

### Some quick notes on using this theme:

- While this is a public release, this is still considered a “preview build” of this theme. There are many things I still want to do for the final theme, and some features are just removed from this version (most notably, Marathon Mode) because I haven’t had time to make them work fully. I don’t want to discourage people from playing on it -- I wouldn’t be releasing this at all if I didn’t think it was in a playable state, but I don’t want it to be mistaken for the fully finished product. If some things (especially the overall aesthetic) look underdeveloped, in all likelihood I feel the same way, as I still have a lot of work to do.
- The NoteSkins included here are what are recommended to use with this theme. These are variations of Metal and Cel (labeled “wf-metal” and “wf-cel”) that have additional things going on in them that allow features of this theme to work seamlessly. Using other NoteSkins will not break the theme, but when using them under the “ITG” Gameplay Environment, the color flashes will not be responding to the ITG judgments, which may be disorienting. Going forward, I’m open to including versions of whatever other NoteSkins people like to play with that will function correctly with this theme.
- This theme uses its own system of recording high scores. The first time you load a profile, it will “import” the scores from ITG, FA+ and “Experimental” modes into the new profile system. This may take a few minutes, but will only happen on the first time you load a profile. If you’re confused seeing a bunch of 0% Fails in your PBs, it’s likely because you’re looking at the scores under the default Game Environment (what this theme considers “Standard”), which is not ITG. From the Player Options menu, under Advanced Options, switching Gameplay Environment to “ITG” will make the song select screen show the ITG PBs and machine records. Scores from “Experimental” mode, if available, are imported into the Standard Game Environment’s high scores.
- Any options you had set in “Simply Love Options” along with any special player options you use, will have to be set again (the menu that was called Simply Love Options in SL is labeled Theme Options here). This is not a bug, just a byproduct of this being a new theme, which creates new ThemePrefs and UserPrefs files local to itself.

With those things out of the way, read on to learn more about what this is all about, and what’s (hopefully) coming in the future.

## Project Waterfall - Preview / ECFA7 Theme

### Introduction

For close to a year now, I've spent the better part of my free time developing a new theme for StepMania, aimed at the "ITG" or 4 panel pad customs community. What started off as me just hacking some numbers into Simply Love to see how it felt, led to more and more ideas, which ultimately has culminated in a project of building a whole new theme, reworking a ton of the inner workings of the theme, and adding in a huge amount of new features and metagame elements. I'm now finally ready to release what I'm calling a "preview version" of this theme, currently still being referred to by me as "Project Waterfall" or just "WF." It's considered a preview version because there are still a lot of unfinished areas and plans for more features, but it's in a playable state for general use now and I wanted to get a version of it out there to give people a taste of what I've been up to.

This version is branded around ECFA7 because it was planned to be used for the main ECFA7 tournament, originally scheduled for the end of July. The plan was that this would both give the tournament some added personality with a custom theme, and allow me to get some feedback on it from a tournament environment. ECFA7 then got delayed and I decided to take some more time developing some planned features, but the branding has been left in. In the final version of the theme, it won't be branded around ECFA or any particular tournament -- I'd like it to have an overall aesthetic that stands on its own (this also means that it will hopefully not just look like a modification of Simply Love, which it still does in a lot of ways).

The purpose of this document is to give an explanation of all the features you probably aren't familiar with coming in. I've tried to articulate my line of thinking about each particular item as well as I can, as well as how it might play into a bigger overall vision for the final theme. But if you're curious about some more introspective, unfiltered thoughts about my motivation and goals behind this project, as well as how ideas have evolved over time, feel free to read on past the end credits and into the abyss of *Other Ramblings*. If you try this out, feel free to give me any feedback on it. I'm pretty active on Twitter and Discord, particularly in the Stamina Nation and ECFA servers for the latter.

-SteveReen

## Overview of New Features

This will be focused on features that are new to this theme, and are not just inherited from Simply Love. For features that already existed in SL, see SL-README.md

The following is an outline of the sections discussed here:

1. Profile Customization
2. Game Environments
3. LifeBar System
4. Clear Types and Grades
5. FA+
6. High Score Saving
7. Advanced High Score Stuff
8. Evaluation Screens
9. Player Options

### Profile Customization

When using a LocalProfile from your StepMania setup, elements from that profile along with your own preferences within this theme will make up a “profile card,” which appears on the Evaluation screen (and later on, hopefully the Song Select screen, and possibly even Gameplay if there is some way to fit it). The card consists of 4 parts:

- Display Name
- Optional Subtitle
- Avatar
- ProfileCardInfo

The Display Name is defined in Editable.ini within your profile folder. If a subtitle is used, it will appear under your Display Name.

To use a subtitle, create a file called **subtitle.txt** in your profile folder, and just enter the text there. Note that the subtitle is limited to 20 characters, and newlines will be replaced with spaces. If there is no subtitle file upon loading your profile, this theme will create the file with no text in it so that you can just edit it if you want.

To use an avatar, put an image file named **avatar.png** in your profile folder.

Lastly, ProfileCardInfo is the section that appears at the bottom of your profile card, under the avatar. By default, this will just show how many songs have been played in the current session. There are four other options that can be used by editing the **ProfileCardInfo** field in the Waterfall ECFA7 UserPrefs.ini file. These options are:

FCTiers - shows how many Perfections, Excellent Combos and Great Combos (see *Clear Types and Grades* section) you have recorded.

FCTiersNoPerfect - shows how many Excellent Combos, Great Combos and Full Combos you have recorded.

LifeBarClears - shows how many Hard Clears, Clears and Easy Clears you have recorded.

TopGradesITG - shows how many Quad Star, Tristar, Double Star and Star grades you have recorded under ITG scoring (see *Game Environments* and *High Score Saving* sections).

Eventually, you'll be able to set these from a menu, but there was not a convenient/nondisruptive place to put them within the existing Player Options menus, so for now you can just edit the .ini file with one of those values.

Note that when using a Guest profile, none of these features are usable and the card will just show defaults.

## **Game Environments**

Those familiar with Simply Love should know about its concept of Game Modes. Simply Love has the user select from a set of modes including ITG, Casual and FA+, and reassigns the metrics (along with several other game conditions) according to the selected mode. This theme has a similar concept of multiple game environments, but with selecting a game mode taken out in favor of something more seamless.

"Game Modes" as they exist in Simply Love are removed from this theme; you no longer select a mode from a menu, and the metrics enforce an environment based on what has previously been known as "Experimental Mode" as the base game. ITG gameplay with all of its judgments, timing windows, life metrics and scoring metrics, is still possible here however, with some pretty nice benefits to this new implementation.

Some key differences to Game Environments from SL are as follows:

- Game Environment is selected from the "Advanced Options" menu from the modifier select screen.
- Game Environment can be set independently per player.
- Both environments are actually always running regardless of which one you have selected to view in Gameplay.
- FA+ is also completely usable per player in either environment (see *FA+* section).

To summarize, the most important things about this are that the Game Environment can be selected per player on the fly without backing out, and that the selection actually only affects what you *see in gameplay*, but scores for both environments will be tracked identically regardless of what options you're using. This means you can play in the normal environment and see if you passed on ITG, or if you got the quad, or play on ITG and see what your Clear

Type, score and everything else in the Standard environment are. There is a theme of *seamlessness* here that I have a strong commitment to.

With that said, there are a few things to take note of. First, the way judgment graphics are used has been reworked, making judgment fonts from SL no longer usable. Every judgment font needs to have frames for all judgments including FA+ versions of the top judgment. My commitment to seamlessness also means I want every judgment font to have a version for both environments styled the same way. Some more notes on judgment graphics are discussed in the *Player Options* section.

On a final note, the size of the outer timing window has some limitations. It cannot be different between simultaneously running game environments, and cannot be different per player. To put it another way, when a judgment happens, the game can track everything about how each environment should respond, but is still limited to that “when a judgment happens.” The total size of timing windows can’t be two different things at once. As such, by default, the ITG Way Off window gets truncated to the size of the standard Error window. There is an option to extend the Error window to the size of Way Off, which will allow you to play ITG with the full #BoysOn experience. Likewise, setting Error Window to “Disabled” makes the outer window the size of the standard Close window, which truncates ITG’s Great window a tiny amount. Truncated ITG windows are indicated on the Evaluation screens (and in game steps statistics) with an asterisk.

If you’re curious, the following are the timing windows and dp values for the Standard Game Environment:

Window	Size	DP
Perfect!	15ms	+10
Excellent	30ms	+9
Great	50ms	+6
Close	100ms	+3
Error	160ms	0
Miss		0

Holds/Rolls: +6 / 0

Mines: -3

## LifeBar System

One of the most advanced new systems built into this theme is its LifeBar system. StepMania’s life system is actually completely unused, with a new system of three simultaneously running LifeBars in its place from the theme side. Technically speaking, there are actually four life bars running, because the ITG life bar is built in here too.

This section will be focused on the new cascading LifeBar system, but it's worth it to at least mention that the ITG life bar running in this theme responds to ITG judgments, and emulates ITG's life bar exactly, with all of its confusing and inconsistent logic intact. If you pass a song under the ITG environment in this theme, you can rest assured that it's a pass under ITG's life rules.

With that out of the way, I'll first point out some differences in general behavior between the WF LifeBars and the built in SM (and by extension, ITG) one:

- WF LifeBars use integer increments, with a max value of 1000 and min value of 0; SM's life value is a floating point between 0 and 1.
- ComboToRegainLife system is still used, but the CTRL value only decrements from tap judgments that increase your combo. In SM's built in system, the CTRL value decreases from any judgment with a non-negative life delta value. For ITG in particular, this means Decents and finished Holds/Rolls both count toward ComboToRegainLife; Holds in particular do not count under the WF LifeBars. This makes the RegenCombo value consistent with the actual combo counting in game; the LifeBar will always begin to increase at the same actual combo value.

The three LifeBars running in this theme have the incredibly creative names of Easy, Normal and Hard. If you've played IIDX or SDVX, you might have some idea how this dynamic works, with the main distinction being that none of the bars I've built use the dumb system of starting empty and requiring you to finish above some threshold in order to pass. All three start full and can't recover after emptying. As the names suggest, the Hard one is hardest to keep alive, with the Easy one having much more lenient rules. Each LifeBar has a Clear Type associated with it for finishing a song with the corresponding LifeBar alive. Finishing a song with Hard LifeBar alive will give a Hard Clear, whereas you'll just get a normal Clear if the Hard bar empties but the Normal one stays alive, and so forth. More info on Clear Types in the *Clear Types and Grades* section.

I don't think it's important to list the exact numbers governing each LifeBar, so much as point out the general idea behind each one. Hard has a much greater emphasis on comboing effectively and staying on time, always requiring a combo of 10 to start gaining life. Hard's life gain drops to half outside 30ms, and the Close window has no life gain at all -- and for reference, Close is tighter than ITG's Great, so if you're used to cruising the Great window in ITG, you'll be gaining little to no life under the Hard LifeBar here. Hard also gives no life gain from Holds, so there is no padding at all from how the chart is written. On the other end, Easy gives equal life gain for all combo judgments, has less harsh penalties, and no combo requirement for gaining life. Normal feels pretty closely balanced to ITG, just with the new set of judgments and timing windows in mind. With all this being said, the raw amount of misses required to go from full to empty is not hugely different from one LifeBar to the next (they are different, just not by as much as you might expect). Making the game harder in that way, to me, does little more than just open the door for more annoying ways to fail, like misreading one pattern or messing up in a

break because you were trying to self pit crew or something. The much bigger differences in the LifeBars come from how you have to keep it alive from judgment to judgment, which is much more interesting and satisfying to observe.

There is also a completely new mechanic at play used by the Easy and Normal LifeBars. Life will start to automatically regain during empty breaks if it is under a certain threshold and enough time has passed with no judgments occurring. This will never get in the way during charts of typical density, as every time a life changing judgment happens, the timer is pushed back up. If a judgment happens after regeneration has started, some time will be added back to the regen timer, so the regeneration will stop until the timer has expired with no judgments again. This only happens when life is under a set threshold, and life will only regenerate up to that threshold. The purpose of this is to give a little bit back if a break is completely empty but you manage to get through with very low life. For reference, the Normal LifeBar will take 5 seconds to initiate regeneration, and will regenerate up to 35%. Easy will take 4 seconds to initiate and regenerate, more slowly, up to 50%. Hard has no auto regeneration.

By default, the visible LifeBar at the start of a song is Hard. If the visible LifeBar empties, the LifeBar in view will switch to the next one down (so from Hard to Normal, then to Easy). A *Fail* will **only** happen once *all LifeBars have emptied*, so you can keep going and increase your score as long as the Easy bar is alive. This theme also records what your final score was for each LifeBar, and saves it to your stats file, so if you finish a song with a normal Clear and want to know what your score was when Hard “failed,” that information is tracked. The Danger animation also plays for each LifeBar, with the green flash indicating that you’ve climbed out of Danger within the visible LifeBar. If the visible LifeBar empties but the next one down has not entered Danger, the Danger animation will fade away with no green flash. A red flash indicates a Fail once all LifeBars have emptied.

Finally, there is an option to change which LifeBar is visible from the start of a song. This option is labeled “Preferred LifeBar” under Advanced Options on the modifiers screen. If Hard is too intense, you can switch this to Normal or Easy, and that will show from the start of the song. An important thing to note about this is that no matter which you select, *all LifeBars are still running*. This means you can set Preferred LifeBar to Normal or Easy and still get a Hard Clear, because the theme is still running the Hard LifeBar invisibly. I don’t want to withhold any achievements just because you weren’t watching the progress of that achievement in gameplay. This is also reflected on the Evaluation screen, where all three LifeBar graphs are always visible.

## Clear Types and Grades

A new type of achievement that is being tracked in addition to high scores in this theme is *Clear Types*. If you play DDR, you can think of this in the same way as how lamps work (except, the actual uh, visual “lamp” part of it on the song menu is not there yet, unfortunately). There are 8 Clear Types that exist:

- 1) Perfection - 100% score
- 2) Excellent Combo - Full combo with no judgments outside Excellent
- 3) Great Combo - Full combo with no judgments outside Great
- 4) Full Combo
- 5) Hard Clear - Cleared within the Hard LifeBar
- 6) Clear - Cleared within the Normal LifeBar
- 7) Easy Clear - Cleared within the Easy LifeBar
- 8) Fail

One thing worth clarifying is that the logic behind “combo” is a little bit different from ITG. Hitting a Mine or dropping a Hold/Roll will reset your combo to 0. A Full Combo can’t be achieved if you drop Holds/Rolls or hit any Mines.

Your best Clear Type for any given chart is attached to your profile stats for that chart, separately from your high scores, in exactly the same way your PFC/GFC/etc lamps are in DDR. Currently, these are all indicated on Evaluation screens and anywhere else by kind of ugly colored texts; this is a placeholder for now. Eventually I want each Clear Type to have a cool looking medal associated with it, but I’m not an artist, so this will have to do for now. By the way, if you’re an artist and want to make some cool looking medals, I’ll pay you money for it.

Having the Clear Type medals and Grades show on the Song Select screen in the same way lamps work in DDR is something I am definitely planning on doing later on. Unfortunately, there are some challenges associated with doing that right now (discussed a little more in the *High Score Saving* section), and ultimately I am going to end up completely rebuilding the Song Select screen, so it doesn’t seem worth it to me to spend a ton of time getting this stuff to work on a screen I plan to get rid of in a few months or less. This is one of many reasons I must emphasize that this is a *preview version* of a theme I have a greater vision for. Hopefully all this can come to fruition eventually.

Anyway, Grades work a little differently from how StepMania insists them to, so I’ve circumvented SM’s system for these as well. The main thing is that there is no Grade associated with a Fail. The reason for this is that Fail is already under the Clear Type category (where it makes more sense, since you can fail a song with just about any score, but failing is mutually exclusive to all other Clear Types). Having a Grade of F sitting next to a Clear Type also indicating a Fail is redundant and doesn’t make sense, so the lowest Grade is a D. There also is no Grade associated with a perfect score, for a similar reason (except in this case, the redundancy is unavoidable; you’ll always have the highest possible Grade if your score is 100%, but dedicating a Grade to a perfect score still wouldn’t tell you anything additionally meaningful). What this means in simple terms is that Grades explicitly represent ranges of scores, detached from additional logic that is handled separately by Clear Types. This is a much nicer system, I think.

The score thresholds for WF Grades are as follows:



- S - 99%
- AAA - 97%
- AA - 95%
- A - 90%
- B - 80%
- C - 70%
- D - under 70%

The purpose here is to simplify Grades down to the most meaningful thresholds. As you get better at the game, scores in ranges below 80 or even below 90 become less common, and it takes more work to increase score as you get closer to 100%. So having a few close ranges near the top with some wider ranges near the bottom feels nice.

ITG scores obtained in this theme will calculate Grades separately according to the familiar Grade tiers defined by ITG, including using an F to indicate a Fail under ITG life. So you'll still see a Quad Star for a 100% ITG score on the Evaluation screen, and so forth.

## **FA+**

FA+ is usable here, and is much more fleshed out as a concept than what is currently referred to as "FA+." In order to make this more understandable from the start, I need to establish that this theme's definition of the term "FA+" is *anything relating to timing windows tighter than the top scoring window*.

There are technically 3 FA+ windows that are tracked and usable in gameplay with this theme. These are 10ms, 12.5ms, and 15ms. 15ms as an FA+ window is a little bit dubious, because it's exactly the same as the theme's native Perfect window, but it's usable as an FA+ window when playing under the ITG Gameplay Environment, so it's considered part of the FA+ system. The "FA+ Window" option under Advanced Options in the modifiers menu allows you to choose which of these to view in gameplay, or not to use one. When one of these is in use, the same colored/white judgment coloring for the top scoring judgment that you know from existing FA+ environments is used for the in game judgment text. Additionally, if Steps Statistics is enabled, your current FA+ percentage will appear alongside all the other statistics. Most crucially, these FA+ options can be changed on the fly and set per player, just like with Game Environment. Finally, FA+ does not rearrange the actual engine level windows in use, meaning it does not sacrifice the outer timing window. The full #BoysOn experience is possible with any FA+ configuration.

On the Evaluation screen's main pane, if an FA+ option was used in gameplay, the FA+ percentage for the window used will be displayed near the section with Holds, Rolls and Mines. If Error Window was disabled, the separated pink/blue and white counts are shown in the familiar way, but otherwise these counts are not visible from the main pane (they are on a

dedicated FA+ pane either way). This is a temporary design choice, as eventually I am planning on not having these panes look exactly like Simply Love does, and am intending on designing them with the ability to fit all judgments with FA+ on the main pane in mind.

Just like with LifeBars, regardless of which options you use to determine what you *see in gameplay*, all FA+ counts are always being tracked, and always viewable at Evaluation. A newly added FA+ pane exists which lists the three windows, and shows your counts and percentages out of total notes in the chart for each window. Your personal bests for each one of these are also stored to your profile stats, so you can track if you improve your best counts.

It's my hope that at this point, this paradigm of *seamlessness* might be starting to click more into place. It's not just about being able to choose your gameplay environment on the fly, but also the fact that nothing is lost in doing so. ITG scores aren't sacrificed for playing in the Standard environment. Hard Clears aren't sacrificed for preferring to view the Easy LifeBar. FA+ counts are tracked whether you're watching them or not. And so forth. Nothing feels disjointed anymore; it all just exists together in one place, there to make use of it in whatever way you want. This vision persists throughout everything I've done and should be reflected further in the following section.

## High Score Saving

This theme uses a completely rewritten high score/stats system that completely ignores SM's engine level system using Stats.xml. One thing worth pointing out is that SM is still doing its thing, but the theme is not making any visible use of it anywhere. That said, scores obtained when using this theme will *not* overwrite anything in your existing Stats.xml files, as this theme uses a separate file labeled WF-Stats.xml. WF-Stats.xml can be thought of as a dummy file to just get StepMania out of the way; the actual stats being recorded here are in different files created by the theme.

Throughout this section, the entity that contains scores and other stats for any particular chart will be referred to as a "SongStats."

Some major differences between the WF stats system and SM's are:

- SongStats are indexed by the hash using the same system used by the Groovestats QR code, meaning all copies of the same chart will have the same stats.
- Playing a chart on a rate mod will save stats separately from any other rate mod. Some chart on some rate mod is essentially considered a unique chart by itself.
- The concept of "High Score Lists" now only exists in the context of machine records. For player profiles, only the personal bests are recorded, though there are many components to personal bests as explained below.

- The old school arcade style “HighScoreName” is no longer visibly used anywhere, except in the messy/unfinished Song Select screen. Once that screen is overhauled, there should be room for the full player name associated with a score.

The first time you load any profile (including Machine Profile) in this theme, an “import” will be done, which might take some time. What this is doing is looking at every high score recorded in your Stats.xml, ECFA-Stats.xml, and Exp-Stats.xml, and extracting any usable scores and data that can be used in the context of the WF stats system. Any scores obtained in either ITG or FA+ within Simply Love should be intact as ITG scores after importing, and anything obtained in Experimental Mode will be recorded as Standard scores. Currently, this import only happens the first time you load a profile (specifically, if the WF player/machine stats files don’t already exist), meaning any scores you get from another theme after having already used this theme will not be imported. Later on in an update, I plan to add an option to the operator menu to run this import again, which would merge all improved stats from the corresponding XML files into the existing WF stats files.

If you’re wondering why this takes so long, the specific operation that is taking time is generating the hashes. Generating a hash for one chart by itself typically only has a small hiccup, but looping through every chart that has a high score and doing this operation on each one adds up if you have a lot of different charts played, especially ones with very high step counts. This theme does have a runtime cache of chart hashes associated with the song folder, style and difficulty they came from, so once a chart hash has been generated once during the runtime of the game, it won’t need to be generated again to retrieve the stats. This hashing time is also the reason there is a slight delay before chart stats are retrieved when scrolling on the Song Select. In order to allow smooth scrolling without the game lagging from immediately trying to find the hash, it waits about a half second before getting the stats. Down the line, this will need to be addressed in some way in order to implement medals and grades on the song wheel items. I have some ideas about this but as mentioned earlier, it makes more sense to tackle that once I get to rebuilding the Song Select screen than to spend extra time on it now.

The role of the Machine Profile vs that of Player Profile with respect to SongStats is much more distinct in the WF high score system. The Machine Profile specifically only manages *lists of high scores*, associating a name and a date to each record. A SongStats for the Machine Profile actually contains two separate high score lists -- one for Standard and one for ITG scores. Whenever a chart is played, the scores for both environments are inserted into the corresponding machine record lists. Machine record lists keep the top 10 scores based on percent DP within the corresponding environment. A score obtained at a later time is considered “higher” when scores are equal and will take precedence.

A SongStats for a Player Profile has the following elements:

- General chart information (song title, artist, difficulty, chart hash, rate mod, etc)

- Play count
- Best Clear Type
- Best % score (Standard)
- Best % score (ITG)
- ITG Pass/Fail/unplayed
- Best 10ms FA+ count
- Best 12.5ms FA+ count
- Best 15ms FA+ (Perfect) count
- Information on the “Best Play” on the chart, based on Best Standard % score -
  - Date obtained
  - Judgment counts
  - FA+ counts
  - Final LifeBar values
  - Final score for each LifeBar
  - Significant Mods used (see below)

When a chart is played, each of these individual elements is compared against what was in the player’s existing SongStats, if there was one, and each one is updated if it improved. This allows you to track many different aspects of your progress on a chart independently from each other. There is a pane labeled “Achievements” on the Evaluation screen which reflects all of these comparisons (see *Evaluation Screens*).

Significant Mods is a list of mods that might be important to show that were used for a particular play on a chart. This essentially replaces the old “disqualification” system -- nothing will disqualify you, but options that affect the chart or gameplay environment in some notable way are recorded. The following is a list of what are considered Significant Mods:

- CMod, if a CMod would disqualify under ITG rules
- ITG Gameplay Environment
- FA+ Window, if used
- Error Window, if something other than “Enabled” was used
- Any Turn mods
- No Mines

Note that at the moment (and for the foreseeable future), mods that add or remove notes or other elements to a chart are completely unselectable in this theme.

## **Advanced High Score Stuff**

Another new feature to this theme is the addition of *detailed files* for high scores. These files contain the same general chart metadata stuff that the SongStats contains, along with detailed information for a specific play on the chart. These files are written to a folder called “detailed” within your profile folder, with a filename that comes from a combination of the chart hash and the rate mod used, if one was used. Currently, this file is **only** created when your Standard % score increases, and will overwrite any previous file for the same chart. Eventually (possibly in a small update to this preview), I want to add functionality to manually save a permanent file for the current play, regardless of how it compares to your PB. My current idea is to tie that to the Screenshot command.

Anyway, in addition to general information and Significant Mods used for the given play, the detailed file contains information on every judgment that occurred during the chart, which includes the song timestamp, judgment type (tap hit, miss, hold, mine etc), timing offset, and panels. What this means is that all of the information needed to construct everything seen in game at Evaluation is recorded to a file. Reading that file you can get judgment counts for either environment (or even any other arbitrarily defined environment), timing error stats, per panel judgment counts, FA+ counts, LifeBar graphs, and so forth.

Included with this theme is a Python script called DetailedJudgmentInfo.py. Running this script with Python 3 and passing the path to any detailed file as a command line argument, the script will print out a bunch of judgment information. Note that this script was basically thrown together quickly and serves more as a proof of concept for the idea of something being able to read these files and interpret all the relevant information, than anything super useful on its own. The key thing to understand about this is that it isn’t just reading some counts and spitting them out; it’s *calculating* all this information by looking at all of the individual judgments in exactly the same way the actual game does.

While the idea of external score viewers is cool to me, there are other implications for how this can be used within the theme itself, and I have several ideas I’d like to implement later on. One of them is to allow real time score comparison against a PB or other play on a chart, reading the detailed file to get the information for comparison. Another idea I have is to have a screen where you can view various stats stored in your profile, which would allow you to select any SongStats you have stored, and view the stats from any previous play that has a detailed file, on a screen similar to what would have appeared at Evaluation. There are a lot of ideas I’m really excited about that come from being able to successfully output these detailed files.

## Evaluation Screens

Some new panes have been added to the Evaluation screen, and some of the information already previously there in Simply Love is presented a little differently now. This section will discuss everything either changed or completely new on this screen as well as the Summary screen, along with some ideas about how this might change going forward.

First, some notes about the general layout of the Evaluation screen. To summarize:

- Banner scaled down to make room for full song and chart info.
- Song info box below the banner contains title, subtitle, artist, BPM and length all together in a neat fashion.
- Marquee style chart info removed in favor of showing all 3 potential fields together.
- Profile name removed from the footer, and Profile Card added to the upper part of either player's side.
- Difficulty number replaced with larger difficulty "icon" that includes both the difficulty name and rating number.
- LifeBar graph now appears on top of chart density graph; timing scatterplot is shown when viewing the Timing pane.
- Lower part of the screen pushed down slightly, mod string removed from the bottom of panes.

The song info section is something I feel particularly strongly about. Here's a question to consider: why haven't we been displaying the music artist on this screen? There is a reason, but it's not one that many people would really know unless they actually stopped to think about it for a minute. Pretty much every other rhythm game I can think of displays the artist here in some form, because it only makes sense -- but here's what you might not be thinking about: this includes ITG. Not ITG as we know it, but the actual game *In The Groove*. See, once upon a time, ITG was an actual game of its own, with its own set of content, and wasn't designed around the idea of custom songs. As part of the game's content, every song had a banner, which included both the title and artist. So in actuality, in the context of the game proper, ITG did always have the music artist visible on this screen. This is the reason there was originally no plain text indication of the song title at all. Now about that plain text song title, there is a story behind that that's connected to this. Once customs started to become a thing, these were mostly all being played under r21 restrictions, where there were no graphics supported, and many people didn't make professional graphics for simfiles anyway. Playing charts in this way in the original ITG2 theme meant you had no way of seeing what the actual song was from a screenshot, and as a result, everyone would have to just say what song they played when they posted scores. As such, one of the first things people started doing when hacking themes was to add a plain text above the banner to indicate the song title, so that you'd always know what the song played was in a screenshot. This became more or less the expected layout for ITG themes, which persisted until now without anyone really questioning it. The point of this whole tangent is just to demonstrate that the layout you're used to originates from a context that isn't really even relevant anymore, and is definitely not ideal. I'd also like to clarify that this isn't intended to put any blame on Simply Love for something I consider "bad," because again, I think

this is something everyone just takes for granted because members of this community have all just been used to the way this has been for so long that we don't really even stop to question it. So with that in mind, I'd like to suggest that going forward, for this to be a change that every theme tries to adapt. Include proper music credit on the Evaluation screen, because why not?

Anyway, with that out of the way, the other thing here I want to talk about is the mod string. While this string *can* contain some useful information, I think the way it presents that information is tacky and annoying, and all of the useful information it can give could be presented in better ways. Firstly, the only mods that are important to convey are Significant Mods, many of which are already indicated in some way -- FA+ shows the window next to Holds/Rolls/Mines, No Mines would show a value of 0 in the Mines field, #BoysOff shows the windows disabled, for example. The only things not covered here currently are CMod and Turn mods; eventually I'd like to show little icons to indicate those. Just worth keeping in mind for now that speed mod does not show up here at all.

Now, onto the panes (finally). Something to note is that there are essentially two types of panes: normal ones, and "ITG-centric" ones. When viewing an ITG-centric pane, the Grade, PB indicator, and life graph all reflect the ITG Game Environment. Currently, the ITG-centric panes that exist are the ITG version of the main pane, and the QR pane. Eventually, this distinction on individual panes might go away, in favor of some command on this screen that will just switch the Game Environment you're viewing. This is something I've been considering, but would be something for further down the line (particularly, when more advanced menu controls are thought out and implemented). On a final note, two-pane view for single player is currently not implemented, but I plan to include it in an update pretty soon, hopefully.

### **Main Panes**

These are mostly what you know from Simply Love; the main thing to know is that there are two versions of the main pane, one of them being ITG-centric. When playing under the ITG Gameplay Environment, the default pane on the Evaluation screen will be the ITG version of the main pane. On the ITG pane, "Way Off" or "Great" will have an asterisk next to them if they have been truncated from their full size (see above section on *Game Environments*). If an FA+ window is used in gameplay, the window size and percentage of notes hit within the window will show on the button, next to Holds/Rolls/Mines. If Error Window is disabled, the colored/white split for the top scoring judgment with FA+ will be shown as well. As mentioned previously, eventually I want to redesign these visually in a way that accommodates FA+ split either way.

### **High Scores Pane**

As mentioned previously, the concept of high score lists no longer exists in the context of personal records. As such, this pane has been modified. This pane now shows a partial view of both machine record lists for the chart played; Standard view is on top, ITG view is on bottom.

### **Timing Pane**

Nothing is different about this pane in itself from what you know, but it's worth noting that viewing this pane is where to find the timing scatterplot. The scatterplot is also now unobscured by the life graph, which I personally think looks better. Another smaller note about the scatterplot is that it now displays Mine hits as gray vertical lines.

### **Groovestats QR Pane**

This is still usable, with some noteworthy things to consider. First, this pane will only show at all if you played the chart in the ITG Gameplay Environment. If you're wondering why it isn't showing up, that is likely the reason. Next, there are some checks in place that are trying to enforce that you have no visibility of a tighter window than Fantastic. Officially, it's my understanding that FA+ is supported by Groovestats, but I figured I'd make this check configurable. It can be changed in the operator menu under Theme Options.

### **FA+ Pane**

This newly added pane shows your counts and percentages for each FA+ window, as discussed in the above *FA+* section. The layout of this is pretty plain, but the information should be pretty self explanatory. The percentage shown is the percentage of notes hit within the window out of the total note count of the chart.

### **Achievements Pane**

The most elaborate of the newly added panes is the Achievements pane. This shows comparisons for every personal best item you have stored in the SongStats for the chart played, with the corresponding elements of the current play. You'll be able to see if you improved your scores, Clear Type, and FA+ counts from your previous bests, or just see how the current run compares in each of those categories. This pane might seem like information overload, but its purpose is geared toward advanced players wanting to track their progress in deep ways, so that is kind of the point in a way. That said, I'm sure it might look intimidating to less experienced players, so something I'm considering is making a simplified version, with a UserPref option to enable the advanced version.

The last thing worth going over here is the Set Summary screen. This screen will show each row according to the environment it was played in -- if you played it under ITG, it will show the ITG stats, otherwise it will show the Standard stats. If Error Window was disabled, numbers will be invisible accordingly. If an FA+ window was used, it will be indicated above the grade, and the split counts will be shown. This is all nice for now, but eventually I want to make this screen even more dynamic. I'd like to be able to highlight any individual row and switch between environment views, or even select it to show the Evaluation for that play again. These are ideas I have in mind for later on.

### **Player Options**



In this section I'd like to go over any newly added options, or ones that were changed in some way, on the modifier select screen. Some will be quick notes, while others will be more elaborate discussions about why it's a certain way, or where it's going eventually.

One thing I want to mention right away is that if you find some of these options a bit obtuse or confusing, chances are I agree. Honestly, I think SM's option rows are kind of terrible, and eventually I am planning on rebuilding Player Options as a new custom menu within the Song Select screen. I have a lot of ideas about this, which will allow these options to be organized better, and not have to be presented in such limited and annoying ways. For now, it's all at least *functional*, so that's good I guess.

### **Early/Late Indicator**

Early/Late ticks are no longer embedded into judgment graphics in this theme. Instead, a separate indicator is shown above the judgment on the corresponding side. By default, this appears as a text; setting it to "Simple" will show it as a plain tick (the actual look of the tick is subject to change, it's kind of ugly right now). Selecting "Disabled" will hide this indicator. Eventually, probably in a small update, there will be an additional option here. Hoping to have that implemented soon. I'm doing everything I can 🛠️

### **Judgment Graphic**

As mentioned earlier, judgment graphics have different requirements in this theme from Simply Love, and therefore only ones designed for this theme will work. With that aside, there is a new "Plain Text" option here, which displays judgments as just a plain text actor as opposed to an image. This leads into some thoughts I have about judgment graphics in general, which should illuminate where the idea for this option came from.

I've given a lot of thought to how judgments are shown in game, and some common problems associated with them. Some people don't like seeing so many different colors in dense charts, or find it distracting seeing so many different judgments, or just might not be able to differentiate the colors or words easily for any particular reason. With this in mind, two ideas I have for later on are optional color schemes and naming schemes for how judgments show in gameplay. With plain text, these options would be limitless, since the text can be set to whatever you want, and diffused to any color. The most flashy graphical judgments would be incompatible with these features, but some graphical judgment fonts could be made with diffusing to custom colors in mind. Additionally, some judgment fonts can be designed around preset naming schemes -- one idea I had was for all combo judgments to just say Hit, another one is to use the same word for the top 2 or 3 windows, and so forth. There are a lot of possibilities to explore here and accommodating as many players' comfort zones as possible is a good thing. Plain Text seems like the most customizable means to this end, allowing the user to customize the text in exactly the way they want, at the expense of looking really cool.

On a final note about judgment graphics, combo fonts and Hold judgment graphics are not planned to be supported in this theme (sidenote: I am not intending to use “Wendy” as the combo font in the final version either. Sorry Wendy). Hold judgments have been made much less obtrusive as they are in this theme, however.

### **Steps Statistics**

Simply Love’s “Data Visualizations” option set is replaced with just the option for Steps Statistics. In all my experience, this has been the most valuable of these visualizations, and I can’t remember ever seeing anyone use the Pacemaker in particular. If you’re upset that the other options are removed, feel free to say so, but if your complaint sounds like it only comes from a place of “something that used to be here isn’t here anymore” rather than a real demonstration of its value, I won’t be convinced. With that aside, a noteworthy addition to Steps Statistics is that it will display your current FA+ percentage for the window in use, if one is in use. It will also reflect the Game Environment in use.

On another note, something I *do* intend to bring back that’s temporarily removed in this area is “Target Score” and “Action on Missed Target.” I have some different ideas about how I want to handle Target Score, so once that’s done, it’ll be usable again.

### **Measure Counter Options**

The option to “Move Up” is removed, because it gets in the way of the Early/Late indicator. Later on, I’d like to really brainstorm some ideas about giving better customization of the layout of all these UI elements. For now, everything just has to fit.

### **Gameplay Environment**

Switch between Standard and ITG Game Environments. This can be set individually per player. As discussed in the *Game Environments* setting, this only affects what you see in gameplay, and your scores for both are recorded regardless.

### **FA+ Window**

Show a distinct judgment graphic for a window smaller than the selected Game Environment’s tightest scoring window. The ECFA window for FA+ is 12.5ms. The 15ms option will only affect the ITG Gameplay Environment, as the Standard environment’s Perfect window is already 15ms. This is an example of one of those things I hate about SM’s options screens. In a better menu, the 15ms option wouldn’t even be visible if you don’t have ITG selected; having to list it as “15ms (ITG only)” is dumb and confusing. Anyway, as mentioned in the *FA+* section, this only affects what you see in gameplay, and all FA+ counts are tracked regardless.

### **Early/Late Threshold**

This determines whether the Early/Late Indicator should appear only outside the top scoring window for the selected Game Environment, or outside the FA+ window in use. The default option is FA+, which is functionally the same as Top Window if you are not using an FA+ window. This means if you like it to appear for FA+, you can just leave this option on FA+ all the

time without having to worry about what happens when you enable or disable FA+. There will soon be another option here. 🛠️

### **Preferred LifeBar**

Sets the LifeBar that is visible from the start of the song. See the *LifeBars* section for a detailed explanation of cascading LifeBars. As mentioned in that section, this only affects what you see in gameplay, and all LifeBars are running regardless. This also has no effect when playing in the ITG Game Environment, as the LifeBar is replaced with the ITG one in that case.

### **Error Window**

This is this theme's replacement for the "Timing Windows" option. You can either enable or disable the Error window, which refers to the range of judgments from 100ms to 160ms. Note that disabling the Error window will remove both Decent and Way Off from ITG, along with truncating ITG's Great by a tiny amount (from 103.5ms down to 100ms). When a better menu exists, this set of options should be more dynamic to the Game Environment in use (though that gets complicated when two players are playing in different environments). This option is **not** independent per player; it affects the game globally.

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### **Credits/Acknowledgments**

quietly-turning, and the whole Simply Love team

This theme uses Simply Love as a foundation, and would not exist without it. In building all of this, I have had to dig through nearly every file of Simply Love, which has given me an even greater appreciation for all the work that has gone into that theme than I already had. Simply Love has played an instrumental role in keeping the "ITG" scene alive while improving the game in ways we could have never imagined before the jump to SM5. The importance of SL can not be overstated here. I would also like to thank quietly-turning for encouraging me to start this project, despite my initial negative response.

Pluto - Background art  
RiOdO - ECFA integration  
mute - Noteskin work, previous judgment fonts  
teejusb - Technical help/discussion  
Stamina Nation/ECFA servers - General feedback  
MegaSphere - Base noteskins  
Chief Skittles - Testing, feedback, judgment fonts  
implode - Testing, feedback  
UVCat - Testing, feedback  
ITGAlex - Previous judgment fonts, testing, feedback

## Music Credits:

Style Select screen: File Select - A Hat in Time Soundtrack - Pascal Michael Stiefel

Evaluation screen: Shooting Star Summit - Paper Mario - Yuka Tsujiyoko

Game Over screen: Space Junk Galaxy - Super Mario Galaxy - Mahito Yokota

These songs were chosen to fit the “space” theme for ECFA7, and are also each from things that are special to me in some way.

## Planned Updates

The following are some features I plan to update this preview theme with, before I commit fully to the final version. Each of these doesn’t necessarily indicate an individual update, just something I intend to get to at some point. How many actual updates there will be is up in the air.

- 1) Two-pane view on Evaluation in single player
- 2) Implement real time score comparison vs PB
- 3) Manual saving of detailed score files
- 4) Option to “re-import” scores, merging new ones with existing WF stats file
- 5) Rework “Target Score” and bring back “Action on Missed Target”
- 6) 🛠️
- 7) Bring back Marathon Mode

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## Other Ramblings

It's pretty likely by now that you've at least vaguely heard about some of the things I've been doing. Maybe you saw my ideas from a while back about a possible new standard for 4 panel; maybe you've messed with "Experimental Mode" or just heard mention of "Gamer Mode," or seen the videos from my channel recently, or whatever else. Since my little Simply Love hack that introduced Experimental Mode I've been basically off doing my own thing without really communicating much about what exactly I'm doing or working toward, so it's reasonable to have a lot of questions about this. So now, I'm finally able to release a preview version of the theme I'm building, and to accompany that, I'd like to go over some of my main motivations, overall goals, and talk about how some of my ideas have evolved along the way.

Sidenote: this section was originally being written as the "intro" in case it sort of reads that way above. I couldn't keep it concise as an intro so I stopped writing, moved it here and focused on explaining the features instead. This is a mess, sorry.

To start off, one thing I would like to address is the question of what the target group of players is. Some people have seen the LifeBar stuff I've done and assumed it's geared toward stamina, whereas others have seen the increased focus on full combo types and tighter timing window and assumed it's geared specifically toward FA. I've no doubt that the more recent branding of the theme as the ECFA7 theme throws another wrench into that as well. But to answer the question: who is this aimed at? The pipe dream answer I would give is that ultimately, everyone would move to either this theme, or some theme enforcing the same game environment. That's probably an unreasonable expectation to have, so a simpler, better answer would just be that it isn't aimed directly at any particular group of players. In a nutshell, I'm trying to improve 4 panel from all possible angles; for all play styles and skill levels. Being someone who plays ITG very actively in pretty much every form, I have ideas for improving the game that can benefit all forms of play.

Being more specific, my goals with this project can be summed up as follows:

- 1) Encourage exploration of a new game environment
- 2) Seamlessness between playable game environments
- 3) Improve the game experience by adding metagame elements
- 4) Offer another option for a quality theme for the community to use

I'd like to elaborate on exactly where I'm coming from with each of these.

### 1. A new game environment

No doubt many of you know that I have been advocating for some new game environment in terms of timing windows, scoring metrics and so forth for some time now. From the beginning, I would say a large part of my motivation for making a theme came from a kind of aggressive rebellion against the "ITG" standard, wanting to start a push to evolve the game in a better

direction. This is not the whole story, however, and I'll get into how my attitude and vision have changed more deeply in the next point regarding "seamlessness." That aside, I do still hold that ITG as a standard to base our game on is outdated and bad in numerous ways, and it still bothers me that we continue to adhere to the standard set by a game we've long since removed ourselves from, to the extent that nearly no one is playing on an actual ITG machine anymore, and the settings enforcing that environment are completely arbitrary in the context of a modern theme for SM5. If everyone thought the same way as me, we'd have all just adopted a new standard already. But not everyone thinks the same way as me, and it's clear that many people still hold some value to ITG as we know it. So, I decided that a good way to introduce these ideas would be to make a theme that uses the new environment as the base game, but still allows anyone to play "ITG" in a comfortable way. Perhaps if people use this theme for ITG, and enjoy the added features it presents, they will be able to get a better appreciation for the benefits of a new environment. Or, maybe they won't. Maybe we don't need to completely move to some new standard and ditch the old one. The conclusion to all this, to me, is that ITG might still be able to coexist with the new environment, as something that just exists on top of what I'm building. To this end, I've held a strong commitment to the following goal...

## **2. Seamlessness**

Simply Love's biggest shortcoming, in my opinion, is how separated the different modes of play are. Don't get me wrong, I don't think SL's implementation of Game Modes was a bad idea in its inception; it was a creative idea that made sense for the time, and allowed numerous different ways to play that wouldn't get in the way of each other. At the time, things like FA+ and StomperZ were more like experiments, not core to the game, but more like extra offerings for different environments that weren't very commonly played. StomperZ was removed, leaving, with the exception of Casual Mode, a selection of modes that doesn't feel like it belongs as a preemptive selection before your game in the first place. And years later, with FA+ being played much more commonly, that separation is a lot more jarring. FA+ is based entirely on ITG, with the only difference being that it hijacks a timing window to add another one on top of Fantastic. But scoring is still the same, life is still the same; for all intents and purposes, it's just "ITG but you can see how good your Fantastics are." At this point in time, the fact that that has to come at the expense of keeping your scores together, as well as the true outer timing window, is something that pretty badly needs to be addressed. Something that is merely an option to enhance an existing game environment is forced into a menu that you have to commit to before a set, when there isn't any good reason they shouldn't just exist together.

Hopefully, the overview above of how all the options and stats between game environments, FA+ and so forth interact has demonstrated with some clarity what this idea of seamlessness refers to. But I think this presents an opportunity to tell the story of how I reached this design philosophy, from the perspective of building this myself every step of the way, and how each idea led to the next, with this as its conclusion. I think there is something to be taken away from this. Or maybe there isn't, I don't know. But it's meaningful to me.

From the beginning, Experimental Mode was nothing more than me just wanting to try out some different timing window values and see what it felt like. Loosely inspired by having been playing DDR, I wanted to see if there was some balance that could be reached that would improve the game by adding a tighter window, but didn't come with the annoyances I had with FA+. All I wanted to do at the time was slap some numbers into Simply Love and call it a day. After iterating on this a bit and playing on it more and more, I found that I really liked playing on it as its own thing. As I got more ideas for how things like FC tiers could be combined with this to improve the game, this led to my (infamous? I don't know) proposal for a new standard. At the time, my attitude was to lean all in on this new standard. This of course was met with hesitation, with a common response being that getting the community onboard would be difficult. As an aside, I still think "this is a good idea, but the community buy-in is too hard" is a terrible mentality, in that if you like the idea, you should be part of encouraging that community buy-in. It's no different from something like "I don't vote because my side has no chance of winning" but I digress. Anyway, the point is that people having some value for their ITG score led to small ideas at first, like "maybe I'll show something that indicates you got the quad, if all your judgments were within 23ms." These grew to other questions, like "what if I'm playing stamina, and want to know if I passed on ITG?"

Those types of questions were what started me experimenting with the idea of simulated judgments, by checking the ms offset of whatever judgment happened, comparing it with some metrics that aren't necessarily the ones in use by the engine, and tracking those judgments accordingly. This was the framework for the ITG stats pane I hacked into Experimental Mode. From there, tracking the ITG lifebar was a logical next step. If I can accurately measure ITG judgments, I can have a simulated lifebar value that responds to those judgments too. This proved effective, and I was able to fully simulate the ITG environment in the background of Experimental Mode. I have to admit, despite still not liking the idea of just rebuilding the game that already exists into what I was proposing to be a new standard, the success of this experiment was really satisfying. Checking the ITG stats after each song and making observations persisted to be fun to do, no matter how much I wanted to push away from ITG.

But this exercise in simulating ITG proved useful to me in other ways as I thought more about ways I'd like to improve the game within a theme of my own. Writing the code to simulate ITG's lifebar in gameplay made me think about coding lifebars in a more general sense, and made me consider the idea of implementing my own lifebars. This, along with thinking about SDVX's "ARS" system led to my idea for multiple simultaneous lifebars, and having achievements tied to each one. So this was one aspect in which *my own new environment* benefited from the work I had done in supporting ITG, which I had previously just looked at as a lot of time wasted rebuilding stuff I was intent on moving away from. Later on, the idea of supporting FA+ by comparing offsets in the same way came as a logical next step from simulating ITG judgments, so that was another way that this exploration contributed to improving my own ideas.

Building off of what was already going on in Experimental Mode to track ITG judgments and life in the background, it was a pretty obvious logical step to allow ITG gameplay without having to

back out into a different mode. This, combined with FA+ options, effectively eliminated the need for Game Modes entirely. So now, I had a whole system in place that would allow you to play in either environment in gameplay, with or without FA+, and everything visually would respond accordingly. But an unfortunate issue here was that score saving would be limited to the WF environment. For a while I figured I would implement ITG gameplay in a really limited way, just so that you could play that way if you wanted and see your score and judgments, but the “real” game would always be the new environment. But after doing all this work I figured, if people were actually going to play ITG using this theme, they would probably not like this, as it would just feel like an incomplete way of playing ITG. They wouldn’t like the discrepancy of their recorded scores and grades, etc. Simultaneously, I had already implemented WF’s Clear Types but was not satisfied with the way it was implemented for a number of reasons, and knew at some point I was going to have to really rethink the way I was recording stuff for my own metagame elements, particularly because I hated dealing with SM’s UserTable so much. All of these things coming together started my exploration of just writing my own high score system, which took into account recording ITG scores separately from Standard scores from the outset. Along the way, I thought about other improvements I could make to high score saving (with some ideas and feedback from others, which was appreciated), which included recording scores by chart hash, and separating scores obtained on rate mods.

The result of all this, is not only a system where seamless gameplay is possible, and all stats exist in one place, but also an overall improvement to my own original vision in many different ways. A lot of what I consider to be WF’s most defining features actually came about as a result of exploring the possibility of seamless gameplay with ITG. What started out as a rebellion against an outdated game, intending to leave it behind, ended up as something embracing it as a way to play that exists right alongside -- or on top of, I guess -- the new environment. The result is something much more harmonious, and I’m happy with where this adventure has brought me. The takeaway to all this, I suppose, is that in approaching your ideas with an open mind, and thoroughly exploring all the possibilities, you might end up coming back with a vision that looks much different from what you had at the outset. Exploring new ideas leads to gaining new knowledge, which can then be applied to even more new ideas; with patience, this kind of iteration leads to something much more complete in the end. Thanks for coming to my TED Talk, or something.

### **3. Metagame**

Something I’ve written about previously is that one issue with “ITG” as we know it today is that there is very little to it that makes it feel like an actual *game* as opposed to just a bunch of charts floating around. Players who are used to having more structure, goals, rewards etc. set by the game find it hard to know what to play, or to track their progress, and so forth, without having in game elements to guide them. It takes a lot of intrinsic motivation to really get into this game, which is just the nature of a game driven by custom content.



There are a couple clarifications I'd like to make about that though. First, I don't think this is actually such a catastrophic problem in the first place. The community is still very active after so many years and doesn't show any sign of slowing down, so it doesn't seem like the game really *needs* this stuff in order to keep people interested. Additionally, the community continues to organize events that do a great job motivating people to play new stuff, and to improve at the game overall. Events like Stamina RPG and ECFA 2019 along with numerous in person tournaments have done a great job curating content and adding competitive elements to the game in external ways, and this has been hugely successful. The other point here is that even having built in metagame elements, they can only go so far within the limitations of the scope of this project. In case I've glossed over that scope, the gist of it is that everything I'm doing is limited to what can be contained in a theme. I'm not enforcing any official set of content; the content being played is the same custom content we've built for years. All this is to say, it's inherently less meaningful to have systems like "lamps," or tracking your counts for different types of achievements, etc, when all of this stuff is local to any given build of the game. You can't just look at an aggregate of someone's achievements and understand what much of it means, unless you have some understanding of the content they've been playing. This is a concession I'm making from the start, and that also dictates how some of it is designed to some degree. My general philosophy, as a result, is that I think metagame elements can still enhance the game in fun ways and can still be useful for anyone who wants to pay attention to them, but I'm not going out of my way to enforce any kind of rigid competitive backbone to them. If people inflate their stats or abuse the system to make their profile look cooler, that's no different from anything you can already do in StepMania, and it doesn't really matter to me.

With those things out of the way, I should probably get into what exactly I'm referring to when I talk about metagame elements. Clear Types and the LifeBar system are one of the main examples of this that are already fully implemented. Clear Types allow more tiers of goals to strive for, which can incentivize coming back and replaying charts, whether it be for going for better LifeBar clears, upping a GC to an EC, or whatever else. Later down the line, as mentioned earlier, I want to have Clear Type medals show on the song menu in the same way lamps do in DDR, which would create even more goals to shoot for, incentivizing playing through whole packs. FA+ is another more subtle element here, as your best counts for three different tiers are recorded to your stats for any given chart. The Achievements pane is intended to be a manifestation of all of this stuff; being able to compare your current run with all your personal bests for each item can help track your progress in different aspects of a chart, and is a pretty cool illustration of how many different things there are to go for.

There are still more things I want to do later on as well. One thing I've touched on before was an idea to have "Skill Courses," which would be kind of like the Dan courses in IIDX or Skill Analyzer in SDVX. I've been brainstorming an idea to make a new type of course mode (not a replacement for Marathon, but something separate) that would essentially just use the normal gameplay system of being scored per song and seeing the evaluation after each one, but the set of songs would be a list defined by the course. There would be a timer at each song evaluation, after which the next song would start. At the end of the course, if you clear, you

would be rewarded with the Skill Level achievement associated with that course. Skill Level would be among the things you could display on your Profile Card. I've thought about working with the community to come up with a list of courses that could be built into the theme, and as long as the charts for the courses exist in someone's SM setup, they could play them. Another idea I've tossed around and will probably be doing some experimentation with is a system similar to SDVX's Volforce system. It would be focused on rewarding you points for the hardest charts you can pass, with some added bonuses for scoring well on top.

Finally, I want to add more visibility to the stats and records tracked in your profile. The current options for ProfileCardInfo are a small piece of that, but only a start. I am thinking about having some "View Stats" screen selectable from the main menu, where you could select a profile, and view all of the stats associated with it. You could scroll through a menu that would contain every SongStats/CourseStats item stored, and view all records associated with it. Additionally, any charts that have detailed stats files would allow you to view a screen that would show the stats for that particular play on the chart, in a similar way to the Evaluation screen. With all of this, I'd like profile stats to feel more connected to the player, as they currently feel really shallow and distant in SM as it is.

#### **4. Not Simply Love**

Back in the early days of ITG customs, editing and creating themes was at least somewhat more common than it has been in recent years. Changing the theme on a machine to make it more personalized was a cool idea to a lot of people, and over time there became a lot of different options for themes to choose from. From recolors of the ITG2 theme, to the ITG3 theme, to Devon's Chromatic and Altitude themes, Jayce's Retro and GrooveNights, Matt's Tactics theme, and so forth. Having a fresh new look for the game every so often was nice, and I think a lot of people still agree. Eventually though, Mad Matt and hurtpiggypig created Simply Love -- the original version for SM 3.95/OpenITG. This theme became a blessing and a curse to the game. A blessing because it blew every single other theme in existence out of the water in terms of functionality available. Speed mod selection, judgment fonts, measure counters, ghost data, score comparisons, the list goes on. This theme was so good that there was basically no longer any other option to play on if you wanted to play in an environment that didn't feel ancient. And that's what presented the "curse" -- many people weren't (and aren't) into Simply Love's very simple, plain aesthetic, some finding it to be really ugly. To people from the outside who wouldn't fully grasp what makes the theme so good, the theme not looking good to them did little more than turn them away from the game. So everyone actively playing the game didn't want to make any new themes anymore after so much went into what was basically the best possible set of features one could offer, and the Simply Love theme just kind of *became* ITG.

Many newer players might not know this, but what we know as *Simply Love* today isn't the original theme. As mentioned above, the original was a collaboration between hurtpiggypig and Mad Matt, and was made in the environment of SM 3.95, that being the version that stock ITG machines run. The Simply Love theme made for SM5 that is used by the community today was

made by quietly-turning, and began as a project to port the popular ITG theme to the environment of SM5. This was very successful (as is evident today), and over time, Simply Love for SM5 took on a life of its own, extending way beyond the reaches of the original. In a way, SL for SM5 has carried on the legacy of the original theme in basically the best and worst ways -- it has continued to be the most feature-rich theme to use, with so much more to offer than was ever possible before the jump to SM5, which aligns with one of the main things that defined the theme originally. But people who find the aesthetic too plain or ugly are still unsatisfied in that way, and the overall lack of interest in creating something new when something so good already exists has persisted until very recently. At the very least, more theming efforts have been popping up recently, which has been nice to see. Still though, many of these are just modifications of SL, and not really intending to extend beyond that. The biggest departure so far has been Aoreo's Digital Dance, which I feel I should shout out here.

With all this in mind, one of the things I am wanting to do is simply to offer another option for a theme for the community to use. I want something that has an identity of its own, and would add to the overall variety of what we might see when people play. It's with this in mind that many features tied to SL's core aesthetic design have been removed here -- visual styles, color selection, and so forth, are all creative ideas that are original to Simply Love, and in an effort to start to build something that stands on its own, I've removed those things. Admittedly, the current state of this theme is a bit confusing. It still looks more or less like a modification of SL, but is branded around ECFA, so I wouldn't blame anyone for looking at it and not making the connection that this is a goal I have in mind. If I keep at this, the final version should have different graphics, icons, font choices, redesigned screen layouts and so forth for every major piece.

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And that covers basically everything I wanted to say here, I think. If you read this whole thing, wow. Thanks I guess. If all of the ideas discussed here come to fruition there is no way the full theme will be done within the year, but hopefully sometime next year would be nice. I've been asked questions pretty often about what I'm making, and I'm aware that I just haven't really been doing much to inform everyone, as I just haven't had the time to write up a 27 page document like this until now. Hopefully this clarifies and explains a lot of things, but if you're still curious about anything, feel free to ask.

-SteveReen