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# About SummaSketch III Help

## Part Number 37-902549-01, Rev. C

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## Radio Frequency Interference

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential 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. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more 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.
- Reorient or coil cables.
- If necessary, consult the dealer or an experienced radio/television technician for additional suggestions.

**Important:** Any cables the user adds to the device must be shielded to be in compliance with the FCC standards. Any unauthorized modification to this device could result in the revocation of the end user's authority to operate this device.

### Canada

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

*Le présent appareil numérique n'émet pas bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.*

## Certifications

In addition to **FCC Class B compliance**, the SummaSketch III series, Model MM III tablet and/or accessories are certified by UL, CSA and TUV. The equipment has been tested to the International Safety standards IEC-950 and EN 60950.

German EMI Compliance, Class B, General Permit: GTCO CalComp, Inc. hereby certifies that the equipment (SummaSketch III Series, Model MM III) is in compliance with the requirements of BMPT Vfg 243/1991, RFI suppression. The German Postal Services have been advised that this device is being put on the market and that they have been given the right to inspect the series for compliance with the regulations. This equipment has been tested concerning compliance with the relevant RFI protection requirements both individually and on a system level (to simulate normal operating conditions). However, it is possible that these RFI requirements are not met under certain unfavorable conditions in other installations. It is the user who is responsible for compliance of his or her particular installation. **WARNING: COMPLIANCE WITH APPLICABLE REGULATIONS DEPENDS ON THE USE OF THE I/O CABLES SUPPLIED BY SUMMAGRAPHICS. IT IS THE USER WHO IS RESPONSIBLE FOR INSURING THAT THE PROPER CABLES ARE USED.**

This equipment has also been tested and shown to be in compliance with the requirements of EN55022 and CISPR22.

Hiermit wird bescheinigt, dass die Digitizer SummaSketch III und SummaSketch III Professional in Uebereinstimmung mit den Bestimmungen der BMPT-Amtsbl. Vfg 243/1991 funkentstoert sind.

Dem Zentralamt fuer Zulassungen im Femmeldewesen wurde das Inverkehrbringen dieser Geraete angezeigt und die Berechtigung zur Ueberpruefung der Serie auf die Einhaltung der Bestimmungen eingeracumt.

Wenn die Digitizer zusammen mit anderen Anlagen betrieben werden, muessen diese ebenfalls der Amtsbl. Vfg 243/1991 entsprechen.

## Warranty for the United States and Canada

GTCO CalComp warrants to the original end user (as evidenced by a copy of the receipt and registration card that has been returned to GTCO CalComp within thirty [30] days of purchase date) that the product will be free from defects in materials and workmanship for a period of twelve (12) months from the date of purchase by the end user. GTCO CalComp, in its sole discretion, may either repair or replace the defective product. Cursors, pens, options, cables, power supplies, upgrade and accessory items are also covered by a twelve (12) month warranty.

All warranty service will be performed at the GTCO CalComp digitizer factory. The purchaser is encouraged to visit the Company's web site ([www.gtcocalcomp.com](http://www.gtcocalcomp.com)) where current driver releases as well as comprehensive technical support, troubleshooting and FAQs can be found. The purchaser is required to call GTCO CalComp's Technical Support and Service Department at (480) 443-2214 for CalComp and Summagraphics brand products and (410) 381-6688 for GTCO and Science Accessories brand products to receive a Returned Material Authorization (RMA) number prior to returning any product thought to be defective. Purchaser is responsible for freight charges to the GTCO CalComp factory under this warranty.

A nominal warranty processing and handling fee will be charged after the first 90 days of use, calculated from the date of purchase by the original owner. This payment must be made by Credit Card prior to issuance of the RMA.

This warranty only applies to equipment purchased in the United States and Canada. For equipment purchased outside of the United States and Canada contact your local dealer or distributor.

This warranty does not cover: (1) consumable parts (*i.e.*, batteries, pen tips, *etc.*); (2) products with serial numbers that cannot be read; (3) products which have been operated with incompatible consumable parts or accessories. Warranty will not cover damage resulting from: (1) abnormal conditions including but not limited to accidents, fire, water, *etc.*; (2) neglect or misuse of the product; (3) causes external to the product including but not limited to failure or fluctuation of electrical power, air conditioning, humidity control, *etc.*; (4) maintenance, repairs, alterations, or modifications performed by any person or entity other than GTCO CalComp.

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SOME STATES DO NOT ALLOW FOR THE EXCLUSION OR LIMITATION OF CERTAIN LIABILITIES, SO THE ABOVE LIMITATION MAY NOT APPLY. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH VARY FROM STATE TO STATE. FURTHERMORE, THIS WARRANTY MAY VARY IN OTHER COUNTRIES WHERE THE PRODUCT IS SOLD OR DISTRIBUTED.

# About Your SummaSketch Tablet

## Topics discussed in this section:

Overview

Caring for Your SummaSketch Tablet

Guidelines For Installing the Drivers/Utilities

## Overview

### About this Manual

This manual is your guide to using your SummaSketch tablet, and the SummaSketch Drivers/Utilities software. It assumes that you have experience with basic DOS tasks such as changing directories, copying files, and creating batch files. If you are unfamiliar with any of these tasks, refer to a DOS user's manual before continuing.

### Introduction to SummaSketch

Below is information to get you acquainted with your new SummaSketch tablet.

#### What are the SummaSketch tablet formats?

Your tablet can operate in either of two formats:

- MM/SummaSketch Format
- UIOF/Microgrid Format

Your tablet automatically defaults to one of these formats, depending on which stylus or cursor is attached when your tablet is powered up.

#### If you have a:                      Then your default tablet format is:

Stylus	MM/SummaSketch
Four-button cursor	MM/SummaSketch
Sixteen-button cursor	UIOF/Microgrid

#### How do I change between formats?

There are two way to change your tablet format:

- Change your stylus or cursor and repower the tablet
- Use the software utilities provided on the SummaSketch Drivers/Utilities diskette to override the default tablet formats.

#### What are the SummaSketch drivers?

A SummaSketch driver is a program that lets your SummaSketch tablet communicate with your application. For your tablet to act as an input device, it must be able to communicate with your software. A driver converts tablet data into information that can be read, understood, and used by your application.

#### Are there separate drivers for the different tablet formats?

Drivers are written for specific tablet formats and work with these tablet formats only. Be sure to select the proper driver within your application software to match your tablet format.

#### What are the SummaSketch Utilities?

The SummaSketch Utilities allow you to do the following:

- Reset your tablet, without turning the power on and off.
- Switch between MM and UIOF formats.
- Test your tablet to ensure that it is working properly.

## When do I need to use the Utilities?

- **To reset the tablet.** You may need to reset your tablet when switching between some applications. Applications configure the tablet for their own needs. Using one of the tablet reset utilities—MMRST (used with tablets configured for MM/SummaSketch format) or UIOFRST (used with tablets configured for UIOF/Microgrid format)—clears the tablet for a new configuration. (Note that you can also reset the tablet by repowering it.)
- **To change default tablet parameters.** Some applications will only support either the MM/SummaSketch format or the UIOF/Microgrid format. For example, if you have a tablet configured for MM/SummaSketch format, and you wish to use an application written for the UIOF/Microgrid format, you must change your default tablet format from MM to UIOF.

### There are two utilities for changing between the MM and UIOF formats:

- MM.COM** This utility changes the format of a SummaSketch tablet to MM/SummaSketch. Use if you have a 16-button cursor attached to the tablet, or if your tablet has been previously configured for UIOF/Microgrid format.
- UIOF.COM** This utility changes the format of a SummaSketch tablet to UIOF/Microgrid. Use if you have a stylus or four-button cursor attached to the tablet, or if your tablet has been previously configured for MM/SummaSketch format.

## Installing the SummaSketch III Tablet

All cable connections are made at the rear of your SummaSketch tablet. Turn off your computer and make sure the tablet power switch is in the Off position.

- Insert the small end of the serial cable into the socket labeled **I/O** on the SummaSketch tablet. Connect the wide end of the serial cable to the computer's serial communication port. Tighten the thumbscrews.
- Insert the power cable into the jack on the back of the serial cable connection on the computer. Connect the power supply end to a power outlet or power strip.
- Insert the pointing tool connector into the socket on the tablet labelled **POINTER**.

## Caring for your SummaSketch III Tablet

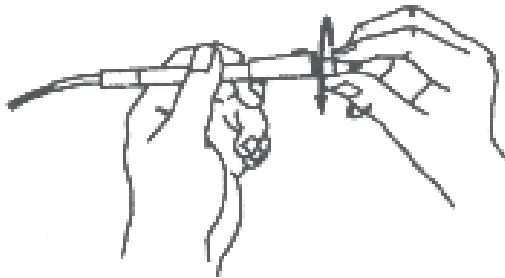
### Caring for SummaSketch III

Below are basic guidelines for the care and maintenance of your SummaSketch tablet.

- Turn the tablet and computer off and unplug them both before cleaning. Also, unplug the power supply.
- To clean your SummaSketch tablet, wipe with damp, lint-free cloth and a mild detergent solution. Do not use abrasive cleaners on the tablet surface.
- Never disassemble the SummaSketch tablet. There are no user-serviceable parts inside.
- When you turn off the computer, also turn off the tablet.
- Never scratch or mar the tablet surface.
- Never immerse the SummaSketch tablet or accessories in liquid.
- Do not trace through metal or metallized paper. Do not use metal objects, such as metal or metal-edged rulers, on the tablet.

### Changing the Stylus Tip

The stylus is shipped with a non-marking refill tip already installed. To change the stylus tip, unscrew the cap and pull the refill straight out.



- Insert the new refill and screw on the cap.

Non-marking stylus tips are available from your Summagraphics dealer, or directly from Summagraphics.

## Guidelines for Installing the Drivers/Utilities

The Drivers and Utilities, found on the TabletWorks CD in the **Archives** directory, are used when the tablet needs to be reset. In the Archives directory, select the **TabletWorks CD V5\_2** directory, and the **SGDOSUTL** subdirectory. The two subdirectories of interest to you are described below:

- **ADIDVR** contains the MM format and UIOF format drivers for Autodesk's applications (both real mode and protected mode versions).
- **UTILITY** contains the following utilities: MMRST, UIOFRST, MMTEST, MM, UIOF, AND SEND.

# Summagraphics Drivers

## Topics discussed in this section:

Autodesk Application Drivers

Summagraphics Tablet Driver/Mouse Emulator

## Autodesk Application Drivers

### MM/SummaSketch Format Drivers

Use these drivers if you have configured AutoCAD for a real or protected mode ADI driver and your tablet has a four-button cursor or stylus attached.

**Note:** Summagraphics' ADI drivers are less likely to encounter initialization problems when "shelling out" of AutoCAD, therefore, Summagraphics recommends using the ADI drivers supplied on the Drivers/Utilities disk instead of AutoCAD's drivers.

Summagraphics provides both a protected mode driver and a real mode driver:

- **DGPSUMMA.EXP (protected mode driver)** Use this driver if you have a release 11 or 12 version of the 386 DOS extender version of AutoCAD and wish to take advantage of AutoCAD's protected mode capabilities.
- **DGSUMMA.COM (real mode driver)** Use this driver with all DOS versions of AutoCAD.

### Installing the Protected Mode Driver for AutoCAD Rel. 11

- 1 Copy the drive file from the diskette to your AutoCAD directory and rename it to ADIDIG.EXP.  
Example: COPY A:\ADIDVR\DGPSUMMA.EXP C:\ACAD\ADIDIG.EXP
- 2 Start up AutoCAD. The main menu will appear on the screen.
- 3 Select *Configure AutoCAD* from the screen menu. A listing of the current configuration appears on the screen. Press **ENTER** to proceed to the configuration menu.
- 4 At the configuration menu, select *Configure Digitizer*. AutoCAD asks if you want a new digitizer. Since you are installing for the first time, type **Y** then press **ENTER**. A list of digitizer options appears on the screen. Select *ADI P386 digitizer* and press **ENTER**.
- 5 Next, you are prompted for the size of your tablet. Select the number corresponding to your tablet size and press **ENTER**.
- 6 Next, you are prompted for the number of buttons on your pointing device (stylus or cursor). Enter the appropriate number and press **ENTER**.
- 7 You are now asked to name the serial port to which your tablet is connected. Type COM1, or COM2 and press **ENTER**.
- 8 The configuration is now complete; you are now ready to use your Summagraphics tablet with AutoCAD. Exit to the drawing editor and enter **Y** to save changes.

## Installing the Protected Mode Driver for AutoCAD Rel. 12

- 1 Copy the protected mode drivers from the Summagraphics Drivers/Utilities diskette to the ACAD \DRV directory.  
Example: COPY A:\ADIDVR\DGPSUMMA.EXP C:\ACAD\DRV
- 2 Start up AutoCAD. The AutoCAD Drawing Editor appears on the screen.
- 3 Type CONFIG and press **Enter**. A listing of the current configuration appears on the screen. Press **ENTER** to proceed to the configuration menu.
- 4 At the configuration menu, select *Configure Digitizer*. AutoCAD asks if you want a new digitizer. Since you are installing for the first time, type **Y**, then press **ENTER**. A list of digitizer options appears on the screen. Select *Summagraphics MM Series v 1.3, ADI 4.2 by Summagraphics* and press **ENTER**.
- 5 Next, you are prompted for the size of your tablet. Select the number corresponding to your tablet size and press **ENTER**.
- 6 Next, you are prompted for the number of buttons on your pointing device (stylus or cursor). Enter the appropriate number and press **ENTER**.
- 7 You are now asked to name the serial port to which your tablet is connected. Type COM1, or COM2 and press **ENTER**.
- 8 The configuration is now complete; you are now ready to use your Summagraphics tablet with AutoCAD. Exit to the drawing editor and enter **Y** to save changes.

## Installing the Real Mode Driver (for all versions of AutoCAD)

Copy the file DGSUMMA.COM from the Drivers/Utilities disk to your hard drive, and run the driver before starting Autodesk applications.

**Command Syntax:** DGSUMMA [com port]

Parameter	Permissible Values	Description
[com port]	/1 (default)	Indicates tablet is connected to serial port 1 of computer.
	/2	Indicates tablet is connected to serial port 2 of computer.
	/3	Indicates tablet is connected to serial port 3 of computer. (IBM PS/2 only)
	/4	Indicates tablet is connected to serial port 4 of computer. (IBM PS/2 only)
[/OFF]	/OFF	Disables the driver.

## Examples

For a SummaSketch Professional connected to Com 2, type the following at the DOS prompt:

```
DGSUMMA /2
```

## Sample Batch File

```
DGSUMMA /2      installs driver
CD \ACAD        changes to application directory "ACAD"
ACAD            runs application "ACAD"
```

## Configuring AutoCAD for the Real Mode Driver

After you have installed the Summagraphics ADI driver, start up AutoCAD and follow the instructions listed below.

- 1 If you are running AutoCAD release 11, select *Configure AutoCAD* from the AutoCAD main screen menus and press **ENTER** to proceed to the configuration menu. If you are running AutoCAD release 12, select *Configure* from the **File** pop-down menu and press **ENTER** to proceed to the configuration menu.
- 2 At the configuration menu, select *Configure Digitizer*. AutoCAD asks if you want a new digitizer. Since you are installing for the first time, type **Y** then press **ENTER**. A list of digitizer options appears on the screen. If you are running AutoCAD release 11, select *Autodesk Device Interface* and press **ENTER**. If you are running AutoCAD release 12, select *ADI Digitizer (Real Mode)* and press **ENTER**.
- 3 Next you are prompted for the hexadecimal interrupt code (INT0XXh)<79>. Press **ENTER** to accept the default of 79 and return to the configuration menu.
- 4 If you are running AutoCAD release 11, select *Exit to Main Menu* and press **ENTER**. If you are running AutoCAD release 12, select *Exit to Drawing Editor* and press **ENTER**.
- 5 Type **Y** to save configuration changes and press **ENTER**.

## UIOF/Microgrid Format Drivers

Use these drivers if you have configured AutoCAD for a real or protected mode ADI driver and your tablet has a 16-button cursor attached.

**Note:** Summagraphics' ADI drivers are less likely to encounter initialization problems when *shelling out of AutoCAD*, therefore, Summagraphics recommends using the ADI drivers supplied on the Drivers/Utilities disk instead of AutoCAD's drivers.

Summagraphics provides both a protected mode driver and a real mode driver:

- **DGPMG.EXP (protected mode driver)** Use this driver if you have a release 11 or 12 version of the 386 DOS extender version of AutoCAD and wish to take advantage of AutoCAD's protected mode capabilities.
- **DGMG.COM (real mode driver)** Use this driver with all DOS versions of AutoCAD.

## Installing the Protected Mode Driver for AutoCAD Rel. 11

- 1 Copy the drive file from the diskette to your AutoCAD directory and rename it to ADIDIG.EXP.  
Example: COPY A:\ADIDVR\DGPMG.EXP C:\ACAD\ADIDIG.EXP
- 2 Start up AutoCAD. The main menu will appear on the screen.
- 3 Select *Configure AutoCAD* from the screen menu. A listing of the current configuration appears on the screen. Press **ENTER** to proceed to the configuration menu.
- 4 At the configuration menu, select *Configure Digitizer*. AutoCAD asks if you want a new digitizer. Since you are installing for the first time, type **Y**, then press **ENTER**. A list of digitizer options appears on the screen. Select *ADI P386 digitizer* and press **ENTER**.
- 5 Next, you are prompted for the size of your tablet. Select the number corresponding to your tablet size and press **ENTER**.
- 6 Next, you are prompted for the number of buttons on your pointing device (stylus or cursor). Enter the appropriate number and press **ENTER**.
- 7 You are now asked to name the serial port to which your tablet is connected. Type COM1, or COM2, and press **ENTER**.
- 8 The configuration is now complete; you are now ready to use your Summagraphics tablet with AutoCAD. Exit to the drawing editor and enter **Y** to save changes.

## Installing the Protected Mode Driver for AutoCAD Rel. 12

- 1 Copy the protected mode drivers from the Summagraphics Drivers/Utilities diskette to the ACAD \DRV directory.
- 2 Start up AutoCAD. The AutoCAD Drawing Editor appears on the screen.
- 3 Type `CONFIG` and press **Enter**. A listing of the current configuration appears on the screen. Press **ENTER** to proceed to the configuration menu.
- 4 At the configuration menu, select *Configure Digitizer*. AutoCAD asks if you want a new digitizer. Since you are installing for the first time, type **Y**, then press **ENTER**. A list of digitizer options appears on the screen. Select *Summagraphics Microgrid, v 1.3, ADI 4.2 by Summagraphics* and press **ENTER**.
- 5 Next, you are prompted for the size of your tablet. Select the number corresponding to your tablet size and press **ENTER**.
- 6 Next, you are prompted for the number of buttons on your pointing device (stylus or cursor). Enter the appropriate number and press **ENTER**.
- 7 You are now asked to name the serial port to which your tablet is connected. Type `COM1`, or `COM2` and press **ENTER**. If you are using a computer with a non-standard serial port, you may specify the IRQ number and the address of the port in hexadecimal by choosing the *Allow Detailed Configuration* option from the configuration menu before running *Configure Digitizer*, as described above.
- 8 The configuration is now complete; you are now ready to use your Summagraphics tablet with AutoCAD. Exit to the drawing editor and enter **Y** to save changes.

## Installing the Real Mode Driver (for all versions of AutoCAD)

Copy the file `DGMGCOM` from the Drivers/Utilities disk to your hard drive, and run the driver before starting Autodesk applications.

**Command Syntax:** `DGMG [com port] [transducer]`

Parameter	Permissible Values	Description
[com port]	/1 (default)	Tablet is connected to serial port 1 of computer.
	/2	Tablet is connected to serial port 2 of computer.
	/3	Tablet is connected to serial port 3 of computer (IBM PS/2 only).
	/4	Tablet is connected to serial port 4 of computer (IBM PS/2 only).
[transducer]	/CP	Selects two-button stylus.
	/C16 (default)	Selects 16-button cursor.
[/OFF]	/OFF	Disables the driver.

### Examples

For a SummaSketch Professional with a 16-button cursor connected to Com 2, type the following at the DOS prompt:

```
DGMG /2 /16
```

### Sample Batch File

```
DGMG /2 /16      installs driver
CD \ACAD         changes to application directory "ACAD"
ACAD             runs application "ACAD"
```

## Configuring AutoCAD for the Real Mode Driver

After you have installed the ADI driver, and restarted your computer, start up AutoCAD and follow the instructions listed below.

- 1 If you are running AutoCAD release 11, select *Configure AutoCAD* from the AutoCAD Main Menu and press **ENTER** to proceed to the configuration menu. If you are running AutoCAD release 12, select *Configure* from the **File** pop-down menu and press **ENTER** to proceed to the configuration menu.
- 2 At the configuration menu, select *Configure Digitizer*. AutoCAD asks if you want a new digitizer. Since you are installing for the first time, type **Y** then press **ENTER**. A list of digitizer options appears on the screen. If you are running AutoCAD release 11, select *Autodesk Device Interface* and press **ENTER**. If you are running AutoCAD release 12, select *ADI Digitizer (Real Mode)* and press **ENTER**.
- 3 Next you are prompted for the hexadecimal interrupt code (INT0XXh)<79>. Press **ENTER** to accept the default of 79 and return to the configuration menu.
- 4 If you are running AutoCAD release 11, select *Exit to Main Menu* and press **ENTER**. If you are running AutoCAD release 12, select *Exit to Drawing Editor* and press **ENTER**.
- 5 Type **Y** to save configuration changes and press **ENTER**.

The configuration is now complete. You are now ready to use your Summagraphics tablet with AutoCAD.

## Summagraphics Tablet Driver/Mouse Emulator

### MM/SummaSketch Format Driver

TABLET.COM enables a SummaSketch Series tablet to emulate a Microsoft Mouse. Use when your application's setup menu includes a listing for TABLET.COM or Microsoft® Mouse (MOUSE.COM), and your tablet is configured for use with a four-button cursor or stylus (MM/SummaSketch format).

### Installing The MM/SummaSketch Format Driver

Copy the file TABLET.COM from the drivers/utilities disk to your hard drive, and run the driver before starting your application.

**Command Syntax:** TABLET [com port] [stylus/cursor] [tracking] [other options]

Parameter	Permissible Values	Description
[com port]	/1 (default)	Indicates tablet is connected to serial port 1 of computer.
	/2	Indicates tablet is connected to serial port 2 of computer.
	/3	Indicates tablet is connected to serial port 3 of computer (IBM PS/2 only).
	/4	Indicates tablet is connected to serial port 4 of computer (IBM PS/2 only).
	/BAxxxx	Selects serial port with a base address of xxxx (address must be in hexadecimal).
	/lx	Selects serial port with IRQ line number x (2-7).
[/OFF]	/OFF	Disables the driver.
[stylus/cursor]	/CP	Selects two-button stylus.
	/C3	Selects three-button stylus.
	/C4 (default)	Selects four-button cursor.

**Note:** Refer to [Appendix D](#) for TABLET.COM button mapping, tracking, and memory location options.

## Examples

For a SummaSketch with a four-button cursor connected to Com 2: TABLET /2/C4

### Sample Batch File

```
TABLET /2/C4      installs driver
DOSSHELL         runs the DOSSHELL environment
```

### Running the Driver from CONFIG.SYS

Another way to install the driver is by including TABLET.SYS as a device driver in the CONFIG.SYS file. In doing so, the system automatically installs the driver each time you boot or turn on the system.

### Line Syntax

```
DEVICE=TABLET.SYS [comport][stylus/cursor][tracking][other options]
```

Note that the command options are the same as those for running TABLET.COM from the DOS prompt or a batch file. Most of the command line arguments described for TABLET.COM also work for TABLET.SYS. The exceptions are the /OFF command and the memory location options /U, /E, and /HI.

### Example

For a SummaSketch with a four-button cursor attached to Com 2:

```
DEVICE=TABLET.SYS /2/C4
```

## UIOF/Microgrid Format Drivers

TABLETMG.COM enables a SummaSketch Series tablet to emulate a Microsoft Mouse. Use when your application's setup menu includes a listing for TABLETMG.COM or Microsoft® Mouse (MOUSE.COM), and your tablet is configured for use with sixteen-button cursor (UIOF/Microgrid format).

### Installing the TABLETMG.COM Driver

Copy the file TABLETMG.COM from the Drivers/Utilities disk to your hard drive, and run the driver before starting your application.

**Command Syntax:** TABLETMG [com port] [stylus/cursor] [tracking] [other options]

Parameter	Permissible Values	Description
[com port]	/1 (default)	Indicates tablet is connected to serial port 1 of computer.
	/2	Indicates tablet is connected to serial port 2 of computer.
	/3	Indicates tablet is connected to serial port 3 of computer (IBM PS/2 only).
	/4	Indicates tablet is connected to serial port 4 of computer (IBM PS/2 only).
	/BAxxxx	Selects serial port with a base address of xxxx (address must be in hexadecimal).
	/lx	Selects serial port with IRQ line number x (2-7).
[/OFF]	/OFF	Disables the driver.
[stylus/cursor]	/CP	Selects two-button stylus.
	/C3	Selects three-button stylus.
	/C4	Selects four-button cursor.
	/C16 (default)	Selects 16-button cursor.

**Note:** Refer to [Appendix D](#) for TABLETMG.COM button mapping, tracking, and memory location options.

### Example

For a SummaSketch with a sixteen button cursor attached to Com 2: TABLETMG /2 /C16

### Sample Batch File

```
TABLETMG /2 /C16  installs driver  
DOSSHELL          runs the DOSSHELL environment
```

### Running the Driver From CONFIG.SYS

Another way to install the driver is by including TABLETMG.SYS as a device driver in the CONFIG.SYS file. In doing so, the system automatically installs the driver each time you boot or turn on the system.

### Line Syntax

```
DEVICE=TABLETMG.SYS [com port][stylus/cursor][tracking][other options]
```

Note that the command options are the same as those for running TABLET.COM from the DOS prompt or a batch file. Most of the command line arguments described for TABLETMG.COM also work for TABLETMG.SYS. The exceptions are the /OFF command and the memory location options /U, /E, and /HI.

### Example

For a SummaSketch with a 16-button cursor attached to Com 2:

```
DEVICE=TABLETMG.SYS /2 /C16
```

# Summagraphics Utilities

## Topics discussed in this section:

Resetting the Tablet (MMRST and UIOFRST)

Testing the Tablet (MMTEST)

Changing Tablet Formats (MM.COM, UIOF.COM, SEND.COM)

## Resetting the Tablet (MMRST and UIOFRST)

### MMRST Command

The MMRST command resets a tablet that is configured for MM/SummaSketch format and has a four-button cursor or stylus attached.

**Command Syntax:** MMRST [options]

Options	Description
/1 (default)	selects serial port 1 (PC, XT, AT, PS/2)
/2	selects serial port 2 (PC, XT, AT, PS.2)
/3	selects serial port 3 (PS/2 only)
/4	selects serial port 4 (PS/2 only)
/5	selects serial port 5 (PS/2 only)
/6	selects serial port 6 (PS/2 only)
/7	selects serial port 7 (PS/2 only)
/8	selects serial port 8 (PS/2 only)
/BAxxxx	selects serial port with a base address of xxxx (address must be in hexadecimal)
/N	selects no parity configuration
/? or /H	displays help screen

### Notes

- When using the BA option (Base Address), all four digits must be specified.  
(**Example:** for COM 1 - /BA03F8)
- This program transmits in the MM/SummaSketch default serial communication configuration: 9600 baud, 8 data bits, odd parity, and 1 stop bit.
- Use the /BA switch only when the serial port is located at a non-standard address within the computer.
- A summary of command line switches is always available by starting the program with switch /? Or /H.

**Example:** To reset an MM/SummaSketch format tablet connected to Com 2, type: MMRST /2

## UIOFRST Command

The UIOFRST command resets a tablet that is configured for UIOF/Microgrid format and has a sixteen-button cursor attached.

**Command Syntax:** UIOFRST [options]

Options	Description
/1 (default)	selects serial port 1 (PC, XT, AT, PS/2)
/2	selects serial port 2 (PC, XT, AT, PS.2)
/3	selects serial port 3 (PS/2 only)
/4	selects serial port 4 (PS/2 only)
/5	selects serial port 5 (PS/2 only)
/6	selects serial port 6 (PS/2 only)
/7	selects serial port 7 (PS/2 only)
/8	selects serial port 8 (PS/2 only)
/BAxxxx	selects serial port with a base address of xxxx (address must be in hexadecimal)
/N	selects no parity configuration
/? or /H	displays help screen

### Notes

- When using the BA option (Base Address), all four digits must be specified.  
(**Example:** for COM 1 - /BA03F8)
- This program transmits in the UIOF/Microgrid default serial communication configuration: 9600 baud, 7 data bits, even parity, and 2 stop bits.
- Use the /BA switch only when the serial port is located at a non-standard address within the computer.
- A summary of command line switches is always available by starting the program with switch /? Or /H.

**Example:** To reset a UIOF/Microgrid format tablet connected to Com 2, type: UIOFRST /2

## Testing The Tablet (MMTEST)

### MMTEST Tablet Test Utility

The MMTEST utility verifies that your MM/SummaSketch or UIOF/Microgrid format tablet is working properly.

**Command syntax:** MMTEST [options]

Options	Description
/M(default)	selects MM format configuration when tablet is configured for MM formator has four-button cursor or stylus attached.
/U	selects UIOF format configuration when tablet is configured for UIOF format or has a 16-button cursor attached.
/1 (default)	selects serial port 1 (PC, XT, AT, PS/2)
/2	selects serial port 2 (PC, XT, AT, PS.2)
/3	selects serial port 3 (PS/2 only)
/4	selects serial port 4 (PS/2 only)
/5	selects serial port 5 (PS/2 only)
/6	selects serial port 6 (PS/2 only)
/7	selects serial port 7 (PS/2 only)
/8	selects serial port 8 (PS/2 only)
/BAxxxx	selects serial port with a base address of xxxx (address must be in hexadecimal)
/lx	selects serial port with IRQ line number x (2-7)
/N	selects no parity configuration
/? or /H	displays help screen

### Notes

- When using the BA option (Base Address), all four digits must be specified.  
(**Example:** for COM 1 - /BA03F8)
- Use the /BA switch only when the serial port is located at a non-standard address within the computer.
- A summary of command line switches is always available by starting the program with switch /? Or /H switch.

### Test Results

After running MMTEST, you should see X, Y coordinate data streaming on the screen. The date is in the following format: XXXXXX,YYYYYY,F,P, where **X** is the X coordinate data and **Y** is the Y coordinate data. **F** is the number of the cursor/stylus button being pressed (1,2,3, or 4). **P** is proximity: 0 is in proximity: 1 is out of proximity.

Move the cursor/stylus around on the tablet surface. You should se the X, Y coordinates changing. Press each of the cursor/stylus buttons one at a time. You should see the **F** field changing accordingly. Lift the cursor/stylus a few inches off the tablet surface. You should see the **P** field change from 0 to 1.

If the tablet performs all of these tasks, then it is operating properly. If not, refer to [Appendix A: What To Do If A Problem Arises](#).

### Exiting MMTEST

To exit MMTEST, type: <Ctrl>X

## Changing Tablet Formats (MM.COM, UIOF.COM, SEND.COM)

### MM Tablet Configuration Utility

The MM Utility configures a tablet to MM/SummaSketch format, regardless of the cursor/stylus being used.

**Command syntax:** MM [options]

Options	Description
/1 (default)	selects serial port 1 (PC, XT, AT, PS/2)
/2	selects serial port 2 (PC, XT, AT, PS.2)
/3	selects serial port 3 (PS/2 only)
/4	selects serial port 4 (PS/2 only)
/5	selects serial port 5 (PS/2 only)
/6	selects serial port 6 (PS/2 only)
/7	selects serial port 7 (PS/2 only)
/8	selects serial port 8 (PS/2 only)
/BAxxxx	selects serial port with a base address of xxxx (address must be in hexadecimal)
/? or /H	displays help screen

### Notes

- When using the BA option (Base Address), all four digits must be specified.  
(**Example:** for COM 1 - /BA03F8)
- Use the /BA switch only when the serial port is located at a non-standard address within the computer.
- A summary of command line switches is always available by starting the program with switch /? Or /H switch.

**Example:** To configure a tablet on Com 2 for MM/SummaSketch format, type: MM /2

### UIOF Tablet Configuration Utility

The UIOF tablet configuration utility configures a tablet for the UIOF/Microgrid format regardless of the stylus/cursor being used.

**Command syntax:** UIOF [options]

Options	Description
/1 (default)	selects serial port 1 (PC, XT, AT, PS/2)
/2	selects serial port 2 (PC, XT, AT, PS.2)
/3	selects serial port 3 (PS/2 only)
/4	selects serial port 4 (PS/2 only)
/5	selects serial port 5 (PS/2 only)
/6	selects serial port 6 (PS/2 only)
/7	selects serial port 7 (PS/2 only)
/8	selects serial port 8 (PS/2 only)
/BAxxxx	selects serial port with a base address of xxxx (address must be in hexadecimal)
/? or /H	displays help screen

## Notes

- When using the BA option (Base Address), all four digits must be specified.  
(**Example:** for COM 1 - /BA03F8)
- Use the /BA switch only when the serial port is located at a non-standard address within the computer.
- A summary of command line switches is always available by starting the program with switch /? Or /H switch.

**Example:** To configure a tablet on Com 2 for UIOF/Microgrid format, type: UIOF /2

## SEND Tablet Configuration Utility

The SEND tablet configuration utility sends a string of commands to SummaSketch tablets to modify the default tablet settings.

**Command syntax:** SEND [options]/Cx...

Options	Description
/1 (default)	selects serial port 1 (PC, XT, AT, PS/2)
/2	selects serial port 2 (PC, XT, AT, PS.2)
/3	selects serial port 3 (PS/2 only)
/4	selects serial port 4 (PS/2 only)
/5	selects serial port 5 (PS/2 only)
/6	selects serial port 6 (PS/2 only)
/7	selects serial port 7 (PS/2 only)
/8	selects serial port 8 (PS/2 only)
/M (default)	selects MM format serial configuration
/U	selects UIOF format serial configuration
/BAxxxx	selects serial port with a base address of xxxx (address must be in hexadecimal)
/Cxxx...	transmit command characters "xxx..." until carriage return (required options)
/? or /H	displays help screen

## Notes

- SEND.COM can transmit at various baud rates and parities, and can transmit commands from an ASCII file. For further information, refer to SEND.DOC, or invoke SEND.COM with the "Help" option (example: SEND /?)
- When using the BA option (Base Address) all four digits must be specified  
(**Example:** for Com 1 - /BA03F8).
- Option /C must be the last option on the command line. There is no space between the /C switch and the commands that follow.
- To transmit ASCII control characters, precede a printable ASCII character with "ÙÙ" (examples: ESC=ÙÙ[, NULL=ÙÙ@, BELL=ÙÙG)
- The /BA option should only be used when the serial port is located at a non-standard address within the computer.
- A summary of command line switches is always available by starting the program with the /? or /H options.

## Examples

- To configure a tablet on Com 1, transmitting in MM format to ASCII format output, type:  
SEND /1 /Cza
- To configure a tablet on Com 2, transmitting in MM format to binary format, type:  
SEND /2 /Czb
- To configure a tablet on Com 1, transmitting in UIOF format to stream mode, type:  
SEND /1 /U /CÙÙ[M0

# Appendices

## Topics discussed in this section:

Appendix A: What to do if a Problem Arises

Appendix B: MM/SummaSketch Format Command Summary

Appendix C: UIOF/Microgrid Format Command Summary

Appendix D: TABLET.COM & TABLETMG.COM Command Options

Appendix E: Configuring Windows and AutoCAD Rel. 12 for Windows

Appendix F: Interface/Power Cable Pin Assignments

Appendix G: 9- to 25-Pin Serial Adapter Wiring Diagram

Appendix H: Communication Parameters

## Appendix A: What to do if a Problem Arises

You should have no problems with your SummaSketch. However, if a problem arises, first ensure that you have installed the tablet as described in this manual. Then follow the checklist below.

Problem	Solution
The power/prox light is not on.	<ol style="list-style-type: none"><li>1. Check that the power switch is in the ON position.</li><li>2. Check that the power supply is plugged into the interface cable.</li><li>3. Check that the power supply is plugged into a working electrical outlet.</li><li>4. Check that the I/O cable is plugged into the proper jack on the back of the tablet.</li></ol>
The screen cursor doesn't move when I move the stylus/cursor.	<ol style="list-style-type: none"><li>1. Check that the application is configured for the proper stylus/cursor.</li><li>2. Reset the tablet and restart the application.</li></ol>
The buttons on the stylus/cursor don't work.	<ol style="list-style-type: none"><li>1. Check that the application is configured for the proper tablet driver.</li><li>2. Run MMTEST to check if the buttons are working properly.</li></ol>

If the problem persists, it is probably in the configuration of the application software. Contact the application developer or your local dealer for assistance. If you discover that you have a tablet problem, contact our Sales Support Groups at one of the numbers listed below.

### Sales and Service

GTCO CalComp, Inc.  
14555 N. 82nd Street  
Scottsdale, AZ 85260

Telephone: 800-458-5888  
480-948-6540  
480-443-2214 (Technical Support)

GTCO CalComp Ges.m.b.H.  
World Trade Center  
Suite 165  
A-1300 Vienna, Austria

Telephone: + 43 1 7007 36450

## Appendix B: MM/SummaSketch Format Command Summary

<b>Command</b>	<b>ASCII</b>
<b>Autobaud</b>	<SP>
<b>Axis Update Mode:</b>	
command	G
value	<SP> to <DEL>
<b>Code Check</b>	x
<b>Coordinate System:</b>	
absolute	F
relative	E
<b>Echo</b>	k
<b>Increment Mode:</b>	
command	I
increment value	<SP> to <DEL>
<b>Origin:</b>	
upper left	b
lower left	c
<b>Report Modes:</b>	
Point Mode	B
Remote Request Mode:	
mode command	D
trigger command	P
Stream Mode	@
Switch Stream Mode	A
<b>Report Rate:</b>	
110 rps	Q
50 rps	R
10 rps	S
2 rps	T
<b>Reset</b>	<Nul>
<b>Resolution, Definable:</b>	
command	r
X axis res., low byte	Hex 00 to FF
X axis res., high byte	Hex 00 to 17
Y axis res., low byte	Hex 00 to FF
Y axis res., high byte	Hex 00 to 17

**Resolution, Predefined:**

1 lpi	l
2 lpi	n
4 lpi	p
100 lpi	d
200 lpi	e
10 lpmm	f
400 lpi	g
500 lpi	h
20 lpi	i
1000 lpi	j
40 lpmm	q
2000 lpi	s
2032 lpi	u
2540 lpi (12x12 only)	v

**Resume Transmission (XON)** <CTRL>Q**Self Test** t**Send Model ID** <ENQ>**Sent Test Results** w**Send Configuration** a**Stop Transmission (XOFF)** <CTRL>S**Tablet Identifier:**

zero	0 (zero)
one	1

**z Commands:**

Autobaud	z<SP><SP>
ASCII BCD report format	za
binary report format	zb
8 data bits, no parity	z8
8 data bits, odd parity	z9
increment confirmation	zi
firmware identification	z?
transducer identification	zt
UIOF format select	zu
16-button cursor enable	z6
disable reset	zr
enable x filter, 15:1	zx
enable y filter, 3:1	zy
enable w filter, 7:1	zw
clear all filters	ze
display filter status	zq

## Appendix C: UIOF/Microgrid Format Command Summary

Command	ASCII
<b>ASCII delineator</b>	<ESC>D[b]
where [b] can be an ASCII character	
<b>Code Check</b>	<ESC>x
<b>Self Test</b>	<ESC>t
<b>Coordinate System:</b>	
absolute	<ESC>M5
relative	<ESC>M4
<b>Increment Mode:</b>	
command	<ESC>I[bbb]
where [bbb], the increment value, can be from 000 to 225	
<b>Send Configuration</b>	<ESC>a
<b>NOP (no operation)</b>	<CR>
<b>Send Tablet ID</b>	<ENQ>
<b>Origin:</b>	
lower left corner	<ESC>F0
user-defined	<ESC>F1
center	<ESC>F2
upper left corner	<ESC>F3
<b>Report Format:</b>	
binary	<ESC>MB
ASCII BCD	<ESC>MA
<b>Report Modes:</b>	
Point Mode	<ESC>M1
Remote Request Mode:	
mode command	<ESC>M3
trigger command	<ESC>G
Stream Mode	<ESC>M0
Switch Stream Mode	<ESC>M2
<b>Enable Stylus</b>	<ESC>MS
<b>Enable Four-Button Cursor</b>	<ESC>MC
<b>Enable/Disable &lt;CR&gt;in</b>	
ASCII formats	<ESC>MR
<b>Enable/Disable &lt;LF&gt;in</b>	
ASCII formats	<ESC>ML
<b>Redefine Reset</b>	<ESC>r[b]
<b>Resume Transmission (XON)</b>	<CTRL>Q
<b>Diagnostic</b>	<ESC>U0
<b>Enable Tablet ID</b>	<ESC>T1

<b>Disable Tablet ID</b>	<ESC>T0
<b>Mode Change to MM (1812 only)</b>	<ESC>z1
<b>Clear All Filters</b>	<ESC>f0
<b>Enable 15:1 Filter</b>	<ESC>f1
<b>Enable 3:1 Filter</b>	<ESC>f2
<b>Enable 7:1 Filter</b>	<ESC>f3
<b>Display Filter Status</b>	<ESC>f9
<b>Baud Rate:</b>	<ESC>B[b]
19.2k	<ESC>B0
9600	<ESC>B1
4800	<ESC>B2
2400	<ESC>B3
1200	<ESC>B4
600	<ESC>B5
300	<ESC>B6
150	<ESC>B7
110	<ESC>B8
<b>Parity:</b>	<ESC>p[b]
Parity None	<ESC>p0
Parity Odd	<ESC>p1
Parity Even	<ESC>p2
<b>Decimal Enable</b>	<ESC>d1
<b>Decimal Disable</b>	<ESC>d0
<b>Report Rate:</b>	
1 rps	<ESC>R0
2 rps	<ESC>R1
5 rps	<ESC>R2
10 rps	<ESC>R3
30 rps	<ESC>R4
60 rps	<ESC>R5
75 rps	<ESC>R6
80 rps	<ESC>R7
<b>Resolution, Definable:</b>	
X axis	<ESC>PX[bbbb]
Y axis	<ESC>PY[bbbb]
where [bbbb] is any number from 0000 to 1016	

## Resolution, Predefined:

1 lpi	<ESC>C8
2 lpi	<ESC>C9
4 lpi	<ESC>CA
100 lpi	<ESC>C7
200 lpi	<ESC>C0
10 lpmmm	<ESC>C1
400 lpi	<ESC>C6
500 lpi	<ESC>C4
20 lpmmm	<ESC>C5
1000 lpi	<ESC>C2
40 lpmmm	<ESC>C3
2000 lpi	<ESC>CS or <ESC>Cs
2032 lpi	<ESC>CB
2540	<ESC>CD (1201 only)

## Appendix D: TABLET.COM & TABLETMG.COM Command Options

### Cursor/Stylus Button Mapping Options

#### Command syntax: /CM####

Allows a user-defined mapping of the cursor/stylus buttons. The /CM argument is followed by 1-4 digits that specify which cursor/stylus switches are assigned to standard mouse buttons. Each digit represents the value of a cursor/stylus switch, and its position represents the mouse button that it is assigned to. The first digit after the /CM argument corresponds to the left mouse button, the second digit to the right mouse button, the third digit to the middle mouse button, and the fourth digit corresponds to an emulation of both the left and right mouse buttons being pressed simultaneously.

**Example:** TABLET /CM2134

The above example shows cursor/stylus switch #2 being mapped to the left mouse button, cursor/stylus switch #1 being mapped to the right mouse button, cursor/stylus switch #3 being mapped to the middle mouse button and cursor/stylus switch #4 being mapped to both the right and left mouse button.

### Tracking Options

The following options will work only if the application is set up to use a Microsoft Mouse (MOUSE.COM). Applications that are compatible specifically with TABLET.COM should configure tracking automatically or allow you to configure tracking through the application's set up utility. The use of the following options will be overridden by the application.

#### Relative Mode /R

Relative mode is the default setting. There are four relative mode options:

/S## Sets both horizontal and vertical sensitivity—Range=0-99, default=50

/H## Sets only the horizontal sensitivity—Range=0-99, default=50

/V## Sets only the vertical sensitivity—Range=0-99, default=50

/P# This option is the ballistic gain profile. It controls acceleration of the screen cursor.

TABLET.COM comes with four built-in ballistic gain profiles: Slow, Moderate, Fast and Unaccelerated. Specify 1,2,3, or 4, respectively.

## Absolute Mode /A

Absolute mode maps the tablet's entire active area to the computer screen. Relative mode options (/S,/H,/V,/M) should not be used in Absolute mode.

**Note:** Applications accept input from MOUSE.COM as either absolute screen coordinates, or relative mouse units, also referred to as *mickeys*. Absolute mode works only with those applications that accept input as absolute screen coordinates. To verify that absolute mode is working, position the screen pointer, then lift the cursor/stylus out of the tablet's active area and place it at a different location on the tablet. The screen cursor should snap to a new location. If it does not, then the application works only in relative mode and the absolute mode option will have no effect.

## Other Options

- /M# This option overrides an application that changes the mouse cursor for text modes by *locking* the mouse cursor to the default text cursor. To enable locked cursor type /M1; t disable locked cursor type /M0. The default is /M0.
- /N# This option specifies how many screen updates to skip before actually plotting the cursor. This feature is useful for laptop computers and other systems with slower LCD displays. A small value is recommended because driver performance can be affected. ## is a number between 0-10. The default is /N0.

## Notes

- When selecting a serial port other than 1,2,3, or 4, the /BA and /I options must be used together.
- When using the /BA option, all four digits must be specified  
(**Example:** for Com 1 - /BA03F8)
- Use the /BA and /I options only when a non-standard serial address is used in the computer.

## Memory Location Options /U, /E, and /HI

These options allow you to maximize the amount of memory available for DOS applications programs. The trick is to move most of the TABLET.COM driver to a memory location outside of the 640K area used by most applications programs. The /U command moves the driver to the upper memory area between 640K and 1 MB. The /E command moves the driver into expanded memory. The /HI command moves the driver into the high memory area between 1 MB and 1.064 MB.

Your computer system needs to support those options before they can be used. The designated memory must be installed as RAM. To use /E, you must have either expanded memory hardware, such as an Intel Above Board, or a software driver, such as EMM386 or QEMM in your machine. To use /HI, you must have an 80286, 80386 or 80486 family processor and the HIMEM.SYS driver, or equivalent, loaded before installing the mouse driver. MS-DOS 5.0 systems should also have the line DOS=UMB in the CONFIG.SYS file.

Only TABLET.COM can be relocated. TABLET.SYS can not be relocated. You cannot relocate TABLET.COM into another memory area without first removing the mouse driver by using the TABLET/OFF command.

## Appendix E: Configuring Windows and AutoCAD Rel. 12 for Windows

This appendix assumes that you are using a template with AutoCAD. If you are not using a template, you will need to designate a rectangular area within the active area as your screen pointing area.

### Configuring the Windows Driver

- 1 Install the tablet Windows driver as described in *Windows Driver (WINTAB Compliant)* under [Summagraphics Drivers](#).
- 2 Fasten the AutoCAD template to the tablet.
- 3 Next, start up Windows. Once in Windows, open the Summagraphics Control Panel and double-click on the Setup icon.
- 4 The Setup dialog box appears. In the **Tracking Area** field of the Setup dialog box, click in the *Whole Tablet* and *Preserve Aspect Ratio* checkboxes so that there are no check marks.
- 5 Position the screen pointer inside the black/gray box in the lower portion of the Setup dialog box and click. The box will turn completely gray. (For more detailed information on using the Setup utility, refer to in [Windows Driver \(WINTAB Compliant\)](#) under [Summagraphics Drivers](#).
- 6 Digitize the lower left dot on the template's screen pointing area. Next, digitize the upper right dot on the template's screen pointing area. When you are finished digitizing these two points, click the **OK** button to close the dialog box.

### Configuring AutoCAD for Windows

- 1 Install AutoCAD for Windows as explained in the AutoCAD Installation Guide.
- 2 Start up AutoCAD for Windows. In the Drawing Editor, select *Preferences...* from the **File** pull-down menu.
- 3 In the **Preferences** dialog box, activate the *Save To ACAD.INI* and the *Digitizer/Mouse Arbitrate* radio buttons. Then click the **OK** button to close the dialog box and save changes.
- 4 Next, select *Configure* from the **File** pull-down menu. The current Configuration Screen appears. Press [ENTER] until the Configuration Menu appears.
- 5 Select *Configure Digitizer* from the Configuration Menu.
- 6 Next, AutoCAD asks if you want to select a different digitizer. Type **Y** for yes then press [ENTER].
- 7 A screen listing the available digitizer drivers is displayed. Select *WINTAB Compatible Digitizer ADI 4.2-by Autodesk* and press [ENTER]. AutoCAD then displays a series of prompts. There are an infinite number of possible configurations you can specify at this point. Summagraphics recommends using the configuration listed below. After you have successfully setup the recommended configuration, are comfortable with it, feel free to try other configurations.

**AutoCAD prompt:** Do you want to configure your digitizer as a mole?

**Response:** Type **Y**.

**AutoCAD prompt:** Do you want an audible mole/con?

**Response:** Type **Y**, if you like beeps, **N**, if not.

**AutoCAD prompt:** Do you want a visible mole/context state indicator?

**Response:** Type **Y**.

**AutoCAD prompt:** Do you want to assign a CURSOR BUTTON to toggle modes?

**Response:** Type **Y**.

**AutoCAD prompt:** Press any button except the *pick* button, now.

**Response:** Press the side button on the stylus, or any button (except the *pick* button) on your 4- or 16- button cursor.

**AutoCAD prompt:** Do you want to assign a PRIMARY MOLE area?

**Response:** Type **N**.

- AutoCAD prompt:** Do you want to assign a secondary MOLE area?  
**Response:** Type **Y**.
- AutoCAD prompt:::** Enter lower left hand corner now.  
**Response:** Digitize the lower left hand dot on the AutoCAD template's screen pointing area.
- AutoCAD prompt:** Enter upper-right hand corner now.  
**Response:** Digitize the upper right hand dot on the AutoCAD template's screen pointing area.
- AutoCAD prompt:** Do you want a primary toggle area?  
**Response:** Type **N**.
- AutoCAD prompt:** Do you want a secondary toggle area?  
**Response:** Type **N**.

- 8 At the Configuration menu type [ENTER] twice to save configuration changes and return to the drawing editor.
- 9 Next, configure your template as you normally would. Refer to your AutoCAD Interface, Installation and Performance Guide or third party template manual for detailed template configuration instructions. When you are finished, the template, mole area, tablet area, and toggle button should be properly configured.

### Digitizer Mode vs. Mole Mode

Your tablet is initially setup in the *Digitizer* mode. In the *Digitizer* mode you can draw in the graphics area, execute template picks, and operate the cursor buttons. However in the *Digitizer* mode you cannot access the pull-down menus, tool palette, or manipulate the window; this requires the *Mole* mode.

To enter in the *Mole* mode, press the button that you previously defined as the *Toggle* button. In the *Mole* mode, you can draw in the graphics area, execute template picks, access the pull-down menus, and the tool palette. However the cursor buttons will not have the usual AutoCAD definitions. Instead, the pick button remains the pick button, and the button defined as the toggle button remains a toggle button. All other buttons will produce results that are defined in the Summagraphics Windows control panel.

## Appendix F: Interface/Power Cable Pin Assignments

The table below identifies the pin assignments of the 25-pin D female connector that terminates the interface/power cable. Refer to this table if you want to use an extension or adapter cable between the interface cable and the computer.

Pin	Wire Name	Description
1	GROUND	Protective Ground
2	RXD	Receive RS-232C Data from Host
3	TXD	Transmit RS-232C Data from Host
4	RTS	Request To Send
5	CTS	Clear To Send
6	DSR	Data Set Ready
7	GROUND	Signal Ground
20	DTR	Data Terminal Ready

## Appendix G: 9- to 25-Pin Serial Adapter Wiring Diagram

The table below identifies the wiring of the Summagraphics 9- to-25-pin serial adapter. If you want to use an adapter other than the one supplied, make sure that it has the same specifications shown below.

9-Pin Female Connector	25-Pin Male Connector
1	8
2	3
3	2
4	20
5	7
6	6
7	4
8	5
9	22

## Appendix H: Communications Parameters

### SummaSketch (MM) Format

<b>Format:</b>	RS-232-C
<b>Baud Rate</b>	9600
<b>Number of data bits:</b>	eight
<b>Parity bit:</b>	odd
<b>Number of stop bits:</b>	one
<b>Data format:</b>	binary format

<b>MSB</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>LSB</b>	<b>Transmit Sequence</b>
<b>7</b>							<b>0</b>	
PH	PR	T	Sx	Sy	Fc	Fb	Fa	1st byte
0	X6	X5	X4	X3	X2	X1	X0	2nd byte
0	X13	X12	X11	X10	X9	X8	X7	3rd byte
0	Y6	Y5	Y4	Y3	Y2	Y1	Y0	4th byte
0	Y13	Y12	Y11	Y10	Y9	Y8	Y7	5th byte

<b>Stylus</b>	<b>Cursor Buttons</b>	<b>Fc</b>	<b>Fb</b>	<b>Fa</b>
none pressed	none pressed	0	0	0
tip button	1	0	0	1
barrel button	2	0	1	0
tip and barrel	3	0	1	1
	4	1	0	0
	1+ 2	0	1	1
	1+ 3	1	0	0
	1+ 4	1	0	1
	2+3	1	0	1
	2+4	1	1	0
	1+2+3	1	1	0
	1+2+4	1	1	1
	2+3+4	1	1	1
	1+2+3+4	1	1	1

**Key:**

- MSB = Most Significant Bit
- LSB = Least Significant Bit
- Fa, Fb and Fc are the flag bits. They identify the status of the stylus and cursor buttons.
- Sx and Sy are the X and Y coordinate signs: 1 = positive; 0 = negative.  
In absolute coordinates, the sign is always positive. In relative coordinates, the sign can be positive or negative.
- T is the Tablet Identifier. our choice of 1 or 0. Command controlled.
- PR is the proximity bit: 0 = in-prox; 1 = out-of-prox.
- PH is the phasing bit: always 1
- X0, X1, etc., and Y0, Y1, etc., are the X and Y coordinate bits.

**UIOF Format**

- Format:** RS-232-C
- Baud Rate** 9600
- Number of data bits:** seven
- Parity bit:** even
- Number of stop bits:** two
- Data format:** binary format

<b>MSB</b>						<b>LSB</b>	<b>Transmit Sequence</b>
<b>6</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	
PH	0	0	0	0	T	PR	1st byte
0	0	Fe	Fd	Fc	Fb	Fa	2nd byte
0	X5	X4	X3	X2	X1	X0	3rd byte
0	X11	X10	X9	X8	X7	X6	4th byte
0	0	Sx	X15	X14	X13	X12	5th byte
0	Y5	Y4	Y3	Y2	Y1	Y0	6th byte
0	Y11	Y10	Y9	Y8	Y7	Y6	7th byte
0	0	Sy	Y15	Y14	Y13	Y12	8th byte

**Key:**

MSB = Most Significant Bit

LSB = Least Significant Bit

PR is the proximity bit. 0 is in-prox. 1 is out-of prox.

T is the Tablet Identifier

PH is the phasing bit, which is always 1.

Fa through Fe are the flag bits. They identify the status of the cursor buttons:

<b>16-Button Cursor</b>	<b>4-Button Cursor</b>	<b>Fe</b>	<b>Fd</b>	<b>Fc</b>	<b>Fb</b>	<b>Fa</b>
None	none	0	0	0	0	0
1	1	0	0	0	0	1
2	2	0	0	0	1	0
3	3	0	0	0	1	1
C	4	0	0	1	0	0
4		0	0	1	0	1
5		0	0	1	1	0
6		0	0	1	1	1
D		0	1	0	0	0
7		0	1	0	0	1
8		0	1	0	1	0
9		0	1	0	1	1
E		0	1	1	0	0
A		0	1	1	0	1
0		0	1	1	1	0
B		0	1	1	1	1
F		1	0	0	0	0

X0, X1, etc., and Y0, Y1, etc., are the X and Y coordinate bits. The coordinates are in counts of resolution, not inches or millimeters.

Sx and Sy are the X and Y coordinate signs. 1 is negative. 0 is positive.