OPERATION MANUAL

SOFTWARE

(WINDOW VERSION FOR U-P METER & DMM)

MODEL NO : SW-U801-WIN

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1. INTRODUCTION

The SW-U801-WIN is a powerful WINDOWS program software which enables LUTRON's full line RS232 serial instruments to be with data logging function.

Three kinds of different displays provide you choice depends on your favorite. Maximum 8 channel monitoring at the same time let you can get a complete data information. High, Low warning to monitor any unusually situation. Sample rate setting from 2 to 3600 seconds to satisfy your different demands.

.xxx.mdb data file can be retrieved by EXCEL, ACCESS, and other kinds of database software. Data analyze and demonstrate easily.

Before you start the program, to identify the meter with how many displays is necessary to make sure no artificial omission occur. Please refer to REFERENCE at page 9 for relative information.

2. GENERAL SPECIFICATIONS

Hard Ware System Requirement	*Computer with VGA monitor* Win 95 : IBM 486, 586 or higher.. 16 Mega memory bytes at least. Win 98 : IBM 586 or higher.. 32 Mega memory bytes at least.
Common Port	COM 1, COM 2, COM3 or COM 4.
Data Record	Auto or Manual
Sample Rate	2 to 3,600 seconds.
Data Save	Data file : XXX.mdb. automatic save to disk,
Accessories Included	CD disk..... 1 PC. Operation manual..... 1 PC.
Optional Accessory	* RS232 cable. Model : UPCB01 Available for *u* -P instruments,
	* RS232 cable. Model : UPCB-02 Available for DMM & TM-2000
	* RS232 cable. Model : UPCB-04 Available for FG-5000A-232 FG-20KG-232

3. INSTALL AND START THE PROGRAM

3-1 Installation

*** Before installation, please remove the previous version data acquisition software of LUTRON.**

1. Connect the RS232 cable (UPCB-01 for u-P instruments, UPCB-02 for DMM/DM-9680) to LUTRON's instruments & COMPUTER.
   Note : * Plug the "Microphone plug" of cable into the RS-232 socket of the instrument.
   * Plug the "9 pins plug" of cable into COM 1 or COM 2 socket of the computer.
2. Start your windows.
3. Place the CD-ROM disc into your CD-ROM driver.
4. In Windows 95 or 98, click Run from the Start menu.
5. Assume that your CD-ROM driver is D:.
   Run "D:\setup.exe" and click OK to start install

3-2 Star the program

Once you finish the installation, click the "LUTRON 801" from the program file to start the program.

4. USING SW-U801-WIN

4-1 System setup

After running the program, the computer will show as Fig.1.

1. Chose System setup from the top-left corner and you will see a dialog box as Fig.2.
2. Enter a value in the "System Scan Rate" grid to determine the sampling time.
3. Enter a value in the "Max Record Data" grid to determine computer's max recording number.
4. Click the arrow of "Common Port" to chose which port of computer that you are connecting.
5. Click the arrow of "Text Display Type" to determine how many displays shown in the Text display screen.
6. Click the arrow of "Angular Display Type" to determine how many displays shown in the Angular display screen.
7. Click the up-down arrow of "Chart Display Chan." to select which channel shown in the Chart display screen.
8. To determine the meter with how many displays please refer to Ref-1. (Page 9)
9. Click "Save" to save your above setting then click "Exit" to close this dialog box.

4-2 Create New Data File

Chose "Create New Data File" from the "Setup" menu (Fig-3)

1. Enter a file name in the Data File Name grid.
2. Click on "Create" then click on "Exit" to close this dialog.

4-3 Angular Display

We recommend you to start from the "Angular Display" for serial settings, and following instructions are based on the meter with 2 channels.

1. Select "Angular Display" from the commander line of LUTRON measurement system dialog box(Fig.1), and you will see the Angular Display dialog box with four sheet.
   The initial screen is 2 Angular Display depending on your selection of "System Setup" dialog box. Channel No. please refer to the highlight blue number at the top-left corner of the angular panel.
2. Select "Page Setup"(Fig-4) sheet for the proper range setting of the angular panel and charts.
3. Select the up-down arrow of "Channel No" to determine which channel that you want to adjust.
4. Enter a number in the "Min Value" and "Max Value" grid to determine the range of the angular panel.
5. Enter a number in the "Large Tick Delta" and "Small Tick Delta" grid to determine the graduation of the angular panel.
6. Enter a number in the "Label Delta" grid to determine the numerical graduation of the angular panel.
7. Enter a number in the "High Warning" and "Low Warning" grid to set the tolerable range.
8 Input a integer in "Decimal" grid to determine how many numbers behind the decimal point.

9. The number of the "Scale" grid must be an integer, and the scale value will time your meter's reading value. For instance, scale is10 and the meter's reading value is 65.4, then the reading value on the screen would be 654.
10 To judge the unit of your measurement automatically, please click the grid in front of "Unit Auto Sense".
11 Press "Save" button to save the setting.
Press Save button every time to make new setting value work.
12 Change to sheet "2 Angular Display" (Fig-5) you can find the angular panel and inspect whether the setting is OK.

Panel Description

* Timer icon : Show the measuring time.
* Counter icon : Show how many data recorded.
* Scan Rate indicator : Show the sampling time.
* Run / Pause button :
  If it shows Run that means recording data automatically.
  If it shows Pause that means no data recording.
* Alarm Sound : click on grid for sound warning.
* Save Data button :
  No matter the data record situation is Run or Pause, every time you press the button would record data once.
* Chart Display button : Change to Chart Display screen
* Text Display button : Change to Text Display screen

4-4 Text Display

1. Page setup sheet (Fig-6)
   Select the group that is suitable your measurement, and select a channel for each display.
   Change to "2 channel Display" sheet, and you can see the setting result.
2. Channel Display sheet (Fig-7)
   The light blue grid shows the unit selected.
   The light orange grid shows the channel selected.

4-5 System Monitor (Chart Display Fig-8)

1. Enter a number into the "Y-Max" and "Y-Min" grid to set the Y-axis max. and min. value.
2. Press the button "Set Y-Axis Min_Max" every time to make the new setting value work.

4-6 Data Query

Select the Data Query from the "Report" menu in the LUTRON Measurement system dialog box.(See Fig. 1) to entry the "Data query" program.(See Fig.9)

* **Before making the data query, you should firstly select the Database (Chan. 1 to Chan. 8) and the sampling date**
* **If user intend to have period data analysis, please check the grid in front of the "Add Time condition". Key in the time in the "Start Time" and "END Time" grid.**

1) Click the "Data Query" button, and each data would be listed in the data list icon.
2) Click the "Show chart" button to show the data recorded with chart display.
3) Click the "Print Chart" and "Print Data" button to print the detail of data recorded.
4) Click the "Clear Chart" button to clear the chart display.
5) * Enter the chart's header in the "Header" grid.
   * Enter the chart's footer in the "Footer" grid.
   * Enter numbers in "Y-Max" and "Y-Min" to set the Y-axes.
   * Enter numbers in "Y-Grid" and "X-Grid" to divide the chart with vertical line and horizontal line and the number you entered is the interval of two line.
6) Click on "Setup" button to display it on the chart.
7) Click Setup button every time when the setting value has been changed to make a new setting value work.
8) Click "Exit" to close the program.

REF-1

Meter with one display

Automotive tester, DM-9031	DM-9031
LCR+DMM, DM-9093	DM-9093
Multimeter with RS232 interface, DM-9680	DM-9680
Digital stroboscope, DT-2269	DT-2269
Force gauge, 20 Kg, FG-20KG-232	FG-20KG
Force gauge, 5 Kg, FG-5000A-232	FG-5000A
LCR-9073, LCR-9073	LCR-9073
Light meter, LX-105	LX-105
Moisture meter, MS-7000	MS-7000
Pressure meter, PS-9302	PS-9302
PT 100 ohm thermometer, TM-907A	TM-907A
Infrared thermometer, TM-908	TM-908
Narrow spot IR thermometer, TM-910	TM-910
Dual channel thermometer, TM-915A	TM-915A
Precision 0.01 degree thermometer, TM-917	TM-917
Torque meter, TQ-8800	TQ-8800
UVC light meter, UVC-254	UVA-254
UVA light meter, UVA-365	UVA-365
Vibration meter, VB-8200	VB-8200
3 in 1 thermometer	TM-2000

Meter with two display

Anemometer, AM-4203	AM-4203
Hot wire anemometer, AM-4204	AM-4204
Anemometer/Humidity meter, AM-4205	AM-4205
Anemometer, AM-4206	AM-4206
Anemometer, AM-4213	AM-4213
Conductivity meter, CD-4303	CD-4303
Oxygen meter, DO-5510	DO-5510
Humidity meter, HT-3005	HT-3005
Humidity meter, HT-3006	HT-3006
PH meter, PH-207	PH-207
Dual channel thermometer, TM-906A	TM-906A

Meter with 4 display or more display

Power analyzer, DW-6090	DW-6090
Power analyzer, DW-6091	DW-6091

RS-232 cable, UPCB-01

Anemometer, AM-4203	AM-4203
Hot wire anemometer, AM-4204	AM-4204
Anemometer/Humidity meter, AM-4205	AM-4205
Anemometer, AM-4206	AM-4206
Mini Vane Anemometer	AM-4213
Conductivity meter, CD-4303	CD-4303
Oxygen meter, DO-5510	DO-5510
Humidity meter, HT-3005	HT-3005
Humidity meter, HT-3006	HT-3006
Light meter, LX-105	LX-105
Moisture meter, MS-7000	MS-7000
PH meter, PH-207	PH-207
Pressure meter	PS-9302
PT 100 ohm thermometer	TM-907A
Dual channel thermometer, TM-906A	TM-906A
Infrared thermometer, TM-908	TM-908
Narrow spot IR thermometer, TM-910	TM-910
Dual channel thermometer, TM-915A	TM-915A
Precision 0.01 degree thermometer, TM-917	TM-917
Torque meter, TQ-8800	TQ-8800
UVC light meter, UVC-254	UVA-254
UVA light meter, UVA-365	UVA-365
Vibration meter, VB-8200	VB-8200

RS-232 cable, UPCB-02

Automotive tester, DM-9031	DM-9031
LCR+DMM, DM-9093	DM-9093
Multimeter with RS232 interface, DM-9680	DM-9680
Digital stroboscope, DT-2269	DT-2269
LCR-9073, LCR-9073	LCR-9073
Power analyzer, DW-6090	DW-6090
Power analyzer, DW-6091	DW-6091
3 in 1 thermometer	TM-2000

D9 to D9 RS-232 cable, UPCB-04

Force gauge, 20 Kg, FG-20KG	FG-20KG
Force gauge, 5 Kg, FG-5000A	FG-5000A

Fig-1

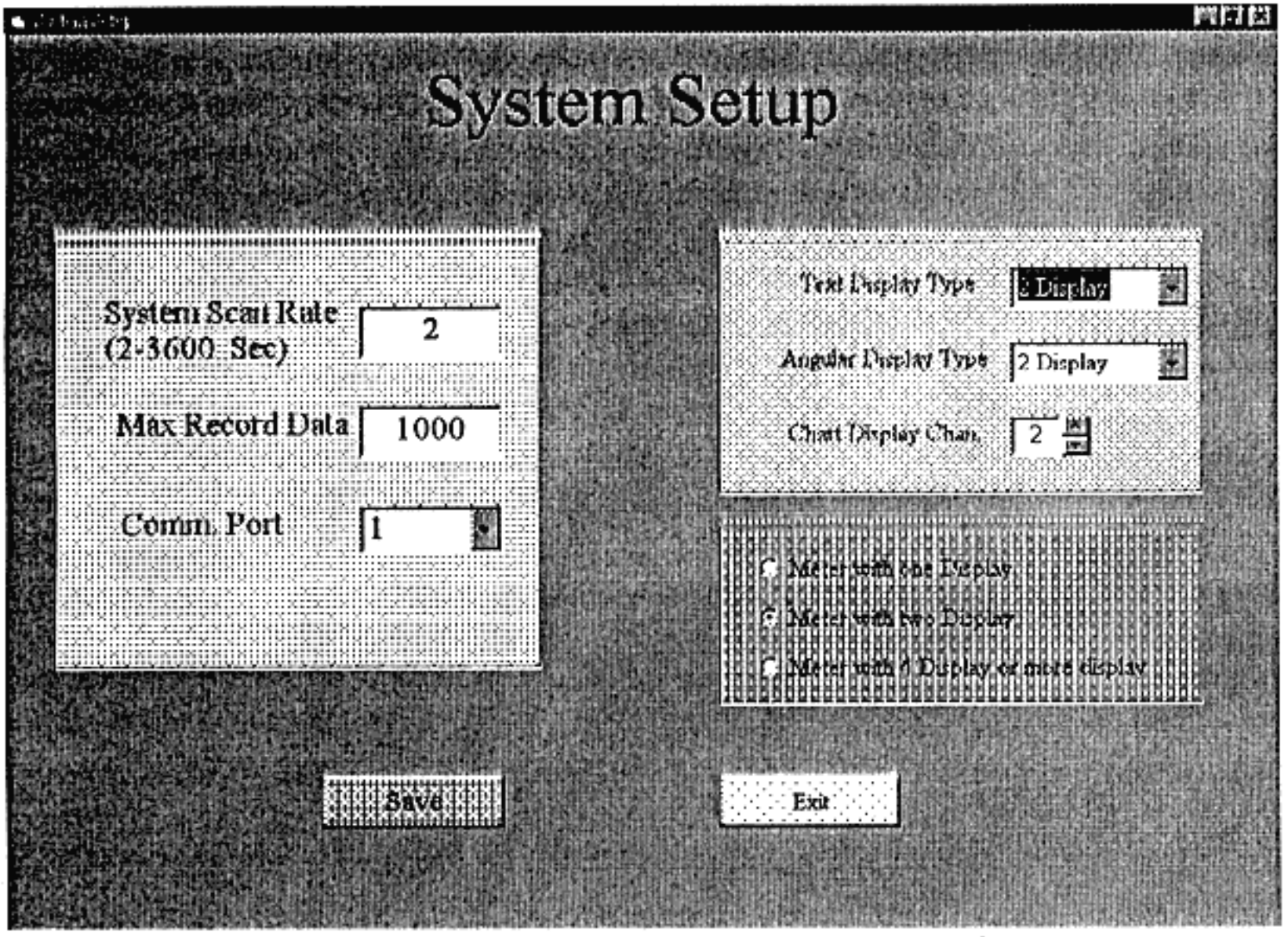
System Setup
System Scan Rate (2-3600 Sec)
2
Max Record Data
1000
Comm. Port
1
Text Display Type
3 Display
Angular Display Type
2 Display
Chart Display Chan.
2
Meter with one Display
Meter with two Display
Meter with 3 Display or more display
Save
Exit

Fig-2

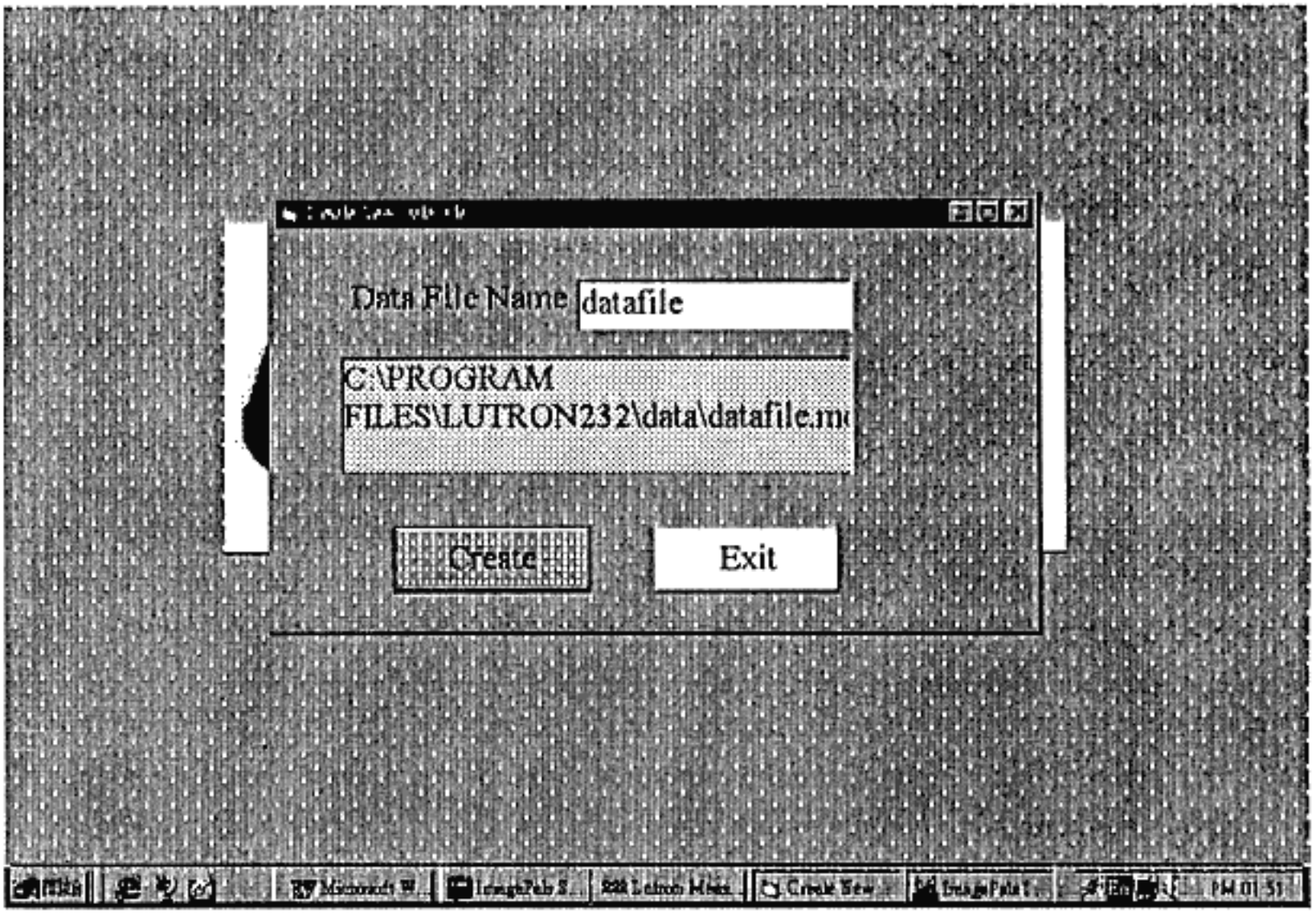
Data File Name
datafile
C:\PROGRAM
FILES\LUTRON232\data\datafile.m
Create
Exit

Fig-3

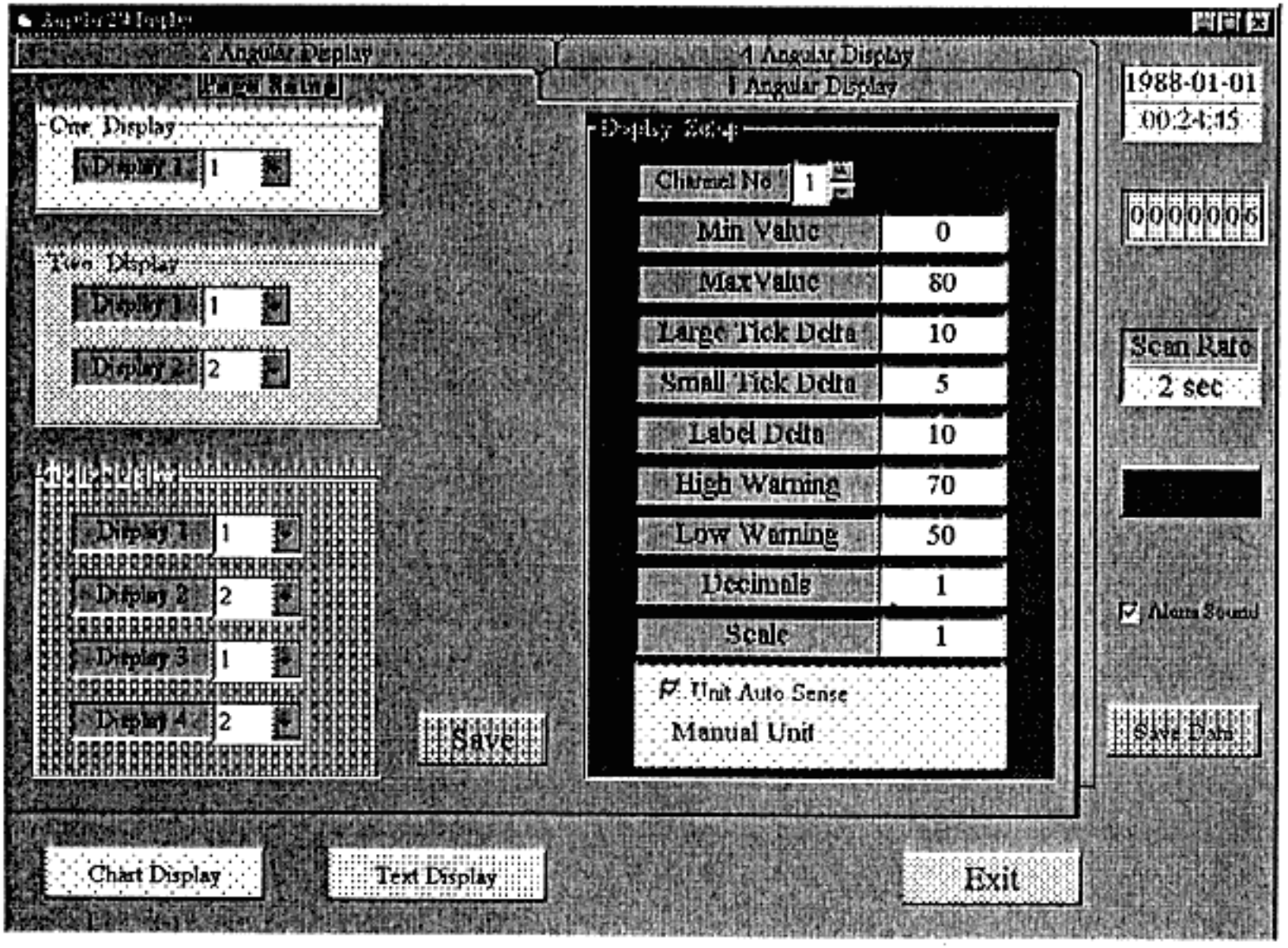
4 Angular Display
1 Angular Display
1988-01-01
00:24:15
0000006
One Display
Display 1
1
Two Display
Display 1
1
Display 2
2
Four Display
Display 1
1
Display 2
2
Display 3
1
Display 4
2
Save
Channel No
1
Min Value
0
Max Value
80
Large Tick Delta
10
Small Tick Delta
5
Label Delta
10
High Warning
70
Low Warning
50
Decimals
1
Scale
1
Unit Auto Sense
Manual Unit
Scan Rate
2 sec
Alarm Sound
Save Data
Chart Display
Text Display
Exit

Fig-4

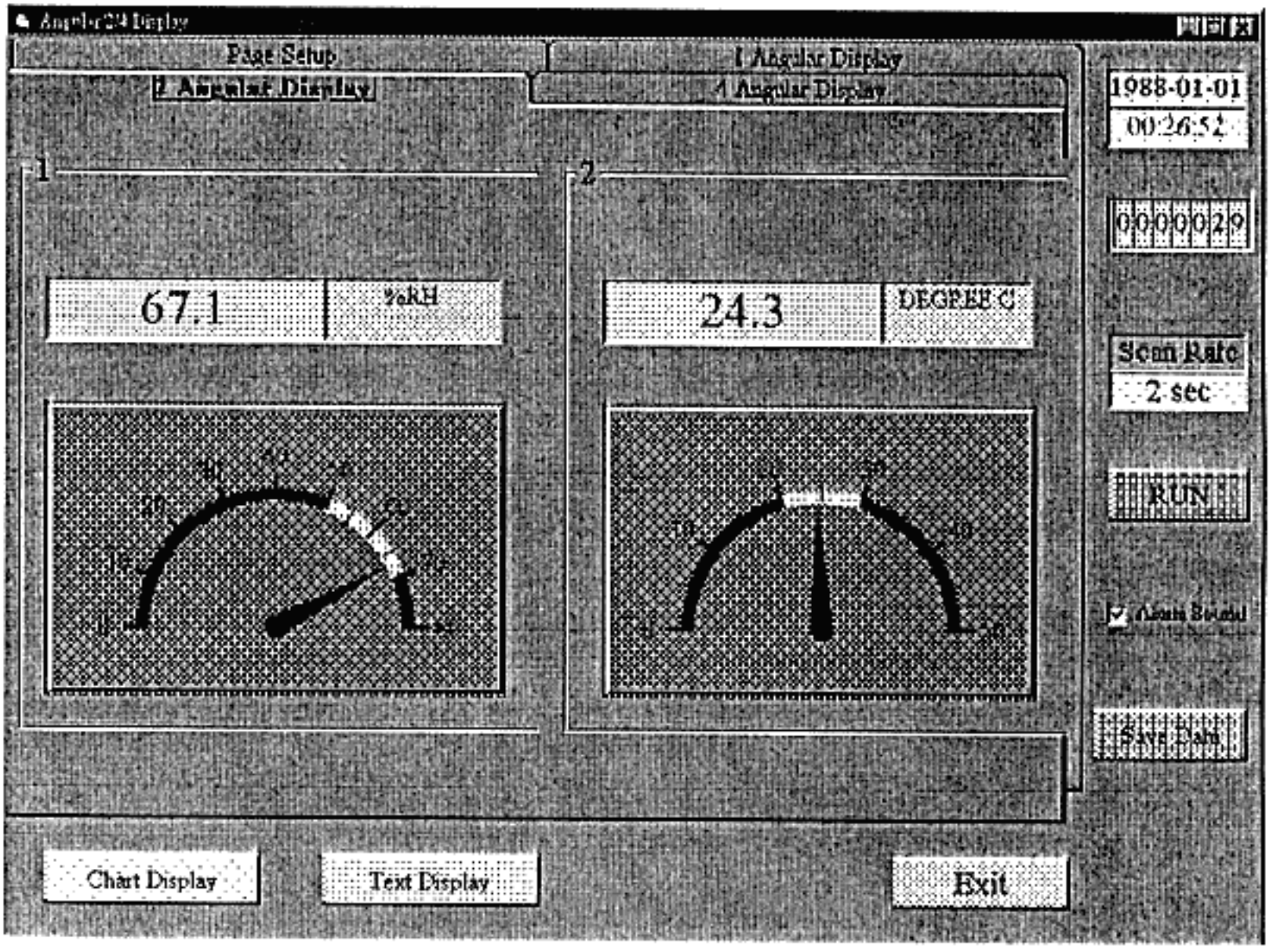
Page Setup
2 Angular Display
1 Angular Display
1988-01-01
00:26:52
1
67.1
%RH
2
24.3
DEGREE C
0000029
Scan Rate
2 sec
RUN
Save Data
Chart Display
Text Display
Exit

Fig-5

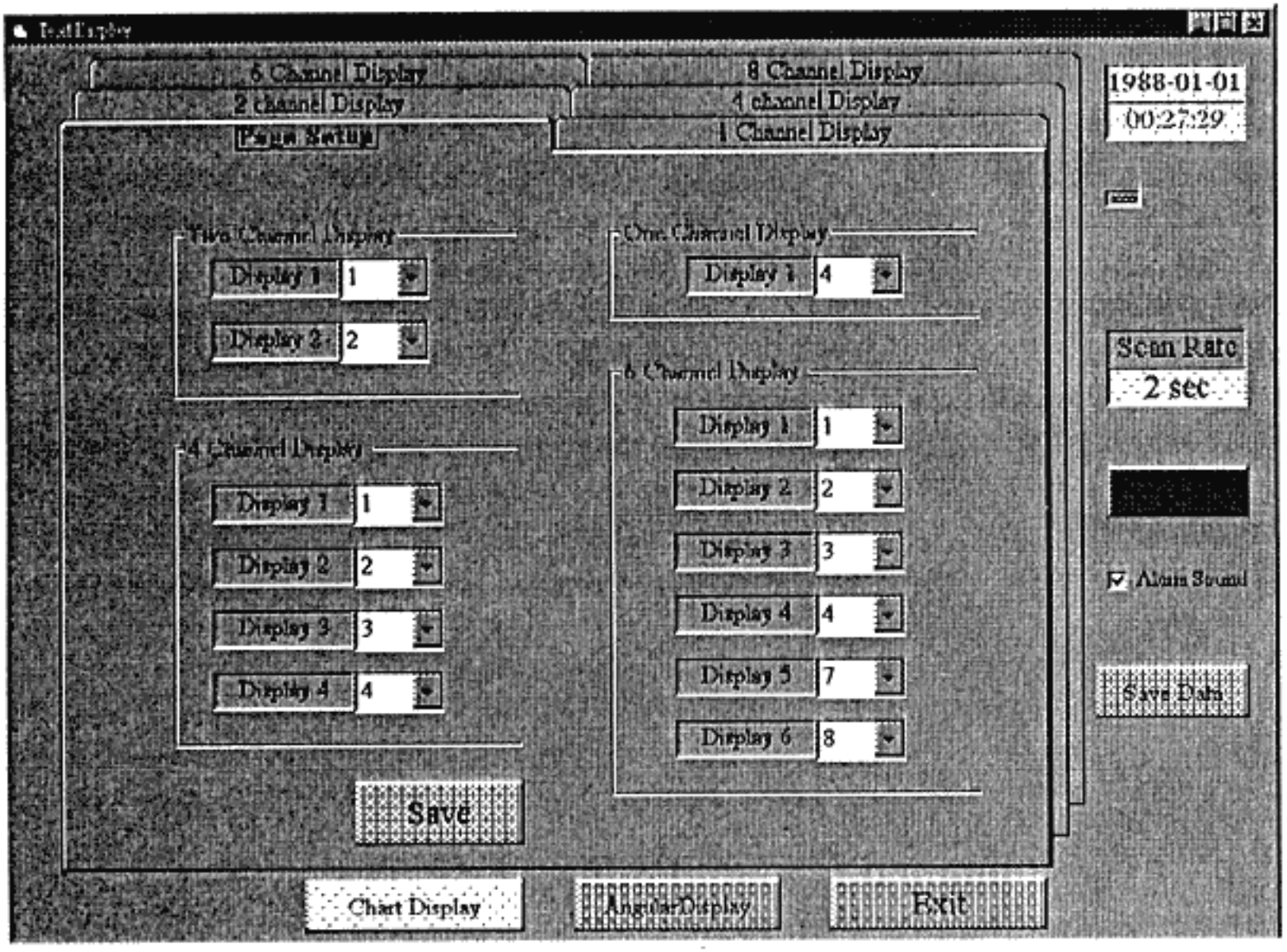
6 Channel Display
8 Channel Display
2 channel Display
4 channel Display
Page Setup
1 Channel Display
1988-01-01
00:27:29
Two Channel Display
Display 1
1
Display 2
2
One Channel Display
Display 1
4
Scan Rate
2 sec
6 Channel Display
Display 1
1
Display 2
2
Display 3
3
Display 4
4
Display 5
7
Display 6
8
4 Channel Display
Display 1
1
Display 2
2
Display 3
3
Display 4
4
Alarm Sound
Save Data
Save
Chart Display
AngularDisplay
Exit

Fig-6

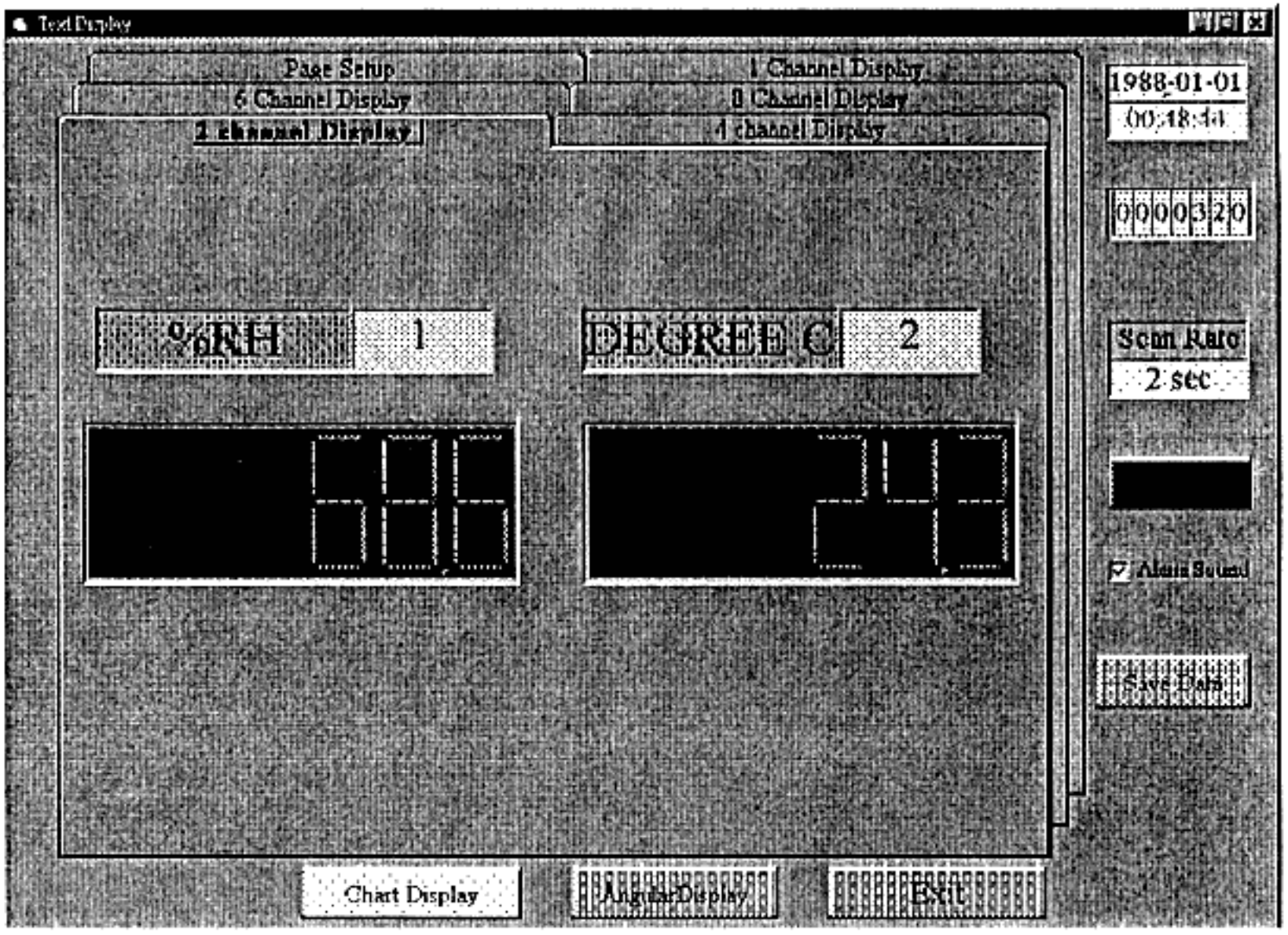
Text Display
Page Setup
1 Channel Display
6 Channel Display
8 Channel Display
2 channel Display
4 channel Display
1988-01-01
00:18:40
0000320
%RH
1
DEGREE C
2
Scan Rate
2 sec
Alarm Sound
Save Data
Chart Display
Angular Display
Exit

Fig-7

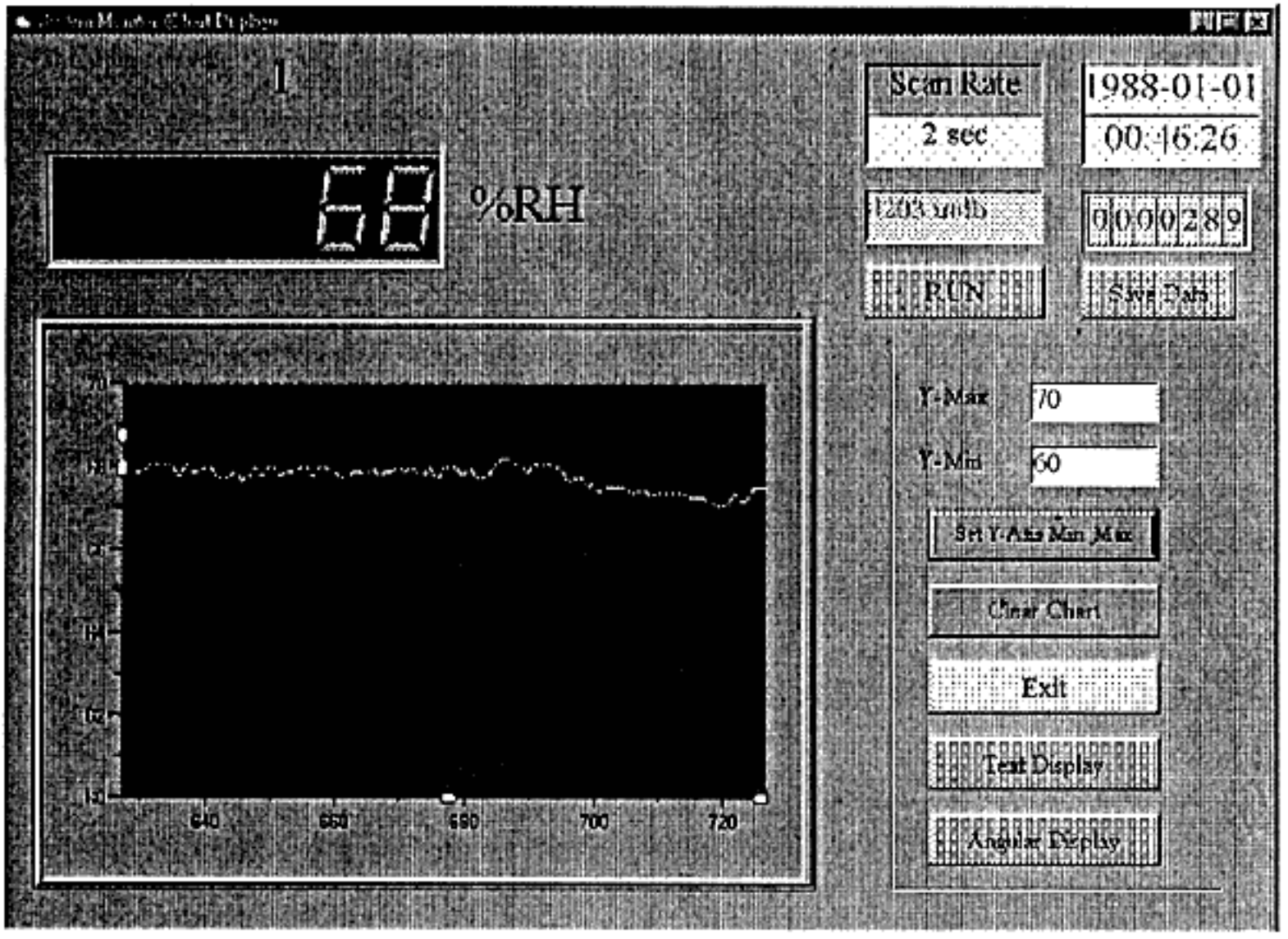
1
68
%RH
Scan Rate
2 sec
1988-01-01
00:46:26
RUN
Save Data
Y-Max
70
Y-Min
60
Set Y-Axis Min Max
Clear Chart
Exit
Text Display
Angular Display
640
660
680
700
720

Fig-8

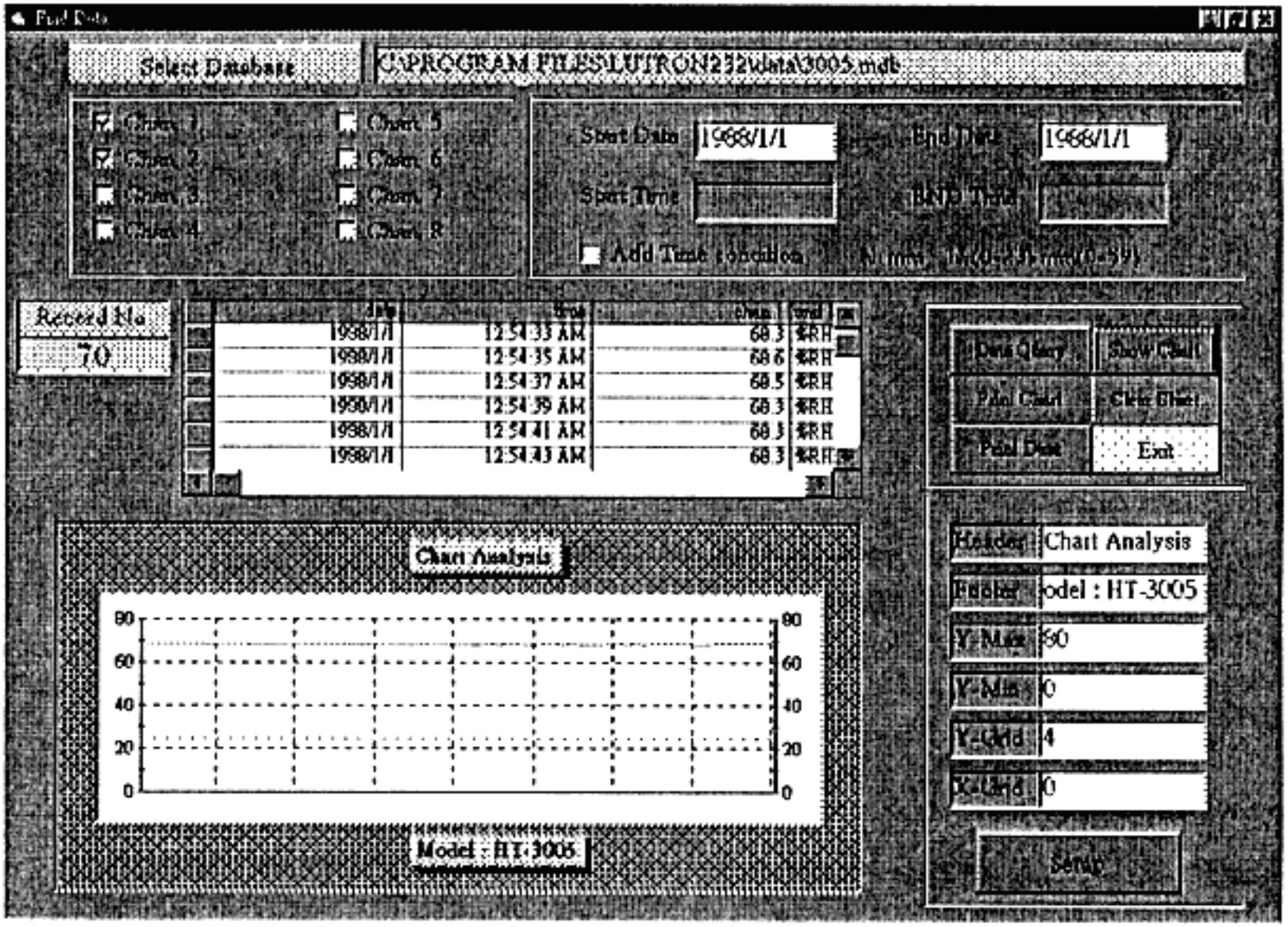
Select Database
C:\PROGRAM FILES\LUTRON232\data\3005.mdb
Start Date
1998/1/1
End Date
1998/1/1
Start Time
End Time
Add Time Condition
Record No
70
Data Query
Show Chart
Print Chart
Clear Chart
Print Data
Exit
Chart Analysis
Header
Chart Analysis
Footer
odel : HT-3005
Y-Max
90
Y-Min
0
Y-Grid
4
X-Grid
0
Setup
Model : HT-3005

Fig-9