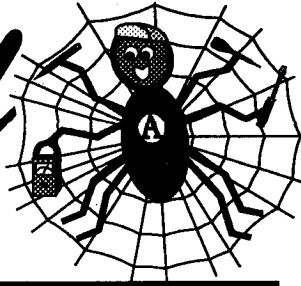


Arachnid Tech. Tips



SPRING 1994


EDITOR
Connie Groves: Technical Service

TECHNICAL ADVISORS
Gene Harlan: Manager, Tech.Serv.
Mark Helmer: Electrical/Field Serv.
Pat Rice: Software/Dartman II
Dick Jones: Research & Devel.
Brad Bennehoff: Gaming Division

A Publication Especially for Operators and Technicians who service Arachnid Products

This publication is provided as an aid for field technicians and operators who troubleshoot, repair, and maintain Arachnid games. It is a technical tool designed to keep all the latest updates, service bulletins, suggestions, and ideas together in one neat package.

Your input is welcome. If you have a special idea or tip you would like to share, send it to:
It will be reviewed and considered for publication.

HAVE A TECHNICAL QUESTION OR PROBLEM? Call us at 1-800-435-8319  and ask for Technical Service. We'll be happy to assist you in any way we can.

Arachnid Inc. Engineering Div.
Attn. Tech Tips Editor
P.O. Box 2901
Rockford IL 61132-2901

IN THIS ISSUE:

Introducing Wild Card Cricket	1
Technical BBS: Lesson One	1
Causes of Extra Stats in Dartman II	2
Editing & Updating Stats in Dartman II	3
VGD Corner: Enrolling	3
The Archives: Tips for Older Models	4



Technical BBS: Lesson One - Logging In

This is Lesson One in a series designed to teach novice Bulletin Board users how to access and use the Arachnid Technical Bulletin Board System (BBS).

Set up your computer and modem to call (you can use 300, 1200, 2400, 9600, or 14400 baud rates). The BBS phone number is 1-815-654-7985. The BBS should answer on the 1st or 2nd ring.

When the BBS connects, it will ask you a series of questions:

First and Last name

Spelled Correctly? (Y/N)

You will get a "Welcome", then press <C> to continue:

Company name and address

Daytime phone #

Is it correct? (Y/N)

Your BBS or Data Line phone #

Date of birth

Where you are from, for the greeting line

What kind of computer do you have?

Your sex (optional)

Protocol to use? (for first-time users, type "S" for now)


Do you want to use Hot Keys? (suggested answer = "Yes")

Which Message Editor to use? (First-time users, type "S")

Use Color menus? (Yes - if you have a color monitor and have ansi.sys called out in your config.sys file)

Erase Pause prompt? (First-time BBS users, type "No")

Mother's maiden name? (In case you forget your password)


That's it! Now you may look through the Main Menu. You have up to 60 minutes to use the BBS before it will log you off. Next time you call in, you will be recognized. In the next issue of Tech Tips, we will take a tour of the Main Menu and its operations. 

Introducing... WILD CARD CRICKET!!!



Arachnid, Inc. has introduced a new game for Galaxy dart boards called Wild Card Cricket. This is an exciting new twist of the original Cricket game *where anything can happen!* Wild Card plays like Cricket, except the numbers change. A wild card number can be any number between 7 and 20 (a single or double bullseye is always present on the screen). Any unmarked number will become wild and change between rounds. What was a 20, might now be a 12, or even a 7! This number will stay wild and continue to change until it is marked. The 200 point spread limit (if enabled) will also apply to Wild Card Cricket, and it has a 35 round limit.

Before installing the Wild Card chip, make sure that all necessary league stats have been collected from the Galaxy game. After installing the new Wild Card chip, reset the League Variables, run "Find a Free Node", then go to "Game Credits Setup Menu" in the Test/Setup Mode, and set the price for Wild Card Cricket. Also set the bullseye option desired. Check all other setup screens too, just to be sure that nothing has changed. If you use Setup cards, make a new card for the Wild Card software, because older Setup cards will not work with it.

The Wild Card Cricket software, labeled Version 3.2, may be purchased from your Arachnid Distributor. It will work properly with Dartman II Version 1.084 only. Version 3.1 and 3.2 chips can be intermixed in league games. Contact Arachnid if you have any additional questions concerning compatibility. 

Extra Stats in Dartman II?

When printing reports in Dartman II, do you sometimes find that teams are shown as playing more games than possible, or a player has too many feats on a given week?

When you Browse Stats to find out why, there are extra lines, or duplicates, for certain weeks. They are easy enough to delete, and your report is fine again, but why did they appear in the first place?

Many factors can affect what gets stored in the team and player stats. Dartman II is very efficient, it will store **everything** that is put into it, without exception. Therefore, you should give careful attention to the stats that come in if you want your reports to be complete and correct every time they are printed.

After stats are loaded, be it from Operator cards or from Modem collections, **always** look at them under "Edit Collected Data" before loading them into the leagues (be sure to check Team, X01, and Cricket). Any extra stats can be caught and deleted here, so you don't have to browse through all the weeks of stats to find it later.

The following paragraphs describe common causes for the duplicate data to appear. They are usually a result of an oversight or incorrect collection procedure. Even if you don't think anything is being done improperly, go through these causes with all involved in the collection process. You may be surprised.

Collecting with Operator cards

Doing a Recollect instead of Collect - This is the most common error made in operator card collection. Often, the collectors don't realize that they are recollecting, so they won't report that it has been done.

The ENTER Button is always lit - When collecting data, you are supposed to press the Select button to collect only new data, however the Enter button is lit, so people mistakenly press it without realizing they did it! Once this is pointed out though, they will look more closely at the button they are pushing.

Misunderstanding - Along with the button confusion, make sure your collectors understand the difference between Collect and Recollect, so if they do recollect for some reason, they will tell the league coordinator about it.

Card is Full - If the collection is not allowed to complete, and the card(s) are read into Dartman II, partial data will result. Next time a collect is done, all the data will be collected again, even what made it to the first card before. Therefore, if the collector gives a full card to the coordinator, and didn't complete the collection, they will get double stats when the collection is completed later. Some collectors don't realize that when you insert a card and the game says "Card is full", that it actually has written some of the stats onto the card. They may leave because they are out of cards, and return later to collect again, and give both to the league coordinator.

Reformatting Cards - Some people believe that if you don't reformat a card after using it for a collection, that old stats may not be completely overwritten the next time the card is used. This is not true. Once a card is read into Dartman II, it can immediately be used for another collection without any fear of getting old stats from it. If you do get old stats, the reasons above are probably why.

Collecting Later - Some operators want stats posted before they all can be collected, so the league coordinator manually enters wins and losses before the card collections are done. When this happens, it doubles the coordinator's work, because he/she must then delete all the manually entered data later. This cleanup process is difficult, and things can be overlooked. Please avoid this if possible!

Automatic Modem Collections

A Failed Collection - is caused by a "no connect", interference during the transmission - either the phone was picked up, another modem answered (pay phone, alarm system, fax, etc.), or the game was turned off. Often these stats are put in manually to get reports out if the problem isn't solved immediately. Then next week, stats are collected successfully, but last week's collection comes across as well. Similarly, if the stats are collected with a card, and a recollect is mistakenly done instead of a collect, there will be double stats for two weeks in a row, one from the recollect, and one the next week because a collect was never done the week before.

On rare occasions, interference on the phone line may occur at the tail-end of a transmission. Dartman II may get all the stats, but the "update pointers signal" that is sent by Dartman II never reaches the game. If this happens, the game won't know the collection was successful, and will allow the same stats to be collected again the next time.

Manual Modem Collections

Manual modem collections can have many of the problems associated with Operator card and Auto collections. The most obvious mistake that can be made is hitting "R" instead of "C".

Picking up the Phone - If the game modem is functioning properly, and the games are turned on, manual collections may fail because the bar picks up the phone. (They may not realize that someone did pick up the line, so they will tell you that they didn't.) One reason for this we have uncovered, is that a collection from multiple games may take longer than the bar owner realizes. They keep trying to use the phone before the transmission is complete. The league coordinator probably won't understand the reason for the failure, unless he/she hears the pickup over the computer speaker during the collection. **Suggestion** - On the Galaxy game with the modem, you can turn DIP switch 4 on the Main P.C. board "ON". This will cause the modem sounds to be transmitted on the Galaxy's speaker, so that the bar will know when the game is transmitting. **However**, make sure the bar owner and workers understand what these sounds are, so they don't report it as a game problem, or shut the game off during the transmission.

Remember - If your modem collection has failed, and you recollect or manually enter the stats, the next time collect works, the same data will come across again. "Reset League Variables" on the Galaxy game(s) involved if you no longer need the stats.

Lack of Communication - Some operators have more than one person doing collections, and they don't communicate with each other (or look first). They try to collect after it has already been done, don't get anything, and then recollect or send someone out with a card. Oops! Double stats, and they don't understand why.

Interruptions in League Play

This generally does not cause a problem, even from electrical storms, tripping over the power cord, etc. However, make sure your players know how to properly resume league play should this occur. League play that is not allowed to be completed will not give stats. A match that is completed without properly exiting league play can also be a problem. As players become more familiar with the new system, they will also be able to help you more by reporting any occurrences that may affect stats collections.

Arachnid is always ready to help you with any problem you may encounter, just call 1-800-435-8319, and ask for Technical Service. ☺

Editing & Updating Stats in Dartman II

The BROWSE mode can be a powerful tool for solving report problems

Occasionally it may be necessary to add additional stats or revise stats that already exist in Dartman II. There are two ways to accomplish this. It may be done in either UPDATE STATS or in BROWSE modes. However, if stats are entered or changed in UPDATE STATS, there is a risk of adding blank records that will show up as extra stats or 0's within the reports. This can happen if you press any key except for <ESC> when you call up a record that you do not wish to change. (NEVER use UPDATE STATS to check previously entered stats.) These extra records must then be deleted in BROWSE mode in order to make the reports look correct.

An easier method of revising stats is to do it all in the BROWSE mode. When finished, you can see exactly what will be listed on the reports, and you won't have to go back and make changes later.

Adding or Modifying Team Stats - Go to BROWSE TEAM STATS, and sort by team. Then press <F5>. This will allow you to see the individual weekly stats. Answer "Yes" to the question, "Display Multiple Rows of Stats?" The stats displayed here may be changed, deleted, or added to. You can even enter an entirely new line of stats by pressing <F7> (Append). A blank line will be added that you can fill in with the necessary information.

Adding or Modifying Player Stats - Player stats can be modified in the same manner as Team stats. The <F5> key is available to view and edit the weekly details for all the players, and records can be changed, updated, or deleted as described above.

Correcting Name Spellings - If a player subs for a team more than once, sometimes their name will show up differently, because the player typed it into the game differently (no last name once, or a different spelling). This will cause their stats to be listed separately under the two spellings. Even a simple error like an extra space will cause this to happen. The BROWSE mode is the perfect place to fix this problem, and get their stats back together under one name. Simply enter the weekly details by pressing <F5> as described previously, and change the name spellings for the player so that they all match. When a report is printed again, all the stats for that player will be grouped together as they should be.

Deleting Extra Stats - If there are extra stats showing for a given week, they can be deleted in the weekly details by highlighting the line to be deleted, and pressing <F10>. The program will "mark" the line with a dot. When you are sure you have all the lines to be deleted marked accordingly, then you must back completely out of the BROWSE mode. When you go back in, you will see that the lines marked will be gone, and your totals should now be correct.

Check Stats Before Printing - It is always a good idea to look at newly entered stats in the BROWSE mode before printing reports, especially if the reports are long. This will save time and paper in reprinting, and prevent players from questioning the stats in the event there is a problem. Also, it is less confusing if you don't have to go back several weeks at a time to look for discrepancies.

Whenever there is a stats collection problem as described in the previous article, please double check the stats in BROWSE mode. Also, if entering stats in the UPDATE STATS screens, always check your work in BROWSE mode before printing. Again, any errors can easily be eliminated before anyone else sees the stats.

Also, remember to back up the data directory often, so that if the wrong stats are accidentally altered, you can have a way to retrieve them and start over. Remember, a computer can only save what is put into it, it can't second-guess the contents of the data.

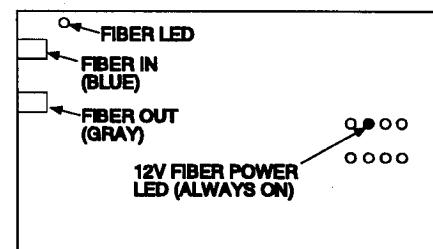
VGD Corner: Service Information and Tips...for Arachnid's Video Gaming Device



VGD Enrollment Instructions

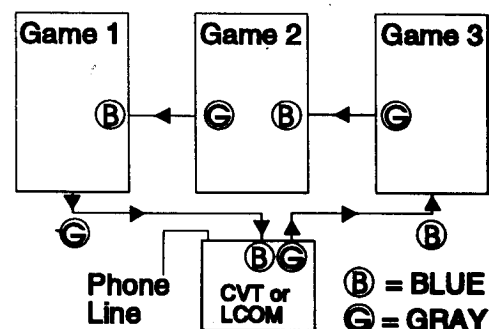
For those technicians who have already enrolled a VGD, here is a quick overview checklist of the steps required. These instructions are also available on a pocket-sized card. If you are a Certified VGD Technician and haven't received yours, call Arachnid's Service Department to request your own copy.

1. Install game and run the fiber optics. Blue connectors on cables go into blue connectors on I/O Board, gray connectors on cables go into gray connectors on I/O Board (see illustrations below).
2. Check the loop. If this is a new location, disconnect both ends of the fiber at the CVT or LCOM. Shine a light into the blue end of the fiber. The gray end should light bright red. If not, check the FIBER LED on the I/O Board in the first game in the loop. The LED should be lit while the light is being applied. If not, check the FIBER POWER LED on the I/O Board. If the FIBER POWER LED is lit, replace the fiber optic cable from the CVT to game #1. Follow this check from the 1st game to 2nd, 2nd to 3rd, etc.
3. When the loop is working (both LED's on the CVT and LCOM are flashing), input the poll address and serial number (permit number).
 - a. Go to the main menu (where volume and deal speed are located).
 - b. Turn the attendant key to access System Administration.
 - c. Touch the SET-UP button.
 - d. Touch the ADDRESS & SERIAL NO. button.
 - e. To enter the serial (permit) number, touch corresponding numbers at the bottom of the screen. Do the same for the poll address (Note: leading 0's must be typed in). If an error is made, touch START OVER, or turn the attendant key and re-enter the screen. Once completed, touch ALL DONE.
 - f. Touch the EXIT menu, then touch RETURN TO GAME. A blue screen will appear listing the CVT error messages.
 - g. Call the State Police Help Desk. Give them the CVT# (on the ticket) and ask for polling. The game will be polled.



I/O BOARD

FIBER WIRING DIAGRAM



The Archives: Service Information, Past and Present... for Galaxies and Older Dart Game Models



Monitors, Monitors, Monitors: Oh, how we love them!

There's three on the bench, two more on the shelf, their fate is in your hands, and you don't have an oscilloscope! Isn't this exactly what you became a Tech for . . . No?

Monitors are in almost every video game and in all of Arachnid's current coin-op products, so they are a big part of the Service Tech's workload. Sharing information on trouble areas and solutions to monitor problems can help us all to do our jobs better.

Arachnid is currently using 110VAC Goldstar monitors in its Galaxy, 6300T, and 6500 series games. Previously, we used 12VDC Kristel and Omnivision monitors. Luckily, all three of these monitors are very similar in regards to service. The Goldstar steps the line voltage down to 12VDC with its own power supply, and from then on is basically the same as the smaller 12V monitors.

The following suggestions should help you service all three types of monitors. Component location #'s are different for the three models, however, so we will list them all where applicable as follows: Goldstar=G/Cxxx, Kristel=K/Cxxx, and Omni=O/Cxx.

WARNING: Servicing a monitor either with or without power applied should only be done by qualified technicians. HIGH VOLTAGES are present which may cause SERIOUS shock or result in damage to the chassis. Take ALL precautions necessary for working on high voltage equipment before servicing.

Dark Screen, No Picture at all - Check to see if filament on the back of the tube is lit. If not, there is no 12V. If power supply is good, check all filter capacitors to ground on all 12V lines (especially electrolytics). Replace as necessary. If filament is lit, check secondary voltages on the flyback. If all are missing, check diodes G/D703,702; K/D204,203; O/D2,14. Also check capacitors G/C708,710,711; K/C212,216,221; O/C14,18,19. If only one or some of the voltages are missing, check the diodes in series with

the missing voltages for opens, and the filter capacitors to ground for shorts. Also check for a good video input. If video is ok at the source, make sure the video signal is not being stopped by any transistors along the video input. If no bad components are found, replace the TDA1180 horizontal I.C. (or TEA2037 for Goldstar). If still no help, replace the flyback transformer. **Replacing the flyback requires removal of the 2nd anode lead from the CRT. WARNING: A HIGH STATIC CHARGE may be present.** Remove static charge by using an insulated wire to connect a 10K ohm resistor in series with earth ground and the 2nd anode lead.

Black Background, Line across the Screen - This is an indication of the 12V line being pulled down. Check all filter capacitors to ground on the 12V line, including those on the power supply.

Excessively Bright Screen, (picture is there but washed out) - This is an indication of a problem with the negative voltage line. Check the bottom end of the brightness pot. There should be a negative voltage (the top side should be about 50V) ranging between -20 and -100 or so. If there is no negative voltage, check G/C608,713; K/C223,222; O/C36,21. If negative voltage is present, check the pot itself, or the adjoining resistors.

Smearing or Ghosting Picture - Check the 50V line from the flyback. Check diodes in series and filter capacitors on the 50V line.

Wavy Video at Top of Screen - Check G/C703, K/C206, O/C9.

No Vertical Sweep or Poor Vertical Linearity - Check capacitors in vertical section, G/C602-C608, K/C101-109 (especially C102,108,109), O/C26,29,30-35,51,56 (especially C26,29,51,56). Also, confirm that there are no open diodes in line with any of these capacitors, especially if you find a shorted capacitor. If no bad components are found, replace the TDA1170 vertical I.C. (or TEA2037 for Goldstar).

Jittery Screen - Video cable is loose or any one of the vertical pots on the monitor board are dirty or damaged.

Free binders are available to keep Tech Tips issues together. Write or call us to request one.

IN THE NEXT ISSUE OF ARACHNID TECH TIPS: Darts & Summer Weather // Service Tips on Galaxies and Networks // Using the Arachnid BBS // and Much More !!!


Arachnid
P.O. Box 2901
Rockford, IL 61132-2901
1-800-435-8319

BULK RATE
U.S. POSTAGE
PAID
Rockford, IL
Permit No. 947

Please Forward to your Technical Department

Arachnid Tech. Tips