THE IDS 152 TICKET PRINTER

Revision K, 11/90

Industrial Data Systems, Inc. 590 W Freedom Ave., Orange Ca 92865

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1.0 INSTALLATION

Installation begins with unpacking the IDS152. Save packing materials if the printer is to be re-shipped. Next, the IDS152 needs to be made ready to print. Examine the options available in the IDS152 to determine the best setup for your application.

1.1 UNPACKING THE IDS152 PRINTER.

Remove the printer from the shipping container. REMOVE THE SHIPPING RESTRAINT FROM THE PRINTER MECHANISM. The shipping restraint is a rectangular piece of black rubber located just above the document plate on the left side of the mechanism. Install printer ribbon as shown on the diagram affixed to the dot head cover.

PACKING LIST CHECKOFF

IDS152 PRINTER	_____
PRINTER RIBBON	_____
PRINTER MANUAL	_____
POWER LINE CORD	_____
MATING CONNECTOR/CABLE	_____

1.2 MAKING THE IDS152 READY TO PRINT.

1. Be sure the print-mechanism shipping restraint has been removed.
2. Set the serial communications parameters (baud rate, data bits, etc.) See Section 3.1 for directions.
3. Connect the IDS152 to the 'host' device via the 25 pin 'D' connector at the back of the printer. See Appendix I for communication port wiring information.
4. Connect the IDS152 to AC power.
5. Turn power on. The print head should cycle 1 time.
6. Activate the TEST mode and print the configuration parameters (Section 6).
7. Reset the printer to normal by turning power off and then back on. Send data from the 'host' device to the IDS152.

The IDS152 is pre-configured at the factory for use as a BASIC 'Slave' printer. The IDS152 has a wide range of features that can be activated as needed. If your application requires something beyond the capabilities of a BASIC printer then read Section 2. Choose the functions that you need and then use Section 3 for directions on activating the functions.

2. DESCRIPTION OF THE IDS152 FUNCTIONS AND CAPABILITIES

This section is divided into 5 parts:

2.1 THE IDS152 CONNECTORS, SWITCHES AND LEDS.
The physical characteristics of the IDS152.

2.2 PRINT FEATURES.
Ticket formatting features.

2.3 BATTERY BACKUP FEATURES.
Ticket numbering and the clock functions.

2.4 THE BASIC PRINTER MODE.
General purpose ticket printer mode.

2.5 THE SPECIAL APPLICATION MODES.
Weighing applications.

2.1 THE IDS152 CONNECTORS, SWITCHES AND LEDS.

The front of the printer has 2 switches (**PRINT** and **AUX**) and 2 light emitting diodes (READY and FORM).

The **PRINT** switch activates a Print Request signal that can be sent to the host device.

The **AUX** switch cycles the print head and activates the paper release mechanism.

The functions of the PRINT and AUX switches will change if any of the Special Application modes are selected.

The **READY** light indicates that the printer is ready for receiving print commands. It turns off when the printer is busy. It FLASHES on and off when the printer is in the test mode or if an error is detected.

The **FORM** light indicates that there is no ticket in the printer. It turns OFF when the ticket is properly in place.

On the rear of the printer is the Line connector, the DATA I/O connector, and the Power Switch.

Behind the access panel are a thumbwheel switch, a push button switch (**ENTER SWITCH**), and an LED (**ENTER LIGHT**). The switches are used to select print features and the printer's mode of operation.

2.2 PRINT FEATURES.

The Print Features are used to customize the print format of the IDS152 and to match the requirements of the 'host' device.

1. **AUTOMATIC LINE-FEED AFTER CARRAGE RETURN (Default = ON)**
   The printer inserts a line feed command whenever it receives a carriage return command. Turn this feature on if your 'host' device does not send a linefeed after a carriage return. (see section 3.2.1)
2. **AUTOMATIC PAPER RELEASE (Default = ON)**
   In some applications, the sending device can't send a RELEASE paper command. The automatic paper release feature releases the paper after printing the last line received. (see section 3.2.2)
3. **AUTOMATIC PRINT WRAP (Default = ON)**
   If more than 40 characters (20 char Enhanced) are sent without a linefeed, the overflow data is automatically printed on the next line. If automatic print wrap is turned off, the overflow data is lost. (see section 3.2.3)
4. **MULTI-STRIKE PRINT (Default = OFF)**
   The multi-strike feature prints each line from 2 to 10 times. This increases the legibility of the print in multi-copy tickets. (see section 3.2.4)

NOTE: The MULTI-STRIKE feature prints in a single direction. If MULTI-STRIKE is selected, it will over-ride the bi-direction select.

5. **BI-DIRECTIONAL PRINT (Default = ON)**
   The printer normally prints bi-directionally for faster operation. (see section 3.2.5)
6. **INVERT PRINT (Default = OFF)**
   The invert print feature inverts the print (upside down). The ticket is inserted upside down for printing. This feature is used to print on the left side of a document. (see section 3.2.6)
7. **INHIBIT PRINT IF PAPER EMPTY. (Default = ON)**
   The printer will not print if the paper empty light is on. Turn this feature OFF if the edge of your ticket has holes that do not cover the paper-sensor. (see section 3.2.7)
8. **TOP MARGIN. (Default = 0)**
   The top margin is used to skip from 1 to 9 lines down the ticket before printing. (see section 3.2.8)
9. **LEFT MARGIN. (Default = 0)**
   The left margin is used to move the printed text to the right. The left margin is 0 to 18 characters long.
   NOTE: If invert print is used, the text will be moved to the left. (see section 3.2.9)
10. **PRINT SIZES. (Normal, Enhanced, Mixed). (Default = Norm)**
    The Normal is 12 char/in (typewriter size). The Enhanced print is 6 char/in (double width). The Mixed size prints text in normal size and numbers in enhanced size. (see section 3.2.10)

11. **STATION NUMBER** **(Default = OFF)**
The station number is used print a station ID on each ticket. Station numbers range from 1 to 9. (see section 3.2.11)

12. **HEADER LABEL.** **(Default = OFF)**
The header label is used to print the company name or other information on each ticket. The header label is up to 30 characters long. (see section 3.2.12)

2.3 THE BATTERY BACKUP FEATURES.

The battery is used for the following functions:

1. **TIME AND DATE CLOCK.** The battery keeps the clock running when power is turned off.

2. **TICKET NUMBERING.** Automatically prints a ticket number on each transaction. The battery keeps the number in memory when power is turned off.

3. **TOTALS.**
The battery permits storage of the subtotal and total in memory when power is turned off.

Configure the BATTERY BACKUP option to ON if any of the battery backup functions are used. (see section 3.3)

2.4 THE BASIC PRINTER MODE (SLAVE PRINTER).

The basic printer mode is for general purpose applications. In this mode the printer prints what is sent. This permits the IDS152 to be used with a wide range of devices, including most weigh-meters. The Basic Mode can be combined with the Print Features for applications that require more than your average basic printer. The print features are set with the thumbwheel switch (see section 3.2) or they can be set by sending control codes (see appendix III).

The **PRINT** switch is used to output a data request signal. This is used to activate data transmission from the 'host'.

The **AUX** switch activates a paper release cycle.

2.5 THE SPECIAL APPLICATION MODES.

The special modes are used for weighing applications. They are used in those cases where the weigh-meter is not capable of producing the required print data.

The mode options are selected by setting the thumbwheel switch to the option number. The following is a list of the modes and their option numbers:

0 BASIC PRINTER MODE (Slave Printer).
1 PRINT WEIGHT ONLY.
2 PRINT WEIGHTS WITH GROSS, AND TARE LABELS.
3 GROSS, TARE, NET PRINTING.
4 PRINT AND TOTAL.
5 PRINT, SUBTOTAL, AND TOTAL.
6 PRINT AND TOTAL (AXLE WEIGH).
7 WEIGH-IN, WEIGH-OUT.

If you use one of the special modes be sure to configure the scale options:

Section 3.4.1 SELECT SCALE METER TYPE
Section 3.4.2 CONFIGURE SCALE UNITS.

If pulse input is being used then also configure:

Section 3.4.3 DECIMAL POSITION.
Section 3.4.4 COUNT/PULSE FACTOR.

2.5.1 PRINT WEIGHT.

Press the **PRINT** Switch to print the weight on the scale in the form: **WEIGHT 12345 LB**

2.5.2 PRINT WEIGHTS WITH GROSS, AND TARE LABELS.

The **PRINT** Switch prints the weight on the scale in the form:
GROSS 12345 LB

The **AUX** Switch prints the weight on the scale in the form:
TARE 2000 LB

2.5.3 GROSS, TARE, NET PRINTING.

This feature provides gross, tare, and net printing in 2 weighments.

The **AUX** Switch instructs the printer store the weight on the scale into the tare register. The printer cycles to signal that tare weight is read.

The **PRINT** Switch causes the printer to print the GROSS, TARE, and NET weights.

GROSS 4321 LB
TARE 1234 LB
NET 3087 LB

2.5.4 PRINT AND TOTAL.

This feature provides a totalize register for summing weighments.

The **PRINT** Switch prints the weight on the scale. The printer adds the weight to the total register.

The **AUX** Switch prints the total.

Press the **AUX** Switch twice within 10 seconds to clear the total register. The print head will cycle at the end of 10 seconds to signal that the printer is ready for new commands.

2.5.5 PRINT, SUBTOTAL, AND TOTAL.

This feature provides a subtotal and a total register for summing weighments.

The **PRINT** Switch prints the weight on the scale. The printer adds the weight to the subtotal and total registers.

The AUX Switch prints the subtotal and clears the subtotal register.

Press the **AUX** Switch again to print the total.

Press the **AUX** Switch twice within 10 seconds to clear the total register.

2.5.6 PRINT AND TOTAL (AXLE WEIGH).

This feature is for printing a list of weights with the total at the end.

The **PRINT** Switch prints a sequence number and the weight on the scale. The printer adds the weight to the total register. The paper is clamped on the first print and released after the total is printed.

The **AUX** Switch prints the total and releases the paper. The total is cleared after it is printed.

Example:

 # 1 1234 LB
 # 2 4321 LB
 # 3 2134 LB
TOTAL 7689 LB

2.5.7 WEIGH-IN, WEIGH-OUT.

This feature allows a truck (container, etc) to weigh-in either empty or full, and then weigh-out after filling or unloading.

3. CONFIGURATION OF THE IDS152

Remove the access panel located on the back of the printer. The 8 position 'dip' switch is used to configure the serial communications port. The thumbwheel switch and the push-button switches are used to configure everything else.

The ENTER light provides feedback for the entry process. If there is paper in the printer, the results of the data entry will be printed after it is entered.

All data entry functions begin with the ENTER light OFF.

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

Topics Covered In Section 3:

3.1 CONFIGURATION OF SERIAL COMMUNICATIONS PORT.

The baud rate and data format is set by the 8 position 'DIP' switch, located behind the access panel at the back of the printer.

Select the baud rate and data format from the table below.

Dip Switch 1:	on = Current Loop Input	off = not selected
Dip Switch 2:	on = RS232 Input	off = not selected
Dip Switch 3:	on = Even Parity	off = Odd Parity
Dip Switch 4:	on = Disable Parity	off = Enable Parity
Dip Switch 5:	on = 7 Data Bits	off = 8 Data Bits

NOTE: Do not set switches 1 and 2 on at the same time.
When using RS232 set dip switch 1 0ff, set dip switch 2 on.
When using Current loop set dip switch 1 on, set dip switch 2 off.

Dip Switches 6,7,8: Baud Rate Select

Baud Rate	sw6	sw7	sw8
300	off	off	on
600	off	on	off
1200	off	on	on
2400	on	off	off
4800	on	off	on
9600	on	on	off

NOTE: Some dip switches use the following labels:
CLOSED = on
OPEN = off

3.2 CONFIGURE PRINT FEATURES.

The following list shows how the print features are set at the factory.

3.2.1	AUTO LINE-FEED AFTER CR	=	ON
3.2.2	AUTO PAPER RELEASE	=	ON
3.2.3	AUTOMATIC PRINT WRAP	=	ON
3.2.4	MULTI-STRIKE PRINT	=	OFF
3.2.5	BI-DIRECTIONAL PRINT	=	ON
3.2.6	INVERT PRINT	=	OFF
3.2.7	INHIBIT PRINT IF PAPER EMPTY	=	ON
3.2.8	TOP MARGIN	=	0
3.2.9	LEFT MARGIN	=	0
3.2.10	PRINT SIZE	=	NORMAL
3.2.11	STATION NUMBER	=	DISABLED
3.2.12	PRINT ONLY HEADING	=	DISABLED

Use the following sections to change the settings.

CONFIGURATION: AUTOMATIC LINE FEED AFTER CARRAGE RETURN.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 1.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 1.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   0 for AUTO LF --- OFF
   1 for AUTO LF --- ON
7. Press the ENTER switch. The ENTER light turns off.

SET AUTO LF AFTER CARRAGE RETURN				
	FLASH	ON	OFF	(Enter Light)
Auto lf OFF	1	1	0	(Thumbwheel Switch)
Auto lf ON	1	1	1	(Thumbwheel Switch)

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.2.2 CONFIGURATION: AUTOMATIC PAPER RELEASE.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 1.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 2.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   0 for AUTO PAPER RELEASE --- OFF
   1 for AUTO PAPER RELEASE --- ON
7. Press the ENTER switch. The ENTER light turns off.

SET AUTO PAPER RELEASE				
	FLASH	ON	OFF	(Enter Light)
Auto Release OFF	1	2	0	(Thumbwheel Switch)
Auto Release ON	1	2	1	(Thumbwheel Switch)

3.2.3 CONFIGURATION: PRINT WRAP.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 1.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 3.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   0 for PRINT WRAP --- OFF
   1 for PRINT WRAP --- ON
7. Press the ENTER switch. The ENTER light turns off.

SET PRINT WRAP				
	FLASH	ON	OFF	(Enter Light)
Print Wrap OFF	1	3	0	(Thumbwheel Switch)
Print Wrap ON	1	3	1	(Thumbwheel Switch)

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.2.4 CONFIGURATION: MULTI-STRIKE PRINT.

NOTE: Multi-strike automatically disables bi-directional printing.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 1.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 4.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   - 0 for SINGLE STRIKE.
   - 1 for DOUBLE STRIKE.
   - 2 for TRIPLE STRIKE.
   - 3 for 4 X STRIKE.
   - 4 for 5 X STRIKE.
   - 5 for 6 X STRIKE.
   - 6 for 7 X STRIKE.
   - 7 for 8 X STRIKE.
   - 8 for 9 X STRIKE.
   - 9 for 10 X STRIKE.
7. Press the ENTER switch. The ENTER light turns off.

SET MULTI-STRIKE COUNT				
	FLASH	ON	OFF	(Enter Light)
Single Strike	1	4	0	(Thumbwheel Switch)
Double Strike	1	4	1	(Thumbwheel Switch)
Triple Strike	1	4	2	(Thumbwheel Switch)

3.2.5 CONFIGURATION: BI-DIRECTIONAL PRINT.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 1.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 5.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   - 0 for BI-DIRECTIONAL PRINT --- OFF
   - 1 for BI-DIRECTIONAL PRINT --- ON
7. Press the ENTER switch. The ENTER light turns off.

SET BI-DIRECTIONAL PRINT				
	FLASH	ON	OFF	(Enter Light)
Bi-Direction OFF	1	5	0	(Thumbwheel Switch)
Bi-Direction ON	1	5	1	(Thumbwheel Switch)

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.2.6 CONFIGURATION: INVERT PRINT.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 1.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 6.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   0 for INVERT PRINT --- OFF
   1 for INVERT PRINT --- ON
7. Press the ENTER switch. The ENTER light turns off.

SET INVERT PRINT				
	FLASH	ON	OFF	(Enter Light)
Set Normal Print	1	6	0	(Thumbwheel Switch)
Set Invert Print	1	6	1	(Thumbwheel Switch)

3.2.7 CONFIGURATION: INHIBIT PRINT IF PAPER EMPTY.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 1.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 7.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   0 for INHIBIT PRINT IF PAPER EMPTY --- OFF
   1 for INHIBIT PRINT IF PAPER EMPTY --- ON
7. Press the ENTER switch. The ENTER light turns off.

SET INHIBIT PRINT IF PAPER EMPTY				
	FLASH	ON	OFF	(Enter Light)
Inhibit Print OFF	1	7	0	(Thumbwheel Switch)
Inhibit Print ON	1	7	1	(Thumbwheel Switch)

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.2.8 CONFIGURATION: TOP MARGIN.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 2.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 1.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   0 for TOP MARGIN = 0.
   1 for TOP MARGIN = 1.
   .
   .
   9 for TOP MARGIN = 9.
7. Press the ENTER switch. The ENTER light turns off.

NOTE: The margin is 1/6" per position. For a 1 inch margin enter a 6. For a 1 1/2 inch margin enter a 9.

The ticket stop on the printer can be adjusted for printing up to 1 1/2" from the top of form. The settings mentioned above are used to position the print even lower on the form.

SET TOP MARGIN				
	FLASH	ON	OFF	(Enter Light)
Set Top Margin OFF	2	1	0	(Thumbwheel Switch)
Set Top Margin 1 in.	2	1	6	(Thumbwheel Switch)
Set Top Margin 1.5 in.	2	1	9	(Thumbwheel Switch)

3.2.9 CONFIGURATION: LEFT MARGIN.

Note: The left margin is set to 2 spaces per count. To space over 10 spaces, enter a 5 for the margin position.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 2.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 2.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   0 for LEFT MARGIN = 0 spaces.
   1 for LEFT MARGIN = 2 spaces.
   .
   .
   9 for LEFT MARGIN = 18 spaces.
7. Press the ENTER switch. The ENTER light turns off.

SET LEFT MARGIN				
	FLASH	ON	OFF	(Enter Light)
Set Left Margin OFF	2	2	0	(Thumbwheel Switch)
Set Left Margin 10 sp	2	2	5	(Thumbwheel Switch)
Set Left Margin 18 sp	2	2	9	(Thumbwheel Switch)

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.2.10 CONFIGURATION: PRINT SIZE.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 2.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 3.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   - 0 for Host Control of Print Size.
   - 1 for NORMAL SIZE PRINT.
   - 2 for ENHANCED SIZE PRINT (double width).
   - 3 for MIXED SIZE PRINT (numbers large, letters small).
7. Press the ENTER switch. The ENTER light turns off.

PRINT SIZE				
	FLASH	ON	OFF	(Enter Light)
Host Control of Size	2	3	0	(Thumbwheel Switch)
Normal Size Print	2	3	1	(Thumbwheel Switch)
Enhanced Size Print	2	3	2	(Thumbwheel Switch)
Mixed Size Print	2	3	3	(Thumbwheel Switch)

3.2.11 CONFIGURATION: STATION NUMBER.

The station number is enabled when it is set. Setting the station number to 0 disables it.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 2.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 4.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   - 0 for STATION NUMBER = DISABLED.
   - 1 for STATION NUMBER = 1.
   - 9 for STATION NUMBER = 9.
7. Press the ENTER switch. The ENTER light turns off.

SET STATION NUMBER				
	FLASH	ON	OFF	(Enter Light)
Disable Station No.	2	4	0	(Thumbwheel Switch)
Set Station No. = 1	2	4	1	(Thumbwheel Switch)
Set Station No. = 9	2	4	9	(Thumbwheel Switch)

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.2.12 CONFIGURATION: HEADER LABEL.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 6.
3. Press the ENTER switch. The ENTER light flashes.
4. Enter the decimal-ascii code for the label, 2 digits/character. The maximum number of characters is 30.
   The ENTER light flashes before the 1st digit.
   The ENTER light is ON before the 2nd digit.
5. Enter two zeros (0, 0) to end the data entry.
6. The ENTER light turns off.

NOTES: ASCII codes are listed in appendix IV.
Enter a line feed code (10) in the first position to print header at the bottom of the ticket.
Lower case characters can not be entered.

ENTER HEADER LABEL				
	FLASH	ON	FLASH	(Enter Light)
Begin Header Entry	6			(Thumbwheel Switch)
CHAR 1		X	X	
CHAR 2		X	X	
.				
.				
CHAR N		0	0	END OF HEADER ENTRY

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.3 CONFIGURATION OF BATTERY-BACKUP OPTIONS

The Battery-Backup options rely on the battery for proper operation. Configure BATTERY ENABLE = ON if any of the following options are used:

TIME and/or DATE
TICKET NUMBER
BATTERY BACKED UP TOTALS (Special Applications)

If BATTERY ENABLE = ON the IDS152 will test memory for a battery failure on power up.

3.3.1 CONFIGURATION: BATTERY ENABLE.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 2.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 5.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   0 for BATTERY ENABLE --- OFF
   1 for BATTERY ENABLE --- ON
7. Press the ENTER switch. The ENTER light turns off.

SET BATTERY BACKUP				
	FLASH	ON	OFF	(Enter Light)
Battery Enable OFF	2	5	0	(Thumbwheel Switch)
Battery Enable ON	2	5	1	(Thumbwheel Switch)

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.3.2 CONFIGURATION: SET TIME

1. Begin with the ENTER light OFF.

2. Turn the thumbwheel switch to position 3.

3. Press the ENTER switch. The ENTER light begins flashing.

4. Turn the thumbwheel switch to the first digit of time.

5. Press the ENTER switch. The ENTER light turns on.

6. Turn the thumbwheel switch to the second digit of time.

7. Press the ENTER switch.

8. Turn the thumbwheel switch to the third digit of time.

9. Press the ENTER switch.

10. Turn the thumbwheel switch to the fourth digit of time.

11. Press the ENTER switch.

12. Turn the thumbwheel switch to position:
    0 for AM
    1 for PM
    2 for 24hr time

13. Press the ENTER switch. The ENTER light turns off.

SET TIME							
	FLASH	ON	ON	ON	ON	OFF	(Enter Light)
Set	3	hr	hr	min	min	0 = AM	(Thumbwheel Switch)
TIME						1 = PM	
						2 = 24 hr time	

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.3.3 CONFIGURATION: SET DATE

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 4.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel to the first digit of the month.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel to the second digit of the month.
7. Press the ENTER switch.
8. Turn the thumbwheel to the first digit of the day of month.
9. Press the ENTER switch.
10. Turn the thumbwheel to the second digit of the day of month.
11. Press the ENTER switch.
12. Turn the thumbwheel to the first digit of the year.
13. Press the ENTER switch.
14. Turn the thumbwheel to the second digit of the year.
15. Press the ENTER switch.
16. Press the ENTER switch. The ENTER light turns off.

SET DATE								
Set	FLASH	ON	ON	ON	ON	ON	OFF	(Enter Light)
DATE	4	mo	mo	day	day	year	year	(Thumbwheel Switch)

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.3.4 CONFIGURATION: SET TIME AND DATE PRINT FORMAT.

The clock data can be printed in 6 different formats and at 3 different positions. Use the following lists to configure the time/date print to fit your application.

FORMAT LIST

0 = Disable Time & Date
1 = Print Time & Date With Labels
2 = Print Time With Label
3 = Print Date With Label
4 = Print Time & Date
5 = Print Time
6 = Print Date

POSITION LIST

1 = Print Clock Data as Last Line
2 = Print Clock Data at Beginning of the 1st Line
3 = Print Clock Data at End of the 1st Line

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 5.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to one of the above format numbers.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to one of the above position numbers.
7. Press the ENTER switch. The ENTER light turns off.

SET TIME/DATE FORMAT			
	FLASH	ON	OFF (Enter Light)
SET TIME FORMAT	5	Format no.	Position no. (Thumbwheel Switch)
Time On Last Line	5	5	1

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.3.5 CONFIGURATION: TICKET NUMBER.

The ticket number is enabled when it is set. Setting the ticket number to 00000 disables ticket numbering.

1. Begin with the ENTER light OFF.

2. Turn the thumbwheel switch to position 2.

3. Press the ENTER switch. The ENTER light begins flashing.

4. Turn the thumbwheel switch to position 6.

5. Press the ENTER switch. The ENTER light turns on.

6. Enter a 5 digit number by selecting numbers on the thumbwheel and pressing the ENTER switch.

7. The ENTER light turns off.

---------- SET TICKET NUMBER ----------									
	FLASH	ON	ON	ON	ON	ON	OFF	(Enter Light)	
Ticket	2	6	X	X	X	X	X	(Thumbwheel Switch)	
Number			(XXXXX is a 5 digit ticket number)						

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.4 CONFIGURATION OF WEIGHING APPLICATION OPTIONS.

If you are using one of the weighing 'SPECIAL APPLICATION' modes then the following must be configured:

Section 3.4.1 **SELECT SCALE METER TYPE.**
Section 3.4.2 **CONFIGURE SCALE UNITS.**

If pulse input is being used then also configure:
Section 3.4.3 **DECIMAL POSITION.**
Section 3.4.4 **COUNT/PULSE FACTOR.**

The **'SPECIAL APPLICATION'** modes are selected by IDS152 by reading the thumbwheel switch on power up.

THUMBWHEEL POSITION	**APPLICATION MODE**
0	**BASIC PRINTER MODE.**
1	**PRINT WEIGHT ONLY.**
2	**PRINT WEIGHTS WITH GROSS, AND TARE LABELS.**
3	**GROSS, TARE, NET PRINTING.**
4	**PRINT AND TOTAL.**
5	**PRINT, SUBTOTAL, AND TOTAL.**
6	**PRINT AND TOTAL (AXLE WEIGH).**
7	**WEIGH-IN, WEIGH-OUT.**

If position 0 **(BASIC MODE**) is used then ignore section 3.4.
The section 3.4 configurations have no effect in **BASIC MODE.**

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.4.1 CONFIGURATION: SELECT SCALE METER TYPE.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 7.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 1.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   - 0 – NCI5790
   - 1 – AN5316, continuous output mode.
   - 2 – Condec, Accuweigh, Applied Forces, MSI Transweigh, Streeter Q9000.
   - 3 – A&D 4316, 4321, GENERAL 521.
   - 4 – CARDINAL 738
   - 5 – TOLEDO 8132, 8142 high speed mode.
   - 6 – WI 110, 120.
   - 7 – DR 10K.
   - 8 – SSD800.
   - 9 – Pulse Input.
7. Press the ENTER switch. The ENTER light turns off.

SET SCALE METER TYPE				
	FLASH	ON	OFF	(Enter Light)
Set NCI5790	7	1	0	(Thumbwheel Switch)
Set AN5316	7	1	1	(Thumbwheel Switch)
Set Condec	7	1	2	(Thumbwheel Switch)
Set A&D / Gen.	7	1	3	(Thumbwheel Switch)
Set Cardinal 738	7	1	4	(Thumbwheel Switch)
Set Toledo 8142	7	1	5	(Thumbwheel Switch)
Set WI 110	7	1	6	(Thumbwheel Switch)
Set DR 10K	7	1	7	(Thumbwheel Switch)
Set SSD800	7	1	8	(Thumbwheel Switch)
Set Pulse Input	7	1	9	(Thumbwheel Switch)

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.4.2 CONFIGURATION: SCALE UNITS.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 7.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 2.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   - 0 for undefined
   - 1 for LB
   - 2 for kg
   - 3 for TON
   - 4 for TNE
   - 5 for GRAM
   - 6 for OZ
   - 7 for t
7. Press the ENTER switch. The ENTER light turns off.

CONFIGURATION: SCALE UNITS (cont.)

SET SCALE UNITS				
	FLASH	ON	OFF	(Enter Light)
Set LB	7	2	1	(Thumbwheel Switch)
Set kg	7	2	2	(Thumbwheel Switch)
Set TON	7	2	3	(Thumbwheel Switch)
Set TNE	7	2	4	(Thumbwheel Switch)
Set GRAM	7	2	5	(Thumbwheel Switch)
Set OZ	7	2	6	(Thumbwheel Switch)
Set t	7	2	7	(Thumbwheel Switch)
Undefined	7	2	0	(Thumbwheel Switch)

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.4.3 CONFIGURATION: MULTIPLIER.

NOTE: Used with pulse input only. Each pulse in is multiplied by the multiplier factor.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 7.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 3.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   - 0 for 1
   - 1 for .1
   - 2 for .01
   - 3 for .001
   - 4 for .0001
   - 5 for 10
   - 6 for 100
7. Press the ENTER switch. The ENTER light turns off.

DECIMAL POINT				
	FLASH	ON	OFF	(Enter Light)
Set 1	7	3	0	(Thumbwheel Switch)
Set .1	7	3	1	(Thumbwheel Switch)
Set .01	7	3	2	(Thumbwheel Switch)
Set .001	7	3	3	(Thumbwheel Switch)
Set .0001	7	3	4	(Thumbwheel Switch)
Set 10	7	3	5	(Thumbwheel Switch)
Set 100	7	3	6	(Thumbwheel Switch)

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

3.4.4 CONFIGURATION: COUNT/PULSE.

NOTE: Used with pulse input only. Each pulse in is multiplied by the count/pulse factor.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 7.
3. Press the ENTER switch. The ENTER light begins flashing.
4. Turn the thumbwheel switch to position 4.
5. Press the ENTER switch. The ENTER light turns on.
6. Turn the thumbwheel switch to position:
   1 for 1
   2 for 2
   5 for 5
7. Press the ENTER switch. The ENTER light turns off.

COUNT/PULSE				
	FLASH	ON	OFF	(Enter Light)
Set 1x	7	4	1	(Thumbwheel Switch)
Set 2x	7	4	2	(Thumbwheel Switch)
Set 5x	7	4	5	(Thumbwheel Switch)

3.5 INITIALIZE SYSTEM TO ORIGINAL FACTORY SETTINGS

The printer can be reset to its original settings by the INITIALIZE function.

1. Begin with the ENTER light OFF.
2. Turn the thumbwheel switch to position 8.
3. Press the ENTER switch. The ENTER light flashes.
4. Press the ENTER switch. The ENTER light turns on.
5. Press the ENTER switch 2 more times.
6. The ENTER light turns off.

INITIALIZE SYSTEM				
	FLASH	ON	ON	OFF
INITIALIZE	8	8	8	8

REMEMBER: Return the thumbwheel switch to the correct mode postition after configuration.

4. MAINTENANCE

The maintenance requirements are minimal on the IDS152.

1. PRINT RIBBON REPLACEMENT. Replace the print ribbon when the print immage becomes unacceptably light. Use the diagram that appears on the dot head cover for threading directions.

2. CLEANING. Remove dirt and stains using alchol or benzine. Do NOT use thinner or trichloroethylene or keton based solvents, which may damage plastic parts.

5. TESTING AND TROUBLESHOOTING.

IDS152 TEST PROGRAMS.

5.1. POWER ON SELF TEST.

The IDS152 performs a self test on power up. If a fault is detected the READY led will flash and an audible alarm will sound. Press the Print switch to print the results of the test. Press the AUX switch to ignore the test results.

5.2. PRINTER CONFIGURATION AND TEST REPORTS.

The IDS152 has 2 internally generated reports. The printer configuration report lists the status of the configuration parameters. The test Report shows results of the IDS152's power on test.

Begin with power OFF. Hold the **PRINT** switch on and turn power on. The READY light will flash. Release the PRINT switch.

NOTE: The print head does NOT cycle on power-up.

Press the **PRINT** switch to print configuration data.

Press the **AUX** switch to print test results.

Turn the printer OFF and then ON to begin normal printing.

5.3. HEX-ASCII PRINTING.

Begin with power OFF. Hold the **AUX** switch on and turn power on. The READY light will flash. Release the **AUX** switch. Information received by the IDS152 will be printed in the hexidecimal form of the characters received. Press the PRINT switch to activate the print request signal. Press the AUX switch to print the contents of the data receive buffer.

See appendix IV for ASCII to HEX translation.

5.4 TROUBLESHOOTING.

5.4. 1. THE PRINTER IS NOT PRINTING DATA FROM HOST.

1. Check the FORM light. It is OFF when a ticket is properly inserted in the printer.

Activate the test function as follows:
Begin with power OFF. Hold the PRINT switch on and turn power on. The READY light will flash. Release the PRINT switch.
NOTE: The print head does NOT cycle on power-up.

Send data to the IDS152 from the host device. Print the test report (press the AUX switch). Print the Configuration data (press the PRINT switch).

2. Check the Received Characters count. If the count is 0 then check the following:
   The RS232/Current Loop switches in the IDS152.
   The cable connections between the IDS152 and HOST.

3. Check the FRAMING ERRORS and PARITY ERRORS count. If they are NOT 0 then the baud rate or data format is incorrect. Varify that the Serial Port Configuration printed in the Configuration report is the same as the HOST's configuration.

4. Varify that the mode is correct. The mode that is printed should be "Mode 0 - Slave Printer" unless you are using a SPECIAL APPLICATION mode. If you are using a special mode then the meter type will be printed after the mode. Varify that the correct meter type is selected.

5.4.2. MISSING DOT TROUBLESHOOTING.

Missing dots are caused by 1 or more of the following:

1. Broken needle.
2. Blown transistor.
3. Blown drive diode.
4. Blown fuse.

The table below lists the dot driver components in order of dot position. If a dot is missing, check ALL of the dot driver components for the missing dot.

DOT POSITION	FUSE	TXSISTOR	DIODE	DIODE
. 7	F7	Q7	CR17	CR28
. 6	F6	Q6	CR16	CR27
. 5	F5	Q5	CR15	CR26
. 4	F4	Q4	CR14	CR25
. 3	F3	Q3	CR13	CR24
. 2	F2	Q2	CR12	CR23
. 1	F1	Q1	CR11	CR22

6. APPENDIX I. SERIAL COMMUNICATIONS PORT. (25 PIN 'D' CONNECTOR)

6.1 Signal list for serial communications port (25 PIN ‘D’ CONNECTOR)

LIST BY PIN NUMBER		LIST BY SIGNAL NAME	
PIN	SIGNAL	SIGNAL	PIN #
1	CHASSIS GND	RS232 RXD	3
2	RS232 TXD	RS232 TXD	2
3	RS232 RXD	RS232 CTS	5
4	RS232 RTS (Print Request)	RS232 RTS	4
5	RS232 CTS (Busy)	CUR LOOP IN +	8
6	+5 R	CUR LOOP IN –	22
7	GND	CUR LOOP OUT	24
8	CUR LOOP IN +	TTL RTS OUT	25
9	#2 RS232 RXD		
10	#2 RS232 TXD		
11	RS485 +	#2 RS232 RXD	9
12	RS485 –	#2 RS232 TXD	10
13	GND	RS485 +	11
14		RS485 –	12
15	PULSE INPUT +		
16	TTL INPUT (Remote Print Switch)	RTS (+5R)	6
17	TTL INPUT (Remote Aux Switch)	DTR (+8R)	20
18	TTL OUTPUT (Print Request +)		
19			
20	DTR (+8V)		
21	TTL OUTPUT	+5V	23
22	CUR LOOP IN – / PULSE IN –	GND	7,13
23	+5 V	TTL INPUTS	16,17
24		TTL OUTPUTS	18,21,25
25	TTL OUTPUT (open collector)	PULSE INPUT+	15
	(Print Request –)	PULSE INPUT–	22

NOTE: When using RS232 set dip switch 2 on, 1 off.
When using current loop set switch 2 off, 1 on.

Use pin 4 (RTS) for RS232 print request signal.
Use pin 18 for TTL positive true print request.
Use pin 25 for TTL negative true print request.

6.2 RS232 INPUT CONNECTIONS

RS232 INPUT CONNECTIONS		
signal name	direction	pin number
RXD	INPUT to 152	3
CTS	OUTPUT from 152	5
GND		7

6.3 CURRENT LOOP INTERFACE

CURRENT LOOP INTERFACE		
INPUT	Clt +	8
	Clt –	22

NOTE: When using current loop set dip switch 2 OFF, dip switch 1 on

6.4 PULSE INPUT INTERFACE

PULSE INPUT INTERFACE	
Signal name	pin number
Pulse input (+24v)	15
Return (gnd)	22

Note: Pulse input uses pins 15(+) and 22(return). The pulse signal voltage should be 24V. Consult the factory for other voltage ranges.

7. APPENDIX II. CONFIGURATION OPTIONS REFERENCE LIST

SECTION	FUNCTION	FLASH	ON	OFF	(Enter Light)
3.2.1	Auto lf OFF	1	1	0	(Thumbwheel Switch)
	Auto lf ON	1	1	1	
3.2.2	Auto Release OFF	1	2	0	
	Auto Release ON	1	2	1	
3.2.3	Print Wrap OFF	1	3	0	
	Print Wrap ON	1	3	1	
3.2.4	Single Strike	1	4	0	
	Double Strike	1	4	1	
	Tripple Strike	1	4	2	
3.2.5	Bi-Direction OFF	1	5	0	
	Bi-Direction ON	1	5	1	
3.2.6	Invert Print OFF	1	6	0	
	Invert Print ON	1	6	1	
3.2.7	No Paper No Print	1	7	0	
	OK Print No Paper	1	7	1	
3.2.8	Set Top Margin	2	1	x	(x = 0 - 9)
3.2.9	Set Left Margin	2	2	x	(x = 0 - 9)
3.2.10	Print Normal Size	2	3	1	
	Print Enhanced	2	3	2	
	Print Mixed Sizes	2	3	3	
3.2.11	Set Station Number	2	4	x	(x = 0 - 9)
3.3.1	Battery Backup OFF	2	5	0	
	Battery Backup ON	2	5	1	
3.3.2	Set TIME	3	HHMMX		H=hr, M=min, X=0-AM,1-PM 2-24hr
3.3.3	Set DATE	4	MMDDYY		M=mo, D=day, Y=year
3.3.4	Time & Date Format	5	F	P	F=format, P=postiton
3.3.5	Set Ticket Number	2	6	xxxxx	(5 digit ticket #)
3.4.1	Meter Type	7	1	x	x=Meter Type
3.4.2	Weight Units	7	2	x	x=Weight Units

REMEMBER: Set the thumbwheel switch to the correct mode position when done.

8. APPENDIX III. ASCII CONTROL CODES

ASCII codes can be sent to the IDS152 that will control some of the print features. The following table summarizes the control codes that the IDS152 responds to.

Discription	code(HEX)	code(DEC)
PRINT BUFFER AND LINE FEED	0A	10
PRINT BUFFER AND RELEASE PAPER	0C	12
PRINT BUFFER. IF AUTO LF AFTER CR THEN LINE FEED ALSO.	0D	13
BI DIRECTIONAL PRINT ON	19	25
BI DIRECTIONAL PRINT OFF	1A	26
INCREMENT MULTI-STRIKE COUNT	0E	14
MULTI-STRIKE PRINT OFF	0F	15
START MIXED SIZE PRINT.	10	16
START ENHANCE PRINT.	12	18
START NORMAL SIZE PRINT.	14	20
INVERT PRINT.	16	22
NORMAL (UP-RIGHT) PRINT.	18	24
PRINT TIME	1C	28
PRINT DATE	1D	29
PRINT TIME AND DATE	1E	30

APPENDIX IV. ASCII CHART

ASCII	DEC	HEX	ASCII	DEC	HEX	ASCII	DEC	HEX	ASCII	DEC	HEX
NUL	00	00h	<SPACE>	32	20h	@	64	40h	`	96	60h
SOH	01	01h	!	33	21h	A	65	41h	a	97	61h
STX	02	02h	"	34	22h	B	66	42h	b	98	62h
ETX	03	03h	#	35	23h	C	67	43h	c	99	63h
EOT	04	04h	$	36	24h	D	68	44h	d	100	64h
ENQ	05	05h	%	37	25h	E	69	45h	e	101	65h
ACK	06	06h	&	38	26h	F	70	46h	f	102	66h
BEL	07	07h	'	39	27h	G	71	47h	g	103	67h
BS	08	08h	(	40	28h	H	72	48h	h	104	68h
HT	09	09h	)	41	29h	I	73	49h	i	105	69h
LF	10	0Ah	*	42	2Ah	J	74	4Ah	j	106	6Ah
VT	11	0Bh	+	43	2Bh	K	75	4Bh	k	107	6Bh
FF	12	0Ch	'	44	2Ch	L	76	4Ch	l	108	6Ch
CR	13	0Dh	-	45	2Dh	M	77	4Dh	m	109	6Dh
SO	14	0Eh	.	46	2Eh	N	78	4Eh	n	100	6Eh
SI	15	0Fh	/	47	2Fh	O	79	4Fh	o	101	6Fh
DLE	16	10h	0	48	30h	P	80	50h	p	102	70h
X-ON	17	11h	1	49	31h	Q	81	51h	q	103	71h
TAPE	18	12h	2	50	32h	R	82	52h	r	104	72h
X-OFF	19	13h	3	51	33h	S	83	53h	s	105	73h
DC4	20	14h	4	52	34h	T	84	54h	t	106	74h
NAK	21	15h	5	53	35h	U	85	55h	u	107	75h
SYN	22	16h	6	54	36h	V	86	56h	v	108	76h
ETB	23	17h	7	55	37h	W	87	57h	w	109	77h
CAN	24	18h	8	56	38h	X	88	58h	x	100	78h
EM	25	19h	9	57	39h	Y	89	59h	y	101	79h
SUB	26	1Ah	:	58	3Ah	Z	90	5Ah	z	102	7Ah
ESC	27	1Bh	;	59	3Bh	[	91	5Bh	{	103	7Bh
FS	28	1Ch	<	60	3Ch	\	92	5Ch	|	104	7Ch
GS	29	1Dh	=	61	3Dh	]	93	5Dh	}	105	7Dh
RS	30	1Eh	>	62	3Eh	^	94	5Eh	~	106	7Eh
US	31	1Fh	?	63	3Fh	`	95	5Fh	DEL	107	7Fh