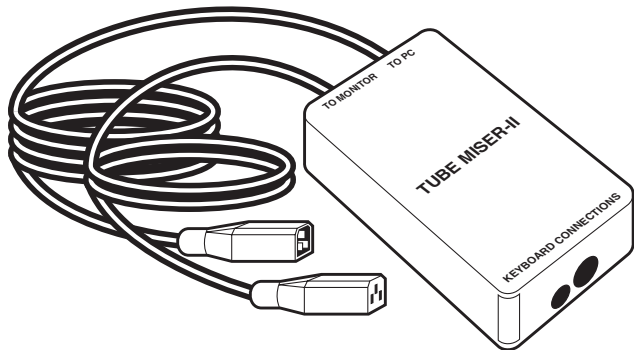




Tube Miser-II



CUSTOMER SUPPORT INFORMATION

Order **toll-free** in the U.S. 24 hours, 7 A.M. Monday to midnight Friday: **877-877-BBOX**
FREE technical support, 24 hours a day, 7 days a week: Call **724-746-5500** or fax **724-746-0746**
Mail order: **Black Box Corporation**, 1000 Park Drive, Lawrence, PA 15055-1018
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**FEDERAL COMMUNICATIONS COMMISSION
and INDUSTRY CANADA
RADIO FREQUENCY INTERFERENCE STATEMENT**

Class B Digital Device. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. If this equipment does cause harmful interference to radio or telephone reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult an experienced radio/TV technician for help.
-

Caution:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To meet FCC requirements, shielded cables and power cords are required to connect this device to a personal computer or other Class B certified device.

This digital apparatus does not exceed the Class B limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.

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Contents

Chapter	Page
1. Specifications	1
2. Quick Setup	2
2.1 Introduction	2
2.2 Package Contents.....	2
2.3 System Requirements	2
2.4 Hardware Installation	3
2.5 Time Delay	4
2.6 Software Installation	5
3. Operation.....	7

1. Specifications

Compliance —	FCC Class B, UL®
Switching Voltage —	100 to 240 VAC
Switching Power —	500 watts/500 VA max.
Switch Cycles —	200,000 minimum
Time Delay —	15 or 75 seconds; 2.5, 5, 10, 20, or 40 minutes
Accuracy —	10% ±3 seconds
Supply Voltage —	4.7 to 6 V
Supply Current —	110 mA max.
Operating and Storage Temperature —	5° to 149°F (-15° to +65°C)
MTBF —	50,000 hours
MTTR —	15 minutes
Size —	1.7"H x 2.8"W x 4.7"D (4.3 x 7.1 x 11.9 cm)
Weight —	0.3 lb. (0.1 kg)

2. Quick Setup

2.1 Introduction

The Tube Miser-II is designed to save money, reduce screen burn, and prolong the working life of the monitor by automatically turning it off when not in use.

2.2 Package Contents

Before beginning, check to make sure you have all of the following components for the Tube Miser-II. If you don't, contact Black Box.

- (1) Tube Miser-II unit
- (1) PS/2® (6-pin mini DIN/5-pin DIN adapter cable) AT® keyboard cable
- (1) 3.5" software diskette
- This user's manual

2.3 System Requirements

- 512 bytes of memory (RAM or high memory)
- DOS 3.x or later
- Windows™ 3.x (if installed)
- 3 KB hard-disk space

2.4 Hardware Installation

Installing the Tube Miser-II is simple. No special tools are required.

1. Turn off your monitor and PC.
2. Unplug your keyboard from the PC and plug it into the open receptacle on the Tube Miser-II labeled “Keyboard Connections.” Connect the supplied 1-m (3.3-ft.) cable to the PC keyboard socket and the other end to the other “Keyboard Connections” socket. Unplug the monitor AC power cable and plug it into the “To Monitor” outlet. Attach the supplied cable to the “To PC” outlet, and plug the other end into the AC monitor outlet on your CPU.
3. Set the DIP switches on the bottom of the Tube Miser-II to the desired shut-off delay period. (See the chart on page 4.)

Delay Period	Switch 1	Switch 2	Switch 3	Switch 4
15 sec.	U	U	U	U
75 sec.	U	U	U	D
2.5 min.	U	U	D	D
5 min.	U	D	D	D
10 min.	D	U	U	D
20 min.	D	U	D	D
40 min.	D	D	D	D

U=up, D=down

Turn on your PC and monitor—installation is complete.

2.5 Time Delay

Finding the appropriate time delay may require some experimenting. The balance between saving energy and not switching the monitor off unnecessarily depends on how the PC is used. Read the following sample scenarios.

Infrequent Use—If the PC is only used occasionally (as an inquiry terminal that is accessed by different users intermittently throughout the day, for example), set the switches for a 5-minute delay or less.

Frequent Use—If the PC is used exclusively by one person for intensive typing or programming, try setting the delay for 20 or 40 minutes. This way the monitor is always available when required, but it still switches off after work periods.

Test Mode—When Tube Miser-II is first installed, test to make sure it's working properly. Set the time delay for 15 seconds. Continuous typing keeps your monitor from switching off, but any break longer than 15 seconds shuts off the monitor power.

2.6 Software Installation

Unlike the keyboard, the mouse is not connected to the Tube Miser-II. A PS/2 (6-pin mini DIN) mouse uses the same keyboard timing circuit and will be monitored by the Tube Miser-II. If you are using a serial mouse connected to COM1 or COM2 ports, then you must install the ECOMOUSE.EXE software, which controls the Tube Miser-II by monitoring mouse operation through the COM port. To install ECOMOUSE.EXE software:

- 1) Select disk drive A or B. Insert the diskette.
- 2) Type Install.
- 3) The program will ask you for a Directory, a COM Port Number, and automatic updating of the CONFIG.SYS file. We recommend using the default settings.
- 4) The program will install ECOMOUSE.EXE in your CONFIG.SYS file as a device driver, along with the required parameter for the selected COM port number for the mouse.

For example:

```
DEVICE = C:\ECOMOUSE.EXE 1  
(monitors COM1 activity)
```

```
DEVICE = C:\ECOMOUSE.EXE 2  
(monitors COM2 activity)
```

ECOMOUSE.EXE can also be loaded into high memory by using the DEVICEHIGH (or equivalent) command. If you still need help installing the software, call Technical Support.

3. Operation

Tube Miser-II will continue to operate automatically without further action from you. It will turn off power to your monitor any time there is no keyboard or mouse action for the period of time you specified with the DIP-switch settings.

When the monitor is off, all you have to do to begin working is press any key on the keyboard, move the mouse, or press a mouse button. When using the keyboard to reactivate your monitor, try to use the Ctrl or Shift key to avoid inserting unwanted characters in your document or causing an unexpected action.



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