Databack

User's Guide V4

Backup/Restore
Software for
Retail Scales

C13954200A
3/96

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METTLER TOLEDO does not accept responsibility for any computer hardware, installation of hardware, or

data files produced by the system. Consult your computer supplier for information and services relating to the computer hardware and operating system software. Refer to the **Specifications Section 2** of this guide for minimum computer system hardware/software requirements.

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1 Introduction

The METTLER TOLEDO ***Databack*** Program is software product designed to operate on a personal computer using the PC-DOS™ or MS-DOS™ operating system, that will backup and restore data to certain models of METTLER TOLEDO programmable scales. The ***Databack*** program uses the scale host interface port for high speed communications.

Certain scale models can be connected directly to the PC's RS232 serial port, while other models will require the use of the ***Databack*** an RS232/RS422 converter. The Table 1 shows whether a RS232/RS422 converter is required with the following scales. The ***Databack*** program will communicate to the following scale models:

Model	Databack Converter Required?
350	Yes/+ Adapter 14029300A
8301C	Yes/+ Adapter A12384500A
8305M	No
8360	No
8408E (W/COMM Kit)	Yes
8422M	No
8423M	No
8423SA (8423-2200)	No
8425	Yes
8427SA (Standalone)	Yes
8450SA (Standalone)	No
8450 (V2+)	No
355 Printer	No
8460	No

2 Specifications

Hardware Requirements

Minimum hardware requirements to operate the ***Databack*** program are as follows:

IBM™ compatible personal computer.

640k Ram Memory minimum.

PC-DOS™ release 2.0 or higher, or MS-DOS™ release 2.1 or higher.

One 720k/1.44m floppy disk drive. Hard disk drive and 1.44m HD floppy drive recommended.

One RS232 Serial Port with a 9-Pin or 25-Pin connector.

Mettler Toledo ***Databack*** RS232/RS422 Converter or equivalent required for RS422 type scale I/F (refer to Table 1-1).

Interconnect cables to scales and converter.

The ***Databack*** program is designed to operate on a single 720k 3.5" floppy disk drive (FDD), which is the type found on laptop PC's. If the PC has a 1.44 Meg floppy drive, or a hard disk drive (HDD), the performance of the program will be improved by eliminating disk swapping. If the PC has a HDD (Hard Disk Drive), the ***Databack*** program can be installed on the HDD. Databack can be run on a network drive environment such as Novell.

Data Files

The ***Databack*** program uses a binary file type for disk storage. The data file names are selected by the user but must conform to standard DOS conventions. File names include a user selectable 1-8 character prefix, and a fixed default extension of .000, which is used by the program to track files which may not fit on one diskette. The file extension cannot be changed. The file name prefix must not contain the following reserved characters: `* / \ . , : ; " ' | < >` A default drive or directory for data files can be configured in DATABACK.

Multi-Tasking & TSR's

Databack should not be run in a multitasking environment, such as Windows™. Errors relating to the serial port can occur when ***Databack*** is run in these type environments. Certain TSR's (Terminate and Stay Resident or Ram Resident programs) may also cause problems when loaded before running ***Databack***.

Factory Numbers

Product ID	Description
0918-0027	DataBack Software and Manual (3.5" DD Diskette)
0918-0028	Level Converter, RS232/RS422. (Includes 12 VDC Power Supply and 9 pin to 25 pin adapter.)
0900-0294	Main Cable. (Connects the 0918-0028 Level Converter to the 8427SA or 8408E.)
0900-0295	Adapter Cable for 350/8425. (Adapts the 0900-0294 Main Cable for use with models 350/8425.)
0900-0285	Cable, PC DB9 to 8422M, 8423M, 8305M, 8450, 8450SA, 355, and 8460 (Connects PC 9-Pin serial port to scales.)
0900-0286	Cable, PC DB25 to 8422M, 8423M, 8305M, 8460, 8450, 8450SA, and 355 (Connects PC 25-Pin serial port to scales.)
0901-0260	Adapter for 8423SA. (Adapts Cables 0900-0285 and 0900-0286 for use with the 8423-2200 Stand-alone scale.)
0900-0299	Adapter for 8301C. (Adapts Cable 0900-0294 to 8301C.)

3 Installation

Using *Databack* on a Single Floppy Drive

To run ***Databack*** on a floppy drive, ***first make a working copy of the program diskette***. Do not use your original diskette as a working copy. After making a copy of your program diskette, store the original in a safe place as a backup. To make a working copy of the program diskette, you will need a blank diskette and the original program diskette to perform the following procedure. Insert your original 3.5" program diskette in your floppy drive. For this example, we will use drive A. If it is B, change the commands accordingly.

TYPE: DISKCOPY A: A:
PRESS: [ENTER]
Insert your source diskette in drive A:
Press any key...

The diskette will be read until the PC runs out of free RAM memory. You will then be prompted to "***Insert target diskette in drive A:***, then "***Press any key...***". Insert your blank diskette that will be used as the target diskette, then press a key on the keyboard. If your blank diskette is not formatted, you will see a message that DOS is formatting while copying. You may will be prompted to switch diskettes at least one more time with DOS versions below 6.0 before the copy process is complete.

Using *Databack* on Two Floppy Drives

If your PC is equipped with two floppy drives, you can use drive A as the program diskette drive, and drive B as the data drive. Follow the procedure in the previous section to make a working copy of the program. You can format a diskette for drive B to be used as the data drive where the scale files will be stored.

Using *Databack* on a Hard Disk Drive

To copy the program to your HDD, you must first create a new subdirectory. For the following example, we will use the subdirectory name ***DBACK***. Your subdirectory can be any name you choose, but must use standard DOS conventions. The subdirectory name can be up to eight characters long, and must not use the following reserved characters: * / \ . , : ; " ' | < > To create a new subdirectory, type in the following:

TYPE: C:
PRESS: [ENTER]
TYPE: CD
PRESS: [ENTER]
TYPE: MD \DBACK

You have just created a new subdirectory called DBACK off the root directory of drive C. Next, make this subdirectory your default directory by typing:

TYPE: CD DBACK
PRESS: [ENTER]

Next, insert the ***Databack*** program diskette in your floppy drive (we will assume your floppy drive is A). Next type in the following command to copy the files into your subdirectory:

TYPE: COPY A:*.*
PRESS: [ENTER]

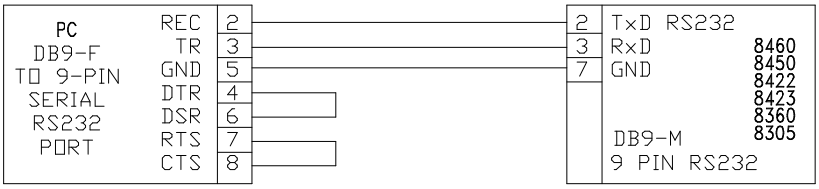
You will see a list of files as they are copied. When the copy process is completed, store your original program in a safe location for backup purposes.

4 Cables

Cables for 8422, 8423, 8305, 8360, 8450, 8450SA, 355 and 8460

The PC's RS232 Serial Port can be connected directly to the model 8422M, 8423M, 8305M, 8360, 8450, 355, 8450SA or 8460 scales as shown in Figure 4.1. Factory cables are available as shown below.

0900-0285 (*13816200A) Cable, PC DB9 to 8450 10 ft/3 m
0900-0297 (*14102600A) Cable, PC DB9 to 8450 25 ft/7.62 m



0900-0286 (*13816300A) Cable, PC DB25 to 8450 10 ft/3 m
0900-0298 (*14102800A) Cable, PC DB25 to 8450 25 ft/7.62 m

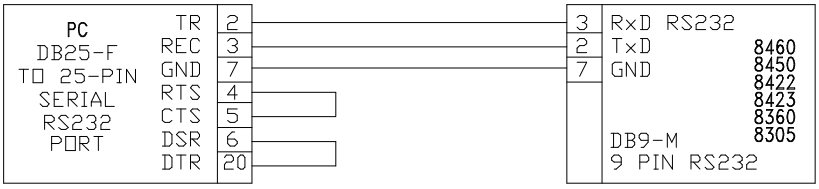


Figure 4.1 PC RS232 Cables

8423-2200 Cables

When connecting the model 8423-2200 Stand Alone scale to a PC, the cables listed in section 4.1 can be used with the addition of the P/N 13392900A Adapter, or cables can be made to connect directly to the scale, as shown in Figure 4.2.

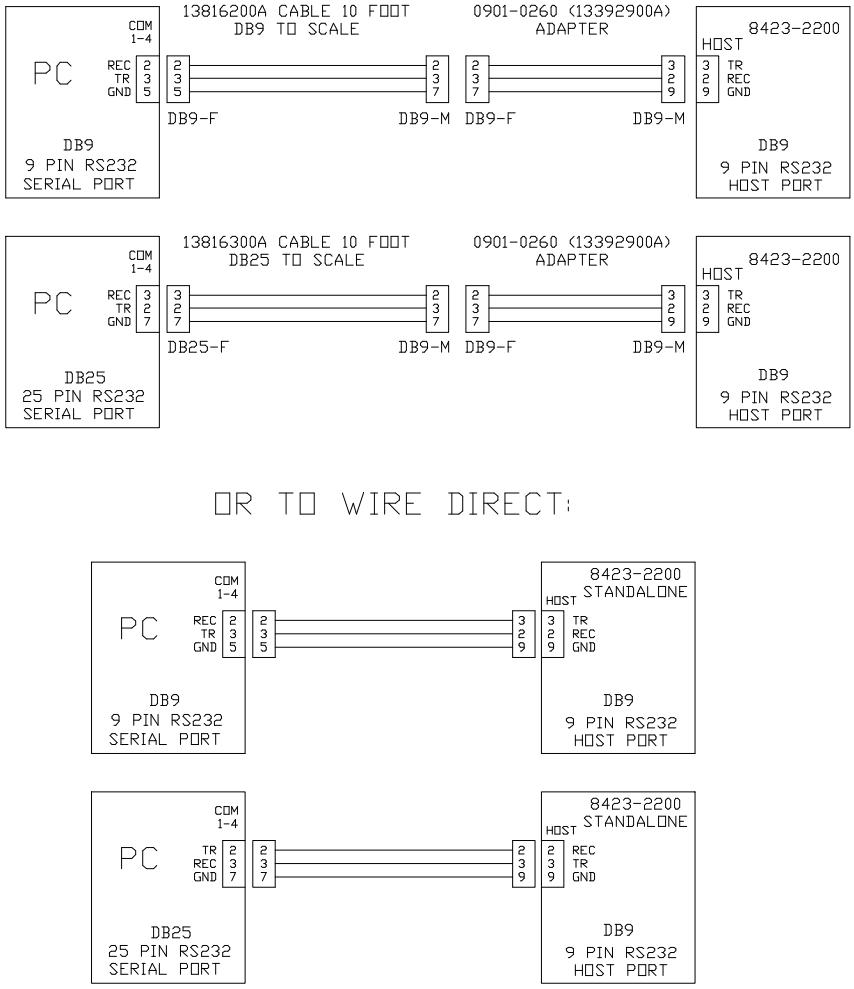


Figure 4.2 8423-2200 to PC Cables

RS422 Scales on Host Network

Databack can be used to backup scales on a host RS422 network such as Intelli-Net, or using the Intelli-Net Converter. Figure 4.3 shows the wiring for these type of networks.

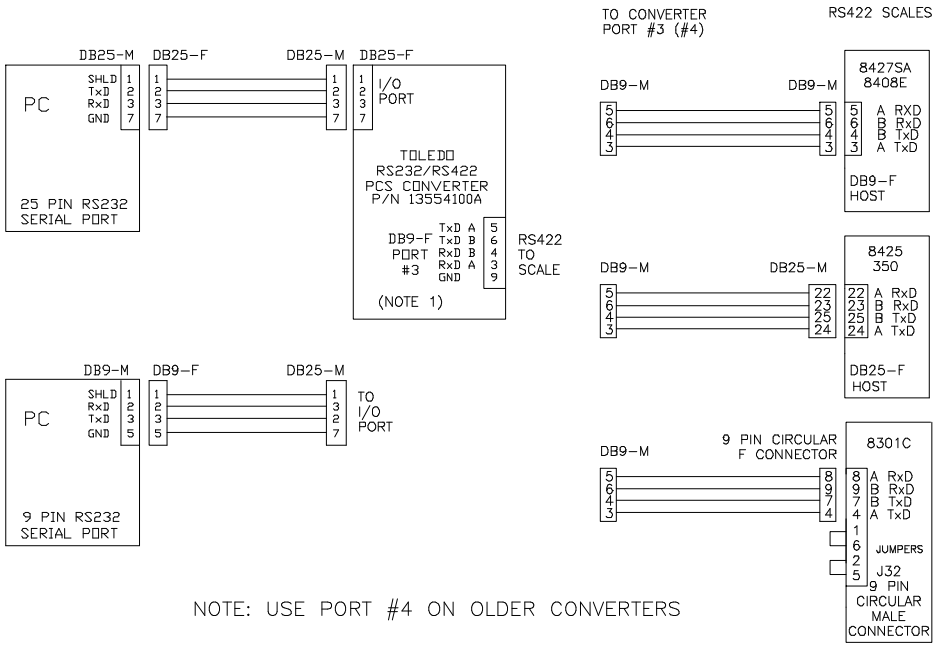


Figure 4.3 Host RS422 Network

Databack RS232 to RS422 Converter

The optional ***Databack*** Converter is a portable RS232/RS422 Converter (P/N 14029400A) that allows communication with the RS422 scale types listed on page 1 of this manual. The ***Databack*** Converter is small enough to be stored in a laptop PC case. To use the converter on a PC's DB-9 Serial Port Connector, use the P/N 14929500A DB-9 to DB25 Adapter. To use the PC's DB-25 serial port, connect the converter end marked RS232 directly to the PC's serial port. Connect the remainder of the cables required, then connect the converter's wall transformer to the converter and to AC power. The ***Databack*** Converter requires a main cable (P/N 14029200A) that is used to connect from the converter to a model 8427SA or 8408E. To communicate with an 8301C, use the Scale Adapter Cable P/N A12384500A. To communicate with the 8425/350, use Scale Adapter Cable P/N 14029300A. The wiring diagram in Figure 4.4 shows all of the cables and the ***Databack*** Converter.

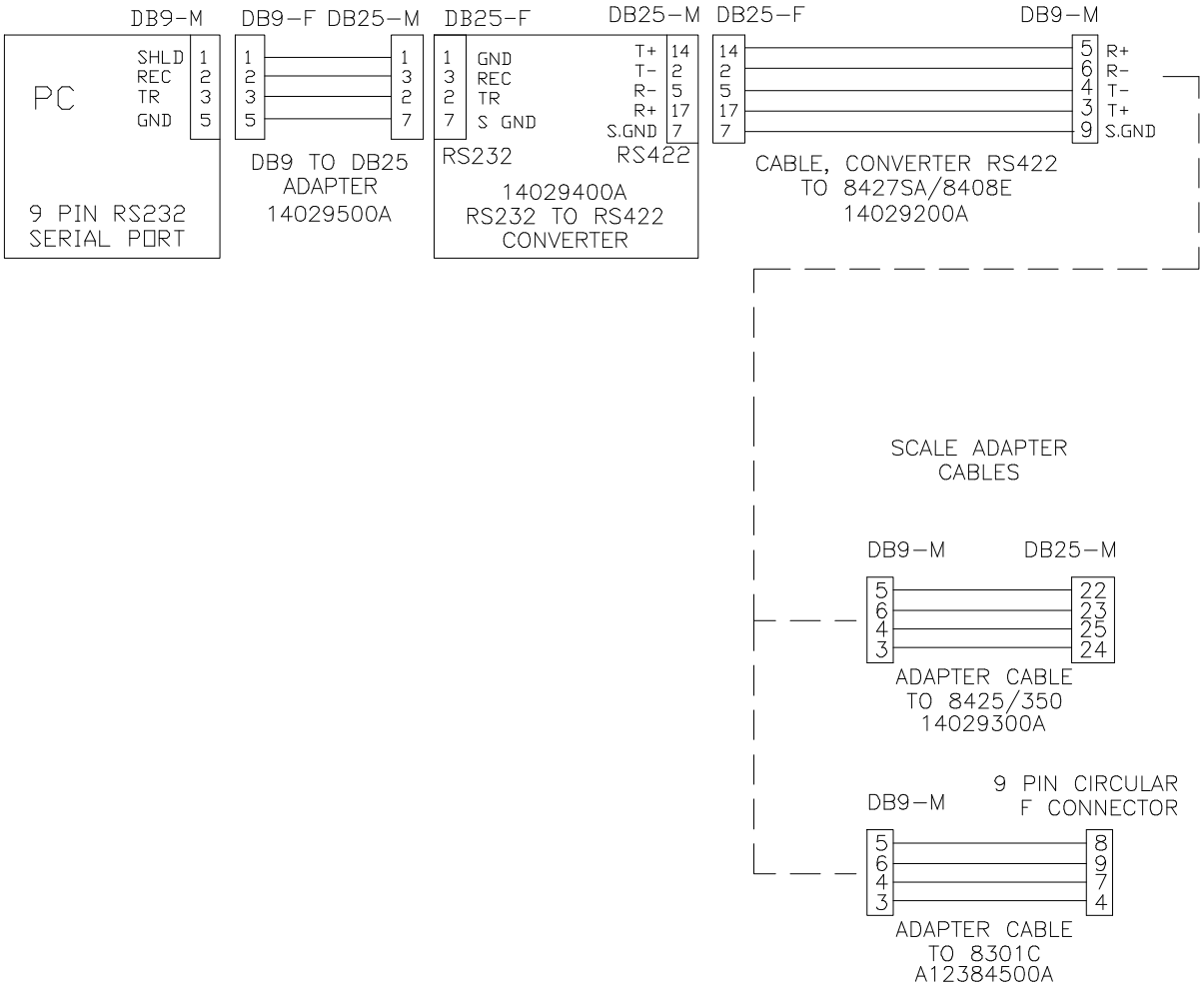


Figure 4.4 *Databack* Converter Interconnect Diagram

5 Using *Databack*

Starting *Databack* from Floppy Disk

To start the ***Databack*** program from a floppy diskette, first make sure you have a blank formatted diskette that will be used to store the data from the scales. Next, insert your working copy of the program in the floppy drive (Make your A drive your default by typing **A:** Enter). Type in **DATABACK** and press the enter key to start the program. If you have two floppy drives, you can use drive A for the program drive, and drive B for the data drive. If you have a single floppy drive, you will have to switch between the program and data diskettes.

To start ***Databack*** from a hard disk drive (HDD), first make your DATABACK subdirectory the default directory. For this example, we will assume your subdirectory name is DBACK and is located on drive C. Type in the following:

TYPE: C:
PRESS: [ENTER]
TYPE: CD \DBACK
PRESS: [ENTER]
TYPE: DATABACK
PRESS: [ENTER]

All selections in ***Databack*** use a point and shoot type of menu selection. Selections can be made by using the up/down cursor keys to first highlight the menu item then pressing the ENTER KEY, or by pressing the first letter of the menu selection to highlight the item, then pressing ENTER. As selections are made, various windows will open. To cancel a function, or to return to the previous menu, press the ESC (escape) key. Help information on the current window is available by pressing the F1 function key. The main menu is shown in Figure 5.1. The top of the screen will show the current settings and status when menu functions are selected.

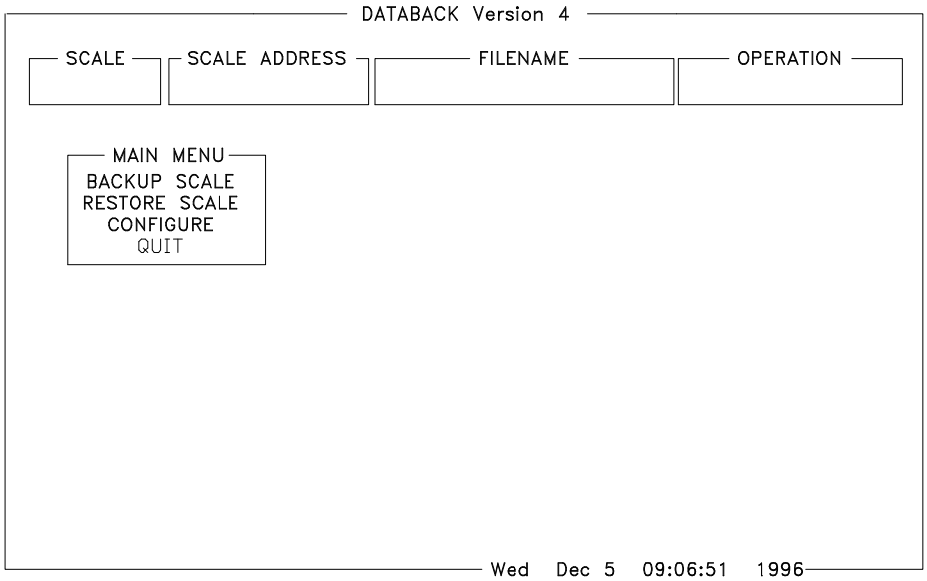


Figure 5.1 *Databack* Main Menu

Configuring
Databack

When initially starting ***Databack***, factory default settings will be read into memory. You must configure ***Databack*** for your application. Your configuration will be written to disk and will be recalled whenever you start up the program. To configure ***Databack***, highlight **CONFIGURE** and press the ***ENTER*** key. The four **CONFIGURE** menu selections are as follows:

SCALES SETUP

This selection is used to configure the scale ID number and default baud rate. This number must match the host ID number entered into the scale's configuration. The baud rate must also match the selected baud rate in the scale. The selections for 8427sa (when the 0954-0014 Standalone Kit is installed), and 8422m (8422/8423/8305 master) include a Department Number that can be used to selective backup or restore only the configured department. If no specific department is required, type in ALL for the department.

DRIVE AND PATH

This selection is used to set the default drive and path for the scale data files. If you enter the name of a new subdirectory under the ***Databack*** subdirectory, ***Databack*** will create the new subdirectory for you. An example path would be as follows:

C:\DBACK or **C:\DBACK\FILES** or **B:**

COM PORTS

This selection is used to identify which of the PC's RS232 serial ports you will use to communicate with the scales. COM Ports 1 through 4 can be used. Each COM Port uses an IRQ (Interrupt Request) which the PC uses to identify the COM Port. If you have only one serial port, you would select COM 1/IRQ 4 in most cases.

COLORS

Use this selection to change screen foreground and background colors if you are using a color monitor. If you have a monochrome or LCD display, reverse video is available.

Backup Scale

The BACKUP function will upload data from a scale and write the data to the PC's floppy disk or HDD. Certain scale types will only have a menu selection for PLU data (ex: 8408, 8301C, 8425, 8423SA), while other scale types will have extra menu selections, such as: All, Extra Text, etc. To backup a scale, select BACKUP SCALE, then select the scale type. Next, select the appropriate backup type.

You will next be asked for the File Specification. A DOS file contains three parts; a Prefix, a Period Separator, and a Suffix. (Example: 8422_PLU.000) A file specification is the name of the file you wish to use to store the data and can include the use of wildcard characters. Wildcard characters are the asterisk *, and the question mark ?. The asterisk is used to replace one or more characters in a file name. The question mark is used to replace a single character in a specific position in a file name. For example, you cannot remember the names of previously backed-up files and you wish to list all of them. To do this, just use the BACKSPACE key to erase the default file name, then type in *.* as the file spec. This means list all files. When backing up files from a scale using 6-digit PLU numbers, the file name should include a 6D to indicate the file is using 6-digit PLU numbers. (EX: 8427_6D.000) Files from 6-digit PLU records can not be restored to a scale using a 4-digit PLU number.

You can narrow the list down by using combinations of characters and wild cards. If you want to list all previously backed-up 8422 files, you could type in 8422*.* for the file spec to list all files that contain 8422 for the first four characters. The * can also be used at the beginning of the file spec. Typing *ALL.* will list all files that contain the characters ALL at the end of the file prefix name. The ? can be used to further narrow the search to a single character in a specific position. For

example, typing 842?_PLU.* will limit the search to files starting with 842 but with any character in the next position. If you wish to save your files on a different drive or subdirectory, type in the complete path plus the file spec. Different files or groups of files can be separated into subdirectories to avoid confusion.

After typing in a file spec, you will see a file name or a list of files. Select a file by highlighting the file name, then press **ENTER**. The Backup screen will then display a cable part number(s) and may give other instructions for the scale. Press any key to continue and start the backup. The screen will display ***WAKEUP*** **---->** as ***Databack*** attempts to communicate with the scale. If the scale is On-Line, you will see **<----** ***ACKNOWLEDGE*** which indicates the scale responded to the wakeup. When the backup starts, you will see record numbers scroll on the screen until the backup is completed.

Restore Scale

The Restore Scale function is similar to the Backup Scale procedure. Select RESTORE SCALE from the main menu, then select the scale type. Next, select the type of restore if there are more than one selections listed. When you are asked for the file spec, you can type in the exact file name, or use wildcard characters. Typing *.* will tell ***Databack*** to list all of the files in the default subdirectory. If your files reside on a different drive or subdirectory, type in the full path plus the file spec.

When the files are listed, highlight the desired file and press ENTER. Press any key to continue at the information screen. When the restore is complete, you will be returned to the previous menu.

File Manipulation

Databack version 4.0 is being sent with three programs to aid the user in file manipulation.

1) Huff_dec.com

2) Huff_cpr.com

3) Splitall.exe

Huff_dec and Huff_cpr are decompression and compression programs similar to pkzip and pkunzip. Databack uses Huff_cpr to compress the file stored on the disk during a BACKUP. Databack uses Huff_dec to decompress a file to be sent to the scale during a RESTORE. A user can use Huff_dec on an existing Databack file to decompress it into an ASCII readable file.

Syntax:

Huff_dec<Databack file name *.000><Destination file name*.txt>

Huff_cpr<File name *.txt> <Databack file name *.000>

The Splitall.exe program is used to separate a file backed up under the **ALL** command in Databack. This program separates the **ALL** file into separate numbered files. The numbers correspond to each individual file listed under the **ALL** selection in Databack for the scale type it was received from.

Syntax:

Splitall <Databack file name (*.000)>

6 Scale Setup

8422, 8423, 8305 Master

Files that can be backed-up and restored on this type of scale include All, PLU's, and Extra Text.

The following configuration should be programmed into the 8422/8423/8305 master scale when interfacing to ***Databack***.

EDIT CONFIGURATION SETUP

To configure the master, you must use the optional programming keyboard. Press ***F10***, then ***2***. When ***Edit Configuration*** displays, press ***Y*** (for yes). If a password is required, enter 8305. Press ***Enter*** to advance through the softswitches until the following prompts display.

HOST ID NO.

The Host ID number must match the number used for the scale address number in ***Databack***. Do not confuse this number with the Master ID, or the satellite scale ID numbers. This number is used by ***Databack*** to identify the scales connected on the network.

HOST BAUD RATE XXXX

The baud rate must match the baud rate setup in ***Databack***.

HOST PARITY? EVEN

This is the default setting for use with ***Databack***.

HOST BUSY HI? NO

This is the default setting for use with ***Databack***.

The data cable connects from the PC serial port to the master scale host port. The 8422/8423/8305 master scales use standard RS232 for host communication. A single master scale can be connected directly to the PC serial port. Typical cable connections for a 25-pin and 9-pin serial port connector to a master scale are shown in Figure 4.1 in section 4. The master scales can be backed-up without affecting the satellite communications.

8423SA Scale

The only files that can be backed-up or restored to the 8423 Standalone are the PLU files. The 8423SA scale configuration must be as shown below when interfacing to ***Databack***:

Note: New scales should be initialized before downloading files into them. To initialize, press /81, then Yes. When [Are You Sure?] displays, press Yes. Enter 1379 for the initialization password.

To set the following softswitches required for ***Databack***, slide the scale setup switch (located under the top plastic cover in an access hole) to ON, then set the following:

HOST ID NO.

The one or two digit Host ID number must match the scale address number programmed in ***Databack***.

HOST BAUD RATE XXXX

The baud rate must match the baud rate setup in ***Databack***. Valid selections are 1200, 2400, 4800, and 9600 baud.

HOST PARITY? EVEN

This is the default setting for use with ***Databack***.

HOST BUSY HI? NO

This is the default setting for use with ***Databack***.

The data cable will connect the PC serial port to the Host/Tape port on the rear of the 8423SA. The wiring to the 8423-2200 is not the same as an 8423 master scale. Cables designed for master scales can be used with the addition of a 0901-0260 Adapter. The 8423SA scales use standard RS232, for host communication. Refer to Figure 4.2 in section 4 for wiring diagrams.

NOTE: CABLES USED FOR THE MASTER TYPE SCALES CAN BE USED WITH THE 8423-2200 WITH THE ADDITION OF ADAPTER 0901-0260 (P/N 13392900A) WHICH CONNECTS BETWEEN THE MASTER DATA CABLE AND THE 8423SA. THIS ADAPTER IS AVAILABLE FROM METTLER TOLEDO.

8301C Scale

The only files that can be backed-up or restored to the 8301C are the PLU files. The 8301C Logic PCB switches must be set as follows when using the ***Databack*** program.

LOGIC PCB

SW3-1 = ON (Host interface enable)

COMMUNICATION/MEMORY PCB

SW1-1 ON=9600 BAUD, OFF=1200 BAUD

The data cable will connect to J32 on the 8301C rear panel. The 8301C will require the use of an RS232/RS485 converter. Refer to Figure 4.4 in Section 4 for wiring instructions using the ***Databack*** Converter.

Use the following procedure to enter the Host ID number:

Turn the "Set Date And Operator Number" rotary switch to the TEST position.

Using the 8301 key, set the Price Rite switch to the FILE PRINT OUT position. The display should show 00.

Press the following sequence of keys: 7 0 / (seven, digit zero, slash). The display should now show two dashes: _ _ .

Next enter the Host ID number then press the ENTER key. Use only even numbers for the 8301C ID number. The display will blank after entering the number.

To verify your entry, press the RESET key, then enter: 7 2 / The Host ID number should then display.

Return the Operator and Price Rite switches back to the RUN positions.

The scale should now be ready to operate with ***Databack***.

8408E Scale

Only PLU files can be backed-up or restored to the 8408E. The data files backed-up with ***Databack*** are not compatible with any other scale type. The 8408E must have a communication kit installed to work with ***Databack***. The following setup must be performed when connecting the model 8408E to the ***Databack*** program. Set the following program switches and jumpers on the Communication/Memory PCB.

SWITCH SW1	SWITCH SETTING
1-1	ON
1-2	OFF
1-3	OFF
1-4	OFF
1-5	OFF
1-6	OFF
1-7	BAUD RATE SELECT
1-8	BAUD RATE SELECT

	SW1-7	SW1-8
9600 BAUD	OFF	OFF
4800 BAUD	OFF	ON
2400 BAUD	ON	OFF
1200 BAUD	ON	ON

JUMPER	
W1	2 & 3 SHORTED
W2	OPEN
W3	SHORTED
W4	SHORTED
W5	2 & 3 SHORTED

ENTER HOST ID NUMBER

Place the keyswitch to the LOAD position. Press: 1 7 ENTER

The display will show Add. Key in the Host ID and press the ENTER key.

Place the keyswitch back to the RUN position.

The 8408E requires the use of a converter to communicate with a PC. Refer to Section 4 for wiring instructions to the Databack Converter.

8425 Scale

Only PLU files can be backed-up or restored to the 8425. The data files backed-up with ***Databack*** are not compatible with any other scale type. The following setup must be performed when connecting the model 8425 to the ***Databack*** program.

Set the scale baud rate program switches on the Main Logic PCB.

1200 BAUD	9600 BAUD
SW3-1 ON	SW3-1 OFF
SW3-2 OFF	SW3-2 ON

Enter the Host ID Number. With the keyswitch in the LOAD position, enter Function Code 18 (1 8 ENTER). Next, enter the one or two digit Host ID number; then, press the ENTER key.

Set the Softswitches. Set the softswitches as needed for the application (Function 11), with the exception of ***SSW #6 which must be ON***. Refer to the 8425 Technical Manual for softswitch details.

The 8425 requires the use of a converter to connect to the PC. Refer to Section 4 for wiring instructions to a Toledo Converter. Note: The cable for the model 8425 and model 350 printer is the same. *NOTE: WHEN BACKING UP A FILE FROM AN 8425 WITH 6-DIGIT SOFTWARE INSTALLED, YOU CANNOT RESTORE TO A SCALE USING STANDARD 4-DIGIT SOFTWARE. BACKUPS FROM A 6-DIGIT 8425 SHOULD ALSO REFLECT THIS IN THE FILE NAME. EXAMPLE: 8425_6D.000 FOR A 6-DIGIT FILE AND 8425_4D.000 FOR A 4-DIGIT FILE.*

350 Printer

Only PLU files (with Extra Text as part of the PLU) can be backed-up or restored to the 350. The data files backed-up with ***Databack*** are not compatible with any other scale type. The following softswitches must be set to communicate with the ***Databack*** program. To enter the setup mode, turn the keyswitch to the LOAD position, then use the appropriate Function Code to enter the data.

SSW 13 HOST COMPUTER BAUD RATE

Enter Function Code 63 to enter the Softswitch menu. Press ENTER to advance to SW13 Host BR (for host communication baud rate). Press the / (slash) key to toggle between 300 and 9600 baud. When the correct baud rate is displayed, press ENTER, then CLEAR to exit the menu. The baud rate must match the baud rate selected in the ***Databack*** scale configuration.

HOST ID NUMBER

Enter Function Code 62 to enter the Address number. This number must match the scale address number in the DATABACK scale configuration. This number is used by DATABACK to identify a particular 350 printer.

The 350 printer requires the use of an RS232/RS422 converter. Refer to Figure 4.4 in Section 4 for wiring instructions. Note: The model 350 and model 8425 use the same host interface cable. When setting up a new printer, refer to Technical Manual TM000350R01, Section 5, for setup instructions. These instructions include turning the battery switch to ON, entering time/date, and initializing the memory.

8427SA Scale

Databack can backup or restore the PLU files and Extra Text Files on the 8427 Standalone. The following setup must be performed for the 8427SA to communicate with the ***Databack*** program.

EDIT CONFIGURATION

Press /681 on the scale keyboard for Edit Configuration. The following information must be configured:

ENTER HOST ID: Enter a two digit number to correspond to the scale ID programmed in the ***Databack*** program.

HOST BAUD RATE: Select baud rate to match baud rate selected in the ***Databack*** program.

HOST PARITY: Use the default of EVEN.

SET SOFTSWITCHES

Use the scale setup switch under the platter to set the following:

4 DIGIT HOST?

If you are using a 4 digit PLU number, set this prompt to YES. If you are using a 6 digit PLU number, answer NO. When backing up units set for 6-digit host PLU's, remember to name the files according to PLU length (Ex: 8427_6D.000, 8427_4D.000). Files backed up to a 6-digit format cannot be restored to scales setup for 4-digit format.

DEPARTMENT NUMBER

(A Revision Software or higher.) The default department number is 0 (zero). Set the department number to 0-9 if compatibility with a master scale is desired. This number must also match the department number in ***Databack*** SCALE CONFIGURATION for the 8427SA scale.

CABLES

The 8427SA requires the use of an RS232/RS422 converter. The cable used for the 8427SA is the same wiring as the 8408E. Refer to Figure 4.4 in Section 4 for wiring instructions.

8460 Satellite (Version 3)

The following can be backed-up or restored using ***Databack***:

ALL

This category includes label/cassette formats, presets, and miscellaneous.

LABELS, CASSETTES

Includes only the custom label formats and cassette assignments.

SCALE PRESETS

Includes only the user defined preset keys.

MISCELLANEOUS

Includes Grade Table, Action Code Table, PLU Settings, TNET Protocol, Department ID and records, Marquee messages, Accumulator Setup, and other Softswitch Settings.

In the Version 3 Satellite 8460, the Scale ID is used to communicate with ***Databack***. To check the Scale ID, touch the ***SETUP*** key, then the ***UNIT*** key. If a password has been programmed, enter the password, or if it is not known, press the ***CAL*** Pushbutton under the scale platter to bypass the password. Next touch the ***CALIBRATE/INSTALL UNIT*** key, as shown in Figure 6.1, then the ***CONTINUE*** key to view the setup data, or the ***CAL*** Pushbutton under the platter to enter the setup mode. Note the first item **UNIT ID:**, as shown in Figure 6.1. Use this number to configure the 8460 Scale ID in ***Databack***. The ***Databack*** configuration for this version of 8460 must be 9600 baud, 7 data bits, Even parity, and 1 stop bit.

The 8460 uses the same cables as the 8422/8423/8305 master scales, as shown in Section 4. To start communication to the 8460 satellite Version 3, first start the backup or restore function in ***Databack***, then at the Home Screen, touch the ***SETUP*** key then the ***UNIT*** key, enter the password if programmed (or press the CAL Pushbutton if the password is not known), then touch the ***BACKUP/RESTORE MEMORY*** key.

8460 Satellite (Version 4 and Up)

Satellite Configuration

The following can be backed-up or restored using ***Databack***:

ALL includes label/cassette formats, presets, and miscellaneous.

LABELS, CASSETTES includes only the custom label formats and cassette assignments.

SCALE PRESETS includes only the user defined preset keys.

MISCELLANEOUS includes Grade Table, Action Code Table, PLU Settings, TNET Protocol, Department ID and records, Marquee messages, Accumulator Setup, and other Softswitch Settings.

The 8460 (versions 4 and up) AUX port must be configured before using ***Databack***. From the **UNIT SETUP** screen (touch the Setup key, then Unit), touch the ***PERIPHERAL CONFIGURATION*** key. The ***Databack*** menu will show the following selections:

Host ID must match the Scale ID programmed in ***Databack*** .

Baud Rate default is 9.6k (9600) baud.

Parity default is EVEN for use with ***Databack***. Other selections are Even, Odd, Low, High, and Off.

Stop Bits default is 1 for use with ***Databack***.

Data Bits default is 7 for use with ***Databack***.

Flow Control default is None for use with ***Databack***.

Timeout default is 20000ms for use with ***Databack***. If OverRun errors occur, increase this value to 30 or 40k.

The defaults should be correct for most cases. You may change the baud rate to fit your needs. These settings must match those configured in ***Databack***. When the settings are correct, ***Databack*** can be started to run either the backup or restore functions. No keys on the 8460 need to be pressed to start the backup or restore. ***Note: Exit from the setup mode before starting Databack backup or restore.***

File Compatibility

Presets and Label Formats are not compatible between the V3.X and V5.X satellites. Table 6-1 shows how to convert ***Databack*** files from a V3 to V5, or a V4 to V5. NOTE: If mostly default settings are used, it may be easier to just setup one V5 satellite and use ***Databack*** to backup the files for use with other V5 satellites.

Conversion Type	V3 to V4	V3 to V5	V4 to V5
Presets	Use DB_CONV on Disk P/N A14226200A	Use DB_CONV on Disk P/N *14226200A	No conversion needed. V5 files are not backward compatible.
Label Formats	Use DB_CONV on Disk P/N A14226200A	Use DB_CONV on Disk P/N A14226200A	No conversion needed. V5 files are not backward compatible.
Misc	No conversion needed.	Use SCONV050 on Disk 14521500A .	Use SCONV050 on Disk 14521500A .

Table 6-1 8460 File Compatibility

Notes on File Compatibility

The ALL function should not be used to transfer files from the old versions to the new versions since any of those files that are not compatible will not download.

V4 PRESET files are compatible with V5.

V4 LABEL FORMAT files are forward compatibly with V5 satellites, but are not backward compatible due to new fields. You can ***Databack*** V4 label formats into V5, but you can not ***Databack*** V5 into V4 satellites.

MISC files are not compatible due to the new softswitches for international (EAN/UPC, NF with and without the footnote, memory mode department, operator totals). Run this file through the SCONV050.COM conversion program before restoring to a V5 satellite.

SCONV050 Conversion Program

The **SCONV50** program is used to convert ***Databack*** V3/V4 Misc Files to a format that can be restored (using ***Databack***) to a Version 5 Satellite.

The SCONV050.COM program is supplied on Diskette P/N 14521500A. Copy the files on the diskette onto your hard disk drive in the directory where the files to be converted are located.

To use SCONV050.COM, first use ***Databack*** to back up the desired V3 or V4 satellite MISC Files. Be sure to backup MISC, not ALL. Once DataBack has created the file, exit ***Databack*** and run SCONV050.COM specifying the input and output file names on the command line; e.g.,

SCONV050 [source drive:][source path\]name1.000 [target drive:][target path\]name2.000

Where [source drive] is the drive where you have the original V3/V4 MISC file (e.g., A:, B:, or C:), and [target drive] is the drive (e.g., A: B: or C:) where you wish to store the converted V5 MISC file. [source path] is the complete path to the directory where you stored the original V3/V4 file. [target path] is the complete path to the directory where you wish to store the converted V5 file. (Note: if the convert program and Misc file is in the same directory, just supply the input and output file names.)

Note that ***Databack*** requires that the file extension be .000, so this must be the extension for the output file name. SCONV050 will not automatically add any extension. If the improper number of parameters are specified, SCONV050 displays a message showing the proper parameter format.

DB_CONV Conversion Program

The **DB_CONV** program is used to convert ***Databack*** V3/V4 Label Format Files and Preset Files to a format that can be restored (using ***Databack***) to a Version 5 Satellite.

The DB_CONV.COM program is supplied on Diskette P/N A14226200A. Copy the files on the diskette onto your hard disk drive in the directory where the files to be converted are located.

To use DB_CONV, first use ***Databack*** to back up the desired 3.8 (or earlier) satellite. You may only use the individual LABEL and PRESETS files that ***Databack*** creates for an 8460 Version 3.8 satellite. If the data is too large for a single diskette, ***Databack*** will create additional files with extensions .001, .002, etc. However, DB_CONV will not work with multiple disk files.

When the V3/V4 file has been created, exit ***Databack*** and run DB_CONV specifying the input and output file names on the command line; e.g.,

db_conv [source drive:][source path\]name1.000 [target drive:][target path\]name2.000

Where [source drive] is the drive where you have the original V3/V4 LABELS or PRESETS files (e.g., A:, B:, or C:), and [target drive] is the drive (e.g., A: B: or C:) where you wish to store the converted V5 LABELS or PRESETS files. [source path] is the complete path to the directory where you stored the original V3/V4 files. [target path] is the complete path to the directory where you wish to store the converted V5 files.

Note that ***Databack*** requires that the file extension be .000, so this must be the extension for the output file name. DB_CONV will not automatically add any extension. If the improper number of parameters are specified, DB_CONV displays a message showing the proper parameter format.

DB_CONV uses the utility programs HUFF_DEC.COM and HUFF_CPR.COM to decompress and compress the files as it processes them. These utility programs must be in the same directory as DB_CONV.COM. Once DB_CONV has converted the file, the output file(s) may be restored by ***Databack*** to the V5 satellite.

Smart*Touch* Master (8360/8460)

The following can be backed-up or restored on the **Smart***Touch* Master:

ALL includes PLU, Extra Text, Nutrition Text, Graphics, and Miscellaneous.

PLU includes only the PLU data files.

EXTRA TEXT includes only the Extra Text File.

NUTRITION FACTS includes only the Nutrition Text.

GRAPHICS includes only Graphics files.

MISCELLANEOUS includes Cutting test, Accumulators, Host ID, Wgt Increment, Currency Increment, Tare Limit, Currency DP, Currency Symbol, Host Protocol, Master Editor Password, Department Table, Store Record, Grade Table, Group Table, Message Table, Operator Totals Table, Operator Records Table, Item Number Duplication status, Printer Setup, Serial Device Setup.

The **Smart***Touch* Master Host Port must be configured before using ***Databack*** by touching the ***Setup*** key**,** then the ***Master Editor*** key. Enter the password for the **Smart***Touch* Master Editor, then choose ***Config***, followed by ***Master Peripherals***. Touching ***Host*** will display the following items, which must be setup for use with ***Databack***. ***Note: Exit from the Master Editor before starting any host communications.***

Baud Rate is selectable from 1.2k to 115.2k baud. This must match the baud rate of the host or ***Databack***. The default is 9600 baud.

Parity of Even, Odd, Low, High, and Off/No can be selected. Use EVEN parity for *Intelli-Net* and ***Databack***.

Stop Bits selections are 1, 1.5, and 2. Use 1 Stop Bit for *Intelli-Net* or ***Databack***. The default is 1.

Data Bits selections are 5, 6, 7, and 8 data bits (sometimes called word length). Use 7 data bits for *Intelli-Net* or ***Databack***.

Time Out is used to end host communications if no response is detected. The default is 20000 ms (milliseconds).

Flow Control selects either hardware, software, or no handshaking. Flow Control sets up communication between the host device and a peripheral that will start and stop data transfer to prevent an overflow condition. Use NONE with *Intelli-Net* or ***Databack***.

Host ID from 1-99 is used by a host computer identify a scale.

Host Interface selection is used to configure external host communications for a 6-digit PLU or a 4-digit PLU database.

8461 Satellite (Future)

This scale type is new style scale using the new printer engine. The following can be backed-up or restored using ***Databack***:

ALL includes label formats and assignments, presets, and miscellaneous.

LABELS includes only the custom label format assignments.

SCALE PRESETS includes only the user defined preset keys.

MISCELLANEOUS includes Grade Table, Action Code Table, PLU Settings, TNET Protocol, Department ID and records, Marquee messages, Accumulator Setup, and other Softswitch Settings.

The 8461 AUX port must be configured before using ***Databack***. From the **UNIT SETUP** screen (touch the Setup key, then Unit), touch the ***PERIPHERAL CONFIGURATION*** key. The ***Databack*** menu will show the following selections:

Host ID must match the Scale ID programmed in ***Databack*** .

Baud Rate default is 9.6k (9600) baud.

Parity default is EVEN for use with ***Databack***. Other selections are Even, Odd, Low, High, and Off.

Stop Bits default is 1 for use with ***Databack***.

Data Bits default is 7 for use with ***Databack***.

Flow Control default is None for use with ***Databack***.

Timeout default is 20000ms for use with ***Databack***. If OverRun errors occur, increase this value to 30 or 40k.

The defaults should be correct for most cases. You may change the baud rate to fit your needs. These settings must match those configured in ***Databack***. When the settings are correct, ***Databack*** can be started to run either the backup or restore functions. No keys on the 8461 need to be pressed to start the backup or restore. ***Note: Exit from the setup mode before starting Databack backup or restore.***

8450 Satellite

Setup data from the 8450 Version 2.0 or later, can be backed-up or restored using ***Databack*** Version 4 or later. New scales can be easily set up by using files backed up from other 8450, 8450SA, 355, 8360, or 8460.

The wiring diagrams shown in Figure 4.1 can be used to make cables from a 25-pin or a 9-pin PC Serial Port to the 9-pin connector at the 8450. Factory cables are available from METTLER TOLEDO using the part numbers shown in Figure 4.1. (Note: the cables are the same as used for the 8422/8423/8305/8360/8460/8450/8450SA/355.)

Four categories of satellite setup can be backup/restored using ***Databack*** 4 with the 8450 V2.0:

ALL Includes all data sets below.

LABELS Includes only programmed label formats and programmable text.

STYLES Includes information on all labels sizes, formats, label width, label length, etc.

SCALE PRESETS Includes only the user defined preset keys.

MISCELLANEOUS Includes Grade Table, Action Code Table, PLU Settings, Department ID and records, T-net Protocal, Barcode settings, Language settings, Marquee messages, Date/Time setup, Accumulator Setup, Host setup, and other Satellite Softswitch Settings.

To backup satellite data, connect the data cable to the PC's serial port and the end marked Scale to the AUX/HOST Port. The AUX/HOST port must be configured. To configure the Host port in the 8450, first press the ***Setup*** key, then press ***Host***. Set the baud rate and Host ID to match the baud rate and host ID configured in ***Databack***. The other parameter defaults do not need to be changed. The defaults for use with ***Databack*** are 9600, E, 7, 1. (9600 baud, Even parity, 7 data bits, 1 stop bit.) Exit the setup mode before starting ***Databack*** backup or restore.

Note: 8460 to 8450 conversions. Only the 8460 labels/cassette data can be converted for 8450 Version 2 use. This must be run through a conversion program (label2mm.exe, see 8450 Technical Manual) that generates the 8450 label format and 8450 label size files.

8450 Standalone

Setup data from the 8450SA can be backed-up or restored using ***Databack*** Version 4 or later. New scales can be easily set up by using files backed up from other 8450SA, 8450, 355, 8360, or 8460.

The wiring diagrams shown in Figure 4.1 can be used to make cables from a 25-pin or a 9-pin PC Serial Port to the 9-pin connector at the 8450. Factory cables are available from METTLER TOLEDO using the part numbers shown in Figure 4.1. (Note: the cables are the same as used for the 8422/8423/8305/8360/8460/8450/8450SA/355.)

Several categories of standalone setup can be backup/restored using ***Databack*** 4.

ALL Includes all data sets below.

LABELS Includes only programmed label formats and programmable text.

STYLES Includes information on all labels sizes, formats, label width, label length, etc.

SCALE PRESETS Includes only the user defined preset keys.

MISCELLANEOUS Includes Grade Table, Action Code Table, PLU Settings, Department ID and records, T-net Protocal, Barcode settings, Language settings, Marquee messages, Date/Time setup, Accumulator Setup, Host setup, and other Satellite Softswitch Settings.

PLU includes only the PLU data files.

EXTRA TEXT includes only the Extra Text File.

NUTRITION FACTS includes only the Nutrition Text.

GRAPHICS includes only Graphics files.

DATABASE PARAMETERS includes Host Protocol, Department Table, Store Record, Grade Table, Group Table, Message Table, Operator Totals Table, Operator Records Table, Printer Setup, Serial Device Setup, and other DataBase Functions.

The 8450SA AUX/HOST Port must be configured before using ***Databack*** by pressing the ***Setup Mode*** key**,** then press ***Enter***. Pressing ***Host*** will display the following items, which must be setup for use with ***Databack***. You can scroll through the options by pressing the ***Up or Down*** keys and you can change the selected option by pressing ***Enter*** and then ***Up or Down*** keys again. When done selecting press ***Enter*** to chose the selection and the display will advance to the next selection. ***Note: Exit from the Setup before starting any host communications.***

Baud Rate is selectable from 1.2k to 38.4k baud. This must match the baud rate of the host or ***Databack***. The default is 9600 baud.

Parity of Even, Odd, Low, High, and Off can be selected. Use EVEN parity for *Intelli-Net* and ***Databack***.

Stop Bits selections are 1, 1.5, and 2. Use 1 Stop Bit for *Intelli-Net* or ***Databack***. The default is 1.

Data Bits selections is 7 data bits (sometimes called word length). Use 7 data bits for *Intelli-Net* or ***Databack***.

Time Out is used to end host communications if no response is detected. The default is 20000 ms (milliseconds).

Flow Control selects either hardware, software, or no handshaking. Flow Control sets up communication between the host device and a peripheral that will start and stop data transfer to prevent an overflow condition. Use NONE with *Intelli-Net* or ***Databack***.

Host ID from 1-99 is used by a host computer identify a scale.

Host Interface selection is used to configure external host communications for a 6-digit PLU or a 4-digit PLU database.

355 Bakery Printer

The 355 Bakery Printer is to be used the same as 8450 satellite or 8450SA depending upon the software loaded. All functions are the same.

Note: You must choose the appropriate selection (8450 Satellite or 8450SA) in the configuration of Databack to fit your application.

8360 Satellite

Using ***Databack***, the following files can be backed-up or restored on the 8360 Satellite.

ALL	Includes all data sets below.
LABELS	Includes label data, custom label formats, and programmable text.
STYLES	Printer Setup, etc.
MACROS	Programmable Macros.
SCALE PRESETS	Includes only the user defined preset keys.
MISCELLANEOUS	Includes Grade Table, Action Code Table, PLU Settings, Department setup, Accumulator Setup, etc.

The 8360 Satellite AUX port must be configured to use ***Databack***. To configure the 8360, touch the ***Setup*** key, then touch ***Unit.*** If the 8360 asks for a password, enter the password or press the ***CAL*** switch if the password is not known. Next touch ***Peripheral Configuration,*** then touch ***Databack.*** The following items will be presented.

Host ID must match the ID in ***Databack*** .

Baud Rate default is 9.6k (9600) baud.

Parity default is EVEN for use with ***Databack***. Other selections are Even, Odd, Low, High, and Off.

Stop Bits default is 1 for use with ***Databack***.

Data Bits default is 7 for use with ***Databack***.

Flow Control default is None for use with ***Databack***.

Timeout default is 20000ms for use with ***Databack***. If OverRun errors occur, increase this value to 30 or 40k or slow the baud rate down.

When the settings are correct, ***Databack*** can be started. Exit the setup mode in the 8360 before starting host communications.

7 Error Handling

Error Log

Invalid or corrupt file records will be written to a log file called ERROR.LOG. This file will be in an ASCII format that can be viewed using DOS TYPE, MORE, or any DOS utility programs or word processors that can read ASCII text files. DOS utility programs, such as BROWSE.COM, allow use of the PageUp/PageDown and cursor keys to scroll through an ASCII file. By viewing the file, you can determine which records may not have been transferred by ***Databack***. To view an ASCII file using DOS TYPE or MORE, you can use following commands.

```
TYPE ERROR.LOG
 - OR -
MORE < ERROR.LOG
```

The ERROR.LOG file can also be printed out using the following commands.

```
TYPE ERROR.LOG > PRN
- OR -
PRINT ERROR.LOG
```

Error Messages

This section contains some common error messages and their solutions.

Invalid Channel

Press Escape then go through the configuration of the serial port.

OverRun Error

The characters are coming into the serial port too fast for the PC to process them. Try a slower baud rate. On 8460, increase value of the Timeout.

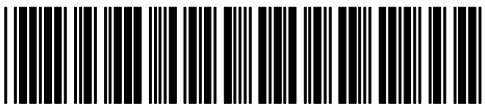
Unknown Message Length

The scale doesn't understand the command Databack has sent. For example, if the scale is an 8427SA, attempting to backup all departments you would result in this error. You must specify which department to backup. Selecting the wrong scale type for backup or restore can also result in this type of error.

METTLER TOLEDO
Scales & Systems
350 West Wilson Bridge Road
Worthington, Ohio 43085-2273

P/N: C13954200A

3/96



C13954200A