

PLANTRONICS | USB Headset Review

Introduction

We conducted an expert usability review of three USB headsets: the Plantronics Supra Plus Wideband USB (Microsoft Certified), the Plantronics DSP 55 (Legacy, Not Certified), and the GN 2000 USB OC (Microsoft Certified). Our review focused on the ease of headset setup and the user experience when making calls using Microsoft Communicator. For each headset, we performed an initial installation, disconnection, connection, and a series of calls throughout.

This document contains four primary sections:

- **Summary** of key issues
- **Test protocol** used for testing each headset
- **Screenshots** of each screen in the flow
- **Annotated flow diagrams** that provide detailed documentation and analysis of the setup configuration process for each headset. These flow diagrams also report on the successes/failures of headset use in each tested scenario.

Summary

All three headsets that we tested were functional and allowed us to make and receive calls using the Microsoft Office Communicator application. However, we observed that the Plantronics Supra Plus Wideband USB Microsoft Certified headset had the most setup and functionality issues out of all three headsets, as follows:

- **Non-functioning onboard controls:** The Supra headset's on-board controls almost never worked. While the competitor's headset once had an issue with the same problem, it seemed to be a fluke and consistently worked thereafter. The controls on the Plantronics Supra device worked only once out of many attempts.
- **Computer unable to identify headset as default USB device:** The setup wizard and the operating system was unable to consistently designate the Supra headset device as the default device for audio output and microphone input. Sometimes the device registered as the default audio device, sometimes it did so only partially (i.e. the audio output registered but not the microphone), and sometimes nothing registered at all. Although the device seemed to work even when it wasn't registered as the default device in the control panel, the inconsistency in how the device registered in the settings played a significant part in our confusion with the user experience.

In addition, we have the following observations about the setup and use of all three devices:

- **Multiple audio settings:** The wizard provides two separate screens with different settings for speaker and microphone devices (The Handset or Headset screen and the Speaker/Microphone or Speakerphone screen). Although we now understand that it's possible to designate different devices for different modes, this is not obvious from the wizard screens themselves and is confusing for users. At a minimum, we recommend updating the language on these screens to communicate their purpose. Ideally, it would be beneficial to redesign them completely since it seems like the most common case would be to have just one device.
- **Device designation:** There is something interesting happening around the designation of each device to the host operating system which we speculate might have something to do with the difference in reliability between the devices. For instance, the OS designated the Supra MS certified headset as a Wideband USB device, and the

GN headset as a USB OC. The latter device had an uninstaller which was made available in the dock. When we used the GN uninstaller, it listed the headset as a CDRW/DVD drive. The unconventional designation of a headset as a DVD device may help explain the difference between the Plantronics Supra headset and the GN headset. This DVD designation for a headset might help the system to more reliably recognize the device as a default audio and input facility.

- **Wizard vs. Control Panel:** Although Microsoft offers both a Wizard and a Control Panel for viewing and editing settings, we determined that the settings for both are completely linked: when you change the settings in one, the other area is instantly updated to reflect that same change. We recommend directing users to the Wizard inside the Communicator application for interacting with settings because there are other important controls in that area that users may be interested in, such as the NetCam. Also, since the user is already in the Communicator, it is easier to access the Wizard.

Test Protocol

Test A:

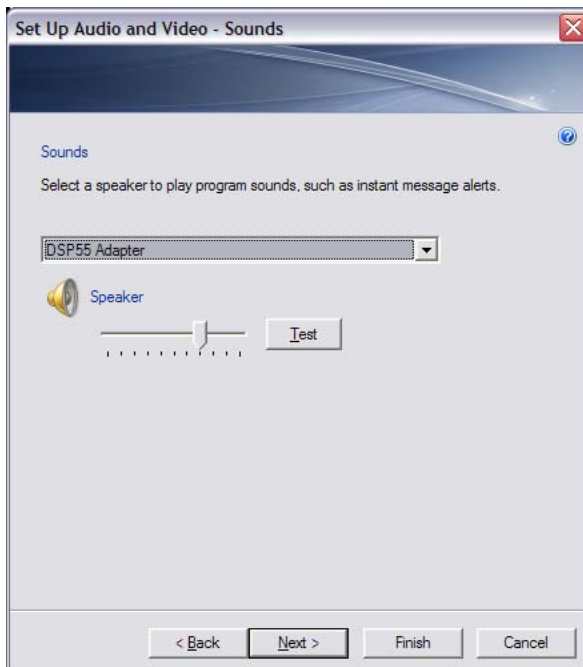
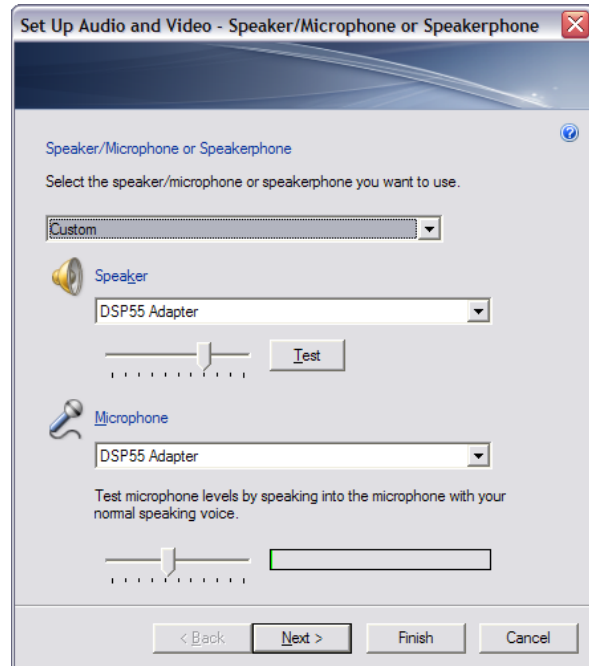
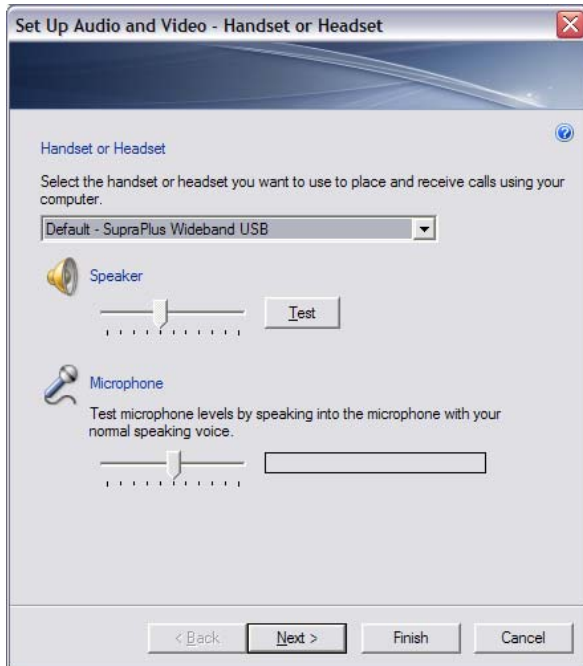
1. Plug the headset in. Insure that applications for setup are not open.
 - a. Capture anything that happens after device is plugged in.
 - b. Capture settings for settings for both audio & voice in the Control Panel
2. If not already captured, capture preferences and options in Microsoft Communicator.
3. Make an outgoing call without making any changes to device settings.
 - a. If not successful, open preferences for Microsoft Communicator and change settings to select headset as default device. Try again.
 - b. If call still doesn't work, double check settings and note any changes.
 - c. Try changing preferences until able to successfully make a call.
 - d. If still unable to make call, exit and restart application and try again.
 - e. When call is successful, perform subsequent tests.
4. Receive an incoming call. Answer call from device. Hang up on call from device.
5. Unplug device
6. Receive incoming call with device unplugged. When phone rings, plug device back in and answer from call from headset once and from application in the second trial.
7. Unplug headset
 - a. "Safely remove hardware" if possible
 - b. Restart computer

Test B

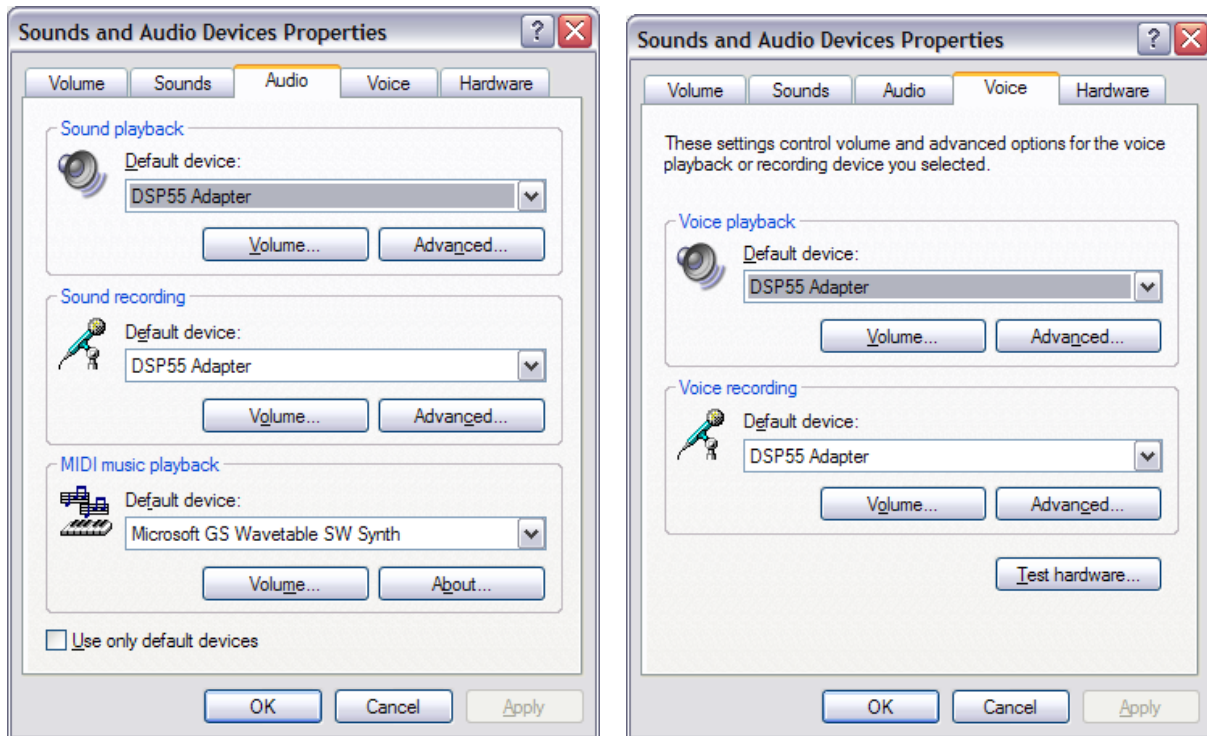
1. Capture settings in Microsoft Communicator and in the Control Panel with the device disconnected.
2. Plug device in and capture settings again in the Communicator and in the Control Panel. Note if settings changed automatically when headset plugged in.
3. Make an outgoing call.
 - a. If not successful, open preferences for Microsoft Communicator and review settings. Did they change? If necessary, change settings to select headset as default device. Try again.
 - b. If call still doesn't work, double check settings and note any changes.
 - c. Try changing preference until able to successfully make a call.
 - d. If still unable to make call, exit and restart application and try again. If still unable, restart the computer and try again.
 - e. When call is successful, perform subsequent tests.
4. Receive an incoming call. Answer call from device. Hang up on call from device.
5. Unplug device
6. Receive incoming call with device unplugged. When phone rings, plug device back in and answer from call from headset once and from application in the second trial.
7. Unplug headset
 - a. "Safely remove hardware" if possible
 - b. Restart computer

Screenshots

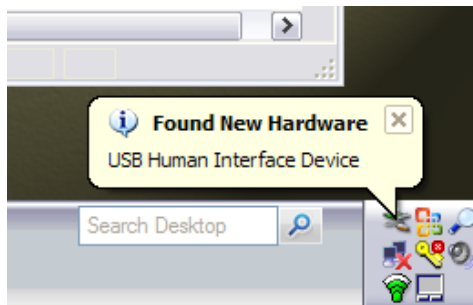
Wizard – Screens contained in the flow



Control Panel – Audio and Voice screens

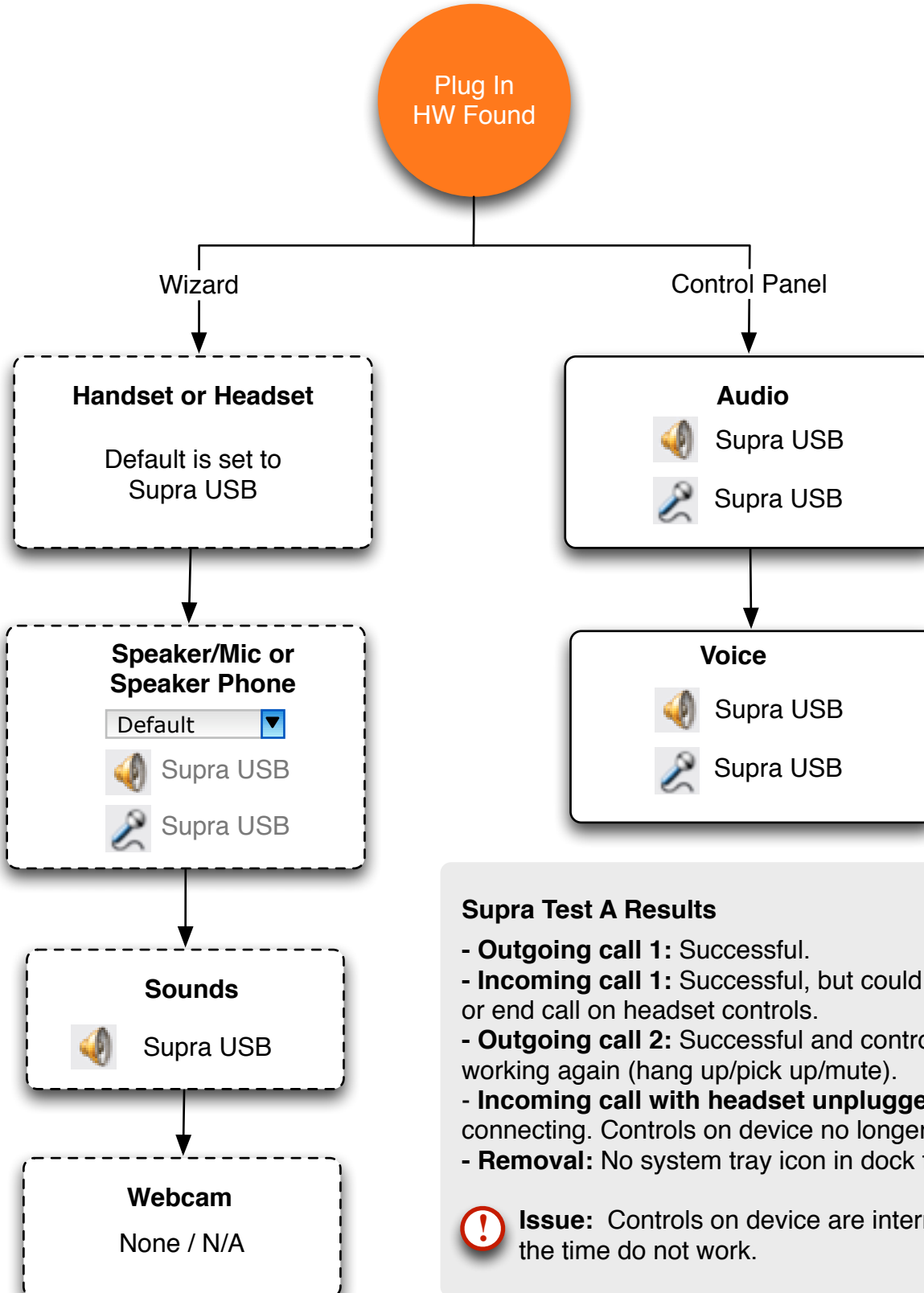


Found New Hardware Bubble



Supra Plus Wideband USB (Plantronics Microsoft Certified Device)

Test A



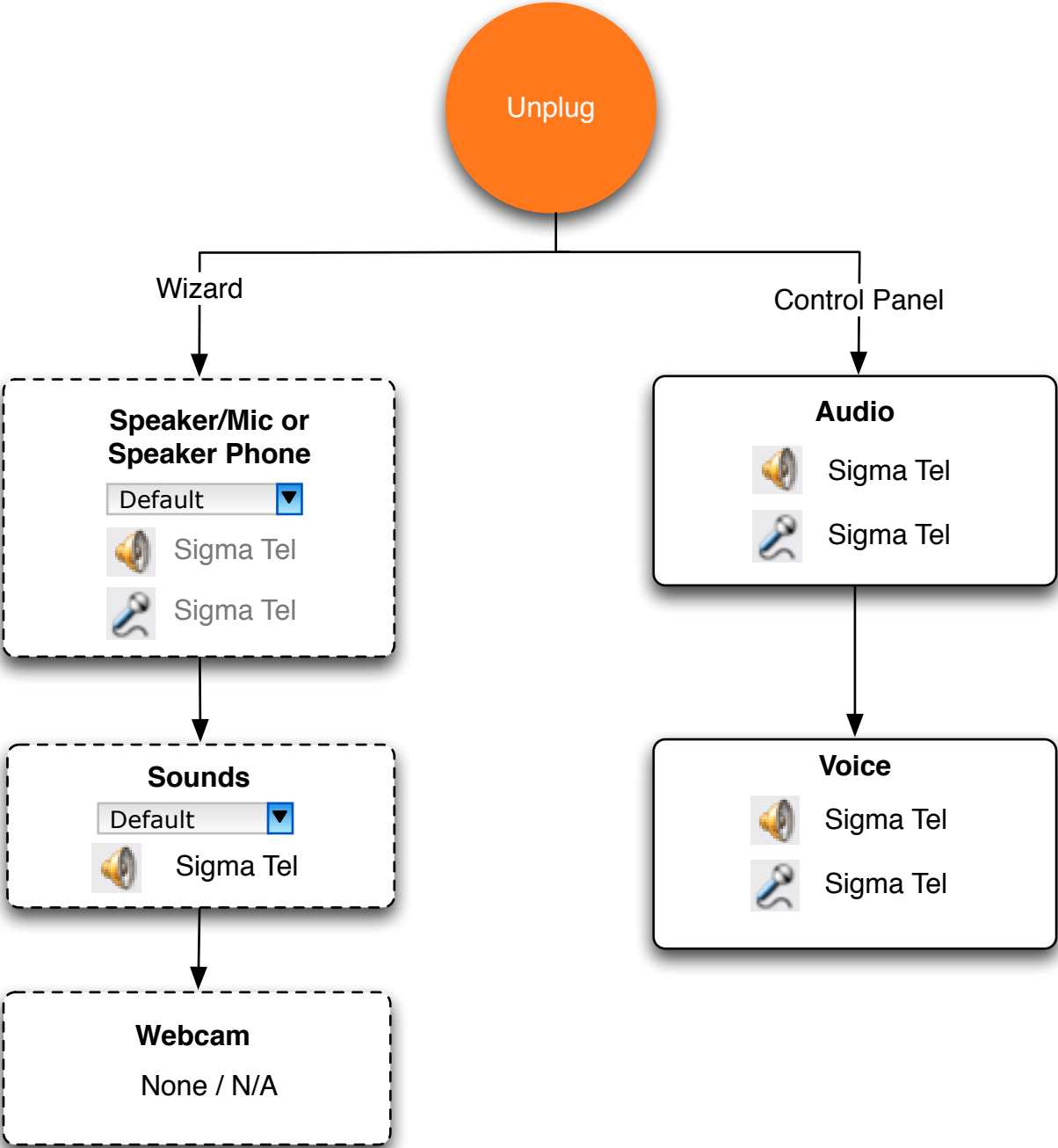
Supra Test A Results

- **Outgoing call 1:** Successful.
- **Incoming call 1:** Successful, but could neither pick up call or end call on headset controls.
- **Outgoing call 2:** Successful and controls suddenly started working again (hang up/pick up/mute).
- **Incoming call with headset unplugged:** Trouble connecting. Controls on device no longer work.
- **Removal:** No system tray icon in dock for uninstall.

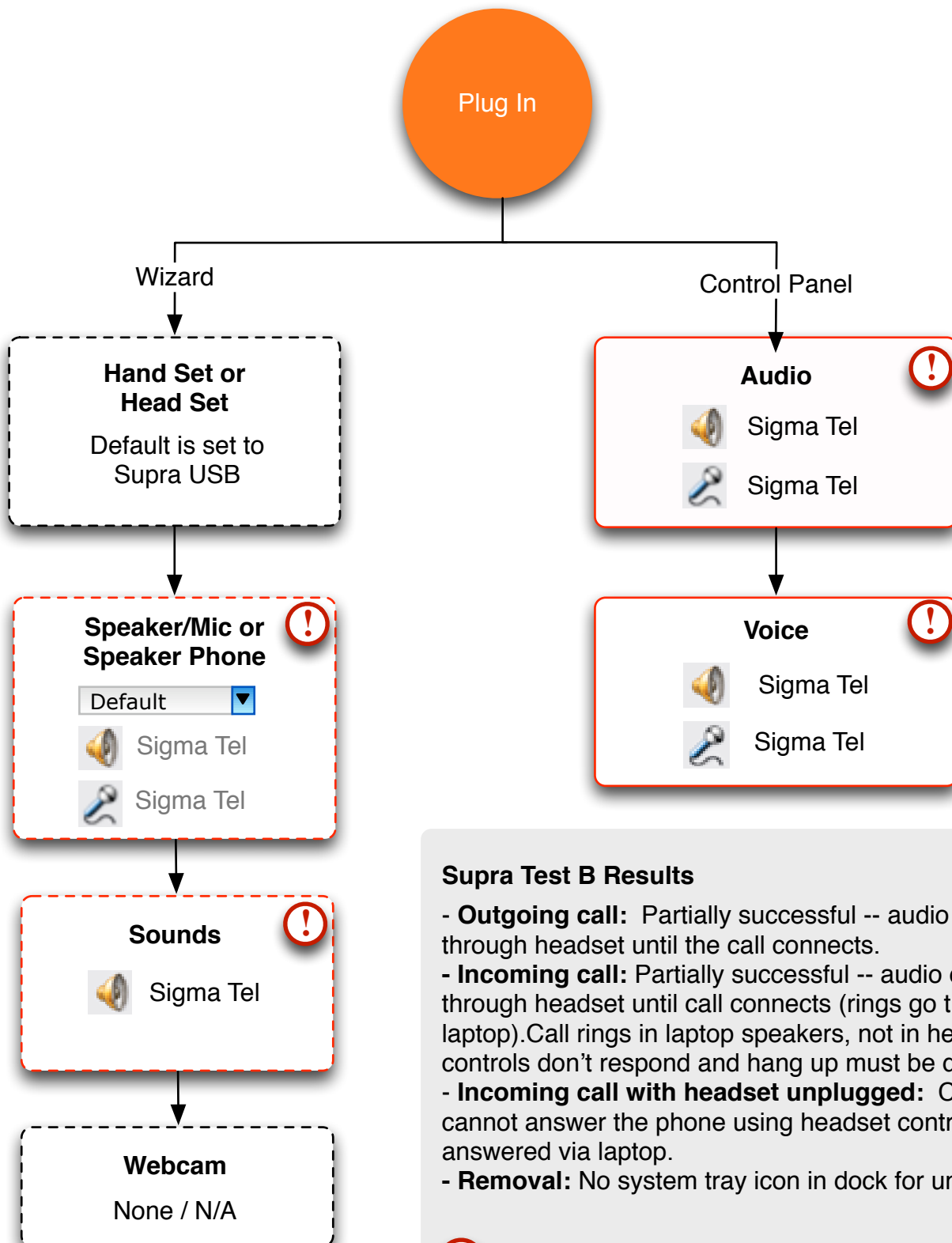


Issue: Controls on device are intermittent and most of the time do not work.

Test B



Test B, continued



Supra Test B Results

- **Outgoing call:** Partially successful -- audio does not come through headset until the call connects.
- **Incoming call:** Partially successful -- audio does not come through headset until call connects (rings go through laptop). Call rings in laptop speakers, not in headset. Headset controls don't respond and hang up must be done on the laptop.
- **Incoming call with headset unplugged:** Call successful. but cannot answer the phone using headset controls. Call must be answered via laptop.
- **Removal:** No system tray icon in dock for uninstall.

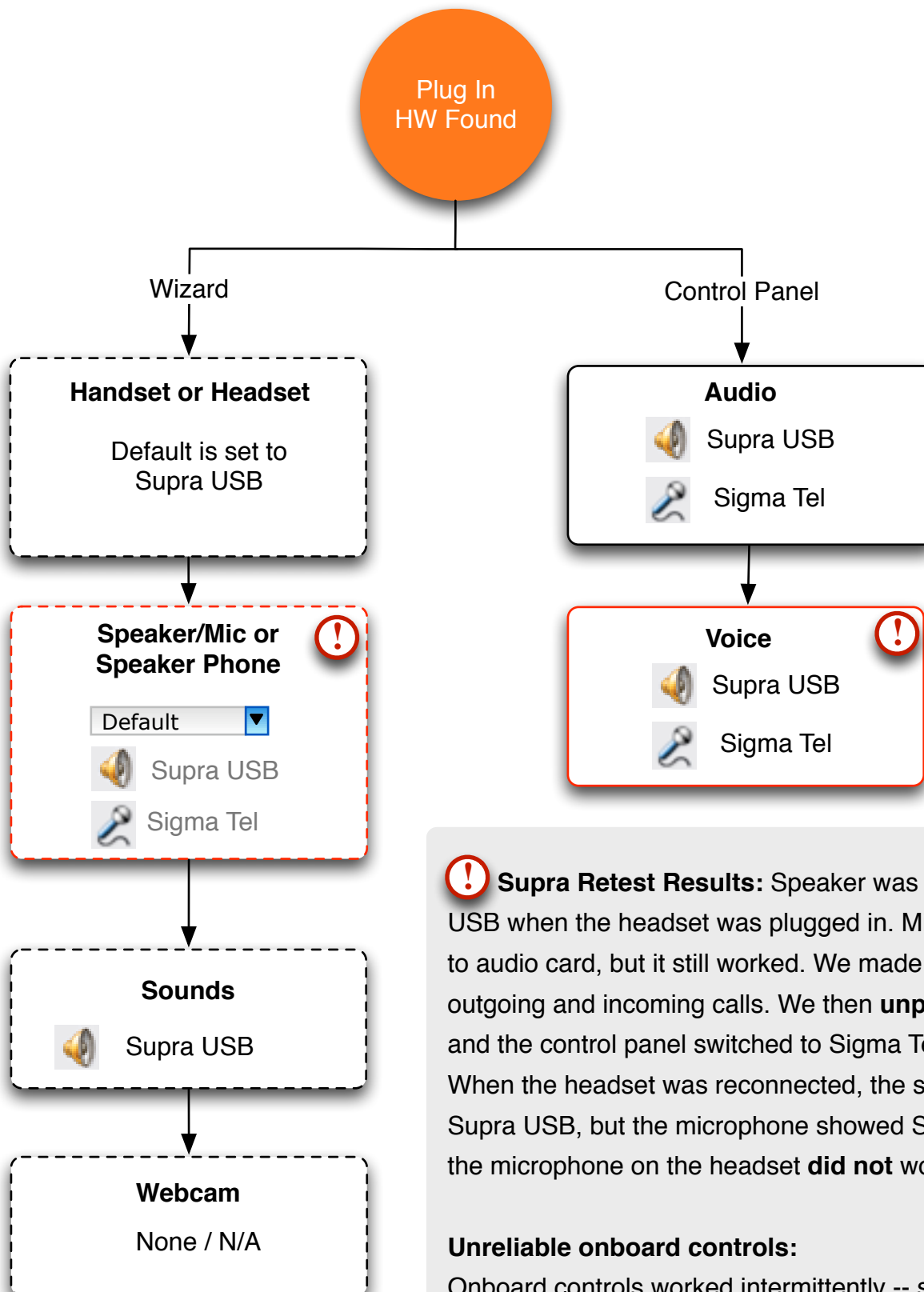
Setup Issues

Most screens are registering the SigmaTel Audio device (laptop sound card) and not the USB headset --except for the first screen in the Microsoft Communicator Wizard. Supra Wideband USB is an available option in the dropdowns but is not selected.

All control panels are set to default laptop audio once device is unplugged.

Retest A

We decided to redo the test for the Supra Plus device to verify our findings because (1) there were some time-outs with the first round and (2) this device had the most user experience issues.



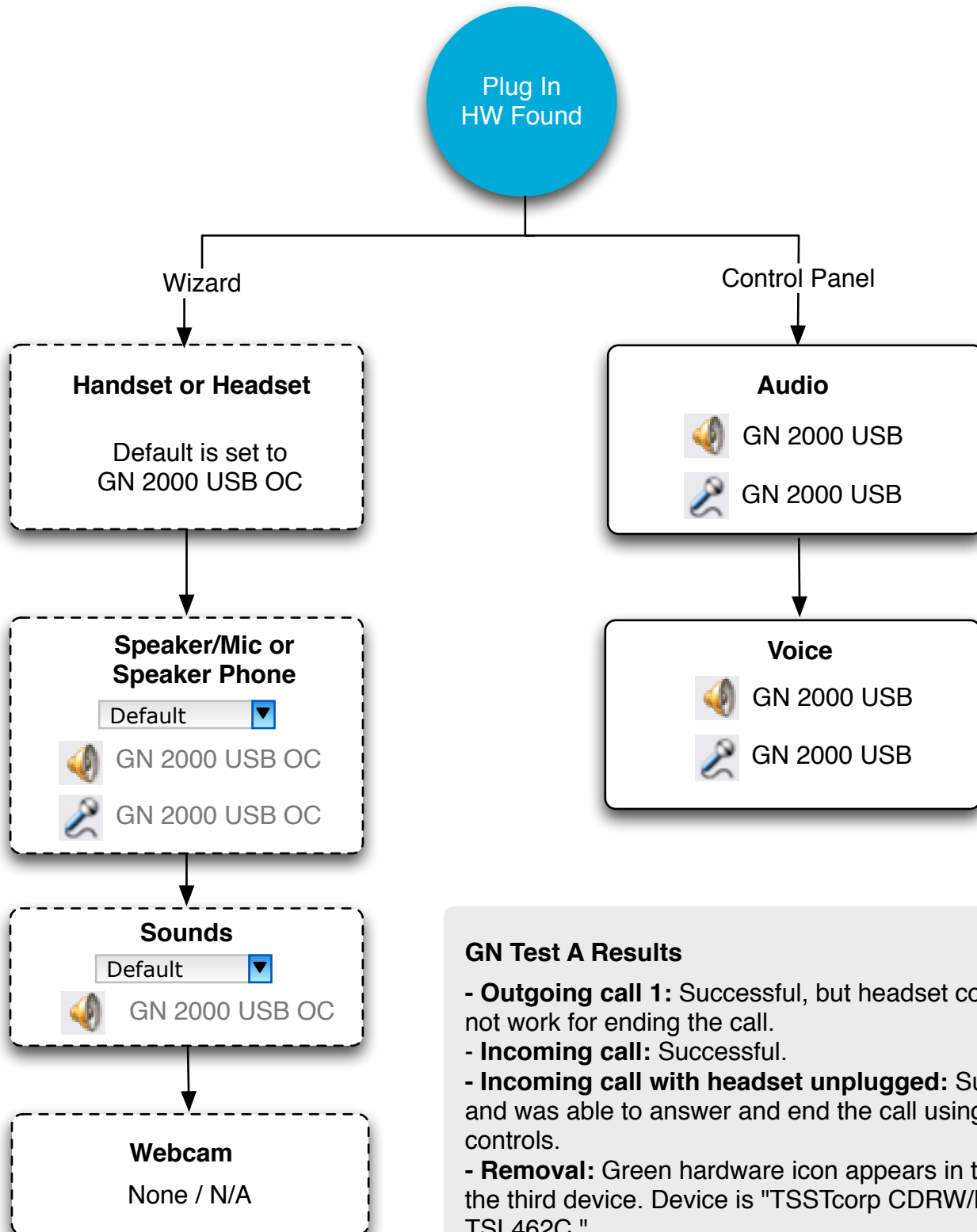
! Supra Retest Results: Speaker was initially set to Supra USB when the headset was plugged in. Microphone was set to audio card, but it still worked. We made successful outgoing and incoming calls. We then **unplugged** the headset and the control panel switched to Sigma Tel for all devices. When the headset was reconnected, the speaker showed Supra USB, but the microphone showed Sigma Tel. This time the microphone on the headset **did not** work during calls.

Unreliable onboard controls:

Onboard controls worked intermittently -- starting and stopping after disconnecting and reconnecting the headset.

GN 2000 USB OC

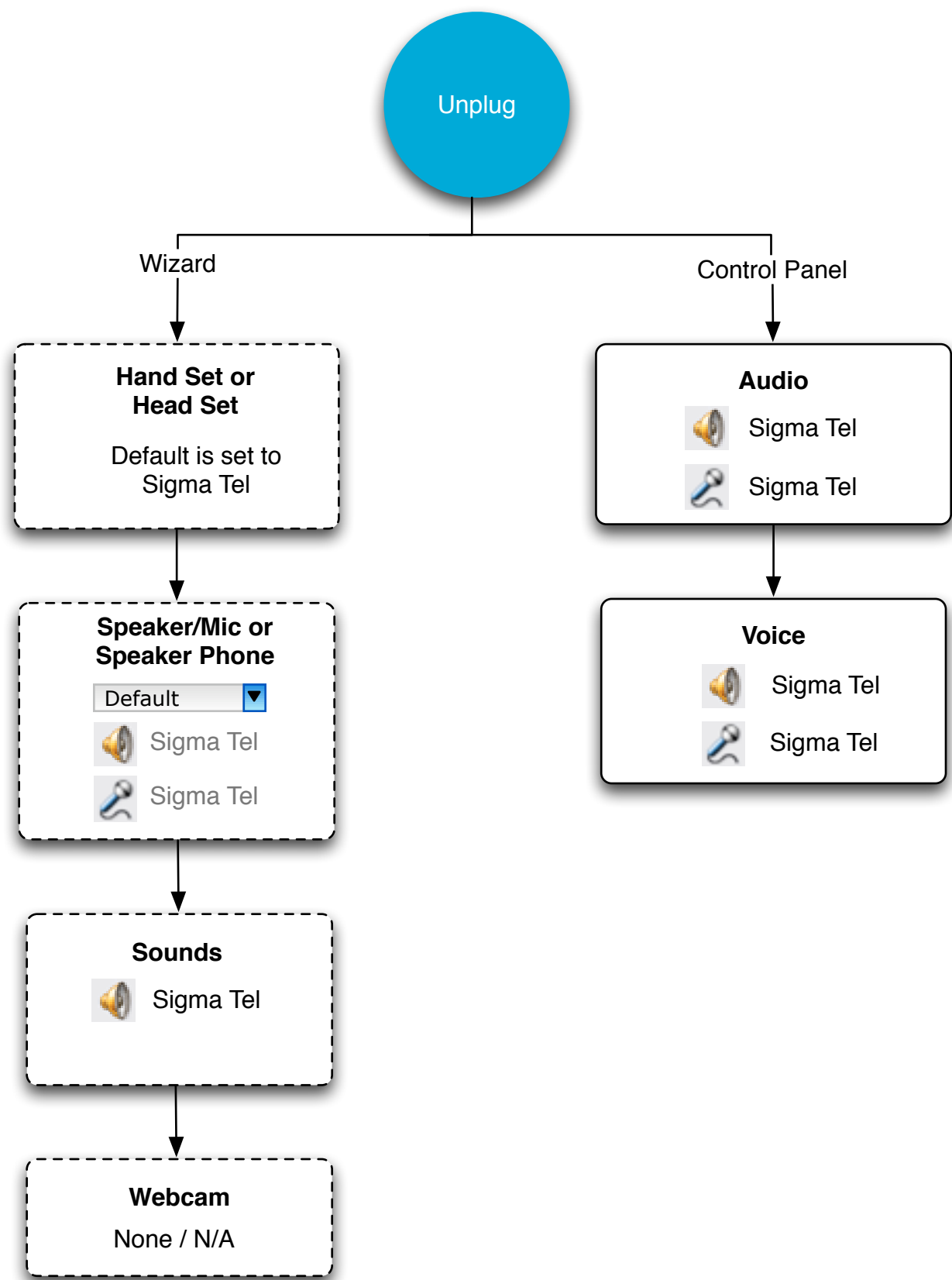
Test A



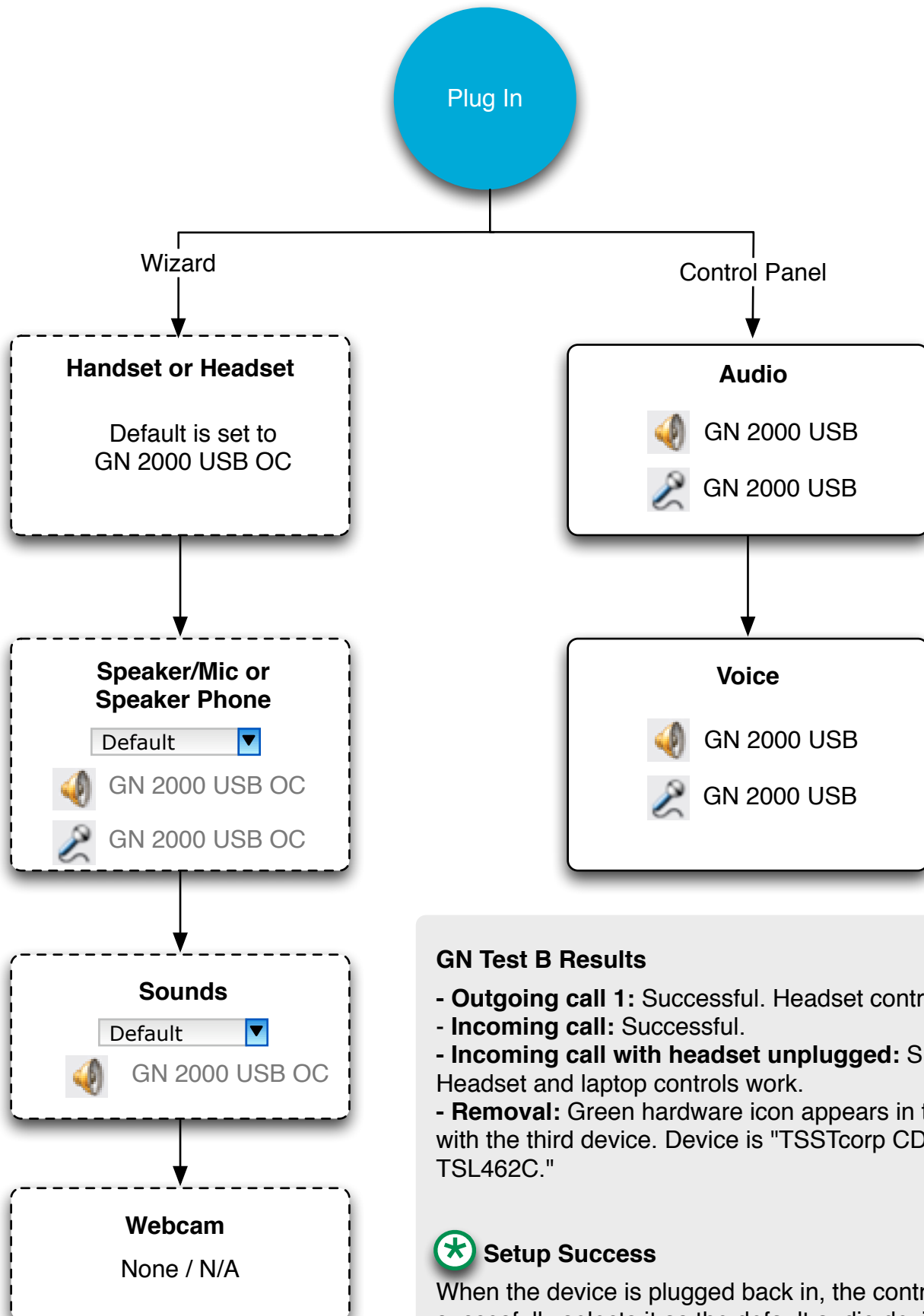
GN Test A Results

- **Outgoing call 1:** Successful, but headset controls did not work for ending the call.
- **Incoming call:** Successful.
- **Incoming call with headset unplugged:** Successful and was able to answer and end the call using headset controls.
- **Removal:** Green hardware icon appears in the docs with the third device. Device is "TSSTcorp CDRW/DVD TSL462C."

Test B



Test B, continued



GN Test B Results

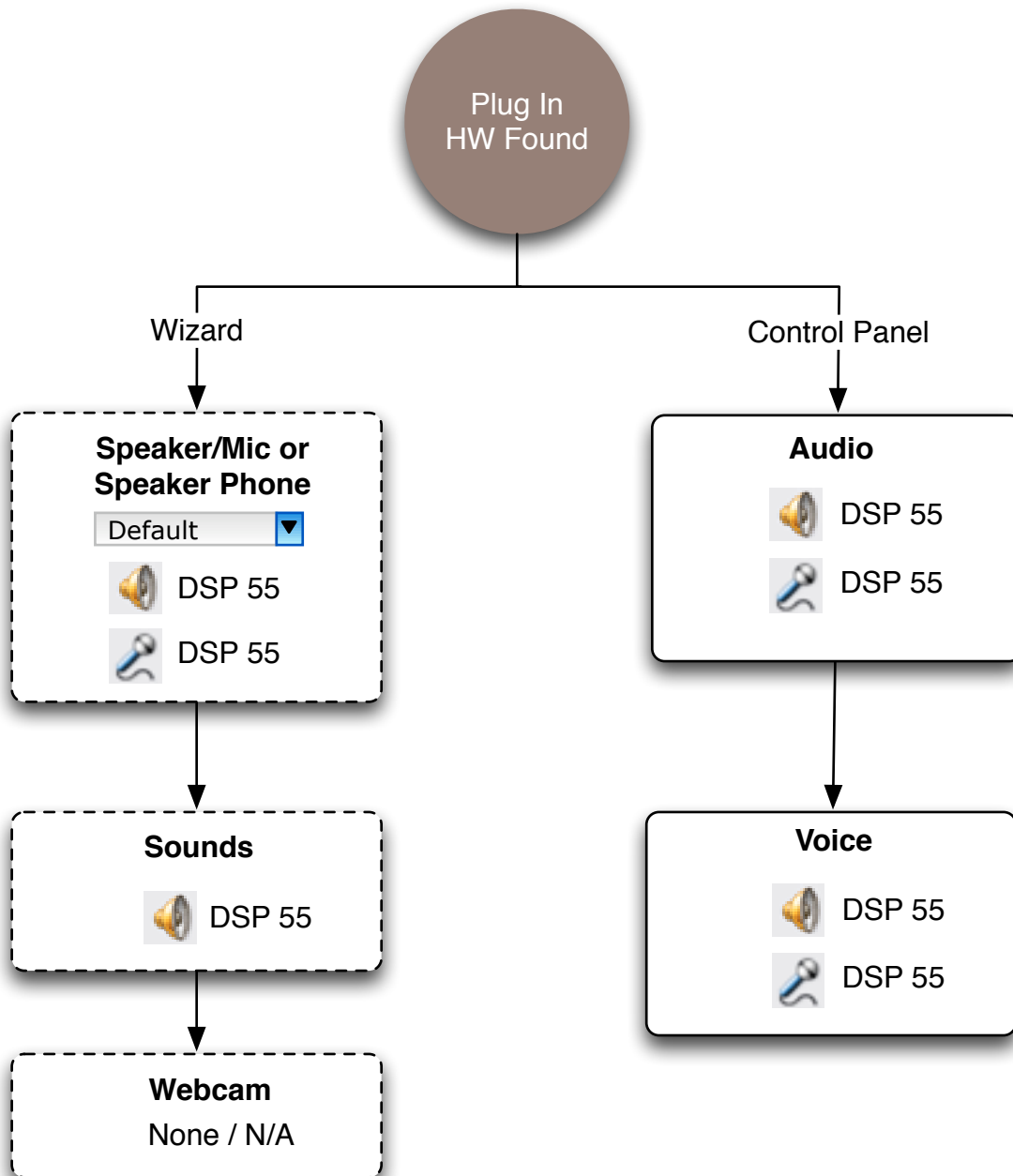
- **Outgoing call 1:** Successful. Headset controls work.
- **Incoming call:** Successful.
- **Incoming call with headset unplugged:** Successful. Headset and laptop controls work.
- **Removal:** Green hardware icon appears in the docs with the third device. Device is "TSSTcorp CDRW/DVD TSL462C."

Setup Success

When the device is plugged back in, the control panel successfully selects it as the default audio device automatically. It is identified in the Found New HW bubble as "GN 2000 USB OC"

DSP 55 (Plantronics Legacy Device)

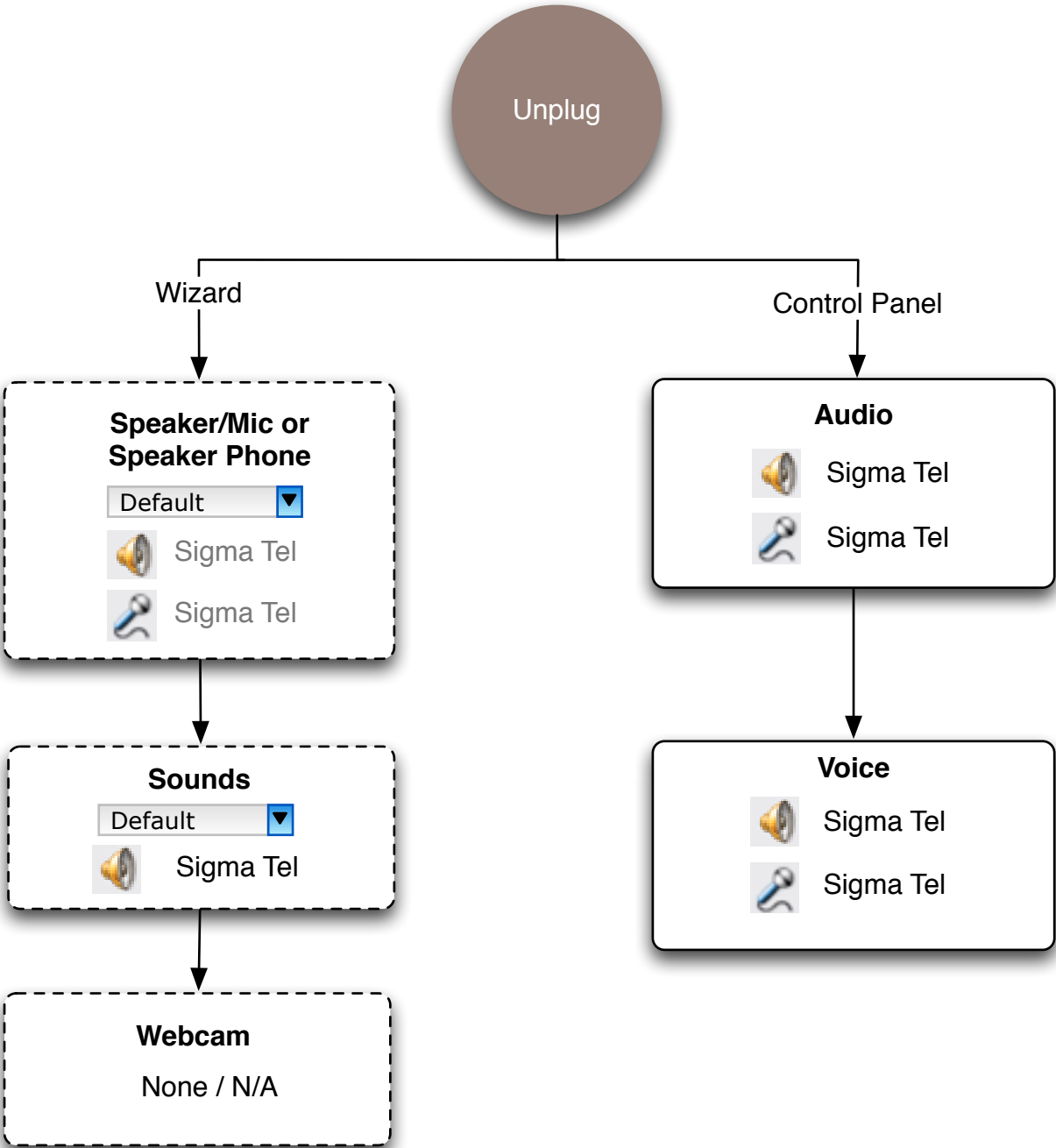
Test A



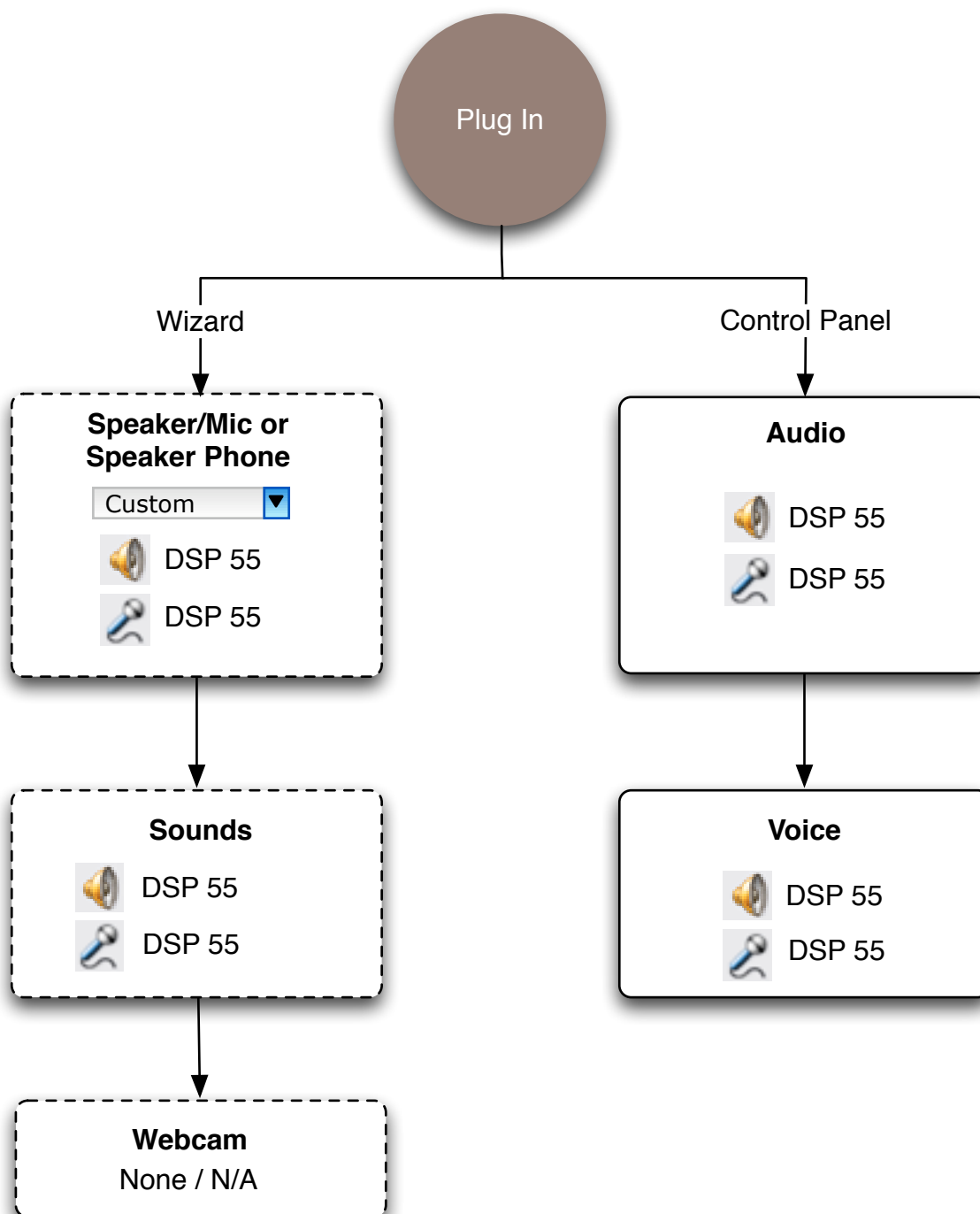
DSP 55 Test A Results

- **Outgoing call:** Successful.
- **Incoming call:** Successful, answered from application, headset controls don't work.
- **Incoming call while headset unplugged:** Successful.
- **Removal:** No system tray icon in dock for uninstall.

Test B



Test B, continued



DSP 55 Test B Results

All incoming and outgoing calls successful.

Settings changed automatically to the correct state when headset plugged in.