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**UNIKON**



**deister**   
**electronic**

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# **UNIKON**

**Race Computer and Race Entry Sensor**

**Set up and Operating Instructions**

**Edition: January, 2003**

**Deister Electronics USA, Inc.  
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Manassas, VA 20110**

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The information in this document is subject to change without notice.

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## System requirements

Operating system: Window 95/98/NT/XP  
Interface: One free COM port (UNI-DOS restricted to 1 or 2)

### 1.1 Introduction

Congratulations and thank you for purchasing the UNIKON system. You have made a wise decision in selecting UNIKON for your club's race clocking and verification needs.

A review of this manual and some simple precautions will help you avoid some of the most common problems encountered when establishing an electronic clocking system for your loft and club. It will also help you become familiar with the terminology used and thus make communication between Clubs, Combines, Concourses and your National Organization easier and more accurate. So, please take a few moments to read the information contained in this manual and to study the wiring diagrams and assembly pictures. We want to help you get the most from your UNIKON system!

### 1.2 Important Considerations

Please observe the following points when installing and setting up your equipment. Following these guidelines will prevent damage to your equipment and keep it operating at peak performance.

- 1) **DO NOT** install or remove any cable or antenna with the power on. **TURN OFF** the unit before installing or removing any cables or antennas. For safety, you may wish to remove the power supply cable when installing or removing cables. *Failure to follow these precautions may result in severe damage to your equipment.*
- 2) **DO NOT** exceed the specified operating and storage temperatures. Operating the equipment at temperatures below or above the stated ranges will result in errors in logging and could damage the equipment. Please review the section on **Technical Specifications** at the end of this manual.
- 3) Keep metal away from the Race Entry Sensor and Loft Antenna. The UNIKON system uses an inductive-coupling technique (similar to a transformer) to read data from and write data to the electronic bands. Metal objects can disrupt the inductive field and result in extremely slow data logging, no data logging, or extremely short "read range."
- 4) The distance between the Race Computer and Race Entry Sensor should be about 2 yards--the Race Entry Sensor is supplied with a 2-meter cable for this reason. Try to maintain that spacing during assignment and race entry. Please note that any device, which emits EMF

(Electro-magnetic frequency) radiation, such as portable or cellular phones, should also be kept at least 2 yards away.

- 5) For the same reason, the Race Computer should be kept about 2 yards from the PC during use and should be 2 yards away from other active Race Computer/Race Entry Sensor hook-ups.
- 6) Keep the Race Computer and Race Entry Sensor out of direct sunlight and away from wet or damp areas. Do not allow the equipment to be exposed to rain.
- 7) The LCD display is covered with a protective plastic sheet when shipped. You may remove this sheet from the display window (it should just peel off easily).
- 8) Connect the Race Entry Sensor, power supply, printer cable, and PC cable to the Race Computer with the power off. Turn on the printer and PC first; turn on the Race Computer last.
- 9) Remember that the Race Computer is actually a dual-use device. When the Loft Antenna is attached instead of the Race Entry Sensor, the Race Computer will act as a Data Logger Unit. *The same precautions must be taken in either mode. Do not disconnect or connect antennas or cables with the unit powered up!*

### **1.3 Other Important Information**

- 1) The Memory Module contains a real-time precision quartz clock to maintain the date and time. Deister tests and adjusts all internal clocks to a minimum accuracy of  $\pm 15$  seconds per month (or about  $\frac{1}{2}$  second per day).
- 2) The Memory Module contains a button-cell battery to run its clock and preserve its memory. When a Memory Module's battery is low, this status will be reported on the Data Logger/Race Entry Computer LCD screen.
- 3) Always make backup copies of your software and bird inventory. After the bands are assigned to your birds, the Unikon Administration Software allows you to transfer back the Electronic Band ID numbers. We strongly recommend that you do this immediately to prevent the need for a complete re-assignment of your loft if the data is inadvertently deleted.
- 4) During race entry, the bird's leg must be held fairly still while the Race Entry Sensor "writes" the secret code to the electronic band. If the band moves excessively it can become corrupted during this cycle. The UNIKON system will automatically repair these electronic bands by simply leaving the band in the sensor for a few moments.

## 2.1 Definitions

### **Data Logger**

The UNIKON base unit with the *Loft Antenna* attached. The main UNIKON unit acts in two different capacities depending on which antenna is attached. When the Loft Antenna is attached, the UNIKON is ready to log returning pigeons.

### **Race Computer**

The UNIKON base unit with the *Race Entry Sensor* antenna attached. Used to assign electronic bands to birds, enter races, store "*Liberation Points*," and print out official race results.

### **Race Entry Sensor**

A special antenna incorporating a "read/write" head specially designed to write data to *passive RFID transponders*. Attaching this antenna to the UNIKON computer automatically switches the Data Logger into a Race Computer.

### **Loft Antenna**

Also occasionally referred to as a "*Ring Sensor*." This is the antenna that is installed in the flyer's loft and will sense and read the electronic bands on the returning bird's legs. Attachment of this antenna to the UNIKON base unit converts it into a Data Logger.

### **Memory Module**

Occasionally referred to as a "*RAM Box*." or "*RBM*". This is the module containing all of the information about a flyer's bird inventory and assignments as well as any current race data.

### **Code Key**

Also referred to as the "Authorization card" on the UNIKON display when reading the memory module data. This very special key-fob transponder is required to gain access to the Race Computer functions (the *same* key must be presented each time the key is requested by the system).

### **UNI Administration Software**

The Deister (DOS or Windows) software package included with all club systems that allows the flyers or club administrators to enter their bird inventories and transmit this information to the UNIKON system hardware. Must have a working COM port 1 or 2 on your computer.

<b>Electronic Band</b>	The plastic band containing an <i>RFID Transponder</i> (Radio Frequency Identification) chip that is attached to the bird's leg. This band may also occasionally be referred to as a "ring."
<b>"Firmware"</b>	This refers to the internal operating system software in the UNIKON system hardware.
<b>RFID Transponder</b>	An encoded microchip with a built-in antenna. They are powered by inductive coupling with the Race Entry Sensor or Loft Antenna.
<b>Arrival Report</b>	The race result report printed with the Race Computer at the club. The "official" Arrival Report will contain information about the race, along with security check data to ensure the integrity of the race.
<b>SuperVal</b>	The "logging without memory module" feature to allow more than one race to be conducted at the same time, or more than one flyer to log pigeons in the same loft.
<b>LCD (Display or Screen)</b>	The "Liquid Crystal Display" on the Data Logger.
<b>RAM Box</b>	The Memory Module.
<b>Ring Sensor</b>	The Loft Antenna.
<b>Authorization Card</b>	The Code Key.

### 3.0 Equipment Setup

#### 3.1 Assemble the Race Entry Sensor

1. Observe specified operating and storage temperatures.
2. No metallic objects should be in the proximity of the race entry antenna.
3. The distance between the race computer and race entry antenna should be at least 78". Please note that portable and cellular telephones should also be kept at least 78" away from the race computer.
4. The distance between race entry antennas connected to different race computers must be a minimum of 78".
5. Place the race computer and antennas only in dry locations and out of direct sunlight. That includes keeping the antenna connectors dry.
6. Switch off all power during set-up!
7. Remove protective sheet from LCD display window.
8. Connect the race computer, power supply, antenna, printer, and PC. Power up the race computer last. The race computer will perform a status check to verify that the antenna has been connected. A code key must be presented to begin proper communications.
9. **NOTE!** Disconnect power before installing or removing any cable or antenna. Failure to do so may result in damage to the equipment.

The Race entry Sensor is provided with two Support Stand "legs," six screws two Code Keys, and an integral cable for connecting to the Race Computer.

The Support Stands are manufactured as *left* and *right*-sided parts. Note that the countersink in the screw hole should go on the outside of the stand, so that the screw heads will be flush with the unit when they are tightened.

Attach the two sides Support stands using the enclosed screws. Be sure to position the stand so that the recess of the Race Entry Sensor will be at the bottom. See Figure 1 on the next page.

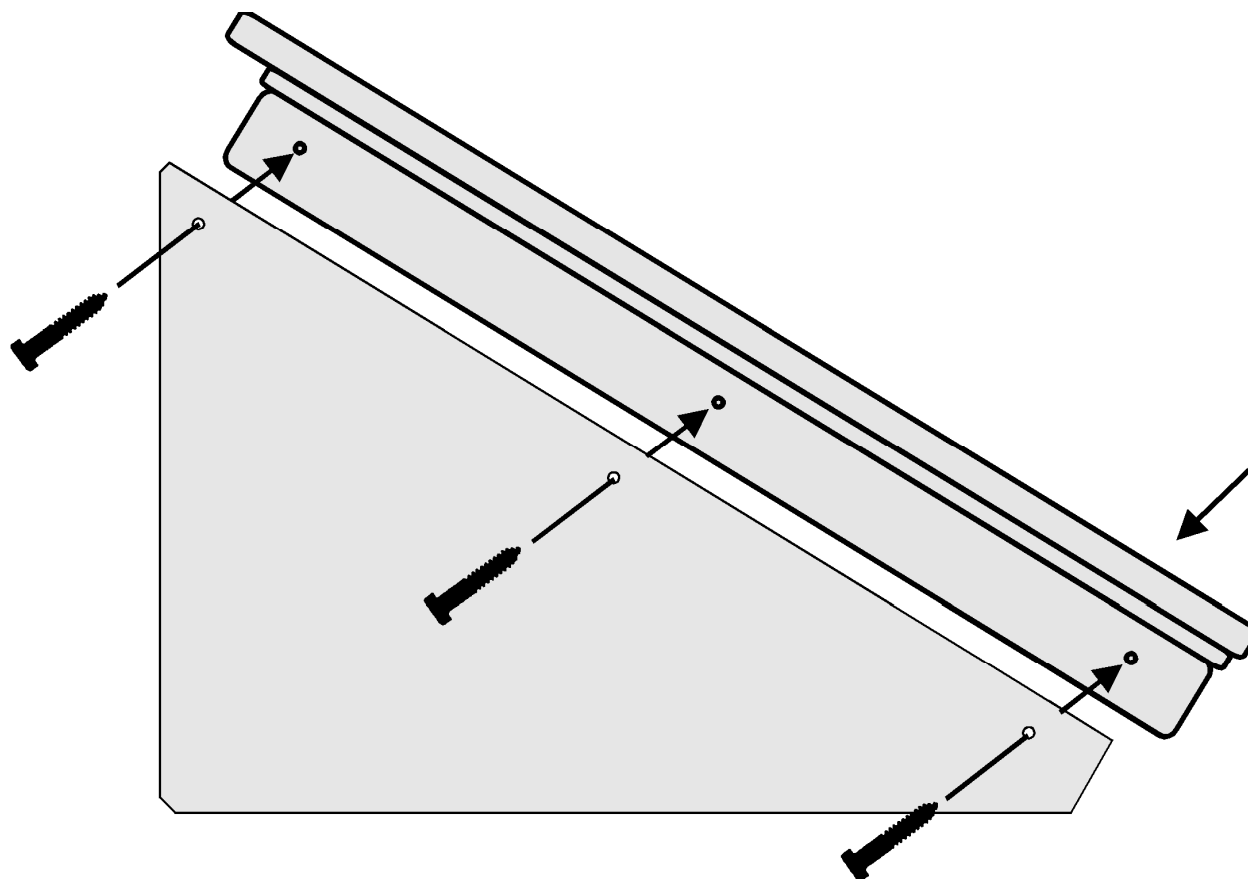


Figure 1: Assembling the Race Entry Sensor.

### 3.2 Setup for Assignment

After the club administrator or flyers have entered their personal information and bird inventory in the UNI software, the birds must be assigned an Electronic Band ID using the Race Computer and Race Entry Sensor. The inventory data must be transmitted to the Memory Module before assignment can be accomplished. Please see the section on The UNI Administration Software.

Set up the equipment as shown in Figure 2. A PC will be needed to transfer the electronic IDs back from the Race computer into the UNI software bird inventory. *We strongly recommend that this be done as soon as possible following assignment.* Backing up this data to the PC will help insure that you will not need to completely re-assign all birds in case of data loss in the memory module.



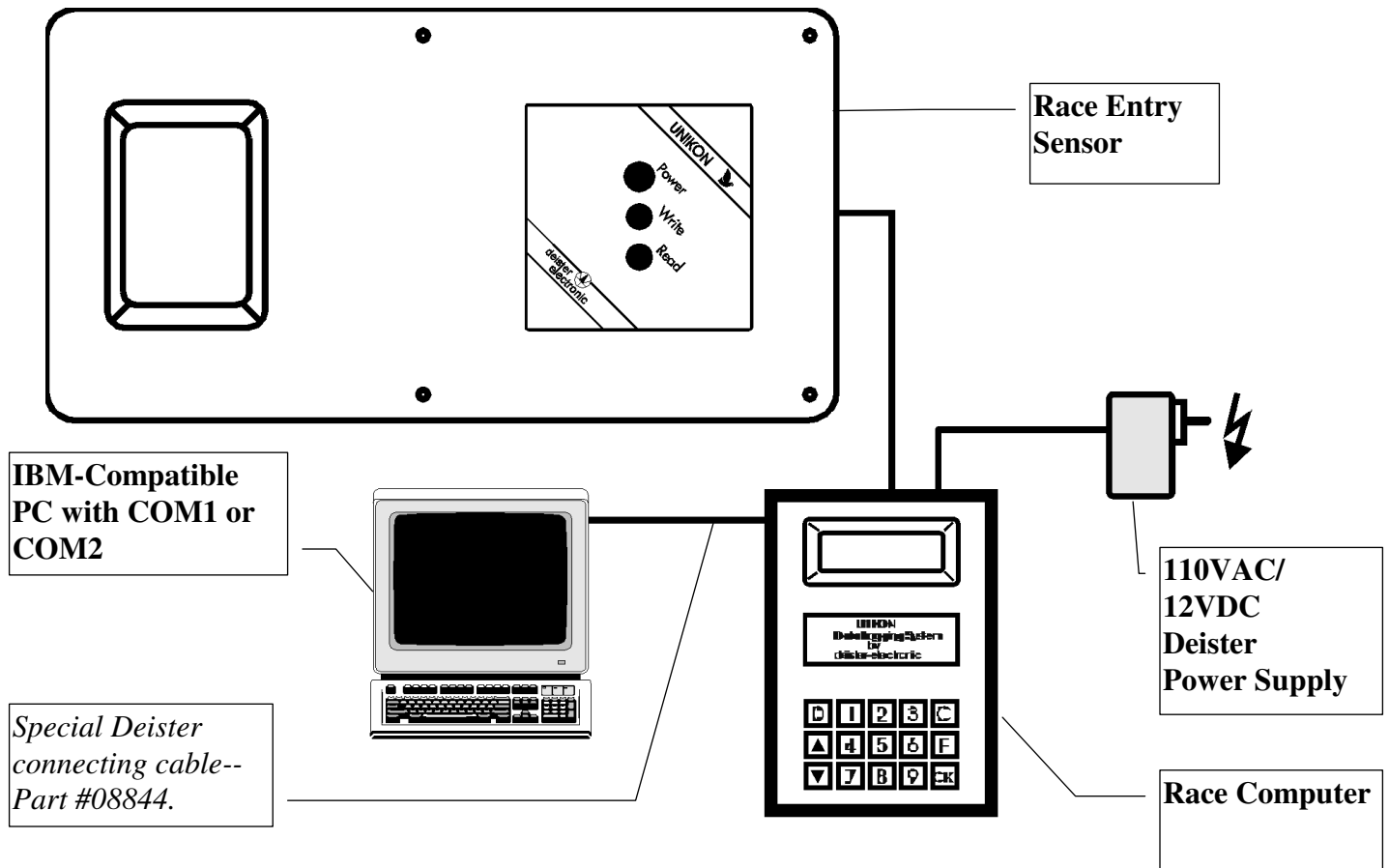


Figure 2: Setup for Bird Assignment.

Never use a gender-changer to plug the computer cable into the back of the Race Computer or the Race Entry Sensor into the port on the side of the unit! Serious damage could result!

### 3.3 Setup for Race Entry or Printing Race Results (the Arrival Report)

Figure 3 shows a typical setup for the race entry procedure. A printer is always required at race entry so that official copies race entries will be printed for the race officials. A printer *will* also be required to obtain the official race results (the “Official Arrival Report”). Note that printing the official Arrival Report is a “big deal” to the UNIKON system and must be done in order to strike out the race. Please see the section on Recommended Race Entry Procedures.

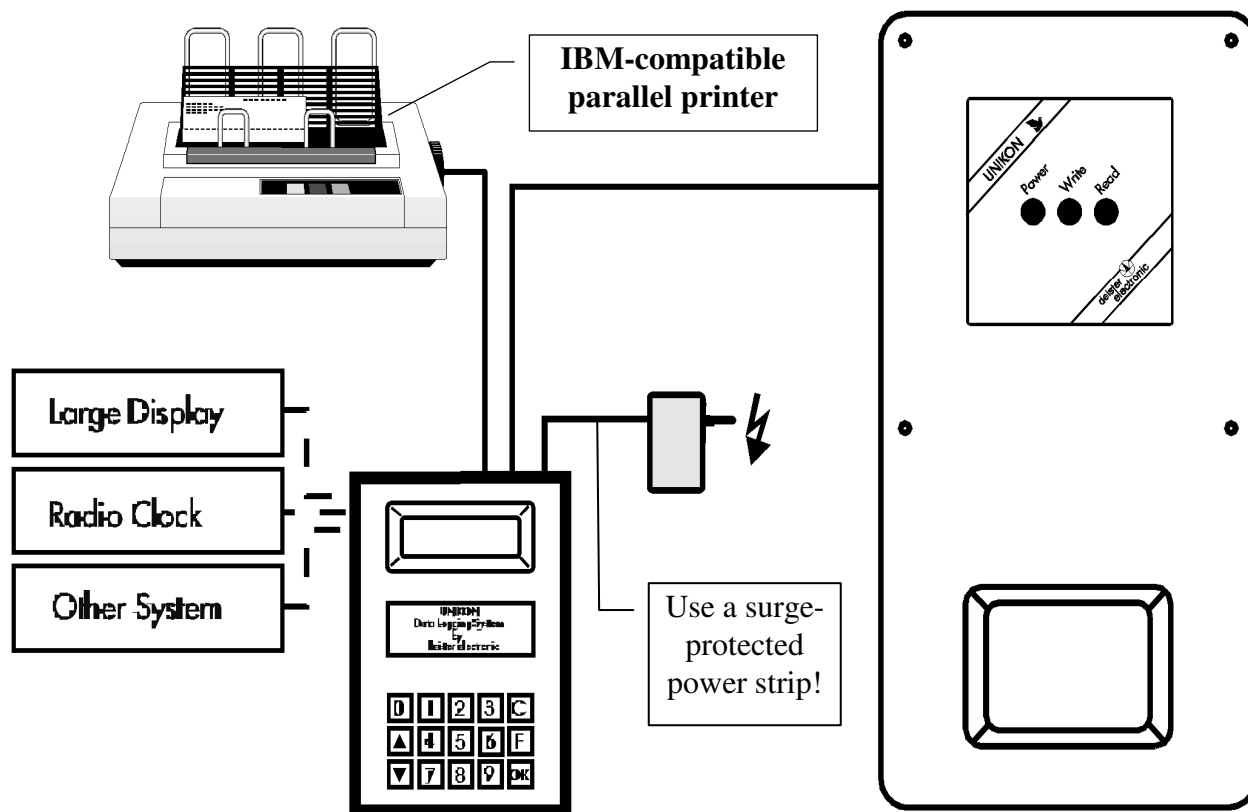


Figure 3: Setup for Race Entry (and Race Results)

Remember that the UNIKON unit is a dual-use device. Attaching the Race Entry Sensor to the unit makes it a Race Computer. Attaching the Loft Antenna makes it a Data Logger. Unique functions are available in each mode.

### 3.4 Setup for Printing Only

In some circumstances, a flyer may wish to simply print his “unofficial” Arrival Report as a backup. The UNIKON system may be accessed without attaching an antenna for this purpose (or for communicating with a PC).

The unit will enter its self-test routines and check for antennas attached. A code key must be presented, or when it does not detect any antenna, an alarm will sound and the message “**no antenna connected! please check!**” will flash on the unit’s LCD screen. Press the green [OK] key to bypass this warning.

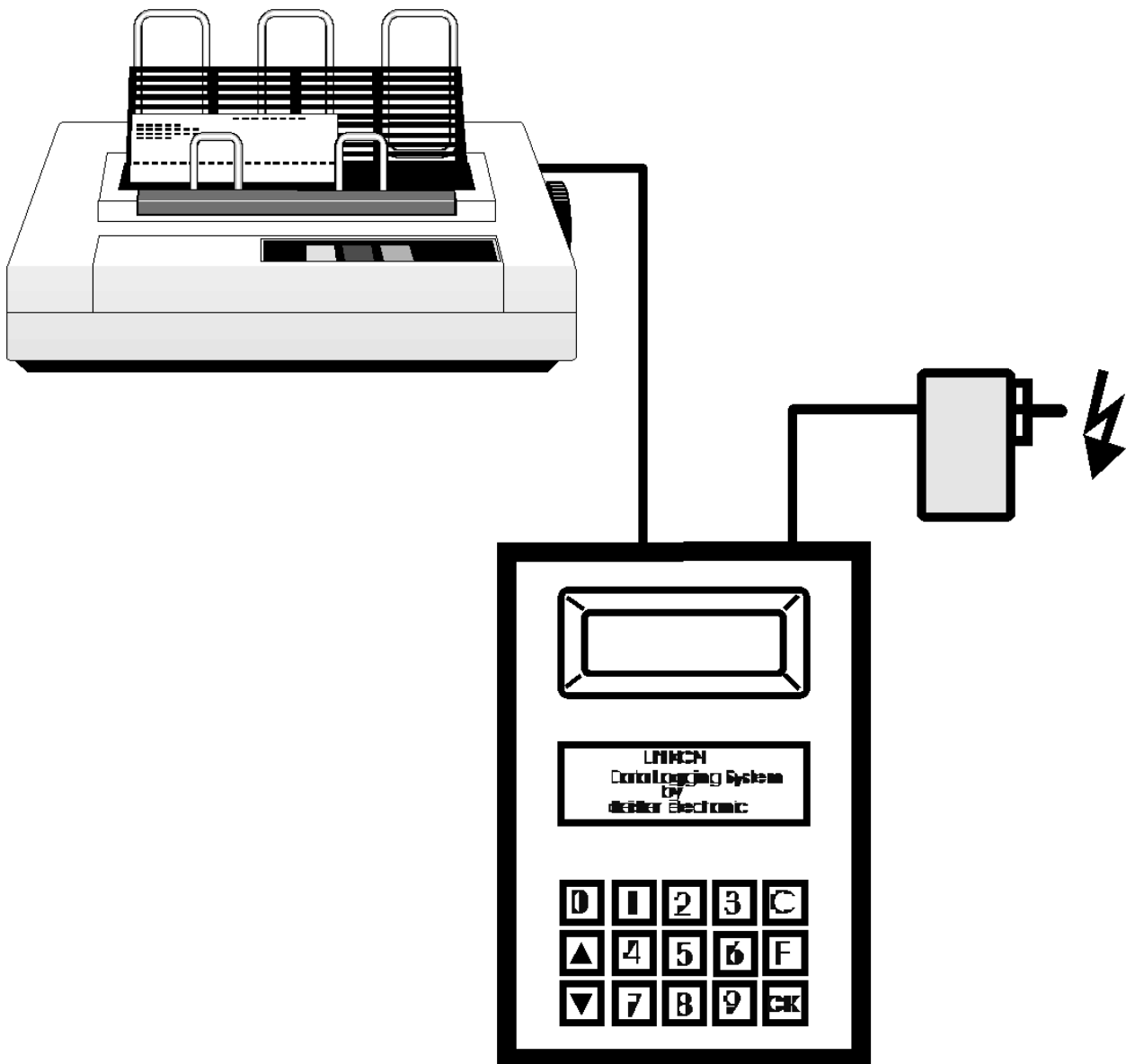


Figure 4: Setup for Printing Only.

### **3.5 Problems getting reports to print?**

With the increased power and speed of today's computers, printer manufacturers have taken an economizing step that makes selecting a printer for use with the UNIKON a bit more difficult. In most new models, printer manufacturers have removed the ASCII translation process from inside the printer and moved it inside the computer via the required loadable drivers. It is true that this has made True Type fonts easier to generate for publishing software but has left many pieces of electronic devices with imbedded processors (such as UNIKON) with an ever smaller number of new printers to choose from. If your existing printer will successfully execute a "SCREEN PRINT" from native DOS mode (NOT an MS-DOS WINDOW), then you should not have any problems using it with UNIKON.

The requirements for the printer to be compatible with UNIKON are as follows:

- 1) Industry standard "CENTRONICS" parallel interface.
- 2) Internal ASCII translator (standard for many years).
- 3) Capable of IBM GRAPHICS (for a more defined report column separator).
- 4) HP brand printers must be capable of PCL.

Printer must not be any of the following:

- 1) Requires WINDOWS operating system.
- 2) Requires 486, Pentium, or better processor.
- 3) Requires interface drivers to be loaded.
- 4) DGI (Digital Graphical Interface).

## 4.0 The UNI Administration Software

The UNI (DOS) software has been tailored to meet the needs of U.S. and Canadian flyers participating in AU, CU, and IF events and clubs. It will allow you to enter extensive data about your National Organization, Combine, Concourse, Club, and flyers. A complete bird inventory can then be entered for each flyer, which will include the bird's band ID, sex, hatching year, and, after "uploading," the assigned Electronic Band ID. You can even enter and transmit to the UNIKON system a unique set of race stations ("Liberation Points") and the dates of each race.

Providing you have a working COM port 1 or 2 on your computer, the UNI software will also handle the communications with the UNIKON hardware, and will even allow you to transfer race results to a PC for further analysis by a third party software database!

### 4.1 Installing the UNI-DOS Software

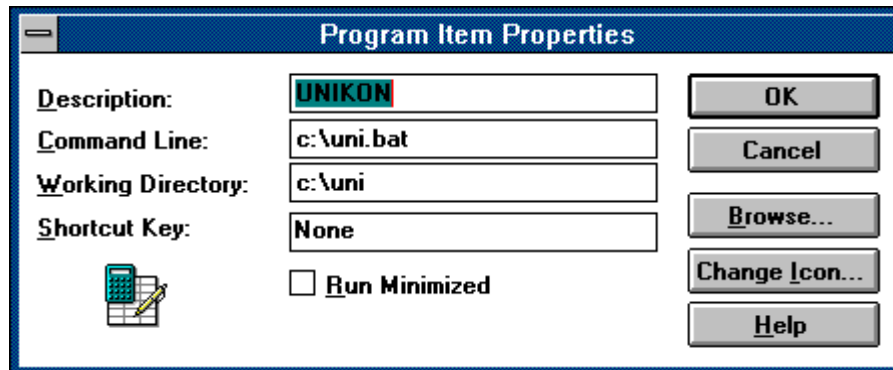
The disk you have received contains an installation program that will automatically create a UNI directory and load the appropriate program files there and in your root directory. Please follow the simple steps below.

- 1) Insert the floppy diskette in your computer's Drive A.
- 2) Exit any and all programs and directories (including Windows) so that only the C prompt is showing. (C:\>)
- 3) Type **a:** and press <ENTER>.
- 4) Type **install** and follow the on-screen prompts.
- 5) When the installation is complete, type **uni** at the C prompt to start the software.

#### *For experienced Windows 3.1 users:*

- 1) Install the program as above.
- 2) Start Windows.
- 3) From the Program Manager select "File" and "New."
- 4) Create a new Program Group (e.g. "UNIKON").
- 5) Maximize the program group.

- 6) Select “File” and “New” and choose “new program item.”
- 7) Enter the command lines as below; the calculator/notepad Icon is available from the Program Manager selections.



*Figure 5: Program Manager Selection*

### ***For experienced Windows 95/98 users:***

You may create a shortcut in your Windows 95 file manager using standard Windows 95 techniques. Use the command line **c:\uni.bat** in the pop-up box. The exact procedure for accomplishing this is beyond the scope of this manual and we wish to remind you that UNI is a **DOS program** and may have problems under Windows 95/98. If problems occur, try starting the program through a DOS window. If problems persist, you may need to check system hardware devices to make sure that no plug and play devices are using the standard DOS addresses for COM 1 or COM2. Please see the section on [Troubleshooting Tips](#) for more information.

## **4.2 System Setup**

Access the program by typing **uni** at the “C” prompt (**c:\>**). The UNI software should load.

Check the top left corner of the main menu screen. Verify that you have loaded “UNIKON V1.18b-001.” The red highlight bar will be positioned over the Flyer Menu. Press the down arrow key on your computer keyboard until the red highlight bar drops over the “Program Configuration/Default Settings/System Set-up” item. Press **<ENTER>**.

The System Set-up dialog box will appear on the screen. Each item has a set maximum number of characters that you may type in.

Please examine the following chart:

<u>Field</u>	<u># of Characters</u>	<u>Valid Inputs</u>
National Org :	2	AU, , CA, CU, IF, NP, MX
Concourse # :	4	Any alpha-numeric entry is allowed.
Combine # :	2	Any alpha-numeric entry is allowed.
Combine Name:	20	Any alpha-numeric entry is allowed.
COM Port:	1	Only a "1" or "2" may be entered here.

Enter the appropriate information for your club. After each entry is made, the cursor will drop down to the next field. For example, after you enter "AU" the highlight cursor will drop down to "Concourse #" automatically. If you do not use all of the available characters, you may move to the next field by pressing the down arrow key or <ENTER>. Be sure to enter the COM port to which the UNIKON Race Computer will be attached. ("1" is the default setting.) Press the **F10** key to save the data you have entered. Press the **Esc** key to leave this screen without saving any changes.

After pressing **F10** or **Esc** the software will return to the Main Menu. From now on, if you saved the data with **F10**, the information you have entered will be displayed at the top right of the screen every time you access the program.

### **4.3 The Club Menu**

You may enter your Club name by highlighting "Club Menu - Edit Club Information" and pressing <ENTER>. Press the **F2** key to enter new information.

A dialog box will appear in which you can enter a two-digit club number ("01" by default) and the club name. Press <ENTER> to accept the club number and the cursor will move to the club name entry box. Type in your club names (20-character max.); press **F10** to save the data. Press <ESC> to access the main menu.

### **4.4 The Flyer Menu**

It is critical to have accurate information entered into this menu because this is what will be transmitted to the Memory Module to identify the individual flyer to which the module belongs. Separate bird inventories are then entered for each flyer in the list.

Access this menu as described above, by highlighting “Flyer Menu - Edit & Transmit Flyer/Pigeon Data” and pressing <ENTER>.

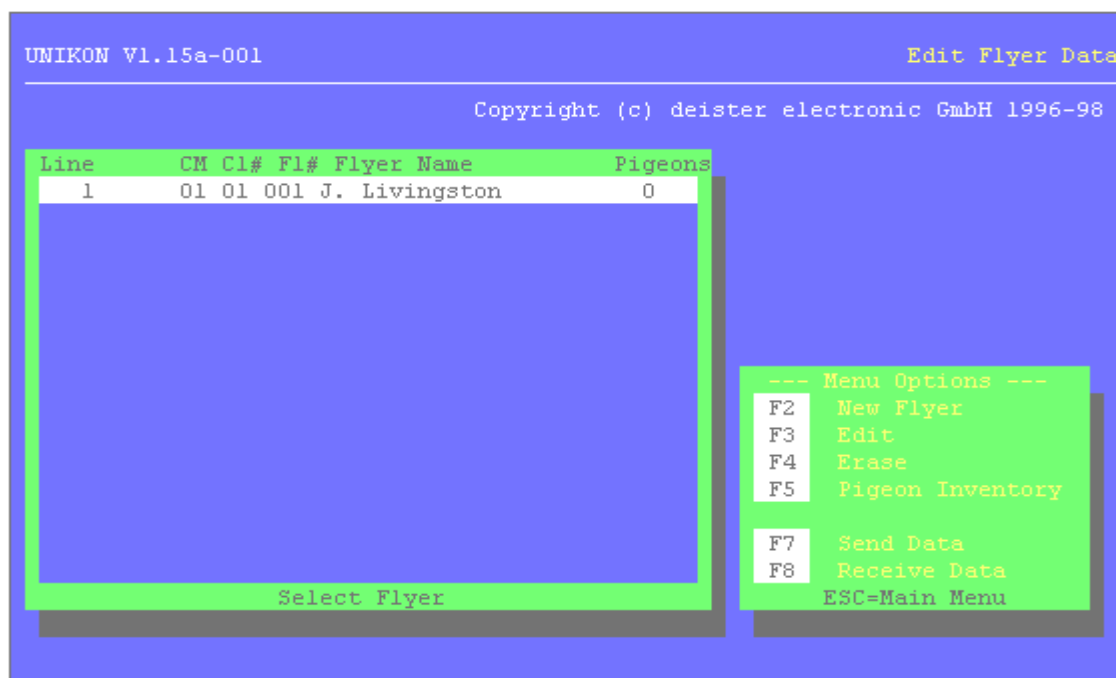


Figure 6: The Flyer Menu

Please examine Figure 6. As you can see, the Menu Options are clearly described on the lower right dialog box. Press the **F2** key to enter new flyer information. Other options include editing the flyer information, erasing the current entry, and creating the pigeon inventory, and transmitting data to or receiving data from the UNIKON system. These functions will apply to the “active” (highlighted) flyer file. If more than one entry is displayed, you may select the flyer file you wish to work with by using the keyboard arrow keys.

After entering the appropriate flyer information (i.e. the flyer number and name) presses **F10** or <ENTER> to save the information. Then press **F5** to enter that flyer’s bird inventory.

## 4.5 Entering the Pigeon Inventory

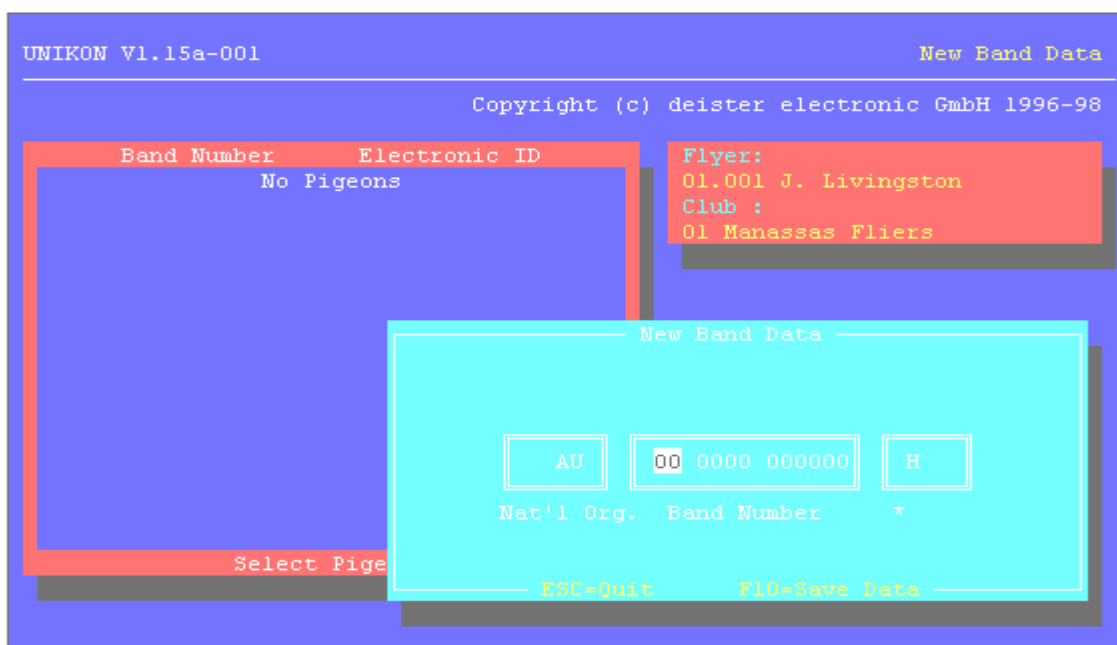
Please examine Figure 7. The UNI software will allow you to enter significant data about the flyer’s birds, including the National Organization, the bird’s hatch year, the Concourse code, the band ID number for the bird, and the bird’s sex (as either “C” for cock or “H” for hen).

*Please note:* The bird inventory entry dialog box will display a four-digit field for entering your National Organization. It is very important that you only enter “AU”, “CU”, or “IF.” Entry of these valid characters converts the following entry fields into the proper format for North American racer’s bird IDs. Enter the correct organization code (e.g. AU) and press <ENTER>. The cursor will jump to a two-digit field where you can then enter the hatching year. Then enter



the concourse code, bird ID, and sex in that order. Press **<ENTER>** or **F10** to save the data when all fields have been completed. If the band ID number is not six digits long, hit **<ENTER>** when ready to go on to the next field; UNI will insert leading zeros for you.

Some flyers may have duplicate band ID numbers that need to be entered. In most European countries the duplication band ID numbers is not possible or allowed. Therefore, UNI will resist entry of these numbers. Please see the section on [Troubleshooting Tips](#) for detailed instructions on how to overcome this restriction, if necessary .



*Figure 7: Entering the Pigeon Inventory*

When the flyer’s information and bird inventory have been entered, you must send the data to the flyer’s Memory Module. The **F7** key accesses this communication function.

Just highlight the flyer data you wish to send and press **F7**. A dialog box will appear asking if this is indeed the data that you wish to transmit. (“Should the following assignment data be sent?”) Press **<ENTER>** to proceed or **Esc** to stop the transfer. When **<ENTER>** is pressed, the flyer’s information as well as his bird inventory will be transmitted to the UNIKON Memory Module (assuming the UNIKON system is properly attached to the computer’s working COM port and the Memory Module is inserted and not in “race mode”).

After assigning Electronic Band IDs to the birds, you may “upload” this data back into the PC by pressing **F8** (“Receive data”) from the flyer menu. Of course, this assumes that the system is properly connected (as previously discussed).

## 4.6 The Liberation Points Menu

The Liberation Points Menu allows you to enter specific race release stations and race dates. There is also a “type” field in which you have the option of designating certain races as a particular “type” (i.e. 0, 1). This is not a required field.

If you wish to use specific race stations you must enter them in this menu and then “transmit” them to the UNIKON system. Connect the UNIKON as previously discussed and press **F7** to send the data to the Race Computer. Follow the on-screen prompts.

*Important note:* The race station information is stored in the Race Computer, *not* in the individual flyer’s Memory Module. If you wish to use Liberation Points, it may be best to designate one Race Computer as the one used at the club for race entry and results printing.

## 4.7 Uploading Data from the UNIKON Memory Module

The Main Menu of the UNI presents two additional functions: “Transfer Band Assignment Data from Memory Module” and “Transmit Race Data from Memory Module.”

The first function is useful to upload and save band assignments from each flyer’s RBM. The data will be sorted to the proper file from the “Club” and “Flyer” number designations stored in the RBM.

The second function can be useful if you wish to use another database to store and analyze race results. Please note that the UNI software does not have an internal race analysis function.

## 4.8 Exit Program

Use the arrow key to highlight Exit Program and press **<ENTER>**. This will end your UNI session.

## 4.9 Installing the Unikon for Windows Software

Since the Unikon for Windows program was designed to replace the old UNI-DOS program, all previous administration requirements are very similar and will be followed. Exit all other applications before installing the Unikon for Windows program. Other programs running in the background can cause errors during the install process.

- 1) Insert CD (or floppy disk 1) into appropriate drive. Click 'Start', 'Run', and "Setup.exe" and follow all on-screen prompts.
- 2) It is recommended to use the same folder as the old UNI-DOS program (C:\UNI) to make it easier to import existing flyer and race data.
- 3) Click "Start", "Programs", and choose "Unikon for Windows" to run the new program.
- 4) It is recommended to have the Unikon PCF-Datalogger connected at this time.

## 4.10 Software Registration

The first thing to do is register the program. This process is not designed to prevent use of the Unikon software but to promote better service for our customers. By compiling a list of contact information, we will be able to send information and software updates as available. Connect the PCF datalogger to the PC with the Unikon-PC cable (normally supplied with the Unikon Club Kit). Click on the "Start" button, choose "Programs", and choose Unikon for Windows.



Unikon for Windows v1.34.1  
Customer Support :  
PH: 703-368-2739  
FX: 703-368-9791  
E-Mail: support@deister.com   
Copyright 2002, 2003  
www.deister.com/en/unikon/index.htm

Insert RBM and then click 'OK' to generate Random number.

**Random #**

Please call Deister Electronics at 703-368-2739 to obtain the Registration number using the above generated Random number.

**Registration #**

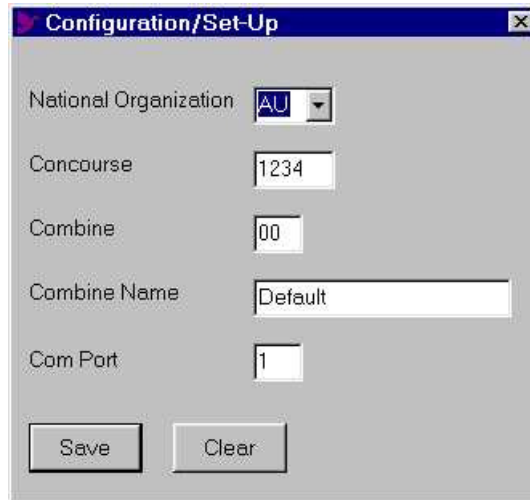
Register the program to make it easier for Deister Electronics to notify you of updates and improvements. Click cancel to use the Unikon program without registration.



Go to 'Help', 'About Unikon for Windows'. With the PCF-Datalogger turned on, and an RBM inserted, click on the "OK" button to generate a random number. While leaving the unit on simply follow the information on the screen. Enter the text box labeled "Registration #" then click "Save". If the registration is successful, a confirmation message will appear.

## 4.11 System Setup

Click “Options”, “Configuration/Set-Up”.



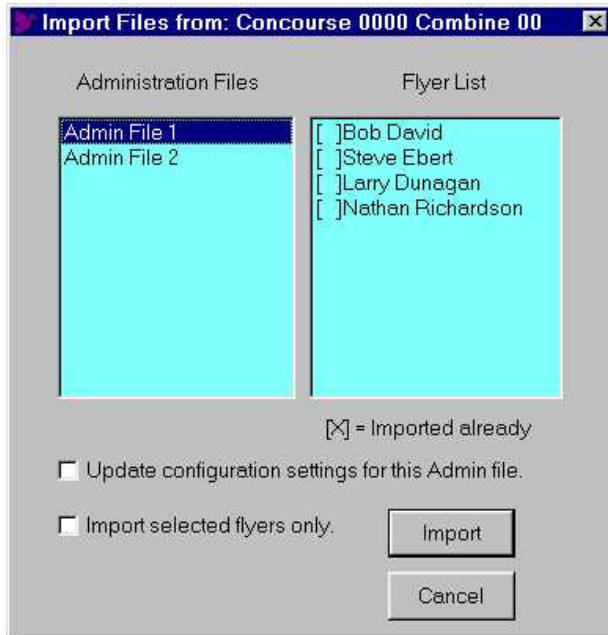
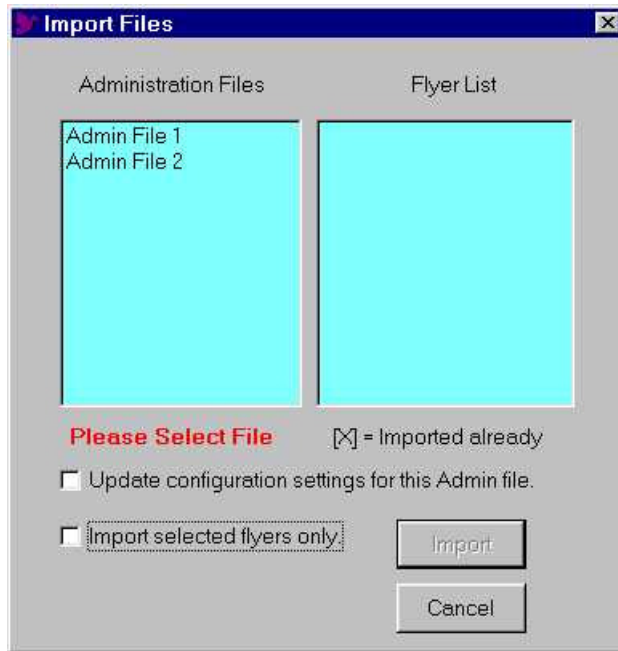
National Organization	AU
Concourse	1234
Combine	00
Combine Name	Default
Com Port	1

Save Clear

The same rules apply when entering data for “Unikon for Windows” as it was for UNI-DOS except for the “Com Port” field. Here is where you enter the number for the COM port that Windows has issued for that particular device. USB to serial port adapters are also compatible when no serial COM ports are installed (such as many newer laptop computers) or available. Look in the “System” device manager of your computer to find the installed COM port information. A PCF-Datalogger needs to be connected in order to test the COM port when the data is saved. Click “Save” when finished.

## 4.12 Import Existing UNI-DOS Data

Click “File”, “Import Files” to retrieve existing flyer data from the old UNI-DOS program.

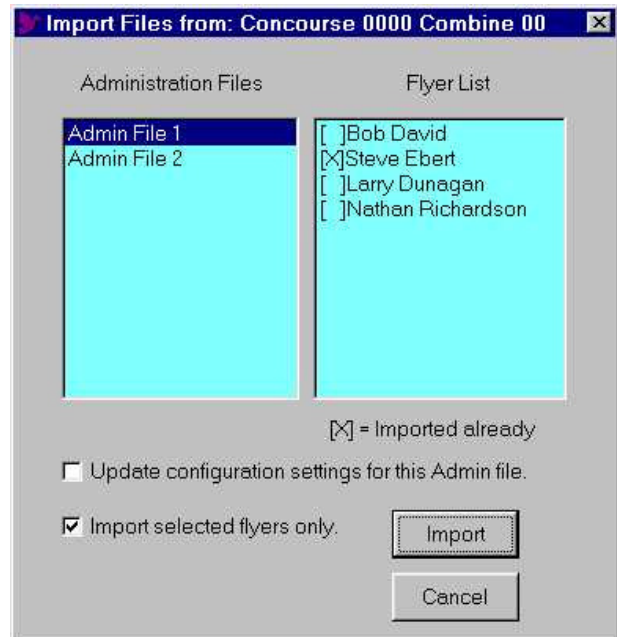


The program will look to the default folder C:\UNI for any existing administration files. If any are found you will see them listed in the list box on the left side.

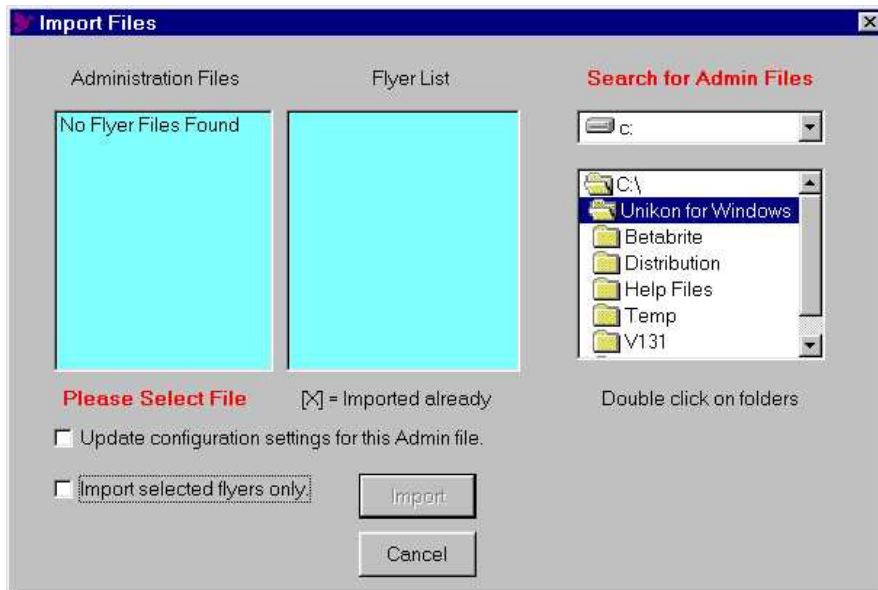
Select from the list of admin files. A list of flyers will be shown in the list box on the right side.

An "X" next to the flyers name means that the program has already imported data for that flyer.

Select the "Update configuration settings for this Admin file" if this is the current configuration used in your UNI(DOS) program. Concourse and Combine information is used in the memory module for identification purposes.



Click on "Import" to transfer all names in the list, or select the check box to import only individually selected flyers. Hold down the <Ctrl> button while clicking on the individual names to select. Click "Cancel" to abort or quit.

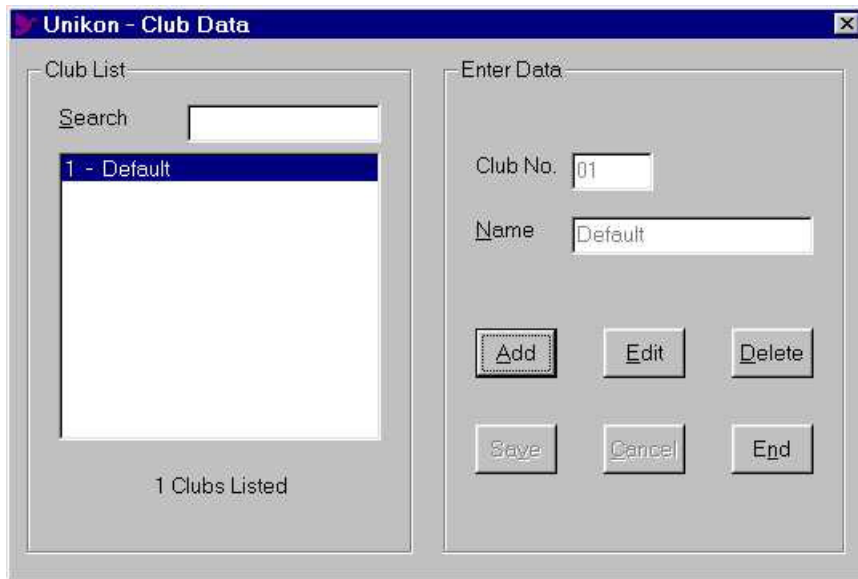


If an Admin file cannot be found the import function will allow you to search for them in another folder location.

Double click the folders to open them up. The program will behave the same as above when admin files are found. Click "Cancel" to quit when you are finished.

## 4.13 The Club Menu

Click “Administration”, “Club Data”.

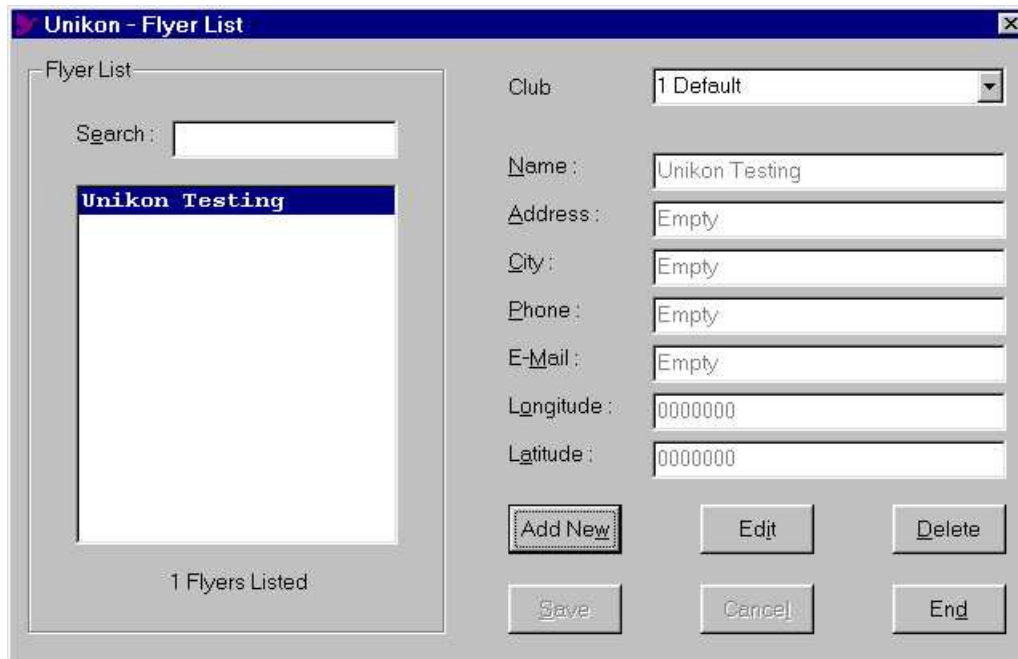


The screenshot shows a software window titled "Unikon - Club Data". It is split into two panes. The left pane, labeled "Club List", contains a search field and a list box with one entry, "1 - Default". Below the list box, it indicates "1 Clubs Listed". The right pane, labeled "Enter Data", contains two input fields: "Club No." with the value "01" and "Name" with the value "Default". Below these fields are two rows of buttons. The first row contains "Add", "Edit", and "Delete" buttons. The second row contains "Save", "Cancel", and "End" buttons.

You must have at least one club defined. The database comes with one club entered named “Default” which you can rename (edit). You can enter or edit the club name only. Click "Add" to enter more clubs. The club number increments automatically and is there as a display only. If the number of clubs expands beyond the list window, you can search for a club by entering the first letter of the club name in the "Search" text box. Click on "End" or the "X" to quit the form.

## 4.14 The Flyer Menu

Click "Administration", "Flyer Menu".

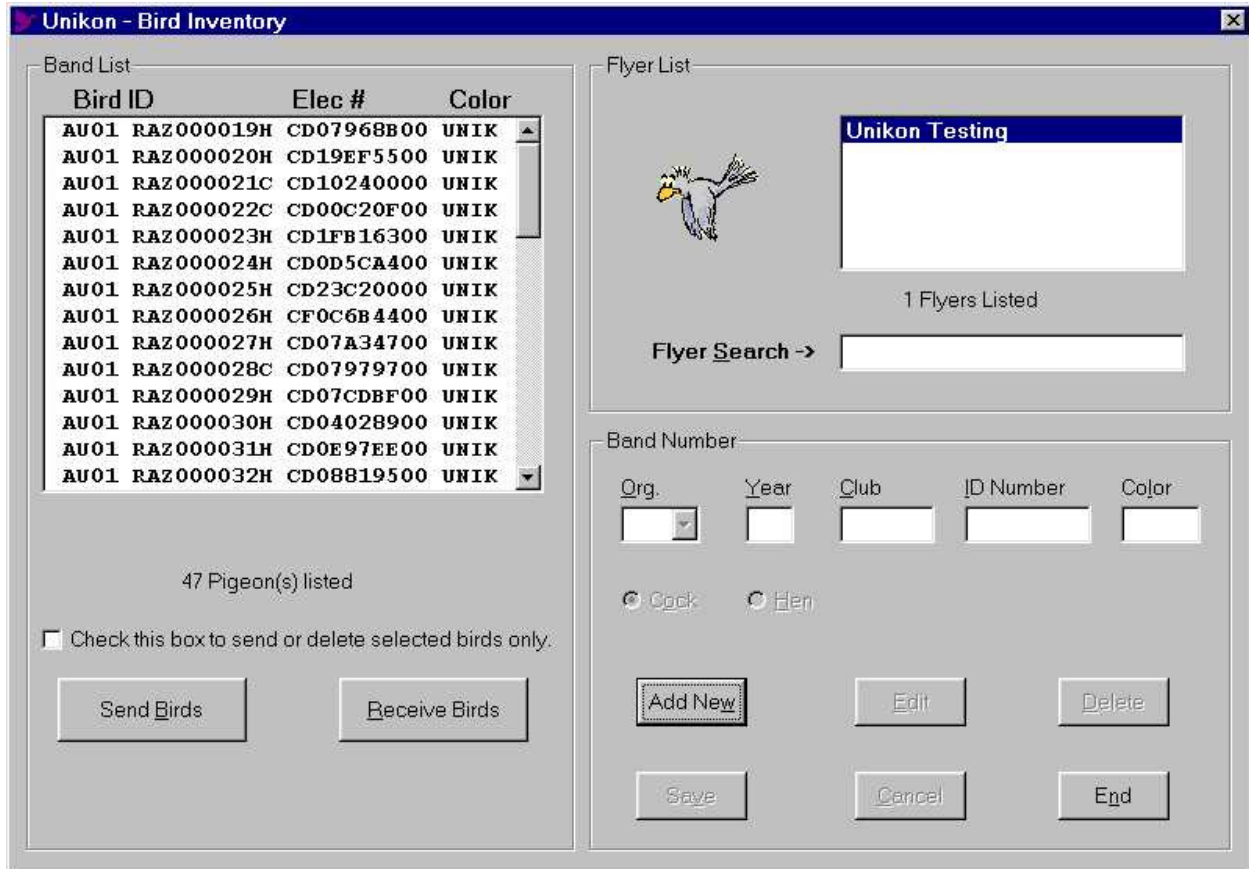


Click "Add New" to enter flyers. Choose the club from the list. You must enter a name for the flyer. All other fields are optional at this time. If the flyer list expands beyond the list window, you can search for a flyer to edit by entering the first letter of the flyer's first name in the "Search" text box. Click "End" or "X" to quit the form.



## 4.15 Entering the Pigeon Inventory

Click “Administration”, “Bird Inventory”.



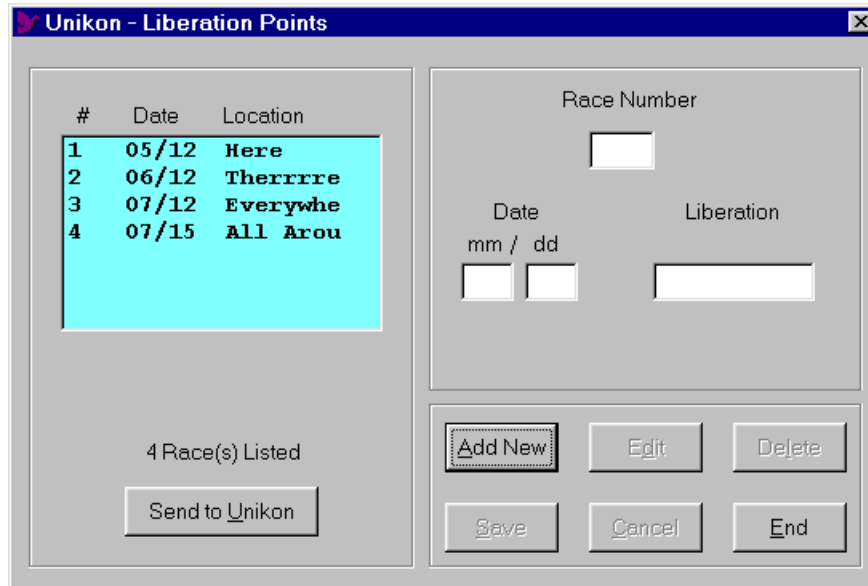
Select the flyer from the 'Flyer List' box, or search for a particular flyer by using the 'Flyer Search' method. Type in the first letter of the flyer's first name. A shorter list will be produced if any matches are found.

A list of birds entered for the selected flyer (if any) will be listed in the 'Band List' box. Selecting a bird from the 'Band List' will fill in the 'Band Number' information so the data can be deleted, or edited. If more than one band needs to be deleted, click on the box to 'delete selected birds only', then select multiple birds by clicking the first bird (to be deleted), then hold down the <Shift> key, then click on the last bird (to be deleted). Alternately you can hold down the <Ctrl> key while clicking on the desired birds to be deleted, then click the 'Delete' button.

Click 'Send Birds' to load inventory data into memory module. All communications functions require the datalogger to be connected to the PC with the Unikon PC cable supplied with the standard 'Club Kit'. You should receive data from memory modules after any changes to assignments to update the current flyer's list.

## 4.16 The Liberation Points Menu

Click “Administration”, “Liberation Data”.



#	Date	Location
1	05/12	Here
2	06/12	Therrrrre
3	07/12	Everywhe
4	07/15	All Arou

4 Race(s) Listed

Send to Unikon

Race Number

Date  
mm / dd

Liberation

Add New Edit Delete

Save Cancel End

Click "Add New" to enter race stations. Click on one of the existing release stations, then "Edit" to change values. All data must be entered except the race number, which is done automatically. Make sure the Unikon is connected and turned on, then click "Send List to Unikon".

Note: There is a limit of 50 stations allowed.

## 5.0 Assignment of Birds

After the proper information has been entered into the Unikon administration software, and sent to the memory module, you must “assign” an Electronic Band Number to the individual birds. The procedure for accomplishing this is quite similar to entering birds into a race.

### 5.1 The UNIKON Keypad

The UNIKON unit (Race Computer/Data Logger) is equipped with a numerical keypad as well as several function keys. Please take a moment to familiarize yourself with this arrangement.

To the left of the numerical keys are two blue arrow keys pointing up and down. These keys are used to scroll through the various menu options presented on the LCD screen.

To the right are a red “Cancel/Clear” [C] key, a blue “Function” [F] key, and a green [OK] key. These keys are used, obviously, to cancel an operation or clear an entry, to access a function via the Main Menu, or to accept an entry into the unit. The precise use of these keys will be clarified throughout this manual.

### 5.2 Set Up Your Hardware

Please review the illustrations in Section 3.1 and 3.2. Assemble the Race Entry Sensor as shown and connect the Race Computer and PC.

Use a surge-protected power strip for all equipment. Plug the printer cable (if a printer will be used to print an Assignment List) into the long (25 pin) connector on the back of the UNIKON Race Computer. Plug the Race Entry Sensor into the smaller (9-pin) port on the back of the unit. (*Note:* The cable connector on the Race Entry Sensor is “male.” The correct port on the Race Computer is “female.” *Never* use a gender-changer to plug the Race Entry Sensor into the male port on the left side of the Race Computer or to plug a computer cable into the port on the back of the Race Computer.) Plug the power supply cable into the keyed socket closest to the switch.

Turn on the surge-protected power strip. Turn on the printer. (A “power” and “Ready” or “On-line” indicator should glow.) Turn on the Race Computer. A self-test routine will begin, and after a moment, a check for the entry antenna. The code key must be presented for proper communications to begin. You should then see the “v1.4 Antenna OK” message displayed.

The Race Computer unit will request that you “Present authorization card to antenna please!” This refers to the small, black (or white), round key-tag code key. Place the code key into the Race Entry Sensor’s recess. The next screen menu that appears will be the clock-setting function.

### 5.2.1 Set the Master Clock

The Race Computer will always offer you two clock-setting choices when it is powered up with a Race Entry Sensor attached:

<b>1</b> → <b>Set clock</b>
<b>2</b> <b>Use current time</b>
<b>Sa 05/31/99 14-39-12</b>

*Figure 9: Clock Setting Function*

The current date and time will be displayed at the bottom of the screen.

Note the two blue “arrow keys” pointing up and down. To activate the “Set clock” menu, press "1" or the [OK] key. Of course, if the clock is more or less correct, resetting it is not necessary at this time. Press 2 to accept the current time. Clock knock-off is primarily a concern at race entry.

If Function 1 is selected, the LCD will show “Set clock” at the top of the display.

<b>Set clock</b>
<b>→ 05 31 99 14 39 12</b>
<b>Sa 05/31/99 14-39-23</b>

*Figure 10: LCD Display*

Presumably the month, day, and year will be correct. Press the green [OK] key to bypass each of these fields. If the hour needs to be reset, just type over the current entry. (The cursor should be blinking at this spot before typing anything.) When you type in the first character (e.g. “1”) the next character will go blank and the cursor will be at that spot. The cursor should now be at the “minutes” field. Enter the current minute. Enter the current seconds.

If you make an error in the entry of some number (e.g. the hour) you may press the red [C] (Cancel/Clear) key to back up one field.

Press “2” from the menu to “Use current time.”

### 5.3 Insert Memory Module/Transmit Bird Inventory

When you insert a Memory Module, the system will again ask you to “**Present authorization card, please!**” Place the *same* code key you used previously into the Race Entry Sensor’s recess. Failure to do so will cause an "INVALID" error message to be displayed next to the Code number on the arrival report.

Transmit the flyer’s information and bird inventory from the UNI software to the Memory Module as described in sections 4.3 and 4.4. The LCD screen will display the message “RAMBOX exchanges data with PC” and then “receiving data” while this transfer is in progress. When the transfer is complete, the screen should display the correct flyer information.

You may assign the bands alone or after attaching them to the bird’s leg--whichever way you find easier. Please note that it may be a good idea to attach a small tag with the bird ID information on it to the band if you assign bands that are not on the bird’s leg(s). It is very important that the correct band be placed on the correct bird.

We recommend placing the band on the bird with the rounded plug up. Note that the band will read with either side facing up, but it must be relatively parallel to the Loft Antenna or Race Entry Sensor.

### 5.4 Assign the Birds

From the Main Menu, press [2] on the keypad to access the “Assign” function. The bird inventory you have downloaded will be presented in a numerical order based on the last four digits of the bird ID number. (That is, band number 201234 will be displayed before 011243. The last four digits of the ID number primarily drive many UNIKON functions.) If one band has the same serial number as another in inventory, a small “+” sign will appear next to the number on the race computer LCD screen.

Present the first band to the Race Entry Sensor and press the green [OK] key. The Race Computer will emit a series of beeps (beeeeep-beep-beep-beep--one long beep and three shorter beeps) when the band data has been read by the sensor and logged in the Memory Module. A series of very short beeps indicates an error--either the bird ID already has an Electronic Band assigned, or the band presented is already assigned to another bird.

If the incorrect bird/band has been presented to the sensor, you may delete that electronic ID by first placing the pigeon band in the race entry antenna basket,

then press the red [C] (Clear/Cancel) key. The Race Computer will ask “Delete OK/C?”; press the [OK] key to delete the assignment or the [C] key to cancel.

<b>Assignment</b>	<b>→3456</b>
<b>AU99MAN1123456c NOM0</b>	
<b>CF 00 DB E7 85</b>	
<b>8/8 assigned</b>	

*Figure 11: Assign Function Screen*

Press the blue “down” arrow to scroll to the next bird ID. Repeat the process outlined above.

## 5.5 Print the Assignment List

When all of the birds have been assigned, press the [F] key and a message will ask if you want to “Print report?” Printing an assignment list is optional at this point. Press the [OK] key to print, or [C] to abort. If [OK] was chosen the LCD screen will momentarily display the “printing” message while the data is transmitted to the printer. The main menu will then re-appear.

The assignment list will provide information about the flyer as well as the birds (in numerical order). The bird ID will be printed on the left side of the column and the Electronic Band ID will be printed to the right. Two columns are printed on each page.

## 5.6 Transmit (“Upload”) the Assignment Data

As mentioned previously, we strongly recommend that you transmit the assignment list back to the PC so that you will have a backup of the inventory assignment in case of unexpected data loss.

Start the UNI software by typing **uni** at the “C” prompt. From the UNI Main Menu, select “Transfer Band Assignment Data from Memory Module.” The inventory data will be stored by club and flyer number so verify that the flyer shown on the LCD screen is actually entered in the UNI Flyer Menu before transferring the data, because it is possible to overwrite another flyer! The UNIKON system will transmit the data to the flyer number indicated/as shown on the flyer Menu list. If a different computer was used to enter the inventory and flyer information, the numerical listings may not match. In this case, it is best to actually accomplish the transfer via the Flyer Menu (**F8**). Highlight the appropriate flyer and press **F8** to begin the data uploads.

Press **<ENTER>** to begin the data transfer; press **<Esc>** to cancel. Access the Pigeon Inventory to verify that the transfer has been successful and that the Electronic Band numbers have been properly assigned to the correct birds.

## 5.7 Clearing the Unikon Bands

When your old birds have been retired you will no doubt want to re-use their electronic bands for new young birds. The newer green colored Unikon bands have information about the pigeons written to them during assignment. You will need to clear the information that is stored on the bands in order to use them for the new birds. Along with the electronic number that is permanently stored on the band, the pigeon inventory information is also temporarily stored; such as the “National Organization” letters, hatching year, “Combine” designation, pigeon serial number, and sex designation. Before deleting the old inventory in the UNIKON administration software and downloading the new bird inventory, clear each band of the prior bird inventory.

To clear the band of bird information simply place the band into the club antenna recess and press the red “C” button, and press “OK” to delete. You will see the message “Band cleared”. Do this for all of the pigeons until all bands are cleared.

If you are trying to assign an electronic number to a new inventory and you have not cleared the old bird information from the bands you will get an error message that flashes “unknown pigeon”.

<p><b>unknown pigeon</b> <b>AU00TEST11111h NOM0</b> <b>CD 0C 30 09 00</b> <b>Delete? OK/C</b></p>
---

Simply press “OK” to clear the old band information. Then press “OK” again to assign the current data to the band.

## 5.8 Nominating Pigeons

Nominating pigeons is easy...it is all done automatically. The first five birds entered in each race (up to nine races are allowed at any one time) are nominated in the order they are entered. Therefore it is important to retrieve and enter the first five birds in the correct order. If a bird, that is already entered, is deleted from a race, the nomination is also deleted and all the birds “slide” up in order and assume the nomination number for the position they assume. Only the first five birds receive a nomination number 1 – 5, the rest are tagged with a zero (not nominated).

## 6.0 Recommended Race Entry and Use Procedures

The UNIKON system has been engineered to be easy to use, but some aspects of its operation may require clarification. Following the procedures outlined below will eliminate the most common problems encountered on race day and help insure that you won't have unexpected difficulties. You will see that these procedures are quite similar to those followed for the bird assignment.

### 6.1 At the Clubhouse: SHIPPING THE BIRDS

#### 6.1.1 Set up your equipment

Review Section 3. As mentioned under the section on assignment, use a surge-protected power strip for all equipment. Plug the printer into the long (25 pin) connector on the back of the UNIKON Race Computer. Plug the Race Entry Sensor into the smaller (9 pin) port on the back of the unit. (*Note:* The cable connector on the Race Entry Sensor is "male." The correct port on the Race Computer is "female." *Never* use a gender-changer to plug the Race Entry Sensor into the male port on the left side of the Race Computer or to plug a computer cable into the port on the back of the Race Computer.) Plug the power supply cable into the keyed socket closest to the switch.

Turn on the surge-protected power strip. Turn on the printer. Turn on the Race Computer. The code key must be presented for proper communications to begin. After a moment you should see the "1 Antenna OK" message displayed.

The Race Computer unit will request that you "Present authorization card to antenna, please!" Place the code key into the Race Entry Sensor's recess. The next screen menu that appears will be the clock-setting function. Refer to section 5.2.1 for clock setting instructions.

Press "2" from the menu to "Use current time." After you select "Use current time" the Race Computer will show a blank string " \_ \_ \_ \_ \_ \_ \_ \_ \_ \_", or the last liberation point used in a race, and wait for the first memory module to be inserted. When the first memory module is detected, the Race Computer will scroll through the memory module information and end up showing the main menu.

1 →	Enter pigeons
2	Assign
3	Strike out
4	Logging times

*Figure 14: Race Computer Main Menu*



### 6.1.2 Insert the first flyer’s Memory Module

When you insert a Memory Module, the system will again ask you to “**Present authorization card, please!**” Place the *same* code key you used previously into the Race Entry Sensor’s recess, or else an "INVALID" error will appear next to the code key number on the arrival report. This is how you can tell if someone else used a different code key to gain access to the club system.

The LCD screen will briefly show “RAMBOX” and display the flyer’s name as well as concourse, combine and club information. After a moment, the main function menu will appear.

### 6.1.3 Enter the birds

If you wish to enter birds in a particular race from a specific release point, you must press "1" to enter pigeons. Unless “Liberation points” have been programmed in UNI and transmitted to the Race Computer there won't be races to choose from. *Please note that the release stations are stored in the data logger, not the flyer’s memory module.* Please see section 4.5 on the Liberation Points Menu. If you have liberation points stored in the data logger but don’t want to select one, just select the blank string of characters " \_ \_ \_ \_ \_ \_ \_ \_ \_ \_", and proceed to enter pigeons.

Pressing "1" to enter pigeons will automatically bring up the liberation points menu, providing liberation points have been previously downloaded into the race computer. Simply select the desired race to which you want to enter pigeons for using the blue arrow keys to point to the race and (make sure the date is valid!) press [OK]. Selecting the flight (pressing the key to enter birds) will set or otherwise known as "knock-off" the memory module (RBM) clock.

The display should now show:

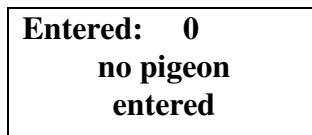


Figure 15: Display Screen

“Counter-marking” can now be accomplished by placing the bird’s leg (with the electronic band) into the Race Entry Sensor’s cavity. **NOTE! Keep the Code Key at least two feet away from the race entry sensor!** The green “Read” light will flash for a short burst if "marking" has been successful. The Race Computer will emit a series of four beeps identical to those emitted during assignment (beeeep-beep-beep-beep) to acknowledge the race entry. The pigeon ID as well as information about the race entered and the counter-

marking time will be displayed on the LCD screen. Repeat this process with all birds. The LCD display will report on how many birds have been entered as you proceed and you may scroll through the entry list at any time. The number of pigeons entered can be seen on the entry report as "set: n", where "n" equals the number of pigeons entered in a race.

If the wrong bird is entered for a flyer you may press the red [C] key (Cancel/Clear) and the bird listed or showing on the LCD screen will be removed from the race. To delete a specific bird already entered simply type in the last four digits of that particular bird's serial number and follow the same procedure as described above.

If the unit emits a long single beep and displays "programming failed" on the screen, something has happened during the "writing" of the secret code to the electronic band. (Typically this would happen if the band is removed too soon or if the bird is moving excessively during entry.) Just leave the band in the recess and the race entry antenna will automatically try again. If that doesn't work try another bird then re-try the preceding bird again. The band may be bad and need to be replaced. If problems persist, please see the section on "UNIKON Troubleshooting Tips."

#### 6.1.4 Printing the Entry List

A race entry list can be printed when the entry procedure is terminated by pressing the [F] key (an arrival report must be printed in order to strikeout the race). If multiple races have been used, a menu will be shown asking for which race to print the entry report. The UNIKON LCD display will blank out for a moment and then briefly display a "printing" message. The printer should start to print the report. As mentioned under the section on assignment, if the flyer has not printed an assignment list since entering or changing the pigeon inventory, the assignment list will print at this time as well.

<p><b>What flight?</b> <b>→01 05/31 OKC1 0</b> <b>02 05/31 OKC2 0</b></p>
---

*Figure 16: Race Menu*

We recommend that you double-check the information on the printout (i.e. the flyer, race station, date, number of birds entered (set: n), and so on).

### 6.1.5 Enter the next flyer

Remove the first flyer's Memory Module and insert the next flyer's module. The system will again ask you to present the authorization card (key). *Remember that the same code key must be used for all flyers.* Select the appropriate race and station (if used) as described above. Press "1" for Enter pigeons. If the flyer's Memory Module is not in "race mode" the clock will be knocked off at this instant.

Follow the steps outlined above (steps 3 through 6) for all flyers. After the race entry has been completed, turn off the power to all equipment.

### 6.1.6 Emergency procedure to erase a flight

If there has been a bad mistake during the race entry process, or if your race went so bad that you don't even want to go back to the club to "Strike out" the race from your memory module, you can erase a flight with the following procedure.

- 1) With the data logger off, hold down the "9" key.
- 2) While holding down the "9" key turn on the data logger.
- 3) Keep the "9" key down while the data logger goes through its check out procedures
- 4) When the data logger starts emitting continuous beeps, let go of the "9" key.
- 5) Press the "F" key to display the full menu of options.
- 6) If the data logger is in a "race mode" you will be presented with an "Erase flight" option.
- 7) Select "Erase flight", enter "4258" for the code number and the flight will be gone.

**DO NOT USE THIS PROCEDURE UNLESS YOU ARE ABSOLUTELY SURE YOU WANT THE RACE DATA IN THE MEMORY MODULE TO BE ERASED!**

### 6.1.7 How to register "Superval"

Superval registration can be done at the loft with the loft antenna connected, or at the club with no antenna connected. Registration will not work with a club antenna connected.

- 1) With the data logger off, hold down the "9" key.
- 2) While holding down the "9" key turn on the data logger.
- 3) Keep the "9" key down while the data logger goes through its check out procedures
- 4) When the data logger starts emitting continuous beeps, let go of the "9" key.
- 5) If no antenna is connected you will need to press the 'OK' key to bypass the antenna check.
- 6) Press the "F" key to display the full menu of options.
- 7) The main menu will contain a "Register Feature" at the bottom of the list.
- 8) Select "Register Feature" and enter the ten digit number supplied by your distributor.
- 9) Registration will be automatically entered when the last number is entered.

## Flyer Kit #1 loft antenna instructions

### 6.2 At the Loft on Race Day: LOGGING RETURNING BIRDS

#### 6.2.1 Have everything ready for the returning birds

The flyer should double-check that the loft antenna is connected to the UNIKON Data Logger. Place the Memory Module into the Data Logger. If you are using the optional Remote Display system, install the remote display transmitter. Install your power cable and turn the unit on.

#### 6.2.2 Verify the system operation

Verify that the Data Logger detects *all* of the antennas you have connected. (The display should show “1 antenna OK” or “2 antennas OK” and so on.) Make sure that you have the correct Memory Module (your name and information should be displayed on the LCD screen momentarily). Verify the number of birds entered as reported on the LCD screen. Watch to make sure that the clock is running. Now is the time to remove the memory module if clocking with the “Superval” feature. Repeat procedure for all other modules in the loft (up to 6 modules).

<b>Entered:     20</b> <b>                  no pigeon</b> <b>                  logged</b>
<b>Sa 09/17/01                   15-03-08</b>

*Figure 17: LCD Screen Displaying Number of Birds Entered*

#### 6.2.3 Sit back and enjoy watching your birds return to the loft!

The Data Logger will display each returning bird’s band ID number as well as the race in which it was entered and the precise clocking time when the bird walks over the Loft Antenna/Ring Sensor. The log will increment each time a bird is recorded. You may scroll through the list of clocked birds at any time by using the blue arrow keys. If you would like to check on a particular bird, just type in the last four digits of the bird ID number and the display will jump to that bird’s logging record. Superval mode will only show the amount (number) of birds logged until you place the memory module into the data logger.

#### 6.2.4 Print your own arrival report at race completion

If you have a printer and would like to do so, the Data Logger will allow you to print an unofficial Arrival Report. Just connect the printer cable to the long (25 pin) port on the back of the Data Logger (with the power off, please!). Turn the logger back on, press the blue [F]

key. The UNIKON LCD display will show a menu to check on logging times, print reports, or erase any training race data.

<b>0</b>	<b>→</b>	<b>Logging</b>
<b>1</b>		<b>Reports</b>
<b>2</b>		<b>Velocity calc.</b>
		<b>Erase training</b>
		<b>Erase flight</b>

*Figure 18: LCD Menu*

Select "1" to access the reports menu.  
The next menu will show

<b>1</b>	<b>→</b>	<b>Print entry list</b>
<b>2</b>		<b>Print arrival list</b>
<b>3</b>		<b>Print training</b>

*Figure 19: LCD Menu Selection*

If there are multiple races for one module then you will be prompted for which race to print. The entry list shows all pigeons entered in a selected race. The arrival list shows all birds that were entered and made it across the receiving antenna. The training list shows all birds that are assigned but not entered in the race, but were in training with the other pigeons.

### **6.2.5 Power down, remove the memory module**

When the race is complete, turn off your Data Logger and remove your Memory Module. Return the Memory Module to the club for determining the Official Race Results.

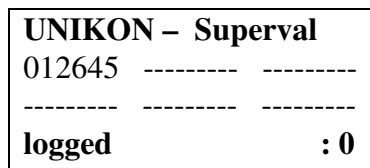
## 6.3 At the Loft on Race Day: LOGGING RETURNING BIRDS in SUPERVAL MODE

### 6.3.1 Have everything ready for the returning birds

The flyer should double-check that the loft antenna is connected to the UNIKON Data Logger. If you are using the optional Remote Display system, install the remote display transmitter. Install your power cable and turn the unit on. It is important that all Memory Modules be placed into the Data Logger, one at a time, to synchronize the time and identify the serial numbers. After “showing” the Memory Modules to the Data Logger, the serial number(s) will be displayed on the LCD readout of the Data Logger. You are now ready to log the returning birds in Superval mode.

### 6.3.2 Verify the system operation

Verify that the Data Logger detects *all* of the antennas you have connected. The display should show “1 antenna OK” or “2 antennas OK” and so on. After insertion and removal of Memory Modules, check to see that the correct serial numbers are displayed. The Data Logger in Superval mode will hold up to six Memory Modules in one logging session. The LCD will display only the number of birds logged in Superval mode.



*Figure 18: LCD Screen Displaying Superval Mode*

After all birds are logged, insert Memory Module in any order to upload data. The corresponding data will be sorted into each Memory Module automatically. Follow the above instructions for NORMAL mode to print out results after the race.

## 6.4 At the Club: STRIKE OUT AND RACE RESULTS

### 6.4.1 Set up the equipment

Use a surge-protected power strip for all equipment. A printer *will be required* in order to print the official Arrival Report. Plug the printer’s cable into the long (25 pin) connector on the back of the UNIKON Race Computer. Plug the Race Entry Sensor into the smaller (9-pin) port on the back of the unit. Plug the power supply cable into the keyed socket closest to the switch on the back of the unit. Plug all power cords into the power strip.

Basically, repeat the procedures outlined in section 6.1 on *SHIPPING THE BIRDS*. Turn on the surge-protected power strip. Turn on the printer. (A “power” and “Ready” or “On-line” indicator should glow.) Turn on the Race Computer. A self-test routine will begin to check for the race entry antenna, as always, the code key must be presented in order to begin proper communications. You will then see the “1 Antenna OK” message displayed.

The Race Computer unit will request that you “Present authorization card to antenna, please!” Place the code key into the Race Entry Sensor’s recess. The next screen menu that appears will be the clock-setting function.

#### **6.4.2 Check and set the Master Clock (if needed)**

Again, the clock setting procedure is the same as outlined under *SHIPPING THE BIRDS*. Of course, if the Race Computer clock is dead-on, no further setting is required. Just press “2” for “Use current time.”

To activate the “Set clock” menu press the [1] key, or when it is pointing at “Set clock” press the [OK] key. The LCD will show “Set clock” at the top of the display.

Presumably the month, day, year and hour will be correct. Press the green [OK] key to bypass each of these fields.

The cursor should now be at the “minutes” field. Enter the minute at which you wish to knock off the clock. The cursor will move to the “seconds” field. Enter the first zero (“0”). When your clock hack is announced press the “0” key again. The clock will be instantly synchronized.

If you make an error in the entry of some number (e.g. the hour) you may press the red [C] (Cancel/Clear) key to back up one field.

Press “2” from the menu to “Use current time” and the main menu will show after validating code key requests.

#### **6.4.3 Print the first flyer’s Official Arrival Report**

Insert a flyer’s Memory Module into the Race Computer. Present the code key when requested. The LCD display will momentarily show the flyer information and then display the main function menu.

- |           |                      |
|-----------|----------------------|
| <b>1</b>  | <b>Enter pigeons</b> |
| <b>2</b>  | <b>Assign</b>        |
| <b>3→</b> | <b>Strike out</b>    |
| <b>4</b>  | <b>Logging times</b> |

*Figure 20: Main Function Menu*

Function 3 “Strike out” will end the race and allow printing of the arrival reports. If you wish, you might review the actual arrival times directly on the LCD screen by selecting Function 4 -- “Logging times.” Use the arrow keys to scroll through the entries; they will be presented in chronological order with information about the bird and the date and time it was logged in.

If more than one release station was entered at shipping, the Race Computer will ask “What flight?” or “Which race?” you wish to print and display a list of the entered stations. Use the arrow keys to select the appropriate flight(s). Press [OK] to begin printing the report for that station/race.



## 6.5 The Arrival Report: YOUR RACE RESULTS

UNIKON - ARRIVAL REPORT

---

Race: No. 2 date 05/31 liberation point : OKC1

Concourse SOO1 Combine O3 Club 01 flyer 001 - J. Livingston

Printed on : 06/01/01 10-14-23 memory module : 6638 v3.25/1.5  
 RBM clock set on : 05/31/01 14-44-16 Verified : 06/01/01 10-05-15  
 Clock time : 06/01/01 10-05-16

Entry begin : 05/31/01 14-44-16 Last entry : 05/31/01 21-32-55  
 Version v3.25/1.5  
 Flight 11075 Antenna 65288 Code 2113930589 Version v3.25/1.5

Set : 8

No.	band	electr. check	Arrival		Comments
			day	time	
1	AU96SOO1002146c	CD00292C	05/31	16-42-37	UNIKON - Superval
2	AU96CBS1029848h	CD002317	05/31	16-45-18	UNIKON - Superval
3	AU97ARPU000201c	CF0E4DFA	05/31	16-51-22	UNIKON - Superval
4	AU96SOO1002251c	CD002CE7	05/31	16-59-38	UNIKON - Superval
5	AU95SOO1120431h	CD002867	05/31	17-15-21	UNIKON - Superval
6	AU96NPR2058735c	CF0F2C4D	05/31	17-27-46	UNIKON - Superval
7	AU97SOO1000374h	CF0E2C34	05/31	18-44-39	UNIKON - Superval
8	AU95ARPU001762h	CD002DF3	05/31	21-32-55	UNIKON - Superval

Signed:                      Flyer                      Club                      Clock checked

Report Headline

The list number and race date of the race entered in UNI.

This is the time that the Memory Module clock was knocked off.

This is the number of birds entered in the race.

The birds are listed in the order of their arrival.

This is the serial number of the Race Entry Sensor in

This is the "Authorization" Card Number.

The release station entered in UNI software.

The flyer's memory module serial number and "firmware" version.

The Verified time is the current data logger time. The Clock time is the time in the memory module. The difference is the deviation!

UNIKON - Superval shows if pigeon is logged using this new feature.

The arrival date and time.

Please review the sample Arrival Report shown above. Note that the "RBM clock set on" time matches the "Entry begin" time. That is the precise time at which the key to enter pigeons was pressed. The Arrival Report printed by the individual flyer at the loft will not contain all of the data shown above.

## **7.0 Data Transfer Errors (Problems connecting computer and UNIKON)**

**DISPLAY** → “**Check Connection to UNIKON**”

This message is displayed when the UNI administration software is unable to detect a UNIKON Data Logger/Race Computer attached to the PC. After about 5 to 10 seconds, a new message will appear:

**DISPLAY** → “**No Connection to UNIKON**”

POSSIBLE REMEDIES:

1. The cable is not connected securely to computer COM port or left port on UNIKON unit.
  - Remove, re-insert and tighten the cable on the COM port and UNIKON unit.
2. The cable is not connected to the computer’s COM 1.
  - Try attaching the cable to another COM port.
  - Change the COM port setting in UNI software:
    - \* Press [ESC] to return to the Main Menu.
    - \* Use the arrow key to highlight the “Program configuration/Default Settings/System Set-up menu; press **<ENTER>**.
    - \* Use the down arrow key to highlight the COM port selected. (By default, this should be “1.”)
    - \* Press “2” to change the setting.
    - \* Press the **<F10>** key to save the change.
3. The cable is not the special UNIKON/PC connecting cable.
  - Purchase proper cable. (UNIKON Part Number 08844.)
4. The computer’s COM port is not functioning properly.
  - Contact computer equipment dealer or manufacturer.
5. The Windows 95/98 environment is preventing COM port access due to an existing software latch. Use Unikon for Windows software.

- Examine your installed software for PDA devices (palm devices), digital cameras, ...etc that have control of COM1 or COM2.
- Examine system properties to make sure there are no conflicts with the COM port settings.
- Make sure the Windows COM port settings are configured correctly for a DOS program (COM1 = I/O - 3F8, IRQ4, COM2 = I/O - 2F8, IRQ 3).
- Close the UNI program, access the [Start] menu of Windows 95, shut down the computer, and restart in DOS mode.
- Access your computer's BIOS and choose to reset the system to the default settings.
- As a last resort only, assign and reserve the COM1 IRQ address in Windows 95/98 "Control Panel" settings for use by UNLXEXE (a DOS program). Doing so will not allow Windows programs to use the reserved hardware. Follow the instructions below.

**Reserve COM port address for UNLXEXE DOS program in Windows 95/98**

- 1) Click [Start], click [Settings], click [Control Panel]
- 2) Double click on [System] icon
- 3) Choose "Device Manager". Make sure "Computer" is highlighted.
- 4) Click "Properties", click "Reserve Resources", select "Interrupt Request (IRQ)"
- 5) Click "Add"
- 6) Enter the IRQ address value "04". Ignore the "Resource Conflict Warning"
- 7) Click [OK] to exit "Properties", click [OK] to exit "Control Panel".
- 8) Click [Start], click [Shut Down], click [Restart], click [OK] to restart your computer.
- 9) This way anything that may be loading up on COM1, or taking away the ability for UNLXEXE to access COM1, will not be allowed to.

**DISPLAY** → "Transmission Not Possible, Memory Module in Race Mode"

**REMEDY:**

1. Release Memory Module from Race Mode.
  - Press the [F] key on the Data Logger to return to the main menu.
  - Use the down arrow key to point to "Strike out."
  - Press [OK]. The Data Logger may ask you to verify the deletion of the race data.

**DISPLAY** → “Data Transmission Failed”

POSSIBLE REMEDIES:

- 1) This is typically caused by a bad connection, worn cable socket connection. Re-check all cable connections, and/or order new cable.
- 2) The memory module may have been removed before the transfer was complete. Wait for the software’s acknowledgment “beep” to remove the Memory Module.
- 3) Computer problem. See tips above.

## **7.1 Race Entry Problems (Unable to enter bird in race)**

**PROBLEM:** Band will not accept entry into race.

**(DISPLAY** → “Programming failed”) *This message is displayed on the UNIKON LCD screen.*

*Probable additional symptom: Green “Read” and red “Write” lights no longer flash.*

**POSSIBLE CAUSE:** Code Key is too close to race entry sensor. Bird’s leg was moved during “write cycle”.

**REMEDIES:**

1. Remove Code Key from the race entry sensor area (at least two feet). Do not secure the Code Key to the race entry sensor with a short string.
2. Place band/bird’s leg back into the Race Entry Sensor’s cavity and leave it there. Let the sensor try to write to the band for a couple of more tries. After a few seconds the green “Read” light should flash and the sensor will beep signifying a successful entry.
3. Try moving the bird’s leg into slightly different positions--you may need to locate a “sweet spot” for the programming repair.
4. The system may be operating outside of its recommended temperature range (see Section 8). Move race entry system indoors.
5. The band may have gone bad. Replace band.

## 7.2 Bird Inventory Problems (Unable to enter bird in inventory or race)

**PROBLEM:** UNI software will not allow entry of duplicate bird ID numbers (even if sex, hatching year, or concourse information is different).

**CAUSE:** In most nations, the duplication of bird IDs is not possible or allowed. UNI adheres to this standard. Furthermore, UNIKON will allow you to check on a particular bird's logging record during a race by typing the last four digits of the ID into the keypad. This function will be disrupted if duplicate ID digits are entered.

**REMEDY:**

Enter the duplicate band number into the UNI software *by changing the first digit*. For example, if the first band is:

**AU 96 ARPU 002345** ...and the second band is:  
**AU 95 CBS1 002345**

you must add a digit (e.g. a "1") to the beginning of the second bird ID number. So, the second bird ID becomes: **AU 95 SOO 102345**

When all of the birds have been entered, leave the UNI Administration software. You will be using DOS Edit to remove the first added digit from the bird ID.

Change to the UNI directory (type **cd\uni**). The bird inventory will be under a file beginning with the character "Z". The next two characters will be the "Combine" designation as entered in the UNI.EXE configuration/setup page (e.g. 56). The next two characters will be the "Club" numbers as entered in the UNI.EXE software (e.g. 99). The next three characters will be the extension to the file and represents the "Flyer" number as entered in the UNI.EXE software (e.g. 222). The file directory will also show the current date the file was created or modified. Type **dir** and press **<ENTER>** to find this file.

EXAMPLE: Z5699.222

At the system prompt (C:\UNI>) type **edit** and the file name (e.g. **edit Z5699.222**). Find the bird record you wish to change. Move your cursor to the added first digit using the arrow keys or mouse. Press **<Delete>** to remove the "1" and type in a "0" to replace it. *The ID number must be of the correct length! Don't just delete the "1" and not add the "0"!*

Press **<Alt>**, **f**, **x**, and **y** in that order to exit and save the changes. Start UNI again and check your pigeon inventory to verify the change.

# **UNIKON**

**Race Computer and Loft Antenna**

**Set up and Operating Instructions**

**Edition: January, 2003**

## Contents

Start-Up  
Operation  
Installation  
Wiring  
Remote Display  
Specifications

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January 2003

## Start-Up

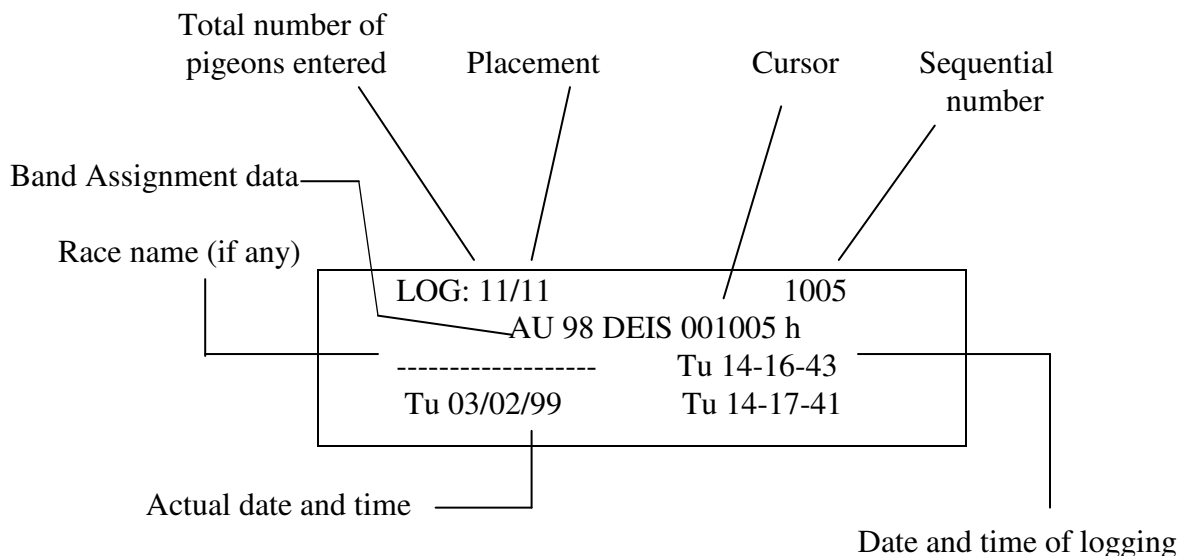
1. Before installing the system in the loft it should be set up and tested on a wooden table. For this procedure an electronic band should be used to test the antenna. Please test the active antenna fields (corrugated surface) by means of the band and use a ruler to determine the possible logging distance. Mark this band to check the data logging distance at the entry by using the same band after the system has been installed. Now, carry out the following steps:
2. Switch off all power during start-up!
3. Connect loft antennas to the race computer (see installation manual).
4. Remove the protective foil from the LCD display bezel.
5. Place the memory module in the recessed receptacle of the race computer with arrow facing you and pointing down.
6. Connect the printer\* and power supply. Now you may turn on the power. Keep a distance of at least 2m between portable and mobile radio telephone and race computer!
7. Check if the number of connected loft antennas indicated by the race computer corresponds to the actual number. If not, please check the wiring.
8. It is recommended to have all the equipment connected to an electric power distribution strip with an on/off switch. This way, you can always be certain that all units are switched on or off simultaneously and you only have to operate one switch.
9. This system performs an automatic status test to verify that an antenna has been connected and, the memory module has been inserted. If these conditions are not met, an error message will appear and prompt the operator for corrective action. Wait several seconds for all error messages to clear before proceeding any further. The unit is now ready for data logging. If you do not wish to log data, you may enter the main menu by pushing the [F] key.
10. No antenna needs to be present for pooling entries or printing out the arrival list. For this reason, just press the green "OK" key when the message that no antenna is connected appears.



## Training Flights

### Data logging

Upon completion of all tasks described in the "start-up" section, with the race computer powered-up, the system is ready to log data. (**This does not apply when preparing for a competitive race.**) The display shows the following information:



**Illustration: Sample display during data logging**

Each log entry:

- provides audible acknowledgement
- increments the total number of racing pigeons by one
- indicates the band number of the pigeon
- indicates the exact time of logging
- indicates the placement
- transfers data to the memory module

With each log change, the cursor moves automatically to the sequential number. Selecting the desired number provides the placement position and log time of a particular pigeon. Leading zeroes do not need to be entered if pushing the green "enter" key follows the entry of the digits, e.g. "0059 may be entered as [5] [9] [OK]

The blue up/down keys allow for scrolling through the placement results. Press [F] to return to the main menu.

## Main Menu

By activating the [F] key (twice in some cases), you have selected the main menu. The main menu covers different parameters depending on whether there is a training flight in progress, a race in preparation, or an actual race in progress.

During a training flight, the main menu supports the following functions:

- 0     Logging
- 1     Reports
  - 1     Print entry list
  - 2     Print arrival list
  - 3     Print training
- 2     Velocity calc.
  - Erase training
  - Erase flight

The desired menu may be selected by entering the appropriate number. If the cursor is at the desired location, the green [OK] key may be pressed. Menu points can also be selected by scrolling the blue up/down keys.

Changing from one menu to another is done via the main menu.

## Arrival list

With a printer connected to the race computer, activating the "Reports" prompt in the main menu may generate arrival lists. (See illustration next page)

0	Logging
1	▶ Reports
2	Velocity calc. Erase training Erase flight

1	Print entry list
2	▶ Print arrival list
3	Print training

UNIKON - ARRIVAL REPORT

RACE: No. : 01      date : 03/06.      liberation point : Manassas  
 Concourse 1333      Combine MD      Club 01      flyer 006 - Deister Testing NEW  
 Printed on            : 03/02/99 16-02-48            memory module : 8441            v3.15/1.5  
 set : 6

No.	band	electr. check	Arrival day	time	Comments
1	AU98DEIS001008h	CD00C20F	03/02/	16-01-54	UNIKON - Superval
2	AU98DEIS000010h	CD00C637	03/02/	16-02-00	UNIKON - Superval
3	AU98DEIS001001h	CD00C1B8	03/02/	16-02-01	UNIKON - Superval
4	AU98DEIS001006h	CD00CB66	03/02/	16-02-04	UNIKON - Superval
5	AU98DEIS333333h	CD00EF41	03/02/	16-02-07	UNIKON - Superval
6	AU98DEIS001004h	CD00C39B	03/02/	16-02-10	UNIKON - Superval

**The "UNIKON - Superval" message in the comments section indicates that the pigeons were clocked without a memory module.**

## Erase training flight

Moving the cursor to the main menu prompt "Erase training" with the blue up/down keys may erase training flights. To activate this feature, press the green [OK] key. After the erasure the race computer is ready for the next training flight.

## Race flight operation

At the club, when you enter birds for a race, your memory module will be set and configured into “race mode”. If you place it in your race computer in the loft, the system will be ready to log data as soon as the power is turned on:

Entered:	30
	no pigeon
	logged
We 03/03/99	10-22-50

Current date and time

### **Illustration: Display before the first log.**

During race flight operations, the main menu shows the following menu points after the first data log.

0	▶ Logging
1	Reports
2	Velocity calc.
	Erase training
	Erase flight

All reports: entry, arrival, training, and nominations can be printed out at the loft at any time.

## Velocity Calculations

This feature is only enabled if at least one race is active in the memory module. In this case the release data can be entered (start time and distance) for the appropriate race by selecting the [F] key, followed by the menu item 3 “Velocity calc.” The following dialog shows:

The first line shows the race information (8 digit liberation point name, “RACEINFO”) of the current selected race.

<p><b>Date/Time: RACEINFO</b>  <b>▶ MMDDYY hh mm ss</b>  <b>Distance:</b>  <b>00000000 cm</b></p>
---

The start time is entered by the digit keys (0-9) and is complete when the seconds are entered. The cursor will jump down to the distance section where the units are input in units of centimeters. If yards per minute are desired then simply multiply 1760 (yards in a mile) by the number of miles and add two zeros. For instance: 300 miles x 1760 = 528000 + 00 = 52800000. Although the velocity will be showing m/min (meters per minute), you will know that it is in y/min (yards per minute). **NOTE: Velocity calculations are to be used for general curious purposes only and are not intended in any way to be an official time!**

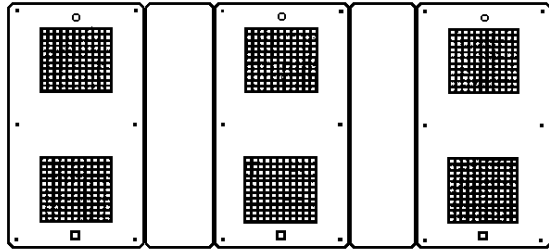
The result of the velocity calculation is displayed in logging mode after a pigeon has been logged. The calculations are shown in three-second intervals alternating back and forth with the current memory module time.

<p><b>LOG.: 1 / 1            0001</b>  <b>AU01TEST000001h NOM1</b>  <b>RACEINFO Fr 16-11-34</b>  <b>01760.0 m/min</b></p>
---

## **Observe the following points during installation of your loft antenna:**

1. Loft antennas should not be mounted directly on sheet metal. For optimum results, a minimum distance of 10-cm (4") must be maintained between antenna and metal. The reading distance diminishes to 80% with antenna distances from sheet metal of 3 cm (1.2") and to 10-20% at distances of 1 cm (0.4"). (Sheet metal also includes: aluminum, copper, lead, zinc, stainless steel, iron, brass, etc.)
2. Cables may only be plugged in or removed with the power off.
3. Each race computer can support up to 4 antennas maximum (without expansion module).
4. The distance between the race computer and the first loft antenna should be a minimum of 2 m (78").
5. The distance between the individual antennas connected to the same race computer must be 8cm (3.1") for longitudinal mounting. For transverse installation the loft antennas can be placed next to each other.
6. The combined length of all cables connected to a race computer (connecting and jumper cables) may not exceed 30m (100').
7. The distance between loft antennas connected to another race computer should be a minimum of 2m (78").
8. Protect the race computer from feces and dust. Operate the unit only in dry areas without direct exposure to sunlight and the elements.
9. Observe the temperature specifications (please refer to "Specifications") when selecting the installation site.
10. Generally, the connectors of the loft antennas are to be placed away from damp or dirty areas.

## Longitudinal Mounting of the Loft Antenna



Entry 1



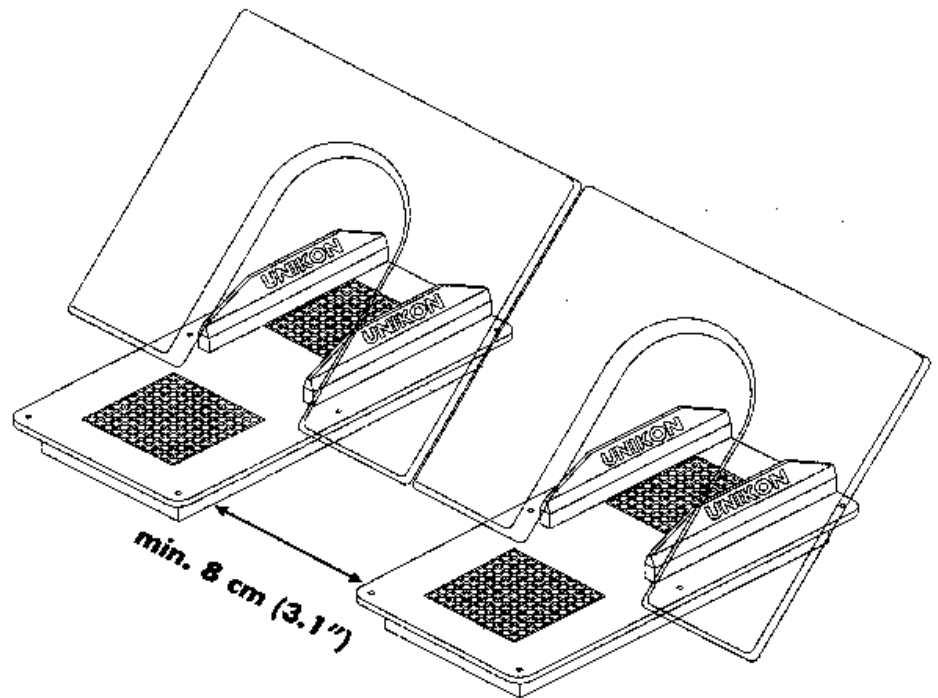
Entry 2



Entry 3

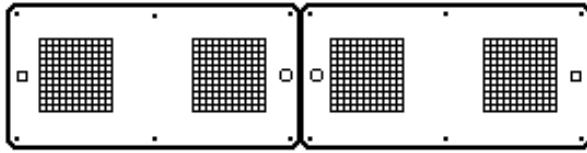
The illustration on the left shows a loft entry with 3 loft antennas and 3 entries (longitudinal mounting of the antennas – double data logging integrity).

**Mounting for two loft antennas with two entries**



For longitudinal mounting of the loft antennas the distance between two antennas must be 8-cm (3.1”) minimum. Please be aware that pigeons arriving at the loft pass over the corrugated reading fields with their electronic bands. This can be achieved, for example, by means of guides at the sides. For antennas mounted side by side, matching symbols must be placed next to each other (circle next to circle, square next to square).

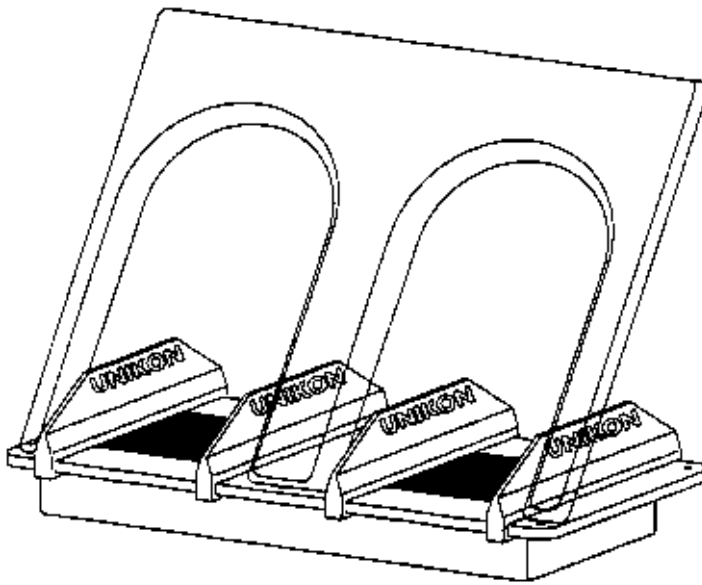
## Transverse Mounting of the Loft Antennas



The illustration on the left shows a loft entry with 2 loft antennas and four entries (transverse mounting of the loft antennas).

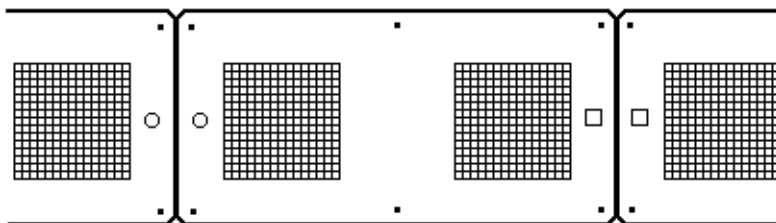


Entry 1    Entry 2    Entry 3    Entry 4



**Mounting for two entries with dividers**

Please be aware that pigeons arriving at the loft pass over the corrugated sections with their electronic bands. This can be achieved, for example, by means of guidelines at the sides.

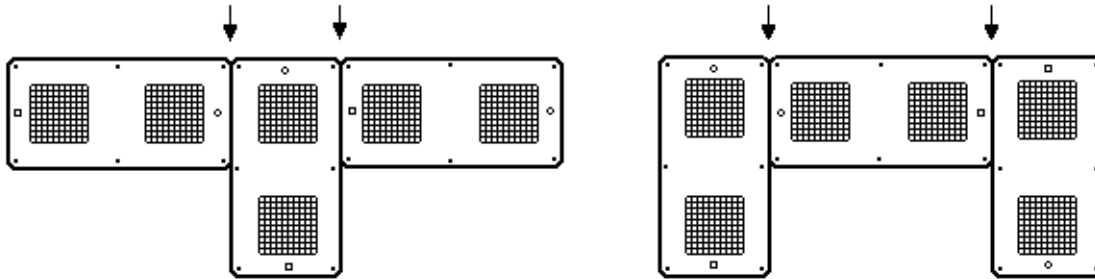


For two adjoining loft antennas, matching symbols must be placed next to each other (circle next to circle, square next to square).

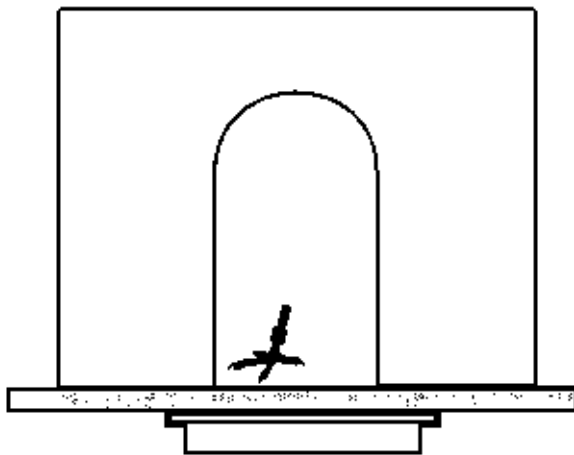


## Installation Variants

Due to space limitations, if one of the configurations shown below is chosen, the antennas should be aligned as such with a distance of at least 4 cm (1.6") between the loft antenna at the indicated points.



## Installation Hints



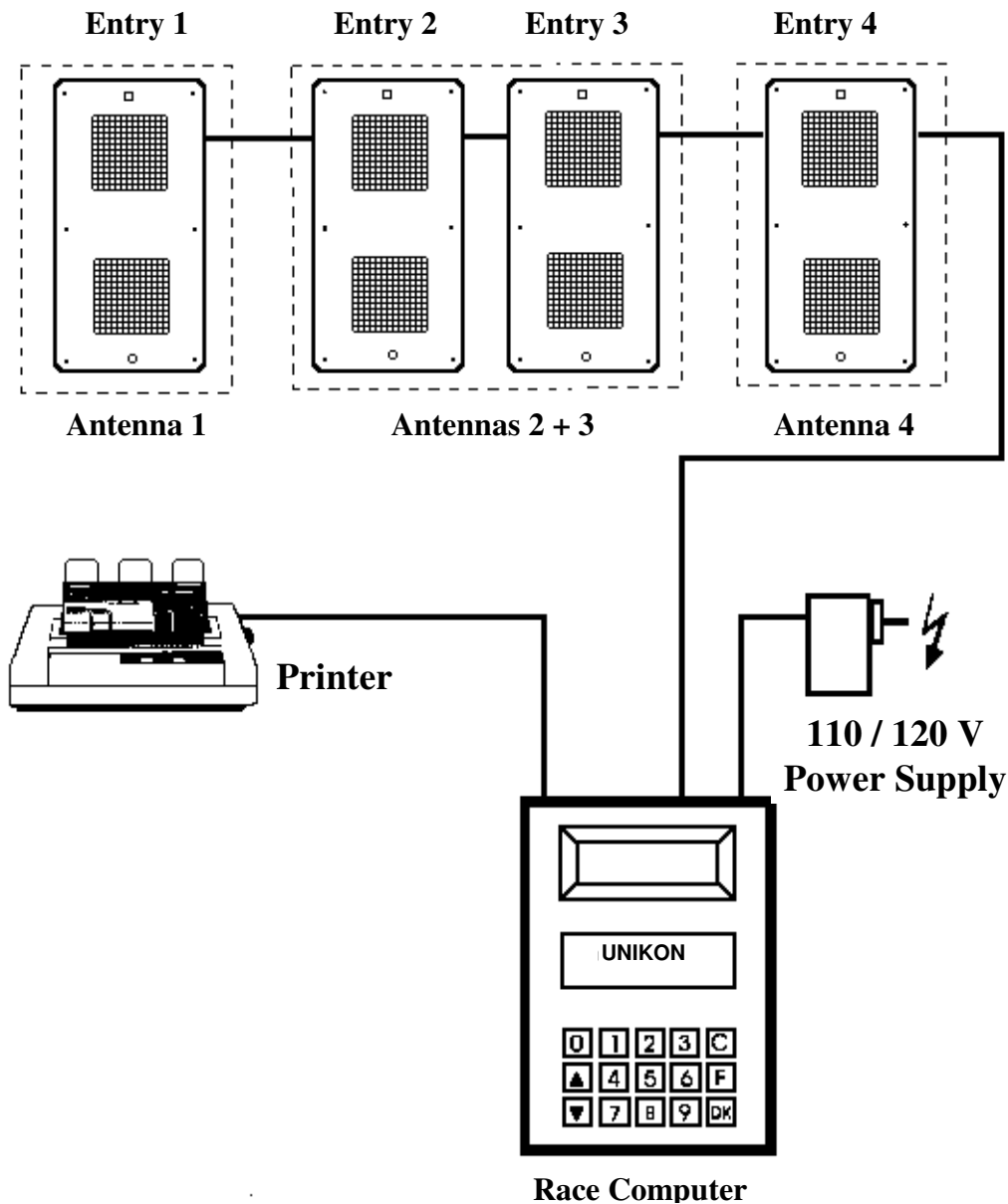
The loft antennas can be mounted on rails below the entry board (see illustration on the left).

In general, it must be kept in mind that the entry board should be as thin as possible ( $\frac{1}{4}$ "") to assure a reliable data logging for covered installations.

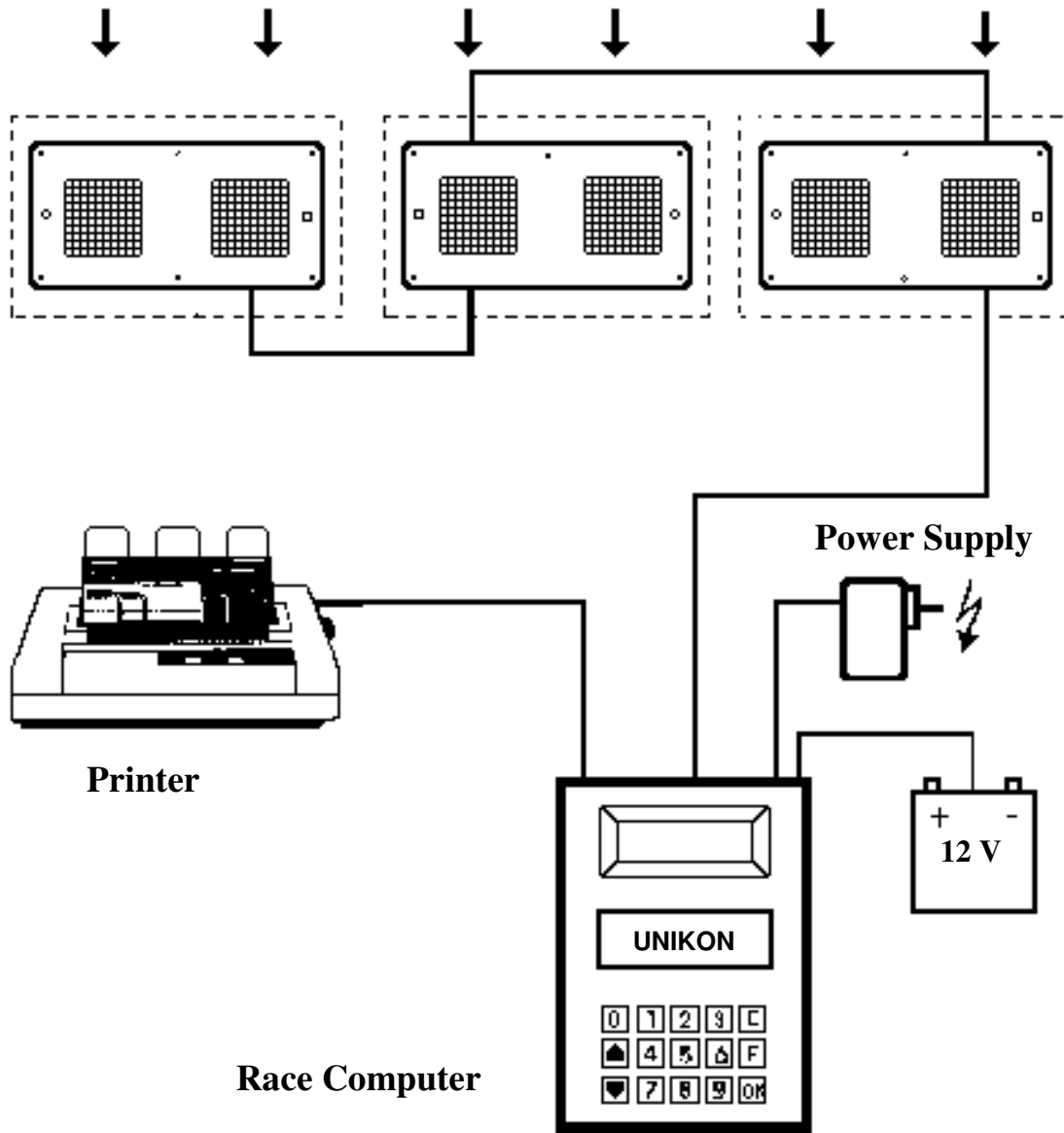
The entry opening must be positioned to force the pigeon to slow down and walk across the corrugated field with its electronic band. It is also important to center the corrugated field to the opening.

For a reliable data logging it is recommended to use unlocked bobs to slow down the pigeons before they enter the loft.

## Wiring Example of the Complete System, Longitudinal Mounting of the Loft Antennas

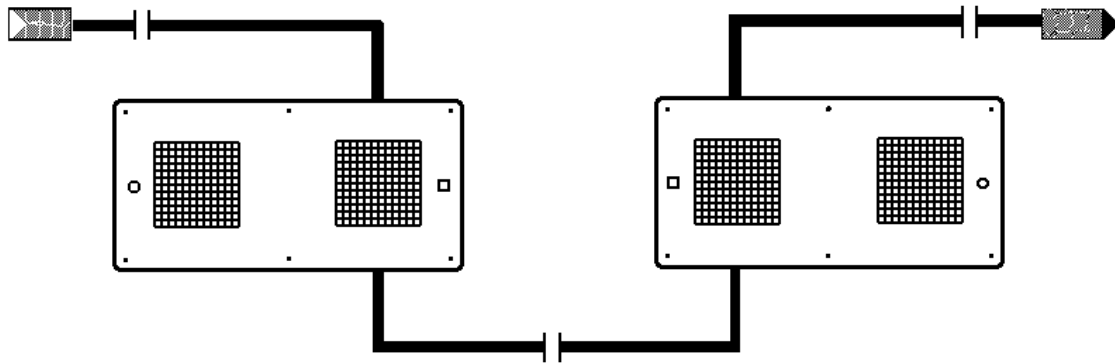


## Wiring Example of the Complete System, Transverse Mounting of the Loft Antennas



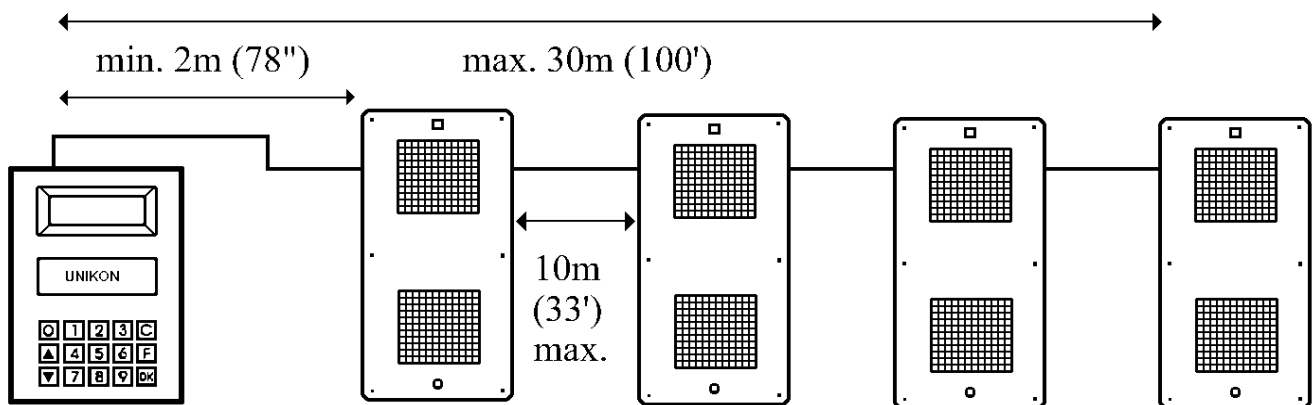
### Wiring of Loft Antennas

Connect loft antennas with cables of the appropriate length. For greater distances an extension cable can be used. However, the cable lengths given in the following chapter have to be considered! It must be ensured that the plugs remain dry and clean. Corrosion caused by dampness and dirt reduces the life of your system and has a great influence on the data logging integrity.

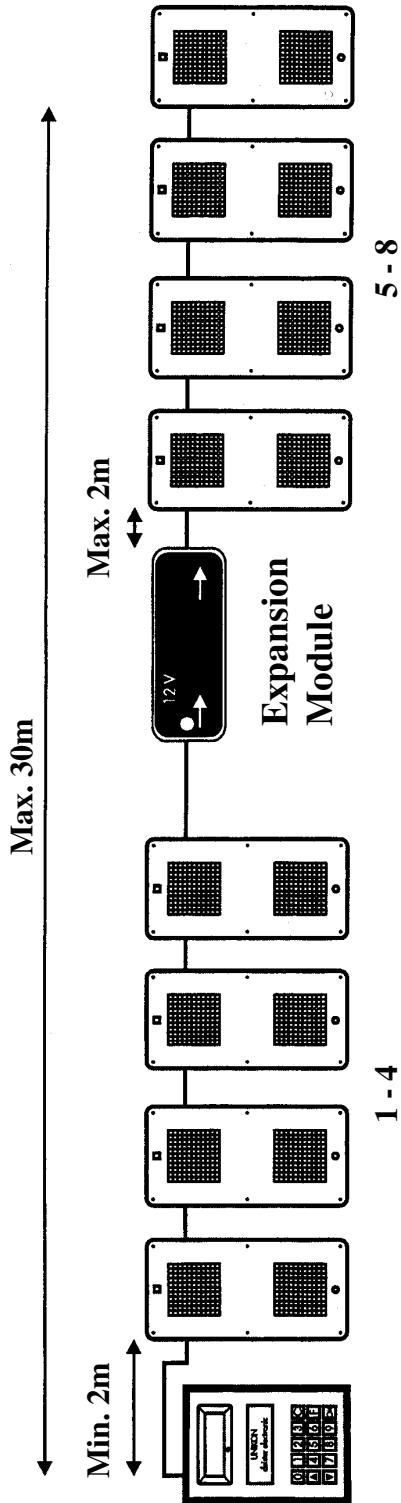


### Cable Lengths in General / Connection of the Expansion Module

Each race computer can support up to 4 loft antennas maximum (without expansion module). The distance between the race computer and the first loft antenna should be 2m (78") minimum. The distance between the individual loft antennas should not exceed 10m (33'). The maximum total cable length between race computer and the last loft antenna connected is 30m (100').

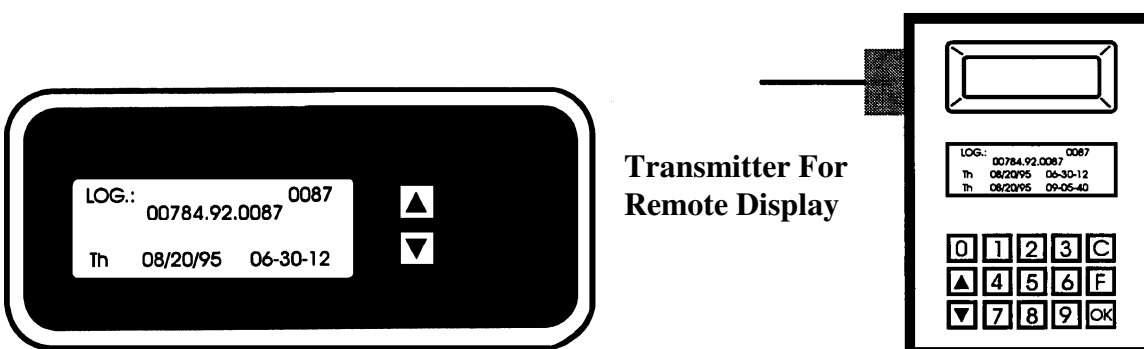


By means of an expansion module, four more loft antennas can be connected (compare illustration on next page). The arrow on the expansion module points from the race computer to the additional antennas. The expansion module is powered by a 12 V power supply. Here, the maximum total cable length between race computer and the last loft antenna connected is also 30m (100') and the maximum distance between the individual loft antennas is 10m (33')! It is recommended to use a cable of less than 2m (78") between expansion module and the following loft antenna.



## Operation of the Remote Display

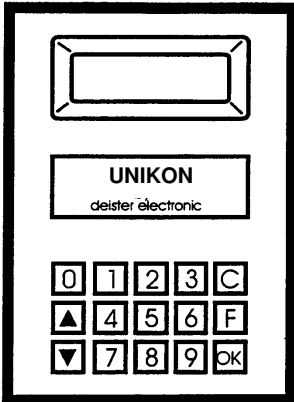
Usually, the race computer is mounted inside the loft where it should be protected from the elements. Returning pigeons are logged automatically if the race computer has been turned on and the memory module has been inserted (and removed if “Superval” is active). The remote display can be used for observing the logging of the pigeons as they enter the loft from a distance of up to 1000'. The remote display can be powered either by a 9-volt battery or a 12-volt supply.



The background of the display is only illuminated when the power supply is used! The transmitter for the remote display is plugged into the serial interface on the side of the race computer only. When the race computer and remote display are turned on, the remote display is ready for operation. An audible signal will sound when a pigeon is logged. The display will correspond to that of the race computer, except for the actual time which is not shown by the remote display. The keys, as well as the up/down keys of the race computer, may be used to scroll through the list of pigeons that have been logged. The remote display stores the last 64 pigeons that have been logged.

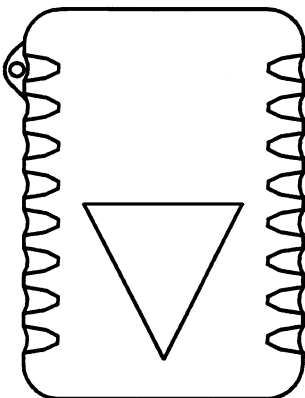
## Specifications

### Race Computer



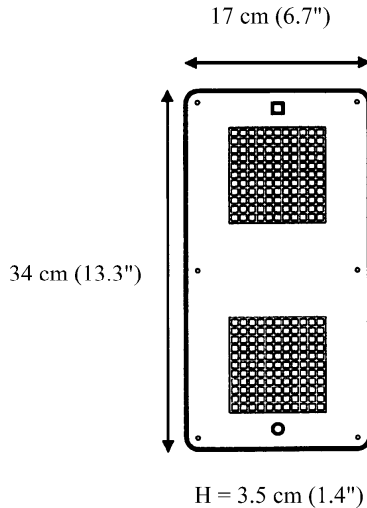
Dimensions: 13 x 6 x 20 cm (5.1 x 2.4 x 7.9") approx.  
LCD Display: 4 lines, 20 characters, illuminated  
Storing temp.: -20° C to 60° C (-4° F to 140° F)  
Operating temp.: 5° C to 50° C (41° F to 122° F)  
Power Supply: 12V DC (dual jack for battery and power supply operation.)  
Interfaces:  
- Parallel printer, "Centronics"  
- Loft antennas  
- Serial interfaces

### Memory Module



Dimensions: 7 x 3 x 10 cm (2.75 x 1.18 x 4") approx.  
Storing temp.: -20° C to 60° C (-4° F to 140° F)  
Operating temp.: 5° C to 50° C (41° F to 122° F)  
Interfaces: Contact free  
Power supply: Inductive  
Memory: Data sets for 500 pigeons

## Loft Antenna



Dimensions:	17 x 3.5 x 34 cm (6.7 x 1.4 x 13.4") top 14 x 3.5 x 31 cm (5.5 x 1.4 x 12.25") cutout
Material:	Polypropylene
Storing temp:	-20° C to 60° C (-4° F to 140° F)
Operating temp:	5° C to 50° C (41° F to 122° F)
Cable:	24" attached for input and output
Mounting:	Guide rail below entry board possible
No. of antenna fields:	2
Active antenna field:	10 x 10 cm (4 x 4")
Minimum space	
Between antennas:	8 cm (3.15") for longitudinal mounting)

## Expansion Module

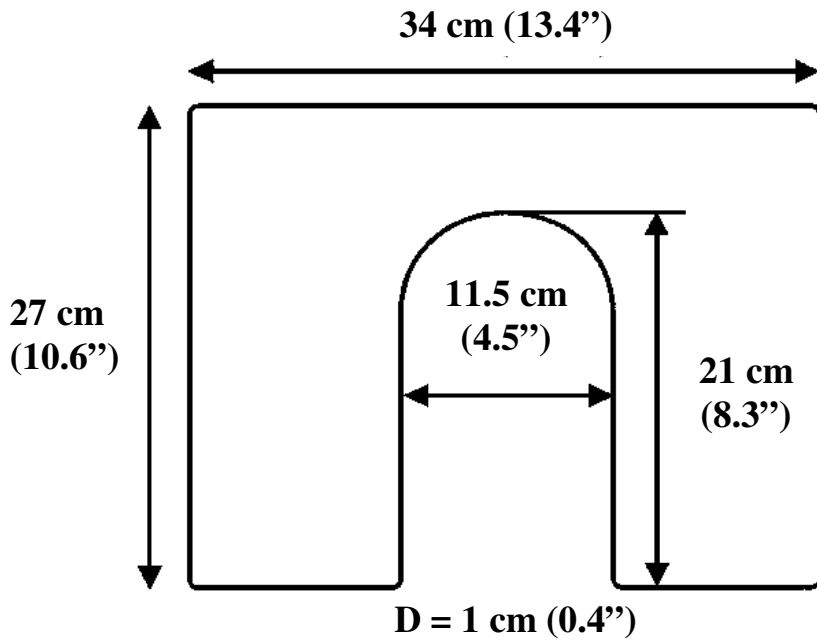
Dimensions:	17 x 8.5 x 3.5 cm (6.7 x 3.3 x 1.38")
Power supply:	12V DC
Cable:	28" attached for input and output
Number of	
Antennas supported:	4

## Power Supply (for race computer/expansion module)

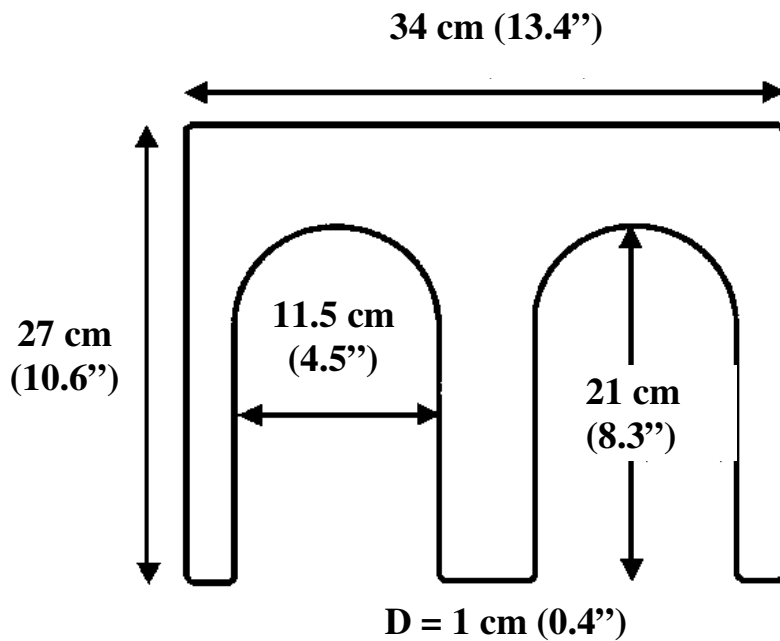
Power output:	12V DC @ 1A, standard version supports 4 loft antenna
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**Entry Portals**



**Material:** Transparent plastic



## **The *UNIKON* System**

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**703-368-2739**

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