

# LIGHTNING STRIKE PROCEDURES

## TELEPHONE SYSTEM WIRING/ LIGHTNING PROTECTION NOTICE

In order for your telephone headset and computer modem to be protected from lightning strikes that can come through the phone lines, the same surge suppressor/ battery backup box that protects the computer should also be use to protect the telephone equipment.

Make sure your telephone lines are connected this way:

1. From wall jack to battery backup phone LINE IN jack
2. From phone LINE IN jack on UPS to modem LINE IN on the computer
3. From the modem LINE OUT on the computer to the telephone
4. From the telephone handset jack to the Virtuoso
5. From the Virtuoso to the telephone handset

Pay special attention to numbers 1 and 2; this is necessary to protect your system. If you do not have the telephone line going first from the wall jack to the UPS unit, get an extra 7 foot phone cord (or call us) and connect the telephone line through the battery backup UPS BEFORE the line connects to the computer's modem.

## WHAT TO DO IF LIGHTNING STRIKES

### 1. No Dial Tone:

First toggle the headset/ handset button on the Virtuoso headset interface.

- a. If you can hear the dial tone, try placing a call manually.
  - i. If you can place the call manually, the telephone is fine. If not, the telephone is bad.
  - ii. If you can place a call, now try using the computer to dial the telephone (AKA=use autodialing)
  - iii. If the computer can autodial, the modem is fine. If you get an error, or it can't autodial, you need a new modem.
- b. If you cannot hear dial tone with Virtuoso in the telephone position...  
Connect the telephone to a KNOWN working good telephone line (try the station's FAX machine line).
  - i. If you can hear dial tone, this means your telephone line at your sales desk is bad.
  - ii. If you cannot hear dial tone or cannot dial a number, then telephone is bad. (If you have several phones with problems, it's a good idea to disconnect and take all telephones at once to the KNOWN good line since you can do a test on several phones at the same time in just a couple minutes).

### 2. Noise in the headset or telephone:

- a. If you have noise in the headset, repeat the above steps with just the telephone to make sure the noise is just in the headset. If the noise is in the phone, it could be the phone, modem, or the phone line. Repeat the above steps to rule out your own telephone line. If the noise persists on the phone it is not the headset if the noise isn't on the phone alone—it's the headset system.

### 3. Testing the Virtuoso:

- a. The Virtuoso system consists of 4 main components:
  - i. The Power Supply

- ii. The Headset
- iii. The Amplifier Module
- iv. The Multiplier Module (for audio playback/ record)
- b. Testing the headsets
  - Headsets are very unlikely to be affected by a lightning strike.
  - i. If one of telesales positions works, try all the headsets on that position, and determine if any are bad (characterized by either no sound, or noise that prevents you from hearing the person on the other end of the line, or they from hearing you)  
(call the station receptionist to test)
- c. Testing the Multipliers
  - i. Unsnap the fronts of the Virtuoso's (Multipliers) and try them all one-by-one on the good working Virtuoso's. Call the receptionist and play back audio for her
  - ii. Note those Multipliers that cause noise or prevent a call from being completed.
- d. Testing the Amplifiers and Power Supplies
  - In order to test the Amplifiers and Power Supplies for each Virtuoso, you have to "re-learn" the Virtuoso and phone every time.
  - i. Begin by switching out the power supplies onto the known good Virtuoso and each time you will have to "re-learn" the phone and the Virtuoso and adjust the volume settings to verify that the power cords are indeed working correctly.
  - ii. Now swap the amplifiers and re-learn the phone and the Virtuoso and adjust the volume setting to test each Virtuoso.
  - iii. Note those power supplies that are not working and those amplifiers that are not working.

\*\*You will have to re-learn the phone and the Virtuoso anytime that the power source is disconnected from the back of the Virtuoso. This also means you will have to readjust the gray volume button on the back of the Virtuoso so that callers can hear you. The volume settings are defaulted each time the Virtuoso loses power.

**4. Indicate on the following page what replacement items you need from us:**

## Telephone System Lightning Strike Replacement Parts Order Sheet

**[ ] The telephone line(s) were connects through the battery backup surge protector (UPS)**

IF the telephone lines(s) were connected through the UPS unit, but didn't protect our telephone equipment, we'd like to know for future considerations/ investigation into better in-line surge devices.

**Number of bad telephones.** Indicate quantity on the line.  
(please pick only one bad cause per telephone).

- \_\_\_\_\_ Dead no dial tone
- \_\_\_\_\_ Works but noisy
- \_\_\_\_\_ Other

**Number of bad modems.** Indicate quantity on the line.  
(please pick only one bad cause per telephone).

- \_\_\_\_\_ No dial tone/ can't dial
- \_\_\_\_\_ Doesn't interfere with calls, but you can't autodial
- \_\_\_\_\_ Other

**Number of bad headsets.** Indicate quantity on the line.  
(please pick only one bad cause per telephone).

- \_\_\_\_\_ No audio at all
- \_\_\_\_\_ Poor sound quality/ noise
- \_\_\_\_\_ Other

**Number of bad Virtuoso Multipliers.** Indicate quantity on the line. \_\_\_\_\_

**Number of bad Virtuoso power supplies.** Indicate quantity on the line. \_\_\_\_\_

**Number of bad Virtuoso Amplifiers.** Indicate quantity on the line.  
(please pick only one bad cause per Amplifier)

- \_\_\_\_\_ Can't hear anything in the headset or handset
- \_\_\_\_\_ Noise or other (i.e. caller can't hear you)