

# Cosine Plug-in

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This manual describes the use of the *Cosine* Plug-in for thinkDB™ 2.0. For more information on thinkDB 2.0 and other thinkDB Plug-ins, please visit <http://www.thinkingbytes.com>. For information on additional thinkDB Plug-ins created by PDA Bytes, please visit <http://www.pdabytes.com>.

1. **thinkDB Plug-in Overview**
2. ***Cosine* Overview**
  - a. Purpose
  - b. Requirements
3. **Installation**
4. **Uninstalling**
5. **Usage Overview**
  - a. Upgrading from a previous version
  - b. Configuring Plug-in fields
  - c. Running the Plug-in

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## 1. thinkDB Plug-in Overview

A thinkDB Plug-in is simply an add-on program that fills a specific purpose in thinkDB. As such, they extend the functionality of thinkDB. For example, there is currently (as of thinkDB 2.0) no means to concatenate 2 Text fields together. If you have a tinyByte™ with a FirstName Text field and a LastName Text field, there is no facility for joining them together (concatenation) and having them appear as one field of "FirstName LastName" (or "LastName, FirstName"). A Plug-in can fill this void.

## 2. *Cosine* Overview

### a. Purpose:

The purpose of the *Cosine* Plug-in is to simply return a Cosine. Input must be in radians and output will be in radians.

### b. Requirements:

This Plug-in requires the free MathLib library. MathLib is a Palm OS shared library which makes a complete set of IEEE-754 double-precision math functions available to other Palm applications. These functions include trigonometry (with inverse and hyperbolic), logarithms, exponentiation, and miscellaneous helper functions. If you do not have MathLib.prc, you can download a zip file from <http://www.radiks.net/~rhuebner/mathlib.html> which contains MathLib.prc. Install MathLib.prc to your Palm as you install other Palm apps. To check to see if you have MathLib already installed on your Palm, simply look for it in App/Info. If you do have it installed, check to make sure that it is version 1.1 or later.

## 3. Installation

There are a couple of ways to install a thinkDB Plug-in (or any Palm OS application):

- a. Double-click the .prc file to be installed.
- b. Select Install from within Palm Desktop and choose the .prc file.

In both cases, the Palm™ Install Tool will then present a dialog to continue installation. After doing a HotSync®, the Plug-in will be installed into thinkDB and is ready for use. To verify that it was installed correctly, launch thinkDB on your handheld, choose Tools/Plug-in Manager from the thinkDB application menu. Tap the arrow beside "Plug-In:" and you should see the Plug-in listed. If not, repeat install instructions. If you do see it listed, it has been installed.

In addition to installing the actual Plug-in, it is important to install the special "Upgrade.prc" file. This is a special Plug-in that will be used when upgrading to different versions of thinkDB Plug-ins. If you have already installed this file once, it is not necessary to install it again.

#### 4. Un-installing

To remove a Plug-in from thinkDB, first remove the Plug-in from all fields in all your tinyBytes. If you do not, you will encounter problems and could potentially corrupt data. Once you have removed all references of it from your tinyBytes, choose Tools/Plug-in Manager from the thinkDB application menu. Tap the arrow beside "Plug-In:", tap on the Plug-in you wish to remove, then tap the "Delete..." button.

#### 5. Usage Overview

Before configuring any Plug-in, you must first create the fields that the Plug-in requires for both input and output. The input for this Plug-in is a single float field. The output is a single float field and a checkbox field. (Descriptions of these input and output fields follow.) After creating these fields, continue with the instructions for configuring the Plug-in to utilize these fields.

##### a. Upgrading from a previous version:

If you are upgrading from a previous version, the following is some special information to help you avoid problems. Before attempting to configure the Plug-in fields (step b. below), it is necessary to "un-configure" the Plug-in. To do this, please do the following steps:

1. From the Field Editor, select the small box to the right of the field you have previously selected as the Plug-in field.
2. From the Plug-in list, select *Upgrade* and press the OK button.
3. Select the small box to the right of the field you have selected as the Plug-in field.
4. Proceed with step b. 2. below

##### b. Configuring Plug-in fields:

1. From the Field Editor, select Field Type ThinkDB Plug-in from the Field Type list. Selecting the small box to the right will then open the Field Properties dialog.
2. From the Plug-in list, select *Cosine*. Two fields will appear, "Input" and "Results In".
3. Selecting "Input" will allow you to choose a float field to use for the input amount.
4. Selecting the small box to the right of "Results In" will allow you to choose the two output fields. The first to choose is the float field to store the returned value. The second to choose is a checkbox field that will be your indication if the *Cosine* Plug-in has successfully run.
5. The input field and the first output field are required. The checkbox field is optional.

##### c. Running the Plug-in:

There are 2 methods for having any Plug-in perform its duties:

1. Place the "plugged-in" field onto a form and tap it.
2. "Apply" the Plug-in from the "Filtered Operations" screen (which is one of the menu options that appears by tapping on the "tool" icon).

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