DRAWINGBOARD IV™ PRINTABLE HELP FILES

THE DRAWINGBOARD IV FAMILY OF SMALL FORMAT AND LARGE FORMAT DIGITIZERS

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Introduction

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 superior 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 digitizer to eliminate 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.

System Requirements and Compatibility

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, 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 perform 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.

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 space 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. 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

Click tip, pressure tip, or lite-touch tip pen
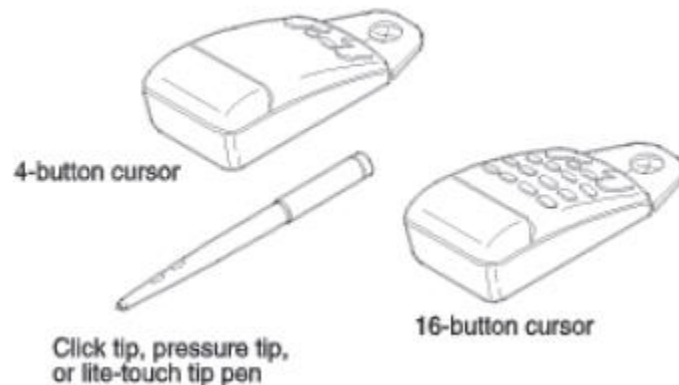
16-button cursor

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 ballpoint 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

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.***

Attach 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.
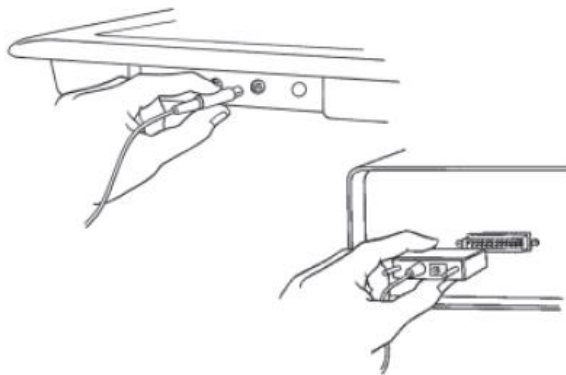
2. Connect the power cable to the serial connector.

Attach the power cable into the jack on the back of the serial cable connector. Connect the power supple 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. The power light will turn on.

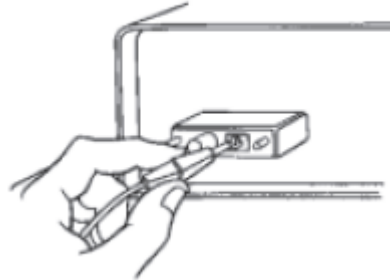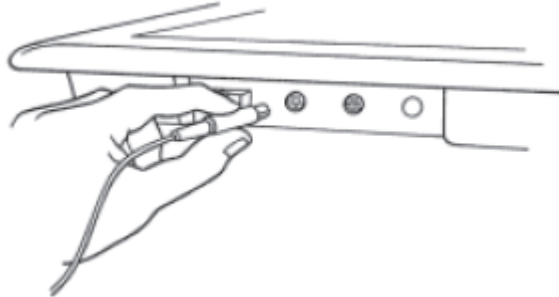If you are using a cordless pointing tool, turn it on by pressing any button on the tool. The power light will glow steadily if the pointing tool is inside the drawing of the tablet. If the pointing tool is outside the drawing area, the power light will blink.

Installing the Software

The TabletWorks software included with DrawingBoard IV allows you to use your tablet both as a mouse and 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
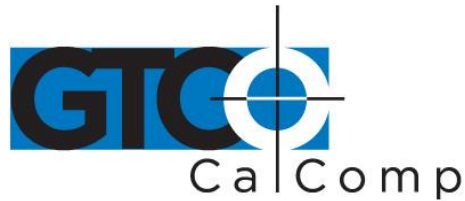
with no mouse functions. In these situations, you can set up DrawingBoard IV manually via the menu strip. Refer to the **Customizing the Tablet** section.

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 DrawingBoard IV is easier than navigating with a mouse. The tablets' pointing tools are more accurate than a mouse giving you greater control over your 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. Since you 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.

NOTE: The DrawingBoard IV high accuracy cursor resembles the pointer 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. The differences among these pens are tilt and height-sensitivity. On all three pens, 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 is Button 2.
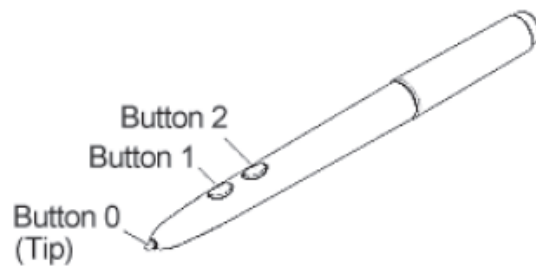
The functions these buttons provide are defined through the TabletWorks software, or through your own software application.

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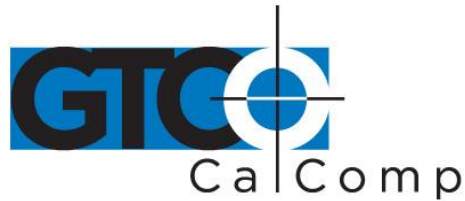
To use the pressure pen, press down on the tip and release for a mouse pick action. Press down and hold for the pressure action. Pressure increases as you continue pressing down on the tip. To decrease the pressure, ease up on the tip.

Learning Basic Movements

DrawingBoard IV pointing tools provide all the basic movements of a mouse. The basic movements include 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 your computer monitor screen. To click, place the transducer, or move the screen pointer using the transducer, to the item to be selected. Tap the pen or press Button 0 on the cursor. A double-click requires you to quickly tap the pen or press the button 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 lifting the pen tip or releasing the cursor button, hold it down while moving the transducer, or corresponding object on the screen, to the desired new location.

Customizing the Tablet

Tailor 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 DrawingBoard IV. You can map your digitizer to the screen area and program stylus and cursor buttons with custom macros. To learn how to use TabletWorks, please refer to TabletWorks Help on the CD.

If you have chosen to use the optional serial interface, you will be able to customize the tablet data format and communications parameters using the Menu Strip, described below.

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 **through**

They keys numbered 1-18 can be used as both Configuration and Macro keys. When the tablet is in Configuration Mode, the keys 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 be recorded only with the TabletWorks software (see TabletWorks Help).

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 CalComp by Turning Technologies DP5 High Resolution Binary
- Summagraphics MM 1201
- CalComp 2000 ASCII

These setups are commonly used 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 digitizer.

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 TTech 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 transducer over one of the Bank keys. The Indicator light is on if the Bank is active.

3. Determine whether the **Configuration** keys are ON or OFF by placing the transducer over each key. If the key is ON, the Indicator light is ON

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

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

6. Exit Configuration Mode by clicking on the **Config/Exit** key.

GTCO
CalComp
by TURNING technologies

> ⚠️ 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.
>
> When you overwrite a pre-programmed setup, see the *Restoring a Pre-Programmed Setup* section for information on restoring the original settings.

Tablet Options

The following sections show the various tablet options available through Configuration keys on the Menu Strip. Follow the procedure described on the previous page, using the keys shown for the option. The circles represent the Indicator light on the tablet:

● = Indicator light ON
○ = Indicator light OFF

Defining operating mode

Config Exit	A 1-18	1	2
Line		○	○
Point		○	●
Track		●	○
Run		●	●

Setting up increment mode

Config Exit	A 1-18	3	4
None		○	○
1		○	●
5		●	○
10		●	●

Turning on prompt mode

Config Exit	A 1-18	5
On		●
Off		○

Setting up data rate for CalComp 2000 format

Config Exit	A 1-18	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
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
7 pps		○	●	●
25 pps		○	●	○
75 pps		○	○	●
150 pps		○	○	○

Setting up resolution

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

● = Indicator light ON
○ = Indicator light OFF

	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)			○	○	○

Setting up format

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

● = Indicator light ON
○ = Indicator light OFF

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

19200	○	○	○
9600	○	○	●
4800	○	●	○
2400	○	●	●
1200	●	○	○
600	●	○	●
300	●	●	○
150	●	●	●

Setting up parity

Config Exit	B 1-18	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

● = Indicator light ON
○ = Indicator light OFF

`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 ● ●
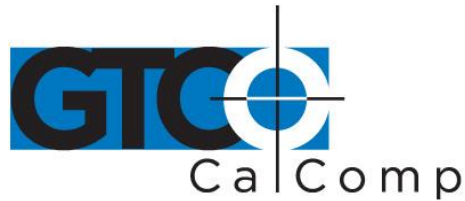
Setting proximity

`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 ●

Using the high accuracy cursor with a small format tablet

`Config Exit` `C 1-18` `8`

Use standard cursor ○
Use HA cursor ●

Recommended Setups for Common PC Software Applications

The following sections show the **Configuration** key setups for some common PC software packages. Setup the Configuration keys as shown below (see *Selecting a Custom Setup*). The circles represent the Indicator light on the digitizer.

● = 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	○	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●

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	○	○	●	○	○	○	●	○	○	○	○	○	○	○	○	○	○	●

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, such as compasses or knives, on the tablet surface.
- Do not use the tablet surface for any purpose other than drawing, tracing or digitizing.
- Do not drill any holes on the digitizer or controller.

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. This may create an undesirable shiny spot on the tablet's surface that cannot be removed.

> ⚠️ **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.

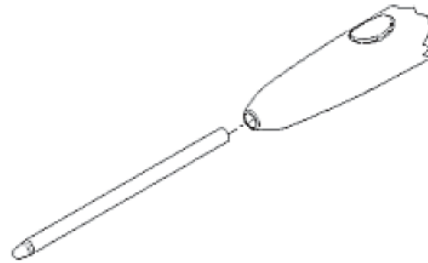### Replacing the Pen Batteries

The pens require two 393 silver oxide batteries. The average battery life is 200 hours.

> **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 the figure above (+ towards pen tip).
4. Replace the pen cover and screw the pen cap onto the pen.
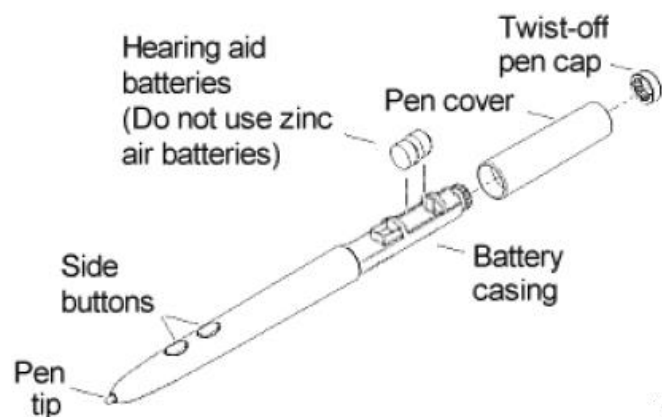
NOTE: When you replace the pen batteries, the pen will reset to the default frequency. If you changed the frequency of the pen before replacing the batteries, you will need to do so again after replacing the batteries (see the *Reducing Monitor Interference* section in *Troubleshooting*).

Replacing the Cursor Batteries

The cordless cursor requires two AAA batteries. The average battery life for the cursor batteries is 2,000 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.

Base

2 AAA Batteries

NOTE: When you replace the cordless 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 *Troubleshooting*).
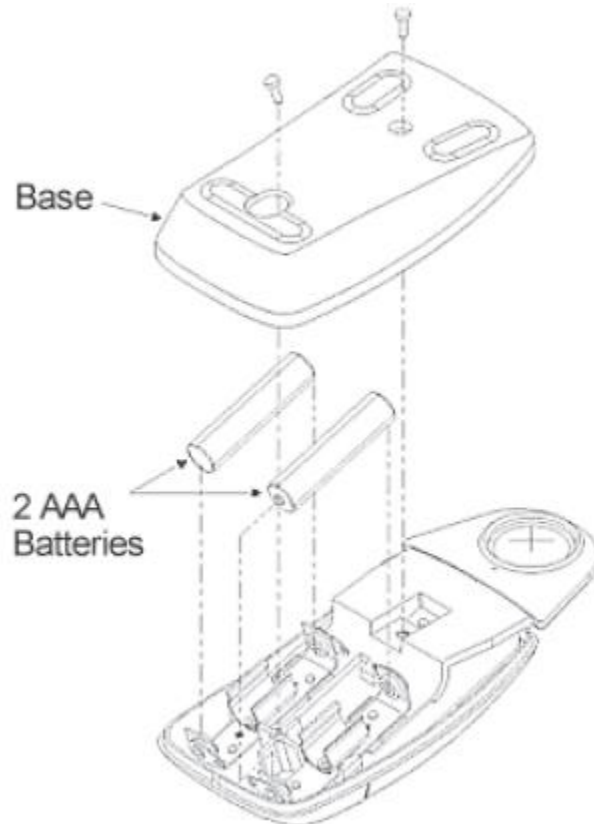
Solving Problems

GTCO CalComp by Turning Technologies wants your experience with DrawingBoard IV to be a successful one. If you ever encounter a problem, please follow the steps below.

1. Review this *User's Guide* to verify you have performed the correct steps.
2. Read the topics below to check for a solution to your problem. Assess the checklists, as well as the Troubleshooting Chart. Keep in mind that the problem could be your computer, display or software, instead of the digitizer.
3. If you still experience an issue, call GTCO CalComp by Turning Technologies Technical Support at 1-866-746-3015 (in the U.S. or Canada) or email us at gtco.support@gtcocalcomp.com. Outside the U.S. or Canada, contact your local GTCO CalComp by Turning Technologies office or dealer. Please have the following information available when you call:
    *   Description of the problem
    *   Name and version of software package
    *   Type of computer being used
    *   DrawingBoard IV model and serial number (see bottom of digitizer)
    *   Type of transducer
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 transducer uses. Transducers with the following FCC ID numbers support two frequencies: ECPPPP, ECPPP2, ECPPLTP, ECPPCURSOR4, ECPPCURSOR16 and ESPPCURSORII. Transducers with FCC ID numbers other than those listed must have frequencies changed by GTCO CalComp by Turning Technologies.

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 Indicator 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 Indicator 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 Pointing Tool

You must use the Menu Strip to change the frequency of the corded transducers (see the **Setting corded frequency** option in the *Tablet Options* section).

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 of your 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 operates.
- 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, USB or 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 re-plugging 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, or do you have multiple mouse drivers?
- 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 tablet 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.	Is the serial port being used 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 setup 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 Interference* section.)
Unable to use the entire tablet surface	Incorrect format selected.	Check your selections in the Menu Strip.
	Software application setup incorrectly.	Check that the tablet is identified in your software application.

Returning your Tablet for Repair

If you believe you have a defective tablet, first see all topics in this section (above) and visit our website at www.gtcocalcomp.com for the latest support information.

If you're still unable to properly operate your digitizer system, please call Technical Support at 1.866.746.3015 or email us at gtco.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 issue with, and receiving an RMA from, a GTCO CalComp by Turning Technologies 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 antistatic plastic bags. If you are shipping the tablet or accessories to a GTCO CalComp by Turning Technologies 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

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 12,000 lpi (500 lpmm)
Accuracy	± .010" standard accuracy
	± .005" high accuracy (optional)
	± .002" high accuracy (optional)
Proximity	>0.5" (12 mm)
Jitter	± 1 lsb
Repeatability	.001"
Maximum Data Rate	>200 pps (corded)
	>170 pps (cordless)

Electrical Specifications

Feature	Description
Power Source	Wall mount power supply with a 2.1 mm mono plug 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 and 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 Weight
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. (42.1 kg)

Parts and Accessories

The following tablet lists the DrawingBoard IV systems and parts available for purchase. To order any of the items listed below, please contact GTCO CalComp by Turning Technologies at 1.866.746.3015 (Toll Free), fax to 480.998.1751, visit us online at www.gtcocalcomp.com, or email to gtco.sales@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 cursor, 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 Active Area is within .010 inches of where it should be.

ASCII
Abbreviation for *American Standard Code for Information Interchange*.

Baud Rate
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
Basic unit of information in the binary system – either 0 or 1.

Button
Switch on the cursor or pen used to input data.

Byte
Group of eight bits that acts as a single unit of information.

Coordinate Pair
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.) Transducer used to select specific points on the tablet surface.
2.) 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

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

Area on the tablet surface intended for digitizing. Referred to as the *Active Area*.

Format

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

Frequency

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
Repeatability error of short duration caused by electrical noise.

Key
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 *lines 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
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
System of characters used by the DrawingBoard IV tablet for outputting data.

Parity
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
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
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
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 depressed. This mode is also called *Switch Stream* by some manufacturers.

X Direction
Horizontal direction across the face of the tablet.

Y Direction
Vertical distance up and down the face of the tablet.

Regulatory Statements and Warranty

Radio and Television Interference

The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits of 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 the 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 the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Reorient or coil cables.
- Consult the dealer or an experienced Radio/TV technician for help.

NOTE: 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 present appareil numérique n'emet pas bruits radioelectriques depassant les limites applicables aux appareils numériques de Classe B prescrites dans le réglement sur le brouillage radioelectrique edicte par le Ministere des Communications du Canada.

European Union Emission Directive

This product is in conformity with the protection requirements of EU Council Directive 89/366/ECC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to CISPR 22/European Standard EN55022. The limits for Class B equipment were derived for typical industrial environments to provide reasonable protection against interference with licensed communication devices.

European Union WEEE Directive

The manufacture of this equipment required the extraction and use of natural resources. It may contain hazardous substances that could impact health and the environment.

- In order to avoid the dissemination of the hazardous substances into the environment and to diminish the pressure on our natural resources, GTCO CalComp by Turning Technologies encourages you to return this product to the appropriate take-back system facility. These facilities reuse or recycle most of the materials in this equipment in a responsible way.
- The crossed-out wheeled bin symbol below invites you to use these take-back systems.
- If you need more information about the collection, reuse and recycling systems in your area, please contact your local or regional waste authority.
- Further information about the responsible end-of-life management of this and other GTCO CalComp by Turning Technologies products is available on our website at www.gtcocalcomp.com.

Japan

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準
に基づくクラスＢ情報技術装置です。この装置は、家庭環境で使用すること
を目的としていますが、この装置がラジオやテレビジョン受信機に近接して
使用されると、受信障害を引き起こすことがあります。
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 by Turning Technologies, Inc.
Manufacturer's Address: 14557 N. 82nd Street
                             Scottsdale, Arizona 85260

Declares, that the product:
Product Name: DrawingBoard IV
Model Numbers: DB4-2024, DB4-2436, DB4-3648 and DB4-4460
Product Options: All

Conforms to the following product specifications:

Safety: UL 1950, 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   6-18-1999   Dana Doubrava
Location   **Date**   **Engineering Manager**

Limited Warranty for DrawingBoard IV

GTCO CalComp by Turning Technologies, Inc. warrants these products to be free from defects in material and workmanship under the following terms. Complete and return the enclosed warranty registration card to ensure that your products are covered with this warranty.

Coverage

Parts and labor are warranted for one (1) year from the date of the first consumer purchase for the digitizer tablet, controller, transducers and tablet accessories. Power supply and cables are also warranted for one (1) year. This warranty applies to the **original consumer purchaser only**.

Within the European Union, the warranty period is two (2) years, as mandated by the EU. Contact your local dealer or distributor for additional warranty information.

Warranty is only valid if original consumer's purchase or lease date is less than or equal to six months from the original GTCO CalComp by Turning Technologies sale date. This information will be captured by the system serial number and confirmed by the reseller's purchase order.

A nominal Warranty Handling Fee will be charged after the first 90 days of use and calculated from the date of original consumer purchase. This payment may be made by Visa, MasterCard or American Express. A copy of the sales receipt or invoice will be required for warranty verification.

Conditions

Except as specified below, this warranty covers all defects in material or workmanship in the products. The following are not covered by the warranty:

1. Any product on which the serial number has been defaced, modified or removed (if applicable).
2. Damage, deterioration or malfunction resulting from:
   a. Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature, unauthorized modification for any purpose, unauthorized product modification, or failure to follow instructions supplied with the product.
   b. Repair or attempted repair by anyone not authorized by GTCO CalComp by Turning Technologies.
   c. Any damage in shipment of the product (claims must be presented to the carrier).
   d. Any other cause which does not relate to a manufacturing defect.
3. Any product not sold or leased to a consumer within six months of GTCO CALCOMP BY TURNING TECHNOLOGIES original sale date.

GTCO CalComp by Turning Technologies will pay all labor and material expenses for covered items, but will not pay for the following:

1. Removal or installation charges.

2. Costs for initial technical adjustments (setup), including adjustment of user controls.
3. Certain shipping charges. (Payment of shipping charges is discussed in the next section of this warranty.)
4. Packaging costs. (Customers should keep their boxes.)

Warranty Service Procedures
1. To obtain service on your GTCO CalComp by Turning Technologies product, contact the Technical Support Department to receive a Return Material Authorization Number (RMA#) and shipping instructions by calling: 1-866-746-3015.
2. Ship the product to GTCO CalComp by Turning Technologies with the RMA# marked clearly on the outside of the box. Without a clearly marked RMA# on the shipping box, GTCO CalComp by Turning Technologies reserves the right to refuse the shipment.
3. Although you must pay any shipping charges to ship the product to GTCO CalComp by Turning Technologies for warranty service, GTCO CalComp by Turning Technologies will pay the return shipping charges for ground shipment. Other shipping options are available at an additional fee.
4. Whenever warranty service is required, the original dated sales invoice (or a copy) must be presented as proof of warranty coverage and should be included in shipment of the product. Please also include your name, address, telephone number, fax number, email address and a description of the problem.
5. If GTCO CalComp by Turning Technologies determines that the unit is not defective within the terms of the warranty, the consumer shall pay the cost of all freight charges, as well as any repair charges.

Technical Support
Web-based Technical Support is available free of charge at: www.gtcocalcomp.com, where current driver releases, as well as comprehensive technical support, troubleshooting, Technical Bulletins and FAQs can be found.

Telephone Technical Support is available free of charge to the original consumer for a period of 90 days from the date of purchase of the product. Please contact our Technical Support Department at: 1-866-746-3015 or fax your request to: 480.998.1751.

Disclaimer of Unstated Warranties
The warranty printed above is the only warranty applicable to this purchase. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. Assuming the warranty above stated is otherwise applicable, it is expressly understood and agreed that GTCO CalComp by Turning Technologies sole liability whether in contract, tort, under any warranty, in negligence or other shall be for the repair or replacement of the defective parts and under no circumstances shall GTCO CalComp by Turning Technologies be liable for special, indirect or

consequential damages. The price stated and paid for the equipment is a consideration in limiting GTCO CalComp by Turning Technologies liability.

Notice
Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights, which vary from state to state, or province to province.

To obtain service on your GTCO CalComp by Turning Technologies product, call our Technical Support Department at: 1-866-746-3015 or fax us at (480) 998-1751. We can also be contacted through our website at www.gtcocalcomp.com (in US); at EUOffice@gtcocalcomp.com (in Germany); at infos@calcomp.fr (in France).

Important!
All products returned to GTCO CalComp by Turning Technologies for service must have prior approval in the form of a Return Merchandise Authorization Number (RMA#), which can be obtained by calling the Technical Support Department.

Corporate Headquarters
14557 N. 82nd Street
Scottsdale, Arizona 85260
Tel: 1-866-746-3015
Support: 1-866-746-3015
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DRAWINGBOARD IV™