Affixed to the deck **17** and inner wall **22** is a motor **56** that rotates a gear **58** when engaged. The motor **56** is electrically connected to the microprocessor **24** by a line **60** that sends signals to activate the motor **56**. Surrounding the gear **58** is a belt **62** that travels vertically along the inner wall **22** and wraps around a pulley wheel **64** that is affixed to the rear wall **18**.

Affixed to the outer surface of the belt **62** that faces toward the center of the space enclosed by housing **14** is a horizontal arm **66** having a vertical aperture **68** located in the center of the horizontal arm **66**. The underside of the horizontal arm **66** has three suction members **70** (two visible) creating sufficient suction to hold one disk against the underside of the horizontal arm **66**.

A vacuum hose **72** connects to the suction members **70** and runs along inner wall **22** where it connects with vacuum regulator **74**. The vacuum regulator **74** is connected to an external hose **76** that is connected to an external vacuum pump (not shown). The vacuum regulator **74** is electrically connected to the microprocessor **24** by a line **78** that sends signals to activate the vacuum regulator **74**, allowing for a suction force to appear at the end of the suction members **70**.

A female power receptacle **80** allows for attachment of an electrical cord (not shown) providing standard 120V AC to a transformer **82**. The transformer **82** supplies power to components throughout the main copy assembly **20**.

Located on the rear wall **18** are one or more electric fan members **86** that draw in air to ventilate the main copy assembly **20** and prevent heat build-up. An air filter **88** is positioned behind the electric fan members **86** and filters the air drawn in by the electric fan members **86** before the air travels through the interior of the main copy assembly **20**. The filtered air then exits the interior of the main copy assembly **20** through vent members **90** located on inner wall **16**.

In the preferred embodiment of FIG. **1**, the copy unit **20** has three disk spindle members **34**. In such a configuration disk spindle member **34***a* hold s blank CD-R disks, disk spindle member **34**b holds burned CD-R disks, and disk spindle member **34***c* holds defective burned CD-R disks. The stationary disk spindle **38** is designated as the disk spindle member holding one or more master compact disks.

Referring to FIGS. **2**A through **2**E, a flowchart of the procedures performed in a disk copy operation, are shown beginning with START in item step **190**. The logic necessary to perform a disk copy operation is programmed into the computer software on the host computer and programmed into the microprocessor located inside the copy unit.

A user begins a disk copy operation by loading master disks on stationary disk spindle **38** (also designated as the master disk spindle) and loading blank recordable disks onto disk spindle member **34***a*. The user then supplies power to the copy unit **20** and starts the computer software located in the host computer **12**. These initialization subprocedures are indicated in item step **200**. A display **13** connected to the host computer **12** then prompts the user for information regarding the selection of the disk spindle members for the blank and burned CD-R disks. The user also selects a disk output spindle that will temporarily hold master disks after the data transfer from each master disk to the host computer **12**. The user also supplies instructions indicating the tracks on the master disks to be copied. This operation is indicated in item step **210**.

When first powered on, the internal microprocessor **24** sends electrical signals to test the operation of the arm **66**, as indicated in item step **220**. The microprocessor **24** sends a set of flags back to the computer software to signal the status of the hardware located on the copy unit **20**, as indicated in item step **230**. If the computer software receives a status flag indicating hardware failure, the computer software issues a display error message for the user to decode, and the copy process is terminated, as indicated in item step **240**.

If the computer software receives status flags indicating the hardware is operational, the computer software sends instructions to the microprocessor that comprise a data acquisition subprocedure. The beginning of the data acquisition subprocedure is indicated in item step **250** and comprises item steps **260** through **340**.

In item step **260**, the computer software checks if a disk drive on the host computer contains an image of the master data. If an image file already exists, control of the software is transferred to item step **360**. Otherwise, control of the computer software is transferred to item step **270**.

As indicated in item step **270**, the computer software first compares the number of disk drives to the number of master disks loaded on master disk spindle **38**. If the number stacked recordable disk drive members **42** is greater than or equal to the number of master disks, the computer software sends a command set to the microprocessor **24** to transfer each master disk to an available stacked recordable disk drive **42**, as indicated in item step **280**.

The computer software then sequentially issues read commands to each stacked recordable disk drive member **42** containing a master disk and transfers the source data from each master disk to the host computer **12**. These commands are summarized in item step **290**. Once the data transfer process is completed, the computer software sends a command set to the microprocessor to transfer each master disk back to the master disk spindle **38**, as indicated in item step **300**, and the data acquisition subprocedure is complete.

If the number of stacked recordable disk drives **42** is less than the number of master disks, the computer software must loop through item steps **310** through **340** until all master disks have been transferred to an available stacked recordable disk drive **42**.

This loop begins when the computer software sends a command set to the microprocessor **24** to transfer the maximum number of remaining uncopied master disks held by the master disk spindle **38** to the stacked recordable disk drive members **42**, as indicated in item step **310**. Then in item step **320**, data is transferred from the master disks to the host computer **12** in the same manner as in item step **280**.

After all data from the master disks loaded in stacked recordable disk drives **42** has been transferred to the host computer **12**, the master disks are temporarily transferred to a disk spindle member spindle **34** as indicated in item step **330**.

The computer software completes this loop as indicated in item step **340** by comparing the number of uncopied master disks with zero, and returning to the top of the loop at item step **310** if any uncopied master disks remain. Once the data acquisition subprocedure is completed, all master disks are transferred back to the stationary disk spindle member **38**, as indicated in step **345**, and control of the computer software is transferred to the beginning of the data transfer subprocedure, indicated as item step **360**.

At the beginning of the data transfer subprocedure, the computer software will, if necessary, reformat the image of the source data located on the hard drive of the host computer to ensure optimal recording speed and accuracy. This computation is indicated in item step **370**. Item box **375**