# Table of Contents

# Radio Frequency Energy Notice

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.

### Cordless pen or cursor

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

### 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 present appareil numerique n'emet pas bruits radioelectriques depassant les limites applicables aux appareils numeriques de Classe B prescrites dans le reglement sur le brouillage radioelectrique edicte par le Ministere des Communications du Canada.*

### Japan

この装置は、第二種情報装置（住宅地域又はその隣接した地域において使用されるべき情報装置）で住宅地域での電波障害防止を目的とした情報処理装置等電波障害自主規制協議会（VCCI）基準に適合しております。

しかし、本装置をラジオ、テレビジョン受信機に近接してご使用になると、受信障害の原因となることがあります。

取扱説明書に従って正しい取り扱いをして下さい。

# CE Certification

Declaration of conformity according to ISO/IEC Guide 22 and EN 45014

|  |  |
|---|---|
| **Manufacturer's Name:** | GTCO CalComp, Inc. |
| **Manufacturer's Address:** | 14555 N. 82nd Street |
| | Scottsdale, Arizona 85260 |
| | U.S.A. |

declares, that the product

|  |  |
|---|---|
| **Product Name:** | DrawingBoard IV |
| **Model Numbers:** | DB4-2024, DB4-2436, DB4-3648, DB4-4460 |
| **Product Options:** | All |

conforms to the following product specifications:

| | |
|---|---|
| **Safety:** | UL1950, EN 60950:1988+A1+A2 |
| **EMC:** | CISPR22:1985/EN 55022:1988–Class B |
| | EN 50082-1:1992 |
| | IEC 801-2:1991–4kV CD, 8kV AD, Criterion B |
| | IEC 801-3:1984–3V/m, Criterion A |
| | IEC 801-4:1988–1kV power lines, .5kV data lines, Criterion B |

**Supplementary Information**

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC.

| | | |
|---|---|---|
| Scottsdale, Arizona, U.S.A. | 6-18-1999 | Dana Doubrava |
| Location | Date | Engineering Manager |

European Contact

GTCO CalComp

World Trade Center

A-1300 Vienna  – Airport

Austria

Tel + 43 1 7007 36450

Fax + 43 1 7007 36458

# Introduction

The **DrawingBoard IV** is a high performance, low cost digitizer tablet well suited for CAD, mapping, and GIS applications as well as drawing, tracing, and presentation graphics. These top of the line tablets offer the highest resolution and accuracy available on the market today along with easy-to-use software and programmable function keys.

DrawingBoard IV combines all the advantages of a mouse and a digitizer to eliminate multiple input devices and provide you with a sleek, simplified desktop.  You can choose from a wide range of options to help you create a working environment suited to your application. The tablets are available in a range of sizes with variable accuracy and pointing tool options. Surfaces can be opaque or backlit.

**Topics discussed in this section:**

System requirements and compatibility

DrawingBoard IV overview

## System requirements and compatibility

This version of the DrawingBoard IV is equipped with an RS-232 serial interface, and is compatible with most industry-standard Personal Computers. The included TabletWorks software provides a WinTab-compliant driver that is compatible with the versions of Microsoft Windows shown below. After installing the PC software, the DrawingBoard IV will work with all Windows-based applications as a mouse, as well as working with Windows-based applications that are specifically designed to work with digitizers.

### Personal Computer requirements

■ Microsoft Windows 95, 98, Me, NT 4.0, 2000 or XP

■ 1 available serial port

■ 10 MB of free disk space

■ Installation must be done by a "Power User" or "Administrator" on Windows NT, Windows 2000 and Windows XP.

# DrawingBoard IV overview

The DrawingBoard IV tablet consists of:

■ Drawing area
■ Menu strip
■ Indicator lights
■ Pointing tools

## Drawing area

The drawing area (or active area) is the area on the tablet surface intended for digitizing. The boundaries of the drawing area are marked by four L-shaped corner marks.

## Menu strip

The menu strip is the row of keys located in the lower left corner of the tablet. You can use these keys to customize your tablet or to assign macros for greater productivity.

## Indicator light

The **power/proximity light** (upper left on tablet) turns on when the power is on. It also indicates whether the pointing tool is within range of the drawing area. The power light glows if the pointing tool is inside the drawing area and blinks if it is outside the drawing area.

## Pointing tools

There are two types of pointing tools available with DrawingBoard IV: **pens** and **cursors**. The pointing tools are available in both corded and cordless versions. The cordless pointing tools are powered by batteries.

Each tool goes into a battery-saving *sleep mode* when no button has been pressed for one to five minutes, depending on the type of tool you are using. To reactivate the tool, press any of its buttons.

4-button cursor

16-button cursor

Click tip, pressure tip, or lite-touch tip pen
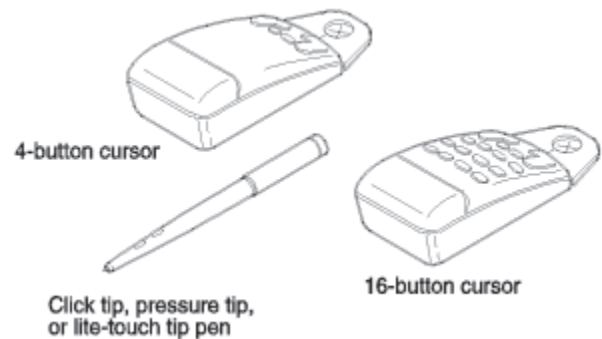
## Cursors

The cursor is similar in appearance to a mouse, except that it has an attached lens with crosshairs for highly accurate detail work. Cursors are available with 4 or 16 buttons. There is a special 16-button cursor available with high accuracy tablets. This corded cursor has a lens area that can be illuminated.

## Pens

The pen is similar in appearance to a ball-point pen. It has a button built into the tip plus two side buttons on the barrel. There are three types of pens that are identified by a colored ring on the pen barrel:

■ Click tip:         Light blue ring
■ Pressure tip:       Black ring
■ Lite touch tip:     Red ring

# Getting Started

Getting started with your **DrawingBoard IV** tablet is fast and easy.

**Topics discussed in this section:**

Unpacking the tablet

Installing the tablet

Installing the software

## Unpacking the tablet

The digitizer system consists of:

- DrawingBoard IV Series digitizing tablet with attached Controller
- Pointing Tool (cursor or pen)
- Power Supply
- Serial Cable
- TabletWorks CD-ROM
- Registration Card and Quick Start Instructions

## Installing the tablet

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

**1.   Connect the serial cable.**

Connect the round end of the serial cable to the socket labeled **I/O** on the tablet. The arrow on the connector should face down.

Connect the wide end of the serial cable to the computer's serial communication port. Tighten the thumbscrews. The arrow on the connector should face down.
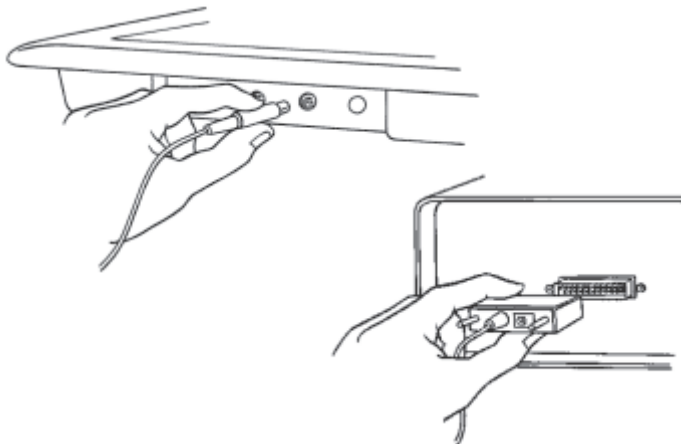
**2.   Connect the power cable to the serial connector.**

Connect the power cable into the jack on the back of the serial cable connector.  Connect the power supply end to a power outlet or power strip.
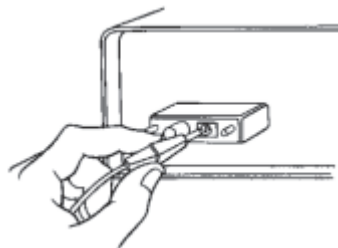
**3.   Connect the corded pointing tool.**

If you are using a corded pointing tool, insert the connector into the socket labeled **POINTER** on the tablet.

**4,  Turn on your computer and tablet.**

The tablet power switch is located at the rear of the tablet on small format models. On large format models, the switch is located either 1) at the rear of the tablet, or 2) on the left side, near the bottom of the tablet. The power light will turn on.

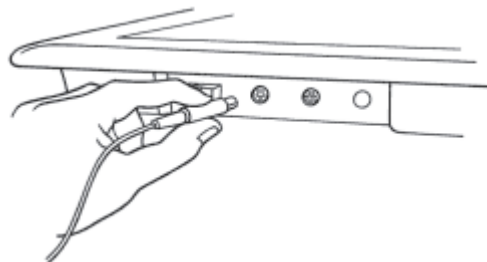If you are using a cordless pointing tool, turn it on by pressing any button on the tool. The power light will glow steadily if the pointing tool is inside the drawing area of the tablet. If the pointing tool is outside the drawing area, the power light will blink.

## Installing the software

The TabletWorks software included with your DrawingBoard IV tablet allows you to use your tablet both as a mouse and a digitizer, and to access all tablet features and capabilities through the TabletWorks control panel. Refer to TabletWorks Help for instructions on installing the software and for customizing your tablet.

### Special cases

Some unique situations may not require the use of the Digitizer Software. These cases are rare, usually in a non-Windows CAD application where the tablet is used solely as a digitizer with no mouse functions. In these situations, you can set up DrawingBoard IV manually via the menu strip.  Refer to the Customizing the Tablet section.

The TabletWorks software must be installed before any Windows applications (including AutoCAD) will be able to work properly with your DrawingBoard IV.

# Learning the Basics

You will find that using your **DrawingBoard IV** tablet is as easy, or easier, than using a mouse. The DrawingBoard IV pointing tools are more accurate than a mouse giving you greater control over your movements.

**Topics discussed in this section:**

Using the pointing tools

Learning basic movements

## Using the pointing tools

The pointing tool does not need to be in contact with the tablet surface in order for the tablet to sense its presence.  It can be detected up to 1/2" above the drawing area. This allows you to trace through materials placed on the surface, such as a drawing or a book. Also, before using the pointing tool, be sure that sleep mode is turned off by pressing any button on the tool.

### Using the cursor

When you use the cursor, the intersection point of the crosshairs on the lens identifies the point you are selecting. The crosshairs are etched on the bottom of the lens to increase accuracy. For maximum precision, look through the lens from directly over it.

Button 0 on the cursor is used as the pick (or left mouse) button. All other buttons are defined by the TabletWorks software or through your own software application.

### High accuracy cursor

To illuminate the lens area of the high accuracy cursor, press and hold any button in the far right column (3, 7, B or F); at the same time, press and hold any button in the far left column (0, 4, 8 or C). The right column button must be held down while pressing the left column button. This same procedure turns the illumination off. The illumination defaults to off when the tablet is first powered on.

Because you will always need one right column button and one left column button free to control the cursor illumination, you should reserve one button in each column from any macro recording.

**Warning:** The DrawingBoard IV high accuracy cursor resembles the cursor for the 9500 series tablet. Although the only difference seems to be the presence of the row of LEDs above the top row of buttons on the 9500 series cursors, **do not interchange these cursors** as damage to both tablet and cursor may result.

### Using the pen

There are three variations of pens: the click tip, the pressure tip and the lite-touch tip. All the variations are tilt and height sensitive. The pen tip is Button 0 and is used as the pick (or left mouse) button. The lower side button is Button 1 and the upper side button is Button 2.

The functions these buttons provide are defined through the TabletWorks software or through your own software application.
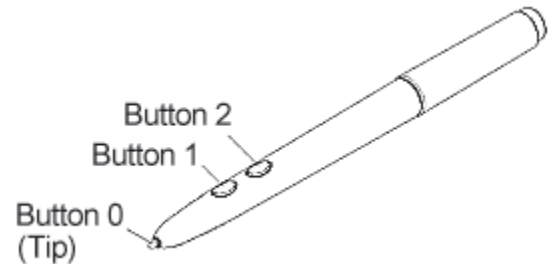
### Click tip pen

The click tip pen is available in both corded and cordless versions. It is primarily used for tracing and menu picking. To use the pen, press down until you feel the tip *click*.

### Pressure pen

The pressure pen is only available in the cordless version. With the pressure pen, the pen tip can be used both as a mouse button and a pressure-sensitive button. To take advantage of the pressure feature, the software package you use must recognize pressure sensitivity. The software assigns values to the pressure levels and uses this data to vary such parameters as line width and color.

To use the pen, press down on the tip and release for a mouse pick action. Press down and hold for the pressure action. Pressure increases as you continue pressing down on the tip. To decrease the pressure, ease up on the tip.

## Learning basic movements

The DrawingBoard IV pointing tools provide all the basic movements of a mouse. The basic movements are clicking, double-clicking and dragging.

### Clicking and double-clicking

Clicking is the action of making a selection. You may be selecting a key on the tablet surface or making a selection from the monitor screen. To click, place the pointing tool (or move the screen pointer via the pointing tool) to the item to be selected then tap the pen or press Button 0 on the cursor. A double-click requires you to tap the pen or press the button quickly two times while the tool remains in the same place. You can also double click by pressing the pen or cursor button that has been defined as a "double-click" button (see TabletWorks Help).

### Dragging

Dragging is the action of moving the pointing tool during a selection. To drag, click on an object but instead of releasing the tip or button, hold it down while moving the pointing tool (or corresponding object on the screen) to the desired new location.

# Customizing the Tablet

You can customize your **DrawingBoard IV** tablet and pointing tool to suit your individual work requirements using TabletWorks. TabletWorks is a Windows program included with the Digitizer Software that helps you use the full capabilities of your tablet. You can map your tablet to the screen area, record your own macros and designate areas on the tablet to switch between open software applications. To learn how to use TabletWorks, please refer to TabletWorks Help.

You can also customize your tablet using the menu strip. However, if you use the Digitizer Software, the software will override the menu strip setup.

**Topics discussed in this section:**

Overview of the menu strip

Selecting a pre-programmed setup

Selecting a custom setup

Recommended setups for common PC software packages

Restoring a pre-programmed setup

## Overview of the menu strip



The menu strip is composed of:

- **Config/Exit key**
  The Config/Exit key turns configuration mode on and off.

- **3 Bank keys**
  There are three Bank keys: A, B and C. Each bank has a different set of tablet options that are available through Configuration key combinations.

- **18 Configuration keys**
  The keys numbered 1-18 can be used as both Configuration and Macro keys. When the tablet is in configuration mode, they function as Configuration keys. These keys allow you to set specific tablet options by turning different combinations of Configuration keys on or off.

  When configuration mode is off, the keys function as Macro keys. Macros can only be recorded with TabletWorks software (see TabletWorks manual).

- **3 Save and 3 Restore keys**
  The Save and Restore keys work hand-in-hand. They are used to save (or recall) a setup to (or from) one of three save areas. There are three pre-programmed setups that come with the tablet. You can use these setups directly or overwrite them with your own. The Default Save key controls the first save area. The setup saved to this area is activated whenever you power up the tablet. We recommend you save the setup you use most often as Default.

## Selecting a pre-programmed setup

There are three pre-programmed setups available with DrawingBoard IV:

- **GTCO DP5 High Resolution Binary**
- **Summagraphics MM 1201**
- **CalComp 2000 ASCII**

These setups are used commonly within software applications as required tablet formats. They are stored in Save areas Default, 2, and 3, respectively. Check the manual that came with your software package to see if your application requires one of these pre-programmed setups. The Default setup is available when you power on the tablet.

**To select one of the other setups:**

**1** Turn on configuration mode by clicking on the Config/Exit key.

**2** Click on the desired Restore key.

**3** Click on the Config/Exit key again to exit configuration mode.  The new setup is activated.

The following table lists the tablet options used by the pre-programmed setups.

|  | **Default** | **Save 2** | **Save 3** |
|---|---|---|---|
| Mode | Run | Track | Point |
| Baud Rate | 9600 | 9600 | 9600 |
| Data Bits | 8 | 8 | 7 |
| Parity | None | Odd | Even |
| Data Rate | 125 pps | 150 pps | 125 pps |
| Resolution | 1000 lpi | 500 lpi | 200 lpi |
| Output Format | Format 23 | Format 30 | Format 0 |
| Emulation | GTCO DP5 High Resolution Binary | Summagraphics MM 1201 Binary | CalComp 2000 ASCII |

## Selecting a custom setup

You can setup specific tablet options by turning different combinations of Configuration keys on or off.  The available tablet options are listed below.

**To set up the tablet:**

**1** Turn on configuration mode by clicking on the Config/Exit key.

**2** Click on the Bank key where you need to work (A, B, or C). You can determine which bank you are in by placing the pointing tool over one of the Bank keys. The power light is on if the bank is active.

**3** Determine whether the Configuration keys are on or off by placing the pointing tool over each key. If the key is on, the power light is on; if the key is off, the power light is off. Click on the key to toggle the setting, if necessary.

**4** Repeat steps 2 and 3 for the remaining banks as required.

**5** After you have completed your setup, you can save it by clicking on one of the Save keys.

**Caution:** Clicking on a Save key will overwrite the pre-programmed setup. This step may be omitted if the setup is temporary for the current session but the setup will be lost when the tablet is powered off. Only save your setup when you will need it for repeated work sessions.

If you overwrite a pre-programmed setup, see Restoring a pre-programmed setup in this section for information on restoring the original settings.

**6** Exit configuration mode by clicking on the Config/Exit key.

## Tablet options

The following sections show the various tablet options available through Configuration keys on the menu strip. Follow the procedure above, using the keys shown for the option. The circles represent the power light on the tablet:

● = Power Light ON          ○ = Power Light OFF

### Defining operating mode

[Config Exit] [A 1-18] [1] [2]

| | 1 | 2 |
|------|---|---|
| Line | ○ | ○ |
| Point | ○ | ● |
| Track | ● | ○ |
| Run | ● | ● |

### Setting up increment mode

[Config Exit] [A 1-18] [3] [4]

| | 3 | 4 |
|------|---|---|
| None | ○ | ○ |
| 1 | ○ | ● |
| 5 | ● | ○ |
| 10 | ● | ● |

### Turning on prompt mode

[Config Exit] [A 1-18] [5]

| | 5 |
|-----|---|
| On | ● |
| Off | ○ |

### Setting up data rate for CalComp 2000 format

[Config Exit] [A 1-18] [6] [7] [8]

| | 6 | 7 | 8 |
|---------|---|---|---|
| 1 pps | ○ | ○ | ○ |
| 5 pps | ○ | ○ | ● |
| 10 pps | ○ | ● | ○ |
| 20 pps | ○ | ● | ● |
| 40 pps | ● | ○ | ○ |
| 75 pps | ● | ○ | ● |
| 100 pps | ● | ● | ○ |
| 125 pps | ● | ● | ● |

### Setting up data rate for Summagraphics MM ASCII format

[Config Exit] [A 1-18] [6] [7] [8]

| | 6 | 7 | 8 |
|---------|---|---|---|
| 7 pps | ○ | ● | ● |
| 20 pps | ○ | ● | ○ |
| 50 pps | ○ | ○ | ● |
| 100 pps | ○ | ○ | ○ |

### Setting up data rate for Summagraphics MM binary format

[Config Exit] [A 1-18] [6] [7] [8]

| | 6 | 7 | 8 |
|---------|---|---|---|
| 7 pps | ○ | ● | ● |
| 25 pps | ○ | ● | ○ |
| 75 pps | ○ | ○ | ● |
| 150 pps | ○ | ○ | ○ |

**Setting up resolution**

| Config Exit | A 1-18 | 9 | 10 | 11 |
|---|---|---|---|---|
| 200 lpi | | ○ | ○ | ● |
| 254 lpi (10 lpmm) | | ○ | ● | ○ |
| 400 lpi | | ○ | ● | ● |
| 500 lpi | | ● | ○ | ○ |
| 508 lpi (20 lpmm) | | ● | ○ | ● |
| 1000 lpi | | ● | ● | ○ |
| 1270 lpi (50 lpmm) | | ● | ● | ● |
| 2540 lpi (100 lpmm) | | ○ | ○ | ○ |

Resolutions up to 10,000 lpi are available on the large format, high accuracy tablets for applications that support it.

**Setting up format**

| Config Exit | A 1-18 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|
| 0-CalComp 2000 A | | ○ | ○ | ○ | ○ | ○ |
| 1-CalComp Wedge | | ○ | ○ | ○ | ○ | ● |
| 2-Summa ID ASCII | | ○ | ○ | ○ | ● | ○ |
| 3-Summa MM 1201 A | | ○ | ○ | ○ | ● | ● |
| 4-CalComp 9100-1 | | ○ | ○ | ● | ○ | ○ |
| 5-CalComp 9100-2 | | ○ | ○ | ● | ○ | ● |
| 6-CalComp 9100-3 | | ○ | ○ | ● | ● | ○ |
| 7-CalComp 9100-4 | | ○ | ○ | ● | ● | ● |
| 8-Summa MM 1105 A | | ○ | ● | ○ | ○ | ○ |
| 9-GTCO DP5 ASCII | | ○ | ● | ○ | ○ | ● |
| 10-GTCO DP5 ASCII | | ○ | ● | ○ | ● | ○ |
| 11-GTCO MD7 ASCII | | ○ | ● | ○ | ● | ● |
| 12-Hitachi ASCII | | ○ | ● | ● | ○ | ○ |
| 13-HiPad ASCII | | ○ | ● | ● | ○ | ● |
| 14-Hitachi ASCII Sign | | ○ | ● | ● | ● | ○ |
| 15-Summa MM 1105 A | | ○ | ● | ● | ● | ● |
| 16-Summa MM 1105 A! | | ● | ○ | ○ | ○ | ○ |
| 17-Wacom ASCII | | ● | ○ | ○ | ○ | ● |
| 18-Reserved | | ● | ○ | ○ | ● | ○ |
| 19-Reserved | | ● | ○ | ○ | ● | ● |
| 20-CalComp AFT | | ● | ○ | ● | ○ | ○ |
| 21-Wacom Binary | | ● | ○ | ● | ○ | ● |
| 22-CalComp Fmt 22 | | ● | ○ | ● | ● | ○ |
| 23-CalComp Hi Res | | ● | ○ | ● | ● | ● |
| 24-GTCO DP5 Hi Res | | ● | ● | ○ | ○ | ○ |
| 25-GTCO Lo Res Bin | | ● | ● | ○ | ○ | ● |
| 26-Kurta Serial 1 #3 | | ● | ● | ○ | ● | ○ |
| 27-Hitachi Hi Res | | ● | ● | ○ | ● | ● |
| 28-CalComp 2000 Bin | | ● | ● | ● | ○ | ○ |
| 29-Summa MM 1201 B3 | | ● | ● | ● | ○ | ● |
| 30-Summa MM 1201 B | | ● | ● | ● | ● | ○ |
| 31-MicroGrid II Binary | | ● | ● | ● | ● | ● |

**Adding line feed**

| Config Exit | A 1-18 | 17 |
|---|---|---|
| None | | ○ |
| Add | | ● |

**Setting up data/stop bits**    `Config Exit` `A 1-18` `18`

| | |
|---|---|
| 7 | ○ |
| 8 | ● |

**Setting up baud rate**    `Config Exit` `B 1-18` `1` `2` `3`

| | 1 | 2 | 3 |
|---|---|---|---|
| 19200 | ○ | ○ | ○ |
| 9600 | ○ | ○ | ● |
| 4800 | ○ | ● | ○ |
| 2400 | ○ | ● | ● |
| 1200 | ● | ○ | ○ |
| 600 | ● | ○ | ● |
| 300 | ● | ● | ○ |
| 150 | ● | ● | ● |

**Setting up parity**    `Config Exit` `B 1-18` `4` `5` `6`

| | 4 | 5 | 6 |
|---|---|---|---|
| None | ● | ○ | ○ |
| Mark | ○ | ● | ● |
| Space | ○ | ● | ○ |
| Even | ○ | ○ | ● |
| Odd | ○ | ○ | ○ |

**Setting corded frequency**    `Config Exit` `B 1-18` `7`

| | |
|---|---|
| Low | ○ |
| High | ● |

**Using Summagraphics MM or CalComp 2000 commands**    `Config Exit` `B 1-18` `8`

| | |
|---|---|
| Use commands | ○ |
| Do not use | ● |

**Using ESC for 9X00 commands**    `Config Exit` `B 1-18` `9`

| | |
|---|---|
| Do not use ESC | ○ |
| Must use escape | ● |

**Sending data out of proximity**    `Config Exit` `B 1-18` `10`

| | |
|---|---|
| No data out of prox | ○ |
| Send data | ● |

**Turning on pressure pen data**    `Config Exit` `B 1-18` `11`

| | |
|---|---|
| Off | ○ |
| On | ● |

**Turning on pen height data**    `Config Exit` `B 1-18` `12`

| | |
|---|---|
| Off | ○ |
| On | ● |

**Turning on pen tilt data**   `Config Exit` `B 1-18` `13`

Off    ○
On    ●

**Turning on pen tilt correction**   `Config Exit` `B 1-18` `14`

Off    ○
On    ●

**Changing tablet to mouse mode**   `Config Exit` `B 1-18` `15` `16`

No mouse    ○ ○
Mouse Systems    ● ○
Microsoft    ● ●

**Setting proximity**   `Config Exit` `B 1-18` `17`

High    ○
Low    ●

**Setting up CTS line enable**   `Config Exit` `B 1-18` `18`

Off    ○
On    ●

**Rotating the tablet**   `Config Exit` `C 1-18` `1` `6`

0° ▭    ○ ○
90° ▯    ○ ●
180° ▭    ● ●
270° ▯    ● ○

**Removing CR on ASCII formats**   `Config Exit` `C 1-18` `2`

CR    ○
No CR    ●

**Controlling pen sound**   `Config Exit` `C 1-18` `3`

No sound    ○
Sound with pen down    ●

**Controlling tablet speaker**   `Config Exit` `C 1-18` `4`

Tablet speaker on ○
Tablet speaker off ●

**Changing tilt data to pressure data**   `Config Exit` `C 1-18` `5`

Leave as tilt    ○
Change to pressure    ●

Config Exit | C 1-18 | 8

Use standard cursor ○
Use HA cursor ●

## Recommended setups for common PC software packages

The following sections show the Configuration key setups for some common PC software packages.Set up the Configuration keys as shown below (see Selecting a Custom Setup). The circles represent the power light on the tablet. Bank C does not vary for these packages so it is not included in the description.

● = Power Light ON          ○ = Power Light OFF

### Setting up for ARCINFO

Using CalComp 9100 format:

| Config Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ○ | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ○ | ○ | ● | ● | ○ | ○ | ● |
| B 1-18 | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

Using GTCO DigiPad format:

| Config Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ● | ○ | ● | ● | ○ | ○ | ● |
| B 1-18 | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

### Setting up for AutoCAD (DOS only)

Using ADI format:

| Config Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ● | ○ | ● | ● | ● | ○ | ● |
| B 1-18 | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

Using CalComp 9100 format:

| Config Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ○ | ○ | ● | ○ | ○ | ○ | ○ |
| B 1-18 | ○ | ○ | ● | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

### Setting up for CADKey

Using GTCO DP5 format:

| Config Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ● | ○ | ● | ● | ● | ○ | ● |
| B 1-18 | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Using Summagraphics MM 1201 format:

| Config/Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ○ | ○ | ○ | ○ | ○ | ○ | ● | ● | ○ | ○ | ● | ● | ● | ● | ○ | ○ | ● |
| B 1-18 | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

# Setting up for DesignCAD 2-D/3-D (DOS only)

Using GTCO DP5 format:

| Config/Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ● | ○ | ● | ● | ● | ○ | ● |
| B 1-18 | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

# Setting up for GeneriCAD

Using CalComp 9100 format:

| Config/Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ○ | ○ | ● | ● | ○ | ○ | ○ |
| B 1-18 | ○ | ○ | ● | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

Using GTCO DigiPad format:

| Config/Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ● | ○ | ● | ● | ● | ○ | ● |
| B 1-18 | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

Using Summagraphics format:

| Config/Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ○ | ○ | ○ | ○ | ○ | ○ | ● | ● | ○ | ○ | ● | ● | ● | ● | ○ | ○ | ● |
| B 1-18 | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

# Setting up for MapInfo (DOS only)

Using CalComp 9100 format:

| Config/Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ○ | ○ | ● | ● | ○ | ● | ● |
| B 1-18 | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

Using CalComp 2000 binary format:

| Config/Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ● | ○ | ● | ● | ● | ○ | ● |
| B 1-18 | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

## Setting up for MicroStation (DOS only)

Using CalComp 9100 format:

| Config/Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ○ | ○ | ● | ○ | ● | ○ | ● |
| B 1-18 | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

## Setting up forTimberline

Using CalComp 9100 format:

| Config/Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ○ | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ○ | ○ | ● | ● | ○ | ○ | ● |
| B 1-18 | ○ | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

Using Summagraphics MM 1201 binary format:

| Config/Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ○ | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ● | ● | ● | ● | ○ | ○ | ○ |
| B 1-18 | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

## Setting up for VersaCAD

Using CalComp 9100 format:

| Config/Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ○ | ○ | ● | ○ | ○ | ○ | ○ |
| B 1-18 | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

# Restoring a pre-programmed setup

When you save a custom setup to one of the save areas, the pre-programmed setup will be overwritten. To restore the original setup, set the Configuration keys as shown below, using the procedure on the following page. The circles represent the power light on the tablet. Bank C does not vary for these applications so it is not included in the description.

● = Power Light ON          ○ = Power Light OFF

## Restoring Save Default — GTCO DP5 High Resolution

| Config/Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ● | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ● | ○ | ● | ● | ● | ○ | ● |
| B 1-18 | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

## Restoring Save 2 — Summagraphics MM 1201 binary

| Config/Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ● | ○ | ○ | ○ | ○ | ● | ○ | ○ | ● | ○ | ○ | ● | ● | ● | ● | ○ | ● | ● |
| B 1-18 | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

| Config Exit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A 1-18 | ○ | ● | ○ | ○ | ○ | ● | ● | ● | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ● | ○ |
| B 1-18 | ○ | ○ | ● | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

# Caring for the Tablet

Follow these precautions at all times to avoid damaging your **DrawingBoard IV**:

■ Avoid discharging static electricity to the tablet.

■ Do not place heavy objects on the tablet surface.

■ Do not use sharp objects, like compasses or knives, on the tablet surface.

■ Do not use the tablet surface for any purpose other than drawing, tracing or digitizing.

**Topics discussed in this section:**

Cleaning the tablet

Replacing the pen tip

Replacing the pen batteries

Replacing the cursor batteries

## Cleaning the tablet

To clean the tablet's surface, use a soft, non-abrasive cloth. Hardened dirt may be removed with a slightly dampened cloth.  Do not clean pencil lines with a soft cleanser or pencil eraser.  his may create an undesirable shiny spot on the tablet's surface that cannot be removed.

**Warning:** Do not use abrasive cleaners, acrylic or lacquer paint thinners, or cleansers with an acetone or solvent base, such as MDC or EDC, on the tablet surface. They will damage the tablet case.

## Replacing the pen tip

To replace the pen tip, grasp the tip and pull straight out (see figure). Insert the new tip and press until it clicks into place.
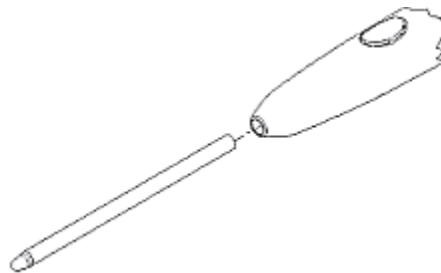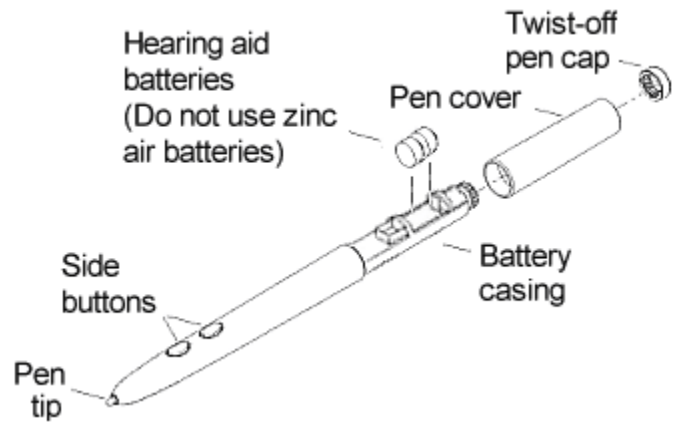
# Replacing the pen batteries

The pens require two 393 silver oxide batteries. The average battery life is 750 to 1,000 hours.

**Warning:** Do not use ZINC AIR batteries as replacement batteries. They will corrode the electronics of the pen.

**To replace the batteries:**

1  Unscrew the pen cap. Hold the pen from the bottom and gently slide off the pen cover to expose the batteries.

2  Remove the old batteries by turning the pen over and gently tapping it, letting the batteries fall into your other hand.

3  Insert the new batteries as they are shown in figure above ("+" towards pen tip).

4  Replace the pen cover then screw the pen cap onto the pen.



**Note:** When you replace the pen batteries, the pen will reset to the default frequency. If you changed the frequency of the pen before replacing the batteries, you will need to do so again after replacing the batteries (see the Reducing Monitor Interference section in Solving Problems).

# Replacing the cursor batteries

The cursor requires two AAA batteries. The average battery life for the cursor batteries is 4,000 hours.

**To replace the batteries:**

1  Place the cursor face down in the palm of your hand. Use a Phillips screwdriver to remove the two screws located on the bottom of the cursor (see figure).  Remove the cursor base.

2  Remove the old batteries from the battery casings.

3  Place the new batteries in the casings, matching the polarity of each battery with the markings on the connector strips (match + to +).

4  Reposition the cursor base. Replace the screws with the Phillips screwdriver.
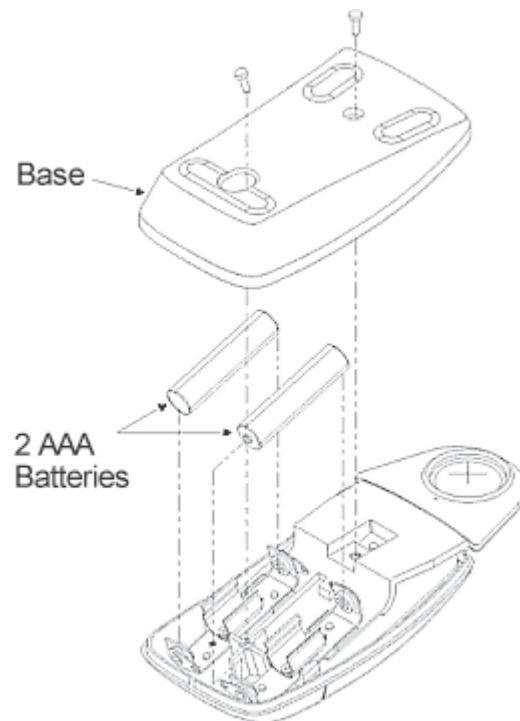


**Note:** When you replace the cursor batteries, the cursor will reset to the default frequency. If you changed the frequency of the cursor before replacing the batteries, you will need to do so again after replacing the batteries (see the Reducing Monitor Interference section in Solving Problems).

# Solving Problems

We want your experience with your **DrawingBoard IV** tablet to be a successful one. If you have a problem, please follow the steps below.

**1**    Reread DrawingBoard IV Help to verify you have performed the correct steps.

**2**    Read the topics below to check for a solution to your problem. Review the checklists as well as the trouble-shooting chart. Keep in mind that the problem may be your computer, your display or your software, instead of the tablet.

**Topics discussed in this section:**

Reducing monitor interference (changing the frequency of pointing tools)

Tablet checklist

Computer checklist

Software checklist

Troubleshooting chart

Returning your tablet for repair

**3**    If you still have a problem, call GTCO CalComp Technical Support at 480-443-2214 (in the U.S. or Canada), or fax us at 480-948-5508. Outside the U.S. or Canada, contact your local GTCO CalComp office or dealer.  Please have the following information available before you call:

■  Description of the problem

■  Name and version of software package you are using

■  Type of computer you are using

■  DrawingBoard IV model number and serial number (see bottom of tablet)

■  Type of pointing tool you are using

**4**    Be at your computer when you call.

## Reducing monitor interference

If you are experiencing monitor interference with your tablet, you can reduce the interference by changing the frequency your tool uses. Pointing tools with the following FCC ID numbers support two frequencies: ECPPPP, ECPPP2, ECPPLTP, ECPPCURSOR4,ECPPCURSOR16, and ESPPCURSORII. Pointing tools with FCC ID numbers other than those listed must have frequencies changed at GTCO CalComp.

### Changing the frequency of the cordless cursor

**1**    Place the cursor on the tablet surface.

**2**    Press Buttons 1 and 2 simultaneously and hold for approximately three seconds.

**3**    The cursor turns itself off. You will know the cursor is off when the power light on the tablet begins blinking.

**4**    The cursor turns on again at the new frequency. You will know the cursor is on when the power light glows steadily.

To return to the default frequency, repeat the above process. When you replace the cursor batteries, the cursor is automatically reset to the default frequency.

### Changing the frequency of the cordless pen

Press both side buttons and the tip simultaneously and hold for approximately three seconds.

To return to the default frequency, repeat the above process. When you replace the pen batteries, the pen resets to the default frequency.

### Changing the frequency of a corded pointing tool

You must use the menu strip to change the frequency of the corded pointing tools (see "Setting corded fre-quency" under Selecting a Custom Setup).

## Tablet checklist

- ❑ Is the tablet power supply plugged into the serial connector and into a live outlet?

- ❑ Is the tablet power switch on?

- ❑ Does the power light glow steadily when the pointing tool is inside the drawing area?  Does it blink when the pointing tool is outside the drawing area?

- ❑ The power light will blink if the pointing tool has gone into sleep mode. Press any button on the tool to activate it. If the power light continues to blink and the pointing tool is in the drawing area, change the pointing tool's battery.

- ❑ Are all cable connections tight?

- ❑ Power cable to serial connector?

- ❑ Pointer cable to tablet?

- ❑ Serial cable to tablet?

- ❑ Serial cable to computer?  Check that the cable is connected to the serial port specified in your software package.

- ❑ Is the tablet set up according to the software recommendations?

- ❑ Are any of the connector cables or receptacles damaged? Check for bent pins, cut insulation, and loose wires.

## Computer checklist

- ❑ Is the computer plugged into a live outlet? Did you turn on the computer?

- ❑ Does the computer work with any software? Try one of your other programs. If the computer has a diagnostic diskette, use it.

- ❑ Is your software package installed correctly?

- ❑ Does the serial port work? The only way to test the port without special equipment is to reinstall something that has worked in the past and test if it still works.

- ❑ Have there been any recent electrical storms in your area that may have damaged your equipment?

## Software checklist

### Does the tablet work with some software?

If your tablet currently works with some software packages, you know that the tablet, serial port, and computer work.

- ❑ Even if the software package you are trying to install and the software that is working both support the same tablets, it does not always mean that you can use the same tablet settings. The output format may be the same, but the communications protocol, resolution, operating mode, and data rate may be different. Check your software's requirements.

- ❑ Call the software manufacturer. Perhaps the software package has a problem with another component of your system.

## Did the software work in the past?

If the software package worked with the tablet in the past, then the problem lies with the new setup.

❑ Check all the connectors. Is the tablet still plugged into the same port? If yes, reset the tablet by unplugging and replugging the power supply and restart the software.

❑ Did you reset or power down the computer?

❑ During reset and power on the computer can send meaningless characters out the serial port and this can disable the tablet. Reset the tablet again.

❑ Have you installed any new software or hardware? Remove it from your system and see if the problem goes away.

❑ Did you move any cables?

❑ If you are using a PC, did the new software alter your AUTOEXEC.BAT file?

❑ Have you updated the software or its drivers?

❑ Are you loading another mouse driver?

❑ Did you reinstall the software, perhaps after a problem with your hard drive? Double check your installation procedure and the driver you selected.

❑ Reinstall the software from its master diskettes. The program files may have been corrupted.

## Troubleshooting chart

The following table lists common DrawingBoard IV problems, their causes and their solutions.

| Problem | Cause | Solution |
|---|---|---|
| Frozen screen pointer | Pointing tool is in "sleep" mode. | Press any button on the tool. |
| | Menu strip is in configuration mode. | If the configuration light is on, click on the Config/ Exit key on the menu strip. |
| | Tablet plugged into the wrong serial port on the computer. | Check that the serial port used is correctly identified in your software application. |
| | Tablet not powered correctly. | Check that the power cable is installed correctly. |
| | Batteries low in pointing tool. | Replace the batteries in the pointing tool. |
| | Software application set up incorrectly. | Check that the tablet is identified in your software application. |
| | Another device is connected to a COM port that shares the same IRQ as the tablet COM port (i.e., your tablet is connected to COM1 IRQ4 and your modem is connected to COM3 IRQ4). | Move one of the devices to another COM port. Contact your system manufacturer for assistance in relocating the device. |
| Screen pointer appears to shake or jitter | Tablet is set too close to the screen monitor. | Move the tablet farther away from the screen. |
| | Tablet's frequency setting may conflict with the display. | Alternate the pointing tool's frequency. (See the Reducing monitor frequency section earlier in this chapter.) |
| Unable to use the entire tablet surface | Incorrect format selected. | Check your selections in the menu strip. |
| | Software application set up incorrectly. | Check that the tablet is identified in your software application. |

# Returning your tablet for repair

If you think you have a defective tablet, first see all topics in this section (above) and visit our Web site at www.gtcocalcomp.com/calcompproducts/a_station/default.htm for the latest support information.

If you are still unable to properly operate your digitizer system, call Technical Support at 480-443-2214, or e-mail us at calcomp.support@gtcocalcomp.com. Technical Support will assist you in determining if your tablet is defective, and will help you obtain a Return Merchandise Authorization (RMA) number. **Important:** Please do not return your product without first discussing the problem with, and receiving an RMA from, a GTCO CalComp Technical Support Specialist.

## Repackaging for shipment

Whenever you ship electronic equipment, try to ship it in its original packing materials. Because packing materials are static-charged, you should ship the cursor or any extra electronics boards inside approved anti-static plastic bags. If you are shipping the tablet or accessories to a GTCO CalComp Service Center for repair, attach a tag to the equipment with the following information:

- Model number
- Serial number
- Maintenance contract number (if applicable)
- Return Merchandise Authorization number
- Detailed description of the problem

# Specifications

The following tables list **DrawingBoard IV** technical specifications:

**Topics discussed in this section:**

Communications specifications

Design specifications

Electrical specifications

Regulatory specifications

Environmental specifications

Physical specifications

# Communications specifications

The **DrawingBoard IV** tablet uses asynchronous serial RS-232C transmission with RS-232C/CCITT V.24 signals. The host end of the cable is standard.

# Design specifications

| Feature | Description |
| --- | --- |
| Resolution | Up to 12,700 lpi (500 lpmm) |
| Accuracy | ± .010" standard accuracy<br>± .005" high accuracy  (optional)<br>± .002" high accuracy  (optional) |
| Proximity | >.5" (12 mm) |
| Jitter | ± 1 lsb |
| Repeatability | .001" |
| Maximum Data Rate | >200 pps (corded)<br>>170 pps (cordless) |

# Electrical specifications

| Feature | Description |
|---|---|
| Power Source | Wall mount power supply with a 2.1mm monoplug DC connector and positive outside diameter |
| Input Voltage | 12 to 17 VDC |
| Current Draw | 400 ma |

# Regulatory specifications

| Feature | Description |
|---|---|
| Safety | UL1950, EN60950 |
| Electromagnetic/Immunity | FCC Class B, DOC Class B, VCCI Class II, EN50082-1, EN55022 |

# Environmental specifications

| Feature | Description |
|---|---|
| Operating Temperature | 50° to 104°F (10° to 40°C) |
| Storage Temperature | -40° to 158°F (-40° to 70°C) |
| Humidity Range | 0% to 95%, non-condensing |
| Operating Altitude | Up to 15,000 ft. (4,572m) above sea level |
| Storage Altitude | Up to 50,000 ft. (15,244m) above sea level |

# Physical specifications

| Model | Active Area | Footprint | Weight | Shipping Wt (Avg) |
|---|---|---|---|---|
| DB4-2024 | 20 in x 24 in (508 mm x 610 mm) | 29 in x 34 in (737 mm x 864 mm) | 23 lb (10.5 kg) | 30 lb (13.6 kg) |
| DB4-2436 | 24 in x 36 in (610 mm x 914 mm) | 32.5 in x 46 in (826 mm x 1168 mm) | 25 lb (11.4 kg) | 45 lb (20.4 kg) |
| DB4-3648 | 36 in x 48 in (914 mm x 1219 mm) | 44.5 in x 60 in (1130 mm x 1524 mm) | 40 lb (18.2 kg) | 71 lb (32.2 kg) |
| DB4-4460 | 44 in x 60 in (1117 mm x 1524 mm) | 52.5 in x 69 in (1333 mm x 1753 mm) | 69 lb (31.3 kg) | 93 lb (42.1kg) |

# Parts and Accessories

The following table lists the **DrawingBoard IV** systems and parts available for purchase. To order any of the items listed below, please contact GTCO CalComp at 1-800-458-5888 (Toll Free), or 480-443-2480, fax to 480-443-2284, email to calcomp.sales@gtcocalcomp.com, or visit us on-line at www.gtcocalcomp.com.

| Tablets | Model | Description |
|---|---|---|
| | DB4-2024 | 20 x 24" active area |
| | DB4-2436 | 24 x 36" active area |
| | DB4-3648 | 36 x 48" active area |
| | DB4-4460 | 44 x 60" active area |
| | All models available with high accuracy. | |

**Pointing Tools**

4-button cursor, corded

4-button cursor, cordless

16-button cursor, corded

16-button cursor, cordless

16-button, high accuracy

Two-side button/click tip pen, corded

Two-side button/click tip pen, cordless

Two-side button/pressure tip pen, cordless

**Accessories**

Accessory tray

Power supply, 100/110V

Power supply, 220/240V

I/O cable with 9-pin connector

9- to 25-pin adapter

Magnifier lens for high accuracy cursor

Six hearing aid type batteries for pens

Replacement tips for pen (3 pack)

# Glossary

### Accuracy

The similarity of a distance measured by the tablet with the actual distance.  When we specify that the accuracy of a tablet is ± .010 inches, we mean that every point in the drawing area is within .010 inches of where it should be.

### ASCII

Abbreviation for American Standard Code for Information Interchange.

### Baud rate

The rate of speed that data flows between a host computer and the digitizer.  It is the number of bits transmitted per second.  The lower the baud rate, the slower the speed.

### Bit

The basic unit of information in the binary system—either 0 or 1.

### Button

A switch on the cursor or pen used to input data.

### Byte

A group of eight bits that acts as a single unit of information.

### Coordinate pair

A pair of numbers representing a unique point on the digitizer surface, usually the distance across and up from the tablet origin.

### CR

The ASCII carriage return character usually added to the end of the X,Y coordinate pairs sent by the tablet (ASCII formats).

### Cursor

1) A pointing tool used to select specific points on the tablet surface.  2) A symbol displayed on the screen marking where the next action will take effect or where the next character typed from the keyboard will appear.

### Data bits

Each transmission contains 7 or 8 data bits.

### Data rate

The number of coordinate pairs (X,Y) the tablet sends to the computer per second.

### Default

A value, action or setting that a computer system assumes unless the user gives an explicit instruction to the contrary.

### Drawing area

The area on the tablet surface intended for digitizing.

### Format

The form in which data is sent from the tablet. The DrawingBoard IV tablet can output 32 different formats.

### Frequency

The number of waves that pass a fixed point in one second.

### Height

See Proximity.

### Increment modes

This mode is used with other operating modes. Data points are sent only if the pointing tool has moved the required increment distance in either the X or Y direction and has satisfied the requirements of the operating mode. These increment distances are set separately for each axis.

### Jitter

A repeatability error of short duration caused by electrical noise.

### Key

A portion of the tablet surface available to the user for tablet setup.

### Line feed

Optional character added to the end of an output format that causes the printer to move to the next line, or causes a line to be added on the display screen.

### Line mode

The tablet sends coordinate data points continuously, while the pen tip or a cursor button is depressed, and one additional point when the pen tip or cursor button is released.

### LPI

Abbreviation for line per inch. English unit of measurement for resolution measuring the number of separate, distinguishable locations that may be found within the distance of one inch.

### LPmm

Abbreviation for lines per millimeter. Metric unit of measurement for resolution measuring the number of separate, distinguishable locations that may be found within the distance of one millimeter.

### Mouse mode

An operating mode that emulates Microsoft and Mouse Systems mouse drivers. Data constantly transmits when the cursor or pen is on the drawing area of the tablet.

### Operating mode

The conditions that must be met before the tablet sends information to the computer.

### Output format

The system of characters used by the DrawingBoard IV tablet for outputting data.

### Parity

A type of error detection where a bit is inserted into every character the digitizer transmits. The status of the parity bit confirms that the data was not altered during transmission.

### Pen tilt correction

An option that allows for tilt correction in the pressure pen.

### Pen tilt data

An option that allows output of tilt data in the pressure pen.

### Point mode

The digitizer transmits one coordinate data point when a cursor button or the pen tip is depressed.

### Pointing tool

The tool used to digitize; it may be either a cursor or pen.

### Pressure pen data

Data output from the pressure pen.

### Prompt mode

The digitizer transmits one coordinate pair each time the computer sends a prompt character to the unit. Prompting can operate with any mode except Mouse mode.

### Proximity

The greatest distance above the drawing area that the pointing tool can be raised and still be sensed by the tablet.

### RAM

Abbreviation for Random Access Memory, a specific type of memory used by the computer.

### Resolution

The distance increment that the tablet outputs in lines/inch or lines/mm.

### ROM

Abbreviation for Read Only Memory, a specific type of memory used by the computer.

### Run mode

The digitizer transmits coordinate data points continuously, regardless of the status of the cursor buttons or the pen tip.  This mode is also called "Stream" by some manufacturers.

### Serial transmission

Data transmission protocol where each bit of the data character is sent one at a time over a single circuit.  This system saves on transmission circuitry, but is usually slower than parallel transmission.

### Stop bits

One or two stop bits are transmitted with each data byte.  They mark a completed transmission.

### Track mode

The digitizer transmits coordinate data points continuously, but only while the cursor button or pen tip is de-pressed.  This mode is also called "Switch Stream" by some manufacturers.

### X direction

The horizontal direction across the face of the tablet.

### Y direction

The vertical distance up and down the face of the tablet.

# 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**) 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) 312-9221 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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# About DrawingBoard IV Help

**Part Number 53-00079 Rev. B**