



Aloha Front of House COM Interface

Technical Overview



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This document provides a summary overview of the mechanisms by which one can integrate with the Aloha POS. Radiant Systems does not warrant that the information in this document or related documents is necessarily accurate. Radiant Systems reserves the right to discontinue or restrict the use of these interfaces.

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What Does It Mean To Interface With Aloha?

Interfacing with Aloha means interacting with the Aloha s software to achieve some goal outside of the current scope of functionality offered in the Aloha suite of products. Examples would be to produce a new report, support a new printer, alter the way text is printed on a check, or a number of other solutions.

What is COM?

This document specifically involves itself with ways an external computer program can communicate with the Aloha s software via Microsoft's COM (Component Object Model) technology, which is available to a number of programming languages such as C/C++ and Visual Basic. COM is a technique which allows two unrelated programs to communicate and interact with each other, even though they were not specifically designed to work together. As an example, our Front of House (FOH) programs allow an external program to "Add an item to a check" or "Print this text on printer four," even though the FOH program never knew that external program existed. COM is not a technology for novice programmers because a good deal of sophisticated programming is required. However ample documentation exists for someone willing to take the time to learn and study it.

Important: Make certain that the Aloha Front of House (FOH) program is already running before attempting to make a COM call, otherwise, critical errors will result. In early versions of the FOH s software, the COM call would attempt to start the FOH but would leave it in an error state (i.e. you would not see the FOH on the screen, but you would see it in the task manager.) Later when the FOH was started in its normal manner (i.e. by double clicking on the icon, or via a batch file, etc.) it would start a second instance of the FOH executable. This leads to many error situations. In the current versions of the software, an attempt to make a COM call when the FOH is not running will briefly start the FOH and then terminate the process and cause the COM call to fail after a timeout.

Different Methods Of Interfacing With Aloha

The following are the common methods of Interfacing with Aloha:

- COM Data Access
- COM FOH Interactions
- COM Printing
- COM Peripheral Activity Notification
- COM Event Notification
- Other methods

COM Data Access

The Aloha Data Access Interfaces allow you to read virtually any data used by the POS. There are two general types of data on the POS:

- **Configuration data** that is read from the DBF files
- **Transactional data** that is generated from the transaction log that represents user activity for the current day

Both of these types of data are accessed through the COM interface in the same way.

For example, a new real-time graphical report on the POS could be implemented by totaling and presenting POS data through the interface.

There are three fundamental COM object interfaces used for the Aloha Data Access:

- IberDepot
- IberEnum
- IberObject

COM FOH Interactions

The Aloha Transaction Interfaces allow you to externally “inject” transactions into the POS and provide additional utility functionality.

For example, an external, proprietary handheld device can be used to order items and apply payments on the POS. Or, you can implement an external Gift Card interface that applies payments through this interface.

The Aloha Transaction Interfaces are implemented by the IberFuncs coclass using the following interfaces:

- IberFuncs
- IberFuncs2
- IberFuncs3
- IberFuncs4
- IberFuncs5 (available in 5.2.5.12 or higher version)
- IberFuncs6 (available in 5.2.6.3 and higher version)
- IberFuncs7 (available in 5.4.0 and higher version)
- IberFuncs8 (available in 5.4.3 and higher version)
- IberFuncs9 (available in 6.0 and higher version)

IberFuncs7 is the most recent version of the interface and includes all functionality of the earlier interfaces.

COM Printing

Aloha provides COM interfaces to allow applications to externally “inject” print jobs into the FOH as well as to intercept printing that is generated by the FOH.

You can print almost anything through the IberPrinter Aloha printing interface, using over a dozen formatting commands. Using this interface, you automatically can print to any printer that is supported by Aloha, and take advantage of Aloha rerouting and error handling capabilities. You also avoid contention for control of the printer.

You can intercept printing from Aloha via the IInterceptAlohaPrinting interface and analyze it, alter it, or redirect it to other devices. This can be useful, especially in international applications.

COM Peripheral Activity Notification

Aloha provides the `IInterceptAlohaPeripherals` (along with the COM interfaces `IInterceptMagCard` and `IInterceptBarcode` which are called by the FOH) to allow applications to intercept peripheral activity occurring on an Aloha terminal. For example, external modules may intercept magcard or barcode reads and process them.

COM Event Notification

Using the `IInterceptAlohaActivity` (and `IInterceptAlohaActivity2`, available since v5.2.5.12. `IInterceptAlohaActivity5` is the most current) interface, you can “hook” your application logic into the operational flow of Aloha.

For example, an external component might wish to perform customized error checking, log information to a database, pop up a dialog, etc., whenever a user presses the “Close Check” button on the Aloha POS.

Other methods

These are NON-COM related methods of interacting with Aloha which are briefly discussed in order to make the reader aware of their’ presence.

Importing Data

The Aloha Grind program outputs the transactional data of the POS into tabular data that is easily imported into other programs. This data is automatically generated on a daily basis, and real-time data can be accessed on demand.

The POS also supports a simple real-time item output function that can be used to implement real-time inventory interfaces.

The Aloha Back office reports can be exported to a number of formats.

Launching External Programs

You can easily launch external programs from Aloha.

- **Table Service.** Use TSBUTTON.CFG to assign your external program to a button on-screen.
- **Quick Service.** Use the Run() button function to place your application on buttons on any screen you design.
- **Quick Service.** Use the Script() button function to script multiple Aloha or external functions in sequence, and make execution conditional on the success of prior steps.

Adding AlohaMgr Controls

AlohaMgr is the “shell” under which all Aloha back office modules execute.

You can add your own modules by creating them as ActiveX controls and implementing a simple COM interface. By doing this your module is indistinguishable from a native Aloha function, and can do the following:

- Appear in the AlohaMgr menu wherever you specify.
- Appear in the user-customizable tool tray.
- Run on a tab within AlohaMgr, next to other Aloha functions that are running.
- Set the text on the title bar, and on the status bar.
- Use AlohaMgr user-level security, with independent control of Run, Add, Edit, Delete security.

Fiscal Printer Interface

Aloha currently supports fiscal printers through a socket-based, XML interface.

Check File Interface

You can configure Aloha so that anytime Aloha prints a check, it dumps the check to a text file. The file contains a detailed breakdown of everything on the check.

Real Time Item Output

Aloha can output a simple text file with one line per item ordered or voided, in real-time. This can be useful in some situations.