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Algorithms FAQ by Terii Senshi

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Final Fantasy III (VI)
Algorithms FAQ V 2.3

By

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2.3 3/10/2004. Adding details to section 2.8 Battle timing for how often
Poison/Regen/Seizure damage is taken, how long Condemned, Stop, Refelect,
Freeze and Sleep status last, and how frequently characters get a chance to run.
Corrected the amount of Vigor monsters start with. Added to the Condemned status
details on how the value of the timer is determined. Removed groups that
couldn't actually be encountered from the Veldt listings.

Revised Suplex description (section 9.3). Switched
probabilities for 1st and 2nd Sketch attacks (section 6.7). Added notes for
Sketch (6.7) and Control (6.8). Added note to Mute status (section 2.7). Added
hit rate note for Stunner SwdTech (section 11.0).

Finally fixed the inequalities in both Chances to Hit formulas. Added Defend
to the Physical Damage Calculation (step 6d). Slightly adjusted the chance of
Metamorph success percentages. :) Fixed the algorithm for determining maximum
enemy Stamina (section 2.6). Adjusted the Defense boost given by Imp equipment
to non-Imps (section 4.2). Adjusted the Bat Pwr boost given by Imp Halberd to
non-Imps (section 3.13). Adjusted the Bat Pwr boost given to Imps by weapons
besides Imp Halberd (section 2.7). Added Seizure note for Stamina (section 2.6)
in keeping with section 2.7. Minor change to Genji Glove (sections 5.8 and 2.1)
to account for barehanded characters. Fixed probability of Wind Slash being
cast with Tempest (section 3.20). Made a few changes to Steal algorithm
(section 6.6) Added damage limit to Poison status (section 2.7). Differentiated
Mag Roader types in the Veldt group listing. Revised explanation of how you can
encounter undead SrBehemoth in two different Veldt groups. Added the Empty
(Fists) item to the weapons (section 3.23). Various spelling and grammatical
corrections, and other minor changes.

2.2 2/29/2004. Added step 5 to damage calculation, modified steps 1 and 7. This
splits the "damage multipliers" into 2 steps, the way it's supposed to be.
Modified step 4 in hit determination to account for getting hit in the back.
Added section 2.12 Umaro's attacks, 2.13 Running from combat, and 2.14 Shadow
leaving, 2.15 Pincer, Side, Back, and Preemptive attacks. Added to the Berserk
and Muddle status. Made corrections to 2.11 Saving Cid section. Made small
corrections to sections 2.2 and 2.16. Revised step 1 of damage calculation to
make magic attacks made by monsters accurate.

2.1 7/1/2003. Made some corrections to section 3.1 - Randomly casts spell.
Added a section for the Jump command (section 6.9). Fixed a few other typos
and such.

2.0 6/24/2003. Fixed a mistake in physical damage calculation. Added Desert
Aria to the list of dances. Added step 6 of damage calculation. Added sections
3.1 to 3.6 to the weapons section. Added sections 4.1 and 4.2 to the armor
sections. Added info for Black Belt relic. Corrected an error in the Steal
command section. Added Shock to the spell listing. Added info for saving Cid
and finding Doom Gaze.

1.6 6/3/2002. Added a section for the Veldt, a section for enemy attacks, and
a section for dropped items. Added Dispatch to the spell stats list (it was
blank before). Made corrections and/or additions to: Damage Determination, Hit
Determination, Desperation Attacks, Steal, Morph, Atma Weapon, Spell Stats
list.

1.5 2/11/2002. Added Character stats, status effects, and battle timing
sections. Added Morph, Dance, and Capture. Made corrections and/or additions
to: Desperation attacks, Atma Weapon, Tintinabar, and True Knight. Added a
listing of spell powers for all attacks.

1.4 10/29/2001. Pretty much changed everything. Added averaging levels and
desperation attacks sections. Added many more weapons. Added armors, lores,
and blitzes sections. Made many changes and minor corrections to the other
sections

1.3 9/10/2001. Added Genji Glove, Earth Wall, and Stone. Corrected or added to
to Physical Damage Calculation, Random Encounters, Chance to Hit, Dice, Fixed
Dice, Gauntlet, and Metamorph.

1.2 Added chance to hit calculation, steal command, sneak ring, and Metamorph.
Changed the layout slightly.

1.1 Added a 100% accurate physical damage formula. Fixed a few other errors.

1.0 The original version.

Credits and Acknowledgements:

Squaresoft
  For making this game :)

GameFAQs
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Everyone at FF3 Message Boards on GameFAQS, especially Master Zed, Assassin17,
Mech Gouki, Mnrogar, and anyone else who figured out some of the things I put
in this FAQ. Thanks to Assassin17 for most of the changes in version 2.3

****
 1.0 Introduction
****

This FAQ explains how the algorithms and calculations for Final Fantasy III
work. It contains details on how damage is calculated, how random encounters
are determined, as well as how other items and things work. Obviously, this
FAQ doesn't cover everything, but it's getting closer.

NOTE: All divisions done in all calculations are integer division. This means
the result after the division is truncated (rounded down), so (4 / 2) = 2,
(8 / 3) = 2, and ((17 / 2) / 5) = (8 / 5) = 1.

[A..B] is used to indicate a random number between A and B inclusive. For
example [2..4] is a random number: either 2, 3, or 4.

             ****
              2.0 Basic Algorithms
             ****

****
 2.1 Damage calculation
****

Determining the amount of damage an attack can do is complicated, and I broke
it down into 9 steps. The 1st step has 4 parts. Depending on whether the attack
is physical or magical, and whether the attacker is a character or monster, it
uses a different part of step 1. After step 1, you have the base maximum
damage that the attack can do. The following 8 steps will further modify the
damage, and are used for all attacks, magical or physical, made by monsters or
characters. At the end of all steps you will have the amount of damage the
attack can do.

Step 1. Maximum damage calculation

  For magical attacks made by characters:

    Damage = Spell Power * 4 + (Level * Magic Power * Spell Power / 32)

  For magical attacks made by monsters:

    Damage = Spell Power * 4 + (Level * (Magic Power * 3/2) * Spell Power / 32)

  For physical attacks made by characters :

    Step 1a. Vigor2 = Vigor * 2
             If Vigor >= 128 then Vigor2 = 255 instead

    Step 1b. Attack = Battle Power + Vigor2

    Step 1c. If equipped with Gauntlet, Attack = Attack + Battle Power * 3 / 4

    Step 1d. Damage = Battle Power + ((Level * Level * Attack) / 256) * 3 / 2

    Step 1e. If character is equipped with an Offering:

    Damage = Damage / 2

    Step 1f. If the attack is a standard fight attack and the character is
    equipped with a Genji Glove, but only one or zero weapons:

    Damage = ceil(Damage * 3 / 4)

  For physical attacks made by monsters :

    Step 1a. Damage = Level * Level * (Battle Power * 4 + Vigor) / 256

    Note that vigor for each monster is randomly determined at the beginning of
    the battle as [56..63]

Step 2. Atlas Armlet / Earring

Step 2a. If physical attack and attacker is equipped with Atlas Armlet or Hero Ring:

Damage = Damage * 5/4

Step 2b. If magical attack and attacker is equipped with 1 Earring or Hero Ring:

Damage = Damage * 5/4

Step 2c. If magical attack and attacker is equipped with 2 Earrings / Hero Rings:

Damage = Damage + (Damage / 4) + (Damage / 4)

Step 3. Multiple targets

If magical attack and the attack is targeting more than one target:

Damage = Damage / 2

Note: Some spells skip this step

Step 4. Attacker's row

If Fight command and the attacker is in the back row:

Damage = Damage / 2

Step 5. Damage Multipliers #1

The damage multiplier starts out = 0.

The following add to the damage multiplier:

Morph (attacker) - If Attacker has morph status add 2 to damage multiplier

Berserk - If physical attack and attacker has berserk status add 1 to damage multiplier

Critical hit -
   Standard attacks have a 1 in 32 chance of being a critical hit. If attack is a critical hit add 2 to damage multiplier

Step 5a. Damage = Damage + ((Damage / 2) * damage multiplier)

Step 6. Damage modification

Step 6a. Random Variance

Damage = (Damage * [224..255] / 256) + 1

Step 6b. Defense modification

Damage = (Damage * (255 - Defense) / 256) + 1

Magical attacks use Magic defense

Step 6c. Safe / Shell

If magical attack and target has shell status, or physical attack and target has safe status:

Damage = (Damage * 170 / 256) + 1

Step 6d. Target Defending

If physical attack and target is Defending:

Damage = Damage / 2

Step 6e. Target's row

If physical attack and target is in back row:

Damage = Damage / 2

Step 6f. Morph (target)

If magical attack and target has morph status:

Damage = Damage / 2

Step 6g. Self Damage

Healing attacks skip this step

If the attacker and target are both characters:

Damage = Damage / 2

Step 7. Damage multipliers #2

The damage multiplier starts out = 0.

The following add to the damage multiplier:

Hitting target in back - If physical attack and attack hits the back of the target, then 1 is added to the damage multiplier

Step 7a. Damage = Damage + ((Damage / 2) * damage multiplier)

Step 8. Petrify damage

If the target has petrify status, then damage is set to 0.

Step 9. Elemental resistance

For each step, if the condition is met, no further steps are checked. So for example, if the target absorbs the element, then steps 9c to 9e are not checked.

Step 9a. If the element has been nullified (by Force Field), then: Damage = 0.

Step 9b. If target absorbs the element of the attack, then damage is unchanged, but it heals HP instead of dealing damage

Step 9c. If target is immune to the element of the attack: Damage = 0

Step 9d. If target is resistant to the element of the attack:
   Damage = Damage / 2

Step 9e. If target is weak to the element of the attack: Damage = Damage * 2

****
2.2 Hit Determination
****

If at any step the attack always hits or always misses, then any further steps are skipped.

Step 1. Clear

If physical attack and the target has clear status, the attack always misses
If magical attack and the target has clear status, the attack always hits.

Step 2. Death Protection

If the target is protected from Wound status, and the attack misses death protected targets, then the attack always misses.

Step 3. Unblockable attacks

If the spell is unblockable, then it always hits.

Step 4. Check to hit for normal attacks

Attacks which can be blocked by Stamina skip this step, and instead use step 5.

Step 4a. If target has Sleep, Petrify, Freeze, or Stop status, then the attack always hits.

Step 4b. If attack is physical and hits the back of the target, then it always hits.

Step 4c. If perfect (255) hit rate, then the attack always hits.

Step 4d. If physical attack, and target has Image status, then the attack always misses, and there is a 1 in 4 chance of removing the

Image status.

Step 4e. Chance to hit

1. BlockValue = (255 - MBlock * 2) + 1

2. If BlockValue > 255 then BlockValue = 255
   If BlockValue < 1 then BlockValue = 1

3. If ((Hit Rate * BlockValue) / 256) > [0..99] then you hit; otherwise,
   you miss.

Step 5. Check to hit for attacks that can be blocked by Stamina

Most attacks use step 4 instead of this step. Only Break, Doom, Demi,
Quartr, X-Zone, W Wind, Shoat, Odin, Raiden, Antlion, Snare, X-Fer, and
Grav Bomb use this step.

Step 5a. Chance to hit

1. BlockValue = (255 - MBlock * 2) + 1

2. If BlockValue > 255 then BlockValue = 255
   If BlockValue < 1 then BlockValue = 1

3. If ((Hit Rate * BlockValue) / 256) > [0..99] then you hit, otherwise
   you miss.

Step 5b. Check if Stamina blocks

If target's stamina >= [0..127] then the attack misses (even if it hit in
step 5a); otherwise, the attack hits as long as it hit in step 5a.

****
 2.3 Random Encounters
****

The game keeps a counter that increases each time you take a step. Walking on
the overworld map adds 192 to the counter for each step taken; walking in
caves, towns, etc. where monsters can be encountered adds 112 to the counter
for each step. Each step, a random number is picked from 0 to 255; if this
number is less than (counter / 256) then a fight occurs. When a random
encounter occurs, the counter is reset to 0. If the lead party member has a
Charm Bangle equipped, then the number added is cut in half. If Mog has the
Moogle Charm equipped, then the counter is not increased, and there is no
chance of random encounters.

****
 2.4 Averaging levels
****

When a character first joins your party (in the World of Balance, or the World
of Ruin), their level is calculated based on the average level of your current
party members. The level for characters is also recalculated at a few other
points in the game as well. When you first start the game with Terra, her
level is always 3.

The new character's level =
Average of all current members' levels (rounded down)

If a character is joining in the WoR, then the new level will never be lower
than their old level.

If a character is joining for the first time, then a value is added to the
average party level to determine their new level, as follows for each
character:

Terra : +0
Locke : +2
Cyan   : +2
Shadow : +0
Edgar : +2
Sabin : +2
Celes : +0
Strago : +2
Relm   : +0
Setzer : +0
Mog   : +5
Gau   : +2
Gogo   : +2
Umaro : +0
Banon : -3
Leo   : +5

****
 2.5 Desperation Attacks
****

If you attack while the character's current HP < their max HP / 8, then there
is a 1 in 16 chance of doing a desperation attack instead of a normal attack.

Gau and Umaro do not have desperation attacks.

If the character has any of the following statuses, then they will never do
a desperation attack: Muddle, Image, Clear, Zombie

Characters will never use their desperation attack more than once each combat.

While the Battle Time Counter (See section 2.8 Battle Timing) is less than
768, characters won't use their desperation attacks. (i.e. Characters will
never use Desperation Attacks during the first 25.6 seconds of combat)

All Desperation attacks are unblockable (see step 3 in hit determination)

All Desperation attacks are magical attacks, that ignore defense (skip steps
5, 6b, 6c, 6d, 6e, 6f, and 7 in damage calculation.)

Sabre Soul and Star Prism are instant death attacks, rather than damage-dealing
attacks like the others. Shadow Fang will also inflict seizure status.

Here is every character's desperation attack:

Char   Attack   Power
Locke   Mirager   139
Terra   Riot Blade   142
Celes   Spin Edge   143
Edgar   Royal Shock   143
Sabin   Tiger Break   140
Cyan   Back Blade   140
Mog   Moogle Rush   150
Strago Sabre Soul   0
Relm   Star Prism   0
Shadow Shadow Fang   140
Setzer Red Card   147
Gogo   X-Meteo   146

****
 2.6 Character Stats
****

Vigor:

Higher vigor increases damage done by physical attacks (see section 2.1
Damage calculation). Raising Vigor over 128 with relics and equipment does
no more damage than having a Vigor of 128.

Monsters do not have individual Vigor stats; instead, their vigor is randomly
determined at the beginning of combat as : [56..63]

Speed:

The higher speed a character has, the faster their ATB gauge increases in
combat. (see section 2.8 Battle Timing)

Stamina:

Stamina increases you chance of blocking most instant death attacks. (see
section 2.2 Hit Determination, step 5)

Stamina increases the amount of HP gained by Tintinabar (see section 5.17),
and Regen (see section 2.7 Status effects), as well as the damage done by poison
and seizure (see section 2.7 Status Effects).

As with Vigor, monsters do not have individual Stamina stats; a monster's
Stamina is figured as follows:

Stamina = (Max HP / 512) + 16. If this number is greater than 40, then the
monster's stamina is 40 instead.

Mag. Pwr:

Mag. Pwr increases damage done by magical attacks (see section 2.1 Damage
Calculation). Unlike Vigor, increasing Mag. Pwr over 128 is more effective.

Evade%:

Evade% is supposed to increase the chance of dodging physical attacks, but due
to a bug in the game, Evade% has no effect, so don't bother trying to
increase it.

MBlock%:

MBlock% increases the chance of dodging attacks (due to a bug in the game, this
affects both magical and physical attacks)

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*******************
 2.7 Status Effects
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Dark:

Dark is supposed to make it harder to hit with physical attacks, but due to
the same bug that makes Evade useless, Dark does not decrease your chance to
hit with physical attacks. The only effect Dark has is that Strago can't
learn new lores while blinded.

Zombie:

While in Zombie status, a character is uncontrollable and automatically
attacks. Characters in Zombie status do not die when reduced to 0 HP.

When a zombie character hits, they have a 1 in 16 chance of inflicting
dark status on the target, and a 1 in 16 chance of inflicting poison status
on the target.

Poison:

While a character is poisoned, they will periodically take poison damage.
Damage from poison is taken approximtely once every 17 seconds, more often if
you're hasted, less often if you're slowed (see section 2.8 Battle Timing for
exact details). The amount of damage done by poison is calculated as follows:

Max Damage = (Max HP * stamina / 1024) + 2 (if this value is greater than
255 it is set to 255)
Damage = Max Damage * ([224..255]) / 256
If a character is poisoned (instead of a monster), Damage = Damage / 2

This damage is the amount of damage taken from Poison the first time in
combat. The second time, the damage is double; the third time it is tripled,
etc. This damage levels off after the eighth round; in other words, the damage
taken from Poison in a round (for characters or monsters) can't exceed 8x what
it was the first round (random variance aside).

Outside of combat, the amount of damage done per step is : (Max HP / 32). This
will never reduce HP below 1.

M-Tek:

While in this status, the character is wearing Magitek Armor, they can't use
their normal commands, and instead can only use M-Tek. Terra has extra
M-Tek commands that other characters don't. If Umaro has this status, he will
use a random M-Tek attack rather than his standard attacks.

This status is only used three times in the game: in the beginning, in the
camp in the desert, and in a part of Cyan's Dream.

Clear:

This status is inflicted by casting Vanish. While in this status, physical
attacks will always miss the target, and magical attacks will always hit.

Any magical attack will remove the clear status.

Imp:

While in Imp status a character can only use fight, item, and magic commands.
The only magic that can be cast is Imp.

While an Imp, the Battle Power of the character's weapon is not added to their
base battle power when determining damage (1 is added instead), unless equipped
with an Imp Halberd.

For monsters, their battle power is instead considered to be 1 while an Imp.

Some monsters however, retain their full battle power while imped, and do
automatic critical hits as well.

Petrify:

While in Petrify status, the character cannot act. Their HP is reduced to 0, but
they don't die.

All damage done to a petrified character is reduced to 0 (see step
8 in damage calculation). Note that the Atma weapon adds 1 to the damage after
this, and thus can do 1 damage to a petrified character.

Attacks always hit a character with Petrify status (see step 4a in hit
determination).

If a monster is ever inflicted with Petrify status, then they are automatically
killed.

Wound:

This means the character is dead, and cannot act until revived.

Condemned:

In Condemned status, the character has a countdown over their head. When this
countdown reaches 0, the character dies. The value that the countdown starts
at is determined as follows:

Timer = 79 - a random number from level to ((2 * level) - 1)
If this value is less than 20 then the countdown is set to 20 instead
Level refers to the level of the monster/character that cast the spell that
caused Condemned status.

The countdown timer is decreased by 1 approximately once every 2 seconds, more
often if you're hasted, and less often if you're slowed (see section 2.8 Battle
Timing for exact details).

Near Fatal:

This status means the character is below 1/8 of their max HP. Characters
can use desperation attacks while in Near Fatal status (see section 2.5
Desperation Attacks).

Image:

While in image status, all physical attacks will miss the character. Every time
the character is missed by a physical attack, there is a 1 in 4 chance of the
image status being removed.

Mute:

While in mute status, a character can't cast spells or lores. If a spell or
lore is confirmed before the character gets Muted, or if they're casting it
via Rage or Sketch, they'll still be able to use it if it *normally* costs
0 MP (Rage/Sketch making it free won't matter).

Berserk:

While in berserk status, a character is uncontrollable, and will automatically
attack a random enemy. In berserk status characters do more damage (see step 5
in damage calculation). To determine which command the character uses, a list
is created. Each of these comands: Fight, Capture, Jump, Rage, and Magitek,
that the character can use is added to the list. An extra Fight command is
added as well (even if the character can't normally use the Fight command). One
of the commands from the list is randomly chosen to be used. Monsters always do
a standard attack while berserked. If a character selects a command before being
berserked, but before they act, then the command selected is still executed.

Muddle:

Muddled characters are uncontrollable and will take random actions. If the
action would normally target the enemy, it targets you characters instead.

If the action would normally target your characters, it targets the enemies instead. The following commands will never be used when muddled: Item, Revert, Throw, Control, Slot, Leap, Def., Summon, and Possess.

Being hit by a physical attack will remove Muddle status. If a character selects a command before being muddled, but before they act, then the command selected is still executed, although the target(s) change.

Seizure:

Seizure status causes periodic damage to the character, just like poison. The amount of damage done is the same as poison, except the damage does not increase over time.

Damage from seizure is taken approximtely once every 8.5 seconds, more often if you're hasted, less often if you're slowed (see section 2.8 Battle Timing for exact details).

Since seizure status is not poison, spells / relics that prevent or cure poison will have no effect against seizure.

Sleep:

While asleep, characters cannot select commands. While asleep, the character's ATB gauge does not increase. (see section 2.8 Battle Timing)

All attacks will automatically hit a character with sleep status, and any physical attack will remove sleep status. A tapir will appear and wake up the monster/character after approximately 38 seconds, faster if you're hasted, slower if you're slowed (see section 2.8 Battle Timing for exact details)

Dance:

This is the status you receive when you successfully dance. While in dance status, a character is uncontrollable and instead randomly uses dance moves. See the section on the Dance command for more info.

Regen:

While in regen status, a character will be periodically healed. The amount of HP healed is calculated as follows:

Max HP Gained = (Max HP * stamina / 1024) + 2 (if this value is greater than 255 it is set to 255)
HP Gained = Max HP Gained * ([224..255]) / 256

HP is gained from Regen approximtely once every 8.5 seconds, more often if you're hasted, less often if you're slowed (see section 2.8 Battle Timing for exact details).

Slow:

Slow status causes the character's ATB gauge increase at a slower than normal rate (See section 2.8 Battle Timing).

Haste:

Haste status causes the character's ATB gauge increase at a faster than normal rate (See section 2.8 Battle Timing).

Stop:

While stopped, a character's ATB gauge does not increase. Wears off after approximately 38 seconds, less time if you're hasted, and more time if you're slowed (See section 2.8 Battle timing for exact details)

Shell:

Shell status causes a character to take 170/256 normal damage from magical attacks (see step 6c in Damage Calculation). Defense ignoring attacks ignore shell status.

Safe:

Safe status causes a character to take 170/256 normal damage from physical attacks (see step 6c in Damage Calculation). Defense ignoring spells ignore safe status.

Reflect:

Reflect status causes spells to be reflected back at the caster's party. Reflected spells deal half normal damage. Not all spells are reflectable. Wears off after approximately 55 seconds, less time if you're hasted, and more time if you're slowed (See section 2.8 Battle timing for exact details)

****
 2.8 Battle Timing
****

In battle, the game keeps track of a battle time counter. This counter is incremented by one approximately 30 times a second. If the "Bat. Mode" is set to "Wait", then the counter will not be incremented while you're selecting spells, items, etc. from the menu. Every time this counter is incremented, each character's and monster's ATB gauge is increased by the following amount:

For characters:

Normal speed:

(96 * (Speed + 20)) / 16

If Hasted:

(126 * (Speed + 20)) / 16

If Slowed:

(48 * (Speed + 20)) / 16

For monsters:

Normal speed:

((96 * (Speed + 20)) * (255 - ((Battle Speed - 1) * 24))) / 16

If Hasted:

((126 * (Speed + 20)) * (255 - ((Battle Speed - 1) * 24))) / 16

If Slowed:

((48 * (Speed + 20)) * (255 - ((Battle Speed - 1) * 24))) / 16

Battle Speed is controlled by the "Bat.Speed" option in the game's Config menu.

Because Speed + 20 must fit in a single byte, any speed over 235 would result in a very slow-moving ATB gauge.

Once the ATB gauge has reached 65536, then characters are able to select a command. The battle time counter and ATB gauges will increase during attack animations, as well as while you select a command, but not while selecting spells, items, etc. from a menu if "Bat. Mode" is set to "Wait".

Each character and monster also has an individual Time counter. Once every 16 times that the Battle timer is increased these counters are increased by the following amount:

If character/monster is at normal speed: 64
If character/monster is hasted: 84
If character/monster is slowed: 32

If any character's/monster's time counter is over 255, then that counter is reduced by 256 and the following occur:

If the character/monster has Stop status, then the "stop timer" is reduced by 1. If the "stop timer" reaches 0, then Stop status is removed. When inflicted with Stop status, the "stop timer" is set 18.

If the character/monster does not have Stop status then the following also occur:

If the party is trying to run, then the character will get a chance to run (see section 2.13 Running From Combat)

If the character/monster has Condemned status, the countdown is decreased by 1.
(See the section for Condemned status)

If they have Reflect status, then the "reflect timer" is reduced by 1. If the
"reflect timer" reaches 0, then Reflect status is removed. When inflicted with
Reflect status, the "reflect timer" is set 26.

If they have Freeze status, then the "freeze timer" is reduced by 1. If the
"freeze timer" reaches 0, then Freeze status is removed. When inflicted with
Freeze status, the "freeze timer" is set 34.

If they have Sleep status, then the "sleep timer" is reduced by 1. If the
"sleep timer" reaches 0, then Sleep status is removed. When inflicted with
Sleep status, the "sleep timer" is set 18.

1 in 8 times, the character/monster will receive Poison damage if they are
poisoned.

2 in 8 times, the character/monster will receive Seizure damage if they have
Seizure status.

2 in 8 times, the character/monster will gain HP from Regen if they have Regen
status.

```
******************
 2.9 Dropped Items
******************
```

At the end of combat, the game checks each monster to see which item it will
drop. Each monster has a 1 in 8 chance of dropping their rare item; otherwise,
they drop their common item. If the monster doesn't have an item in that slot
then it doesn't drop anything.

Note that most monsters only have a rare item, and some monsters don't have
either, which means they'll never drop an item.

```
***********************
 2.10 Finding Doom Gaze
***********************
```

In the World of Ruin, if you haven't defeated Doom Gaze, Doom Gaze moves to a
random location on the World Map every time you get on or off the airship.
While you're flying around, Doom Gaze stays in the same location. Although its
location is random, Doom Gaze always stays still while you're flying, so in
order to ensure that you find Doom Gaze, you need to cover the entire map.

```
****************
 2.11 Saving Cid
****************
```

When you're trying to save (or kill) Cid on the deserted island, the game
keeps track of a counter for Cid's health. This counter starts at 120 and
decreases by 1 every second (when you're in the menu screen or a battle,
the counter doesn't decrease). Feeding Cid fish lowers or raises the counter,
depending on the type of fish (as follows):

Fish (Slow speed)   -16
A Rotten Fish (Medium speed) -4
Just a Fish (Medium speed) +16
A Yummy Fish (Fast speed)   +32

If you feed him multiple fish at a time, the effects of all of the fish count.
The type(s) of fish that are in the water is reset every time you talk to Cid.

What Cid says when you talk to him depends on this "health" counter as follows:

231 - 255 My dear, I ... feel I'm not going to be around much longer...

201 - 230 CELES, thanks for all you've done for me!

161 - 200 HackAck!! I feel a little better!

121 - 160 Cough...wheeze...I can't bear this any longer...

91 - 120 I...I'm not long for this cruel new world ...

61 - 90 My worst nightmare is to think of you alone here on this wretched
           island ... hack ... wheeze!!

31 - 60 Cough...hack...ACK!! While I can still talk, I...wheeze...pant...want
           to thank you...cough!

0   - 30 Good-bye...

If you enter his room when the counter is below 30, then Cid is dead when you
talk to him (If the counter is over 30 when you enter, but lowers below 30 while
you're in the room, Cid won't die until you leave and come back in).

If you feed Cid fish which increase the counter to 256 or more, then Cid is
saved.

```
**********************
 2.12 Umaro's attacks
**********************
```

When Umaro attacks, he has 4 different attacks he can use: a standard attack,
a charge attack where he flies at the enemy, a rage attack where he throws a
character at the enemy (only if equipped with Rage Ring), and a Storm attack
(only if equipped with Blizzard Orb).

The chance he'll use each attack is:

If no Rage Ring or Blizzard Orb equipped:

159/255 chance : Normal attack
96/255 chance : Charge attack

If equipped with a Rage Ring:

95/255 chance : Normal attack
64/255 chance : Charge attack
96/255 chance : Rage attack

If equipped with a Blizzard Orb:

95/255 chance : Normal attack
64/255 chance : Charge attack
96/255 chance : Storm attack

If equipped with a Rage Ring and Blizzard Orb:

63/255 chance : Normal attack
64/255 chance : Charge attack
64/255 chance : Storm attack
64/255 chance : Rage attack

Normal Attack:

This is just a normal fight attack, using the standard chance to hit, and
damage calculations.

Charge Attack:

This attack uses the same chance to hit calculations as a normal attack. For
determining damage, it uses the same calculations as a normal attack, except
that it ignores defense (skips steps 5, 6b, 6c, 6d, 6e, 6f, and 7 in damage
calculation)

Storm Attack:

This is the "Storm" monster attack (see section 11.0). It's a Magical attack
with 100 Spell power that hits all enemies. It's also unblockable (see step 3
in hit determination)

Rage Attack:

This is the attack where Umaro throws a character. In order to use this attack
there must be at least one character besides Umaro that is alive and present.
If there isn't then Umaro will do a charge attack instead.

Umaro determines at random which character to throw. However, if any character
has Sleep or Muddle status, then Umaro will always choose to throw that
character. If more than one character has Sleep or Muddle status, then the
character with Muddle or Sleep who is closest to the top of the screen is
thrown. When a character is thrown, Sleep and Muddle status are automatically
removed from them.

The chance to hit is calculated normally. For determining damage, the battle
power of the attack is equal to Umaro's battle power plus the thrown character's
battle power (or 255 if that number is over 255). The attack is also defense
ignoring (skips step 5, 6b, 6c, 6d, 6e, 6f, and 7 of damage calculation).

```
*************************
 2.13 Running from combat
```

****

The chance to run from a combat is dependent on that character, which monster(s) are present, and how long you've been trying to run.

The game keeps track of a "run difficulty" variable. In side attacks this value is 0; otherwise, the value is equal to 2 times the number of monsters present (some monsters are harder to run from and add 6 to this value instead of 2). There is also a "run success" variable for each character. This value starts at 0 for each character.

Approximately once every 2 seconds, more often for hasted characters, less often for slowed characters (see section 2.8 Batle Timing for exact details), the game checks to see if the characters are trying to run (it won't check during attack animations). If they are trying to run, then each character's "run success" value is increased. The amount added is dependent on the character, and is a random number from 1 to a maximum value depending on the character as follows:

```
Terra:    4
Locke:    5
Cyan:     3
Shadow:   5
Edgar:    4
Sabin:    4
Celes:    4
Strago:   3
Relm:     5
Setzer:   4
Mog:      5
Gau:      5
Gogo:     4
Umaro:    3
Banon:    2
Leo:      3
Vicks:    4
Wedge:    4
```

If the character's "run success" value is greater than or equal to the "run difficulty" value, and the character's ATB gauge is full, then they successfully run away, otherwise they keep trying, and 2 seconds later their "run success" value is increased again.

If certain monsters are present (bosses, ninjas, phases, etc.) then characters can't run no matter what. They also can't run if caught in a pincer attack and monsters are still alive on both sides.

****
 2.14 Shadow Leaving
****

Any time after the Imperial Camp, and before the Floating Continent, and not on the Phantom Train, if Shadow is in your party he has a chance to leave at the end of combat. He has a 1 in 16 chance of leaving at the end of every combat. If Shadow is the only character alive, then he won't run. If the combat is a pincer, side, or back attack he won't run. Shadow also won't run if he has Wound, Petrify, or Zombie status.

****
 2.15 Pincer, Side, Back, and Preemptive attacks
****

Which type of battle you encounter depends on which types are allowed. If any character is equipped with a Back Guard, then Pincer and Back attacks are disabled. Depending on which monster formation you encounter certain types may be disabled as well. (Get FF3usME at http://www.angelire.com/pq/jumparound to see which battle types each formation allows). Most formations allow all types, some disabled pincer attacks, a few disable other types. Most boss battles disable all but Normal attacks.

If only one type of battle is allowed, then that is the type of battle you encounter. Otherwise the chance for each depends on which are allowed as follows:

```
If all types allowed:
Normal:  208/255 chance
Back:     8/255 chance
Pincer:   8/255 chance
Side:    31/255 chance

If normal, back, and pincer allowed:
Normal:  13/14 chance
Back:     1/28 chance
Pincer:   1/28 chance

If normal, back, and side allowed:
Normal:  208/247 chance
Back:     8/247 chance
Side:    31/247 chance

If normal, and back allowed:
Normal:  26/27 chance
Back:     1/27 chance

If normal, pincer, and side allowed:
Normal:  208/247 chance
Pincer:   8/247 chance
Side:    31/247 chance

If normal, and pincer allowed:
Normal:  26/27 chance
Pincer:   1/27 chance

If normal and side allowed:
Normal:  208/239 chance
Side:    31/239 chance

If back, pincer, and side allowed:
Back:     8/47 chance
Pincer:   8/47 chance
Side:    31/47 chance

If back, and pincer allowed:
Back:     1/2 chance
Pincer:   1/2 chance

If back, and side allowed:
Back:     8/39 chance
Side:    31/39 chance

If pincer, and side allowed:
Pincer:   8/39 chance
Side:    31/39 chance
```

Pincer and back attacks will never be a preemptive attacks. For a normal attack there is a 1 in 8 chance of a preemptive attack. Side attacks have a 7 in 32 chance of being a preemptive attack. If any character is equipped with a Gale Hairpin, then the chances are doubled. Certain monster formations (mostly bosses) disable preemptive attacks.

****
 2.16 Veldt
****

When fighting on the veldt, the monsters you run into are not completely random. Instead you run into 1 battle from a group, and then the next time, you run into a battle from the next group (the groups are listed below).

When you first start a new game, the first group you'll run into a battle from is group 1. To determine which battle in the group you run into, the game picks a random number from 0 to 7, and that determines which battle you'll encounter.

However, you can only run into battles that you've run into before (you don't need to have won the battle; if you escape, you can encounter it on the Veldt as well). If the game determines that you should run into a battle that you haven't encountered, then you encounter the next battle in the group instead. It keeps doing this until it finds a battle that you've encountered. If you're on battle 7 of a group and haven't encountered that battle, it starts over at battle 0 from the group and keeps checking.

Some battles can't ever be encountered on the Veldt (these are mostly boss battles). These are marked as "Empty" in the list. If a battle is empty, it's treated exactly the same as if you have never encountered it.

After you fight a battle, the next time you fight on the veldt you'll fight a battle from the next group, or if you're on group 64, then the next fight will be from group 1. If a group is entirely empty and/or you haven't encountered any battles from the group, it skips that group and moves on to the next group. It keeps doing this until it runs into a group which has 1 or more battles that you have encountered.

When you reload a game, it adds 13 to the group number that you'll fight next.

A special note about the 2 SrBehemoth battles (in groups 54 and 57): After you beat the living SrBehemoth in the Veldt Cave (Don't Vanish + X-Zone him!), the game turns on a flag that causes the undead SrBehemoth formation to be loaded

whenever a subsequent battle (i.e. a Veldt one) tries to load the living SrBehemoth formation. When you beat the undead one in the Veldt Cave, the game marks the LIVING formation as encounterable for the Veldt (this works because one variable still holds the first formation number, but all the enemies in the current formation have a value <= 255).

So you can now encounter the SrBehemoth (undead) battle in group 57 on the Veldt, in place of SrBehemoth (living). Once you've fought that, you'll also be able to encounter the SrBehemoth (undead) battle in group 54.

Group 1:
0 Lobo
1 Lobo, Lobo
2 Guard, Guard
3 Bleary, Bleary, Crawly
4 Lobo, Lobo, Marshal
5 Hornet, Bleary, Bleary, Bleary, Hornet
6 Leafer
7 Leafer, Leafer, Dark Wind

Group 2:
0 Leafer, Leafer, Dark Wind, Dark Wind
1 Sand Ray, Areneid, Areneid, Areneid
2 Sand Ray, Sand Ray
3 Areneid, Areneid, Areneid
4 Sand Ray, Areneid, Areneid
5 Hornet, Hornet
6 Were-Rat, Were-Rat, Were-Rat
7 Hornet, Crawly, Crawly

Group 3:
0 Tusker, Tusker
1 Vomammoth, Lobo
2 Crawly, Crawly, Crawly
3 Rhinotaur
4 Rhinotaur, Rhodox, Rhodox
5 Rhodox, Rhodox, GreaseMonk
6 Rhinotaur, GreaseMonk, Rhodox, Rhodox
7 GreaseMonk, GreaseMonk

Group 4:
0 Rhodox, Rhodox, Rhodox, Rhodox
1 Soldier, Soldier, M-TekArmor
2 Repo Man, Vaporite
3 M-TekArmor
4 Trilium, Tusker, Cirpius, Cirpius
5 Cirpius, Cirpius, Cirpius
6 Trilium, Trilium
7 Tusker, Cirpius, Cirpius, Cirpius

Group 5:
0 Brawler, Brawler
1 Brawler, Trilium, Vaporite, Vaporite
2 M-TekArmor, M-TekArmor
3 Pterodon, Pterodon
4 Zombone, Zombone
5 Nautiloid, Exocite, Pterodon
6 Nautiloid, Exocite
7 Pterodon, Exocite, Exocite

Group 6:
0 Empty
1 Lobo, Guard, Guard
2 Empty
3 Empty
4 Were-Rat, Repo Man
5 Were-Rat, Were-Rat
6 Doberman, Doberman
7 Actaneon, Actaneon, Actaneon

Group 7:
0 Empty
1 Stray Cat, Stray Cat, Stray Cat
2 CrassHoppr, CrassHoppr, Stray Cat, Stray Cat
3 CrassHoppr, CrassHoppr, CrassHoppr
4 Rhobite, Rhobite, Rhobite, Rhobite, Rhobite
5 Beakor
6 Beakor, Beakor, Stray Cat
7 Beakor, Rhobite, Rhobite

Group 8:
0 Rhobite, Rhobite, Rhobite
1 Beakor, Stray Cat, CrassHoppr, CrassHoppr
2 Templar, Templar
3 Empty
4 Empty
5 Telstar, Soldier, Soldier, Soldier, Soldier
6 Doberman, Doberman, Doberman
7 Empty

Group 9:
0 HeavyArmor
1 Ghost
2 Ghost, Ghost, Ghost
3 Actaneon, Actaneon, Actaneon, Aspik, Aspik
4 Ghost, Poplium, Poplium
5 Ghost, Ghost, Poplium, Poplium, Poplium
6 Whisper, Whisper, Hazer
7 Vaporite, Vaporite

Group 10:
0 Bomb, Bomb, Hazer, Hazer
1 Apparite, Apparite, Lich, Lich
2 Whisper, Whisper, Whisper, Whisper
3 Over-Mind, Over-Mind
4 Bomb, Bomb, Bomb
5 Bomb
6 Over-Mind, StillGoing, StillGoing
7 Empty

Group 11:
0 Whisper, StillGoing, Hazer, Hazer
1 Whisper, Hazer, Hazer, Hazer
2 Anguiform
3 Anguiform, Anguiform
4 Vomammoth, Vomammoth, Guard, Guard
5 StillGoing, StillGoing, StillGoing
6 Anguiform, Actaneon, Aspik
7 Rider

Group 12:
0 HeavyArmor, Trooper, Trooper
1 Fidor, Trooper
2 Whisper
3 Trooper, Trooper, Trooper, Trooper
4 Bounty Man, Trooper, Trooper
5 FossilFang
6 Red Fang, Red Fang
7 Over Grunk, Vulture, Iron Fist

Group 13:
0 Iron Fist, Iron Fist, Mind Candy, Mind Candy
1 Red Fang, Vulture, Red Fang
2 Over Grunk, Over Grunk, Mind Candy, Mind Candy, Mind Candy
3 Vulture, Vulture
4 Vulture, Iron Fist
5 Mind Candy, Mind Candy, Mind Candy, Mind Candy
6 HadesGigas
7 Crawler

Group 14:
0 Gabbldegak, Gabbldegak, Gabbldegak, Gabbldegak
1 SlamDancer
2 SlamDancer, Gabbldegak, Gabbldegak, Gabbldegak
3 Harvester
4 SlamDancer, Harvester, Harvester
5 Harvester, Gabbldegak, Gabbldegak
6 HadesGigas, Harvester
7 Mag Roader (purple)

Group 15:
0 Vermin, Sewer Rat, Sewer Rat
1 Sewer Rat, Vermin, Sewer Rat, Sewer Rat, Vermin
2 Crawler, Crawler, Crawler, Crawler
3 Garm, Garm, Commando, Commando
4 Garm, Garm, Commando
5 Mag Roader (purple), Mag Roader (red)
6 Trapper, Trapper, Trapper
7 General, General

Group 16:
0 General, Pipsqueak, Pipsqueak
1 Pipsqueak, Pipsqueak, Pipsqueak, Pipsqueak
2 Chaser, Trapper, Trapper, Trapper
3 Chaser, Pipsqueak, Pipsqueak, Pipsqueak
4 Gobbler
5 Commander, Commander, Commander
6 Empty (Allo Ver would go here)
7 Empty

Group 17:
0 Nastidon, Nastidon
1 Empty
2 Empty
3 Empty
4 Empty
5 Empty
6 Nohrabbit, Nohrabbit, Nohrabbit
7 Bomb

Group 18:
0 Bomb, Bomb, Bomb, Bomb, Bomb, Bomb
1 Io
2 Maliga, Maliga, Maliga
3 FossilFang, FossilFang
4 FossilFang, Bug, Bug, Bug
5 Bug, Bug, Bug
6 Bug, Bug, Bug, Bug, Bug, Bug
7 Ralph, Ralph

Group 19:
0 Ralph, Wyvern, Wyvern
1 Ralph, Wyvern, ChickenLip, ChickenLip
2 WeedFeeder, WeedFeeder, WeedFeeder
3 Ralph, Joker
4 Joker, Joker, Joker
5 ChickenLip, ChickenLip, ChickenLip, ChickenLip, ChickenLip
6 Zombone
7 Zombone, Ing, Ing

Group 20:
0 Ing, Ing, Ing
1 Apparite, Apparite
2 Coelecite, Coelecite, Coelecite
3 Lich, Apparite, Coelecite
4 Lich, Lich, Lich
5 Sp Forces, Sp Forces, Sp Forces
6 Balloon, Balloon, Balloon
7 Balloon, Balloon, Balloon, Balloon, Balloon, Balloon

Group 21:
0 Baskervor
1 Chimera
2 Cephaler, Baskervor
3 Cephaler, Cephaler, Cephaler
4 Adamanchyt, Slurm, Slurm
5 Adamanchyt, Adamanchyt
6 Slurm, Slurm, Slurm, Slurm, Slurm
7 Mandrake, Mandrake, Mandrake

Group 22:
0 Mandrake, Insecare, Insecare
1 Abolisher, Abolisher
2 Gigantos
3 Empty
4 Empty
5 Empty
6 Empty
7 Sky Armor, Sky Armor, Spit Fire

Group 23:
0 Sky Armor, Spit Fire
1 Behemoth
2 Apokryphos, Misfit, Misfit
3 Apokryphos
4 Ninja, Ninja
5 Wirey Drgn, Wirey Drgn, Wirey Drgn
6 Apokryphos, Apokryphos, Apokryphos
7 Brainpan, Misfit, Apokryphos, Brainpan

Group 24:
0 Brainpan, Brainpan, Brainpan
1 Dragon
2 Behemoth, Misfit, Misfit
3 Behemoth, Behemoth
4 Ninja, Ninja, Wirey Drgn
5 Grenade
6 Chimera, Cephaler, Cephaler
7 Baskervor, Baskervor

Group 25:
0 Peepers, Peepers
1 Peepers, Peepers, Peepers
2 EarthGuard, Peepers, Peepers
3 Black Drgn
4 Didalos, Veteran
5 Mesosaur, Mesosaur
6 Mesosaur, Mesosaur, Mesosaur, Mesosaur
7 Gilomantis, Mesosaur

Group 26:
0 Gilomantis, Gilomantis, Mesosaur
1 Chitonid, Gigan Toad, Gigan Toad
2 Lunaris, Osprey
3 Lunaris, Lunaris
4 Osprey, Chitonid, Gigan Toad
5 Madam, Veteran, Veteran
6 Veteran, Veteran, Veteran
7 HermitCrab, HermitCrab, Pm Stalker

Group 27:
0 Empty
1 Scorpion, Scorpion, Scorpion
2 Intangir
3 Pm Stalker, Pm Stalker, Pm Stalker, Pm Stalker
4 Vectagoyle, Vectagoyle
5 Buffalax
6 Buffalax, Delta Bug, Delta Bug
7 Bloompire, Bloompire, Lizard

Group 28:
0 Bloompire, Bloompire
1 Delta Bug, Delta Bug, Delta Bug, Delta Bug
2 Bloompire, Bloompire, Delta Bug
3 Buffalax, Lizard
4 Maliga, Maliga, Nohrabbit, Nohrabbit
5 Cactrot
6 Sand Horse, Sand Horse
7 Sand Horse, Maliga, Maliga

Group 29:
0 Latimeria
1 Latimeria, Nohrabbit, Nohrabbit, Nohrabbit
2 Doom Drgn, Doom Drgn
3 Land Worm
4 Humpty, Humpty, Humpty
5 Cruller, Humpty, Humpty
6 Humpty, Humpty, Humpty, Humpty
7 NeckHunter, NeckHunter

Group 30:
0 NeckHunter, Cruller, Humpty, Humpty
1 Dante
2 Drop, Drop, Drop
3 Pugs, Pugs, Pugs
4 Harpiai
5 Hoover
6 Harpiai, Deep Eye, Deep Eye
7 Bogy, Bogy

Group 31:
0 Deep Eye, Deep Eye, Deep Eye, Deep Eye, Deep Eye, Deep Eye
1 Deep Eye, Muus, Muus, Deep Eye
2 Muus, Muus, Muus
3 Muus
4 Orog, Orog
5 Orog, PowerDemon, PowerDemon
6 Osteosaur
7 PowerDemon

Group 32:
0 PowerDemon, Exoray, Exoray
1 Exoray, Exoray, Exoray
2 Mad Oscar, Exoray
3 Mad Oscar
4 Empty
5 Pug
6 Poppers, Poppers, Poppers, Poppers
7 Kiwok, Ceritops

Group 33:
0 Kiwok, Poppers, Poppers, Poppers, Poppers
1 Ceritops, Ceritops, Ceritops
2 Anemone, Anemone, Tomb Thumb
3 Anemone, Anemone, Anemone, Anemone
4 Ceritops, Tomb Thumb, Tomb Thumb
5 Luridan, Luridan, Luridan
6 Punisher, Scrapper, Punisher
7 Borras

Group 34:
0 Borras, Ursus, Scrapper
1 Ursus
2 Luridan, Luridan, Luridan, Luridan, Luridan, Luridan
3 Ursus, Punisher
4 Toe Cutter
5 Toe Cutter, Toe Cutter
6 Rhyos
7 Vectaur, Vectaur, Vectaur, Vectaur

Group 35:
0 Brontaur, Evil Oscar
1 Red Wolf, Red Wolf, Red Wolf
2 Test Rider
3 Nastidon, Red Wolf, Red Wolf
4 Wizard, Wizard, Wizard
5 Wizard, Wizard, Psychot, Psychot, Psychot
6 Red Wolf, Red Wolf, Psychot, Psychot
7 Psychot, Psychot, Psychot, Psychot, Psychot, Psychot

Group 36:
0 Mag Roader (yellow), Mag Roader (yellow), Mag Roader (brown)
1 Mag Roader (yellow), Mag Roader (brown), Mag Roader (brown)
2 Brontaur, Brontaur
3 Empty
4 SoulDancer, SoulDancer, Crusher, Crusher
5 Vindr, Vindr, Wild Cat, Crusher, Crusher
6 Vindr, Vindr
7 SoulDancer, Wild Cat, Wild Cat, Wild Cat, Wild Cat

Group 37:
0 Dahling, Dahling
1 Nightshade, Nightshade, Nightshade
2 Still Life
3 Opinicus, Opinicus
4 Displayer
5 Opinicus, Hipocampus, Eland
6 Hipocampus, Hipocampus, Hipocampus
7 Hipocampus, Cluck, Cluck, Cluck

Group 38:
0 Slatter, Warlock, Eland
1 Slatter, Slatter
2 Warlock, Cluck, Cluck, Eland, Eland
3 GtBehemoth, Vectaur, Vectaur
4 Doom Drgn
5 Goblin, Goblin
6 Goblin, Figaliz, Figaliz
7 Boxed Set, Boxed Set, Figaliz, Figaliz

Group 39:
0 Boxed Set
1 Lethal Wpn
2 Enuo, Enuo
3 Enuo, Goblin, Figaliz
4 Boxed Set, Boxed Set, Boxed Set, Boxed Set
5 Rain Man, Rain Man
6 Samurai, Rain Man, Rain Man
7 PlutoArmor, PlutoArmor

Group 40:
0 Barb-e, Critic
1 PlutoArmor, Sky Cap
2 Allosaurus, Parasite, Parasite, Parasite
3 Critic, Pan Dora, Pan Dora, Pan Dora
4 Allosaurus
5 Barb-e, Samurai, Suriander
6 Suriander, Pan Dora, Parasite, Parasite
7 Crawler, Crawler, Crawler

Group 41:
0 Tyranosaur, Tyranosaur
1 Tyranosaur
2 Brachosaur
3 Mantodea, Sprinter, Spek Tor, Spek Tor
4 Reach Frog, Reach Frog, Reach Frog, Reach Frog
5 Mantodea, Mantodea
6 Geckorex, Geckorex, Reach Frog
7 TumbleWeed, TumbleWeed, TumbleWeed, TumbleWeed

Group 42:
0 Sprinter, Sprinter, Spek Tor, Spek Tor
1 GtBehemoth, Evil Oscar, Vectaur
2 Evil Oscar, Evil Oscar, Evil Oscar
3 Harpy
4 Harpy, Prussian
5 Prussian, GloomShell
6 GloomShell, GloomShell, GloomShell
7 Empty

Group 43:
0 Phase, Phase
1 Trixter, Trixter, Trixter
2 Phase, Parasoul, Necromancr, Necromancr
3 Trixter, Trixter, Necromancr
4 Sea Flower, Sea Flower, Sea Flower, Sea Flower, Sea Flower
5 Uroburos, Sea Flower, Sea Flower
6 Chaos Drgn, Uroburos, Sea Flower, Sea Flower
7 Aquila, Chaos Drgn, Chaos Drgn

Group 44:
0 Empty
1 Empty
2 Ogor, Ogor
3 Covert, Ogor
4 Wart Puck, Wart Puck
5 Karkass, Karkass
6 Tap Dancer, Covert, Covert
7 Tap Dancer, Woolly

Group 45:
0 Woolly, Woolly, Karkass, Karkass
1 Wart Puck, Ogor
2 Empty
3 Magic Urn, Magic Urn
4 Flan, Flan, Flan, Flan, Flan, Flan
5 Flan, Flan, Flan, Flan
6 Empty
7 Empty

Group 46:
0 Rhinox, Rhinox
1 Gobbler, Rhinox, Gobbler
2 Empty
3 Empty
4 Empty
5 Empty
6 Empty
7 Empty

Group 47:
0 Empty
1 Empty
2 Empty
3 Empty
4 Empty
5 Vector Pup, Vector Pup, Commander
6 Vector Pup, Vector Pup
7 Trilobiter, Primordite, Primordite

Group 48:
0 Gold Bear, Primordite
1 Trilobiter, Trilobiter, Trilobiter
2 Primordite, Primordite
3 Dark Side, Dark Side
4 Dark Side, Spectre, Rinn, Rinn, Rinn
5 1st Class, Wild Rat
6 1st Class, 1st Class, 1st Class
7 Wild Rat, 1st Class, 1st Class, Wild Rat, Wild Rat

Group 49:
Empty

Group 50:
0 Empty
1 Empty
2 Empty
3 Innoc, Fortis
4 Fortis, Fortis
5 Empty
6 Dueller, Dueller, Sky Base
7 Scullion

Group 51:
0 Innoc, Innoc, Innoc
1 Junk, Junk, Junk
2 Empty
3 Empty
4 ProtoArmor, Pipsqueak, Pipsqueak

5 Pipsqueak, Pipsqueak, Pipsqueak, Pipsqueak, Pipsqueak
6 Mag Roader, Mag Roader (both purple)
7 Mag Roader, Mag Roader, Mag Roader, Mag Roader (all red)

Group 52:
0 Empty
1 Empty
2 Templar, Templar, Soldier, Soldier
3 Balloon, Balloon, Balloon, Balloon
4 Soldier, Soldier
5 Sky Base, IronHitman, IronHitman, IronHitman, IronHitman
6 IronHitman, IronHitman, IronHitman
7 Dueller, Fortis

Group 53:
0 Commando, Commando, Commando, Commando
1 Empty
2 Commando
3 Empty
4 Empty
5 Empty
6 Empty
7 Empty

Group 54:
0 SrBehemoth (undead)
1 Dark Force, Dark Force
2 Retainer, Retainer, Dark Force
3 Hemophyte, Retainer
4 Outsider, Outsider, Madam
5 Mover, Mover, Mover
6 Steroidite
7 Didalos, Didalos

Group 55:
Empty

Group 56:
Empty

Group 57:
0 Empty
1 Empty
2 Empty
3 Empty
4 SrBehemoth (undead. the living formation is swapped out at battle start.)
5 Empty
6 Empty
7 Empty

Group 58:
Empty

Group 59:
Empty

Group 60:
Empty

Group 61:
0 Empty
1 White Drgn
2 Empty
3 Empty
4 Empty
5 Empty
6 Empty
7 Empty

Group 62:
Empty

Group 63:
Empty

Group 64:
Empty

****
3.0 Weapons
****

****
3.1 Randomly casts spell
****

Weapons with this effect: Flame Sabre (Fire), Blizzard (Ice),
ThunderBlade (Bolt), Break Blade (Break), Soul Sabre (Doom),
Illumina (Pearl), Ragnarok (Flare), Pearl Lance (Pearl),
Stunner (Stop), Fire Rod (Fire 2), Ice Rod (Ice 2), Thunder Rod (Bolt 2),
Poison Rod (Poison), Pearl Rod (Pearl), Gravity Rod (Quartr),
Doom Darts (Doom), Poison Claw (Poison), Fire Knuckle (Fire).

For weapons that randomly cast a spell when they hit the enemy, the
chance that the spell will be cast is 1 in 4.

This spell can't be absorbed by Runic or reflected by the Reflect status, and
costs 0 MP to cast.

If the spell that is cast can be blocked by Stamina (see step 5 in hit
determination), then the chance to hit for the spell is determined as
normal. Otherwise that spell always hits (see step 3 in hit determination).

The damage done by the spell is determined as normal, with a few exceptions:

1. The spell does not ignore your row, so if you're in the back row it will
do half damage. If the weapon that cast the spell ignores row, then the spell
cast will still do full damage if you're in the back row.

2. The damage multiplier added by Jump (see section 6.9) affects the spell as
well, so if you jump and it casts a spell, then the spell does extra damage.

3. If the weapon does automatic criticals, then the spell automatically does
a critical as well (even though spells normally can't do criticals). However,
if the weapon does a critical because of the standard 1 in 32 chance, then the
spell does not do a critical.

****
3.2 Casts spell when used
****

Weapons with this effect: Fire Rod (Fire 2), Ice Rod (Ice 2),
Thunder Rod (Bolt 2), Poison Rod (Poison), Pearl Rod (Pearl),
Gravity Rod (Quartr).

When an item casts a spell when used, the item is destroyed when used. The
spell cast uses the same chance to hit, and damage calculation as if cast by
the character, with the exception that it skips steps 6 and 7 of damage
calculation.

****
3.3 Deals normal damage from the back row
****

Weapons with this effect: Illumina, Flail, Full Moon, Morning Star, Boomerang,
Rising Sun, Hawk Eye, Sniper, Wing Edge, Cards, Darts, Doom Dart, Trump, Dice,
Fixed Dice.

Weapons with this effect still deal full damage if the character equipped with
the weapon is in the back row (i.e. skips step 4 of damage calculation).
However, it still gets reduced damage if the target is in the back row.

****
3.4 Uses MP to do critical hits
****

Weapons with this effect: Rune Edge, Illumina, Ragnarok, Punisher

These weapons Uses MP to do automatic critical hits. The amount of MP
used = [12..19]. If the attacker does not have that many MP, then no MP are
used, but the attack is not a critical hit either (although it still has the
standard 1 in 32 chance of doing a critical)

****
3.5 Ignores Defense
****

Weapons with this effect: Atma Weapon, ValiantKnife

These weapons ignore the defense of the target, as well as many other steps in
damage calculation. The steps skipped are: 5 - Damage Multiplier #1,
6b - Defense Modifcation, 6c - Safe, 6d - Target Defending, 6e - Target's Row,
6f - Morph (target), and 7 - Damage Multiplier #2.

****
3.6 Randomly kills enemy
****

Weapons with this effect: Assassin, Striker, Wing Edge, Trump

If the target is undead, then it is always killed, and then revived. If the target is not undead, there is a 25% chance that the Weapon will attempt to kill it. Stamina can block this (see step 5b in hit determination).

****
 3.7 Atma Weapon
****

Deals damage as normal weapon with the following exception:

After step 9 in damage calculation, the damage is modified as follows:

step 10a. damage = damage * level
step 10b. damage = damage * ((current HP / 256) + 1) / ((max HP / 256) + 1)
step 10c. damage = (damage / 64) + 1

Is also defense ignoring (see section 3.5)

The length of the Atma Weapon is determined solely by the damage you do as follows:

```
Damage      Length
0 - 500     Shortest
501 - 1000  Medium
1001 - 9999 Longest
```

****
 3.8 Dice
****

damage = Dice Roll 1 * Dice Roll 2 * Level * 2

Skips all normal steps for physical damage calculation.

For determining the dice rolls, each number does not have an equal chance of coming up. 1, 2, 3, and 4 each have a 18.75% chance of coming up. 5 and 6 only have a 12.5% chance of coming up.

****
 3.9 Drainer
****

Heals the attacker an amount equal to the damage dealt. Cannot do more damage than the attacker's max HP - current HP. If the target is undead, then it heals the target, and hurts the attacker instead.

****
 3.10 Fixed Dice
****

damage = Dice Roll 1 * Dice Roll 2 * Dice Roll 3 * Level * 2

if all Dice Rolls are the same then:

damage = damage * Dice Roll

Skips all normal steps for physical damage calculation.

For determining the dice rolls, each number does not have an equal chance of coming up. 1, 2, 3, and 4 each have a 18.75% chance of coming up. 5 and 6 only have a 12.5% chance of coming up.

****
 3.11 Hawk Eye
****

Has a 50% chance of having an additional effect, as follows:

If the target has float status, then the Hawk eye is thrown at the target, and 4 is added to the damage multiplier (see step 7 of damage calculation). If the target does not have the float status, then 1 is added to the damage multiplier (see step 7 of damage calculation).

Does full damage from the back row (see section 3.3)

****
 3.12 Heal Rod
****

Heals HP instead of dealing damage.

Ignores self damage (see step 6g in damage calculation).

Has a perfect (255) hit rate (see step 4c in hit determination).

****
 3.13 Imp Halberd
****

When a character is equipped with an Imp Halberd, they only get the battle power from the weapon if they have imp status; otherwise, the battle power of the weapon is considered to be 1.

****
 3.14 Illumina
****

Has a perfect (255) hit rate (see step 4c in hit determination).

Deals normal damage from the back row (see section 3.3).
Uses MP to do critical hits (see section 3.4).

****
 3.15 Man Eater
****

If the target is human: Add 2 to the damage multiplier (see step 7 of damage calculation)

****
 3.16 Ogre Nix
****

Has a chance of breaking every time you attack. The chance of breaking is calculated as follows:

if [0..(last digit of attacker's HP + 1)] = 0 then the Ogre Nix breaks

Use MP to do critical hits (see section 3.4)

****
 3.17 Scimitar
****

Has a 25% chance of slicing the target (killing it).

Stamina can block this (see step 5b in hit determination).

****
 3.18 Sniper
****

Has a 50% chance of having an additional effect, as follows:

If the target has float status, then the Sniper is thrown at the target, and 4 is added to the damage multiplier (see step 7 of damage calculation). If the target does not have the float status, then 1 is added to the damage multiplier (see step 7 of damage calculation).

Does full damage from the back row (skips step 4 of damage calculation). See also Section 3.3.

****
 3.19 Soul Sabre
****

Does MP damage instead of HP damage. Heals the attacker an amount equal to the damage dealt. Cannot do more damage than the attacker's max MP - current MP. If the target is undead, then it heals the target, and hurts the attacker instead.

Randomly casts Doom (see section 3.1).

****
 3.20 Tempest
****

When you attack, there is a 1 in 2 chance that Wind Slash will be cast.

Casting Wind Slash replaces the weapon's attack rather than being cast in
addition to it, so it's not quite the same as magic randomly cast (see
section 3.1), and will not be disabled by the Offering (see section 5.11).

****
 3.21 Thief Knife
****

Has a 50% chance of attempting to steal as well as dealing its normal damage.
When it attempts to steal, it is exactly as if the Capture command were used
(see section 6.1).

****
 3.22 Valiant Knife
****

Deals damage as normal weapon with the following exception:

After step 1 in damage calculation, the damage is modified as follows:

damage = damage + (Max HP - Current HP)

Is defense ignoring (see section 3.5).

****
 3.23 Empty (Fists)
****

When you don't have a weapon in either hand slot, the Empty item is treated
as your weapon. It actually adds 10 to Battle Power, and has a respectable
hit rate of 200.

                                ****
                                 4.0 Armors
                                ****

****
 4.1 Casts spell when used
****

Amor with this effect: Flame Shld (Fire 3), Ice Shld (Ice 3), Thunder Shld
(Bolt 3)

When an item casts a spell when used, the item is destroyed when used. The
spell cast uses the same chance to hit and damage calculation as if cast by
the character, with the exception that it skips steps 6 and 7 of damage
calculation.

****
 4.2 Imp equipment
****

Armor with this effect: TortoiseShld, Titanium, Imp's Armor

Armor with this effect only gains the Defense from the armor if the wearer is
in Imp status. Magic Defense, Bonuses to Mblock, and all other bonuses are
still obtained whether the wearer is an Imp or not, but the Defense is
considered 1 if the wearer is not an Imp.

****
 4.3 Beret
****

Increases success chance of sketch. (see section 6.7)

****
 4.4 Coronet
****

Increases success chance of control. (see section 6.8)

****
 4.5 Cursed Shield
****

Gives the wearer the following statuses: Condemned, Mute, Berserk, Muddle,
Seizure.

To uncurse it you must fight 256 fights (yes, 256 not 255). The character
equipped with the shield must be alive at the end of the battle, and Gogo
cannot uncurse it.

****
 4.6 Force Shield
****

Gives the wearer Shell status.

****
 4.7 Mirage Vest
****

Gives the wearer image status (see step 4d in hit determination).

****
 4.8 Thornlet
****

Gives the wearer Seizure status.

                                ****
                                 5.0 Relics
                                ****

****
 5.1 Atlas Armlet
****

See damage calculation, step 2.

****
 5.2 Black Belt
****

If a character is equipped with a Black Belt, they may counter physical
attacks that hit them. You can only counter attack against physical attacks
made by enemies, not by your own characters. If you have any of the following
status effects, you can't counter either: Wound, Petrify, M-Tek, Zombie,
Sleep, Muddle, Stop, Dance, or Freeze. If those conditions are met, you have
a 1 in 4 chance of countering the attack.

****
 5.3 Charm Bangle
****

Decreases amount of random encounters by 25%. See random encounters (2.3) for
more information.

****
 5.4 Cursed Ring
****

Gives the wearer Condemned status. And no, you can't uncurse it.

Teaches X-Zone at a rate of 5.

****
 5.5 Dragon Horn
****

When you land from a jump, does extra attacks as follows:

75% chance for 2 attacks
18.75% chance for 3 attacks
6.25% chance for 4 attacks

****
 5.6 Earrings
****

See damage calculation, step 2.

****

Increases your attack power; see step 1c in damage calculation.

****
 5.8 Genji Glove
****

Allows you to attack with a weapon in both hands. If you only have zero or one
weapons equipped, the attack does only 75% of normal damage; it does full
damage if you have 2 weapons equipped.

****
 5.9 Hero Ring
****

See damage calculation, step 2.

****
 5.10 Hyper Wrist
****

Increases Vigor by 50%. Note: because of step 1 in physical damage calculation,
increasing vigor over 128 is worthless.

****
 5.11 Marvel Shoes
****

Gives the wearer Regen, Safe, Shell, and Haste status.

****
 5.12 Offering
****

Allows you to attack 4 times. For each attack, damage = damage / 2 (see step 1e
in damage calculation).

Disables critical hits (even automatic criticals from weapons like Rune Edge).

Makes all attacks unblockable (see step 3 in hit determination).

Disables magic from randomly being cast when the weapon hits (in section 3.1).

****
 5.13 Relic Ring
****

Makes the wearer undead.

****
 5.14 Ribbon
****

Blocks the following statuses: Dark, Zombie, Poison, Imp, Petrify, Mute,
Berserk, Muddle, Seizure, Sleep.

****
 5.15 Sneak Ring
****

Doubles your chance of successfully stealing. Does not affect the chance of
getting a rare item instead of a common item.

See Steal (section 6.6) for more information.

****
 5.16 Sniper Sight
****

Makes standard attacks unblockable (see step 3 in hit determination)

****
 5.17 Tintinabar:
****

HP gained per step = Stamina / 4

Base stamina, not modified by equipment, is used to determine how much HP
is gained.

****
 5.18 True Knight
****

If any other party member is in Near Fatal status (below 1/8 max HP), then a
character will take damage from any physical attack that hits the weak
character.

If the weak character is invisible, then you won't take damage for them.

If the character with the True Knight has any of the following statuses, they
won't take damage for the weak character: Petrify, Clear, Zombie, Sleep,
Muddle, Stop, Freeze, Spell, Hide

                    ****
                    6.0 Commands
                    ****

****
 6.1 Capture
****

Capture attempts to steal an item as well as dealing damage. The chance to
steal is the same as for the steal command. (see section 6.6) Capture disables
the special effects from the following weapons:
ThiefKnife, Assassin, Man Eater, ValiantKnife, Rune Edge, Drainer, Soul Sabre,
Ogre Nix, Scimitar, Illumina, Ragnarok, Atma Weapon, Striker, Heal Rod,
Punisher, Hawkeye, Sniper, Wing Edge, Trump, Dice, and Fixed Dice.

****
 6.2 Dance
****

If you are in the correct terrain for the dance, it automatically succeeds. If
you attempt to dance in a terrain which is different from the dance you are
performing, you have a 50% chance of stumbling. If you succeed, the terrain is
changed to the correct terrain for the dance.

Every time a dancing character gets an action, they randomly pick a dance move.
Each dance has four different moves. Here is a list of each move for the
dances with the random chance of that move being picked:

Wind Song:
Wind Slash - 7 in 16
Sun Bath   - 6 in 16
Plasma   - 2 in 16
Cockatrice - 1 in 16

Forest Suite:
Rage   - 7 in 16
Harvester - 6 in 16
Elf Fire - 2 in 16
Wombat   - 1 in 16

Desert Aria:
Sand Storm - 7 in 16
Antlion   - 6 in 16
Wind Slash - 2 in 16
Kitty   - 1 in 16

Love Sonata:
Elf Fire - 7 in 16
Specter   - 6 in 16
Snare   - 2 in 16
Tapir   - 1 in 16

Earth Blues:
Land Slide - 7 in 16
Sonic Boom - 6 in 16
Sun Bath   - 2 in 16
Whump   - 1 in 16

Water Rondo:
El Nino   - 7 in 16
Plasma   - 6 in 16
Specter   - 2 in 16

Wild Bear - 1 in 16

Dusk Requiem:
Cave In   - 7 in 16
Snare   - 6 in 16
Elf Fire   - 2 in 16
Pois. Frog - 1 in 16

Snowman Jazz:
Snowball   - 7 in 16
Surge   - 6 in 16
Snare   - 2 in 16
Ice Rabbit - 1 in 16

```
**************
 6.3 GP Rain:
**************
```

Amount of gold used = Level * 30

If the party doesn't have that much gold, then all remaining gold is used.

Damage = Gold Thrown * 2 / # of enemies hit

Monsters use the gold you get when defeating them, rather than the party's gold.

```
***********
 6.4 Morph
***********
```

The morph command causes the character to morph into an esper.

While morphed, the character deals double normal damage, and receives half normal damage from magical attacks. (see steps 5 and 6e in damage calculation).

The length of time you can stay morphed is based on the number of magic points you have gained (the kind of magic points that are gained after battles). The game keeps an invisible morph duration counter to determine how long morph will last. At the beginning of the game, this counter is 0. Every time you win a battle with Terra in your party, this counter is increased by 2x the amount of MP you earned. If this counter is less than 16, then you can't morph. This counter has a maximum value of 255.

Once you morph, there is another morph time counter to determine when morph will wear off. When you morph, this counter is set to 65535. Every time the battle time counter (see section 2.8 Battle Timing) is increased, the morph time counter is reduced by an amount as follows:

((65535 / morph duration counter) / 16) + 1

When this counter reaches 0, morph wears off and you return to normal, with the morph duration counter reset to 0.

If the battle ends, or you revert before the counter runs out, then the morph duration counter is modified as follows:

new morph duration counter =
original morph duration counter * morph time counter / 65535.

```
************
 6.5 Throw:
************
```

Deals damage as a normal physical attack with these exceptions:

Adds 2 to the damage multiplier (in step 5 of damage calculation)

Is defense ignoring (skips steps 6b, 6c, 6d, 6e, 6f, but not steps 5 or 7)

Ignores row (see section 3.3)

Is Unblockable (see step 3 in hit determination)

The Battle Power used is the Battle Power of the thrown weapon. The elemental property of the weapon counts, but all other special properties of the thrown weapon are ignored.

```
***********
 6.6 Steal
***********
```

1. If the monster has no items, then you automatically fail to steal.

2. If your level is >= 205 (hacks only), you automatically steal.
   (Skip steps 3 through 7)

3. StealValue = Your Level + 50 - Monster's level

4. If StealValue < 0 then you fail to steal.

5. If StealValue >=128 then you automatically steal. (Skip steps 6 and 7)

6. If you have a Sneak Ring equipped:
     StealValue = StealValue * 2

7. If StealValue <= [0..99] then you fail to steal.

8. You have 1 in 8 chance of getting a rare item; otherwise, you get a common
   item.

9. If the monster doesn't have an item to steal in that slot, then you fail to
   steal; otherwise, you successfully steal that item.

```
*************
 6.7 Sketch
*************
```

The chance to successfully sketch an enemy is calculated as follows:

If (Sketcher's level * 256) / Target's level > [0..255] then
you successfully sketch, otherwise you miss.

If you are equipped with a Beret, then the chance to sketch is:

If (Sketcher's level * 256) / (Target's level * 170 / 256) > [0..255] then
you successfully sketch, otherwise you miss.

NOTE: Some monsters can never be sketched.

If you successfully sketch the enemy, then there 2 possible attacks that will occur. The first attack has a 25% chance of happening; the other attack has a 75% chance of happening.

Attacks resulting from Sketch use the sketcher's level to determine damage, but the target's Vigor or Magic Power.

```
*************
 6.8 Control
*************
```

The chance to successfully control an enemy is calculated as follows:

If (Controller's level * 256) / Target's level > [0..255] then
you successfully control the enemy, otherwise you miss.

If you are equipped with a Coronet, then the chance to control is:

If (Controller's level * 256) / (Target's level * 170 / 256) > [0..255] then
you successfully control the enemy, otherwise you miss.

If the monster has any of the following statuses, then any attempt to control them will fail: Clear, Zombie, Sleep, Muddle, Rage, Morph, Hide

NOTE: Some monsters can never be controlled.

Once an enemy is controlled, every time Relm's turn comes around you can select one of 4 commands to use. Each monster has their own list of commands. Once the monster if hit with a physical attack, the control stops.

Note that attacks which cost more MP than the monster currently has will be inaccessible and greyed out on Relm's Control menu. Yet the spells don't actually cost a controlled monster a red cent. Go bloody figure.

```
*********
 6.9 Jump
*********
```

When a character lands from a Jump attack, the attack always hits (see step 3 in hit determination)

If you're equipped with a spear, then 2 is added to the damage multiplier (see step 5 in damage calculation); otherwise, only 1 is added.

The attack also ignores row (i.e. skips step 4 of damage calculation).

If you are equipped with 2 weapons, then you will only get one attack, and one will be randomly chosen to be attacked with. If you are equipped with a spear and a non-spear, then 2 is added to the damage multiplier, even if the non-spear is the one that is attacked with.

```
            ***********
            7.0 Espers
            ***********
```

```
*************************
 7.1 Earth Wall (Golem)
*************************
```

Will block physical damage for all party members. The amount of damage it can block is equal to the HP of the caster when it was cast. Once it has blocked that much damage, it will no longer block attacks for the rest of combat.

```
**************************
 7.2 Metamorph (Ragnarok)
**************************
```

Each enemy has a number 0 to 7 that determines how hard it is to morph. For each value, The chance to morph is:

0: 99.609375%
1: 75%
2: 50%
3: 25%
4: 12.5%
5: 6.25%
6: 3.125%
7: 0%

Each monster has 4 items it can be morphed into. The item you get is randomly determined from among the items, each having a 1 in 4 chance of being the item you get.

```
            ***********
            8.0 Lores
            ***********
```

In order to learn Lores, Strago must be in the party when a lore is cast (Gogo can't learn lores). If Strago has any of the following statuses when the lore is cast, then he won't learn the lore: Wound, Petrify, Zombie, Dark, Sleep, Muddle, Stop, Hide, Rage, Freeze. Strago's status at the end of battle doesn't matter (he can even be dead).

```
**************
 8.1 Dischord
**************
```

For the remainder of the combat, the target's level = (current level + 1) / 2

```
**************
 8.2 Exploder
**************
```

Deals an amount of damage equal to caster's current HP. Kills the caster.

```
**************
 8.3 L.4 Flare
**************
```

Casts Flare on any target if their level is evenly divisible by 4. Ignores the automatic hit caused by Clear status at step 1 in Hit Determination. Removes Clear status from the target whether it hits or not.

```
**************
 8.4 L.5 Doom
**************
```

Kills any target if their level is evenly divisible by 5. Ignores the automatic hit caused by Clear status at step 1 in Hit Determination. Removes Clear status from the target whether it hits or not.

```
****************
 8.5 L.3 Muddle
****************
```

Confuses any target if their level is evenly divisible by 3. Ignores the automatic hit caused by Clear status at step 1 in Hit Determination. Removes Clear status from the target whether it hits or not.

```
****************
 8.6 L.? Pearl
****************
```

Casts any target if their level is evenly divisible by the last digit in the party's gold. Ignores the automatic hit caused by Clear status at step 1 in Hit Determination. Removes Clear status from the target whether it hits or not.

```
****************
 8.7 Pearl Wind
****************
```

Heals all allies (including the caster) by an amount equal to the casters' current HP.

```
************
 8.8 Pep Up
************
```

Restores the target to Max HP. Removes the caster from combat, killing them, and leaving them with 0 HP and 0 MP.

Also removes the following statuses: Dark, Zombie, Poison, Imp, Petrify, Condemned, Mute, Berserk, Muddle, Seizure, Sleep, Slow, Stop, and Freeze.

```
****************
 8.9 Reflect???
****************
```

If any target has reflect status, then it sets the following statuses: Dark, Mute, Slow.

```
**************
 8.10 Revenge
**************
```

Deals an amount of damage equal to Caster's Max HP - Current HP.

```
****************
 8.11 Step Mine
****************
```

Damage dealt = Number of steps taken / 32

MP Used = Minutes played / 30

```
************
 8.12 Stone
************
```

If the caster and target are the same level, then 13 is added to the damage multiplier (see step 7 of damage calculation).

```
            ************
            9.0 Blitzes
            ************
```

```
************
 9.1 Mantra
************
```

Heals every character except the caster. Heals an amount of HP equal to the (caster's current HP) / (number of targets - 1). Sabin is considered to be a target for purposes of determining damage.

Also removes the following statuses: Dark, Poison, Mute, and Seizure.

```
*************
 9.2 Spiraler
*************
```

Heals all characters except the caster. Removes the caster from combat, killing
them, and leaving them with 0 HP, and 0 MP.

Also removes the following statuses: Dark, Zombie, Poison, Imp, Petrify,
Condemned, Mute, Berserk, Muddle, Seizure, Sleep, Slow, Stop, and Freeze.

```
************
 9.3 Suplex
************
```

Is actually a spread attack, but its special effect removes all targets
except for one. Like most spread attacks, it will deal half damage if the
target is not the only enemy remaining.

Is defense ignoring (see section 3.5).

Is Unblockable (see step 3 in hit determination).

Some monsters can't be affected by Suplex.

```
********************
   10.0 Enemy Attacks
********************
```

```
*****************
 10.1 Flare Star
*****************
```

Ignores all normal steps in damage calculation (except step 9) and instead
damage is calculated as follows:

Damage = 80 * (level of a random character that is hit) / Number of characters
hit

```
***************
 10.2 N. Cross
***************
```

N. Cross gives freeze status to any character that is hit. It determines which
characters are hit normally, but then has an additional step as follows:

After determining which characters are hit, it randomly makes N. Cross not hit
0, 1, 2, 3, or all 4 characters. Which character(s) it sets as not hit is
completely random.

After this step, any characters that are still hit are frozen.

```
********************
   11.0 Spell Listing
********************
```

For these listings:

Power = the spell power or battle power used for determining damage in step
1 of damage determination

Physical = whether the attack is physical (if it's not physical it's a magical
attack)

Ign. Def = whether the attack ignores defense (see section 3.5)

Unblock = whether the attack is unblockable (see step 3 in hit determination)

Hit Rate = the hit rate used in step 4e or 5a of hit determination

Spells:

Black Magic:

Spell	Power	Physical	Ign. Def.	Unblock	Hit Rate
Bio	53	No	No	No	120
Bolt	20	No	No	No	150
Bolt 2	61	No	No	No	150
Bolt 3	120	No	No	No	150
Break	0	No	No	No	120
Demi	8	No	No	No	120
Doom	0	No	No	No	95
Drain	38	No	No	No	120
Fire	21	No	No	No	150
Fire 2	60	No	No	No	150
Fire 3	121	No	No	No	150
Flare	60	No	Yes	No	150
Ice	22	No	No	No	150
Ice 2	62	No	No	No	150
Ice 3	122	No	No	No	150
Merton	138	No	Yes	Yes	n/a
Meteor	36	No	Yes	Yes	n/a
Pearl	108	No	No	No	150
Poison	25	No	No	No	100
Quake	111	No	Yes	Yes	n/a
Quartr	12	No	No	No	100
Ultima	150	No	Yes	Yes	n/a
W Wind	15	No	No	No	100
X-Zone	0	No	No	No	85

Gray Magic:

Spell	Power	Physical	Ign. Def.	Unblock	Hit Rate
Bserk	0	No	No	No	150
Dispel	0	No	No	Yes	n/a
Float	0	No	No	Yes	n/a
Haste	0	No	No	Yes	n/a
Haste2	0	No	No	Yes	n/a
Imp	0	No	No	No	100
Muddle	0	No	No	No	94
Mute	0	No	No	No	100
Osmose	26	No	No	No	150
Quick	0	No	No	Yes	n/a
Rasp	10	No	No	No	150
Rflect	0	No	No	Yes	n/a
Safe	0	No	No	Yes	n/a
Scan	0	No	No	No	222
Shell	0	No	No	Yes	n/a
Sleep	0	No	No	No	111
Slow	0	No	No	No	120
Slow 2	0	No	No	No	150
Stop	0	No	No	No	100
Vanish	0	No	No	Yes	n/a
Warp	0	No	No	Yes	n/a

White Magic:

Spell	Power	Physical	Ign. Def.	Unblock	Hit Rate
Antdot	0	No	No	Yes	n/a
Cure	10	No	Yes	Yes	n/a
Cure 2	28	No	Yes	Yes	n/a
Cure 3	66	No	Yes	Yes	n/a
Life	2	No	Yes	Yes	n/a
Life 2	16	No	Yes	Yes	n/a
Life 3	0	No	No	Yes	n/a
Regen	0	No	No	Yes	n/a
Remedy	0	No	No	Yes	n/a

Espers:

Esper	Power	Physical	Ign. Def.	Unblock	Hit Rate
Alexander	114	No	No	Yes	n/a
Bahamut	92	No	Yes	Yes	n/a
Bismark	58	No	No	Yes	n/a
Carbunkl	0	No	No	Yes	n/a
Crusader	190	No	No	Yes	n/a
Fenrir	0	No	No	Yes	n/a
Golem	0	No	No	Yes	n/a
Ifrit	51	No	No	Yes	n/a
Kirin	0	No	NO	Yes	n/a
Ramuh	50	No	No	Yes	n/a
Shiva	52	No	No	Yes	n/a
Shoat	0	No	No	No	96
Siren	0	No	No	No	136
Stray	0	No	No	No	n/a
Maduin	55	No	No	Yes	n/a
Odin	0	No	No	No	110
Palidor	0	No	Yes	Yes	n/a
Phantom	0	No	No	Yes	n/a
Phoenix	4	No	No	Yes	n/a
Ragnarok	0	No	No	No	n/a
Raiden	0	No	No	No	140
Sraphim	18	No	Yes	Yes	n/a
```

| | | | | | |
|---|---|---|---|---|---|
| Starlet | 34 | No | Yes | Yes | n/a |
| Terrato | 93 | No | No | Yes | 150 |
| Tritoch | 110 | No | No | Yes | n/a |
| Unicorn | 0 | No | No | Yes | n/a |
| Zoneseek | 0 | No | No | Yes | n/a |

SwdTech:

| SwdTech | Power | Physical | Ign. Def. | Unblock | Hit Rate |
|---|---|---|---|---|---|
| Dispatch | 120 | Yes | Yes | Yes | n/a |
| Retort | 56 | No | Yes | Yes | n/a |
| Slash | 8 | Yes | No | Yes | n/a |
| Quadra Slam | 72 | Yes | No | Yes | n/a |
| Empowerer | 49 | No | Yes | Yes | n/a |
| Stunner | 97 | No | No | Yes | 140* |
| Quadra Slice | 70 | Yes | Yes | Yes | n/a |
| Cleave | 0 | No | Yes | No | 182 |

* The main damage portion of Stunner is unblockable, but the special
effect will only try to inflict the ailment 116/256 of the time
(116 = 256 - 140).

Blitzes:

| Blitz | Power | Physical | Ign. Def. | Unblock | Hit Rate |
|---|---|---|---|---|---|
| Pummel | 110 | Yes | Yes | Yes | n/a |
| Aurabolt | 68 | No | No | Yes | n/a |
| Suplex | 180 | Yes | Yes | Yes | n/a |
| Fire Dance | 42 | No | No | Yes | n/a |
| Mantra | 1 | No | Yes | Yes | n/a |
| Air Blade | 78 | No | No | Yes | n/a |
| Spiraler | 200 | No | Yes | Yes | n/a |
| Bum Rush | 128 | No | Yes | Yes | n/a |

Dance moves:

| Dance move | Power | Physical | Ign. Def | Unblock | Hit Rate |
|---|---|---|---|---|---|
| Antlion | 0 | No | No | No | 100 |
| Cave In | 12 | No | No | Yes | n/a |
| Cockatrice | 50 | No | Yes | No | 96 |
| Elf Fire | 72 | No | No | Yes | n/a |
| El Nino | 61 | No | No | Yes | n/a |
| Harvester | 0 | No | No | Yes | n/a |
| Ice Rabbit | 60 | No | Yes | Yes | n/a |
| Kitty | 0 | No | No | Yes | n/a |
| Land Slide | 65 | No | Yes | Yes | n/a |
| Plasma | 70 | No | No | Yes | n/a |
| Pois. Frog | 56 | No | No | Yes | n/a |
| Rage | 50 | No | No | Yes | n/a |
| Sand Storm | 45 | No | No | Yes | n/a |
| Snare | 0 | No | No | No | 100 |
| Snowball | 8 | No | No | Yes | n/a |
| Sonic Boom | 10 | No | No | Yes | n/a |
| Specter | 0 | No | No | No | 120 |
| Surge | 55 | No | No | Yes | n/a |
| Sun Bath | 50 | No | Yes | Yes | n/a |
| Tapir | 0 | No | No | Yes | n/a |
| Whump | 53 | No | Yes | Yes | n/a |
| Wild Bear | 100 | No | Yes | Yes | n/a |
| Wind Slash | 48 | No | No | Yes | n/a |
| Wombat | 88 | No | Yes | Yes | n/a |

Lores:

| Lore | Power | Physical | Ign. Def | Unblock | Hit Rate |
|---|---|---|---|---|---|
| Aero | 125 | No | No | No | 150 |
| Aqua Rake | 71 | No | No | No | 150 |
| Big Guard | 0 | No | No | Yes | n/a |
| Blow Fish | 1 | No | Yes | Yes | n/a |
| Cleansweep | 50 | No | No | No | 150 |
| Condemned | 0 | No | No | Yes | n/a |
| Dischord | 0 | No | No | No | 100 |
| Exploder | 1 | No | Yes | Yes | n/a |
| ForceField | 0 | No | No | Yes | n/a |
| GrandTrain | 84 | No | Yes | Yes | n/a |
| L.3 Muddle | 0 | No | No | No | n/a |
| L.4 Flare | 66 | No | Yes | No | n/a |
| L.5 Doom | 0 | No | No | No | n/a |
| L? Pearl | 120 | No | No | No | n/a |
| Pearl Wind | 1 | No | Yes | Yes | n/a |
| Pep Up | 16 | No | No | Yes | n/a |
| Quasar | 57 | No | Yes | Yes | n/a |
| Reflect??? | 0 | No | No | Yes | n/a |
| Revenge | 1 | No | Yes | Yes | n/a |
| Rippler | 0 | No | No | No | 111 |
| Roulette | 0 | No | No | Yes | n/a |
| Sour Mouth | 0 | No | No | No | 100 |
| Step Mine | 32 | No | Yes | Yes | n/a |
| Stone | 40 | No | No | No | 75 |

Magitek:

| Attack | Power | Physical | Ign. Def | Unblock | Hit Rate |
|---|---|---|---|---|---|
| Bio Blast | 60 | No | No | Yes | n/a |
| Bolt Beam | 62 | No | No | Yes | n/a |
| Confuser | 0 | No | No | No | 128 |
| Fire Beam | 60 | No | No | Yes | n/a |
| Heal Force | 50 | No | Yes | Yes | n/a |
| Ice Beam | 61 | No | No | Yes | n/a |
| TekMissile | 58 | No | Yes | Yes | n/a |
| X-Fer | 0 | No | No | No | 120 |

Desparation attacks:

| Attack | Power | Physical | Ign. Def | Unblock | Hit Rate |
|---|---|---|---|---|---|
| Back Blade | 140 | No | Yes | Yes | n/a |
| Mirager | 139 | No | Yes | Yes | n/a |
| MoogleRush | 150 | No | Yes | Yes | n/a |
| Red Card | 147 | No | Yes | Yes | n/a |
| Riot Blade | 142 | No | Yes | Yes | n/a |
| Royal Shock | 143 | No | Yes | Yes | n/a |
| SabreSoul | 0 | No | No | Yes | n/a |
| ShadowFang | 140 | No | Yes | Yes | n/a |
| Spin Edge | 143 | No | Yes | Yes | n/a |
| StarPrism | 0 | No | No | Yes | n/a |
| TigerBreak | 140 | No | Yes | Yes | n/a |
| X-Meteo | 146 | No | Yes | Yes | n/a |

Miscellaneous:

| Attack | Power | Physical | Ign. Def | Unblock | Hit Rate |
|---|---|---|---|---|---|
| 50 Gs | 0 | No | No | Yes | n/a |
| 7-Flush | 84 | No | No | Yes | n/a |
| Absolute 0 | 110 | No | No | No | 140 |
| Acid Rain | 25 | No | No | No | 100 |
| Atomic Ray | 80 | No | No | No | 150 |
| BabaBreath | 0 | No | No | Yes | n/a |
| Bio Blast | 20 | No | No | Yes | n/a |
| Blaster | 0 | No | No | No | 70 |
| Blaze | 68 | No | No | No | 120 |
| Blizzard | 25 | No | No | No | 140 |
| Bolt Edge | 100 | No | No | Yes | n/a |
| Bomblet | 0 | No | No | Yes | n/a |
| Charm | 0 | No | No | No | 80 |
| Chocobop | 36 | No | Yes | Yes | n/a |
| Chokesmoke | 0 | No | No | Yes | n/a |
| Cold Dust | 0 | No | No | Yes | n/a |
| Cyclonic | 15 | No | No | No | 75 |
| Delta Hit | 0 | No | No | Yes | n/a |
| Diffuser | 62 | No | No | No | 150 |
| Disaster | 0 | No | No | No | 62 |
| Discard | 0 | No | No | Yes | n/a |
| Dread | 0 | No | No | No | 75 |
| Engulf | 0 | No | No | Yes | n/a |
| Entwine | 0 | No | No | Yes | n/a |
| Escape | 0 | No | No | Yes | n/a |
| Evil Toot | 0 | No | No | No | 120 |
| Fallen One | 0 | No | No | Yes | n/a |
| Fire Ball | 50 | No | No | No | 150 |
| Fire Skean | 100 | No | No | Yes | n/a |
| Fire Wall | 50 | No | No | Yes | n/a |
| Flare Star | 80 | No | Yes | Yes | n/a |
| Flash | 42 | No | No | No | 128 |
| Flash Rain | 60 | No | No | No | 140 |
| Gale Cut | 15 | No | No | Yes | n/a |
| Giga Volt | 110 | No | No | No | 130 |
| Goner | 220 | No | No | Yes | n/a |
| Grav Bomb | 8 | No | No | No | 100 |
| H-Bomb | 130 | No | No | Yes | n/a |
| Heart Burn | 30 | No | No | No | 120 |
| HyperDrive | 118 | No | Yes | Yes | n/a |
| Imp Song | 0 | No | No | No | 100 |
| Lagomorph | 10 | No | No | Yes | n/a |

```
Launcher       8     No    Yes   No    100
LifeShaver     84    No    No    Yes   n/a
Lode Stone     12    No    No    Yes   n/a
Love Token     0     No    No    Yes   n/a
Lullaby        0     No    No    No    90
Magnitude 8    100   No    No    No    130
Megazerk       0     No    No    Yes   n/a
Mega Volt      20    No    No    No    150
Meteo          60    No    Yes   No    80
Mind Blast     0     No    No    No    110
Missile        4     No    No    No    126
Mute           0     No    No    No    90
N. Cross       0     No    No    No    90
Net            0     No    No    No    100
Overcast       0     No    No    Yes   n/a
Phantasm       0     No    No    Yes   n/a
R. Polarity    0     No    No    Yes   n/a
Raid           40    No    No    No    100
Revenger       0     No    No    Yes   n/a
S. Cross       120   No    No    No    120
Scar Beam      28    No    No    Yes   n/a
Schiller       0     No    No    No    80
Seize          0     No    No    Yes   n/a
Shimsham       8     No    No    Yes   n/a
Shock          128   No    No    Yes   n/a
Shock Wave     25    No    No    No    120
Shrapnel       120   No    No    No    120
Slide          75    No    No    Yes   n/a
Slimer         0     No    No    No    100
Sneeze         0     No    No    Yes   n/a
Soul Out       0     No    No    Yes   n/a
Storm          100   No    No    Yes   n/a
Takedown       55    No    Yes   Yes   n/a
Targetting     0     No    No    Yes   n/a
TekBarrier     0     No    No    Yes   n/a
Tek Laser      20    No    No    No    150
Tentacle       146   Yes   No    Yes   n/a
Train          0     No    No    Yes   n/a
Virite         20    No    No    No    80
WallChange     0     No    No    Yes   n/a
Water Edge     100   No    No    Yes   n/a
WaveCannon     110   No    No    No    150
Wild Fang      66    No    Yes   Yes   n/a
Zinger         0     No    No    Yes   n/a
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