

Overview:

Another Fantasy World (AFW) is an RPG game engine for the TI-89, which allows you to create your own final fantasy like RPG by only having to create the world maps, story line, items, and magic. AFW can host up to 1000 different weapons, 1000 pieces of armor, 1000 magic spells, 1000 items (like potions and such), and 1000 different sprites. All maps are external, so the number of maps are limited to the amount of ram your calculator has. The maps are 57x109 sprites in viewable size. Some of the sprites are used as a buffer, so you don't have blank parts come up at the edges of the screen when you are about to move to another map. So think of the maps as a 50x100 map.

AFW hosts its own special type of "scripting language" (AFWSL) that is used in order to create a story line. AFWSL does have logic capabilities in order to create a more robust and advanced story line for your game to progress in interesting ways. All messages are external and you are limited up to about 99000 lines of messages or things that characters can say. You can also create your own mobs (creatures to kill). That, too, is limited by the ram you have.

There are no damage, stat, or damage caps. All those use Long Integers, which means that you can do billions of damage or achieve level 1000+. There are 12 different skills in the game. These are hard coded in, so you cannot change them. Although, you can change how much they cost to learn or how difficult they are to learn.

There exists a main inventory for all characters. This has 50 slots in it. There exists 15 slots for each character to learn skills and 15 slots to learn any spell. There are 4 different characters: nick, toki, yoki, and rexx. You cannot change their names, sorry. There can be 1 to 4 characters in your party. You can use AFWSL in order to add or remove characters from your party. This helps with the story line, like if someone gets sick or has to go away for some odd twisted reason. The battle system is coded so that the max number of mobs you have to fight will be 4* the number of characters in your party. This helps, so you don't get overrun.

There are 4 modes of transportation: walking, canoe (for rivers), ship (for ocean), airship (for flying around).

**** NOTE:** AFW will need the HW3 patch for it to run properly. You will also need to archive everything, and I mean everything, for the game to work right. You must free all your ram. The main idea I had for this game was that you don't need any other game other than this one. ******

The program is closed source. It will stay that way, so don't ask for the code. There were a few code ideas that I used in my game: qsort (whoever created this deserves their credit)- this was minorly modified; file access idea from tigcc (I did modify the code for my own purposes), and general key grabber routine from zelda, although I heavily modified this to my own version for AFW. As for the rest of the coding... it came from my own imagination.

History:

I originally created AFW to be the best RPG that was ever created for the TI calculators, because all the other games sucked. I first started to do it for the TI-86 in asm. This stopped in 2002 when I graduated high school. In college, I was introduced to pre-calc and the TI-89. I found that Ti-basic was not good enough for programs to do my math for me, so I sought out another language and I found tigcc. I used

this to learn C and while I was learning C, I found the sprite methods and decided to start my game again.

I went through many hardships, because the game ran into the 64k limit constantly, so I always had to figure out how to rewrite the game, so I could add more stuff into it. Eventually, I made everything external, because I wanted to make sequels to the game and I didn't want to redo so much coding. This worked well and many different revisions happened. I eventually found myself with a big annoyance: maps. Maps were time consuming to make, so I created an IDE out of .NET to make maps for me. This was a week long project. After creating the IDE, my map making time went from 10 hours to about 1 to 2 hours to create a 50x100 map. I thought about creating other IDEs, but I haven't gotten around to them.

I made all the maps and most of the mobs for the game. I created all the weapons, armor, items, magics, and skills for the game I wanted to use. I don't really have time to finish up the story line or the mobs, so I am leaving that for someone else to do, which is why I am releasing it now.

TODO:

In the works is a cheat code program, which will allow you to load cheat codes into AFW. Boss routine need to be tested and fixed if errors exist. More testing on the story line needs to be done and the moving of sprites in the story line needs to be tested.

Game Info:

(license agreement)

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You may distribute your own external files as your own game idea; however, you must include your source files for your items, weapons, armor, world maps, modified sprites, magic spells, and mobs. You do NOT have to include your story line source files. The story line can be your own idea, assuming you did not steal it from somewhere else. You may distribute the AFW core files with your external files you created, but this license agreement must be included. You may not modify the AFW core files.

You may not claim the AFW engine as your own. It was created by Kyle Ingalsbe. The author (Kyle Ingalsbe) is not responsible for anything this program may do to your calculator. The author is not and shall not be held responsible for any content, such as: sprites, story lines, items, armors, weapons, monsters, pictures, maps, etc., which are created by any other party. You are at risk if you decide to

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(basics)

You will need to archive everything in order for this to work. You will need hardware patch 3 for this game to work. This game was made to run on an unmodified Ti-89 titanium calculator, meaning that it does not require an OS to operate. If you are running an OS other than the factory one, then I do not know if AFW will work.

(Keys)

2nd – this is the select key

shift– this is the cancel key and the run / walk key (if you are walking around the world, you can press the shift key to make your character move faster or slower (ie run or walk)). The shift key is also used to exit out of the start menu.

F1 – this is the start menu key

F3 – used in the start menu to move items around in your inventory. (explained later on). It is used in battle (explained later on). It, also, allows you to change your leading character's sprite, when on the world map.

F5 – used in battle to show the equip menu.

F2 – used to cancel out of auto battle.

Enter – used to enter the amount of items you want to buy at a store.

Up, down, left, and right keys move your cursor or character.

(General Info)



This is the beginning screen. You have 3 options. You can start a new game, continue, and upload cheats. There are 3 different save slots, which you can continue from. The cheats are still in the making. The cheats will have an external program, which can be used to enable use the cheats. Until that program is created, the cheats will mostly be worthless.

Start Menu:

To access the start menu, you press F1 from mapview.



The start menu has a few different options: Items, Skills, Spells, Equip, Save, Exit, and Next. Most of this should be self explanatory. Items takes you to the items menu. Skills, spells, equip, and save options take you to their respective menus. Exit, on the other hand, will exit the game. If you want to close the start menu, then use the shift key. The “Next” option will display the stats of the characters. Next button:

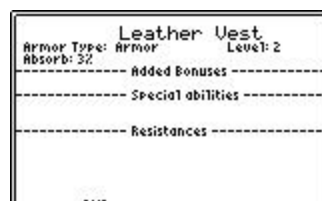


Selecting “next” will display the spells that your party members are affected by. If there is more than one party member, then selecting “next” again will take you to the next party members stats. Selecting “next” again will take you to their spells they are affected by. And it will continue to cycle around.

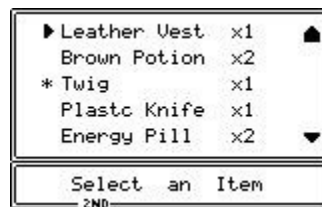
Item Menu:



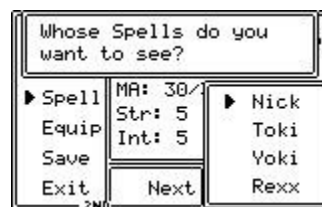
This is the item menu. You can store up to 50 different items in your inventory. You can have up to 500 of each different item. There are 4 options in the item menu. You can use the item, drop items, ID the items, and move the items. If you played RPGs before then using and dropping items should be self explanatory. IDing items is an option that will allow you do display the stats of the item. For example: look below.



This is when the leather vest is IDed. Below is when you use the move option.

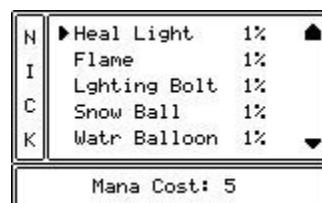


When you use the move option, you will first be prompted to select an item. When that item is selected, a * will display beside the item, like shown above. Then you will be prompted to select another space. That space can be an item or a blank space in the inventory. When that is selected, the item with the * beside it will be moved to that slot. If an item is there, then the items will switch places.



When you select spell, skill, or equip, you will be given a menu with a list of party members.. select a party member and you will be taken to their set of skills, spells, or equipped items.

Spell menu:



This is the spell menu. It shows the spells and the percentage rate at how well your character knows the spell. At the bottom of the menu, it shows the mana cost.

Equip menu:



You are able to equip up to 4 pieces of armor and 1 weapon. The left side shows the name of the person you are equipping and to the right of that are all the items the character is wearing. Equip and remove should be self explanatory. “Next” will take you to the next party member, assuming you have another. It too will cycle through like the “next” option on the main start menu.

** Pressing shift will take you out of your present screen and will take you back to the previous screen. This is true for all screens in the start menu. Use the 2nd key to select any option.**

Shops:

You have 8 different shops: armor, weapon, item, magic, skills, training, life, and the inn.

The Inn will restore your hp and mana, up to about a million or so.

The life shop will bring characters with 0 hp back to life.

Armor, weapon, Items, and Magics should be self explanatory.

Train store menu:



When you go to the train shop, you will be prompted whether you want to train your stats or to practice skills or spells.

Practice menu:



First, you will be prompted with a menu asking whose skills or spells you want to practice. When you

select a character, their skills and spells will be displayed. All their skills and spells will be listed in one menu, so you can practice any of them you want. At the bottom of the menu, you have a practice cost.

Train menu:

Which Stat to Train?	
► Str	5
Dex	5
Int	5
Def	5
Cost: 75 G 9470 G	
2ND	

This is the menu where you can train your stats. The cost of training your stats will go upward as your stats go up. You cannot regress your stats, so once you train it, it is permanent.

Shop Menu (specifically the skill shop and armor shop)

► Hand to Hand Exotic Weapons Daggers	Level: 1
Cost: 500 G 8865 G	

► Cotton Vest	Absorb: 2
Cotton Hat	
Leather Vest	
Leather Shld	Total: 0
Leather Glov	Level: 1
Cost: 30 G 610 G	

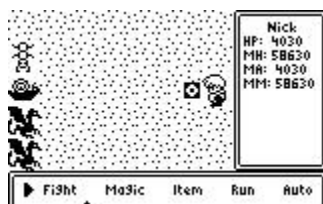
The selection list is the list of items, skills or spells you can purchase. On the bottom left is the cost of the item. On the bottom right is how much gold you have. The right side has a basic set of stats for the item, such as the item type and level. It will also show you how many you have in your inventory.

Purchasing items:

How many do you want?	
Quantity:	tion
-	tion
Total:	0
Level:	1
G	1000 G

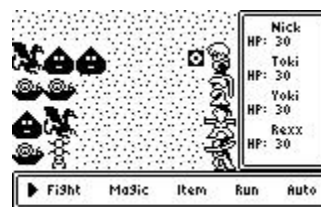
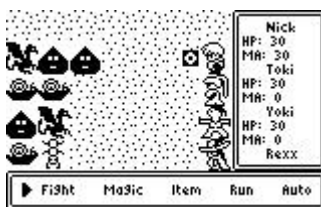
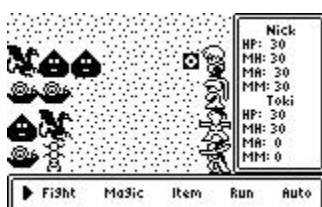
When you want to buy items, a prompt will come up asking you how many you want to buy. Most likely, the 2nd key will be activated, so deactivate 2nd and type in a number. Then press enter. This is the only place where the enter key is used. The system is smart. If you try to buy more than you can afford, then it will enter the max you can afford of that item. If you do not want to buy an item, then do not enter a number, or enter 0 and press enter.

(Battle)



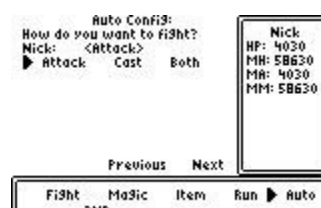
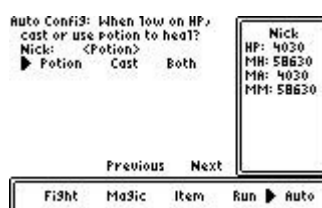
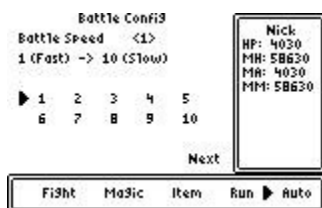
This is your basic battle screen. Your characters are on the right. On the left are the enemies. You can fight, use magic, run away (maybe), use items, or use auto battle. Your scenery can change based upon where you had your battle like forest, grass, sand, etc. The weird little black box, with the circle inside of it, is a pointer to which character is going to fight next.

Different hp views:



One of the problems I ran into was space on the screen. To solve this, I created different views for viewing your hp and mana. There are 3 different views. One shows both current and max hp and mana. Another shows only current hp and mana. And the last shows only current hp. You can access the different views by pressing F1. If you are on any of the extended views, you can use the up and down arrows to view more stats.

Battle Config Menus:



To access the battle config menu, press F3. You can adjust the speed of the messages that are displayed on the first menu. Your other menus adjust how the “Auto” feature will work. You have the ability to use auto healing. When your hp gets too low you can either use a potion or cast a cure spell. You also have the ability to choose whether you will attack, cast, or do both during auto battle.

(auto battle)

I eventually got bored of having to do battles all the time, so I implemented an “auto battle” feature to level me up. This little feature, when activated, will cause your characters to fight without you having to constantly press buttons. So while you are working on math, you can sit there and let it battle for you. I created automatic healing routines that would heal you when you hp got too low to prevent you from dying. This feature is only available during auto battle. I also implemented the ability to always cast, so you could practice your spells during battle. If you want to turn off auto battle, then press F2 constantly until you get your menu back. The battle config menus will configure your auto battle.

Final trick in battle. I ran out of space again and ran into a problem: if your weapons broke during battle, then how would you replace it? This was simply solved. Press F5 and you can equip new armor and/or weapons during battle.

Stats Info:

You have 6 different stats: Int, dex, str, def, mana, and hp.

Int will help you to learn your skills faster. The higher your int, the faster you will learn skills. Int also affects how much mana you will gain per level. Your int, also determines how much damage your magic spells will do.

Str will affect how much damage you will do. It will also cause your weapons to break if you are too strong. It reflects reality. If you put too much force behind a weapon when you use it to hit something, then it will obviously break.. Same concept here. Some weapons are unbreakable...

Dex – this is used for the dodge skill. It is also used to calculate whether you are going to run from battle or not. It also helps you to evade attacks.

Def – each def point will reduce the amount of damage you take by 1 hp. This is useful for early in the game. Def also is used to calculate how much hp you will gain when you level up.

Hp is your hit points. Self explanatory.

Mana is used to cast spells with.

Random info: only your hp, level, and mana will increase as you level up. All your other stats have to be trained. Stats do not have a limit on them, so you can make them go as high as you wish; however, it will cost you.

Skills and spells info:

All skills and spells are level based. You cannot learn some spells and skills until you are the right level. All skills and spells have a percentage rate at which you know them. This percentage rate will

determine whether you will land the spell or successfully execute the skill. For example: if you have hand to hand combat and its skill % is 40%, then you have about a 40% chance of actually hitting a mob during battle. (Don't worry, mobs have the same problem.)

Spells work the same way. If you have the cure spell and it is at 75%, then you have a 75% chance of landing the spell. This adds an extra challenge to the game. There is a shop where you can practice your skills and spells. You can also practice your spells by casting them. You can cast spells in the start menu and in battle. Beware: you can use destructive spells on your characters in the start menu and you can kill them off if you are not careful.

There are 12 different skills which are hard coded into the game. In order to effectively use a weapon, you must know how to use it right? Well that is the concept behind the skills. These are the following skills you can learn: hand to hand combat, exotic weapons, daggers, clubs, swords, ninja weapons (nin jitsu), second attack, 3rd attack, enhanced weapon damage, enhanced magic damage, shield block, and dodge.

Hand to hand combat – this skill is useful, because your fists become weapons. If you do not have a weapon in your hand, then you use your fists. If you know this skill, then your fists become comparable to the damage weapons have. This is a useful skill to have in the event your strength is too high and your weapon breaks. Your hands never “break” so you don't have to worry about losing the hand to hand combat skill.

Daggers, clubs, swords, and ninja weapon skills are all self explanatory. Exotic weapons are weapons that do not fall under those types of weapons. What can be an exotic weapon? Well anything your imagination can come up with, for example: an 8-ball, a purse, a chair, etc. My theory behind exotic weapons was this: think of an odd weapon to have that would be humorous to use, but causes more damage than a normal conventional weapon.

Enhanced damage (magic and weapon) – these skills, when mastered, will increase the damage of your weapons or magic up to 1.5x normal damage.

Shield block – if you have a shield equipped, then you have a chance to block and enemies attack with the shield.

Dodge – this is based off your dex. Your dex is compared to your enemy's dex. Your dodge rate will depend on the difference in dex. If your dex is higher, then there is a better chance that you will dodge your enemy's attack. If your dex is high enough, then there is a possibility that you will never be hit again.

2nd and 3rd attack – this adds an extra attack to your normal attack. If mastered then you will always get the extra attack. Basically 2nd attack will double the damage. Third attack would triple the damage. You need both 2nd and 3rd attack in order to get 3 attacks in, otherwise you will only get 2 attacks in. These attacks are physical attacks and not magical attacks.

Keep this in mind: if you do not have the skill to use the weapon, then you will most likely never hit a mob with that weapon in battle. It is a simple concept: if you do not know how to use the weapon, then how can you be effective in battle with it?

(Spells)

Spells can be made in any combination. However all spells have flags added to them to tell what they will do. Here are the different types of spells possible:

Elemental (i.e. water, fire, ice, and lightening) damage.

Healing – this will heal hp to one or all party members. It also includes life and full life (full life brings a character back to life with full hp). There is also a cure mana ability, although it is usually used in potions.

Curative spells – like cure blind, cure poison, cure silence, cure stone (when a character gets turned to stone).

Maledictions – blind, poison, stone, and silence (cannot cast spells in battle). These spells will last a certain amount of rounds.*

Other:

Sanctuary (sanc) – this spell will reduce the amount of damage (both physical and magical) by half; however, this spell only lasts for a certain amount of battle rounds.*

Haste – this spell will cause your character to have an extra attack. This, too, only lasts for a certain amount of rounds.*

Dispel – this removes the spells from a character.

* The amount of rounds it will last is determined by the spell strength.

There are 3 different target types for spells. You have spells that will heal or damage one enemy / ally. You have spells that will damage or heal all enemies / allies. You have chain spells. The chain spells are spells that will hit its first target then bounce off of it and hit another random target, either ally or foe. The spell will continue to randomly hit targets until it fizzles out. The number of bounces is dependent on the level of the caster.

All spells will decrease in mana cost as you gain levels. There is an initial mana cost for all spells. Usually this mana cost is high. As you advance on, the mana cost drops and it becomes cheaper to cast it. Usually the low level spells will be weaker than the high level spells. Or at least they should be.

Talking:

In order to talk, face a person that is walking around the map and press the 2nd key. Press shift if you want to cancel the conversation.

Opening treasure chests: use the 2nd key.

Use the 2nd key to randomly check the ground for items or info. Keep in mind that these things have to be externally coded for them to exist.

Ship, Canoe, and Air Ship:

The ship can only be used in the ocean. It can only dock at a port. If you want to get onto the ship, then simply walk onto it. If you want to leave the ship, then find a port and walk onto the port.

The canoe helps you to travel the rivers. It is an automatic thing just like in final fantasy.

The air ship sits in one place until you board it. If you want to use the air ship, then walk onto it and press 2nd. When you do this, your character will disappear and you will only see your airship. The airship can cross over any terrain. No monsters will attack you if you are in the air ship. If you want to land, then press the 2nd key again and you will land. Keep in mind that you can only land on certain terrains, like grass.

You can use the shift key to increase the ship, airship, and / or the canoe walk/run speed.

**** Note:** you cannot save while you are in the ship, air ship, or canoe. ******

******* It is known that the ship and air ship can randomly disappear and reappear while you are walking around. This is not a bug, but a known disability. All of the maps are limited in size. When the ships make landfall, they are stored on those maps. AFW can read the maps to the north, south, east, and west. If the ships are on one of those maps, then it will show up; however, if the ships lie in a diagonal direction, then it will not show up, which is why it will “temporarily disappear.”

More technical terms: AFW does a “look ahead” and looks at the maps surrounding the current map. If it sees the ship stored there, then it will display the ship in the buffer area of the current map. However, the program cannot do a “look ahead” that is 2 maps apart. For example: a map that is north then west. It cannot look that far ahead, so the ship disappears.*******

Items:

All items, weapons, and armors will be level based. This means that you must be a certain level in order to use any specific item, weapon, or armor. Items will usually be potions and such that will help aid or hurt you along the way. Your weapons have a max str on them. If your character's str is over the max str of the weapon, then the weapon will break. There are flags, which can be added to the weapons. These flags will cause elemental damage or side affects, like death, blind, poison, stone, dispel, silence, etc.

Armors have all sorts of abilities. They can add or subtract stats. They, too, can have special flags on them that prevent maledictions. Sanc and haste flags exist, which means that you will permanently have haste or sanc during battle. The abs % is fairly simple. The abs % will reduce your damage by that %. For example: if you can absorb 6%, then 6% of all damage will be removed and you will take the other 94% of the damage. If you have 100%+ abs, then you will take no damage. All abs %'s are combined from all armors and then that becomes your total abs %. For example: if your hat absorbs 5%, your gloves absorb 3%, your torso armor absorbs 10%, and your shield absorbs 2%, then $5+3+2+10 = 20\%$ total absorb. There also exists an absorption rate for elemental damage on armors. Their absorption rates work the same way as the normal armor absorption rate.

As for other info, see the other help files that are associated with making external files. This is meant to be a general overview of AFW.

Known Issues:

- When walking around, the screen blinks every now and then – this is due to changing of maps.
- Sometimes the keys don't work right – this is due to low level calls. It's odd. Sometimes the addresses seem to overlap. For example: if you press F3, it thinks F1 is pressed instead...
- You have errors when saving your game – this is due to the fact that you don't have enough ram free. To fix this: Archive everything.
- Address errors – usually due to not having enough ram. Archive everything. Sometimes low level system calls cause address errors, although it is rare. These are usually in try catch blocks, so they shouldn't happen.
- When you press F3 on the world map to choose a new leading sprite and shift is pressed, a ninja appears instead of one of the characters. This was a known bug I used to my advantage. I was running out of space for logic, so I defaulted it to the ninja, so you wouldn't run into other weird sprites. I don't consider it a bug, but a neat hidden feature. Besides, I think it looks cool to run around as a ninja.