

Chapter 27 Tool Locator

The Tool locator has had 2 new features added to it for this release, StartUpTools and ShutDownTools. both are one stop calls that you can use to load and start all the tools your application will need. In addition to these two new calls, users with the discovery ROMs in their systems will also benefit from an Improved tool dispatcher and having the entire tool locator run from ROM.

New Calls

Toolbox programmers must startup and shutdown all the tools they use. This can take several pages of code. To make toolbox programming easier, we've added two new calls to the tool locator to startup and shutdown your choice of tools in a standard way.

StartupTools

Call \$1801

Input

StartStopRecRef Space	LONG	This is space for resulting StartStopRecord reference.
UserID	WORD	The user ID to be passed to tools on startup and used when getting memory.
StartStopVerb	WORD	Describes the kind of StartStop record pointer being passed: 0 = StartStopIsPtr, 1 = StartStopIsHandle, and 2 = StartStopIsResource.
StartStopRecRef	LONG	Reference to the StartStop record.

Output

StartStopRecRef	LONG	This is space for resulting StartStopRecord pointer
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This call starts up the tools specified in the startstop record as follows.

1. The resource manager is started.
2. The resource fork of the current application file is opened.
3. Memory for direct page space is obtained from the memory manager.
4. The specified tools are started up in the following order.

- Resource Manager (started in step 1 above)
- Misc Tools
- Scheduler
- ADB
- Integer Math
- Text Tools
- QuickDraw (Cursor shown when started)
- QuickDraw Aux (Cursor set to WaitCursor when started)
- Event Manager
- Window Manager
- Control Manager
- Menu Manager
- Line Edit
- Dialog Manager
- Scrap Manager
- Standard File
- Print Manager
- Text Edit

Sound Tools
 Note Synthesizer
 MIDI Tools
 Note Sequencer
 ACE
 SANE
 Desk Manager

5. The StartStopRecord reference is returned to the calling routine. If the input reference was a pointer, the output reference is a pointer. If the input reference was a handle or a resource, the output reference is a handle. This reference is used when calling ShutDownTools.

If the StartupTools call returns no errors, the application can assume that it is safe to use the specified tools. The cursor is a watch (if QD Aux was started) and should be changed to the correct image before getting input from the user.

If StartUpTools encounters any errors while starting up a tool set, it will stop everything it is doing and return to your application with the carry set and the accumulator containing the error that it got from the start tool call. In addition to the standard startup errors, you can also receive one of the following errors::

TLBadRecFlag	\$0103 - you passed a poorly formatted StartStopRec
TLCantLoad	\$0104 - One of the tools specified can not be loaded. If you get this error be sure to check the table for correct tool numbers, tool versions, and a correct NumTools value.

The StartStop record is defined as follows (NOTE: The NumTools and ToolArray parameter are the same values that you currently pass to load tools):

```
StartStopRecord = record
  Flags           : integer;           { Must be zero }
  VideoMode      : integer;           { 0 or $80 }
  ResFileID      : integer;           { Output from start call/input to stop }
  DPageHandle    : handle;            { Output from start call/input to stop }
  NumTools       : integer;           { Number of entries in table }
  ToolArray      : array [1..NumTools] of ToolSpec;
end;
```

```
ToolSpec = record
  ToolNumber : integer;
  MinVersion : integer;
end;
```

NOTES:

Since some tools have special startup requirements, you should be aware of how some tools have been started. In most cases, starting a tool only requires passing your app ID and a direct page pointer, this call handles all of that for you. Some tools, however require special parameters, the following is a list of those calls and the parameters we pass for them:

QuickDraw When quickdraw is started, this call uses the video mode that you pass, and the maxWidth value is set to 160.

QDAux After starting QDAux we call WaitCursor, be sure to change the cursor back to an arrow after this call is finished.

- EventMgr When the event manager is started we pass 20 for the queue size and the maximum mouse clamp is set to either 320 or 640 depending on the mode parameter you pass.
- Sound Tools The StartUpTools checks first to see if you have also asked for the note sequencer, if you have, it will let the note sequencer start the sound tools. You will still have to include the sound tools in your tool table, however, so that you are sure they are loaded.
- Note Synth This works just like the sound tools startup above
- Note Seq The update rate is passed as 0 (this causes the note synth to use its default rate), the increment is set to 20, and since the note sequencer generates interrupts at a rapid rate, we call stopInts right away. When you want to start using the note sequencer be sure you call startInts.

ShutdownTools**Call \$1901****Input**

StartStopVerb	WORD	Describes the kind of StartStop record pointer being passed: 0 = StartStopIsPtr, 1 = StartStopIsHandle
StartStopRecRef	LONG	Reference to the StartStop record.

Output

none.

This call shuts down the tools specified in the startstop record as follows.

1. The following tools are shut down.

- Desk Manager
- SANE
- ACE
- MIDI tools
- Note Seqencer
- Note Synthesizer
- Sound Tools
- Text Edit
- Print Manager
- Font Manager
- Standard File
- Dialog Manager
- Scrap Manager
- Line Edit
- Menu Manager
- Control Manager
- Window Manager
- Event Manager
- QuickDraw Aux
- QuickDraw
- Text Tools
- Integer Math
- ADB
- Scheduler
- Misc Tools

2. The handle for direct page space is disposed.
3. The handle for the startstop record is disposed (if it is a handle).
4. The resource manager is shutdown.

The StartStop record that is passed to ShutdownTools must be the modified record returned from StartupTools.

Change History

17 Jan 89 Steven Glass

Changed Descriptors of the StartupTools and ShutDownTools input references. They now are the same as what is used elsewhere in the toolbox: 0 = ptr, 1 = handle, 2 = resource.

