iWEAVEIT USER GUIDE

Version 4

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iWeaveIt User Guide

CONTENTS

INTRODUCTION

iWeaveIt is a weaving draft design app for the iPad, iPhone and iPod.   It was created by Sally Breckenridge and her daughter.   Sally is an experienced weaver and has been programming and selling WeaveIt Products since the early '90s, so has a long experience with weaving software and what users want and like.   Her daughter, Shannon, is currently an experienced iPhone and iPad programmer.   We really like the iPad and think it will become the future of computing.   Thus iWeaveIt is the beginning and will grow in the future just as WeaveIt Pro has.

Shannon built the prototype for iWeaveIt. She provided a lot of hand holding during the development of the app. iWeaveIt uses many of the Apple IPhone conventions.   The initial offering of iWeaveIt showed that if a user was already familiar with iPhone and iPad systems, then they readily figured out what to do in iWeaveIt.   However, there are a lot of new iPad users and many of these are weavers. The first thing they want for their iPad is weaving software.   These users may have difficulty figuring out where to start. Although I am pretty good at it now, I know that not long ago I was also trying to figure out how to navigate around the new iPad.

IPAD/IPHONE PARADIGM

There are some great iBooks at Apple's iBook store on the IPad for new users. If you have not found these, then open the iBook app, click on the upper left corner and select Store. Search for the iPad User Guide. The iPad User Guide for IOS 11 is a great start in learning about your iPad. There is also an iBook on iPhone User Guide for IOS 8. These are free.

Icons used in iWeaveIt:

Help Icon   Help or more info is available.

Action Icon   List or menu of actions that can be performed.

- Every change is saved so that if the phone rang or you were interrupted, information will not be lost. This happens in the background.
- The standard way to close "popups" or menus is to tap outside of the area. This is not a cancel as it is in Windows. Every change made is persistent and saved.
- **Gestures** – iWeaveIt uses many of the standard gestures.
  - A swipe is used for scrolling when scrolling is available
  - A two finger motion by bringing the fingers together will zoom in.
  - A two finger motion by moving the fingers out will zoom out.
  - A tap is equivalent to a mouse click in Windows. Since you are using your fingers instead of a mouse, it takes a larger area to make click than it does with a mouse. If you have difficultly hitting the correct square or icon, a "stylus" really makes it easier. These are available in the computer department of most electronics stores (e.g., Target, Best Buy, etc.)

- **Printing** -- The iPhone and iPad cannot connect directly to a printer. They must use a technology Apple calls "AirPrint. Be sure to check that your printer can support this.

HELP AND IWEAVEIT

- Help – The little ⓘ buttons for help will be found on the main screen in the upper left corner. When editing the threading, treadling and tie-up, the help button will be found next to the editing tools on the main screen. They will also be found on most popups on the iPad and on the screen of the iPhone/iPod.
- Saving and loading files – In addition to saving all changes in the background, iWeaveIt patterns are saved and loaded using the WIF (Weaving Interchange Format) format for the files
- Zooming on the drawdown is done with a two finger swipe as defined by Apple.
  - o Double click in drawdown to zoom in one step.
  - o Two finger single click in drawdown to zoom out one step

ACTION MENU

The ⚙ action menu presents a list of actions that can be performed:

- New / Open / Manage – create a new pattern; open an existing pattern; manage your patterns by grouping, renaming or deleting. Uses the Apple IOS File Manager similar to the IOS Files App .
- Save -- Saves the files or renames it. Does not make a copy.
- Email – email the current pattern file as a WIF file, image or PDF file.
- Pattern Setup – Setup the number of shafts and treadles. Set the draft to use lift plan or treadles.
- Color Setup – Edit the color palette to add colors.
- Print – This item will only be visible if printing is supported on your device. It may not mean that the device is actually connected to an Air Printer.
- Add-On Features – When a new feature is added, it will be available for purchase from the App Store with this menu item. Currently, there are three add-ons: Designer One, Project and Yarn Calculator and the Treadle tracker.

The details of these will be found in other sections of this document.

SHOW ONE REPEAT ICON TOGGLE

Toggle the button to change from viewing the drawdown between one repeat of the draft and a full view of the fabric by repeating the threading/treadling to full screen.

UNDO ICON

The undo icon shows in the top right corner of the screen. This undo is used for undoing actions, entire editing sessions and many of the designer actions. There is also an undo in the editing session for threading, treadling and tie-up but that undo will only undo one edit action, while this undo will undo the entire editing session and return the pattern to the original state.

ZOOMING

Using a two finger pinch or extend gesture will zoom the drawdown to a larger or smaller size.

- o Double click in drawdown to zoom in one step.
- o Two finger single click in drawdown to zoom out one step

Small squares will display in the threading and treadling when the zoom size is too small to display text.

DESIGNER ONE

If you have purchased Designer One Add-on Module, the designer tools icon will be seen in the upper-right corner. To learn about this module and/or purchase it, select "Add-On Features" on the Action menu. The purchase is done through the iTunes App store, using Apple's secure hosting so it is safe to purchase. Your device must be connected to the internet to make the purchase; however, if not connected, learn about this add-on by selecting more info.

The Designer One Add-on provides the basic tools for designing your pattern. These tools include:

- Treadle as Drawn in
- Turn the Draft
- Add Tabby
- Color N Weave
- Find Floats

This module is described in more detail in a later section.

PROJECT AND YARN CALCULATOR

If you have purchased the Project and Yarn Calculation Add-on Module the yarn calculator icon will be seen in the upper-right corner. To learn about this module and/or purchase it, select "Add-On Features" on the Action menu. The purchase is done through the iTunes App store, using Apple's secure hosting so it is safe to purchase. Your device must be connected to the internet to make the purchase; however if not connected, learn about this add-on by selecting more info.

TRACKER FOR TREADLING AND THREADING

If you have purchased the Tracking Add-on Module, the tracker icon will be seen in the upper-right corner. To learn about this module and/or purchase it, select "Add-On Features" on the Action menu. The purchase is done through the iTunes App store, using Apple's secure hosting so it is safe to purchase. Your device must be connected to the internet to make the purchase; however if not connected, learn about this add-on by selecting more info.

WEAVEIT ICON

Even the WeaveIt icon is a button. Click on it to see the version number. There is also a button to the Apple App Store for rating the iWeaveIt. Good ratings are appreciated. If you have an issue or a request, use the feedback button to send email to me. As all my WeaveIt customers know, I like to fix things.

WHAT'S NEW IN IWEAVEIT 4.0

This little icon will provide information about what was added to the latest version of iWeaveIt.

- iWeaveIt now uses Apple's IOS File Manager for creating new files, opening files, managing files and folders.
- Many screens have been updated to support Apple's new sizes for the phones and iPads.

EDITING THREADING, TREADLING AND TIE-UP

HOW TO START AND STOP EDITING

Initially iWeaveIt starts with a sample pattern. Use this pattern to practice using the editing tools.

iWeaveIt supports up to 8 -12 shafts and 10-13 treadles on the iPhone and 24 shafts and 32 treadles on the iPad. The limit is due to the screen size and the size of your finger used for editing. Editing may be easier with a stylus.   A stylus is especially useful when editing more than 16 shafts or treadles, since the square size is reduced even further to fit on the screen.

To start editing of the threading, treadling or tie-up, tap on that area.

To stop editing of any of those areas, tap outside the edit popups. On the iPhone, tap the "Pattern" button to return to the pattern.

EDITING TOOLS

THREADING AND TREADLING TOOLS

The following screen shots show the threading popup when in editing mode. Treadling
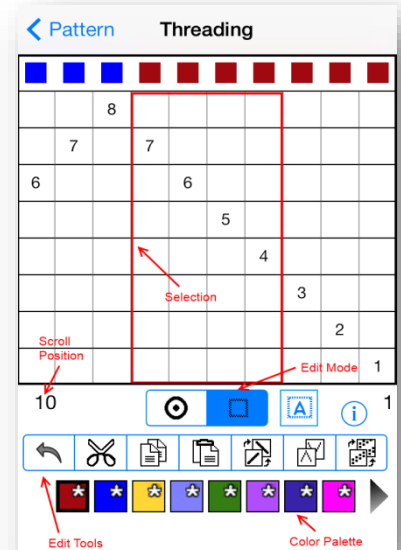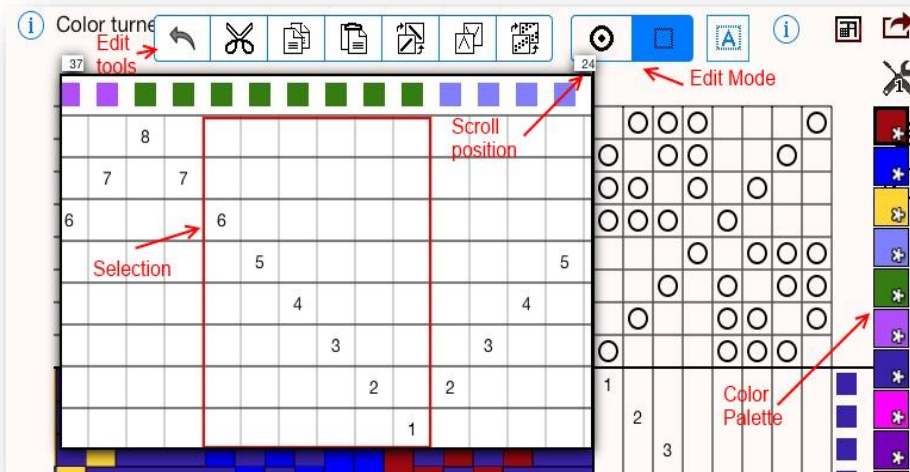
is edited in the same way.

EDITING MODES

The mode tool bar has two buttons that toggle. Select either Mark mode or Select mode by tapping on the buttons.

Mark Mode -- In Mark mode, tap on cells of the threading or treadling to mark the single shaft/treadle in that cell. The color will be the selected color from the palette. See the color at the top. The edit tools are not available in mark mode.

When editing a lift plan or treadling with multiple treadles, tapping on a cell will toggle the cell from on or off but will not affect the other cells of that pick.

Select Mode – In select mode, make a selection and then select the action from the edit tools.

- o To make a selection. Tap on a cell and HOLD for about a half second till the red selection rectangle appears, then drag to select the cells. If you don't hold for a half second before dragging, the view will scroll instead of selecting. There is a subtle difference between scrolling and selecting. For selecting think, "**Hold then drag**".
- o After making the selection, select the action in the edit tools. These actions are described below.
- o The select all button is visible in select mode. Tapping it will select all the warps or wefts in the pattern.

SCROLLING

If there are too many warps to fill the viewing area, the edit view will be scrollable. Use the normal swipe gesture to scroll the threading horizontally or the treadling vertically.

The current scroll position will be shown by the small boxes at each end of the view. See screen shot at beginning of this section.

COLOR PALETTE

The color palette on the iPhone runs along the bottom (in portrait mode of iPhone) and has two scroll arrows at each end.

Tap on the arrows to scroll other colors into view.

The yarns used in the pattern are marked with the star icon ✿. This will help choose the current yarn in the pattern instead of one that looks the same but really isn't.

On the iPad, the color palette runs along the right edge. Since each palette contains 20 colors, the color palette on the iPad does not scroll. There is enough space to show all the colors.

To select a color, tap on the color cell. A black border outlines the selected color.

In mark mode, tap on a threading cell, the color change to the color selected in the palette.

In select mode, selecting a new color in the color palette will change all the thread colors in the current selection to the new color.

EDITING TOOLS

The edit toolbar shows along the top of the main iPad screen when editing the threading or the treadling. It sits below the threading view on the iPhone.

The edit toolbar is only used in select mode. The buttons will highlight if that action is available. The button will be grayed when the action is not available.

Undo – The undo button will undo the last action. It is also available in mark mode to undo the last entry.

Cut – The selected threads are cut and put in the program's clipboard. They can be pasted into another location.

Copy – The selected threads are copied to the program's clipboard. They can be pasted into another location.

Paste – The contents of the clipboard will be pasted into the front of the selected location. The selection will change to select the newly pasted threads.

Insert – New thread cells are inserted at the selection location. The number of selected cells determines how many cells are inserted. It is important to fill these cells as the blank cells interfere with tracking and with project calculations.

Flip H – The selected cells will be flipped horizontally for the threading and vertically for the treadling.

Flip V – Flips the selected cells vertically for the threading and horizontally for the treadling.

Wrap – Wraps the selected cells vertically one cell for threading and horizontally one cell for treadling.

TIP: For Better Performance when editing a large pattern. Before editing a large pattern, set the drawdown to one repeat. Then scroll to the section you wish to change. Keep zoom setting as large as possible.   Use the scroll labels for the one repeat the edit window to line up the threading with the drawdown.

TIP: How to correct an error in large draft. When I view a large draft and notice an error, I will change a color of a thread to a noticeable color as close as possible to the error to mark the location. This may take several tries. Once corrected, I can change the colors back to the correct color.

TIE-UP EDITING TOOLS

The following screen shots show tie-up popup when in editing mode. **Lift Plans cannot edit the tie-up**.
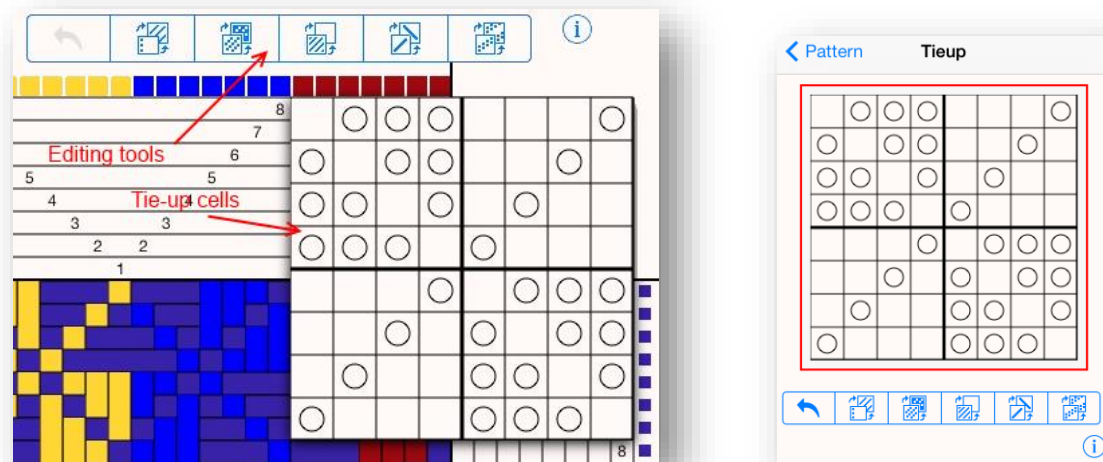
TIE-UP EDITING MODE

Clicking on a single cell in the tie-up will toggle the cell mark on and off. The tie-up editing tools work on the entire tie-up. It is not possible to select a part of it.

TIE-UP EDITING TOOLS

Undo – The undo button will undo the last action.

Twill It – Tap on the cells in the first column of the tie-up. Click on the 'Twill it' action button to generate a twill.

Invert – Invert the tie-up. All the cell markings are reversed.

Clear – Clears the tie-up to a clean slate.

Flip – The tie-up will be flipped horizontally.

Wrap – Wraps tie-up vertically one cell.

FILE MANAGEMENT - NEW, OPEN AND SAVE

NAVIGATING FILE MANAGER

iWeaveIt now uses IOS files management. It is similar to the Files App on your iPhone or iPad[1]. Pick *New / Open / Manage Files* on the Action Settings Menu. Sometimes when iWeaveIt starts, it starts with the File Manager instead of the Drawdown view of your pattern file.   It is important to understand how to navigate the File Manager.

The heading of the files manager shows the current folder as the title. On the left, the parent folder name is displayed.
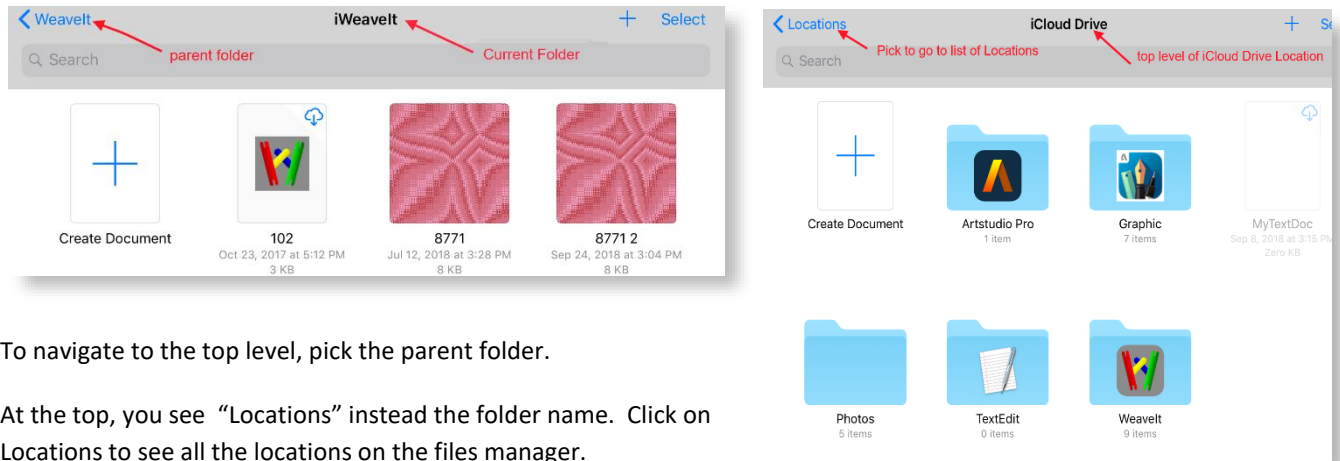
To navigate to the top level, pick the parent folder.

At the top, you see "Locations" instead the folder name. Click on Locations to see all the locations on the files manager.
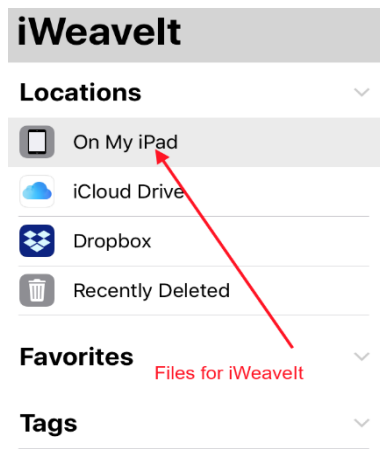
The important ones are "On My iPad" and "iCloud Drive".   To see files locally for iWeaveIt, pick On My iPad and then pick iWeaveIt folder.

Navigate to new folders by tapping on the folder name.

If iWeaveIt file manager starts with the Recent screen and nothing is seen in Recents, then pick Browse on the bottom tab bar. This will take you to the locations screen when you can pick "On My iPad".

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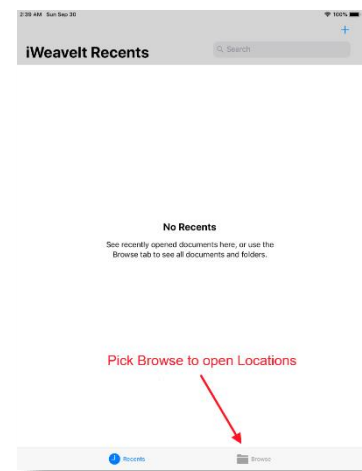
[1] For details on the IOS Files App, read the IOS 12 Guide for iPhone or iPad. This guide is free in iBooks (now called Books) on your iPhone or iPad.

NEW / OPEN / MANAGE FILES
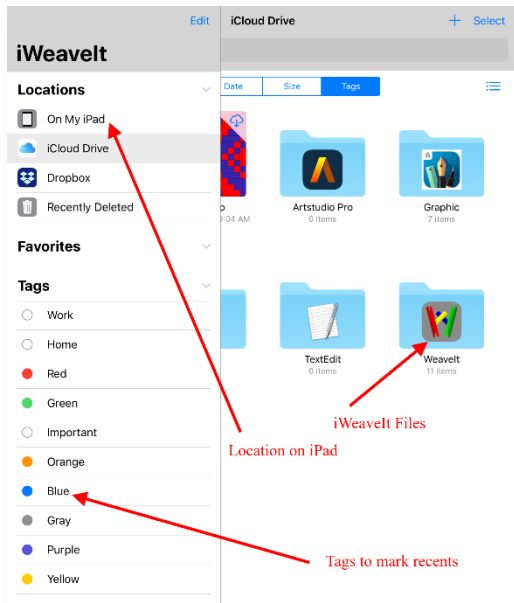
Initially the files manager looks like the screen on the left. Note the Locations in the top left of the side bar. In the *On My iPad* location, see the *WeaveIt* folder in the middle of the right. Tap on the folder to open it. If you don't see any folders, then tap on the *On My iPad* location.

Navigate through the folders by tapping on them. Once in the iWeaveIt folder, see the files and a folder for samples.

Help is now available on the File Manager bar.

Open a File – Tap on the file. It will open in the drawdown view.

Create New File – Navigate to the folder where the new file is desired and tap on the **+** in the first icon.

Create New Folder – Tap on the little folder icon in upper right.

More actions are available when the **Select** button in the upper right of the screen is picked.

See the actions at the bottom of the screen. Multiple files can be selected by clicking on each little circle on the file. T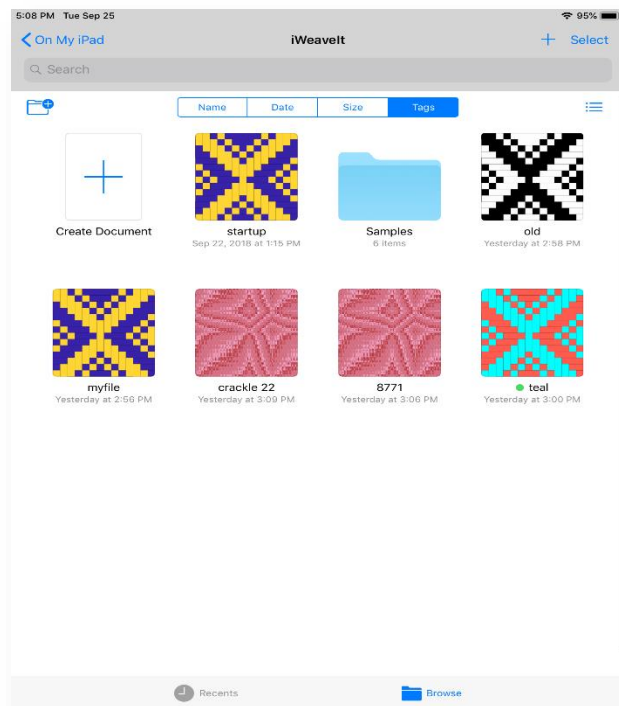hus files can be shared, moved, deleted as a group. Note that folders can also be selected and the operations will also work on them. **Select all** is available in the upper left corner.

Share – Allows files to be emailed.

Duplicate – Make a copy of the file. You should do this before creating a variation of your draft.

Move – Move the files to a new location.

Delete – Deletes the files.

When you have completed the operations wanted, Pick **Done** in the upper right corner.
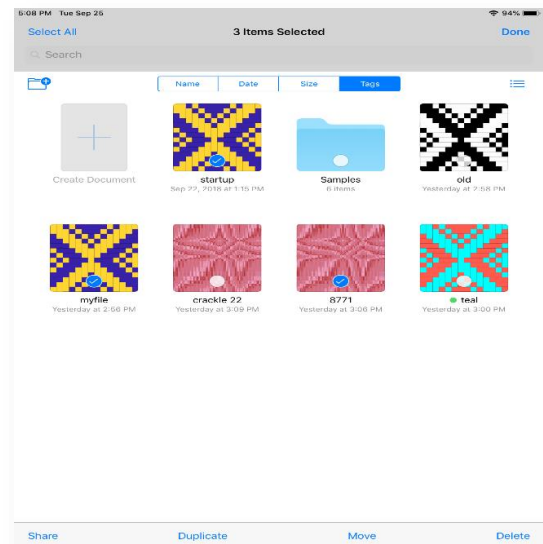
DISPLAYING FILES IN RECENTS

The file operations can also be performed on a single file when it is selected by touching the file icon for a long time until the context menu appears above the file icon.

On the initial screen, there is a **Recents** tab located at the bottom of the screen. Files can be tagged and then they will appear on the Recents screen.
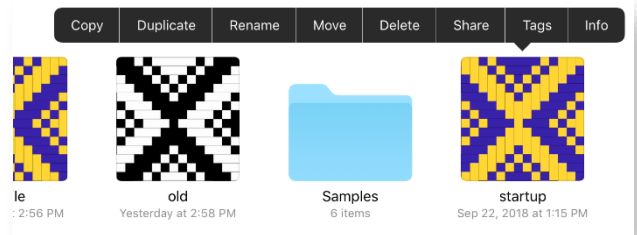
To tag a file, select the file with a long hold to force the context menu to be displayed. Pick the **Tags** operation on that context menu.
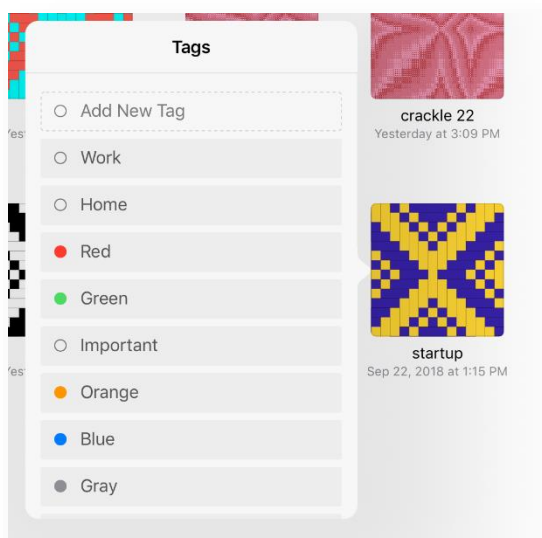
Pick any available tag or create your own. The tab will mark the file and it will appear on the recents tab.

To remove the tag, bring up the context menu again, then pick tags and uncheck the tag. This will remove the file from the Recents list.
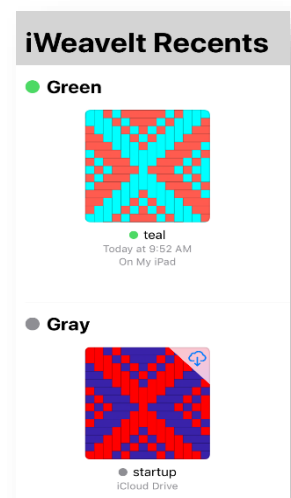
ICLOUD DRIVE

iWeaveIt supports the iCloud Drive. This is an easy way to share files between all your computers. iCloud Drive can be activated on IOS, MacOS and even on Windows.   Files in the cloud will then be available on all your devices.

- To activate iCloud on your iPad or iPhone:
- Go to the Apple IOS settings.
- Pick your account. It is the avatar with your name or picture on it.
- In the accounts, pick iCloud.
- Then pick iCloud Drive to turn it on.
- Look down the list to find the apps that support iCloud Drive and turn on iWeaveIt.

To activate on other types of computer, search on the internet for iCloud on that operating system (e.g. "iCloud on Windows 10"). This should find the appropriate link for downloading and installing iCloud.

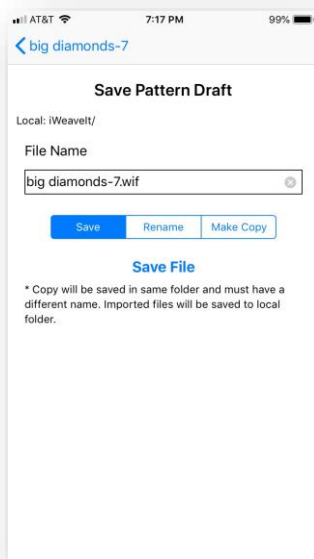The file management of iWeaveIt handles iCloud Files in the same manner as local files. A small icon appears on the top right of the file when it's in the cloud.   You must be connected to the internet to download the file. If the icon does not appear, then the file is on your device and you can open it even when offline.

HOW TO SAVE A PATTERN

On the iPad/iPhone the current pattern being edited is always saved in the background so changes are not lost.   However, when a different pattern is opened or a new one is created, the current pattern needs to be saved as a WIF file.

Save a pattern by selecting Save / SaveAs on the action icon menu in the top right corner of the screen.

- **All files are saved or exported in WIF format.** This format can be written by most other weaving programs so the files are interchangeable using a different computers and different software.
- **Enter the file name.** The extension is not needed. The program will add it.
- **Pick the desired operation, save, rename or make a copy.**
- **Pick Save to save the file or send it.**

The file will be saved to the same folder containing the original file. **To move a file, use the New/Open file manager.**

RECOVERED FILES

iWeaveIt saves an internal copy of your work with every keystroke, thus you don't lose your changes. If iWeaveIt is stopped by manually sliding if off screen or if it were to crash then a recovered pattern file is saved in the local ("On my iPad") folder. It saves a recovered file in the original folder. The file name will have the word "recovered" prepended to the original name.   You can save this file with a new name to retrieve your changes.

When iWeaveIt restarts, it will automatically re-open this recovered file. If you prefer to not have it reload when this occurs, then you can turn off the automatic reloading in the iWeaveIt settings found in the Apple IOS settings. Look down the list of settings to find iWeaveIt settings.

SENDING FILE VIA EMAIL

Often the easiest way to save a file to a different computer is just to email it to yourself.   Select the email on the action menu. It will use your email system to send the file. Then go to the other computer and open the attached file and save to a folder on your Windows PC or Macintosh.

The pattern can also be emailed as an image file or a PDF file. These option is useful to send to another computer for printing without a second weaving app to read the WIF file. It is also useful to send pattern drafts to friends that don't have a weaving app.

This will only work if your device is connected to the internet for emailing. Save in the local documents, and then open it at a later time and export via email when it is available.

IMPORT/OPEN FROM AN EMAIL

- Using email to transfer files is so easy. On another computer, save the file in WIF format. Use any weaving program that currently supports the WIF format.

- Attach the WIF file to an email and mail it yourself to open on your iPad or iPhone.

- On an iPad, IPhone or iPod, open the email. An iWeaveIt icon with the name of the file will be seen in the email. Click on it to immediately open in iWeaveIt. This does not automatically save the pattern to the local documents.
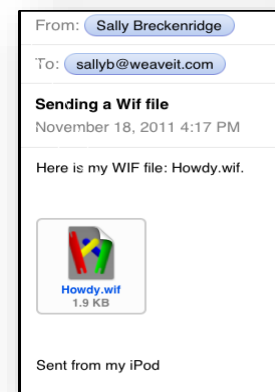
IMPORT/OPEN FROM THE INTERNET

Downloading files from the internet is easy too. Visit site http://handweaving.net to
see thousands of WIF file patterns.   Some sites like http://weavolution.com load the WIF file into a separate browser window as text. In this case, load the text directly into iWeaveIt using the *Import From Text* action on the action menu.

PATTERN SETUP
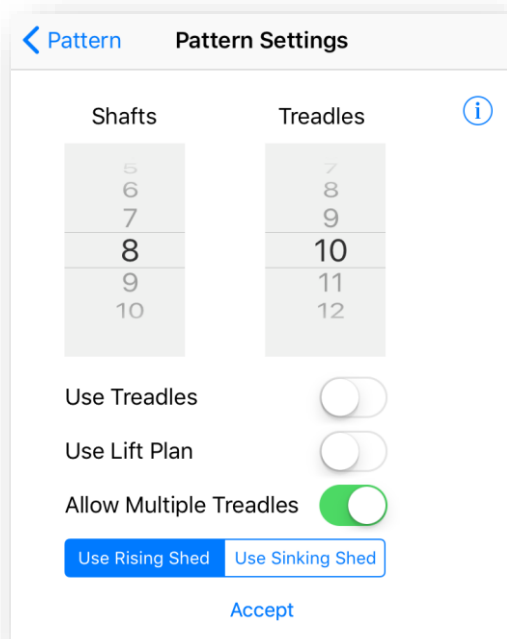
Pick Pattern Setup on the action menu to set the number of shafts and treadles for the pattern.

Use the rollers to select the number of shafts for the new pattern. Pattern Setup can also be used to change the number of shafts/treadles in the current pattern. If the number of shafts or treadles in the pattern is reduced, warp or weft threads will be placed on an available shaft.

iWeaveIt supports lift plans and multiple treadles. When the lift plan is selected, the tie-up cannot be edited. In both cases, editing the treadling will allow each cell to be toggled individually.

The iPhone/iPod is limited by its screen size to between 8-12 shafts and 10-13 treadles, and the iPad is limited to 24 shafts and 32 treadles. This limitation is due to the screen size and the size of the edit cell needed for your finger.

Choose between Use Rising Shed for Jack looms and Sinking sheds for direct tie-up looms. Traditionally an O is used to mark the tie-up for rising sheds and an X is used to mark-up the sinking shed.

TIP: Patterns can be converted from treadles to lift plans and vice versa. However if changing from treadles to a lift plan and then back, the treadles will most likely be different.   It's better to pick undo on the main screen to get back to what you originally had.

EDITING YARN COLORS

Select Color Setup on the Action menu.

The yarn color list displays at the bottom of the window. The color list contains 20 colors.

The yarns used in the pattern are marked with the star icon 🌸. If one of these colors is changed, then it will change the color in the pattern to the new color. This is an easy way to adjust the colors to try different shades.

- To scroll the colors, tap on the arrows at each of the color bar.
- Using a swipe gesture will also scroll the list.

Do the following to change one of the colors in the color list.

- Select the color in the color list at to change. That color will show in the result box in the middle of the screen.

- Drag the circle on the hue bar at the top. The new color shows in the result box in the middle of the screen.
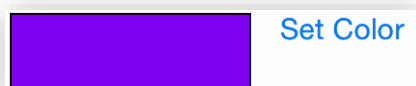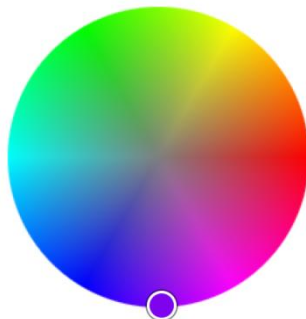

- Drag the saturation/light in the center square. See how this changes the color.

- Tap on Set Color to set the color in the color list.

Reset Colors will reset the list to the default list of colors but it will not remove the colors used in the pattern.

TIP: How to save a custom color palette. Create a 20 thread draft contain each of the colors in your palette. Then save the draft. When its reload, the palette will contain these colors to use in your next pattern.

PRINTING

Pick "Print" on the action menu.

IPhone and iPad use an Apple technology called "AirPrint". If you don't own a "air printer" then it's possible to email the pattern drawdown to yourself. Pick Save/Email and choose drawdown image for the email choice.

If you have the Project & Yarn Calculation module in your iWeaveIt version, printing will be done from the Yarn Calculation module. See the discussion on this in that section of this document.

DESIGNER ONE – ADD-ON MODULE

OBTAINING THE DESIGNER ONE TOOLS

If you have purchased Designer One Add-on Module you will see tools icon in the upper-right corner.   To learn about this module and/or purchase it, pick "New Features" on the Action menu. The purchase is done through the iTunes App store using Apple's secure website.   You must be connected to the internet to make the purchase.   Even if you are not connected, you can still learn about the Project and Yarn calculator.

DESIGNER ONE TOOLS

This module has a basic set of tools that are essential to designing patterns.

TROMP AS WRIT

"Tromp as Writ" is also means for "Treadle as Drawn in". This tool will copy the threading to the treadling. It is one of the most frequently used pattern design tools. It saves time creating treadling. After picking Tromp as Writ, try flipping or wrapping the treadling to see even more designs.
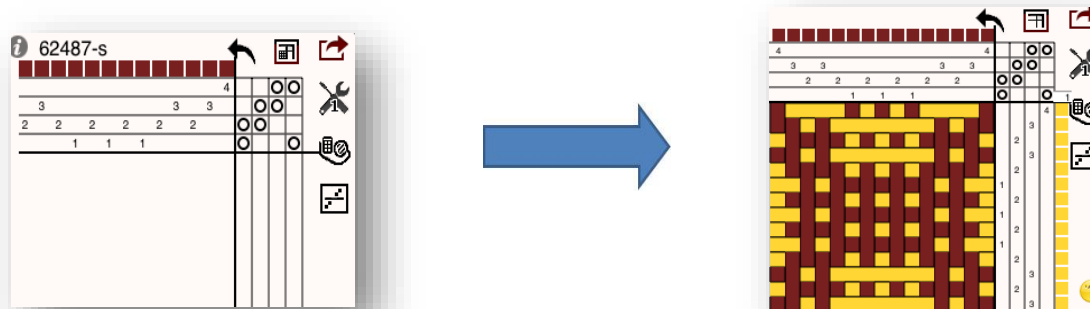
TURN DRAFT

Many times it is useful to change the treadling to threading and vice versa. Sometimes this makes sense because it is easier to thread, or to treadle the pattern. Without the ability to automatically turn the draft, one must manually re-enter the threading, tie-up and treadling.
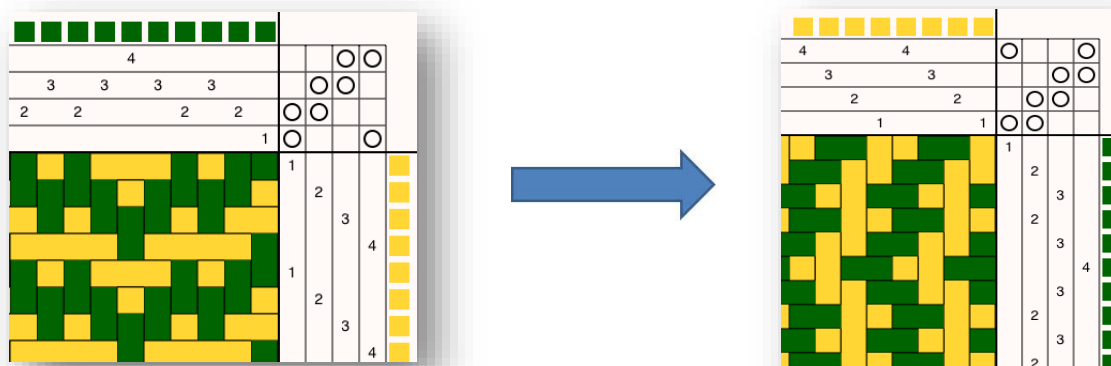
ADD TABBY
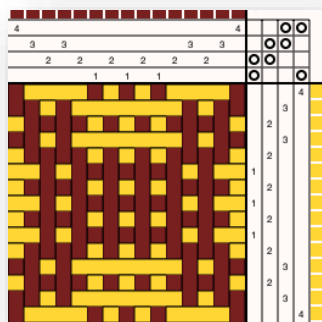
It's usually easier to design the draft without regard to treadling tie-downs called "tabby". Tabby is plain weave applied to the treadling.

One example is found in designing an overshot design. Create the threading, then pick "Tromp as Writ" to create the treadling and finally pick "Add tabby" to add the plain weave tie-downs needed to anchor the fabric. Adding tabby makes designing faster and more convenient.

Add the tabby treadles to the front, in the middle or at the end of the treadles.
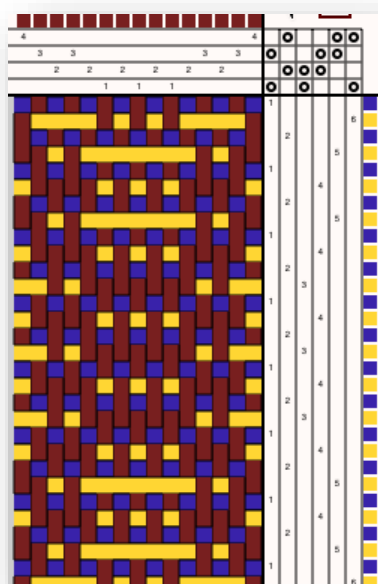
Pick the color for the tabby.

Set the ratio between pattern picks and the

tabby picks. Usually it is one to one but sometimes more

pattern picks are wanted between each tabby pick.

The tabby pick is inserted before the pattern pick by default. This can be changed by unchecking "Place tabby before pick".

Two extra treadles are required for inserting tabby. For lift plans, the tabby picks are inserted in the correct place.

COLOR N WEAVE

This design tool, colors the warp or weft with a selected color sequence without changing the structure.

Sequence ABAB will alternate the color chosen for Yarn A and Yarn B in the warp, weft or both.

Sequence ABCABC with alternate the three chosen colors.

Define your own sequence for two or three colors by picking custom and entering the letters for the yarn colors. Upper case or lower case is allowed. Other letters are ignored. The example below uses the custom sequence AAABB.
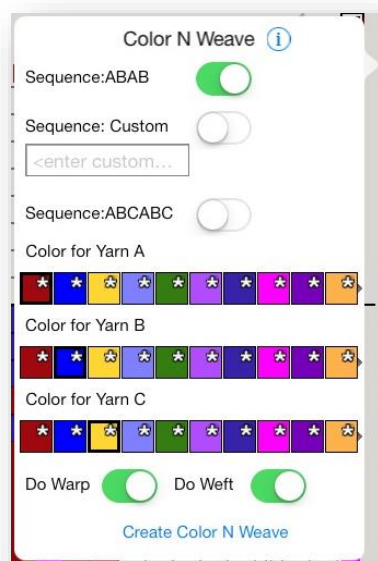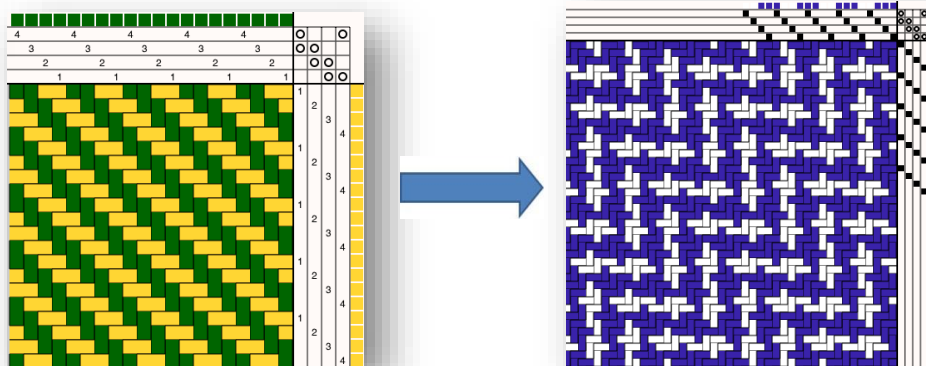

FIND FLOATS
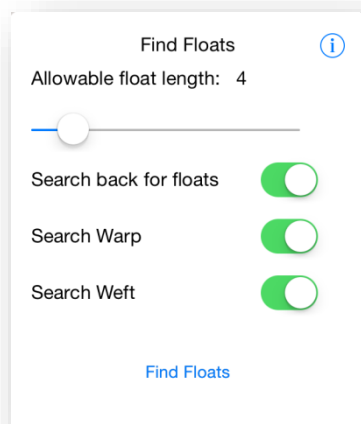
A "float" is defined as "how many threads a warp or weft cross before it is anchored by the crossing thread". The usage of the fabric often determines the length of an allowable float. For clothing, you don't want long floats as it will catch. For table runner or a pillow, a longer float might be acceptable. The sett (warps per inch/cm) will also impact the allowable float length.

With this in mind, even designs taken directly from magazines or books may have floats that are too long for your usage and yarn choice.

- Pick the allowable float length
- Select the search criteria for the floats.
- Pick Find Floats

The main pattern screen of the iPhone will show the float marked in red lines. At the bottom of the screen the float position (warp,weft) and the length of the float are shown. Navigate through the list with the Next button or the Max button.
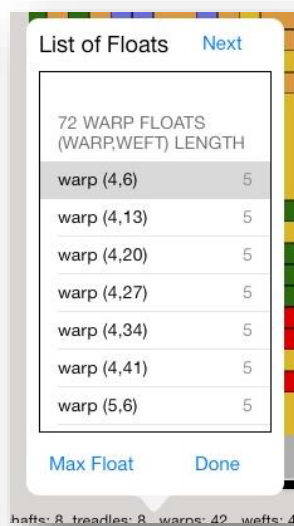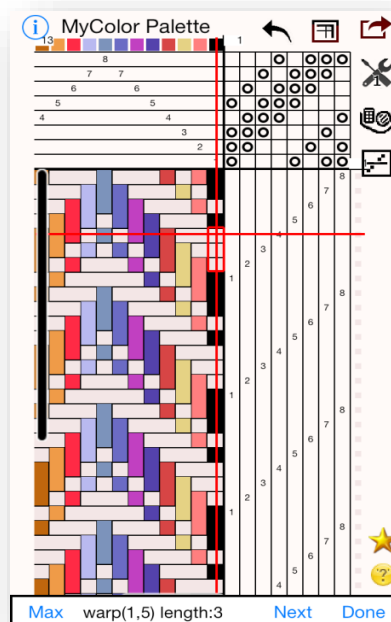
Tap on the threading, tie-up or treadling to edit the pattern. The float will be selected when you move to the edit screen.

On the iPad see the entire list of floats will show in the bottom left corner. Each float will be marked on the drawdown with red lines. Pick next to navigate through the list, or scroll and select the float that interests you. Pick Max float to show the longest float in the pattern.

Pick Done when you are finished looking at the floats. The list does not update as the structure is edited. So after correcting several floats, do the search again.

The action menus are disabled while the float list is visible. Pick Done to re-enable them.

When the threading or treadling is tapped, the marked thread will be selected in the editor.

The length of floats should always be checked. The design can look fine on the screen but there may be a hidden float. It is very sad to discover this after you have warped and begin weaving.

Thus all patterns should be checked for floats making the float finder an essential tool.

PROJECT AND YARN CALCULATIONS – ADD-ON MODULE

OBTAINING THE PROJECT AND YARN CALCULATOR

If you have purchased the Project and Yarn Calculation Add-on Module you will see the yarn calculator icon in the upper-right corner.   To learn about this module and/or purchase it, pick "Add-on Features" on the Action menu. The purchase is done through the iTunes App store using Apple's secure website.   You must be connected to the internet to make the purchase.   If you are not connected, you can still learn about the Project and Yarn calculator.

PROJECT AND YARN CALCULATOR

Click on the Yarn Calculator icon in the upper-right corner display the Project and Yarn Calculator menus and window.

The left figure shows the calculator on the iPad. The two figures on the right show the menu on the iPhone and the calculations screen. On the iPhone, navigate to the pages using the menu.

PROJECT SETUP

Enter the project information on the Project Setup tab.   Enter as little or as much as wanted.

To calculate heddle count, enter the sett and the width on the loom.

To do yarn calculations, enter all the project information.

To calculate in metric units, turn on the Use Metric switch.   Set this as a default in the Default Settings tab.   Since it is also on this tab, use English for some projects and metric for other projects

When using metric, the sett is calculated as warps per centimeter and the ppi is calculated as wefts per centimeter.

Select warp faced or weft faced to display the drawdown as packed in the warp or weft direction. The choice is not used in calculating the yarn requirements. Use the sett and ppi for that purpose.

The waste length and shrinkage can also be set as Default settings. When new pattern is created, the defaults are set. This is useful when working in the same units and with the same loom and typically the same type of yarn.

The length and width of your project can be entered by using one of the choices:[2]

- Exact – The pattern draft and sett/ppi are used to determine the exact width or length. The resulting number is the amount to put on the loom and does not show the finished width or length. Use Calculations tab to see that.
- Loom – This is the amount of yarn that you will put on the loom. Using the sett and the shrinkage it will display the finished amount. Sometimes you think it should be the same as exact, but round-off error or slightly variance will make the numbers different than what is seen in magazines and articles.
- Finished – This choice is desirable when you have a project in mind and you know what size you want it be when done. It will calculate the loom width and loom length to accomplish this.

NOTE: Do yarn calculations even when a pattern is not entered. Enter the above information and the warp and weft yarn calculations will be done. This is useful when shopping for yarns.

YARNS
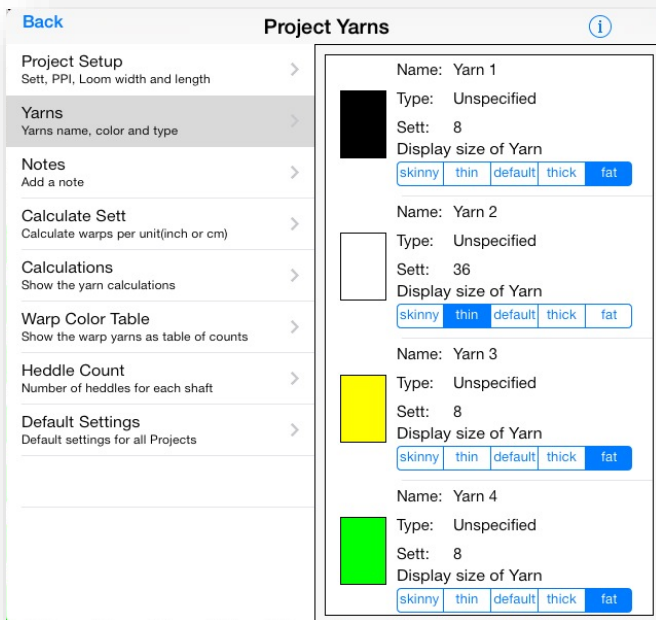
The Yarns tab will display all the yarn colors in the weaving draft.

Tap on each yarn to enter the Name and Type of yarn. This is for your information only and anything can be entered that is meaningful to you.[3]

You could enter the vendor name and color number if that is something you would like to keep track of.

Only enter the sett if it is not the same as the default sett for the project. The calculations are more efficient when using the project sett instead of the variable yarn width sett.

The display size of the yarn is relative to the default sett and is used for screen display. If you choose one of these it will change the sett according to the project sett.

If there are more yarns than will fit on the screen, the view will scroll. Use a swipe gesture to scroll to see all the yarns.

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[2] Always allow a little extra for yarn calculations. The computer calculates exactly, but humans don't weave exactly. Its always a good idea to have extra for security.

[3] I typically enter the color as the name and the yarn type for the type.
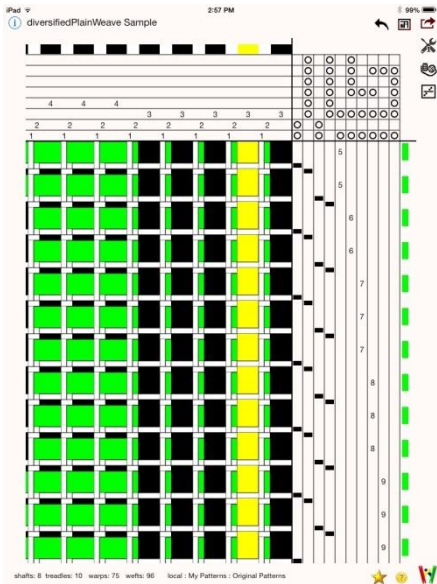
TIP: How to create a Warp Rep pattern display.

  Create yarns for the thin yarns and a distinctly different yarn for the thick weft yarn. It can be any color because it will not show.

Create the draft. Alternate the thick and thin wefts according to your design.

 In the project screen, set the default sett to 12 (This is not the size of your thin yarns).

 In the Yarn screen, mark the thick yarn and the thin yarns. The sett for the thin will be approximately 48 and thick will be about 6.   The typical sett for warp rep is 40 epi for thin 5/2 yarn. Change the sett to that if you are using 5/2 cotton.

Finally in the project layout screen set the weave type to warp faced. You should see your pattern design as it will look when its woven.

TIP: Setting Variable Width Yarns.   Always set the default sett in the Project setup first. Then choose the display size you would like to view. It the specific yarn sett is not close to what you want, then change the sett.   You may need to adjust the default sett to get the display that you want. See diversified plain weave draft to the left.

NOTES
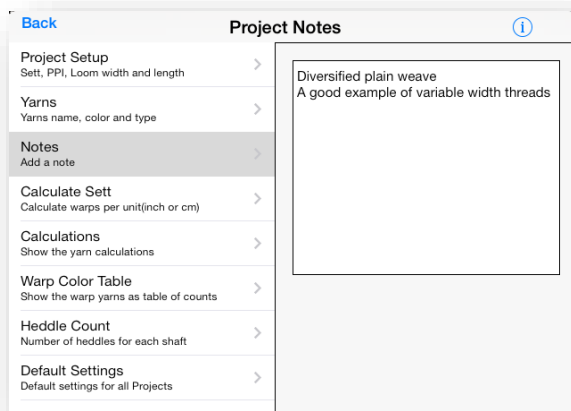
Enter extra information about the project on the Notes tab.

This is a good place to add weaving instructions or finishing instructions.

Notes may be added at any time, so after completing project add notes on how it went. In future projects, this can help with making design decisions.

CALCULATE SETT

Two methods of computing the sett are provided. Use one or both. If both methods are used, then the recommended sett will be the average of the two. How a weaver weaves as well as the type and variance in yarns influence the correct sett to use. Thus the numbers given are guidelines not absolute. The best determination of the sett to use is to sample and use your experience with the given yarn.

Back	Project Calculate Sett	ⓘ
Project Setup Sett, PPI, Loom width and length	>	
Yarns Yarns name, color and type	>	
Notes Add a note	>	
Calculate Sett Calculate warps per unit(inch or cm)	>	
Calculations Show the yarn calculations	>	
Warp Color Table Show the warp yarns as table of counts	>	
Heddle Count Number of heddles for each shaft	>	
Default Settings Default settings for all Projects	>	

Enter yards per pound   4200 ⓘ

or

Enter wraps per inch   28

Cloth Type

90% upholstery
80% production
70% mediumweight clot…
65% woolens
60% lightweight clothing
50% delicate fabrics

Recommended Sett   21

Use Sett

WRAPPING METHOD

If using the wrapping method, then warp the yarn around a ruler for one inch. Use one centimeter for metric. The wraps should be placed next to the previous wrap without overlapping. Do not pack the wraps too tightly but gently next to each other without spaces. Since the density of the wrap is a subjective measure, the results computed by this technique are also subjective.

CLOTH TYPE

The cloth type choice is also subjective. For upholstery the sett will be tighter than for light lacy clothing.   Use the roller to select your best guess.

ASHENHURST METHOD

The Ashenhurst method of calculating the sett uses the yards per pound (or meters per kilogram).   If the measurement is supplied by the manufacturer then it should be a fairly reliable measure. So this method will give the best results.

If you have an unknown yarn then use a McMorran yarn balance to calculate the weight. Look at your yarn supplier for this tool. It works fairly well and I have used it many times for my mystery yarns. In addition to calculating sett it is useful to see if you have enough yarn available to do the pattern.

The following chart can help with some of the more common yarns. Each manufacturer's yarn may be a little different but this will give a good idea.

Yarn Type	Sett Range inches	Sett Range cm	yds/lb	m/kilo
cotton 8/4	15 -18,	6 - 8	1600	3230
cotton 3/2	10 - 12	4 - 6	1260	2545
cotton 5/2	15 - 20	6 - 8	2100	4235
cotton 8/2	16 - 20	6 - 8	3360	6775
cotton, 10/2	24 - 30	10 - 12	4200	8470
cotton, 20/2	36 - 40	14 - 16	8400	16935
tencel, 8/2	16 - 20	6 - 8	3360	6775
tencel, 10/2	24 - 28	10 - 11	4200	8470
tencel, 20/2	36 - 40	14 - 16	8400	16935
Shetland wool	12 - 15	5 - 6	1800	3630
rayon chenille	16 - 18	6 - 8	1450	2925
linen 10/2	20 - 24	8 - 10	1650	3330
linen 20/2	24 - 30	10 - 12	3300	6655
linen 40/2	36	16	3300	6655
linen 16/2	24 - 30	10 - 12	3300	6655
linen 8/2	8	4	1650	3330

CALCULATIONS

Rigid heddle plaid

Shafts:	2
Warps in one repeat	42
Treadles:	2
Wefts in one repeat	42
sett	24 warps/inches
ppi	24 picks/inches
warp waste	36 inches
shrinkage	10 %
loom length	2.00 yards
loom width	25.00 inches
finished length	0.90 yards
finished width	22.50 inches

Yarn		warp	weft	total
	Yarn 1 None	265 530 yds	378 262 yds	792 yds
	Yarn 2 None	112 224 yds	164 114 yds	338 yds
	Yarn 3 None	56 112 yds	82 57 yds	169 yds
	Yarn 4 None	168 336 yds	241 167 yds	503 yds

warp count	601
pick count	865
Total warp yards	1202
Total weft yards	600

The calculation tab will display all the information entered.

In addition, see the calculations for

- Warps in one repeat of the draft
- Wefts in one repeat of the draft
- Finished width of fabric
- Finished length of the fabric

For each yarn see

- Name and type information entered.
- Number of warps and wefts(picks) using the yarn
- Quantity of yarn needed for each yarn

Finally see the totals

- Total number of warps
- Total number of picks. This is very subjective and depends on how you actually weave.
- Total quantity of yarn needed for the warp.
- Total quantity of yarn need for the weft.

Because there can many contributing factors to the correct yarn quantities, treat the yarn totals as estimates. Allow extra for broken threads and mishaps. Allow extra for differences in how a weaver winds a warp or how the weaver throws a shuttle and how tightly the fabric is beaten

If printing is available on your device, a print button will be seen on the tab bar. The printed version of calculations will look similar to the screen.

HEDDLE COUNT

Project Heddle Count

diversifiedPlainWeave Sample

Heddle Count for loom width 24.00 inches and sett 26

Shaft 1: 141
Shaft 2: 141
Shaft 3: 55
Shaft 4: 18
Shaft 5: 18
Shaft 6: 18
Shaft 7: 18
Shaft 8: 15

Total heddles needed: 424

The heddle count tab will display the number of heddles needed for each shaft of the project.

Enter the sett and the loom width in order to calculate the number of heddles.

If printing is available on your device the Print button will be seen on the top bar. The count can be printed to take to your loom to prepare for threading.

WARP COLORS

Display a list of the warp colors used for one repeat of the pattern.

Read the list from left to right to show how many warps to wind of each color.

DEFAULT SETTINGS

Set the defaults for all your projects.

Set the units to English or metric.

The waste length is the amount of yarn that is at the end of the warp and does not get woven. This value is typically the same for most projects as it depends mostly on your loom and the way you warp it.

The shrinkage is the amount expected for both draw-in and shrinking when finished.   This number is typically the same type of yarn is often used.

The default number of shafts and treadles are the typical size pattern that you make. This is not the necessarily the number of shafts and treadles on your loom.

The defaults are used when a new pattern is created. They save time from having to re-enter the same information.

Pick 'Apply to Current Pattern' to apply the changed settings on the current pattern. The default number of shafts and treadles will not be applied.

TRACKER - TREADLING AND THREADING ADD-ON

OBTAINING THE TREADLING AND THREADING TRACKER

If you have purchased the Tracker for Treadling and Threading Add-on Module you will see the tracker icon in the upper-right corner.   To learn about this module and/or purchase it, pick "New Features" on the Action menu. The purchase is done through the iTunes App store using Apple's secure website.   You must be connected to the internet to make the purchase.   If you are not connected, you can still learn about Tracker Add-on.

STARTING TRACKING

Tap on the tracker icon in the upper-right corner of the screen to display a small menu to choose *Track Treadling* or *Track Threading.*

TREADLING TRACKER

The figures below show the treadling tracker in action. On the iPad the popover sits in the upper right corner so that it doesn't cover the drawdown.   It shows the current pick in the large white box. The yarn color is shown next to the pick. The location in the drawdown is marked as you weave so you can see what your weaving should look like.

The figure on the right shows the screen on the iPhone/iPad. Since there is not enough space to display the drawdown, it will display the previous two picks and the following two picks to help you keep track of where you are.

The tracker can show either the shafts to lift for the pick or the treadle to lift. See options below to choose.
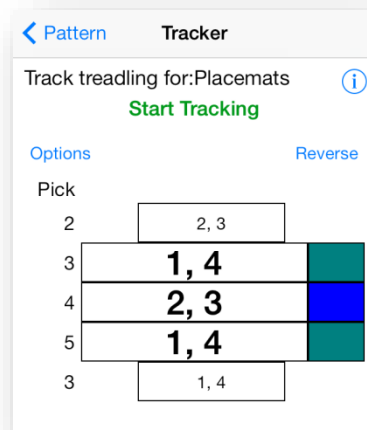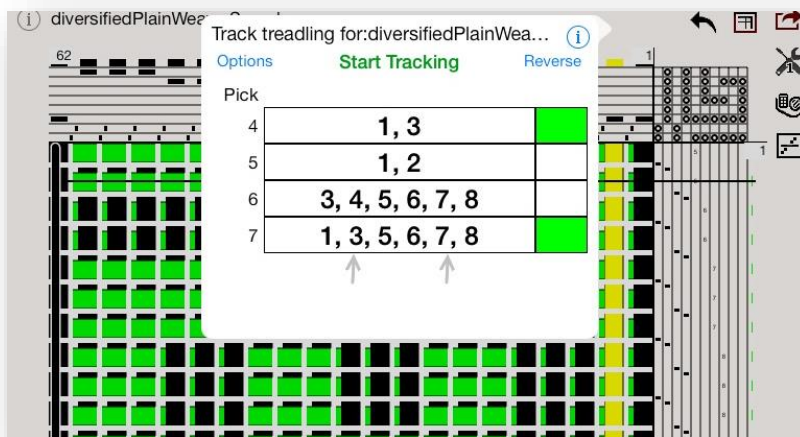
- Place the device near your loom where you can see the screen and touch lightly.   One thought is to hang it upside down using its cord to hold it. Another is to use a high table or a table with a box on it to get it in the correct reach.

- Another tip is to adjust the Auto-lock in your Apple settings to change the "go to sleep" time to allow more time to weave your pick. Tap on the Apple settings icon on the home page, select the General setting and set the Auto-lock.

- Now that it's setup, begin to weave. Open the popup/screen by tapping on the tracker icon and choosing *Track Treadling.* The popover/screen will appear.   Tap the green '*Start Tracking'* button*.   The screens should look similar to the figures above.
- To advance to the next pick, tap the screen anywhere except the red *'Stop Tracking'* button.   This will make it easy to advance the screen while weaving and will speed the weaving process.
- When finished weaving for that session, choose the '*Stop Tracking'* button. This will dismiss the transparent touch screen and will allow dismissal of the popover in the normal way by touching outside the popover.
- The current pick is saved with each tap so the current position is always available at the start of the next session.
- As you weave the count of the full pattern repeats is displayed. This is useful for when you know the exact number of times you want to repeat the full or partial loop of the draft.

REVERSE TRACKING

To reverse directions and unweave, stop the tracking. Tap the 'R*everse*' button and then tap the '*Start Tracking'* button again. A red "Reversing…" label will show when it is in reverse mode.

To go forward again, stop the tracking. Tap the '*Forward'* button and then tap the '*Start Tracking'* button again.

TREADLING OPTIONS

When the tracker is stopped, the options button will show.   Choose it to change the options for tracking.
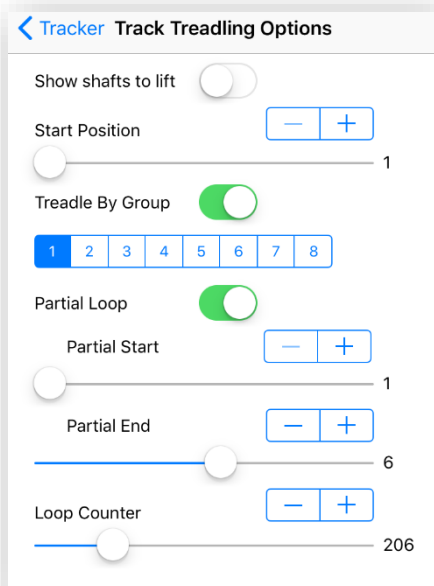
Turn the 'shafts to lift' switch on to track using the lift plan.   This is handy for table looms.   Showing the treadle to lift is the default when this switch is off.

The wheel on the left sets the starting pick. The current position will be changed to the new one selected.

Weave over a partial section of the pattern. Turn on the 'Partial Loop' switch for this looping. Then set the wheels to the loop start and stop.

The third choice is treadling by groups. Many users feel that they can recall a sequence of number and do not want to tap the screen with every stroke. Turn on the treadle by group and select the number of picks to sequence over. Each tap of the screen will advance the group by that number. The group will display in the tracker. The screen shot above show tracking with a group of 4 on the iPad and a group of 3 on the iPhone.
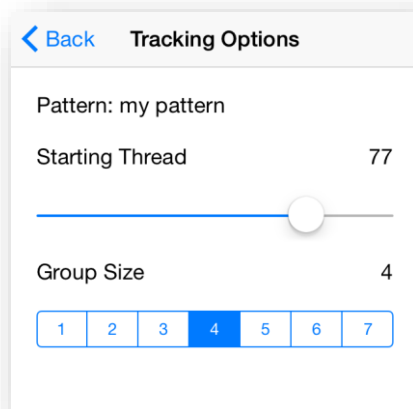
THREADING TRACKER

The Threading Tracker will aide in keeping track of threading the loom.   It is not necessary to print the pattern anymore. The figures below show the threading tracker screen for the iPad and iPhone/iPod respectively.
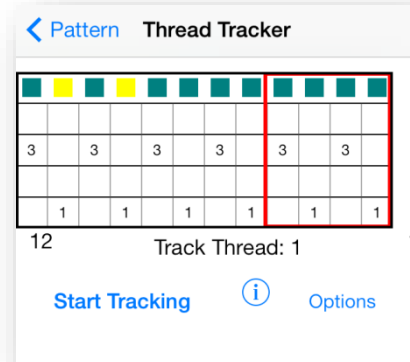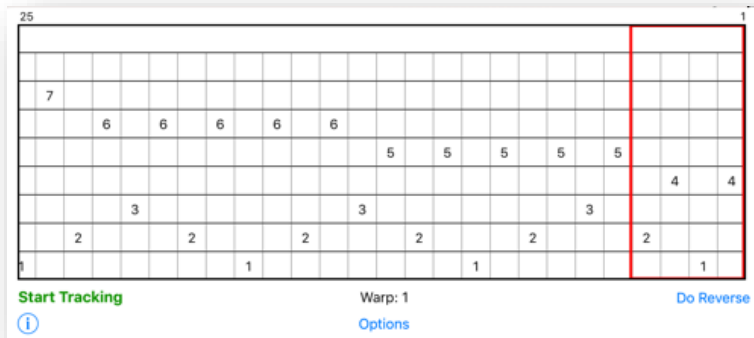
Thread the loom with single threads or by a group of threads.   Using a 4 thread group allows you to easily place the threads between your fingers for efficient threading. The size of the group can be changed in the options

- Place the iPad or iPhone near your loom in a position that you can easily see it and reach it.
- Adjust the Auto-lock in your Apple settings for the device to change the "go to sleep" time to allow you more time to weave your pick. Auto-lock is in the General settings for your device.
- Tap the '*Start Tracking'* button to start the tracking.
- Tap anywhere on the screen to advance the red box to the next group of threads.
- When finished weaving for that session, choose the '*Stop Tracking'* button. This will dismiss the transparent touch screen and will allow dismissal of the popover in the normal way by touching outside the popover.
- The current position is saved with every advance. Your current position will be available for the next threading session.
- Reverse allows the tracker to move from right to left.

THREADING OPTIONS

To changes the current position or the thread group size, select '*Options*' button on the threading tracking popover/screen.

The default group size is 4 as that number of threads fits nicely in your finger to thread.

Set it for 1 if you like to thread one thread at a time.

Depending on the pattern other groups might make better sense. For example, a huck lace block is 5 threads so threading 5 threads at a time keeps you in sync with your pattern.

GLOSSARY OF WEAVING TERMS

AirPrint	This is a technology used by Apple to provide wireless printing to the iPhone and iPad.
draft	In weaving, the draft is the term used to describe the pattern for the design. The terms draft and pattern are equivalent here.
heddle	The wire (or string) with a small hole in center that spans the shaft on a loom. The warps are threaded through the heddles.
pick	The wefts are often called picks. The shuttle being is thrown across the warp to add a weft thread is called a pick.
ppi	Number of wefts in a single unit of measure. This can be wefts per inch or wefts per centimeter. The ppi determines how dense the cloth will be. In a balanced weave, the sett and ppi are the same number.
sett	Number of warps in a single unit of measure. This can be warps per inch or warps per cm. The sett determines how dense the cloth will be.
threading	The plan for threading the warp threads through the heddles.
treadling	The sequence for pressing treadles to lift a group of shafts.
tie-up	The plan for how the shafts are tied to the treadles of the loom.
'tromp as writ'	Treadle the pattern the same as the threading.
warp	The threads that are threaded in the loom. They wrap around the front and back beams and through the heddles.
weft	The threads that are on the shuttle and are interlaced with the warp to create the cloth.