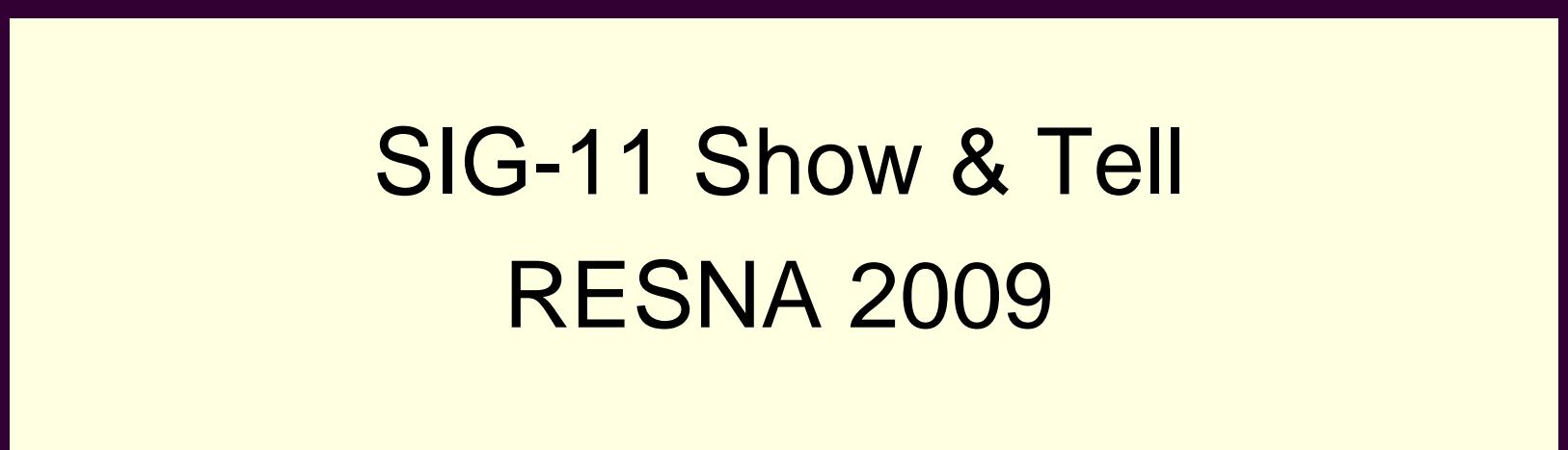




Ray Grott, MA, ATP, RET
RET Project
San Francisco State University
rgrott@sfsu.edu



**SIG-11 Show & Tell
RESNA 2009**

Using the Same Wireless Microphone for Accessing Both a Computer and a Telephone

“Old School” Wireless Options

- Computers: Wireless RF microphones drawn from the pro-audio world
- Telephones:
 - Cordless phones with plug-in wired headsets for home use
 - Wireless headset systems made by Plantronics and GN Netcom available for offices
- Devices to switch the headset between a computer and telephone have been based on corded systems or have used a computer interface (Arial Phone).

“Blue-School” Options

- Newer models of Bluetooth headsets with better quality signals have been able to pair and switch between two or more receiving devices (e.g., cell phone and BT card or dongle on a computer).
- Current wireless products that can work with BOTH computers for speech recognition and telephones now include:

Plantronics Calisto Pro Bluetooth

You can switch between multiple BT enabled devices and includes a wireless telephone base (single analog line only).

\$270

(The headset alone comes bundled with Dragon Naturally Speaking)



Sennheiser BW 900



(\$300)

Plantronics CS50 and CS70

(Not Bluetooth) used with a telephone/ CPU switch



CS50



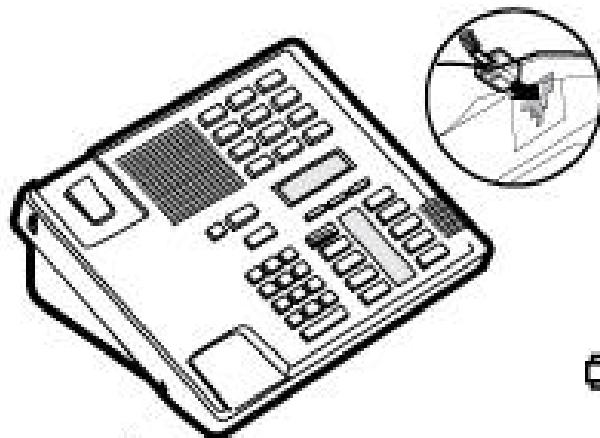
CS70N

Telephone / computer switches

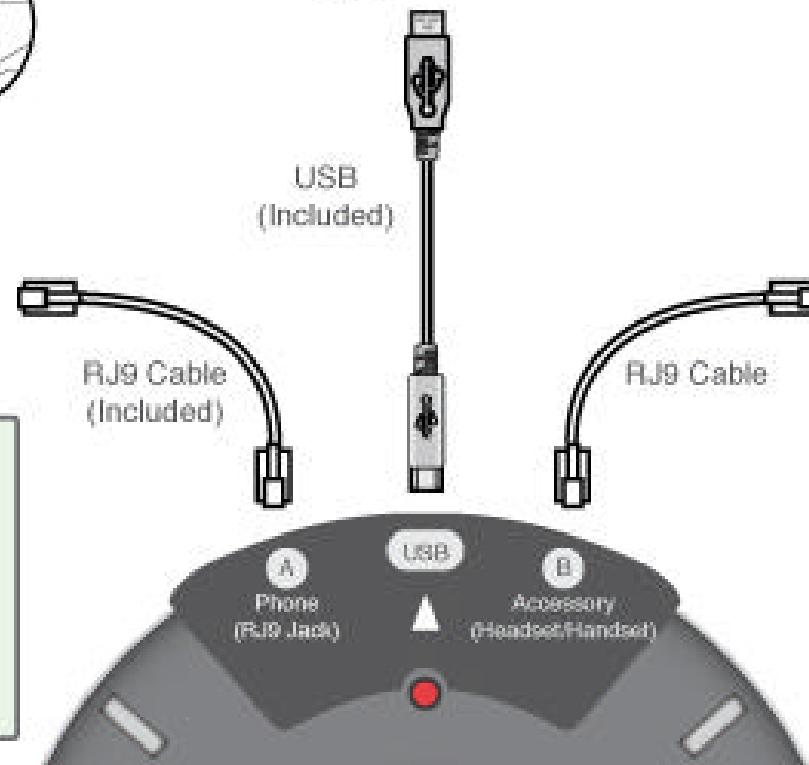


Zoom Switch (USB out)

Plug one end of included USB cable into your computer. Plug the other end into the ZoomSwitch USB port.

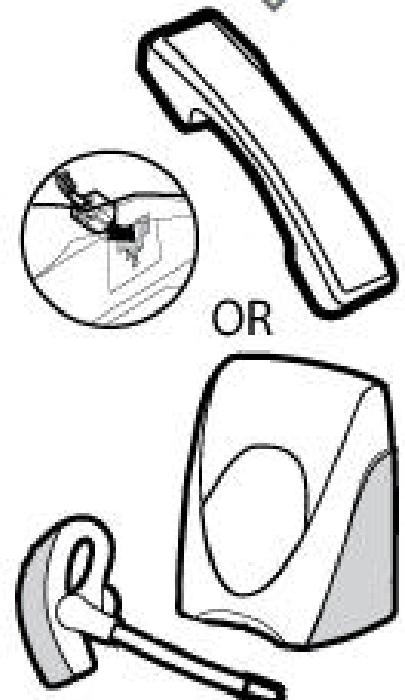


Plug one end of included RJ9 cable into ZoomSwitch Port A. Plug the other end into the handset port on the base of your phone.



If you want to use a headset, plug the RJ9 cable from your headset system or amplifier into ZoomSwitch Port B.

If you want to use a handset only, plug your handset curly cord into ZoomSwitch Port B.



GN SeleCT Switch



PC or telephone at your fingertips!

Challenge:

- All these require the user to manually depress a button at the earpiece and/or at the switcher box. This can be problematic for people with upper extremity limitations.



Solutions

- Tap into tiny headset modules to provide an external switch option



SAJE-Tech OfficeMate multipoint BT, switch adapted

Solutions

- Externally modify headset to provide a larger target and extra leverage to depress switch.



Plantronics Calisto



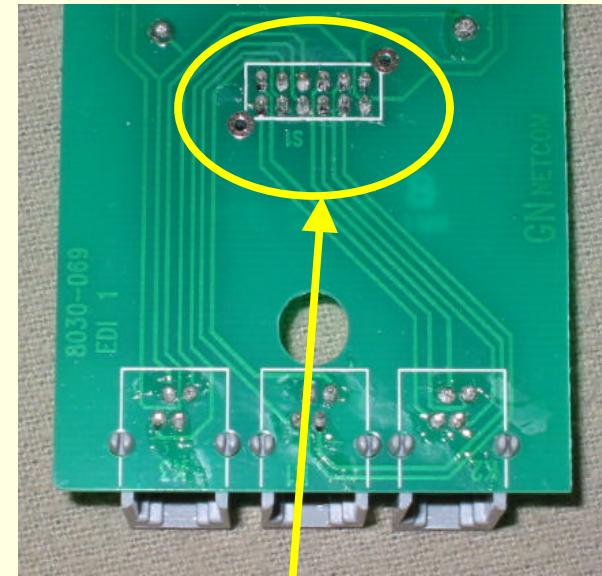
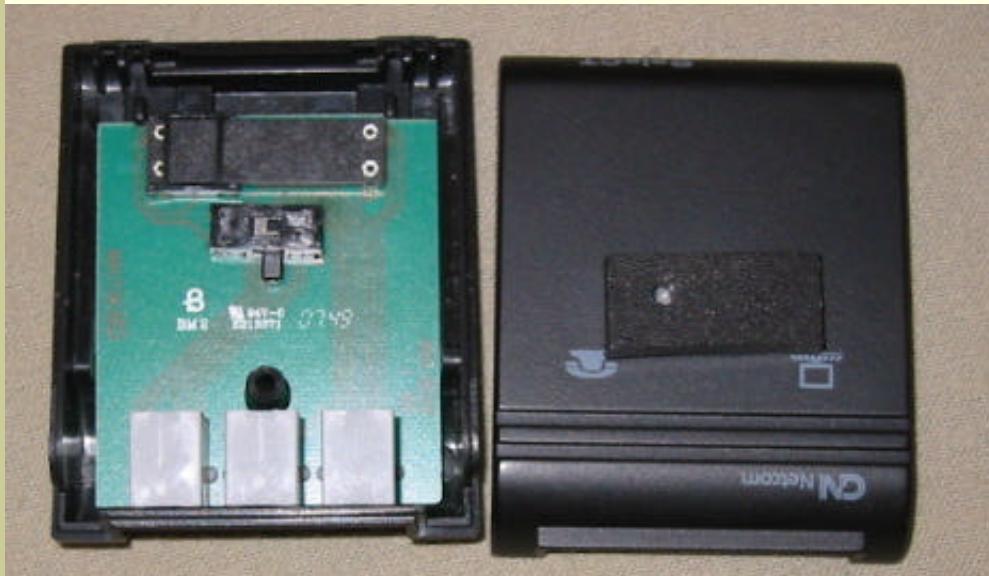


Plantronics CS70N

Solutions

- Modify the switcher box with larger lever, or substitute built-in manual four-pole, double-throw switch with a micro switch-activated relay.

SeleCT Switch



***Contacts for replacing switch
with 4PDT relay***



***Add-on base for attaching
extended lever to rocker switch***

Zoom Switch



Another Challenge

- Systems that include a handset lifter also lift the telephone off-hook when connected to the computer, meaning the user's phone is "busy" while using the computer.



Solutions

- On systems where an electronic hook switch feature is not available and the user cannot physically push the phone handset back down:
- Provide a means to deactivate the phone lifter
 - Include an LED status indicator light
 - Use a supplemental switch in tandem with the switch box switch
 - Employ a relay to control both the signal voltage to the handset lifter and the status light voltage
 - Utilize the power available at headset base







Part of a broader solution with mouthstick to access telephone lines, trackball, etc.