



Darkroom Wizard

PhotoSoft Systems

User Manual v4.01

The **DarkRoom Wizard™** is a program that performs a number of tasks to make work in the darkroom more productive and more accurate. Various versions of this application has been in use WorldWide since its inception in 1995.

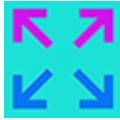
Now available for the Apple iPad iOS 12.0+

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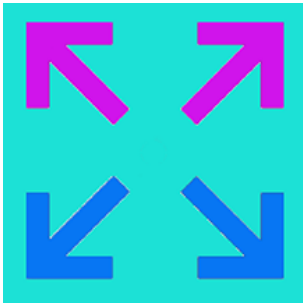
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Reduce or Enlarge Print Sizes

This will calculate the time for a new print based upon the size & time of the first print and the size of new one. Variables that can affect the accuracy of this calculation are as follows:

- 1) *Variations in voltage to enlarger during exposure if the lamp head does not have some sort of voltage or compensating circuitry.*
- 2) *Accuracy in both measurements.*
- 3) *Temperature variations in print developer temperature between first and subsequent prints.*
- 4) *Print agitation*
- 5) *Print Development time*

Note:

If variations in these areas are kept to a minimum, accuracy between the original and new print size should be within $\frac{1}{4}$ of an f/Stop or less.

f/Stop Used: Select the f/Stop from the picker

Length of First Print: Enter the Length of one long or short side (enter Inches in Fractions, Metric in decimals.)

Length of New Print: Enter the Length of new print (if using long side above, use same side here.)

Time of First Print: Enter the time in minutes:seconds (i.e: 01:23 for 1 min, 23 sec.)

Calculate New Print Time. After calculating new time you can use the picker to change f/ stops and time. Changing the picker f/Stop will change the new time based upon current settings and new f/Stop

Reset Button: Reset all values to blank startup values.



Detailed Printing Notes

Keep detailed notes on on printing

The date record saved or modified

Cancel New Record (before saving)

Update

Delete

Restore latest deleted Record

Add New Record

Save New

Export Data in .csv file

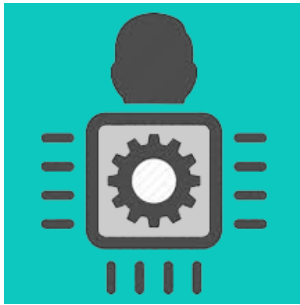
Move Up/Down in the Table

This will keep detailed notes on your prints so that subsequent prints can be made with the same settings for repeatability

[**Print Code**] Information is stored by a unique user defined **Print Code** for each image which can be a number or any other schema one can devise, up to 24 characters in length. One useful method if you use several formats, is to preface the code with the film type, format (i.e. BW4X5) then a period, then a number sequence (i.e. 12345) for an ImageCode of **BW4X5.12345**, as the Image Code for a Black/White 4x5 image or CN6X6.00345 for 2 ¼ x 2 ¼ Color Negative. Another schema for roll films is to use a roll/frame number sequence, i.e. **Roll #3456, Frame #12 for PrintCode 3456-13**, etc.

[**Seq No**] A sequence number is needed for each print record for a given Image Code. This allows for multiple prints form a single code. Records will then appear in PrintCode/Sequence number order. The sequence number must be unique for each ImageCode, but does not need to be unique between PrintCodes.

A listing of print records are shown in a grid at the right, clicking on a list item will bring the record into the data fields for use.



Process Control

This is a process controller and will control a process of up to 24 steps with a drain time between each step.

- 1) Create a Process using the **Process ID** tab at the bottom of the screen
- 2) Enter the data for each step in the process using the **Process Edit** tab at the bottom of the screen
- 3) Once the data is entered into the database it can be recalled at any time by using the picker on the **[Run Process]** tab. You will be presented with a list of current processes, click on the one wanted and all steps will be loaded.
- 4) Pressing the **[Start Process]** button will start the loaded process at step #1. A count down of the time remaining for the current step will be shown in the Current Step Time Remaining box as the step time counts down and the total time remaining in the process will be show just above this box.

While the current step is in process, the data for the Next Step, will be shown in white just below the description and to the right of the volume and temp boxes.

When the current step time reaches 00:00 a user selectable sound is played and the DRAIN box appears until the drain time is completed. The process will then Pause if "Pause at Drain" is selected or the next step then becomes the current step and processing continues. If paused, then pressing the **[Continue]** button will start the next step.

When the process is completed another user selectable sound is played and the **Process Completed** box appears. A process can be stopped while running by pressing the **[Cancel]** button.

Process Run Screen

| | |
|-------------------------------|--|
| Select Process Picker | Select an existing Process to Run |
| Total Time for Process | Shows total time for current process |
| Remaining Process Time | Shows amount of time remaining in current process |
| Start the Process. | Run the Selected Process |
| Continue Button | Continue with the next step after draining, pausing after a step |
| Cancel Run | Stop the running process and clear all data |

Process Control



Process Control

Select Process to Run

A QUICK PROCESS DEMO
ILFOCHROME CLASSIC P-30 JOBO
JOBO/ C41 220 (ROLLS 1-3)

ILFOCHROME CLASSIC P-30 JOBO

Current Step: 1 of 7
Pre-Soak

(next step) Develop

Fluid Volume: 300.0 mL 24.0

Temp: 24.0 °C 0.0

Step Notes
These times/volumes for up to 11x14 in a Jobo rotary processor (sample)

Running Process Info

Total Process Time: 14:05

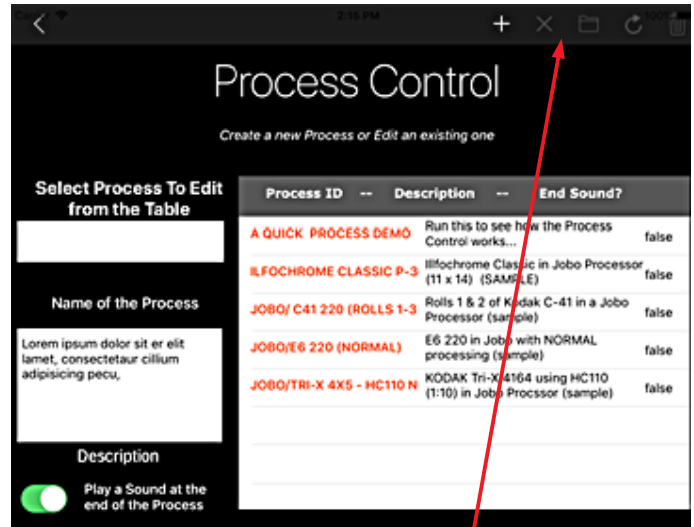
Remaining Time: 14:05

Current Step Time: 01:00

Cancel Run

Start Process

Process Run Screen



Process Control

Create a new Process or Edit an existing one

Select Process To Edit from the Table

Name of the Process

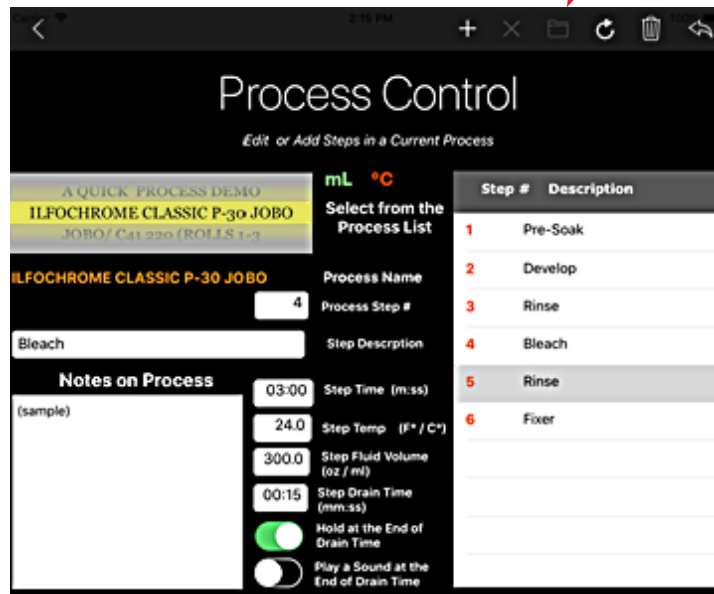
Description

Play a Sound at the end of the Process

| Process ID | Description | End Sound? |
|--------------------------|--|------------|
| A QUICK PROCESS DEMO | Run this to see how the Process Control works... | false |
| ILFOCHROME CLASSIC P-3 | Ilfochrome Classic in Jobo Processor (11 x 14) (SAMPLE) | false |
| JOBO/ C41 220 (ROLLS 1-3 | Rolls 1 & 2 of Kodak C-41 in a Jobo Processor (sample) | false |
| JOBO/E6 220 (NORMAL) | E6 220 in Jobo with NORMAL processing (sample) | false |
| JOBO/TRI-X 4X5 - HC110 N | KODAK Tri-X 4164 using HC110 (1:10) in Jobo Processor (sample) | false |

Process Edit/New Screen

Add, Cancel, Save New, Update & Delete Records



Process Control

Edit or Add Steps in a Current Process

A QUICK PROCESS DEMO
ILFOCHROME CLASSIC P-30 JOBO
JOBO/ C41 220 (ROLLS 1-3)

ILFOCHROME CLASSIC P-30 JOBO

Bleach

Notes on Process (sample)

03:00 Step Time (m:ss)

24.0 Step Temp (F° / C°)

300.0 Step Fluid Volume (oz / ml)

00:15 Step Drain Time (mm:ss)

Hold at the End of Drain Time

Play a Sound at the End of Drain Time

Select from the Process List

Process Name

Process Step #

Step Description

| Step # | Description |
|--------|-------------|
| 1 | Pre-Soak |
| 2 | Develop |
| 3 | Rinse |
| 4 | Bleach |
| 5 | Rinse |
| 6 | Fixer |

Process Step-Edit or New-Step Screen

Timers



There are six independent Timers available. A title can be set for each Timer. They can count **Up** for any length of time or count **Down** from a time you set until zero is reached. Each Timer can have its own title of any length, which will appear on the Timer. Times can be saved and recalled at any time (*all six timers are saved and recalled at the same time*). A sound can be played and/or a message can be shown when a time has completed.

Diagram illustrating the Timers application interface and its various views.

Main Interface:

- Database:** Save and Load Timer Data (Buttons: Load, Save)
- Standard View:** Set either the Standard View or colors for Kodak OC filter or a Red Filter (Buttons: Standard View, Kodak OC Filter, Red Filter, Reset All)
- Time Picker:** Hours, Minutes, Seconds (Buttons: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100)
- Timer Controls:** Select Up or Down Timer (Buttons: Down, Up), Start, Reset, or Pause the Timerr (Buttons: Start, Pause, Reset)
- Title for the Timner:** Timer One, Timer Two, Timer Three, Timer Four, Timer Five, Timer Six
- The Timer Display:** 00:00:00
- Clear all timers And all stored timer data:** Reset All

Views:

- View set for Kodak OC filter:** Shows the interface with a dark background and orange/red text.
- View set for Red filter:** Shows the interface with a dark background and red text.



Charts

This section will create a graphic representation of any data entered into the grid section

Select an existing Chart from the picker list – OR –

- 1) Press the **+** button on the top menu to create a new Chart
- 2) Set all of the parameters for your Chart in each section
- 3) Enter the Legend titles for each of your data sets.
- 4) Enter the title for the vertical and horizontal axis and for the Chart
- 5) Enter you data into the data grid.
- 6) Select data set colors
- 7) Press the **[Create Chart]** button to show your Chart.

Data Charts

Select and Load an Existing Chart

-- Select a Chart --

Color Density Test (sample)

PolyFiber F Paper Curves (sample)

Data Sets - Labels and Colors

Red Filter Green Filter Blue Filter

Set Color Set Color Set Color

Data Set 1 Data Set 2 Data Set 3

Color Density Test (sample)

Density TEST

Color Sensitivity

Graph Title

Horizontal Title (X Axis)

Vertical Title (Y Axis)

Data Sets

Show Lines on Chart

Fill Area Under Lines

Show Dots Data Points

Create Chart

Data Grid

| Xvalue | Data1 | Data2 | Data3 |
|--------|-------|-------|-------|
| -2.75 | 3.5 | 3.8 | 3.6 |
| -2.5 | 3.25 | 3.1 | 3.0 |
| -2.25 | 3.2 | 3.0 | 2.95 |
| -2.0 | 3.15 | 2.9 | 2.87 |
| -1.75 | 3.08 | 2.7 | 2.67 |
| -1.5 | 2.75 | 2.6 | 2.5 |
| -1.25 | 2.6 | 2.55 | 2.45 |
| -1.134 | 1.555 | 1.444 | 1.356 |
| -0.75 | 1.25 | 1.1 | 1.08 |
| -0.5 | 0.7 | 0.6 | 0.58 |
| -0.25 | 0.5 | 0.3 | 0.27 |
| 0.0 | 0.3 | 0.2 | 0.16 |
| 0.25 | 0.15 | 0.1 | 0.09 |
| 0.5 | 0.15 | 0.08 | 0.07 |

Area to Add or Edit Data from Grid

Data Set Titles

Set line colors for each Data Set

Titles

Line display options

Set the number of Data Sets

Create and Display the Chart

Add, Cancel New, Save New, Update or Delete Data Items

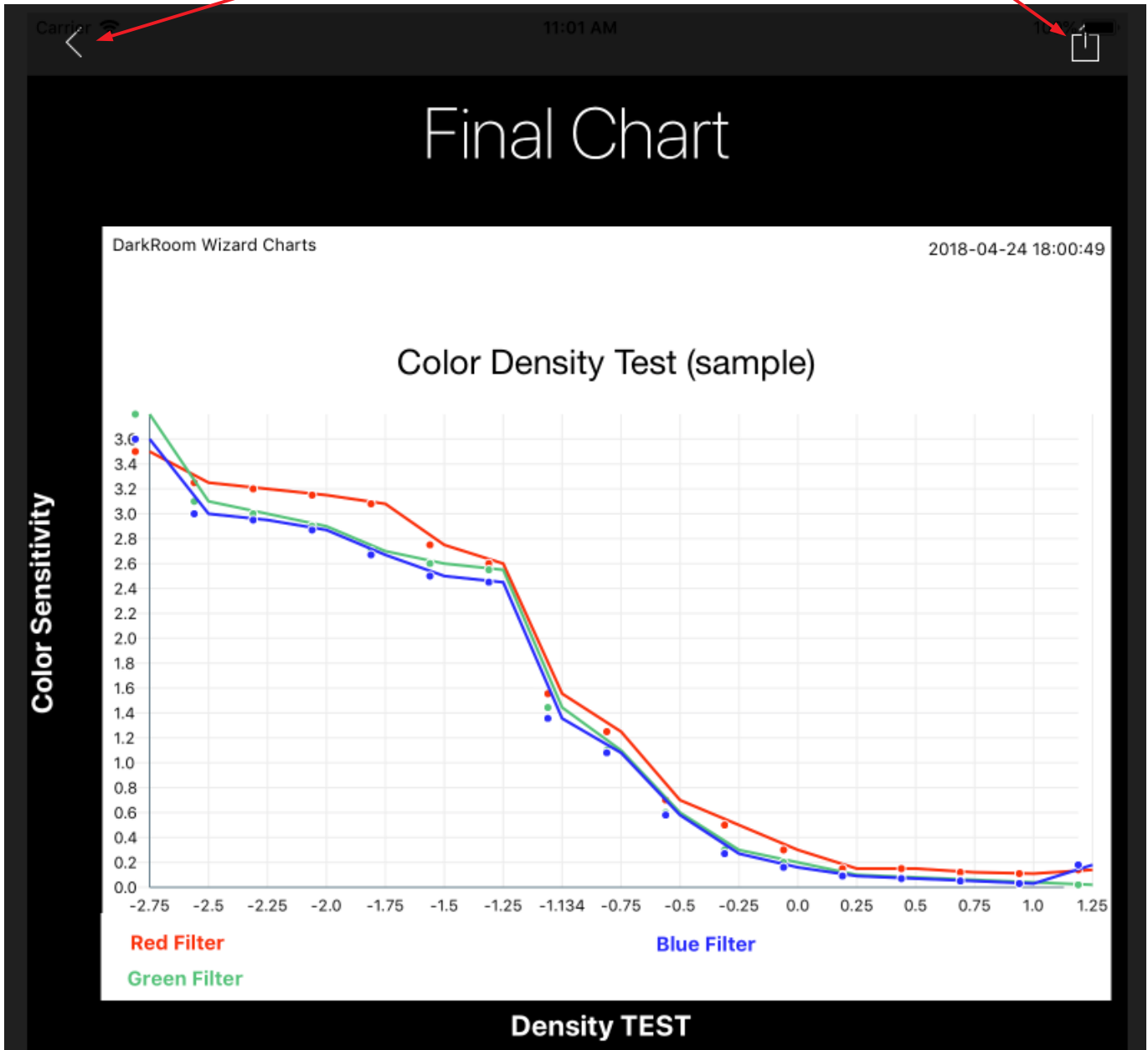


Charts

Final Chart Display from the data on the previous page

Return to the Chart data page

Share the generated Chart as a .png image





Mixture from a Concentrate

This will calculate the mixture percent of a volume a concentrate solution diluted with another solution, either another concentrate or water.

i.e. 1 Fluid Oz. of 28% Acetic Acid diluted with 15 Fluid Oz. of water gives a 1.75% solution of Acetic Acid.

How to Use:

Percent Strength of Concentrate

Enter the % strength of the Concentrate used, (i.e. 28 for a 28% solution.)

Percent Strength of Diluting Solution (0 for water)

Enter % strength for the Dilute, (use 0 if water used).

Volume of Concentrate (ml or oz)

The volume of Concentrate to be used.

Volume of Diluting Solution (ml or oz)

The volume of the Dilute solution to be used.

Calculate Button

Calculate the Mixture Percent.

Mixture Percent Box

This is percent mixture of the concentrate and the dilute solution.

Reset Button

Reset all values to 0.

Mixture Percentage

This will calculate the mixture percent of a volume a concentrate solution diluted with another solution, either another concentrate or water

Reset

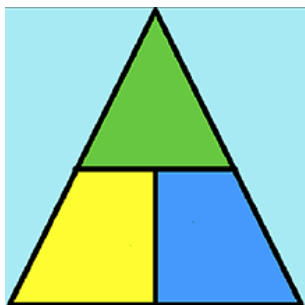
Calculate

Mixture Percent

1.75%

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Volume by Percent

This will calculate the volume of a concentrate and the volume of water needed to create a specific volume at a particular percent of dilution.

i.e. You need 16 Fluid Oz of a 1% solution of Acetic Acid

You would use: 0.6 Oz of 28% Acetic Acid

15.4 Oz of Water

How to Use:

Percent Strength of Concentrated Solution

Enter the % strength of the Concentrate, i.e. 28 for 28%

Enter final volume needed (ml or oz)

Enter the final volume needed in ml or Oz.

Enter final percent needed

Enter the final % needed, (i.e. 3 for 3%)

Calculate Button

Calculate the value

Volume of Concentrate

Volume of concentrate needed to create the % needed

Volume of Water

Volume of water needed to create the % needed

Reset Button

Reset to starting values

mL or Oz Switch

The Ounces or milliliter value is initially set on the Settings section of DarkRoom Wizard.

This switch will override the settings value temporarily.

Volume by Percent


This will calculate the volume of a concentrate and the volume of water needed to create a specific volume at a particular percent of dilution.

☒ mL or Oz (on is Oz)

Percent Strength of Concentrated Solution

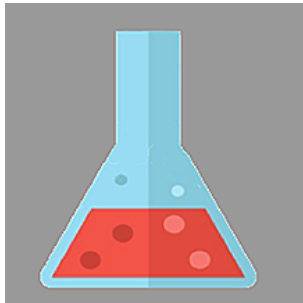
Enter the Final Percentage needed

Enter the final Volume Needed (ml or oz)

 **Calculate**

0.57 oz Volume of Concentrate

15.43 oz Volume of Water



Dilutions

This will calculate the amounts of two solutions needed to make a third, given the ratio between the two and the volume of the third solution.

i.e. You need to dilute your developer at a ratio of 1:7 and you need 330ml of dilute developer.

*You need: 41.2ml of Developer
288.8ml of Water*

How to Use:

Dilution Ratio (i.e. 1:10)

- 1 - Value for the Left Side of Ratio
- 2 - Value for the Right Side of Ratio

Final Volume Needed

The final volume of solution needed (can be in Oz. or ml)

Calculate Button

Press to Calculate

Volume Solution 1

Volume of Solution 1 based upon Left Side of Ratio & Final Volume

Volume Solution 2

Volume of Solution 2 based upon Right Side of Ratio & Final Volume

Reset Button

Reset all Values to blank

mL or Oz Switch

The Ounces or milliliter value is initially set on the Settings section of DarkRoom Wizard. This switch will override the settings value temporarily.

Dilution Calculation

This will calculate the amounts of two solutions needed to make a third, given the ratio between the two and the volume of the third solution

☒ mL or Oz (on is Oz)

Dilution Ratio (i.e. 1;10)

1

:

7

Final Volume Needed (oz/ml)

330

Calculate

Reset

41.25 ml

Volume of Solution 1

288.75 ml

Volume of Solution 2



Conversions

This allows for the conversion of measurements from one form to another.

It will convert Fluid, Dry Linear and Temperature measurements.

How to Use:

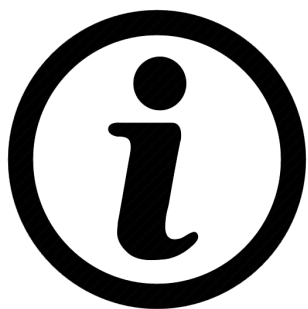
Select the type of Conversion with the **[Type of Conversion]** selector

Select the type of Measurement to **[Convert From]** by clicking on the picker value you want.

Select the type of Measurement to **[Convert To]** by clicking on the picker value you want.

Move to the **[Value to be Converted]** box, enter the value you wish to convert from into this box. This value may be entered as a decimal value for metric or US units.

When entry completed, press the **[Convert]** button to display the new value.



General Informati

NOTIFICATIONS

When first starting the application, a box will pop-up asking if Notifications will be allowed for DarkRoom Wizard. If YES, then Notifications can be used with the Timers, if NO, Notifications cannot be used (*if NO, this can be changed in [Settings, DarkRoom Wizard, Notifications]*)

As shown in the Settings Box below, if YES was selected at startup, the Notifications can be suspended by setting the Notification switch.

SYSTEM SETTINGS

There are a number of settings available in the DarkRoom Wizard settings panel in Systems setting for DarkRoom Wizard:

| DARKROOM WIZARD SETTINGS | |
|---|-------------------------------------|
| Show Notification on finished Timer | <input checked="" type="checkbox"/> |
| Use °F or °C for Temperature (on F) | <input checked="" type="checkbox"/> |
| Play Timer Sounds | <input checked="" type="checkbox"/> |
| Use Oz or mL for Fluids (on for Oz) | <input checked="" type="checkbox"/> |
| Use Inches or CM for Length (on for inch) | <input type="checkbox"/> |

Version 4 for the iPad is substantially the same as previous versions, with the same functionality as the original (*currently v2.1 for the Windows platform*) with some added abilities that are available on the iPad platform. The alarm clock sections in the original are not included in v4 as the iOS applications already have alarms available.

Original reviews can be viewed at:

http://www.photosoftsystems.com/products/drkWizard/dkwz_ca_review.php

http://www.photosoftsystems.com/products/drkWizard/shutterbug_review.php



Database Information

This app utilizes a SQLite v3.0 database to store all of the information utilized by the various sections, with tables for each function that needs to store information. Stored data from the **Printing Notes** section can be Exported in a .csv (*Comma Separated Values*) file that that will easily import into Numbers or other data applications. Data from the **Process Control** and **Charts** sections are not as easily exported as each consists of more than one table.



The Main Screen has three Icons at the top right, the one on the left checks the database tables to make sure there are no orphaned records and the database is in valid condition.

The database is located in a section of the file structure that will be backed up whenever the iPad is backed up to either iCloud or your computer.



Database Information

This is the structure of the PrintNotes table:

| Table name: PrintNotes | | <input type="checkbox"/> WITHOUT ROWID | | | | | | |
|------------------------|------------|--|-------------|-------------|--------|-------|----------|---------|
| | Name | Data type | Primary Key | Foreign Key | Unique | Check | Not NULL | Collate |
| 1 | ID | INTEGER | | | | | | |
| 2 | ImageCode | VARCHAR (36) | | | | | | |
| 3 | SeqNum | VARCHAR (36) | | | | | | |
| 4 | Height | REAL | | | | | | |
| 5 | fStop | REAL | | | | | | |
| 6 | Time | TEXT | | | | | | |
| 7 | Temp | REAL | | | | | | |
| 8 | Paper | VARCHAR (36) | | | | | | |
| 9 | Grade | REAL | | | | | | |
| 10 | maskID | VARCHAR (36) | | | | | | |
| 11 | Notes | TEXT | | | | | | |
| 12 | prDateTime | REAL | | | | | | |

The two tables for Process Control

| Table name: processID | | <input type="checkbox"/> WITHOUT ROWID | | | | | | |
|-----------------------|-------------|--|-------------|-------------|--------|-------|----------|--|
| | Name | Data type | Primary Key | Foreign Key | Unique | Check | Not NULL | |
| 1 | recID | INTEGER | | | | | | |
| 2 | ProcessID | varchar (24) | | | | | | |
| 3 | Description | varchar (256) | | | | | | |
| 4 | SoundAtEnd | BOOLEAN | | | | | | |

| Table name: processDetail | | <input type="checkbox"/> WITHOUT ROWID | | | | | | |
|---------------------------|------------------|--|-------------|-------------|--------|-------|----------|--|
| | Name | Data type | Primary Key | Foreign Key | Unique | Check | Not NULL | |
| 1 | recID | INTEGER | | | | | | |
| 2 | processRecID | INTEGER | | | | | | |
| 3 | detailID | varchar (24) | | | | | | |
| 4 | stepNo | INTEGER | | | | | | |
| 5 | stepDesc | varchar (256) | | | | | | |
| 6 | stepTime | text | | | | | | |
| 7 | stepDrain | text | | | | | | |
| 8 | stepTemp | REAL | | | | | | |
| 9 | fluidVolume | REAL | | | | | | |
| 10 | stepHoldAtDrain | BOOLEAN | | | | | | |
| 11 | stepSoundAtDrain | BOOLEAN | | | | | | |
| 12 | stepNotes | VARCHAR (2048) | | | | | | |



Database Information

These are the Charting tables:

| Table name: GraphID | | <input type="checkbox"/> WITHOUT ROWID | | | | | | |
|---------------------|------------|--|-------------|-------------|--------|-------|----------|--|
| | Name | Data type | Primary Key | Foreign Key | Unique | Check | Not NULL | |
| 1 | ID | INTEGER | | | | | | |
| 2 | GraphTitle | TEXT | | | | | | |
| 3 | XTitle | TEXT | | | | | | |
| 4 | YTitle | TEXT | | | | | | |
| 5 | DataSets | INTEGER | | | | | | |
| 6 | Legend1 | TEXT | | | | | | |
| 7 | Legend2 | TEXT | | | | | | |
| 8 | Legend3 | TEXT | | | | | | |
| 9 | Legend4 | TEXT | | | | | | |
| 10 | GraphLines | BOOLEAN | | | | | | |
| 11 | GraphStyle | BOOLEAN | | | | | | |
| 12 | ShowDots | BOOLEAN | | | | | | |
| 13 | color1 | TEXT | | | | | | |
| 14 | color2 | TEXT | | | | | | |
| 15 | color3 | TEXT | | | | | | |
| 16 | color4 | TEXT | | | | | | |

| Table name: GraphDetail | | <input type="checkbox"/> WITHOUT ROWID | | | | | | |
|-------------------------|------------|--|-------------|-------------|--------|-------|----------|--|
| | Name | Data type | Primary Key | Foreign Key | Unique | Check | Not NULL | |
| 1 | GraphTitle | TEXT | | | | | | |
| 2 | GraphItem | INT | | | | | | |
| 3 | XValue | REAL | | | | | | |
| 4 | Set1 | REAL | | | | | | |
| 5 | Set2 | REAL | | | | | | |
| 6 | Set3 | REAL | | | | | | |
| 7 | Set4 | REAL | | | | | | |
| 8 | ID | INTEGER | | | | | | |



Data Privacy Information

All information within this application is retained within the application and the associated database and is not shared in any in any fashion (*with the exception of a user selected export of Printing Notes and a generated Chart*). There is no personal data of any kind collected by this application.

The database itself is located in a protected location and is not available to users.



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DarkRoom Wizard User Manual, v4.01 for iOS iPad

DRKWIZV40-18A