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Very In-Depth Game Mechanics Guide

By peddroelm

★ ★ ★ ★ ★

45 ratings

Base playable character stats progression table.

Formulas for : various derived stats such as AP (attack power), PD(physical defence), MD (magical defence) , CTC(chance to Crit) , Stamina, Character Abilities [damage/healing/damageshielding], and damage calculation.

Action queue mechanics (the haste system) .

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Latest GameVersion for which the Guide was updated: v.23577

Base Stats progression table for Playing Characters

I needed those stats for building up the knowledge required for reverse engineering the damage formulas and the various other related mechanics but try not to jump to conclusions about party roles on base ability progression alone . Character's Perks make a huge impact also available gear which will hardly ever be perfectly balanced between characters at any point in the game (nature of RNG drops/ shop inventory) ..

Link to the Base Stats progression table for Playing Characters:
<https://docs.google.com/spreadsheets/d/1DGNi64s2li6234lhK1BpuuB67IEMfOmRIsFZvs5onio/edit?usp=sharing>

base values

	Gully	Calibretto	Garrison	Knolan	RedMonika	Alumon
ST	6.86	6.37	4.9	4.41	5.39	6.37
AP	5.88	6.37	7.35	6.86	7.11	6.62
PD	4.9	3.68	2.45	2.21	2.45	3.19
MD	3.92	3.68	2.45	5.15	2.94	3.19
exponential base			0.15			

Base Attributes are then 'level scaled according to the formula' :

For player chars $\text{StatBaseValue} * 1.15 ^ {(\text{LvL} - 1)}$
For enemies chars $\text{StatBaseValue} * 1.155 ^ {(\text{LvL} - 1)}$

Enemies receive better scaling since they don't get bonuses from gear and perks.

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DamageShields stacking mechanics:

Attack Power Formula

AP is a crucial combat related parameter.

Most (all) damage/heal/damageshield amounts are calculated as a percent of AP.

base values

	Gully	Calibretto	Garrison	Knolan	RedMonika	Alumon
AP	5.88	6.37	7.35	6.86	7.11	6.62
exponential base	0.15					

AP is then 'level scaled according to the formula' :

For player chars $\text{LevelScaledAP} = \text{APBaseValue} * 1.15^{(\text{LvL} - 1)}$

For enemies chars $\text{LevelScaledAP} = \text{APStatBaseValue} * 1.155^{(\text{LvL} - 1)}$

Enemies receive better scaling since they don't get bonuses from gear and perks.

$\text{AP} = (\text{LevelScaledAP} + \text{Sum(Flat AP bonuses)}) * \text{Product_Of_ALL(AP multipliers)}$

(the game uses a *4 for AP and *2 for ST FOR DISPLAY. In that formula the flat AP bonuses in the UI should be added divided by 4. Notice how they're all nicely divisible by 4)

A few observations:

Another Special Case to be made here is GARRISON and his overcharge skills (HOW OBSCENELY RIDICULOUS HIS WARBLADE II ABILITY CAN GET WITH HIGH SKILLPOINTS):

It adds $(1 + \text{OVERCHARGE_CONSUMED_BY_ABILITY}/10)^{\text{Nr_Overcharge_Perks}}$ damage multiplier .

So the max is $* 1.6^4 = * 6.5536$!!!!

No other character can get anywhere near him when he gets going ..

This is true for all characters but especially Garrison - ONCE YOU ENABLE THE OVERCHARGE PERKS (the bonuses are unique for each characters - see them in game or my guide) LEARN HOW TO MAXIMISE OVERCHARGE GENERATION AND CONSUMPTION TO HAVE A GOOD TIME WITH BATTLE CHASERS !

Stamina and MaxHP formulas

Formula for ST is un-surprisingly very similar to the AP formula.

base values

	Gully	Calibretto	Garrison	Knolan	RedMonika	Alumon
ST	6.86	6.37	4.9	4.41	5.39	6.37
exponential base	0.15					

ST is then 'level scaled according to the formula' :

For player chars $\text{LevelScaledST} = \text{STBaseValue} * 1.15^{(\text{LvL} - 1)}$

For enemies chars $\text{LevelScaledST} = \text{STStatBaseValue} * 1.155^{(\text{LvL} - 1)}$

Enemies receive better scaling since they don't get bonuses from gear and perks.

$\text{ST} = (\text{LevelScaledST} + \text{Sum(Flat ST bonuses)}) * \text{Product_Of_ALL(ST multipliers)}$

(the game uses a *4 for AP and *2 for ST FOR DISPLAY. In that formula the flat ST bonuses in the UI

Combat order system : Active Time Battle

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Formulas for Knolan's Abilities

Formulas for Red Monika's Abilities

Formulas for Alumon's Abilities

Comments

should be added divided by 2. Notice how they're all nicely divisible by 2)

-multipliers come from Perks and Bestiary bonuses.

-flat bonuses come from gear.

MaxHP = 'real' SP * 10.

Numeric example: Gully LVL 24

Gully's base ST at lvl 24 171 (see table)

Unlocked bestiary ST bonuses $\times (1.01^3) \times 1.05 \times 1.03$

Perk ST mastery 12%

$171 \times (1.01^3) \times 1.05 \times 1.03 \times 1.12 \times 2 = 426.81$ // ok.

Percent to Rating to Percent Formulas for CTCrit, CTEvade and Haste

The percent to rating formula:

Rating = Percent * 10 * $(1 + 0.15)^{(\text{LvL} - 1)}$

Ex 27.4 % CTC [5 base + perks + bestiary] at lvl 30 transforms into 15775 rating.

$274 \times (1 + 0.15)^{(30 - 1)} = 15775.6743$

Gear seems to provide rating bonus [which devalues its percent bonus as the character levels up] .

So probably character's sum (percent) is converted to rating.

The rating from gear is added . [this bonus devalues with character LvL ups - more rating required for the same amount of percent increase]

Then , a reverse formula that converts back from sum(rating) to percent.

Percent = Rating / $(10 \times (1.15)^{(\text{LvL} - 1)})$.

Continuing the previous numeric example:

$15775 / (10 \times ((1 + 0.15)^{(30 - 1)})) = 27.3988$ // back to 27.4 %

Hard limits:

CTC 100%

CTEvade 60%

Formulas for PsysicalDefense and MagicalDefense (PDmul ; MDmul)

base values

	Gully	Calibretto	Garrison	Knolan	RedMonika	Alumon
PD	4.9	3.68	2.45	2.21	2.45	3.19
MD	3.92	3.68	2.45	5.15	2.94	3.19
exponential base			0.15			

PD and MD are then 'level scaled according to the formula' :

For player chars $\text{LevelScaledPD} = \text{PDBaseValue} \times 1.15^{(\text{LvL} - 1)}$

For player chars $\text{LevelScaledMD} = \text{MDBaseValue} \times 1.15^{(\text{LvL} - 1)}$

For enemies chars $\text{LevelScaledPD} = \text{PDStatBaseValue} \times 1.155^{(\text{LvL} - 1)}$

For enemies chars $\text{LevelScaledMD} = \text{MDStatBaseValue} \times 1.155^{(\text{LvL} - 1)}$

Enemies receive better scaling since they don't get bonuses from gear and perks.

$\text{PD} = (\text{LevelScaledPD} + \text{Sum(Flat PD bonuses)}) \times \text{Product_Of_ALL(PD multipliers)}$

$\text{MD} = (\text{LevelScaledMD} + \text{Sum(Flat MD bonuses)}) \times \text{Product_Of_ALL(MD multipliers)}$

- multipliers come from Perks and Bestiary bonuses.
- flat bonuses come from gear.

Formulas for MDmul and PDmul damage reduction coefficients:

$$(1 - (0.6 * (1 - (1 / (1.0027 ^ (10 * PD * (1.15^{(1-AttackerLvl)})))))))$$

$$(1 - (0.6 * (1 - (1 / (1.0027 ^ (10 * MD * (1.15^{(1-AttackerLvl)})))))))$$

It might look intimidating but it is not as scary as it looks.

Max value = *1 for PD or MD = 0. (never happens - all units have at least some PD and MD)

Min value = * 0.4 . This is a limit when $1.0027 ^ (10 * MD * (1.15^{(1-AttackerLvl)}))$ gets to infinity.

$1 - (0.6 * (1 - 0))$.. You'll get close to this in case of extreme Level difference between attacker and defender.

PD and MD scale with defender's LVL (and gear)

$$10 * 1.15 ^ (1-AttackerLvl) \text{ decreases with attacker's LVL } (10 * 1.15^{(1-30)} = 0.17368)$$

It is hard for me to put probable maximum endgame values for PD/MD with famed gear / max perks ..

$$(1 - (0.6 * (1 - (1 / (1.0027 ^ (10 * PD * (1.15^{(1-AttackerLvl)})))))))$$

$$(1 - (0.6 * (1 - (1 / (1.0027 ^ (10 * MD * (1.15^{(1-AttackerLvl)})))))))$$

Because those coefficients change with the level of the attacker it complicates the process of adding a numeric value to it in the bestiary / char screen info ..

What I can do for myself to get a feel of the gameplay 'value' of PD/MD at different stages in the game compared to the other stats is to make the game print the coefficients for every attack :

I seriously doubt these developers will add such an option for the player base wich will make judging the value of those stats and the gear and the perks and enchantments that provide PD/ MD lack a quantifiable base ..

Also Bestiary currently doesn't even provide the numerical values for enemies PD and MD values. I might put some base values for some enemies in some google sheet so you can then level scale from that but I will not bother with all enemies.

testing the new script

lvl 30 Garrison vs 31 blood slime (has weak PD)

```
29844 Garrison uses Swift Strike on target: Blood Slime
625 0.9395 MDmul or PDmul
0 Blood Slime DAMAGE 1830 2700.000CurHP 4530.000MaxHP 31LVL
1.000Pmul 1.000Mmul 227.000PD 302.000MD
```

Formula Verification :

$$1 - (0.6 * (1 - (1 / (1.0027^{(10 * 227 * (1.15^{(1-30)}))))))) = 0.939488 // OK$$

Test 2: lvl 31 Blood Slime vs lvl 30 Gully (tanky char not super geared but with endgame PD and MD skills)

```
500 Blood Slime uses Bloody Bite on target: Gully
....
....
2422 0.8394 MDmul or PDmul
15 Gully Update 1871.716 AP 31.00% CTC
```

16	Gully	DAMAGE	1364	11533.365CurHP	12897.365MaxHP	30LVL
0.810Pmul	0.810Mmul	764.933PD	799.208MD			
31	Blood Slime	HEAL	612	4530.000CurHP	4530.000MaxHP	31LVL
1.000Pmul	1.000Mmul	227.000PD	302.000MD			

Formula Verification:

$1 - (0.6 * (1 - (1 / (1.0027^{(10 * 764.93300 * (1.15^{(1 - 31)})))))) = 0.83940$ // OK

Gameplay observation: LONG WAY TO GO GEAR WISE FROM * 0.83 to * 0.4 even on Gully ...

Formulas for VsPhysicalMul and VsMagicalMul

VsPhysicalMul = Product of ALL vsPhysicalMultipliers

VsMagicalMul = Product of ALL vsMagicalMultipliers

DO NOT CONFUSE THESE WITH PD and MD from the section above.

There cover all modifiers that claim to modify damage inflicted or received by a percent.

example of a few of those damage multipliers:

- Gully and Almon's passives
- the 'Defend' type of action for all characters
- gully's Guard action and her Shatter ability and Clutch Defense Perk Mastery
- debuffs 'sunder' and 'arcane sickness' respectively
- ..

Numeric examples:

gully guard + Kolan defend $(1 - 0.225) * (1 - 0.4)$ and $(1 - 0.225) * (1 - 0.6)$ respectively .. Cool

gully guard + defend $(1 - 0.1) * (1 - 0.225) * (1 - 0.5) = 0.34875$ OK 😊

gully taunt $0.9 * 0.9 = 0.81$

triple stack of 10% sunder is actually $*1.1 * 1.1 * 1.1 = *1.331$

Formula for CTC, CTevade and Haste

Those stats don't behave like the previous ones formula wise. A lot more prudent addition as opposed of the quick to get out of control multiplications we've seen before.

Final Percent = BaseValue + Sum(Percent Bonuses) + RatinToPercent(Sum(RatingFromGear)) .

BaseValue: 5% for CTC, 0 for Haste and Evade.

PercentBonuses: From perks .

Bonuses to these stats lose potency as the character wearing them levels up . Will post the transformation formula when I have it.

DamageShields stacking mechanics:

Sadly the game does not display the current Number of damageshield hitpoints a character has. (you need to do ruler on screen pixel math to use the game UI :))

MaxShield = MaxHealth / 2 = ST * 2.5

(TEST do they benefit from MD/PD vsPDMul vsMDmul ? very likely they do)

DamageShields are reset to 0 at the end of combat.

Once you're capable of generating a lot of shields - having charaters with high ST (natural or from gear) can help not waste them and increase the safety margin before health hitpoints are reached.

List of Shield Granting abilities/perks/dungeon skills :

- Gully Ability Protect
- Gully unique Overcharge consumption Perks
- Gully burst I Shielded Assault
- Gully ability Barrier Swing
- Gully Perk Defensive Fighting
- Gully Perk Last Resort than 30% CurHP
- Alumon ability Dark Mending (heal + shield overflow)
- Alumon ability Sanguine Embrace (heal + shield overflow)
- Alumon ability Shield of Vengeance
- Knolan ability Mana Shield
- Knolan ability Elemental Shield
- Knolan dungeon skill
- WEAPON ENCH [Guardian Weapon]

EVEN IF AMOUNT MIGHT GET RESET (no stack sometimes ?) the EFFECTS ALWAYS STACK. (say shielded assault damage bonus and mana shield + overcharge when hit)

Combat order system : Active Time Battle

While I'm still not with 100% certain about this I can say with a fair degree of confidence this is how it works:

actions and burst have 'instant' cast time = 0 delay // that's why Alumon's Passive triggers during action animation.

'very fast' cast time = 1 delay

'fast' cast time = 3 delay

'slow' cast time = 5 delay

recovery time = 5 delay

After finishing a action/burst/ability characters must wait for 'recovery time' . (with the exception of the abilities that specifically state they have 0 recovery) .

A slow cast ability thus takes exactly as long as 2 actions. (recovery time * 2)

There is an incremental Battle Timer (separate 'time units').

Only one character can act (action, begin casting, use potion or burst) at most once per Battle time unit.

All delays tick down once per "battle time unit" if no character acted (because all remaining delays were still too high). First character to get his delay below 0 gets to act. The amount for each tick down is still unknown to me ATM - other than is proportional with the unit's HASTE stat. Since the game calculates this very fast between animations, the amount decreased per tick doesn't seem important .. NOTHING CAN ALTER QUEUE ORDER BETWEEN 2 CHARACTER's ACTIONS.

Most enemy abilities follow those timings but there are some exceptions.

Stun :

If target was casting. Resets casting and sets Recovery to 5.

If target was in recovery. It adds +5 to its remaining recovery (tested arcane explosion and barsilisk stuns)

Fight starts with all participants in recovery mode 5 + RNG(0.5)

It would be GREAT if the action queue would display the Battle Time each action in queue is scheduled to take place (stuns/+ - hate mods can happen in the mean time). Would make judging cast time durations and haste related perks so much easier for players.

Currently there is no way to tell if the timeDelta between two actors in queue is 1 or 20 (and this is very relevant gameplay information)..

Level Difference Damage Multiplier table

LVLAttacker - LVLDefender	LvlDeltaMul
<= -10	0.3
-9	0.4
-8	0.5
-7	0.6
-6	0.7
-5	0.8
-4	0.9
-3 .. 3	1
4	1.2
5	1.4
6	1.6
7	1.8
>= 8	2

Damage Formula

observations:

- PIERCING DAMAGE IGNORES PD, MD AND (vsPMul < 1 , vsMMul < 1) BUT NOT level difference .

Default crit damage multiplier is * (1 + 0.75) for your characters and *1.5 for (most ?) enemies.

+ Crit Damage perks [Red Monika, Garrison, etc] are ADDED to that multiplier (THEY ARE NOT SEPARATE MULTIPLIERS THEMSELVES) .

AP * AbilityPercentMul * (1 + SumAbilityBonuses) * CritMul * Scaling(Lvl Delta) *
 * [Mitigation(PD or MD) * (VsPMul or VsMMul)] .

Burst-meter mechanics

MaxBurstCapacity = 300

Bust 1 costs 100

Bust 2 costs 200

Bust 3 costs 300

relevant globalvars:

combatMaxLimit = 300

combatDamageTakenToLimitRatioBase = 5

combatDamageTakenToLimitRatioRate = 0.15

burst += DamageReceived / [5 * 1.15 ^ (Lvl -1)] // ?

//dealing damage provides no limit/burst benefit

combatDamageDealtToLimitRatioBase = 0

combatDamageDealtToLimitRatioRate = 0

// burning red mana provides burst

combatRedManaUsedToLimitRatioBase = 4

combatRedManaUsedToLimitRatioRate = 0

burst+ = (units of overcharge used) / 4

combatCastTimeLimitBase = 8 // the +8 for abilities

combatCastTimeLimitMultiplier = 1.5

Healing received/dealt ? also provides burst bonus

Tip: Against weak remaining enemies you can 'farm' the burstmeter with defend and heal actions ..

Mini-guide to Overcharge Generation:

Overcharge Shrine: 10 at turn start.

[Invigorate] enchantment on Weapon or Armor 5 or 10 at turn start.

Debuff from mana slime: Poison DOT + overcharge per tick .

GULLY:

Actions:

Jab 10; Guard 10;

Taunt 5; 5 per incoming attack while active.

Abilities:

Perks:

Readiness: StartBattle 5 per enemy.

Embolden: PASSIVE 10% chance to gain 10 per received attack.

She can get somewhat decent red mana (Overcharge) generation - too bad she doesn't do really amazing offensive things with it.

CALIBRRETO:

Actions:

Gut Punch: +10;

Defensive Matrix I/II: +5/+10 per incoming attack while active.

Cleanse II: +5 per cleansed debuf [up to 10].

Innervating Mist I/II: 6/9 per turn to allies for 3 turns.

Abilities:

Perks:

[Mastery] overcharge carryover: carry up to 15 between battles.

Rerouting Systems: PASSIVE 5 per incoming attack.

GARRISON:

Actions:

Sting +20.

Swift Strike +15, Enrage +15.

Abilities:

Perks:

Seize Opportunity: 10% chance for +20 per performed attack

Conserve Energy: carry up to 10 between battles

Battle Ready: gain 10 at battle start.

Victory Rush: gain 25 per kill blow.

Bloodthirsty: gain 5 per bleed DOT tick.

The champion of overcharge generation and consumption with greatest effects.

KNOLAN:

Actions:

Arcane Missile 5, Ice Blast, Fire Bolt

Abilities:

Mana Shield I/II: 10/15 per incoming attack.

Arcane Explosion: 15 vs chilled enemy.

Mana Magnet (40% defense taunt): 15 if FIRST incoming attack is magic.

Perks:

[Mastery]Firery Will: PASSIVE 3 at turn start

Conserve Energy: carry up to 10 between battles.

Mana Supplement: [PASSIVE] 4 extra per attack.

Savant: gain 15 at battle start.

Poor generation at low perk points. Gets decent with perks and also gains tons of haste for burnig it.

RED MONIKA:

Actions:

Chimera Strike 10; Fade Strike 10; Wild Shot 10.

Abilities:

Perks:

Confident Counter: 5 per evaded attack. Needs lots of time consuming setup.

[Close to WORST OVERCHARGE GENERATOR] She can melt things with ~100% CTC execution spam. But needs help generating overcharge. Knolan's mana shield can help greatly.

ALUMON:

Action:

Shadow Whip 10, Soul Shard 10.

Abilities:

Perks:

[WORST OVERCHARGE GENERATOR] . With overcharge he can do insane healing/shield pumping - he'll often need to power his ability with plain blue mana [and Grim Covenant/Knolan it back later].

Formulas for Gully's Abilities

PASSIVE:

Extra * 0.9 multiplier to ALL incoming damage.

ACTIONS:

Defend:

Adds a DamageMultiplier for Physical and Magic damage * 0.5 until next (?PLAYER? - why not call it action) TURN.

Jab I/II:

Deals $90\% \cdot \text{AP Damage}$. (II $104.5\% \cdot \text{AP}$)

Generates 10 Overcharge.

Taunt I/II:

Taunt on Gully 3 attacks.

Extra Damage reduction multiplier for all damage * 0.9.

Generates 5 Overcharge on cast and 5 extra per incoming attack.

(II $10\% \cdot \text{AP damage}$)

Guard I/II:

Extra Damage Multiplier to all allies for 1 attack * 0.775 (II *0.625)

Generates 10 Overcharge:

ABILITIES:

Protection (VERY FAST MANA 15):

DamageShield any ally for $205\% \cdot \text{AP} \cdot \text{damageShieldPower}$ Hitpoints.

Scatter Shot I/II (VERY FAST MANA 10):

Deals $109\% \cdot \text{AP Damage}$ vs primary and optional $50\% \cdot \text{AP}$ (II $65\% \cdot \text{AP}$) to nearby target.

Quakefist (FAST MANA 15):

Deals $210\% \cdot \text{AP Damage}$.

Barrier Swing I/II (FAST MANA 15):

Deals 160%*AP damage and 75% (II 100%) [OR 0.75 of inflated after mitigation?] as damage shield to most injured ally.

Guard Punch (VERY FAST MANA 10):

Deals 125%*AP Damage and extra * 0.9 damage multiplier on Gully for 3 turns.

Heroism (SLOW MANA 20):

All Party DamageShield with 170%*AP*damageShieldPower hitpoints each.

Earthquake I/II (SLOW MANA 20):

Hits all enemies for 125%*AP Damage to each. (extra 20% damage taken while casting it)

Mantle of Aramus (FAST MANA 25):

Damage shield on Gully 135%*AP*damageShieldPower hitpoints and each time she takes damage she heals for 13%*AP . The heals are small but good vs multiple dots of multi stage attacks.

Cripple (FAST MANA 10):

Deals 160%*AP damage and weakens enemy *0.85 AP multiplier for 2 actions.

Shatter (VERY FAST 10):

Deals 105%*AP Damage and sunders [*1.2 physical damage] for 3 actions.

Gravity Punch I/II (FAST MANA 15):

Deals 5% (II 12%) of CurEnemy hitpoints +180%*AP Damage. (opener vsBoss/hitpoint wall)

Reckoning (SLOW MANA 25):

Deals maxHealth*15% Damage plus (maxHealth-currentHealth)*15% . [Max = + 0.15 * MaxHP]

BURST:

Shielded Assault:

Puts a 141.75%*AP*damageShieldPower DamageShield on whole party. AP *1.1 while shielded.

Boulder Toss:

Hits all enemies 159.75%*AP Damage to each and Short time Stun.

Armus Fury:

Deals 512%*AP !! PIERCING damage split over 19 hits/shots.

PERKS:

Avenger Mastery:

[20/100] Attack: up AP by 3% .

[40/100] Dungeon: Increases maximum charges for all dungeon skills.

[60/100] Ave Overcharge II: AUTO Self cast DamageShield for AP*20%*damageShieldPower 10 overcharge used on that Ability. Stacks with other overcharge perks.

[80/100] Juggernaut: AP up by 1 per Armor PD / 7.

[100/100] Fortress: PD and MD up by 6% per attack. Stacks up to 6 times.

Guardian Mastery:

[20/100] Defense: PD and MD up by 6%.

[40/100] Stamina: ST up by 12%.

[60/100] Guar Overcharge II: AUTO Self cast DamageShield for AP*20%*damageShieldPower 10 overcharge used on that Ability. Stacks with other overcharge perks.

[80/100] Clutch Defense: extra * 0.85 damage multiplier when CurHP < 0.3 * MaxHP

[100/100] Shielded Assault: AP up by 25% while DamageShield is up on Gully.

Avenger:

[2] Reinforced Knickles: CTC up by 1.05% .

[2] Critical Retaliation: AP up by 25% after receiving crit for and action.

[4] Haste Up I: Haste up by 2.3% .

[4] Initiative: Begin Combat with 23% Haste for 1 Action. [works during casting section ?]

[6] AP Up I: AP up by 3.75% .

[6] Scatter Shot II: Additional AP * 0.0375 damage to secondary ..

- [8] Haste Up II: Haste up by 5.4% .
- [8] AP Up II: AP up by 5.4% .
- [10] Readiness: Start Combat with +5 Overcharge per enemy.
- [10] Jab II: extra AP * 0.03625 Damage.
- [12] Build Up: extra 2% AP per incoming hit stacks up to 8 times.
- [12] Taunt II: Also does damage to all enemies AP * 0.025
- [14] Ave Overcharge I: AUTO Self cast DamageShield for AP*20%*damageShieldPower 10 overcharge used on that Ability. Stacks with other overcharge perks.
- [14] Earthquake II: Additional damage (20% of the damage received while casting earthquake) (taunt + eathQ ?)
- [16] AP Up III: AP up by 14% .
- [16] Avenger: AP up by 50% !! for 3 Actions after ally falls.
- [20] Backlash: Perma Thorns 5%*AP
- [20] Gravity Punch II: Deals additional 7% of remaining HP in damage. [Max = + 0.22 * MaxHP]

Guardian:

- [2] Defensive Fighter: Evade up by 1.05% .
- [2] Armor Up I: PD up by 4.2% .
- [4] Defend II: Multiplier lowered from *0.5 to *0.4 .
- [4] Stamina Up I: ST up by 4.6%
- [6] Critical Defense: Incoming Crit damage * 0.7 or crit mod - 0.3 ?? [test after damage formula]
- [6] Embolden: passive 10% chance to gain Overcharge when attacked.
- [8] Barrier Swing II: Extra hitpoints for damage shield by AP * 0.054
- [8] Armor Up II: PD up by 21.6% .
- [10] Quick Healer: Incoming Heal * 1.145 [how stacks with Beastiary upgrade ?]
- [10] Dungeon: Increased radius on GS and duration of SS.
- [12] Defensive Start: AUTO cast damageshield at start 93%*AP*damageShieldPower hitpoints.
- [12] Stamina Up I: ST up by 18.6%
- [14] Guar Overcharge I: AUTO Self cast DamageShield for AP*20%*damageShieldPower 10 overcharge used on that Ability. Stacks with other overcharge perks.
- [14] Battle Recovery: Self Heal 50%*AP on killing blow.
- [16] Last Resort: ONCE PER BATTLE AUTO CAST DamageShield AP * 0.35 hitpoints when bellow MaxHP * 0.35 .
- [16] Resilient: PD and MD up by 28%.
- [20] Guard II: Extra 15% . (final * 0.625)
- [20] Empowered Shields: Increases Power of Damage Shields by 40%.

Formulas for Callibrreto's Abilities

PASSIVE:

Extra 10% HPower.

(sadly the UI accounts for this for some of his abilities and doesn't for others. Since this stacks additively with the healing power perks I and II you can toggle those on/off and see what healing numbers change and which don't . Shifting tides 40% per also adds here +0.4 per)

ACTIONS:

Defensive Matrix:

Adds DamageMultipliers for Physical and Magic damage * 0.6 until next (?PLAYER? - why not call it action) TURN.

Attacks grant 5 Overcharge.

Gut Punch I/II:

Deals 80%*AP Damage and applies 'sunder' (extra * 1.1 (II * 1.2) physical damage debuff) for 3 turns. Generates 10 Overcharge.

Swift Cleanse:

Remove up to 2 debuffs from an ally.

Innervating Mist:

Adds 6 Overcharge to all allies for 3 turns. (18 total)

ABILITIES:

Healing Wave (FAST 15 MANA):

Heal an ally for $AP \times 290\% \times healingPower$ hitpoints.

Obliterate (VERY FAST MANA 20):

Deals $128\% \times AP$ damage over 4 hits.

Add extra $40\% \times AP$ Damage vs 'sundered' or 'bleeding' targets.

Nature's Boon I/II (VERY FAST MANA 10):

All allies AUTO healed for $13\% \times AP \times healingPower \times hotPower$ (II 18%) every time they take damage for 3 turns.

(Equivalent to FLAT Damage Reduction. Good vs (AOE) attacks with multiple (low damage per hit) hits)

Wild Fire I/II (FAST MANA 14):

Deals $240\% \times AP$ damage split over 8 hits/shots to random (including stealthed) targets. $30\% \times AP$ Damage per hit.

(II Adds stacking 2.5% 'sunder' with each of its 8 shots/hits, lasts 3 turns.)

Gaia's Fist I/II (FAST MANA 15):

Deals $100\% \times AP$ and applies 'Gaia's Grasp' on target for 3 turns.

Allies attacking 'Gaia's Grasp' debuffed targets are healed for $75\% \times AP \times healingPower \times hotPower$ (II 91%)

Healing Touch I/II (VERY FAST MANA 10):

Heals an ally for $135\% \times AP \times healingPower$ hitpoints.

Adds a heal over time effect for extra $90\% \times AP \times healingPower \times hotPower$ over 4 turns that can stack up to 3 times.

(II adds extra 0.95 damage received multiplier for duration)

Piercing Rounds (VERY FAST MANA 15):

Deals $120\% \times AP$ PIERCING Damage over 8 hits/shots.

Guardian's Song (SLOW MANA 20):

Heals all allies for $170\% \times AP \times healingPower$ hitpoints.

Cannon Blast I/II (SLOW MANA 25):

Deals $240\% \times AP$ MAGIC Damage and ignites for extra $120\% \times AP$ (II 240%) MAGIC Damage over 4 turns.

(calibrreto's answer to Thorns buff or buff by shot/heal enemies)

Cleansing Rain I/II (SLOW MANA 25):

For the next 3 turns at the start of each ally's turn: cleanse one debuff and heal for $30\% \times AP \times healingPower \times hotPower$ hitpoints. (II 60%)

Reincarnate (SLOW MANA 25):

Revive an ally with 40% of their MaxHP and heal them for extra 33% of their MaxHP over 3 Turns. [test DOES PASSIVE HealP WORK HERE ??]

Nature's Wrath (FAST MANA 15):

CTC up by 22% for all allies for 2 attacks.

BURST:

Purify:

Heals each party member for $108\% \times AP \times healingPower$ hitpoints and remove up to 2 debuffs from each.

Flame Slug:

Deals $143.5\% \times AP$ MAGIC Damage over 6 hits/shots to all enemies and ignite for $75\% \times AP$ MAGIC Damage over 4 turns.

War Machine:

Deals $640\% \times AP$ Damage to random targets over 20 hits.

DUNGEON:

Revitalize:

Heals all party members by $\ast 0.4$ of their MaxHP. [CurHP += MaxHP $\ast 0.4$; $\ast 0.6$ with perk mastery]

Cannon Shot:

Damage [??] all enemies and 'ignite' [?? turns ??] in battle.

PERKS:

Artillery Mastery:

[20/100] AP: Up AP by 3%.

[40/100] Overcharge Carryover: Carry up to 15 Overcharge between battles.

[60/100] Art Overcharge II: Heal most injured for $AP \ast 20\% \ast \text{hotPower}$ per 10 overcharge used on that Ability. Stacks with other overcharge perks. (UI doesn't show his passive but in practice it applies)

[80/100] Stamina: Up ST by 30%.

[100/100] Rising Power: Ups AP by 6% per attack performed, stacks up to 5 times.

Nature Mastery:

[20/100] Haste: Up Haste 3%.

[40/100] Dungeon: Increases maximum charges for all dungeon skills.

[60/100] Nat Overcharge II: Art Overcharge II: Heal most injured for $AP \ast 20\% \ast \text{hotPower}$ per 10 overcharge used on that Ability. Stacks with other overcharge perks. (UI doesn't show his passive but in practice it applies)

[80/100] Nature's Will: Doubles Calibrreto's Will.

[100/100] Nature's Avatar: Ups CTC by 10% and HOTs can crit.

Artillery:

[2] Artillery Calibration: up CTC by 1.05% .

[2] Stamina Up I: ST up by 2.1% .

[4] All Defenses Up I: PD and MD up by 4.6% .

[4] Defensive Matrix II: Extra 5 Overcharge when hit.

[6] AP Up I: AP up by 3.75% .

[6] Obliterate II: also does bonus damage vs 'ignite' or 'poison'.

[8] All Defenses Up I: PD and MD up by 10.8% .

[8] AP Up II: AP up by 5.4% .

[10] Fortify: PD and MD up by 2.9% each time Calibrreto is hit, stacks up to 8 times.

[10] Gut Punch II: Sunder effect increased from $\ast 1.1$ to $\ast 1.2$.

[12] Wildfire II: Adds stacking 2.5% 'sunder' with each of its 8 shots/hits, lasts 3 turns.

[12] Stamina Up I: ST up by 18.6% .

[14] Art Overcharge I: Art Overcharge II: Heal most injured for $AP \ast 20\% \ast \text{hotPower}$ per 10 overcharge used on that Ability. Stacks with other overcharge perks. (UI doesn't show his passive but in practice it applies)

[14] Wrathful Opener: CTC up by 50% !! for first action taken.

[16] AP Up III: AP up by 14% .

[16] Rerouting Systems: Gain 5 Overcharge each time is hit/shot.

[20] Shifting Tides: Attacking ups HealP by 40%, stacks 3 times. (stacks with passive BUT DOESN'T APPLY TO HOTs or AUTOHEALS - just the directly targeted heals)

[20] Cannon Shot II: Doubles the 'ignite' DOT from $AP \ast 0.3$ to $AP \ast 0.6$ MAGIC damage.

Nature:

[2] Healing Power I: HealP up by 2.1% . [stacks add with passive $1.1 + 0.021$]

[2] Haste Up I: Haste up by 1.05% .

[4] Emergency Protocol: AUTO Self heal for $112.125\% \ast AP \ast \text{hotPower}$ over 3 turns after eating a crit.

[4] Preemptive Healing: AUTO heal over time most injured at combat start $AP \ast 62.1\% \ast \text{hotPower}$ over 3 turns. (UI doesn't show his passive but in practice it applies)

[6] Haste Up II: Haste up by 3.75% .

[6] Recuperate: AUTO heal all at end of combat $33.75\% \ast AP \ast \text{hotPower}$. (buff AP when needed.)

([Healing power does not apply. Extra Healing received does])

[8] Swift Cleanse II: Generate 5 Overcharge per stack of debuff removed for Calibrreto.

[8] Gaia's Fist II: Extra Heal by $AP \ast 0.04$ ($\ast 0.044$ with passive)

[10] Healing Touch II: Also add $\ast 0.95$ damage multiplier on target for the duration of the HOT.

[10] Dungeon: Higher % Heal from Revi [from MaxHP $\ast 0.4$ to MaxHP $\ast 0.6$]. and CS will have larger radius.

[12] Nature's Boon: Extra heal on hit of AP * 0.0125 (* 0.01375 with passive)

[12] Healing Power II: Art Overcharge II: Heal most injured for AP*20%*hotPower per 10 overcharge used on that Ability. Stacks with other overcharge perks. (UI doesn't show his passive but in practice it applies)

[14] Haste on Kill: Haste up by 25% for actions after killshot.

[16] Cleansing Rain II: Doubles the HOT from 30%*AP*healingPower*hotPower hitpoints. (II 60%)

[16] Haste Up III: Haste up by 14% .

[20] Innervating Mist II: Ups overcharge gain from 6 to 9 per turn.

[20] Patient Mending: HealP up by 40% for HOTs. [THIS IS A BIG ONE - it affects Recuperate AND HIS OVERCHARGE SKILLS AND NATURE's BOON !!!!!]

TEST: Do his passive and extra Heal power bonuses affect his overcharge heal perks.

- his passive (and healing power I and II perks) DO.
- the shifting tides 40% up to 3 times doesn't. (saves it for a 'real' healing ability)

Formulas for Garrison's Abilities

PASSIVE:

Extra 50% overcharge generation from basic actions and extra maximum Overcharge accumulation cap.

ACTIONS:

Parry I/II:

Adds DamageMultipliers for Physical and Magic damage * 0.6 until next (?PLAYER? - why not call it action) TURN.

Attacks raise Garrison's AP by 5% for a turn. (II extra 5% AP)

Swift Strike I/II:

Deals 90%*AP (II 104.5%*AP) damage.

Generates 15 Overcharge.

Sting I/II:

Deals 35%*AP damage and applies bleed dealing 65%*AP*bleedPower Damage (II 85%) over 3 turns.

Can stack up to 3 times.

Generates 20 Overcharge.

Enrage I/II:

Ups AP for all allies by 10% for 3 turns. (II + 5% CTC)

Generates 15 Overcharge.

ABILITIES:

Rallystrike I/II (FAST MANA 15):

Deals 150%*AP damage and ups Haste for all allies by 10% (II by 30% on crit) for 2 Turns.

Cleave I/II (VERY FAST MANA 10):

Deals 79.5%*AP (II 56%*AP) damage to primary target and optionally to adjacent target.

(II adds 54%*AP*bleedPower over 3 turns)

Warblade I/II (FAST MANA 15):

Consumes up to 40 Overcharge, dealing (190% + 1% per Overcharge Point used) *AP Damage. (II allows it to consume up to 60 overcharge)

Rage Wave I/II (SLOW MANA 25):

Hits all enemies for 130%*AP MAGIC Damage each.

(II Rage Wave II ignores MD , BUT not vsMDmul - would've called it piercing then ?)

Siphon I/II(VERY FAST MANA 15):

Deals 45%*AP MAGIC Damage to all enemies and restores 75%*AP (II 115%*AP) health per bleeding enemy.

Rupture (VERY FAST MANA 10):

Deals 50%*AP Damage.

If the target is Sundered or Poisoned also add Bleed of $175\% \cdot \text{AP} \cdot \text{bleedPower}$ Damage over 5 turns.
Stacks up to 3 times.

Warrior's Resolve (INSTANT!! MANA 10):

Removes up to 2 debuffs from self.

Berserk I/II (SLOW MANA 20):

Attacks a target for 3 hits for $50\% \cdot \text{AP}$ EACH ($150\% \cdot \text{AP}$) .

Gain UP TO 4 additional attacks (dealing the same $50\% \cdot \text{AP}$ Damage) for each crit strike.

[maximum is $\text{AP} \cdot 50\% \cdot 7 \cdot \text{CritMod}$]

(obvious synergy with his lvl 2 Burst that grants +60% CTC and Calibretto's Nature's Wrath)

(II extra 15% CTC if target is bleeding)

Feint (VERY FAST MANA 15):

Deals $100\% \cdot \text{AP}$ Damage and ups AP by 25% for 1 action.

Slash (VERY FAST MANA 10):

Deals $105\% \cdot \text{AP}$ AOE Damage and ups CTC for 10% for the next 3 attacks.

Blood Bath (SLOW MANA 20):

Strike all enemies for $30\% \cdot \text{AP}$ Damage and apply bleed dealing $175\% \cdot \text{AP} \cdot \text{bleedPower}$ Damage to each over 5 turns.

(synergy with Siphon BUT DO YOU REALLY WANT TO KEEP 3 ENMIES ALLIVE FOR 5 turns ?)

(synergy bleed crits, burst 2 and calibretto's nature wrath - PERMA CRIT BLEED)

Impale (FAST MANA 15):

Deals $168\% \cdot \text{AP}$ PIERCING damage.

BURST:

Heart Bleed:

Deals $152\% \cdot \text{AP}$ PIERCING Damage and adds PIERCING bleed for $78\% \cdot \text{AP} \cdot \text{bleedPower}$ over 3 Turns.

Relentless Assault:

NO RECOVERY !!!

Ups CTC of all allies by 60% !! for their next 2 actions.

Blademaster:

Deals $\text{AP} \cdot 640\%$ over 15 hits . (overshadowowed by red mana burning Warblade and Berserk)

PERKS:

Swordsman Mastery:

[20/100] Critical: 3% CTC Bonus.

[40/100] AP: Ups AP by 6%.

[60/100] Ele Overcharge II: boost AP by 10% per 10 overcharge used on that Ability. Stacks with other overcharge perks.

[80/100] Risk Taker: Ups AP by 30% when $\text{CurHP} < 0.3 \cdot \text{MaxHP}$.

[100/100] Overpower: Ups AP by 6% on crits. Stacks up to 6 times.

Wanderer Mastery:

[20/100] Haste: Ups Haste by 6%.

[40/100] Dungeon: Increases maximum charges for all dungeon skills.

[60/100] Wan Overcharge II: boost AP by 10% per 10 overcharge used on that Ability. Stacks with other overcharge perks.

[80/100] Survivor: Ups AP by 1 per ST/7 .

[100/100] Life Leech: Self Heal $40\% \cdot \text{AP}$ on attack.

Swordsman:

[2] CTC UP I: CTC up by 1.05%

[2] Start Strong: Begin battle with extra 10% AP for one action.

[4] Second Wind: End of combat AUTO Self Heal for $46\% \cdot \text{AP}$ hitpoints. (try and boost AP if needed)

[4] Crit Damage Up I: Damage on crits Up by 5.75% ..

[6] AP Up I: AP up by 2.3% .

[6] Warblade II: Raises the amount of Overcharge that can be consumed by WB from 40 to 60.

[8] CTC UP II: CTC up by 5.4% .

[8] AP Up II: AP up by 5.4% .

[10] Bloody Criticals: Crits will cause extra $AP \times 62.2\% \times \text{bleedPower}$ PIERCING damage over 3 turns.

[10] Swift Strike II: Ups its damage by $AP \times 0.03625$.

[12] Honed Blade: CTC up by 2% per attack. Stacks up to 8 times.

[12] Crit Damage Up II: Damage on crits Up by 23% ..

[14] Swor Overcharge I: boost AP by 10% per 10 overcharge used on that Ability. Stacks with other overcharge perks.

[14] Rage Wave II: Becomes PIERCING damage.

[16] AP Up III: AP up by 14% .

[16] Berserk II: Up its CTC by 15% vs bleeding targets.

[20] Enrage II: Also up party CTC by 5%.

[20] Vicious Wounds: bleed DOTs can now Crit. [holy bloodbath + Burst 2 + Calibretto nature's wrath !! guaranteed bleed crits]

Wonderer:

[2] Sturdy: ST up by 2.1%.

[2] Haste Up I: Haste up by 1.05% .

[4] Parry II: Up its AP bonus on parry by 5%.

[4] Seize Opportunity: 10% chance to generate extra 20 Overcharge per attack.

[6] Conserve Energy: Can carry up to 10 Overcharge between combats.

[6] Rally II: Ups its Haste Bonus to 30% if rally crits.

[8] Cleave II: Lowers impact damage from $AP \times 0.19875$ to $AP \times 0.1375$ but adds $AP \times 0.135$ PIERCING bleed over 4 turns to each target.

[8] Haste Up II: Haste up by 5.4% .

[10] Sting II: Increases its bleed damage by $AP \times 0.05$ over 3 turns.

[10] Dungeon: FB extra radius and QStep ups CTC by 10% for the first action.

[12] Battle Ready: Start battle with 10 Overcharge.

[12] Warrior's Resolve II: Removes ALL self debuffs.

[14] Won Overcharge I: boost AP by 10% per 10 overcharge used on that Ability. Stacks with other overcharge perks.

[14] Victory Rush: Killing Blows grant 25 Overcharge.

[16] Siphon II: Extra healing by $AP \times 0.075$ per bleeding target.

[16] Haste Up III: Haste up by 14% .

[20] Bloodthirsty: Each Bleed damage ticks on Garrison generate 5 Overcharge. [assuming bleed on enemies and not on garrison]

[20] Deep Wounds: Ups all bleed damage by 40%.

Formulas for Knolan's Abilities

PASSIVE:

Highest WILL Stat (largest mana pool) but Overcharge gains from basic actions halved. (very bad deal but his awesome mana shield and Burst 2 compensates)

ACTIONS:

Arcane Defense I/II :

Adds DamageMultipliers for Physical $\times 0.4$ and Magic damage $\times 0.6$ (II 0.8) until next TURN.

Arcane Missile I/II:

Deal $80\% \times AP$ MAGIC Damage and apply 'Arcane Sickness' to target. $\times 1.1$ multiplier for magic damage for 3 turns.

Generates 5 Overcharge.

(II dispels 1 buff from target)

Ice Blast I/II:

Deal $60\% \times AP \times \text{elementalPower}$ MAGIC Damage and apply 'Chill' target. -10% haste (II -20% haste) stacks up to 3 times.

Generates 5 Overcharge.

Fire Bolt I/II:

Deal $40\% \times AP \times \text{elementalPower}$ MAGIC Damage and apply 'Ignite' to target dealing extra

65%*AP*elementalPower MAGIC (II 101.4%) damage over 3 turns. Stacks up to 3 times.
Generates 5 Overcharge.

ABILITIES:

Fire Storm I/II (SLOW MANA 20):

Deals 87.25%*AP*elementalPower MAGIC Damage to all enemies and 'ignites' them for 3 turns for extra 65%*AP*elementalPower (II 71%) MAGIC Damage.

Mend Wounds I/II (VERY FAST MANA 20):

Heals target for 215%*AP*healingPower Health. (II remove 1 debuff)

Mana Shield I/II (VERY FAST MANA 10):

Places a DamageShield for 142.5%*AP hitpoints.

Target gains 10 Overcharge per hit and apply 'Arcane Sickeness' on attacker (amount / dur ?)
(II extra 5 Overcharge per hit)

Elemental Shield I/II (VERY FAST 10):

Places a DamageShield for 112.5%*AP hitpoints.

Attacks get 'ignite' and 'chill'. (amount / dur ?)

(II 25%*AP AOE explosion when it goes)

Ice Lance I/II (FAST MANA 20)

Deals 180%*AP*elementalPower MAGIC Damage.

Enemies affected by 'sunder' or 'chill' get extra 60%*AP*elementalPower [magic?] Damage .

(II bonus also triggers vs 'poison' or 'arcane sickness')

Mass Heal I/II (FAST MANA 15):

Heals all allies for 124.6%*AP*healingPower (II 164.92%*) health.

Cleanse (FAST MANA 20):

Removes all debuffs from an ally. [inferior to Calibrreto's similar action]

Arcane Explosion (FAST MANA 20):

Deals 111.2%*AP MAGIC damage to and enemy.

If target has 'Ignite' extra AOE 36%*AP MAGIC Damage.

If target has 'Chill' stun the target.

If target has 'Arcane Sickness' deal extra 50%*AP MAGIC DAMAGE and gain 15 Overcharge!

(can trigger multiple effects at once ?)

Mana Magnet (VERY FAST MANA 10)

Taunt on Knolan 1 attack, reducing its damage by 40% (*0.6 multiplier).

If attack is magical GAIN 15 Overcharge!

Arcane Power (SLOW MANA 20)

All allies AP up by 15% ; Haste up by 15% and CTC up by 15% for 2 actions.

Resurrect (SLOW MANA 25):

Revive ally with CurHP = 65% of MaxHP .

Arcane Storm (SLOW MANA 25):

Deals 230%*AP MAGIC damage to A target (over 3 hits) and applies 'ignite', 'chill' and 'arcane sickness' (fallow up with Arcane explosion ?).

BURST:

Eldritch Summons:

All enemies 112.5%*AP MAGIC Damage each.

Mana Surge:

Heal eachparty member for 151.83%*AP*healingPower health and 40 MANA to each !!! .

Time Warp:

Alters time allowing Konlan to perform 3 actions(abilities actually) in a row.

DUNGEON:

Arcane Light:

Reveals Stealthed units. Adds AP * 0.1875 shields at the beginning of combat.

PERKS:

Elemental Mastery:

[20/100] Critical: 3% CTC Bonus.

[40/100] Haste: 6% haste bonus.

[60/100] Ele Overcharge II: boost Haste by 10% per 10 overcharge used on that Ability. Stacks with other overcharge perks.

[80/100] Fiery Will: Gain 3 Overcharge per turn !

[100/100] Elemental Master: Increase the damage of Fire and Ice Spells by 25%.

Arcane Mastery:

[20/100] Will: 3 extra WILL.

[40/100] Dungeon: Increases maximum charges for all dungeon skills.

[60/100] Arc Overcharge II: boost Haste by 10% per 10 overcharge used on that Ability. Stacks with other overcharge perks.

[80/100] Arch Wizard: AP up by 1% per CurMana / 10 . ['red mana' matters ?]

[100/100] Arcane Master: AP up by 20%.

Elemental:

[2] Elemental Swiftiness: evade chance up by 1.05% .

[2] CTC UP I: CTC up by 1.05%

[4] AP Up I: AP up by 2.3% .

[4] Fire Storm II: The ignite DOT gets extra 6%*AP*elementalPower damage.

[6] Conserve Energy: Carry up to 10 Overcharge between combats.

[6] Ice Lance II: Bonus damage also applied vs 'Arcane sickness' or 'Poison'.

[8] CTC UP II: CTC up by 5.4% .

[8] AP Up II: AP up by 5.4% .

[10] Elemental Shield II: when it expires AOE damage vs all enemies 25%*AP*elementalPower MAGIC damage.

[10] Ice Blast II: 'Chill' effect up from *1.1 to *1.2 per.

[12] Hot Streak: Each DOT of ignite ups CTC by 1% FOR 2 TURNS :(stacks up 30 times.

[12] Mana Supplement: Each Attack grants 4 Overcharge!.

[14] Ele Overcharge I: boost Haste by 10% per 10 overcharge used on that Ability. Stacks with other overcharge perks.

[14] AP Up III: AP up by 5.4% .

[16] Impaling Ice: Ice Spells gain piecing IGNORING ENEMY MD. (good for damage formula)

[16] Firebolt II: 'Ignite' DOT gains extra 36.4%*AP*elementalPower MAGIC Damage.

[20] Drain Heat: Gain 15% haste for each chilled enemy!

[20] Combustion: Ignite DOT can crit.

Arcane:

[2] Arcane Health: Stamina up by 2.1% .

[2] Magic Def Up I: MD up by 4.2% .

[4] Arcane Defense II: incoming MD multiplier lowered from * 0.4 to * 0.2 (or separate extra *0.8 TEST!)

[4] Restauration Specialist: HealP up by 4.6% .

[6] Mana Reaper: Gain 5 Mana per kill shot.

[6] Mana Shield II: Additional 5 Overcharge when target hit.

[8] Brain Storm: Gain 10 mana on crits.

[8] Will Up I: WILL Up by 3.

[10] Arcane Missile II: also dispells 1 buff from target.

[10] Dungeon: AL larger Damage Shield and GoF also adds ignite to victims.

[12] Magic Def Up II: MD up by 37.2% .

[12] Mend Wounds II: Also remove 1 debuff from target.

[14] Arc Overcharge I: boost Haste by 10% per 10 overcharge used on that Ability. Stacks with other overcharge perks.

[14] Will Up II: WILL Up by 6.

[16] Mass Heal II: additional 40.32%*AP*healingPower heal each.

[16] Savant: Start Combat with 15 Overcharge.

[20] Arcane Recovery: +7 mana to each ally at the end of combat!

[20] Spell Weaver: Casting an Arcane Spell will refund 7 Mana to Knolan.

Formulas for Red Monika's Abilities

PASSIVE:

+10% base evade chance.

Gains 'Counter!' buff after evading an attack which enhances CTC by 5% for the next attack. (non stacking)

ACTIONS:

Evasive Maneuvers I/II: Adds a DamageMultiplier for Physical and Magic damage * 0.6 and increases evade chance by 10% until next (?PLAYER? - why not call it action) TURN.
(II extra 10% evasion bonus)

Chimera Sting I/II:

Deals 50%*AP (II 64.5 %) Damage and applies a random debuff from poison, bleed, Sunder, Ignite, Chill, Arcane Sickness or Stun.

Generates 10 Overcharge.

Fade Strike I/II:

Deals 60%*AP Damage and adds 10% evade chance for 3 turns, stacking up to 3 times.

Generates 10 Overcharge.

(II has 25% chance to enter stealth after)

Wild Shot I/II:

Deals 100%*AP (II 139%) Damage to random (even cloaked) enemies over 2 shots.

Generates 10 Overcharge.

ABILITIES:

Ambush I/II (SLOW 20 MANA):

Deals 218%*AP Damage.

If Stealthed, deal 350%*AP Damage instead.

(II + 35% CTC)

Stealth I/II (VERY FAST 10 MANA):

Gain 'Stealth' Buff, ... increasing her Evasion by 25% (vs AOE/wild attacks) for [until?] her next action.

(II +10% CTC for 1 action)

Frost Bomb (FAST 10 MANA):

Deals 65.33%*AP Magic Damage to each enemy and Chills them, reducing Haste by 10% for 2 Turns each. Stacks up to 3 times.

Lighting Reflexes I/II(VERY FAST MANA 10):

Increases Haste by 35% and evade chance (evasion?) by 10% for 3 Turns.

(II changes its recovery from 5 to 4)

Cleansing Bomb (VERY FAST MANA 10):

Remove 1 debuff from all allies.

Fire Bomb (FAST MANA 10):

Deals 35.33%*AP Damage to each enemy and Ignites them, dealing 65%*AP Magic Damage over 3 Turns to each. Stacks up to 3 times.

Riposte I/II (VERY FAST MANA 10):

Deals 100%*AP Damage.

If the 'Counter!' buff is active Deals 144%*AP instead and applies 'Sunder' debuff [Adds a DamageMultiplier for Physical damage of * 1.1 for 3 Turns]

(II its recovery down to 2.5 from 5 if '!counter' buff active)

Distracting Shot I/II (VERY FAST MANA 10):

Deals 35%*AP Damage and puts taunt on Red Monika [1 attack] and increases her evade chance by 30% for the duration.

(II taunts for 1 extra attack)

Exploit Weakness (FAST MANA 10):

Deals 111%*AP Damage to an enemy.

If the target was 'Bleeding' will spread 62.4%*AP Bleed Damage to [adjacent ?] enemies.

If the target was 'Poisoned' deal 20%*AP Damage per stack of poison on target.

If the target was 'Sundered' AUTO CRIT! .

(can trigger multiple effects at once ? Yes)

Execute I/II (SLOW MANA 20):

Deals 275%*AP Damage over 8 hits.

If target is below 30% [checks for each hit individually] health deal 335%*AP) Damage instead.

(II bonus damage triggers under 60% target health)

Barsilisk Shot (FAST MANA 15):

Deals 170%*AP Damage and stuns the target from medium duration [4 turns ?].

Death Blossom (SLOW MANA 25):

Deals 50%*AP Damage to each enemy and applies 2 random debuffs to each from 'Poison', 'Bleed', 'Sunder', 'Ignite', 'Chill', 'Arcane Sickness' or 'Stun'.

BURST:

Creeping Death:

Inflicts an enemy with 'Creeping Death' a Poison that increases in stack size every turn up to 6 stacks and then expires.

Each stack deals 20%*AP PIERCING Damage every turn. [good in long fight vs heavily resistant boss that doesn't heal/dispel] Maximum total AP * 20% * (1 + 2 + 3 + 4 + 5 + 6) = 420% * AP

. (Every Boss and Champion begs for this stuff in the first combat round.)

Assassinate:

Deals 375%*AP Damage and enters 'Steath'. [potential combo with ambush]

Love Bomb:

Deals 88%*AP to all enemies, applies 'poison', 'bleed', 'sunder', 'ignite', 'chill' and 'arcane sickness' , adds extra 195% * AP DOTs (/3 ?) over 3 turns [lowers haste by 10% and amplifies damage by 10%] for 3 turns.

PERKS:

Skirmisher Mastery:

[20/100] Attack Power: 3% AP Bonus.

[40/100] Haste: 6% haste bonus;

[60/100] SK Overcharge II: boost CTC by 10% per 10 overcharge used on that Ability. Stacks with other overcharge perks.

[80/100] Risk Taker: Evade += 15% if CurHP < MaxHP * 0.3 .

[100/100] Executioner: All attacks increase EXECUTE damage buff by 10%. Stacks up to 5 times.

Infiltrator Mastery:

[20/100] Critical: 3% CTC Bonus.

[40/100] Dungeon: Increases maximum charges for all dungeon skills.

[60/100] Inf Overcharge II: boost CTC by 10% per 10 overcharge used on that Ability. Stacks with other overcharge perks.

[80/100] Vital Strikes: AP bonus 15%.

[100/100] Ambush Queen: All attacks increase AMBUSH damage buff by 10%. Stacks up to 5 times.

Skirmisher:

[2] Athletics: Stamina up by 2.1% .

[2] Confident Counter: Evading provides +5 Overcharge. (awesome!)

[4] Evade I: evade chance up by 2.3% .

[4] Critical Counter: extra 10% CTC bonus for evading (stacks with her passive)

- [6] AP Up I: AP up by 3.75% .
- [6] Lightning reflexes II: Reduces the recovery time after casting LR by 20%. [what is recovery time?]
- [8] Evade II: evade chance up by 5.4% .
- [8] AP Up II: AP up by 5.4% .
- [10] Riposte II: If the 'Counter!' buff is present reduce recovery of Riposte by 50%.
- [10] Chimera Sting II: Increase its damage from 50%*AP to (II 64.5 %)
- [12] Distracting Shot II: taunt 1 extra attack (2 total).
- [12] Cleansing Bomb II: clean 2 de-buffs per ally.
- [14] SK Overcharge I: boost CTC by 10% per 10 overcharge used on that Ability. Stacks with other overcharge perks.
- [14] Swift Kill: Gain 100% haste for 1 turn after getting a killing blow. [50% recovery ?]
- [16] AP Up III: AP up by 14% .
- [16] Execute II: Execute bonus damage triggers for targets bellow 60% MaxHP instead of 30%.
[checks for each hit individually]
- [20] Wildshot II: Increases its total damage from 100%*AP to (II 139%)]
- [20] Red Monika's DOTs [Poison, Ignite, Bleed] can now Crit (assuming same CTC).

Infiltrator:

- [2] Reinforced Leather: PD up by 4.2%.
- [2] CTC UP I: CTC up by 1.05%
- [4] Evasive Manuevers II: Increases its evade bonus by 10%. [up to 20% per stacking up to 3 times].
- [4] Crit Damage Up I: Damage on crits Up by 5.75% ..(it stacks with the base crit multiplier*1.75, it adds to it)
- [6] Surprise Attack: CTC + 20% for first action in combat.
- [6] Stealth II: Stealth also increases CTC by 10% for 1 action.
- [8] Fade Strike II: Has 25% chance to grant 'Stealth' on Red Monika for 1 turn.
- [8] CTC UP II: CTC up by 5.4%
- [10] Venom Coated Weapons: Crits will poison AP*62.2% PIERCING damage over 3 turns.
- [10] Dungeon: Full speed while stealthed and extra loot when stealing.
- [12] Crit Damage Up II: Damage on crits Up by 23% ..
- [12] Camouflage: Start Battle Stealthed.
- [14] Inf Overcharge I: boost CTC by 10% per 10 overcharge used on that Ability. Stacks with other overcharge perks.
- [14] Creeping Venom: Kill shots will poison [adjacent ?] enemies AP*62.2% PIERCING Damage over 3 turns.
- [16] Ambush II: Ambush CTC += 35% .
- [16] Crit Damage Up III: Damage on crits Up by 35% ..
- [20] Bomb Expert: Fire and Frost Bombs stack twice per cast.
- [20] Assassin: AP up by 10% CTC up by 10% passive.

Formulas for Alumon's Abilities

PASSIVE (VERY similar with Gully's passive):

Adds a DamageMultiplier for Physical and Magic damage * 0.8 while casting.

ACTIONS:

Shadow Wall I/II:

Adds a DamageMultiplier for Physical and Magic damage * 0.6 until next (?PLAYER? - why not call it action) TURN.

If attacked while active Alumon gains 5% CTC (II extra 5% CTC) for 1 turn.

Shadow Whip I/II:

Deals 60%*AP (II 74.5%*AP) Damage and increases AP by 20% for 1 action.

Generates 10 Overcharge.

Soul Shard I/II:

Deals 110%*AP MAGIC Damage and decreases AP by 30% for 1 action.

(II AP penalty down from 30% to 15%.)

Grim Covenant I/II:

CurMana += MaxMana * 0.2 (II * 0.4); CurHP *= 0.9 . (heal price can be payed with damageshield hitpoints)

ABILITIES:

Devastation I/II (SLOW MANA 20):

Deals 325%*AP Damage to enemy and 30%*AP Piercing Damage to self.

(II Taunts while casting Devastation and deals extra up to 50% of damage received while casting.)

Vampiric Assault I/II (VERY FAST MANA 25):

Deals 120%*AP MAGIC Damage and heals the most damage ally for 75%*AP*healingPower health (II 93%).

Shield of Vengeance I/II (VERY FAST MANA 15):

Places DamageShield on ally that absorbs 150%*AP (II 168%*AP) damage. Also has thorns effect for 22.5%*AP MAGIC Damage.

(thorns effects HURT! for multi 'stage' attacks).

Dark Triage II (VERY FAST MANA 20):

Heals all allies for 104.6%*AP*healingPower. (II 116.26%*AP*healingPower)

Dark Mending I/ II (FAST MANA 20):

Heal an ally for 220%*AP*healingPower health. Any overhealing is added to/as DamageShield.

(II 264.8%*AP*healingPower)

Night's Blessing (FAST MANA 15):

Remove 1 debuff from each ally.

If debuff was removed increase their AP by 15% for 2 actions.

Blood Boil I/II (FAST MANA 15):

Deal 150%*AP MAGIC DAMAGE.

If target had 'Ignite' debuff AUTO CRIT !

(II extra 100%*AP on crit)

Sanguine Embrace I/II (SLOW MANA 20):

Heals all allies for 125%*AP*healingPower health. Any overhealing is added to/as DamageShield.

(II 160.1%*AP*healingPower)

Soul Stagger (VERY FAST MANA 20):

Deals 50%*AP damage, removes 1 buff from an enemy and applies 'Arcane Sickness' to them (Adds a DamageMultiplier for Magic damage * 1.2) for 3 turns.

Mass Haste (SLOW MANA 30):

Increases haste for all party members by 30% for 3 Actions.

Avatar Of Darkness I/II (SLOW MANA 25):

Revive and ally with 65% of their MaxHP.

They will be granted a 20% AP buff for 2 actions after which they will suffer 50% of their MaxHP damage.

(II extra healing 112%*AP*healingPower)

Crushing Darkness (FAST MANA 20):

Deal 120%*AP MAGIC Damage.

If target is affected by 'Arcane Sickness', 'Ignite' or Chill - they will get sundered (Adds a DamageMultiplier for physical damage * 1.25) for 3 turns.

BURST:

Blood Frenzy:

AP of all heroes up by 30% AND 5% MaxHP DOT until dispelled.

Reaper:

Damages each enemy for 100%*AP ; heals each ally for 145.125%*AP*healingPower.

Doom:

Deals 1120%*AP !!! MAGIC damage to target after 4 turns..

DUNGEON:

?: CurHP += MaxHP * 0.05 per hit.

PERKS:

Shadow Mastery:

[20/100] Critical: 3% CTC Bonus.

[40/100] Defense: up PD and MD by 12%.

[60/100] Sha Overcharge II: boost HealP by 20% per 10 overcharge used on that Ability. Stacks with other overcharge perks.

[80/100] Armor of Shadows: Increases AP by PD/7.

[100/100] Harbringer of Death: AP up by 6% on crit, stacks up to 6 times.

Blood Mastery:

[20/100] Healing Mastery: HealP up by 6% .

[40/100] Dungeon: Increases maximum charges for all dungeon skills.

[60/100] Blood Overcharge II: boost HealP by 20% per 10 overcharge used on that Ability. Stacks with other overcharge perks.

[80/100] Blood Quickening: Haste up by 15%.

[100/100] Ancient Bloodline: AP up by 20%.

Shadow:

[2] Shifting Shadows: Evade up by 1.05% .

[2] Shadow Feedback: AP up by 25% for 1 action after receiving crit hit.

[4] CTC UP I: CTC up by 2.3%

[4] All Defense Up I: up PD and MD by 4.6%.

[6] AP Up I: AP up by 3.75% .

[6] Shield of Vengeance II: extra AP*18% damage (II 168%*AP total)

[8] CTC UP II: CTC up by 5.4% .

[8] AP Up II: AP up by 5.4% .

[10] Essence Steal: Crit hits heal most wounded ally for AP*71.775%*healingPower Health

[10] Shadow Whip II: Increase damage of SW by 14.5%*AP [60%*AP (II 74.5%*AP)]

[12] Bladed Shield: Thorns Effect While Casting 5%*AP MAGIC damage.

[12] All Defense Up II: up PD and MD by 18.6%.

[14] Sha Overcharge I: boost HealP by 20% per 10 overcharge used on that Ability. Stacks with other overcharge perks.

[14] Night's Blessing II: NB will cleanse an extra debuff from each ally.

[16] AP Up III: AP up by 14% .

[16] Avatar of Darkness II: Revived allies will return with extra extra healing 112%*AP*healingPower.. [fully healed]

[20] Grim Covenant II: Doubles mana gained from CurMana += 20% of MaxMana to 40% of MaxMana

[20] Devastation II: Taunts while casting Devastation and deals extra up to 50% of damage received while casting.

Blood:

[2] Endurance : ST up by 2.1% .

[2] Haste Up I: Haste up by 1.05% .

[4] Shadow Wall II: extra CTC 5% bonus if struck .

[4] Healing Power I: HealP up by 4.6% .

[6] Vampiric Assault II: Extra 18%*AP*healingPower health healed. [93%*AP*healingPower health total]

[6] Patch Up: End of Combat AUTO heal party for 33.75%*AP. [buff AP when leaving if possible]

[Healing power does not apply. Extra Healing received does]

[8] Haste Up II: Haste up by 5.4% .

[8] Dark Triage II: Heal each ally for additional 11.66%*AP*healingPower . (II 116.26%*AP*healingPower) total

[10] Soul Shard II: AP penalty down from 30% to 15%.

[10] Dungeon: Higher % Heal from LD and PoD will apply arcane sickness.

[12] Reinforced Shield: Extra Passive DR Multiplier 15% [they don't add] * (1 - 0.2) * (1 - 0.15) = * 0.68

[12] Healing Power II: HealP up by 18.6% .

[14] Blood Overcharge I: boost HealP by 20% per 10 overcharge used on that Ability. Stacks with other overcharge perks.

[14] Corpse Explosion: On kill blow AOE 40%*AP MAGIC damage to other 'living' enemies .. [still standing or non undead?]
[16] Dark Mending II: Heal additional 44.8%*AP*healingPower . [264.8%*AP*healingPower total]
[16] Healing Power III: HealP up by 25% .
[20] Sanguine Embrace II: SE heal each additonal 35.1%*AP*healingPower [160.1%*AP*healingPower total]
[20] Blood Boil II: additonal 100%*AP MAGIC Damage on a crit. [before or after crit ?]

6 Comments



peddroelm [author] Jul 15, 2018 @ 7:28am
it has been too long - I don't remember anymore



See you Space Cowboy... Jul 14, 2018 @ 5:33pm
Does (+BonusDmg) then get added to AP, or is it just a flat dmg bonus added at the end?



øjeRum May 23, 2018 @ 3:53am
Nice work.



DilaZirK May 9, 2018 @ 9:07pm
Excellent detailed breakdown of the game's mechanics! I super appreciate the effort you took to compile this and wished the game itself had been more forthcoming about these details.



Krow Apr 28, 2018 @ 8:41am
+1



gui Jan 25, 2018 @ 7:34pm
Very interesting guide gg



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