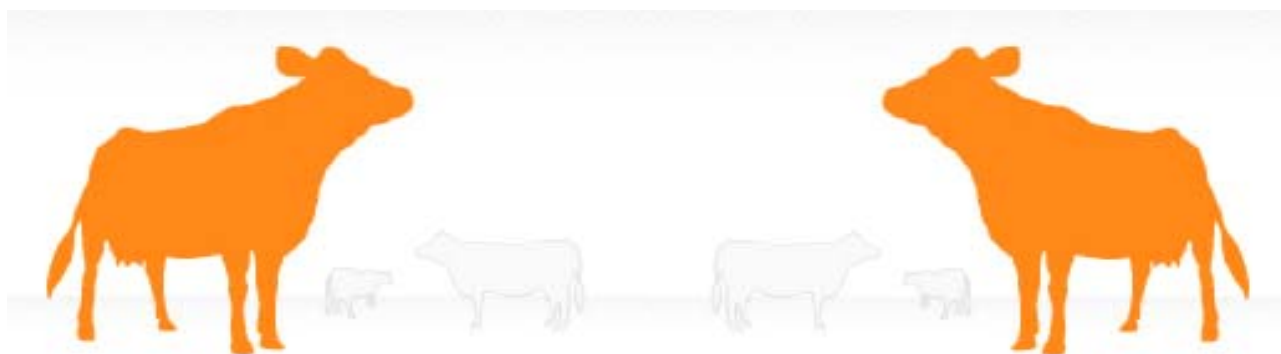


*User Guide*

*Kahne Transceiver*

*KR2001*





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## Foreword

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## Statement of Compliance

1. The KR2001 transceiver complies with FCC CE 
2. The Kahne KR2001 transceiver complies with FCC Part 15 Subpart C. Operation is subject to the following two conditions: (1) these devices may not cause harmful interference, and (2) these devices must accept any interference received, including interference that may cause undesired operation.

### NOTE:

Changes or modifications not expressly approved by the party responsible for compliance will void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Consult the dealer or an experienced radio/TV technician for help.



## Caution to Operators

Operation is subject to the following influencing conditions:

(1) Ensure that you operate this Transceiver and the peripheral wireless boluses in a considerate manner; mitigate unforeseen potential to cause nuisance/harmful signal interference to similar wireless systems.

(2) Consider that other devices and environmental factors may cause interference to the signal received; including but not only interference by buildings, yard and enclosure materials, and electricity transmission lines.

None of these factors have been an influence on the performance of these products to date. This caution is precautionary only and serves to encourage due consideration prior to setting this telemetry network to work in an environment and/or landscape not suited to RF transmissions.

## Warranty

Thank you for purchasing this Kahne product. To get maximum use of the features of your new product we recommend that you follow a few simple steps:

- Read the guidelines for safe and efficient use.
- Read all the terms and conditions of your Kahne Warranty.
- Save your original receipt. You will need it for warranty repair claims. Should your Kahne product need warranty service, you should return it to the dealer from whom it was purchased or contact Kahne.

## Our Warranty

Kahne warrants this product to be free from defects in material and workmanship at the time of its original purchase by a consumer, and for a subsequent period as stated in the following table:

Product	Warranty Period
Kahne Transceiver	One year from the date of purchase

This warranty is expressly limited to the original owner who purchases the equipment directly from Kahne or from an authorised Kahne dealer.

## What we will do

If, during the warranty period, this product fails to operate under normal use and service, due to improper materials or workmanship, Kahne subsidiaries, authorised distributors or authorised service partners will, at their option, either repair or replace the product in accordance with the terms and conditions stipulated herein.

## Conditions

1. The warranty is valid only if the original receipt issued to the original purchaser by the dealer, specifying the date of purchase, is presented with the product to be repaired or replaced. Kahne reserves the right to refuse warranty service if this information has been removed or changed after the original purchase of the product from the dealer.
2. If Kahne repairs or replaces the product, the repaired or replaced product shall be warranted for the remaining time of the original warranty period or for ninety (90) days from the date of repair, whichever is longer. Repair or replacement may be via functionally equivalent reconditioned units. Replaced faulty parts or components will become the property of Kahne.
3. This warranty does not cover any failure of the product due to normal wear and tear, damage, misuse, including but not limited to use in any other than the normal and customary manner, in accordance with Kahne's user guide for use, faulty installation, calibration and maintenance of the product, accident, modification or adjustment, events beyond human control, improper ventilation and damage resulting from liquid or corrosion.
4. This warranty does not cover product failures due to repairs, modifications or improper service performed by a non-Kahne authorised service workshop or opening of the product by non-Kahne authorised persons.
5. The warranty does not cover product failures which have been caused by use of non-Kahne original accessories.
6. This warranty becomes void if a non-Kahne approved AC/DC adaptor or battery is used.
7. Tampering with any part of the product will void the warranty.
8. Kahne makes no other express warranties, whether written or oral, other than contained within this printed limited warranty. To the fullest extent allowable by law all warranties implied by law, including without limitation the implied warranties of merchantability and fitness for a particular purpose, are expressly excluded, and in no event shall Kahne be liable for incidental or consequential damages of any nature whatsoever, however they arise, from the purchase or use of the product, and including but not limited to lost profits or business loss.
9. Some countries restrict or do not allow the exclusion or limitation of incidental or consequential damage, or limitation of the duration of implied warranties, so the preceding limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which may vary from country to country.



## For Your Safety

Read these simple guidelines. Ignoring these guidelines may be hazardous.

- **USE SENSIBLY**

Use only as per this user guide.

- **USE KAHNE APPROVED SERVICE**

Only approved service personnel must work on this product.

- **ACCESSORIES**

Use only approved accessories. Do not connect incompatible products.

- **CONNECTING TO OTHER DEVICES**

When connecting to any other device, read the appropriate user guide for detailed safety instructions. Do not connect incompatible products.

- **HEALTH AND SAFETY IN THE WORKPLACE**

Kahne does not guarantee user safety. In hazardous environments, an appropriate Health and Safety plan should be in place.

## Care and Maintenance

Your Kahne product is of superior design and quality and should be treated with care. When using your Kahne product:

- Keep it and all its parts and accessories out of the reach of small children.
- This KR2001 is designed for indoor desktop applications.
- Do not open or tamper with the Transceiver enclosure. Handle the KR2001 with extreme care; careless handling of the device may cause damage.
- Do not drop, knock or shake the Transceiver as this could lead to internal damage.
- Do not use harsh chemicals, cleaning solvents or strong detergents for cleaning. Wipe with a soft cloth slightly dampened with a mild soap-and-water solution.

## Transceiver Components

### Components supplied with the KR2001:

- KR2001 transceiver
- Short calibration whip antenna
- Long receiving whip antenna
- USB cable
- Software
- Associated USB drivers
- User guide

Please check that all these components have been supplied and contact your dealer or Kahne on email at: [contact@kahneanimalhealth.com](mailto:contact@kahneanimalhealth.com) if any of the components are missing.

## Getting Started

The KR2001 is designed to be connected to a computer to enable two-way communication between the user and a Kahne Bolus. Proprietary software enables a bolus to be configured and its transmitted data to be logged. The KR2001 is designed for indoor and short range (+/- 5 metres) use.

### Computer Requirements

- CD-ROM Drive
- USB port
- Windows OS version 2000 or later
- 100 Mb of spare hard drive space
- recommended >256 Mb RAM
- recommended >1 GHz processor speed

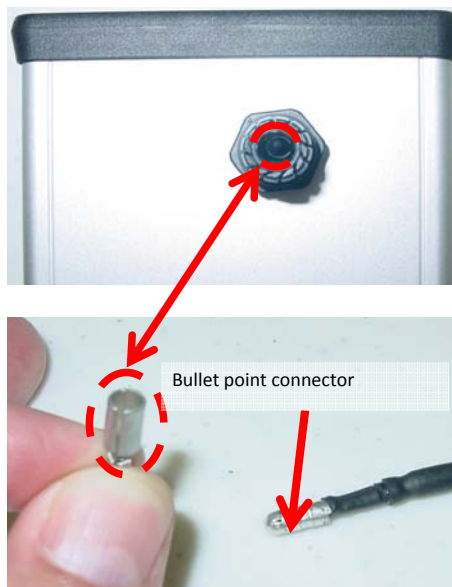
## Antenna Insertion Procedure

The KR2001 is supplied with two whip antennae. The shorter of the two is for bolus be used for transmissions.

1. Unscrew the cable gland in an anticlockwise direction.



2. When inserting antenna take care to insert the bullet point connector into the connection terminal, as shown below.



# Kahne Software

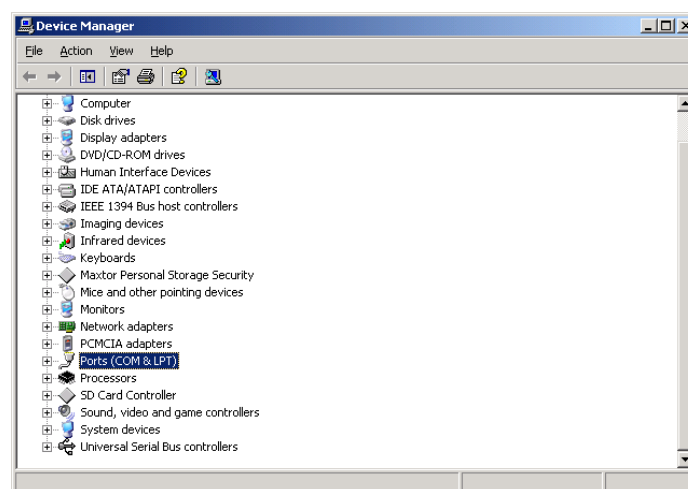
## Description

The Kahne Datasystem Software is designed to be a simple interface for communicating via a computer with Kahne transmitters and receivers. It is used to configure the Kahne products, perform calibrations, and display the data in either table or graphical format. The software runs in Java VM1.5 (supplied with software) and the database is an open source HSQLDB Java database. Data can be easily exported to a spreadsheet for manipulation.

## Setting up

When the drivers have been installed the USB connection will be paired to **ONE** USB COM Port. That port has a number which must be paired to the Kahne software. As the *Kahne Data Processing System* opens the user will be prompted to choose the appropriate COM Port. That COM Port will have already been enabled as the specified COM Port, which is paired to the USB connector. Proceed as follows:

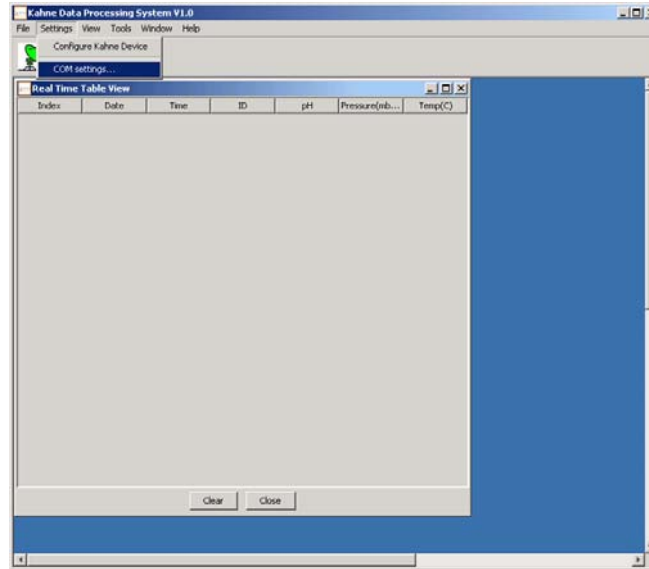
1. Connect the USB cable from Transceiver to the computer.
2. Click *Start* → right click *My Computer* → *Properties* → *Hardware* → *Device Manager* → select *Ports* and record the *COM Port number* as it is paired to the USB connector.



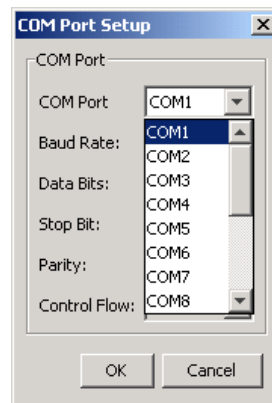
3. Launch the *Kahne Data Processing System* program.
4. If the window below appears, click *OK* and proceed.



5. Select *Settings* → *COM Settings*



6. Open the *COM Port Setup* window and select the COM Port drop down menu.



7. Look up the COM port number recorded earlier from *My Computer/Device Manager* (Step 3) select that same number from the COM Port menu → *OK*.

## ***Configuring System***

Click *Setup*--> *Configuring Kahne Device*

### **Main Transceiver**

Select Main Transceiver window.

Select *Communicate with Bolus directly* if you are not using a BosPac collar transceiver.

Select *Set Properties*.

### **Collar Transceiver**

Refer to manual with BosPac collar transceiver for details on configuring this product.

### **Bolus**

In the *Configuration Setup* box, select the *Main Transceiver* and check that the *Communicate with Bolus Directly* box is ticked.

In the *Configuration Setup* box, select the *Bolus* tab. Next to *Configure Bolus Via*, select *Main Transceiver*

Enter the bolus ID number into the two boxes: *Bolus Current ID* and *Bolus New ID*

Change the *Sampling Frequency* to the required number of minute intervals.

*Set Property* → *Yes* → *OK*

The transceiver and bolus are now communicating correctly.

## ***Troubleshooting:***

If upon clicking *Get Property* or *Set Property* it fails, check to ensure that all connections are working and are plugged in correctly and repeat step.

If the system returns failure windows consistently, unplug all components, close the program and start the process again. There is no need to uninstall the Kahne Software.

### ***Datalogging***

1. To start logging data *Click File--> Start Data Logging*  
Or click on green satellite dish icon  
Data will then be logged into the database and is visible in the Real Time Table window).
2. Data logging can be stopped by: *Click File--> Stop Data Logging*  
Or click on red satellite dish icon

### **Viewing Logged Data**

Real time and logged data are viewed in separate windows in either table or graphical format.

1. Real time data can be viewed in table format by  
*Click View--> Real Time Data Table*  
(Note: This window opens automatically on launching the software.)
2. Logged data can be viewed in table format by  
*Click View--> Logged Data Table*
3. Logged data can be viewed in graphical format by  
*Click View--> Logged Data Graph*

### ***Exporting Data***

The Logged data can be exported to a .xls file

*Click View--> Logged Data Table*

Click on *Export* at the bottom of the Logged Data Table window.

### ***Deleting Data***

The Logged data can also be deleted from the database by:

*Click View--> Logged Data Table*

Clicking on *Delete* at the bottom of the Logged Data Table window.

### ***File Functions***


1. Start/Stop datalogging
2. Import Log file  
Imports a txt file from an SD card into the Kahne database. This function is used with the KR2003 product in which bolus data is stored on the SD card
3. Download log file  
Downloads txt file from a KR2003 receiver via a serial RS232 port into the Kahne database and simultaneously saved as a file.
4. Zip/Unzip Database  
The database can be backed up and saved as a zip file by:

### ***Tools***

1. Please consult the KB1000 User Guide for undertaking a pH sensor calibration.
2. GSM Modem  
This is used to establish a serial link to a remote main receiver equipped with a GSM modem and can be used to download txt file data into the database remotely. Dial the receiver modem number. Once connected you can download data (see *File-> Download Logged File*)



## Specifications

Kahne Transceiver – KR2001	
Power	via USB Port
Rx Frequency	433.9 MHz
Tx Frequency	433.9 MHz
Connectors	1x USB Serial Port    IP65 rated
Enclosure rating	Equivalent to NEMA 3SX and IP62
Enclosure size	253mm (l) x 180mm (d) x 62mm (w)
Enclosure casing	Die cast aluminium
Weight	1515 grams
Approvals	FCC, CE, 
Communication range	Up to 50m to bolus