

## Tech Bulletin 2011-009

### IPitomy Tools

#### Description

IPitomy Tools provide two powerful utilities:

- Memory Test
- IP PBX Restore for IP1100 and IP1200

In memory test, the utility will run a diagnostic for read/write integrity. This is useful to detect issues not resolved by any other means.


PBX Restore is a last-resort restoration of the IP PBX OS (Operating System). In the event a catastrophic situation exists and the IP PBX cannot be recovered by usual means, the PBX Restore utility will reload all IP PBX operating files to a preset factory condition.



**Use of IP PBX Restore requires that all licensing be restored in a separate procedure! This is accomplished by contacting Technical Support and providing all system credentials for reissuance of licensing per the system's previous license status.**

#### Procedure—Safe Power-Down

All IPitomy IP PBX's are equipped with a safe power-down button located at the front.

Boot-Up / Safe Power-Down Switch		
IP1100	IP1200	IP2000/5000
		

1. If your system is powered, press and release (immediately) the raised side of this switch. (This initiates the safe power-down operation.)
2. Wait approximately 3-5 minutes. This should be enough time for the *PBX Running* LED to go out.  
If the lamp is off your PBX has shut down safely, Skip Step 3 and go to **Procedure—Connecting the Tools USB Stick**  
If not, your PBX is non-responsive and must be forced off which may corrupt the database. Perform the next step before continuing.
3. Press and hold the Boot-Up/Power-Down Switch until the LED goes off.  
Go to **Procedure—Connecting the Tools USB Stick**




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#### Procedure—Connecting the Tools USB Stick

The IPitomy Tools program is delivered on an USB Stick that is inserted into an available USB slot on the IPitomy IP PBX. Some system's Bios' will recognize this USB and boot without any special setup, however we have experienced differences in various Bios' and found that some systems must be directed to boot from the USB drive stick by adjusting additional Bios settings. (The IP1200 is found to have required this procedure.)

1. Determine if your system will require Bios adjustment...
2. Insert the USB Stick with IPitomy Tools into an available USB slot on IP PBX.
3. Power-Up the PBX; press and release (immediately) the Safe Power-Down/Boot momentary toggle switch on the front of the IP PBX.

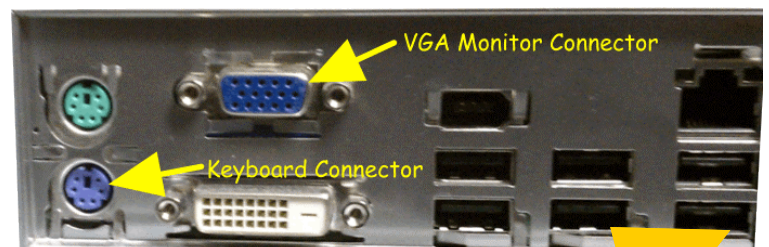
Boot-Up / Safe Power-Down Switch		
IP1100	IP1200	IP2000/5000
		

4. If your PBX boots to IPitomy Tools, go to **Procedure—Using IPitomy Tools**
5. If not (IP1200's are in this group), power the system down again and go to **Procedure—Bios Setup**.

#### Procedure—Bios Setup

If you're here, your PBX didn't boot on the USB Stick. In this case you must setup the bios to boot from the USB drive by activating an additional bios parameter.

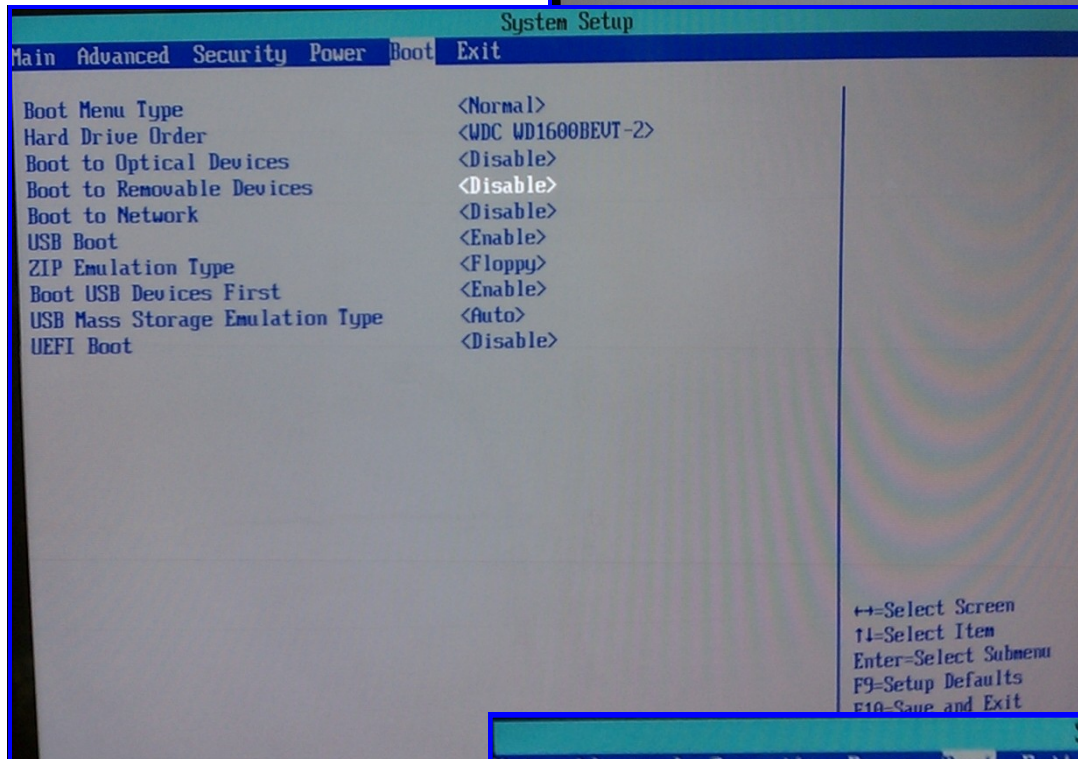
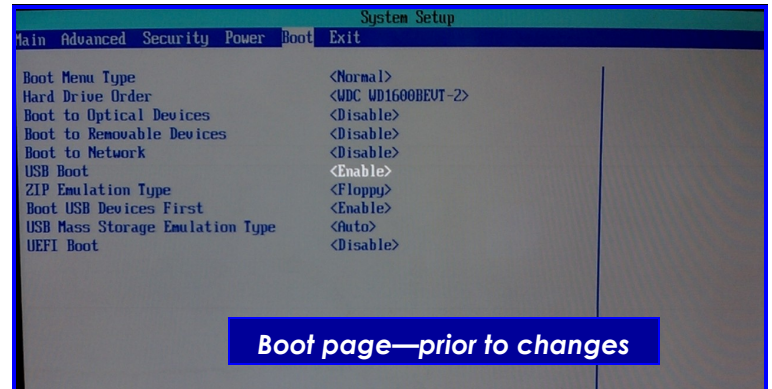
1. Connect a keyboard and monitor to the IP PBX at the connectors shown...
2. Power up the PBX and immediately start pressing the F2 key repeatedly every 1 (one) second. This should activate the Bios Setup utility of the IP PBX.
3. When the Bios Setup (System Setup) screen is open the options for selection of the devices from which boot-up can be set are shown.



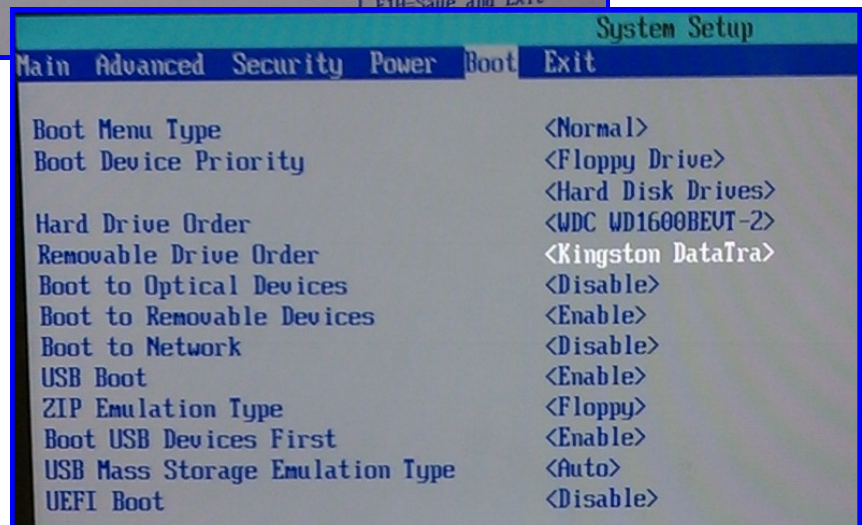
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4. Use the cursor keys to navigate to the **Boot** page.
5. Use the cursor keys and go to the **Boot to Removable Devices** option and press Enter.



6. Select Enable.  
Notice that after selecting enable the USB drive is then shown as the Removable Drive to Boot from.
7. Press F10-Save and Exit.  
This should result in booting to IPitomy Tools.  
Go to **Procedure—Using IPitomy Tools**



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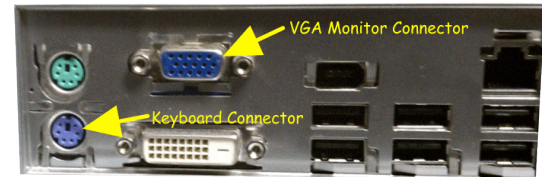
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#### Procedure—Using IPitomy Tools

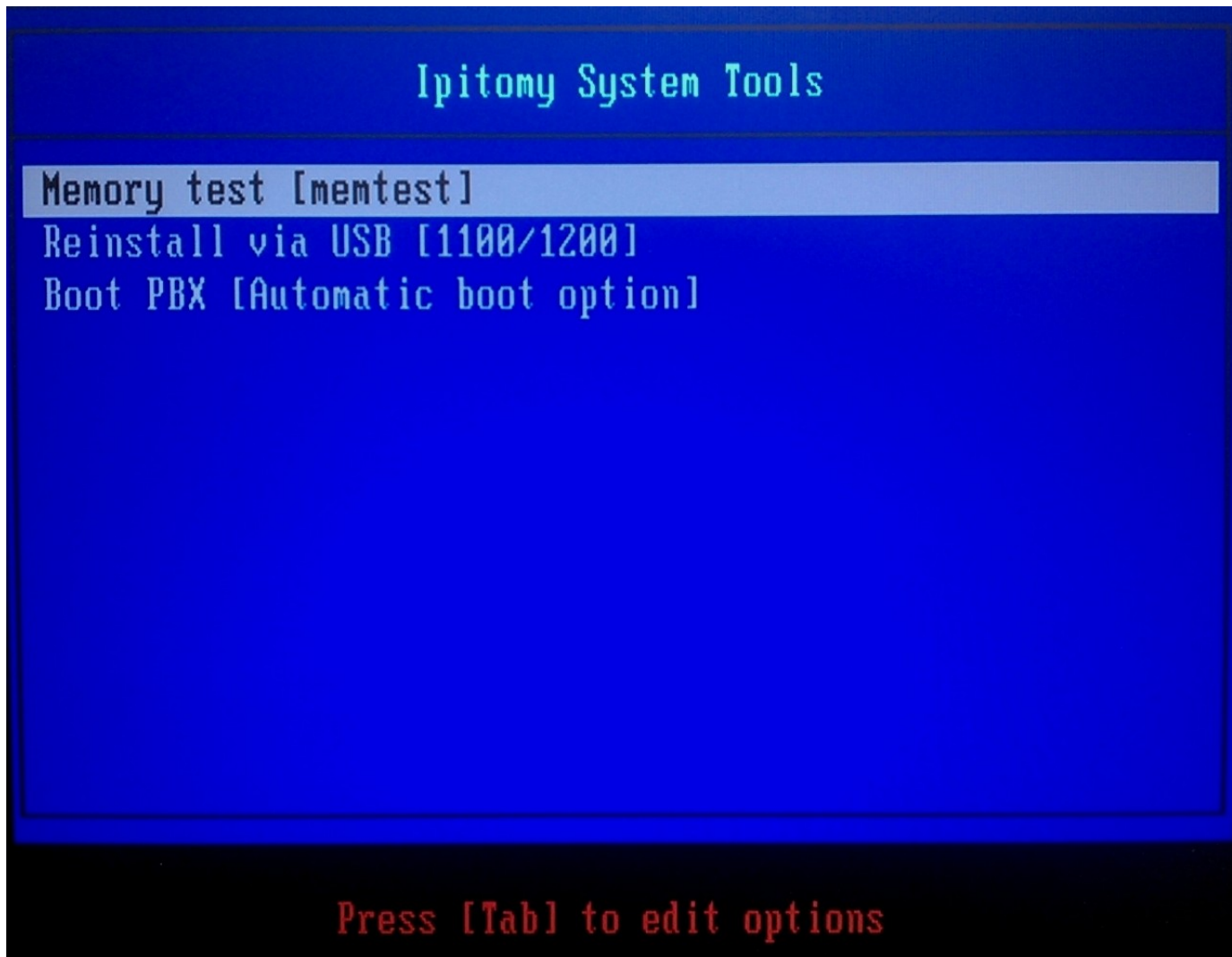
If you haven't already connected a keyboard and monitor—do so now.

The IPitomy Tools page is simple to navigate, there are three choices:

- Memory Test
- Reinstall (Restore IP PBX)
- Boot PBX



If you run memory test, you're likely speaking with technical support. In that case, they will advise you about results. You may run memory test without assistance however and discover its benefits. This publication isn't going further on this topic at this time.



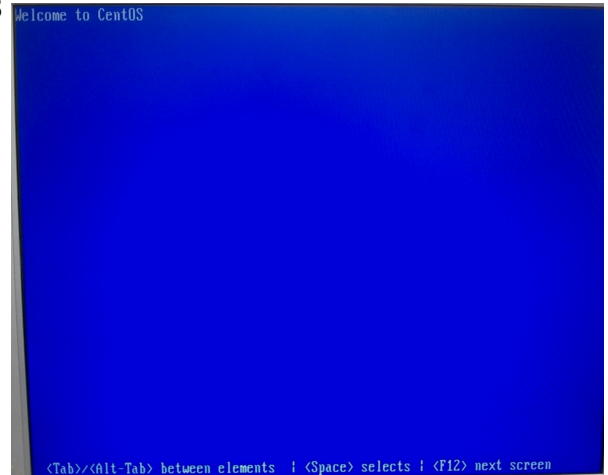
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#### Procedure—Reinstallation/Restore IP PBX

The recovering a PBX is to revive the original configuration at the time the PBX was purchased.

1. From the listed selections choose the *Reinstall via USB* option.
2. The Welcome to CentOS screen will appear.
3. No interaction is required for several minutes. BE PATIENT.
4. The following screens will be seen as the command-line items are implemented and the PBX OS is restored.



CentOS installation starts

```
Running anaconda, the CentOS system installer - please wait...
Probing for video card: Intel Corporation Unknown device a001
Running pre-install scripts
Retrieving installation information...
In progress... Completed Completed
Checking dependencies in packages selected for installation...
In progress... Bad kmod package 'kernel-module-zaptel - 1.4.11-1_2.6.18_53.el
5.rf.i386' does not require a kernel
Bad kmod package 'kernel-module-zaptel - 1.4.12.9-2_2.6.18_164.15.1.e15.rf.i386'
does not require a kernel

Formatting / file system...
In progress...
Formatting /recovery file system...
In progress...
Formatting /boot file system...
In progress...
Starting install process. This may take several minutes...
```

Various formatting processes

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When all the various files are loaded and installed, the IP PBX will boot and the command line login will be presented.

1. Press Ctrl + Shift + F7
2. This enters into the networking configuration page.
3. Use the options available (primarily Option "2" for IP Address) and set the network interface for use with the installed network and the IPitomy web-page interface.
4. The Default Gateway and DNS should be set to the IP Address of the network router.
5. The Subnet Mask should be set to match that of the network router (typically 255.255.255.0)
6. Press "S" to save and update this data.

```
CentOS release 5 (Final)
Kernel 2.6.18-164.15.1.el5 on an i686
```

```
ipitomy pbx login:
```

```
IPitomy Networking - TCP/IP Settings
USING:  IP Address :      192.168.4.191
        Mask       :      255.255.255.0
        MAC Address:      00:27:0E:0C:CF:0F

DATABASE:

        NAME                VALUE
        -----
        [1] Network Type     Static IP
        [2] IP Address       192.168.1.249
        [3] Subnet Mask      255.255.255.0
        [4] Default Gateway  192.168.1.1
        [5] Static DNS       192.168.1.1
        [6] Static DNS 2
        [7] Static DNS 3

        Other Menus
        -----
        [R] Refresh View
        [F] Fix Database
        [W] Web Server
        [H] Host Access

SELECT OPTION: 
```

At this point the Keyboard and monitor can be disconnected from the IP PBX and Web-page access to the IP PBX should be possible.

If there was a database previously saved—that may now be restored. If not, all PBX configuration programming must be re-entered.

**Licensing:** Once access to the PBX via the web-interface is active navigate to PBX Setup/ Services/License File and load the file obtained from Technical Support (941-306-2200) to restore this PBX's license status.