

Objectives

- ◆ In this session, you will learn to:
 - ◆ Test and troubleshoot display devices.
 - ◆ Maintain and troubleshoot input devices.
 - ◆ Test and troubleshoot adapter cards.
 - ◆ Troubleshoot multimedia devices.
 - ◆ Troubleshoot storage devices.

Troubleshoot Display Devices

- ◆ Following are the common display device issues:
 - ◆ Monitor is dark or power indicator light is not lit.
 - ◆ No image displayed on the monitor.
 - ◆ Monitor flickers or is distorted.
 - ◆ Monitor turns itself off.
 - ◆ Screen goes blank, flickers, or acts bizarrely when a specific application is active.
 - ◆ Monitor is on, but display is all white.
 - ◆ Monitor crackles or whines.
 - ◆ Physical damage, internal or external.

Activity 6-1

Activity on Troubleshooting Display Devices

Maintain and Troubleshoot Input Devices

- ◆ Before maintaining and troubleshooting input devices, you need to understand the following:
 - ◆ Common input device issues
 - ◆ Input device maintenance techniques

Common Input Device Issues

- ◆ Following are the keyboard issues:
 - ◆ Keys stick.
 - ◆ User with physical limitations is currently unable to use the standard keyboard.
 - ◆ No input is sent when keys are pressed.
 - ◆ Keyboard-related message or beep codes given during computer boot.
 - ◆ Wrong characters are displayed on the screen when user inputs information.
 - ◆ Multimedia buttons not working properly.
 - ◆ New keyboard won't plug into the same port as the old keyboard.

Common Input Device Issues (Contd..)

- ◆ Following are the pointing device issues:
 - ◆ Mouse pointer jumps around on the screen.
 - ◆ Mouse works sometimes, but not others.
 - ◆ Mouse is not working.
 - ◆ USB mouse is not working properly.

Input Device Maintenance Techniques

- ◆ Following are the various techniques for input device maintenance:
 - ◆ Occasionally disconnect keyboards and mice and gently wipe them clean.
 - ◆ Clean loose debris from inside a trackball or mouse.
 - ◆ Gently shake an upside-down keyboard to remove debris.
 - ◆ Provide a clean, flat mouse pad or other mousing surface.
 - ◆ To avoid spills that can damage input devices, keep food and liquids away from computer systems.
 - ◆ Replace cordless device batteries regularly.

Activity 6-2

Activity on Maintaining And Troubleshooting Input Devices

Troubleshoot Adapter Cards

- ◆ Following are the common adapter card issues:
 - ◆ Adapter seems to work fine until you replace the system case.
 - ◆ Card works fine in another slot, but not in particular slot.
 - ◆ Card tests fine and slot tests fine, but services are unavailable.
 - ◆ Services provided by the adapter or a device connected to the adapter work intermittently.

Activity 6-3

Activity on Troubleshooting Adapter Cards

Troubleshoot Multimedia Devices

- ◆ Following common multimedia device issues:
 - ◆ No sound when speakers worked fine before.
 - ◆ No sound when speakers never worked.
 - ◆ Microphone won't work.

Activity 6-4

Activity on Troubleshooting Multimedia Devices

Troubleshoot Storage Devices

- ◆ Before troubleshooting storage devices, you need to understand the following:
 - ◆ Common storage device issues
 - ◆ Parallel ATA drive troubleshooting tips
 - ◆ SCSI drive troubleshooting tips

Common Storage Device Issues

- ◆ Following are the hard disk drives issues:
 - ◆ Error message at booting time.
 - ◆ POST error codes.
 - ◆ Can't read from or write to the drive.
 - ◆ Drive is making grinding noises.
 - ◆ Data is frequently being corrupted.
 - ◆ Utilities are not running properly.
 - ◆ Hard drive is slow.

Common Storage Device Issues (Contd.)

- ◆ Following are the optical drives issues:
 - ◆ Can't insert or remove disk.
 - ◆ Disk tray stuck.
 - ◆ Cannot read disk.
 - ◆ No sound.
 - ◆ Intermittent problems.
 - ◆ Can't view DVD movies.
- ◆ Following are the floppy disks and tape drives issues:
 - ◆ Read/write problems.
 - ◆ Unable to insert a floppy into an internal tape drive.
 - ◆ Unable to insert a tape into an internal tape drive.

Parallel ATA Drive Troubleshooting Tips

- ◆ Following are the tips for troubleshooting PATA drive:
 - ◆ For one drive on a channel, configure as Single or Cable Select.
 - ◆ For two drives per channel, configure as Master and Slave, or Cable Select.
 - ◆ When removing a drive, configure remaining drive as Single.
 - ◆ Use compatible drive modes.

Parallel ATA Drive Troubleshooting Tips (Contd..)

- ◆ Following are the tips for troubleshooting SATA drive:
 - ◆ Make sure controller card is supported.
 - ◆ Make sure controller driver is latest version.
 - ◆ Install driver manually if not detected.
 - ◆ Load controller to bypass drive size limitation.
 - ◆ Use jumpers to limit transfer rate if drive transfer rate higher than controller rate.

SCSI Drive Troubleshooting Tips

- ◆ Following are the tips for troubleshooting SCSI drive:
 - ◆ Always check IDs and termination.
 - ◆ Handle SCSI cable carefully.
 - ◆ For a bootable SCSI disk, enable the SCSI BIOS.
 - ◆ Use proper cables.
 - ◆ Use proper connectors.

Activity 7-1

Activity on Troubleshooting Hard Drive Problems

Activity 7-3

Activity on Troubleshooting Optical Drive Problems

Summary

- ◆ In this session, you learned that:
 - ◆ Following are the common adapter card issues:
 - ◆ Card won't work in one slot.
 - ◆ Card and slot test fine, but services unavailable.
 - ◆ Following are the common display device issues:
 - ◆ Power issue.
 - ◆ Connection or settings issue.
 - ◆ Driver, magnetism, or interference issue.
 - ◆ Color quality or resolution issue.
 - ◆ Following are the input device maintenance techniques:
 - ◆ Clean loose debris from inside a trackball or mouse.
 - ◆ Gently shake an upside-down keyboard to remove debris.

Summary (Contd.)

- ◆ Following are the common multimedia device issues:
 - ◆ No sound when speakers worked fine before.
 - ◆ No sound when speakers never worked.
 - ◆ Microphone won't work.
- ◆ Following are the common storage device issues:
 - ◆ Boot problems in hard disk drive.
 - ◆ Disk tray stuck in optical drives.
 - ◆ Read/write problems in floppy and tape disk drive
- ◆ Following are the parallel ATA drive troubleshooting tips:
 - ◆ When removing a drive, configure remaining drive as Single.
 - ◆ Use compatible drive modes.
 - ◆ Install driver manually if not detected
- ◆ Following are the SCSI drive troubleshooting tips:
 - ◆ Check IDs and termination.
 - ◆ Handle SCSI cable carefully.