# VR100/VR200 Setting and Data Acquisition Software Version 2.00.05

**IMVR100-SS-JYC**
**2nd Edition, June 1997**
**Printed in USA**

## *Table of Contents*

# 1. Installing the Software

## 1.1. Windows 3.x or Windows NT

Insert software Disk #1 into the floppy disk drive.

From the Program Manager select **File** and then **Run**.

Enter the drive letter plus Setup in the Command Line. e.g. a:setup

Click OK.

Follow the Instructions, and insert Disk #2 when prompted.

**Note:** If you are installing the software over an existing copy. The original copy should be removed before installing the new copy.

## 1.2. Windows 95

Insert Disk #1 into the floppy disk drive.

From the program manager select **Start** and then **Setting, Control Panel**.

Click on the Add/Remove Programs Icon. Follow the instructions.

Insert Disk #2 when prompted.

**Note:** If you are installing the software over an existing copy, the original copy **MUST** be removed before installing the new copy.

## 2. Description

The VR100/VR200 Setting and Data Acquisition software will enable a user to edit a VR100 or VR200 Set mode file and Setup mode file. The Set mode files have an extension .PNL and the Setup mode files have an extension .PNS.

This software can also be used to read Set mode data via an RS232C port. The VR must have the RS422A option to use this method. An RS232 to RS422 converter is also needed and can be purchased from Johnson Yokogawa using part # M1222PQ.

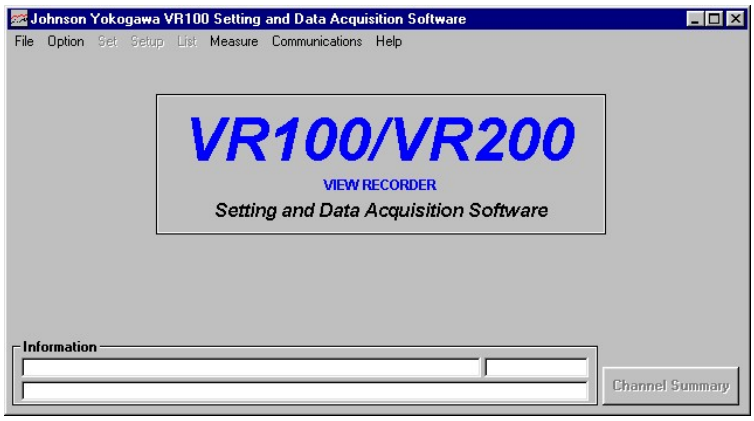
VR104, VR106, VR204 or VR206 files can be edited. To use the software save either Set mode or Setup mode data onto a 3.5 1.44 megabyte floppy disk. Refer to the Instrument Instruction manual for more information on saving Set or Setup mode data. After the Set or Setup mode data has been saved to the floppy disk the data can be read by the Setting Software. Insert the disk into the PC, run the Setting Software and open the file to be edited.

## 3. Main Menu

The Main Menu selections are File, Options, Set, Setup, List, Communications and Help. The **File** Menu is used to Load or Save VR Set mode or Setup mode files. The **Option** Menu is used to configure the Software. **Set** is used to select Range, Alarm, Time/Div or Aux menus. **Setup** is used to select Alarm and A to D Integration, TC BurnOut, RJC, Input Filter, Color, Temperature Units, Data Storage, Aux and Options. **List** saves a list file of the Set or Setup mode currently being edited. **Measure** is used to select Start and Stop measuring and setup data acquisition parameters. **Communications** is used to select Retrieve Set Info, Send Set Info and CommPort Settings. Help is used to select program help.

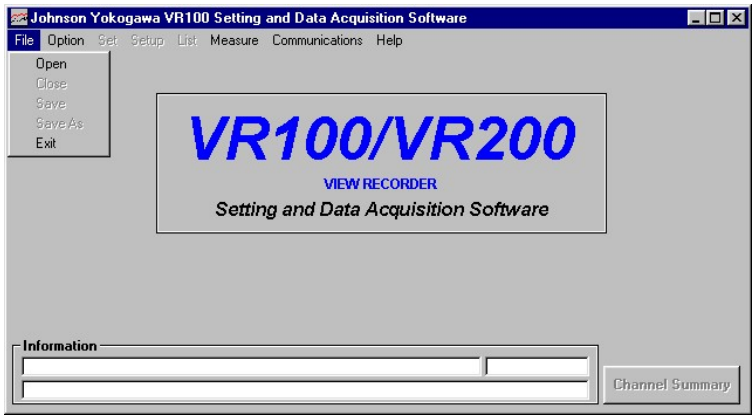
The Set, Setup and List menus will be disabled until a Set or Setup Mode file is opened

The Options menu will be disabled after a file is loaded. Options cannot be changed while a file is being edited.



# 4. File Menu

Open, Close, Save, Save As or Exit can be selected from the **File** menu. Choose Open to open a file. Close, Save and Save As will be disabled until a file is opened.

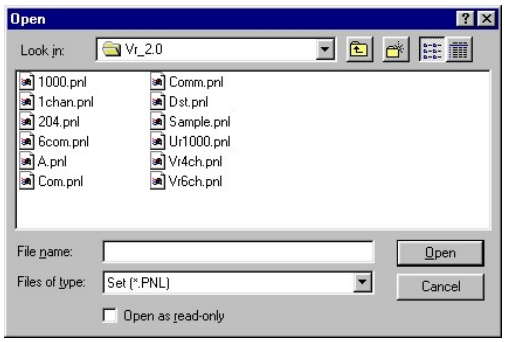



## 4.1. Open

Selecting **Open** will display the Open dialog window.

### 4.1.1. Open dialog window

The Open dialog window is used to open a file. Drive Letter, Path, File Type and File Name can be selected. Use the List files of Type menu to select either a Set or Setup mode file.




## 4.2. Close

Selecting **Close** will close the current file, Enable the Options menu and Disable the Set, Setup and List menus.

## 4.3. Save

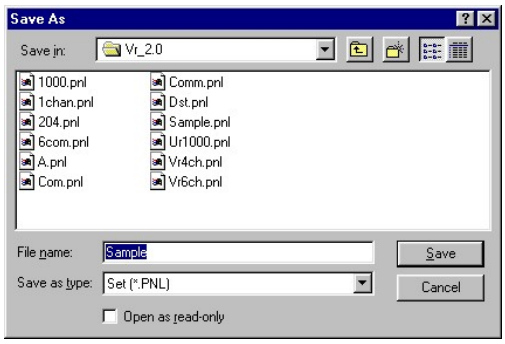
Selecting **Save** will save the current file to the same name and directory where the file was opened. This is a quick save and the user will not be prompted when a file is overwritten.

### 4.4. Save As

Selecting **Save As** will display a Save As dialog window. A Path and Filename can be selected from the Save As Dialog Window. The current Information can then be saved to the new file. If a file already exists a prompt will be displayed confirming that the user wants to overwrite the existing file with the new information.

#### 4.4.1. Save As dialog Window

The Save As Dialog Window is used to select a Drive Letter, Path, File Type and File Name for the information that is going to be Saved.

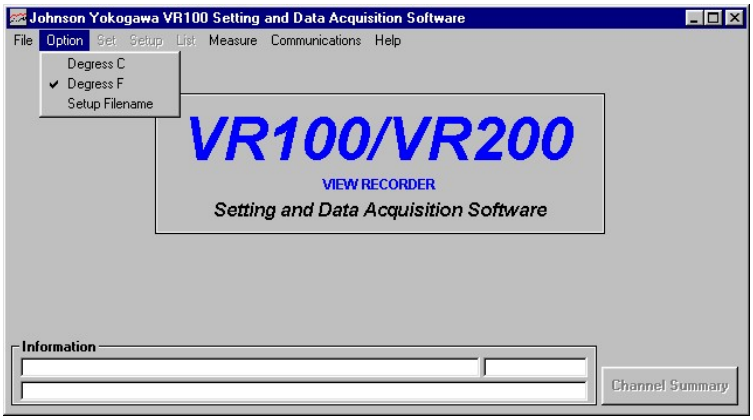



### 4.5. Exit

Selecting **Exit** will close the Software.

## 5. Option Menu

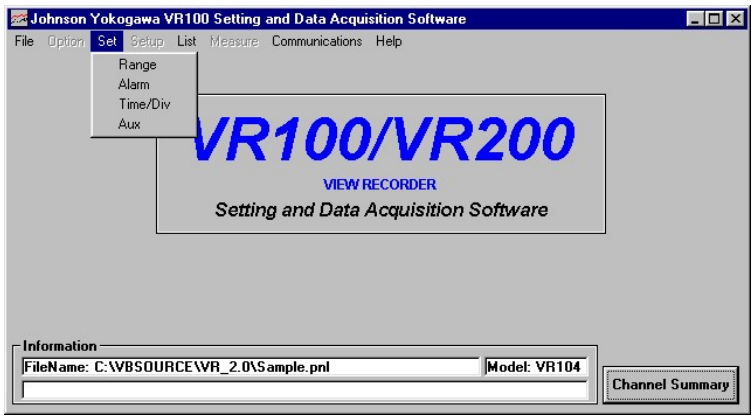
The **Option** Menu contains three selections **Degress C, Degrees F** and **Setup Filename**. Select the appropriate setting based on the VR Temp Setting. The Temperature Ranges that can be selected for Thermocouples and RTDs will not be correct if the software option setting does not match the VR. **Setup Filename** menu can be used to select a Setup file that will be used to determine the Temperature Setting for the software. When a Setup filename is used the software will read the Setup mode file and use the Temperature Unit setting it contains when a Set mode file is being edited.




**Note: Software Option must be set before opening a Set Mode File.**

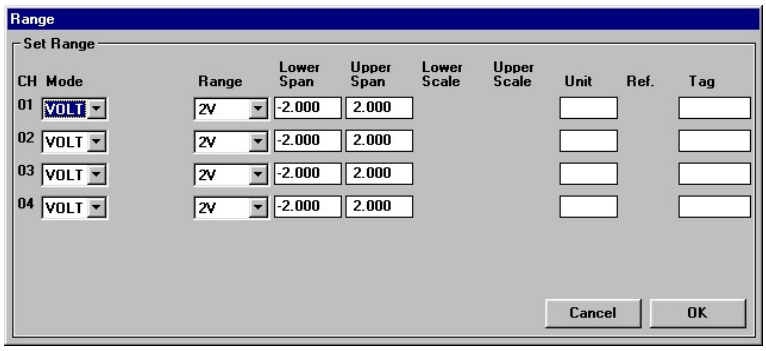
## 6. Set Menu

**Range**, **Alarm**, **Time/Div** and **Aux** can be selected from the **Set** Menu. Selecting **Range**, **Alarm**, **Time/Div** or **Aux** will display the corresponding menu where parameters related to each of the selections can be edited. When any of the choices are selected a new choice cannot be made until the current menu is closed. For example if **Range** is selected, **Alarm**, **Time/Div** or **Aux** cannot be selected until the **Range** Menu is closed.



## 6.1. Range Menu

The Range Menu shows Mode, Type, Range, Lower Span, Upper Span, Lower Scale, Upper Scale, Units, Reference Channel and Tag Name for each channel. Each of these parameters can be changed from this menu. After any parameters have been changed the OK button must be pressed to store the parameters. If the Cancel button is pressed all changes will be ignored.




### 6.1.1. Mode

Mode can be set to SKIP, VOLT, TC, RTD, DI, DELT, SCL or SQRT. All of the channels can be set to any of these settings except channel #1, which cannot be set for DELT.

**Note:**
When the Mode or the Reference Channel for a DELTA channel is set to TC or RTD the Lower and Upper Span for the DELTA channel can be set to a value +/- the difference of the Lower Span and Upper Span of the Reference channel. When the Mode of the Reference Channel is set to VOLT the Lower and Upper Span for the DELTA channel follow the same rules as the Reference Channel.

### 6.1.2. Type

Type is only visible when Mode is set to SCL. Type can be set to VOLT, TC or RTD.

### 6.1.3. Range

The selections that can be made for Range will change based on the Mode setting and the Type setting. Refer to the VR100 Instruction Manual for a list of the possible settings for Range.

### 6.1.4. Lower & Upper Span

The range of values that can be entered for Lower & Upper Span will be determined by the Range Setting. Refer to the VR100/VR200 Instruction Manual for a table of Lower & Upper Span values with respect to the Range setting.

**Note:**
The Lower & Upper Span value cannot exceed the limits specified for the Range. The Lower & Upper Span cannot be equal.

### 6.1.5. Lower & Upper Scale

The Lower & Upper Scale will be visible when Mode is set to SCL or SQRT. The Lower & Upper Scale can be set to any value ranging from -20000 to +20000. The decimal

point position is determined by the Lower Scale and there can be up to 4 decimal places to the right of the decimal point, I.E. -2.0000. If the Lower Scale is set to -2.0000 then the value of the Upper Scale cannot exceed +2.0000.

### *6.1.6. Units*

Up to 6 characters can be entered for the Unit setting. If the Unit setting is blank it will contain 6 spaces. These spaces need to be deleted before a new unit setting can be entered. Refer to the VR100/VR200 Instruction Manual for a list of legal characters.

**Note:**

When Mode is selected as VOLT, TC, RTD or DELTA the Unit setting will not be used. A standard predefinded Unit will be displayed based on the Mode setting. For Example °F for TC and RTD.

### *6.1.7. Ref*

The Reference Channel setting can be set to any channel as long as the channel number is less than the DELT channel number and the Reference Channel Mode is set to VOLT, TC or RTD. Channel 1 Mode cannot be set to DELTA.

**Note:**

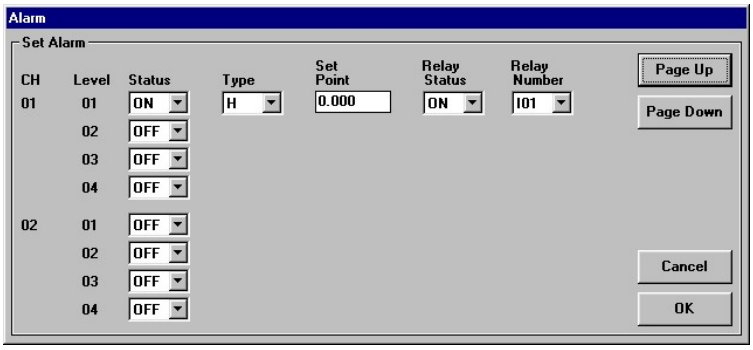
If the Reference Channels Mode or Range is changed after the DELTA channel has been set. The DELTA channel will be set to SKIP.

### *6.1.8. Tag*

Up to 7 Characters can be entered for the Tag Setting. If the Tag setting is blank it will contain 7 spaces. These spaces need to be deleted before a new Tag setting can be entered. Refer to the VR100/VR200 Instruction Manual for a list of legal characters.

## 6.2. Alarm Menu

Status, Type, Set Point, Relay Status and Relay Number alarm parameters can be changed from the Alarm Menu. All of the parameters are displayed in a column and row format. The Channel number and Alarm level are the first two columns with all other parameters displayed from left to right for each Channel and Level. After any parameters have been changed the OK button must be pressed to store the parameters. If the Cancel button is pressed all changes will be ignored.




### 6.2.1. Status

The Status menu can be set to ON or OFF. When Status is set to ON the Type, Set Point and Relay Status menus will be visible. If the corresponding channel is set to Skip the Status menu is disabled.

### 6.2.2. Type

The Type menu can be set to H, L, R or r. When a Channel is set as a DELTA channel h and l can also be selected from the Type menu.

### 6.2.3. Set Point

The Set Point can be set to any value equal to or within the Lower and Upper Span, or equal to or within the Lower and Upper Scale when the Channel Mode is set to SCL or SQRT.

### 6.2.4. Relay Status

The Relay Status menu can be set to ON or OFF. When Relay Status is set to ON the Relay Number Menu will be visible. When Relay Status is set to OFF the Relay Number menu will not be visible.

### 6.2.5. Relay Number

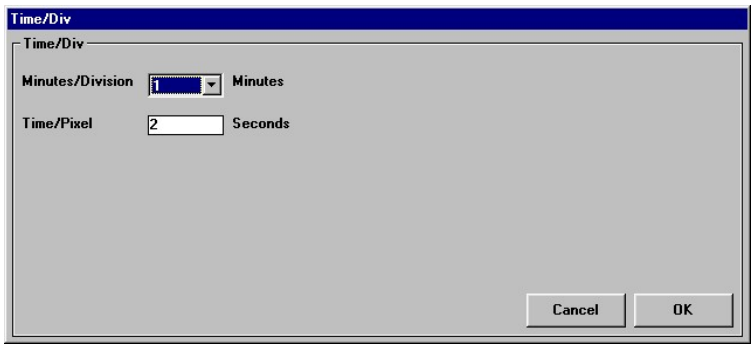
The Relay Number menu can be set to I01-I06.

**Note:**
Alarm setting will be canceled when any of the following parameters are changed on the corresponding channel:

-Input type or input range is changed.
-Decimal point for linear scaling and square root is change.
-Upper or Lower scale limit is changed.
-Reference channel is changed.

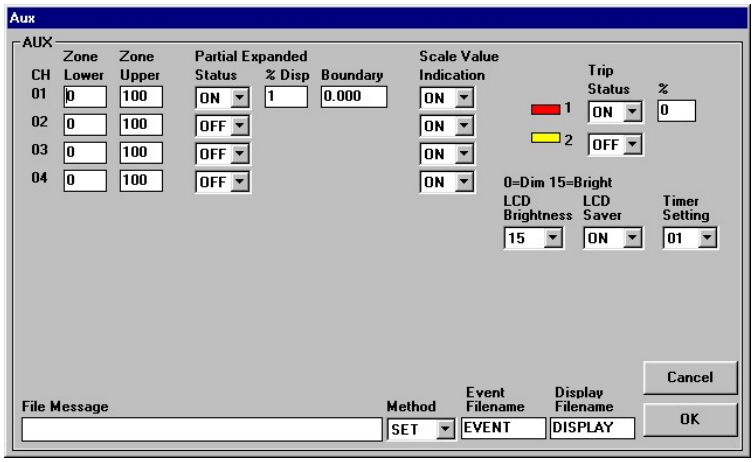
### 6.3. Time/Div Menu

Time/Div can be set to 1, 5, 10, 20, 30 or 60 minutes. The Time/Pixel is automatically calculated and is for information only. Time/Div is the time that will elapse between each divison on the chart.




### 6.4. Aux Menu

Zone, Partial Expanded, Trip Level, LCD, File Message, File Method and Filenames can be set from the Aux Menu.




#### 6.4.1. Zone Lower and Zone Upper

Zone Lower can be set to any value from 0 to 95%. Zone Upper can be set to any value from 5 to 100%. Zone Lower cannot be greater than Zone Upper and must be 5% less than Zone Upper.

#### 6.4.2. Partial Status

Partial Status can be set to ON or OFF. When Partial Status is set to OFF, % Disp and Boundary settings will not be visible. When Partial Status is set to ON, they will be visible.

#### 6.4.3. % Disp

%Disp can be set to any value from 1 to 99%.

#### *6.4.4. Boundary*

Boundary can be set to any value within the range of the Lower and Upper Span if the corresponding channel is not set to Mode SCL or SQRT. Boundary can be set to any value within the range of the Lower Scale and Upper Scale of the corresponding channel.

#### *6.4.5. Scale Value Indication (VR204 or VR206 only)*

Scale Value Indication will only appear when configuring a VR204 or VR206. It can be set to ON or OFF and determines if the Lower and Upper Scale values will be printed on the chart.

#### *6.4.6. Trip Status*

Trip Status can be set to ON or OFF. When Trip Status is set to OFF, Trip % will not be visible and is not valid. When Trip Status is set to ON, Trip % will be visible and can be changed.

#### *6.4.7. Trip %*

% Trip can be set to any value from 0 to 100%

#### *6.4.8. File Message*

The File Message can be up to 32 characters in length. If the File Message is blank it contains 32 spaces that will need to be deleted before a new message can be entered. Refer to the VR100/VR200 Instruction Manual for a list of the legal characters that can be entered.

#### *6.4.9. File Method*

The File Method can be set to DATE, AUTO or SET. When the File Method is set to DATE the Event Filename and Display Filename will be invisible and cannot be set. When the File Method is set to SET the Event Filename and Display Filename can be changed.

#### *6.4.10. Event Filename*

Up to 7 Characters can be entered. The Event Filename cannot be blank. Refer to the VR100/VR200 Instruction Manual for a list of legal characters.

#### *6.4.11. Display Filename*

Up to 7 Characters can be entered. The Display Filename cannot be blank. Refer to the VR100/VR200 Instruction Manual for a list of legal characters.

#### *6.4.12. LCD Brightness*

The LCD Brightness can be set from 1 to 15. 15 is the brightest setting.

#### *6.4.13. LCD Saver*

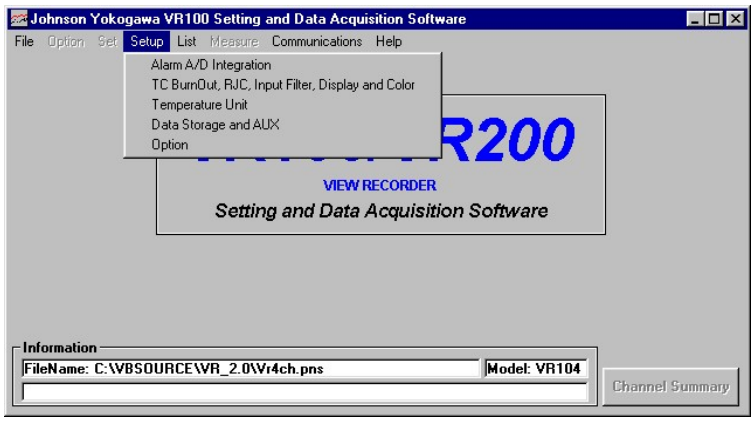
The LCD Saver can be set to ON or OFF. If the LCD Saver is set to ON, the Timer-Setting is visible. If the LCD Saver is set to OFF the Timer Setting is not visible.

#### *6.4.14. Timer Setting*

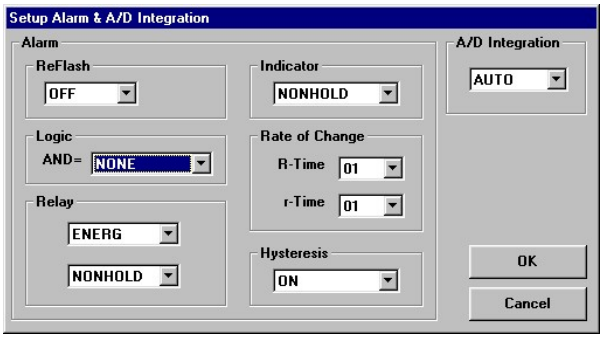
The Timer Setting can be set to 1, 2 , 5, 10 , 30 or 60 Min. Timer Setting is the duration the display will stay bright before going dim.

# 7. Setup Menu

Alarm, A/D Integration , TC BurnOut, RJC, Input Filter, Color, Temperature Unit, Data Storage, AUX and Option can be selected from the Setup Menu. These items correspond to the Setup Mode information described in the VR100 Instruction Manual. After the information is edited it can be transferred to the VR via disk.




## 7.1. Alarm, A/D Integration




### 7.1.1. ReFlash

ReFlash is used to select Alarm Reflash On or Off. When set to On the Output Relay will be cycled from on to off during an alarm condition.

### 7.1.2. Logic (AND/OR Setting)

None, I01, I01-I02, I01-I03, I01-I04, I01-I05 or I01-I06 can be selected. I01 corresponds to Output Relay number 1.

### 7.1.3. Relay

ENERG or DE_EN can be selected for Energize or DE-energize Relay Action.
NONHOLD or HOLD can be selected for Relay Action .

### 7.1.4. Indicator

NONHOLD or HOLD can be selected for Indicator Action .

#### *7.1.5. Rate of Change*

R-Time can range from 01-15 scans for rate of change increase. r-time can range from 01-15 for rate of change decreasing.

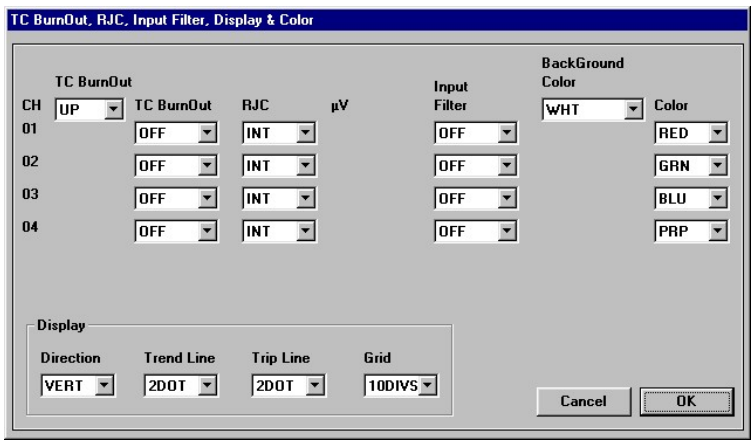
#### *7.1.6. Hysteresis*

Hysteresis can be set to ON or OFF and is a global setting for all alarms.

#### *7.1.7. A/D Integration*

A/D Integration can be set to Auto, 50Hz and 60 Hz. 100ms can also be selected for a VR106 only.

### *7.2. TC Burnout, RJC, Input Filter & Display Color*




#### *7.2.1. TC BurnOut (Direction)*

Can be set to Up or DN and determines the direction the input will go when a thermocouple burns out. This is a global setting for all channels.

#### *7.2.2. TC BurnOut (Status)*

Can be set to ON or OFF and determines the status of BurnOut for each channel.

#### *7.2.3. RJC*

Can be set to EXT (External) or INT (Internal) and determines if Remote Cold Junction is enabled per channel. If RJC is set to EXT a micro Volt menu will appear. The micro Volt setting can range from -20000 to 20000.

#### *7.2.4. Input Filter*

For VR104 & VR204 Input Filter can be set to OFF, 2s, 5s or 10s. For VR106 or VR206 Moving Average can be set to OFF or Range from 2 to 16.

#### *7.2.5. Background Color*

Background Color can be set to WHT (White) or BLK (Black).

#### *7.2.6. Color*

Color can be set to RED, GRN (Green), BLU (Blue), BRN (Brown) or PRP (Purple). L.BLU (Light Blue), ORG (Orange) or GRY (Gray) can be set for VR106 & VR206.

#### *7.2.7. Direction (VR204 or VR206)*

Horz or Vert can be select. Determine the direction of the chart.

#### *7.2.8. Trend Line (VR204 or VR206)*

Trend Line can be set to 1DOT, 2DOT or 3DOT. This setting determines the width of the trend lines on the chart.

#### *7.2.9. Trip Line (VR204 or VR206)*

Trip Line can be set to 1DOT, 2DOT or 3DOT. This setting determines the width of the Trip Lines on the chart.

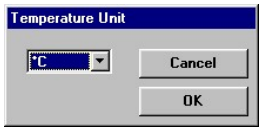
#### *7.2.10. Grid (VR204 or VR206)*

Grid can be set to 4DIVS, 5DIVS, 8DIVS or 10DIVS. This setting determines the number of divisions on the value axis of the chart.

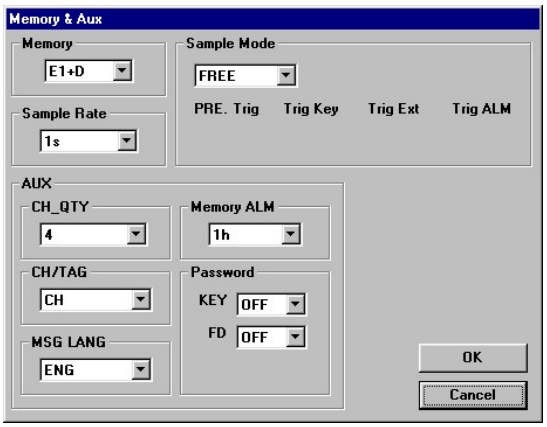
CAUTION

### *7.3. Temperature Unit*

Temperature Unit can be set to °F or °C. **This setting should be the first thing that is set. When the Temperature units is set all other Set mode information is cleared.**




### *7.4. Memory_AUX*




#### *7.4.1. Data*

E1+D, E16+D or E1 can be selected. If E1+D is selected data will be stored to 1 Event file and the Display Data file. If E16+D is selected data will be stored to 16 Event files and the Display Data file. If E1 is selected data will be stored the 1 Event file only.

#### *7.4.2. Sample Rate*

125ms, 250ms, 500ms or 1s can be select for the VR104 & VR204. Fast, 2s, 10s, 30s, 60s, or 120s can be select for the VR106 & VR206.

#### *7.4.3. Sample Mode*

Free, Trig or Rotate can be selected.

#### *7.4.4. PRE Trig.*

0 to 100% can be selected in 10% increments. PRE Trig. determines the percentage of PreTrigger for Event file data.

#### *7.4.5. Trig KEY*

ON or OFF can be selected. Trig KEY settings determine if Event files can be triggered by a Keypress.

#### *7.4.6. Trig Ext*

ON or OFF can be selected. Trig Ext settings determine if Event files can be triggered by a External contact.

#### *7.4.7. Trig ALM*

ON or OFF can be selected. Trig ALM settings determine if Event files can be triggered by an internal alarm.

#### *7.4.8. CH QTY*

1, 2, 3, or 4 can be selected for the VR104. 1, 2, 3, 4 or 6 can be selected for the VR106.

#### *7.4.9. CH/TAG*

CH or TAG can be selected. Determines if a Channel number or a channel tag are displayed on the VR digital display.

#### *7.4.10. MSG LANG*

English or Japanese can be selected. Determines the Language the messages will be displayed.

#### *7.4.11. Memory ALM*

1h, 2h, 5h, 10h, 20h, 50h or 100h can be selected.

#### *7.4.12. Password*

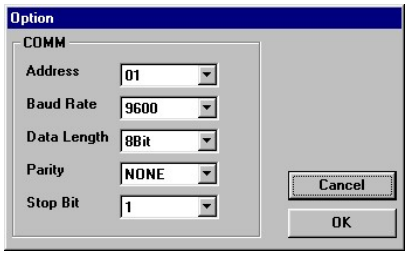
ON or OFF can be selected. If ON is select a Password text box will be displayed. any number ranging from 0000 to 9999 can be entered for the Password.

#### *7.4.13. FD Password (VR204 or VR206 only)*

If ON is select a FD Password text box will be displayed. any number ranging from 0000 to 9999 can be entered for the Password. The FD Password is used to password protect getting data from the recorder via floppy disk.

## 7.5. Option

### 7.5.1. COMM




### 7.5.2. Address

01 to 16 can be selected for the RS422A address.

### 7.5.3. Baud Rate

1200, 2400, 4800 or 9600 Baud can be selected.

### 7.5.4. Data Length

7bit or 8bit can be selected.

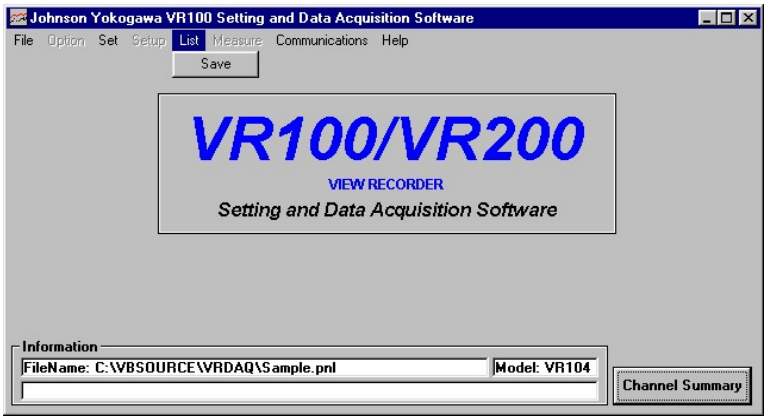
### 7.5.5. Parity

ODD, EVEN or NONE can be selected

### 7.5.6. Stop Bit

1 or 2 Stop bits can be selected.

# 8. List Menu




## 8.1. Save

List Save will save a list of the settings of the current VR100 Set or Setup mode file. The file will be saved to a file with the same name as the Set Mode file, but with the extension .LST.

## 8.2. Sample List file for Set mode

```
*** List ***        09-12-1996 22:14:53

TIME/DIV :  1min

CH  MODE TYPE       RANGE      LOWER      UPPER      SCALE LOWER UPPER   UNIT
 1  VOLT            2V         -2.000     2.000
 2  VOLT            2V         -2.000     2.000
 3  VOLT            2V         -2.000     2.000
 4  VOLT            2V         -2.000     2.000

CH        ALARM1    RLY  ALARM2    RLY  ALARM3    RLY  ALARM4    RLY
 1
 2
 3
 4

CH  TAG No.         ZONE(%)             PARTIAL
 1                  0-100
 2                  0-100
 3                  0-100
 4                  0-100

TRIP LEVEL          SET                 POSITION
     1              OFF
     2              OFF

MESSAGE : ABC
FILE_NAME :DATE
FD_FORMAT :1.44M

LCD
LIGHT     SAVER     SAVER TIME
15        OFF
```

## 8.3. Sample List file for Setup Mode

```
*** Setup List *** 09-12-1996 22:11:38

ALARM
REFLASH  AND       ALARM     RLY       IND       R_TIME    r_TIME    ALM_HYS
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ON | I01-I02 | ENERG | NONHOLD | NONHOLD | 01 | 01 | OFF |

| CH | B.OUT | RJC | µV | FILTER | COLOR |
|---|---|---|---|---|---|
| 1 | ON | INT | | OFF | BRN |
| 2 | ON | INT | | OFF | GRN |
| 3 | ON | INT | | OFF | BLU |
| 4 | ON | INT | | OFF | RED |

| INTG | B.OUT | BACKGROUND | TEMPUNIT |
|---|---|---|---|
| AUTO | UP | BLK | áF |

| MEMORY DATA | RATE | MODE | PRE-TRIG | TRIG KEY | TRIG EXT | TRIG ALM |
|---|---|---|---|---|---|---|
| E16+D | 125ms | TRIG | 100 | ON | ON | ON |

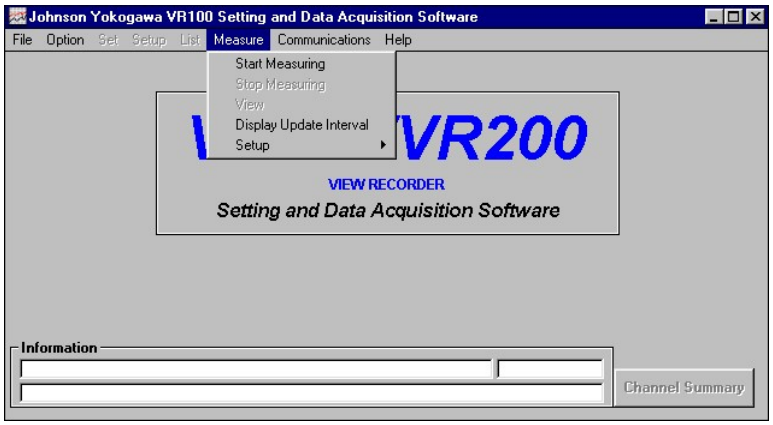
| CH/TAG | MSG LANG | MEMORY ALM | PASSWORD |
|---|---|---|---|
| TAG | ENG | 2h | OFF |

| COMM ADDRESS | B.RATE | D.LEN | PARITY | STOP BIT |
|---|---|---|---|---|
| 01 | 9600 | 8Bit | NONE | 1 |

# 9. Measure

This version of the VR100/VR200 Setting and Data Acquisition software can measure real-time data from up to 16 recorders. The data being measured can be viewed on a real-time trend, stored to disk or accessed by other Windows programs via DDE (Dynamic Data Exchange). Although the software is only capable of configuring VR series products it can measure data from µR1000 s or µR1800 s 1, 2, 3 or 4 pen and 6 dot models. The software communicates to the recorders through a single RS232 port on a personal computer. An RS232 to RS422A converter must be used to convert the RS232 signal from the computer to RS422A signals for the recorders. A converter is available from Johnson Yokogawa using part # M1222PQ. The CommPort setting in the communications menu must be setup to match the settings on the recorder before measurement can be started. Each of the Recorders connected on the RS422A serial link to the PC must have a unique address. Refer to the recorder instruction manual for detailed information on the RS422A option.

The Measure menu contains a menu choice for Start Measuring, Stop Measuring, View, Display Update Interval and Setup. If the software is not measuring Stop Measuring and View cannot be selected.




## 9.1. Start Measuring

Selecting Start Measuring will cause the software to start scanning for recorders on the selected communication port. The status of scanning is displayed in the Information text box. If no VR or µR recorders were found the software will display No VR100s found in the Information text box. If the software found recorders during the scanning process, the Stop Measuring menus and View menus will be enabled and the software will be acquiring data from the recorders. Select the View menu to display the current real-time data.

## 9.2. Stop Measuring

The Stop Measuring menu choice will be disabled until Measuring has been started. When stop measuring is selected the software will stop measuring real-time data from the recorders and also closing all log files if data is being logged. Refer to the Setup Logging menu for more information on logging data.

### 9.3. View

Selecting the View menu will show a Faceplate display for a single recorder. If multiple recorders are being measured, buttons will be displayed to the right of the faceplate. These buttons will indicate the model of the recorder and the RS422 address. The button that is gray is the recorder currently being displayed. To display a recorder click on one of the buttons and the display will update with that recorder s information. An alarm indicator will be located to the right of the buttons. The indicator will be green if there are no active alarms or no alarms configured on the recorder. The indicator will be red if there is a currently active alarm on the recorder.

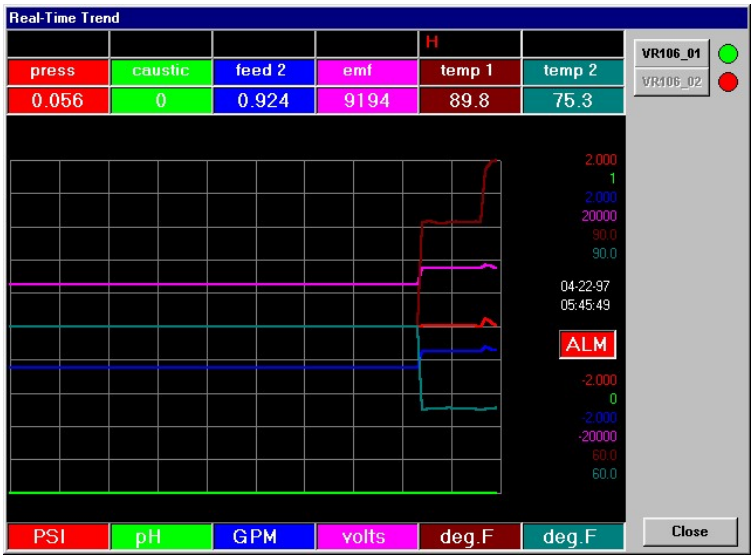
The faceplate display contains Alarm Status information, Channel Tag names, Measured Values, Engineering Units and Chart scale information. All of this information is read from each of the recorders and displayed. The currently displayed recorder time and date, read from the recorder, will also be displayed.

H, L, h, l, R or r will be displayed for each level in the alarm status display at the top of the faceplate. The level 1, 2, 3, and 4 will be displayed from left to right.

The Tag name will be displayed below the Alarm status information. If tags are not configured in the recorder the Tag name text box will be blank. The channel color can be changed by clicking on the Tag name text box. There are 16 possible colors. The color will increment every time the Tag name text box is clicked.

The current measured value will be displayed below the Tag name.

The Engineering units will be displayed at the bottom of the faceplate. If Engineering units are not configured in the recorder this text box will be blank.

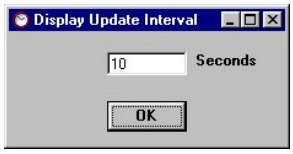



The upper and lower graph span will be displayed to the right of the graph. These values are read from the recorder so the trend matches the chart on the recorder. If zoning is setup in the recorder these values will also be read and the graph will reflect the recorder settings.

The graph will show from 1 to 6 trend lines based on the current configuration of the recorder being measured. Data on the graph will be scrolled from right to left at the Display Update Interval. 100 points will be trended on the time axis of the graph.

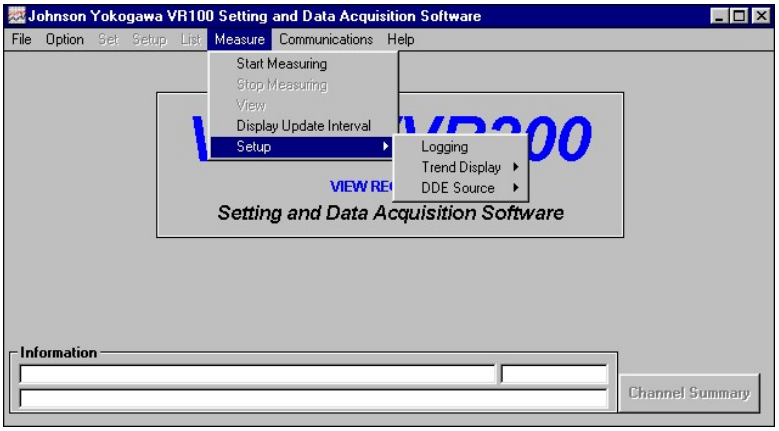
### *9.4. Display Update Interval*

Selecting Display Update Interval from the Measure menu will display the Display Update Interval window. The Display Update Interval setting determines how fast the software will scroll the trend data. The Display Update Interval can be set from 1 to 86400 seconds.



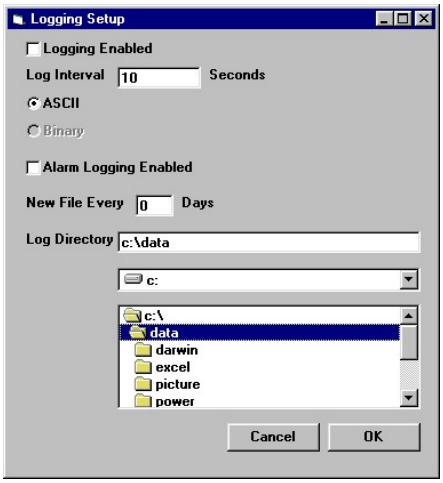

### *9.5. Setup*

Selecting the Setup from the Measure menu will display the additional menu items Logging, Trend Display and DDE Source.




### *9.6. Logging*

Selecting Logging will display the Logging Setup window. Logging can be enabled and setup from this window. If the Logging Enabled check box is checked, data measured from each of the recorders will be stored to disk.




The Log Interval can be set from 1 to 86400 seconds and must be greater than or equal to the Display Update Interval. The Logging Interval should also be a multiple of the Display Update Interval.

Data will be stored in ASCII format. In a future version data, will be able to be stored in binary format. The data will be stored in a comma delimited ASCII file which can be imported into EXCEL and LOTUS 123.

If the Alarm Logging Enabled check box is checked, alarm information will be stored into an alarm log file.

The Logging Directory determines where the measured data and the alarm log file will be stored.

### *9.7. Data File*

When data is logged to disk, one data file will be created for each recorder. The data files name will contain the month, day, year, hour and Recorder RS422 address. The first two numbers of the file name are the month. The third and forth numbers in the file name are the day of the month. The fifth and sixth numbers in the file name are the year. The seventh and eighth numbers in the file name are the hour. The file name extension is the recorder RS422 address. The following is an example of a data file name started April, 16 1997 at 12 am on recorder #1. E.g. 04169712.A01. If data is currently being logged and measurement is stopped and then started again within the same hour; a new file name will not be created. Measured data will be appended into the same file.

The data file will contain a header and the tabular measured data. The header consists of three lines. The first line is the channel #. The second line is the channel Tag name. The third line is the Engineering units.

The measured data will be stored as a group containing a Date and Time stamp and the measured values for each channel. The Date and Time stamp is not computer generated, it is the Date and Time returned from the recorder when the data was measured.

The following is an example of a data file.

```
" "," ",1,2,3,4,
" "," ","TEMP   ","TEMP 2 ","       ","TEMP 4 ",
"Date","Time"," °C   ","in.   ","POLYME","µS    ",
"04-16-97","10:59:59",26.8,.47,-.798,3238.2,
"04-16-97","11:00:09",27,.63,-.915,3238.2,
```

"04-16-97","11:00:19",28,.67,-.942,3238.2,
"04-16-97","11:00:29",25.6,.67,-.951,3238.2,
"04-16-97","11:00:39",24,.67,-.952,3238.2,
"04-16-97","11:00:49",23,.67,-.952,3238.2,
"04-16-97","11:00:59",22.4,.67,-.952,3238.2,

### *9.8. New File Every __ Days*

New File Every *n* Days is used to automatically create a new data and alarm log file at midnight every *n* number of days. *n* can be any number from 0 to 99. If the number of days is set to 0 this function is disabled an new files will not be created. If the number of days is set to 1 a new data file name and alarm log file name will be create every day at midnight. The original file will be close and no longer written to by the software. This feature can be used to keep data file sizes to a minimum.

### *9.9. Alarm Logging File*

A single alarm log file will be created for all recorders. The alarm log file contains a Channel #, Tag name, Alarm Type, Alarm Level, Value, Engineering units, Alarm Status, Date and Time. A header will be stored in the file as a title for each of the columns of information. All of the alarm information will be stored in a tabular format.

Channel,Tagname,Type/Level,Value,Units,Status,Date,Time
2,temp2,L2,24.6,deg.C,InAlarm,04-26-97,08:21:43
1,temp1,H1,31.2,Deg F,InAlarm,04-26-97,08:22:02
1,temp1,1,29.4,Deg F,OutAlarm,04-26-97,08:22:15
2,temp2,2,28.7,deg.C,OutAlarm,04-26-97,08:22:19

### *9.10. Trend Display (VR204 & VR206 Only)*

Selecting the Trend Display menu will display a Pen Width menu. The width of the Trend lines can be set to 1DOT, 2 DOT or 3DOT.

### *9.11. DDE Source*

Select the DDE Source menu to disable or enable the DDE source capability. When DDE Source is enabled data can be accessed from the software by other windows applications via DDE. The DDE capability increases the software overhead. If DDE is not needed, the DDE Source setting should be disabled.

To access measured data from Excel, the program name, a Topic and Item must be specified. The program name is VR100. The Topic for measured data is DATA. The item for measured data is PV(*ac*). The *a* is the recorder address and the *c* is the channel number. If the example below is entered into an Excel cell the value of channel #1 recorder #1 will be displayed in the cell.

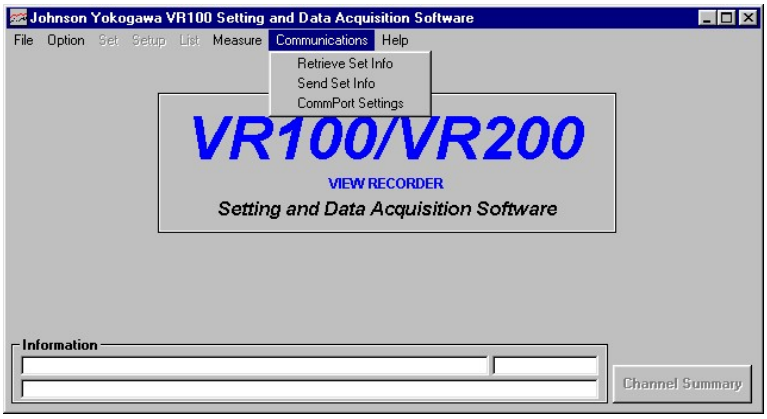
Example:
=Vr100|data!'PV(11)'

Alarm status information can also be accessed via DDE. For alarm status data use the DDE item ALARM(*ac*). The *a* is the recorder address and the *c* is the channel number. The data return is an integer number that represent the status of all 4 alarms. Refer to the recorder instruction manual for information on the construction of the integer. If the example below is entered into an Excel cell the alarm status of channel #1 recorder #1 will be displayed in the cell.

Example:
Vr100|data!'alarm(11)'

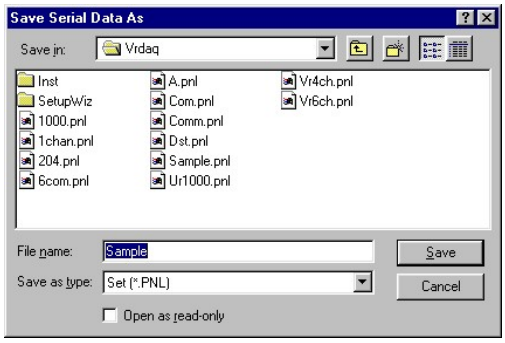
# 10. Communications

Communications can be used to Retrieve or Send Set Mode Information from or to the VR. The VR must have the RS422A option to use this feature.



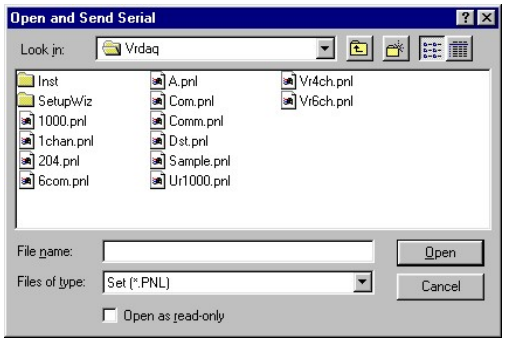

## 10.1. Retrieve Set Info

When Retrieve Set Info is selected Set mode information will be retrieved from the VR via RS422. The retrieved data will be stored in the selected Set mode file and can then be opened and edited.



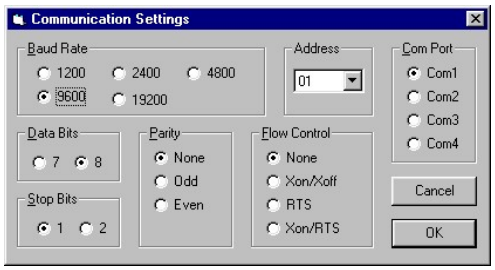

## 10.2. Send Set Info

When Send Set Info is selected a file dialog menu will be displayed. A file must be selected. After a filename is selected and the OK button is pressed, data in the Set Mode file will be sent to the VR via RS422A communications.



### *10.3. CommPort Settings*

The CommPort Settings menu is used to configure the computer s'communications settings. These settings must match the settings in the VR.




## *11. Channel Summary Display*

The Channel Summary Display is used for Information Only and can be displayed at anytime. It contains range information for a single channel at a time. Any channel can be selected.