dispelled). To my experience works only on player-casted spells somehow, I've never seen AI spell reflected by such creature, not sure if this is intended or just bad luck.

19) **MagicChannel** – creature will transfer to ally hero 20% of each mana amount enemy hero spends. These are not stackable.

20) **isFaerie** – grants creature Faerie Dragon ability to cast random damage spell each turn. This flag however is not enough by itself – you should set the three magic fields accordingly: "*Mode 9 (0x44835E)*" in first field, "*Random Damage Spell*" in second and "*Mode 3 (Damage)*" in third.

21) **isPassive** – prevents movement, attacks and retaliations after the first creature turn.

22) **isCerberus** – works only with "*hits all enemies around*" flag set and limits its effect to three targets – main one and the ones adjacent by left and right side of it.

23) **isDragonSlayer** – gives creature +100% hatred damage to enemies with "*dragon nature*" flag. Plays a special spell animation when triggered.

24) **PreventiveStrike** – creature will relatiate before it actually gets hit. If it has more than 1 relatiation per round, the normal retaliation will still follow, so you can make creatures that attack twice but only when defending. This flag has 2 visual glitches:
- preventive strike will always use up attack animation, even if enemy came from below;
- if this strike kills the stack entirely, creature won't turn back unless this happens again from the other side.

25) **RangedRetaliation** – creature will always shoot back at other shooters attacking it as long as its ammo allows and there are no adjacent enemies around. While ammo is spent for each triggering of this ability, the amount of melee retaliations remains untact.

26) **isAmmoCart** – creature will grant infinite ammo to all ally shooters.

27) **isConstruct** – marks creature as construct, to heal/revive it with *"Repair Constructs"* casting option or buff with *"Overclock"* (see below).

28) **isAimedCaster** – allows creature to pick the spell target area with F (like in Faeries case), and thus opens a wider possibilities for casting options. For example, with this flag creatures are able to cast Remove Obstacles spell which is not possible without. Also this allows caster to buff himself with his own spell (doesn't work with resurrection sadly).

29) **isTeleporter** – allows creature to ignore obstacles, disappearing in starting position to appear at destination (instant movement). For this to work, couple other adjustments have to be made:
- "*flying*" flag should be disabled
- creature should have only 1 frame in moving category, preferably empty (full cyan). The moving animation should be separated between Start Moving and Stop Moving categories instead. This will skip playing SXXXMOVE.wav sound.
- creature should have SXXXEXT1.wav and SXXXEXT2.wav sounds, which will play at the start and at the end of movement. If your creature transforms to something for moving and you want to keep both MOVE sound of flying and EXT sounds of transforming (like vampires do), you can set this flag without diabling "*flying*" and without removing moving animation category in def. This helps to fix WoG Sorceress sounds which transforms to bird for movement, and will help for new similar creatures.

31) **MovesTwice** – allows creature to have two turns in a row in the same battle round. This won't trigger if the second turn was granted by morale.

32) **Receptive** – imitates Stack Experience ability to allow friendly spells even if creature is immune to them (i.e. Bloodlust on Firebirds).

33) **isHellHydra** – every melee attack of this creature will trigger both ACAST_ACID and ATT_DISRUPT like Hell Hydras do. Normally ATT_DISRUPT has only 20% to happen.

34) **isLord** – prevents creature from being left on map with respective WoG option.

35) **No Golem Overflow** – prevents additional creatures from resurrecting beyond stack size with VULN_GOLEM values above 100. By default it is allowed.

36) **isDragonResistant** – creature will receive twice as less damage from enemies with "*dragon nature*" flag.

37) **Do Not Genenrate** – prevents creature from appearing on map, including garrisons.

In *fields* category (on the right part of the window) we have:

1) **Creature Spell Power** – allows to set creature spell power as you see fit by changing the components of its formula: Spell_Power = (Stack_Size * multiplier / divider) + adder. Affects most unique abilities and direct casts.

2) **Creature Regeneration** – allows to customize regeneration ability per each individual creature you want to have it with. Health field is an amount of hp restored (won't cause resurrection upon overflow), and Chance is calculated at each creature's turn separately. Note that having Elixir of Life with you overrides these settings to 100% chance and full hp each time. Also commander regeneration ability overrides the value to 50 as well.

3) **Mana Drain** – grants creature a Wraith ability to drain mana from enemy hero each turn. The amount drained vanishes and is not trasfered to anyone. Beware that activating this field will disable "*isEnchanter*" flag effect.

4) **Creature Cast Settings** (the three fields set to *None* by default)
Okay, this is a vast one. Mind that whatever you set here will spend creature cast points, so if you want to use any of these, go and add some casts in .txt beforehand. Now to the contents, first field is cast mode, second is cast type, the third one is cast target for AI decisions, for player third field doesn't matter.

<u>First</u> field offers the following options:
• **Resurrection** – this mode has to go in pair with "Resurrection"/"Raise Undead"/"Reapir Constructs"/"Gate Infernals" in second field for them to work properly. Otherwise don't use it.
• **Genie Spell** – this mode is only viable if you aim to replicate Master Genie behavior for your creature, in this case choose it alongside the "Random Friendly Spell" in second field. Otherwise it's not your choice.
• **Demonology** – this is Pit Lord ability to resurrect fallen living(!) ally creatures in form of another creature, except instead of Demons it could be anything set in Demonology Target field in bottom left corner of the window. When picking a target creature keep in mind hardcoded demonology rules:
- targets are revived for 50 hp per each creature in caster stack, but you can affect this by custom spell power factors above;
- the amount of revived creatures can't exceed the initial stack size (from 4 unicorns you will be able to resurrect up to 4 centaurs despite their health difference);
- total hp of revived creatures can't exceed total hp of the dead stack (you won't be able to resurrect 4 unicorns from 4 centaurs).
After you picked the desired target for demonology, choose "Resurrection" in second and third fields and you should be good to go.
• **Bloodlust**/**Prot Water**/**Prot Earth**/**Prot Air**/**Prot Fire** - these modes will allow you to cast specified spells only. Don't use them if you want to fully benefit from custom spell power.
• **0x44835E**/**Exact spell number**/**Exact spell number (Twice)** /**Exact spell number (Expert)** – these are your best deal as most customizable mode. Taking an exact spell number from the "Casts Spell (ID)" field in bottom right corner and applying your custom spell power formula, they provide the most flexible possibilities including beforementioned Bloodlust and elemental protections. Now to the difference between them – "Exact spell" is just that, "Twice" option could be quite OP as it allows to cast the spell twice in a row while spending only 1 cast point, and "Expert" makes creature cast their spell on expert level (by default it's always on advanced). "0x44835E" mode is essential to recreate Faerie Dragon casting behavior, see "*isFaerie*" flag above. From my observations, if used for specific buffs instead of "Exact spell" it also allows the spell to become expert once hero has reached the expert level in the respective magic school.
• **Random Elemental** – this mode will allow your creature to summon random elemental (who would have guessed, right?). You don't have to specify any spell for it to work.
• **Enchant Target**/**Minor**/**Major** – this mode will allow your creature to increase the target's cast points (by 2 if default, by 1 if minor and by 3 if major).
• **Heavenly Inspiration** – this mode allows to grant a special buff to target: speed & max hp increase for the entire battle + endless retaliation for 1 turn.
• **Rush Target Ally** – this mode allows to grant an additional turns to target in this round. Amount of turns could be increased by higher adder in spell power formula.
• **Dragon Will** – this mode allows to grant a dragon nature to target alongside with hp and damage boost. Should be used with "Friendly Non-Dragons" in second field.

• **Overclock** – this mode allows to grant a special cumulative buffs to constructs. On first use it gives them "*Attacks twice*" flag, on second they will get "*PreventiveCounterstrike*" or "*RangedRetaliation*" depending if they can shoot or not, on third time and further they will just get +6 speed increase. So you will need more than 3 cast points to fully benefit from this ability. Should be used with "Friendly Constructs" in second field.
• **Repair and Overclock** – same as above but includes an Archangel resurrection for constructs upon buffing them. Should be used with "Friendly Constructs" in second field.

Second field offers the following options:
• **Resurrection** – consider it "Archangel mode", it will resurect living creatures even from the corpse state. The default power is 100 hp per creature in caster stack, but can be overriden with your formula factors. Has to be used in pair with "Resurrection" in first field to work properly. Also required if "Demonology" was picked in the first field.
• **Random Friendly Spell** – apart from being a must-have for "Genie Spell" in first field, it is also one of the two options when you want your spell from the first field to affect allies, not enemies. I.e. when you picked "0x44835E" and the ID of some buff, or just picked something like "Enchant Target". Noone wants to enchant enemies, eh?
• **Friendly Spell** – the second possible option for buffs. The difference from previous one is that it actually respects the creature immunities before allowing to cast it. For example, if you picked "Exact Spell Number" and ID 49, making your creature cast Mirth, then with this mode you won't be able to cast it on mind-immune allies, while with "Random Friendly Spell" option it would still apply.
• **Protections** – ill-advised, for buffs use either of the two above.
• **Random Damage Spell** – the only option for spells which should target enemies. Whether it is an offensive spell or just a debuff - use this mode. But in order to make your damage spell truly random, "*isFaerie*" special flag must be set first. If your spell has target area, "*isAimedCaster*" would be of use as well.
• **Raise Undead** – essentialy a duplicate of Archangel resurrection, but checks for "*Undead*" flag. This is more useful than just spell 39 because it can target even completely destroyed stacks. Requires "Resurrection" in first field to work properly.
• **Repair Constructs** – another duplicate of Archangel resurrection, but checks for either "*SIEGE_WEAPON*" or "*isConstruct*" flags. Requires "Resurrection" in first field to work properly.
• **Gate Infernals** – very OP ability to resurrect creatures of Inferno affinity with overflow. The additional creatures stay with you after battle which makes it a very decent necromancy counter. Requires "Resurrection" in first field to work properly.
• **Friendly Non-Dragons** – sets an ally without "*dragon nature*" flag as target, requires "Dragon Will" in first field to work properly.
• **Friendly Constructs** – sets an ally with "*isConstruct*" flag as target, requires "Overclock" in first field to work properly.

Third field offers the following options:
• **Resurrection** – makes AI use the cast on stacks which have suffered losses or are completely destroyed.
• **Buff** – makes AI use the cast on ally stacks.
• **Damage** – makes AI use the cast on enemy stacks.
• **Debuff** – makes AI use the cast on enemy stacks. It is not clear how it is different from above, but use it for debuffs I guess.
• **Custom Buff** – makes AI properly use the custom buffs added by Amethyst like "Random Elemental", "Enchant Target", "Heavenly Inspiration", "Rush Target Ally", "Dragon Will", "Overclock" and "Gate Infernals".
• **None** – AI won't use the spellcasting for this creature whatsoever. You can leave it on None if you set Thunderbird to cast Lightning Bolt, but don't want enemy Thunderbirds to cast it on your creatures when fighting them.

5) **UpgradesTo** – this specifies the possible upgrade for creature. Target must be the same level, otherwise won't work.

6) **MimicArtifact** – allows creature to grant hero an artifact effect, even two at once since both fields by the sides of this text are related to this feature. Not all artifacts are supported, particular cases require additional tests, but keep in mind that you need Emerald plugin for this to work.

7) **Resource Giving** – one would think this is the Diamond Dragon ability to give gems daily, but it's actually more balanced - with dragons you could give a stack to every of your 8 heroes and have +8 gems daily, this one however will add the amount you specify regardless of how many heroes have a stack of such creature. Doesn't work in garrisons or mines, you should have the creature in town or in hero army to benefit from this ability.

8) **Guards** – specifies a creature type of guards added by "*hasSantaGuards*" flag. Don't you dare putting a 2-hex creature here, you have been warned.

9) **Tax** – this field allows creature to give you gold everyday. But how is it different from the gold type chosen in "Recource Giving" field? Well, the amount you specify as tax isn't total, it is multiplied by the stack size before being added to your current gold. Still doesn't work in garrisons and mines, only in towns and hero army.

10) **ReduceTargetDefence %** - this is Behemoth ability to ignore specified % of enemy defence at the moment of damage dealing. Works on ranged attacks as well. Takes values in direct numbers: 20% is 20 in the field, not 0.2.

11) **Spell After Action** – this allows to cast up to 2 spells after few certain actions. Target depends on the spell itself. The fields are spell ID to be cast. If set to same ID, will be cast twice. With some spells like Landmine it's currently bugged (quite a lot) so use at own risk.

12) **Melee Resistance** – decreases or increases the damage creature takes from melee attacks. Plays a special def animation. Takes values in decimals: 40% is 0.4, -300% is -3.

13) **Shooting Resistance** – decreases or increases the damage creature takes from ranged attacks. Plays a special def animation. Takes values in decimals: 40% is 0.4, -300% is -3.

14) **Creature Effects** – there are 4 different fields: ACAST_/ATT_ is what happens after attack, RESIST_ is magic immunities/dwarf resistances, and VULN_ is golem/elemental damage modifiers. Let's get more in-depth here.

First field, **ACAST_**:
• **BIND** – Dendroid ability to bind in place. Guaranteed to happen after attack.
• **BLIND** – Unicorn ability to apply basic Blind. 20% to happen.
• **DISEASE** – Zombie abilitiy to apply disease. Works only on living targets, 20% to happen.
• **CURSE** – Mummy ability to apply basic Curse. 25% to happen.
• **AGE** – Ghost Dragon ability to apply Age. Works only on living targets, 20% to happen.
• **STONE** – Medusa ability to petrify target. 20% to happen.
• **PARALIZE** – Scorpicore ability to apply Paralyze. 20% to happen.
• **POISON** – Wyvern-Monarch ability to apply Poison. Works only on living targets, 30% to happen.
• **ACID** – Rust Dragon ability to reduce target defence by 3 with each attack till the battle end. Guaranteed and stackable, but won't work on targets with RESIST_TOXIC.

Second field, **ATT_**:
• **VAMPIRE** – Vampire Lord ability to drain life with each hit, adding the damage dealt to own hp with resurrection upon overflow. Works only on living targets and won't work with "*hits all enemies around*" flag.

• **THUNDER** – Thunderbird abiity to hit target with thunder, dealing 10 additional damage per creature in attacking stack. Doesn't affect targets with RESIST_TO_AIR and deals double damage to ones with VULN_LIGHTING. 20% to happen.
• **DEATHSTARE** – Mighty Gorgon ability to kill additional creatures in enemy stack with Death Stare. Works only on living creatures, chances to happen depend on stack size.
• **DISPEL** – Serpent Fly ability to dispell all buffs from target with each attack. Guaranteed but won't affect targets with RESIST_DISPEL or RESIST_DEBUFF.
• **DISRUPT** – Rust Dragon ability to deal additional acid damage (25 per each creature in stack). Won't work on targets with RESIST_TOXIC. 20% to happen.

Third field, **RESIST_**:
• **DWARF20**/**40**/**60**/**80**/**100** – Dwarf-type magic resistance: creature will have X% chance to ignore the spell completely. Setting 100 will get it immune to hostile spells, while still allowing to apply buffs.
• **LVL1**/**12**/**123**/**1234**/**MAGICIMMUNE** – Dragon-type of magic resistance by ignoring entire levels of spells. Setting MAGICIMMUNE will also make creature take 50% less damage from Magic elementals.
• **TO_EARTH** – doesn't really give Earth immunity. All it does is protects creature from Meteor Shower and Blind, which is not even an earth spell.
• **TO_AIR** – grants immunity to ATT_THUNDER, Chain lightning, Lighning bolt, Titan's lighning bolt and Armageddon.
• **TO_WATER** – grants immunty to Frost ring and Ice bolt.
• **SPEED** – grants immunity to Slow, Haste, Bind and Quicksand. Quicksand will technically still work, but creature will try to avoid it while moving.
• **TOXIC** - grants immunity to Poison, Disease, Paralyze and Acid.
• **WILL** - grants immunity to Frenzy, Berserk, Hypnotize and Forgetfullness. Basically just a light version of "*Mind spell immunity*" flag.
• **NO_EYES** – grants immunity to Blind, Stone gaze and Death Stare.
• **MASS_DMG** - grants immunity to Death Ripple, Destroy Undead and Armageddon.
• **TO_DISPELL** - grants immunity to Dispell and ATT_DISPEL as well.
• **TO_DEBUFF** - grants immunity to ATT_DISPEL as well as debuffs like Curse, Weakness, Disrupting Ray, Sorrow, Misfortune, Slow, Forgetfullness, Blind, Stone gaze, Poison, Bind, Disease, Paralyze and Age.

Fourth field, **VULN_**:
• **GOLEM_STONE**/**IRON**/**GOLD**/**DIAMOND**/**125**/**150**/**200**/**300**/**400**/**500**/**600**/**700**/**900** – Golem-type magic resistance which decreases the incoming magic damage by said percent. STONE is 50, IRON is 75, GOLD is 85, DIAMOND is 95 and values above 100 will heal creature with resurrection as obsidian golems work in H5, but it conflicts with WoG option Enchanted Resistance, so you should disable it first.
• **LIGHTING** – creature will take x2 damage from all things RESIST_TO_AIR protects from.
• **SHOWER** – creature will take x2 damage from all things RESIST_TO_EARTH protects from.
• **ICE** – creature will take x2 damage from all things RESIST_TO_WATER protects from.
• **FIRE** – creature will take x2 damage from Fireball, Inferno and Armageddon. Doesn't seem to affect Fire Shield damage, although it's rather hard to test.

15) **Creature Misc Statistics** – two fields here, affinity and level. Should be pretty self-explanatory.

16) **Fire Shield** – this is natural fire shield like Efreet Sultans have. You can customize the damage it deals. Takes values in decimals: 20% is 0.20.

17) **Mana Regen** – this will allow creature to restore some mana points for owner hero after its turn. Will work on waiting too, which is useful when you want to cast some buff scecifically on this turn, but lack couple mana points.

18) **Skele Transformer** – the target creature of transformation in Necropolis special building. Doesn't necessarily have to be undead, could be anything. If set the same number as creature edited, transformation won't be possbile at all.

19) **Missile** – defines the type of AoE ranged attack, either Magog fireball of Lich death cloud. Requires "*extended radius of shooting units*" flag set, leaving it at Default won't take any effect.

20) **Death Blow** – Dread Knight ability to deal double damage when it triggers. The number you set here is a chance of happening. Takes values in direct numbers: 20% is 20 in the field, not 0.2. If set to a shooter creature, will trigger on ranged attacks as well. If your creature can hit more than 1 target by having either "*extended attack radius (two cells)* " or "*hits all enemies around*" flag, the chance of triggering death blow will be calculated for each taget separately.

21) **Preserve Spellpoints** – Arch Mage ability to lower the cost of your spells. No matter what you set here, spells will cost at least 1 mana point.

22) **Magic Damper** – the opposite to above ability of Pegasus. Increases the cost of enemy spells by the specified amount.

23) **Retaliations** – defines how many times creature will be able to retaliate each round of battle. When set to 0 creature won't retaliate at all.

24) **Casts Spell (ID)** – sets the spell to be cast by 0x44835E/Exact spell number/Exact spell number (Twice)/Exact spell number (Expert) modes. See ERM help in Era Start Menu for the list of available spells. Doesn't affect any other mode so if you haven't choosed any of the listed above – don't even bother with this field.

25) **Imposed Spells** – grants creature a permanent effect of the specified spell (i.e. Sacred Phoenix has an imposed Slayer), and it will be applied even in anti-magic garrisons with orb of Inhibition. If it was dispelled or lost due to death/resurrection, it will automatically reappear next round. Creature can have up to three of those. Doesn't check for immunity so if creature is mind-immune, it could still have imposed Mirth.

26) **Demonology Target** – decides what creature dead allies will become when resurrected by demonology. Keep in mind that demonology works only on living tagets, so if you set a non-living as a target, you won't be able to revive it again (with living you can "loop" the resurrection as long as your cast points allow since neither corpses nor creatures created by demonology do not disappear).

27) **Phoenix-like Rebirth** – allows to give creature Phoenix ability to revive itself after the stack was completely destroyed and allows to customize three aspects of this system. All of them take values in decimals: 30% is 0.3 in the field.
fraction: the cap of percentage part from the initial stack size to be potentially revived.
chance: the chances of rebirth. Takes values in decimals: 20% is 0.2 in the field. Keep in mind that these chances are per creature, not per stack – with 0.2 one creature will have a 20% chance to raise one unit with rebirth ability, three will have 60% chance to raise one unit, and 6 creatures have 100% chance (always) to raise one unit with a 20% chance of raising a second, and so on until it reaches the fraction cap.
sure: the cap of percentage part from the initial stack size to be always revived no matter what. Basically same as fraction, but regardless of chance, which means you get both upon success.
Example 1: Stack size 100, fraction 0.3, chance 1, sure 0.1 – 40 creatures will be revived.
Example 2: Stack size 100, fraction 0.2, chance 0, sure 0.6 – 60 creatures will be revived.
Example 3: Stack size 100, fraction 0.5, chance 1, sure 0.0 – 50 creatures will be revived.
Example 4: Stack size 100, fraction 0.4, chance 0.1, sure 0.2 – 21..26 creatures will be revived.
Example 5: Stack size 100, fraction 0, chance 0, sure 1 – 100 creatures will be revived.
For vanilla Phoenix default values are: fraction 0.2, chance 0.2, sure 0
For Sacred Phoenix default values are: fraction 0.2, chance 0.2, sure 0.2

Each rebirth is considered a cast, so it requires and spends cast points - make sure your creature has some in .txt.

28) **Additional Effects** – allows creature to apply some effects not sacrificing the ACAST_ field, with customizable percentages for each, but those ignore target resistances and don't work on retaliations, only on direct attacks. Chance takes values in direct numbers: 40% is 40 in the field, but all the rest ones take values in decimals with 1 being the cap.
Example 1: chance 50, aging 0.3, poison 0.2, paralyze 0.4 – 50% chance to trigger an additional effect after attack, and once triggered it will have 30% to be age, 20% to be poison and 40% to be paralyze. There are independent so if you are lucky, all three could apply given the basic 50% have triggered.
Example 2: chance 100, aging 0, poison 1, paralyze 0 – guaranteed poison after attack.
Example 3: chance 0, aging 0.8 poison 0.6, paralyze 0.1 – nothing will trigger.

29) **Ghost Fraction** – customizes the amount of resurrected creatures in relation to killed enemies for creatures with "*isGhost*" flag. Default is 1.00 which means 1 killed enemy is +1 stack size, but you can increase/decrease it to your liking.

30) **Wog_Spell_Immunities** – this field uses characters from SE4 WoG format to provide some spell immunities:
• 1 Level 1 Hostile Spells
• 2 Level 1-2 Hostile Spells
• 3 Level 1-3 Hostile Spells
• 4 Level 1-4 Hostile Spells
• 5 All Hostile Spells
• 6 All Level 1 Spells
• 7 All Level 1-2 Spells
• 8 All Level 1-3 Spells
• 9 All Level 1-4 Spells
• : All Spells
• B Blind
• C Cold spells
• D Direct Damage spells
• H Hypnotize
• I Implosion
• K Berserk
• L Lightning Spells
• M Meteor Shower
• N Dispel Beneficial Spells
• O Fire Damage spells
• P Any Dispel
• R Armageddon
• S Slow
• A Hostile Air Spells
• E Hostile Earth Spells
• F Hostile Fire Spells
• W Hostile Water Spells
• a All Air Spells
• e All Earth Spells
• f All Fire Spells
• m Hostile Mind Spells
• p Hostile Dispel
• w All Water Spells

Amethyst also has three *hidden features*, which are not present in editor but can take effect if changed manually:

• **Necromancy creatures** – you can change which creatures will be resurrected with Necromancy skill. To do so, open *necromancy.cfg* in Data folder of your mod. You will see 6 numbers there, first 3 are creatures to be resurrected for Basic, Advanced and Expert skill level when hero doesn't have Cloak of The Undead King artifact, the other 3 are same for when he does have it equipped. Change to whatever IDs you want (not necessarily undead).

• **Hatred system** – you can set constant hatred damage for your creature. To do so, open its .cfg file with notepad and add this line: HateXXXX=Y
XXXX is ID of target enemy to be hated, and Y is additional percentage of damage it will take. Adding Hate0008=40 to *49.cfg* will make Horned Demons deal 140% damage to Monks (40% more than they usually would). Game will automatically show notification in battle log when this happens, like a vanilla hatreds do. For the one same creature you can add as many hatred lines as you like. If you do it for creatures that already hate someone in vanilla (like angels), your custom damage value will override default one which is 50%.

• **Shared stats** – you can set your config not as one creature's abilities, but the abilities it will provide to allies when present in army. To do so, save the config not as *XXX.cfg* as you normally would, but as *XXXs.cfg* instead. For example, checking "*No Melee penalty*" for *8s.cfg* will not remove it from Monks themselves, but will remove from all ally shooters if your hero has Monks.

Afterword:
Before you start customizing the flags/fields exlained above, you should understand one important rule of how Amethyst plugin works: ***it applies your changes on top of what your creature already has.*** This doesn't matter much when adding a custom creature, since it is new and has nothing yet, but if you decide to modify some vanilla creature you gotta proceed with caution. Some extra details of this rule I have painfully learnt on personal experience:
1) the *basic* flags category (on the left part of the window) should be recreated entirely before saving. Say, you want Monk to become mind-immune, you open AmeEdit, activate the respective flag and save as 8.cfg under <ModName>/Data/Creatures folder (as you should do with any creature btw). But then in game you find out that while he is indeed immune to mind spells now, he also can't shoot anymore! Archangels no longer can resurrect him! "I didn't touch those why it is happening?!" Because the basic flags are not 1/0 checks, they result in a sum in config which means that if you make any changes to them, first thing you gonna do is to activate the ones creature had before your edits. In Monk's case it's "*shooter*" and "*living creature*" ones.
2) ALWAYS set UpgradesTo and Level fields to what they were before. For some reason these two are not restored to default values when skipped. So, even if you didn't make any changes to Monk besides mind immunity, set him "Level 5" as level and "9" as upgrade, just not to face unexpected issues in game. Also if you are editing Black Dragon, Darkness Dragon, Diamond Dragon or Magic Elemental, set them RESIST_MAGICIMMUNE back otherwise they will loose it somehow.
3) You don't have to activate abilities creature already has, like "*JoustingBonus*" flag for Champions. BUT if you want to remove the default ability, you have to tick Forced checkbox next to Save button. What it does is it makes game reconsider creature params entirely, which means creature won't have jousting bonus unless you checked it, even if it is its vanilla ability. And since it affects the entire config, you would have to set ALL the fields from scratch, not just *basic* flags category. Be careful with this one, sometimes it's hard to keep track on what settings creature had by default.
With latest updates some special def animations were added for specific effects. You can review them in AmeEfect.pac and even replace with your own (if keeping the name). However, they won't be skipped if you just delete the def from archive. In this case some red flickering will still appear in top right corner for a brief second. Safer way would be replacing the defs with full

cyan one which has only 1 frame. It will play almost instantly and it's the closest we can get to actual skipping.

!!! Stack Experience Warning !!!

You always have to take into consideration SE abilities table for the creature you are changing in AmeEdit, since it has higher priority in-game than what you set here. If present, SE abilities will override:
- rebirth settings
- retaliations amount
- spell mana cost reduction
- %s of ignored enemy defence
- death blow chances of happening
- regeneration chances and hp amount
- flagged abilities like shooting, fear, no melee penalty etc
- magic immunities as well as dwarven/golem magic resistance

The only exception is imposed spells – SE ones will be added on top of AmeEdit spells instead of overriding them.