

CPU G NEWSLETTER



Volume 12 Number 1

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January , 1993

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MINUTES FOR MONTHLY MEETING:

DECEMBER 7, 1992

The meeting was called to order promptly at 7pm.

Both the secretary's and treasurer's reports were approved in short order.

Rich Lindway could not attend the meeting but he had seen the M.U.N.C.H. maintenance tape and wanted to pass on some suggestions, namely, 1)not to use a screwdriver to clean contacts but to use the gray cardboard found on backs of tablets cut to the width of the contacts; 2) alcohol can be used if it is 91% isopropyl; and 3) changing the VDP resistor didn't make that much difference and could do some damage in changing it.

By 7:10 the meeting was adjourned and the Christmas party began, with goodies contributed by members.

Respectfully submitted,
Dottie Swartz, Secretary

BEST WISHES FOR A HAPPY NEW YEAR FROM THE OFFICERS
OF YOUR CLUB

HOW TO BUY NEW FLOPPY DISK DRIVES

By Richard Roseen

1. Check for quality the main mechanical parts of the drive. They should be located on a solid die cast piece of metal. In other words, solid metal structure throughout as the base of the drive that holds the motors, solenoids, and other movable parts. Avoid any drive put together with metal plates.

2. New drives should be sold to you in antistatic plastic wrap (usually tinted looking) and may have a fitted styrofoam container, will always be half height, never full height, at least two sided, at least capable of 360k double sided double density. 720k 80 track drives are now getting rare due to the newer 1.2 meg. drives. 1.2 meg. drives can be useable at 720k (more on that later). New 3.5" drives are 720k or 1.44 meg. They should follow the rule of die cast body as above also. Newer 3.5" drives will have a thickness much less than a half height 360k drive. Only the new Myarc HFDC has promise of possible drivers to support 1.44 meg. 3.5" or 1.2 meg. 5.25" use. Certain CorComp controllers have floppy disk controller chips that can handle the 1.44 meg. data rate, but the device drivers who knows. No older Myarc disk controller will be fully capable of the 1.44 meg. data rate because of the FDC chips they use. The above also pretty much applies to the use of 1.2 meg. 5.25" drives. The 5.25" 1.2 meg. and 3.5" 1.44 meg. drives can be used for 720k storage with the eprom driver support of the two Myarc controllers; however, if disk rotation speed cannot be jumpered through lack of information on the drive options, you would be forced to live with odd ball 720k, format disks only readable by someone else with 720k capability and 3.5" 1.44 meg. or 5.25" 1.2 meg. drives.

3. Newest drives always have a directly driven disk rotation motor. This means you will not see any belt driven disk rotation.

4. Warrantee's: Ask what the manufacture warrantee is. The warrentee should be at least one year from date of purchase. Also, check to see what the seller's quarantee is on the drive. Typically, the seller's guarantee is full replacement for 30 to 90 days, in addition to the one year manufactures warrentee. The warrantee will give you plenty of time to verify that you do not have a lemon drive.

5. Get the seller's business card with address and phone, Get a receipt in which you and the seller have a copy which must contain the serial number of drives bought and date as well as the cost. If the seller's address is on the receipt, clearly that will substitute for the business card. These requirements are necessary for the manufacture's warrentee and so you can later find the seller or manufacture for information. It is not always possible that the seller has info on the drive, but it will not hurt to ask for data manuals, or schematics.

BUY NEW DISK DRIVE CONTINUED

6. For quality, look for heads mounted on assemblies that are mounted to move solidly, not jerkily such as on two rails instead of one. For low mechanical noise or low clattering (increased reliability and longer life), look for solid movement of the head assembly by a stepper motor through two following examples: Stepper motor that drives a screw shaft or two straps that wind on or off the stepper motor shaft and on or off the head assembly, as the heads move in either direction. Heads take the biggest beating in floppies and more often involved in alignment of a drive. An example of the stepper motor that drives screw shaft is the 3.5" 720k Chinnon and Fujitsu. An example of the strap that winds on or off the stepper motor shaft and on or off the head assembly is the Mitsumi 360k 5.25" drives.

7. 3.5" drives can be hooked up bare without the 5.25" bracked with 34 pin socket IDC (insertion displacement connector) connected to the square pins on the 3.5" drive. If this is done, then the odd ball but findable 4 pin 3.5" drive power connector must be used. These are odd ball because they are not the same as the 5.25" drive power connectors. These connectors not have a polarity tab and can make difficult getting the proper plarity or orientation of the connector to plug in. Go for the works, get the 5.25" bracket and the card edge adapter board that includes standard 5.25" power connector. These adapters may have a jumper for use on PC, XT, or AT clones. Be sure to select XT.

8. Unless you have help from a Guru or user who has successfully installed and used the same drives, then get info from the seller or manufacture on drive selects, other jumper options or features, and resistor packs. On some new drives, the resistor pack is permanently soldered to a high density logic board with a jumper to disable or enable the use of the resistor pack for installation as lesser drive or drives on the chain. If such a drive is the last drive in a chain whose other resistor packs can be removed, there is no problem.

9. Buy or at least shop for any drive or power connectors or power supplies or cases as you may or may not need depending on what you already have.

10. The least expensive power supplies, drive connectors, cables, etc. are sold by vendors selling chips and electronic parts, not by the dealers of floppy drives. The chip parts dealer will have a lot of the necessary parts for homebuilt linear supplies at the lowest total cost of parts. A general list for a linear supply is a transformer, AC line cord and plug, switch, filter capacitor rated above 2200uf (micro farads), bridge rectifier or diodes, linear regulators both 5 and 12 volt.

BUY NEW DISK DRIVE CONTINUED

11. Power requirements: Some 3.5" drives require less than 1 amp for 5 and 12 volts. Some 3.5" drives are very low power and some require only a 5 volt supply. 3.5" drives require the least power. New 5.25" half height drives never require more than 1 amp on 5 and 12 volt lines and can be as low as 1/2 amp. on the 5 and 12 volt line. Add the amperage required for each drive for each and 12 volt line to check your power supply needs for your drives. Drives can be powered separately because the 34 pin cable will carry the common logic signal ground between all drives on the train and the computer. If building a linear supply, be sure the transformer, bridge rectifier diodes and linear regulator exceed your amperage needs. The transformer should be at least 12.6 VAC RMS and 6.3 RMS (transformers are commonly rated with RMS voltage at their secondaries).

Written by Richard Roseen

This information was kept as general as possible so as to guide the 4A buyer. How to buy used floppy drives could never be this informative. Anyone wishing to document their experiences with a specific drive or drives is invited to do so by attaching this general article, an archived document.

My preferences are Mitsumi drives 3.5" and 5.25" any density. These drives are the most quiet drives you WILL ever hear. They have a jumper block to enable & disable the resistor pack though have not verified the identity of the jumper as of yet. Another preference is the NEC 1036 3.5" 720k drives. They are small, quiet, and durably solid, and like any other 3.5" drive lightweight and low power. Also, I recommend Chinnon 3.5" 720k drives. These are much the same as the NEC drives except for screw shaft stepper motor and extremely low power and 5 volt only operation make it better. These drives may be the lowest power in the industry.

This article was copied from September 1992 newsletter of the BOSTON COMPUTER SOCIETY

WE WILL LOOK FOR

YOU

AT THESE MEETINGS

Circle your calendar with these meeting dates for 1993:

JANUARY	5,1993	JULY	5
FEBRUARY	1	AUGUST	2
MARCH	1	SEPTEMBER	11 SATURDAY
APRIL	5	OCTOBER	4
MAY	3	NOVEMBER	1
JUNE	7	DECEMBER	6 *-CHRISTMAS -*

All meetings begin at 7pm except Saturdays 12 noon at the CAMP HILL SHOPPING MALL COMMUNITY ROOM. The Group equipment will be UP and READY for use at approximately 1hr prior to meeting time.

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NEXT MEETING: FEBRUARY 1st, 1993 at 7pm *-MONDAY-*