<u>KILOTECH</u>

KPOS 1530 POS Scale



Service Manual

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Specification

Top and Front View





Power Supply:

- AC Adapter: $7-9V_{DC} \ge 500$ mA, central positive:
- USB power supply if USB interface is installed

Display:

• 51/2-digit,7-segment, 0.58" (15mm) LCDs

Keypad:

• 3 push buttons

Environment:

- Working temperature: -10°C to 40°C
- Storage temperature: -20°C to 70°C
- Humidity: 10 to 90% RH without condensation

Load cell Excitation:

- 1.6.1 Voltage: 5Vdc
- 1.6.2 Max. Curent: 20mA

Communication:

- Optional Serial port: USB (Virtual RS232), RS232
- Baud Rate: Selectable: 1200-2400-4800-9600-19200-38400 bps
- Data Output Format: 8N1, 701, 7E1
- Protocol: programmable

Faceplate



Symbols on LCD screen

- 2.1 turn on when scale is at zero point and the gross weight is 0
- 2.2 **lb** turn on when measure unit is lb
- 2.3 **oz** turn on when measure unit is oz
- 2.4 **kg** turn on when measure unit is kg
- 2.5 **NET** turn on when net weight is displaying, and the tare weight is not 0; turn off when gross weight is displaying

Key function

Mode			
Normal weighing mode	Turn scale on/off	Zero	Enter Backlight setting
Cal mode	Turn scale on/off	Confirm choice	Enter menu or move to next chapter

Operation Menu Structure

Normal weighing mode (Calibration Switch is off)

Under normal weighing mode, when the seal switch is off, use MENU key to toggle between AL.ON, WT.ON, or AL.OFF, which meaning Backlight On, Backlight auto on when key operation or weight changing, and auto off after 30s elapsed, or Backlight Off. Press Zero to confirm the setting, and the scale will be back to normal weighing mode.



Calibration Switch is on

Under normal weighing mode, when the seal switch is on, press MENU key, "CAL" will be shown in display window, press MENU key to shift between "USER", "END" or "CAL", and press ZERO key to confirm to enter into the menu.



CAL Submenu

LAL				
Submenu1	Submenu2	Option	Remark	
	KG		Setting weight unit.	
WET.UT	LB			
	OZ			
	KG		Setting calibration unit.	
CAL.U I	LB			
	CAL DO		Linear calibration point 0: do zero point	
	CAL.P0		calibration, this point can't be omitted.	
			Linear calibration point 1: do first weight point	
	CAL.P1		calibration, this point can't be omitted and	
			standard weight must be over 10%FS.	
LINE	END.Y	YES	End calibration?	
		NO	YES: back to submenu1;	
	END N	NU	NO: go to do next point calibration	
			Linear calibration poin2: do second weigh	
			point calibration, standard weight must be over	
	CAL.P2		10% FS and be larger than it in CAL.P1, After	
			calibrate the point, it will back to the	
			subme <u>nu</u> 1.	
END			Press 🔰 to confirm to end, and the scale will	
			back to CAL MENU.	

USER Submenu

USER				
Submenu1	Submenu2	Option	Default	Remark
		NONE	RS232	Source of the executed command selection:
				NONE: no any command will be executed ;
		USB		USB: command from COM1 will be executed;
	CMD.SR	RS232		RS232: command from COM2 will be
				executed;
		USB.RS		USB.RS: command from USB or RS232 will be
				executed
	INTEC	NONE	TYPE1	Interface with USB/RS232 (please refer to
60M	INITC	TYPE0-8		7.Details about Serial Communication.)
		1200	9600	Selection of USB/RS232 baud rate
COM		2400		
		4800		
	DUD.RI	9600		
		19200		
		38400		
		8N1	8N1	Selection of USB/RS232 byte format.
	BT.FMT	701		
		7E1		
	END			Press 📡 to confirm to end, and the scale will
	END			back to submenu1.
				Remote TARE sensitivity set:
PHD.RG	0~8		0	0=remote TARE key is disable
				$1 \sim 8$ = sensitivity level is set to $1 \sim 8$.
END				Press 🎴 to confirm to end, and the scale will
				back to USER menu.

Config setting

Calibration Switch is on

Under normal weighing mode, when the seal switch is on, long press MENU + ON/OFF key, "**CONFG**" will be shown in display window, press MENU key to shift between "CAL", "USER", "MISC", "TEST", "END" or "CAL", and press ZERO key to confirm to enter into the menu.

Sub- Menu1		Option	Default	Remark
RESET		NO	NO	reset to default setting
CAP		15KG		
CIII		30KG		Select capacity: 15kg/30lb, 30kg/70lb,
		60KG	15KG	00kg/130lb
AZSM		0-100	8	Zero tracking window: 0=0d, no tracking; 1-100=±(0.2+0.05*(1-100))d /s
	FT1.TH	0-255	40	Enter digital filter1 threshold: $0=no$ filter1; 1-254=filter1 be used only when vibration in $\pm 0.25d^{*}(1-254)$; 255= filter1 be always used
	FLT1.S T	1-64	8	Digital filter1 intensity: 1-64=weak to strong
	FT2.TH	0-255	8	Enter digital filter2 threshold: $0=no$ filter2; 1-254=filter2 be used only when vibration in $\pm 0.25d^{*}(1-254)$; 255= filter2 be always used
	FT2.ST	0-255	240	Digital filter2 intensity: 0-255=weak to strong
FLTER	END			Press to confirm to end, and the scale will back to submenu1.
10.DSP		NO YES	NO	Display weight at 10 times division number under primary unit
END				Press to confirm to end, and the scale will back to CONFG.

Weighing operation:

Power on scale: when scale is off, press ON/OFF key to turn on;

Power off scale: when scale is on, press and hold **ON/OFF** key to turn off the scale.

ZERO: When the weight is stable and within the zero range (2%FS) , press ZERO key to set new zero point-

How to change weight unit

With the calibration switch on, turn on the scale and enter into normal weighing mode.

- Press MENU key, and CAL will be displayed.
- Press **ZERO** key to confirm to enter this mode. A calibration counter will be displayed and then WET.UT.
- Press **ZERO** key to confirm.
- Use **MENU** key to toggle between kg, lb, or oz.
- Press ZERO key to confirm. The scale will show WET.UT
- Use **MENU** key to scroll to END.
- Press **ZERO** key to confirm.
- Scale will restart
- Close calibration switch

The scale will return back to normal weighing mode.

Calibration

Note: Please prepare a standard weight (more than 10% of FS weight) prior to starting calibration.

With the calibration switch on, turn on the scale and enter into normal weighing mode

- Press MENU key, and CAL will be displayed
- Press **ZERO** key to confirm to enter this mode. A calibration counter will be displayed and then WET.UT
- Press MENU key to select CAL.UT
- Press **ZERO** key to confirm
- Press **MENU** to toggle between kg and lb
- Press zero to confirm. The scale will show CAL.UT
- Press **MENU** to select LINE
- Press **ZERO** to confirm
- Scale will show CAL.PO. Remove all weight on scale
- Press **ZERO** to confirm to calibrate the zero point; the zero weight will flash and show **CAL.P1**
- Put the weight (more than 10%FS weight) onto scale
- Set the corresponding weight value on the display by pressing **MENU** key to increase and **ZERO** key to change the position of the cursor (active number will flash)
- Once the correct value has been set, press **ZERO** key to confirm
- Scale will show END.Y and Y is flashing
- Press **ZERO** to confirm
- Scale will show LINE
- Press **MENU** key to select END
- Press **ZERO** to confirm
- Scale will reboot
- Close calibration switch

If scale shows **CAL.Er**" Review the setup parameters and try to recalibrate the scale again

Config menu

In normal weighing mode, when the seal switch on, long press MENU + ON/OFF key, "**CONFG**" will be shown in display window, press MENU key to shift between "CAL", "USER", "MISC", "TEST", "END" or "CAL", and press ZERO key to confirm to enter into the menu.



CONFG Submenu:

Sub- Menu1		Option	Default	Remark
RECET		NO	NO	reset to default setting
		YES		
		15KG		Solast conscitut 1Ekg 20kg 70k
САР		30KG	15KG	60kg/150lb
		60KG		
AZSM		0-100	8	Zero tracking window: 0=0d, no tracking; 1-100=±(0.2+0.05*(1-100))d /s
	FT1.TH	0-255	40	Enter digital filter1 threshold: 0=no filter1; 1-254=filter1 be used only when vibration in ±0.25d*(1-254); 255= filter1 be always used
	FLT1.S T	1-64	8	Digital filter1 intensity: 1-64=weak to strong
FLTER	FT2.TH	0-255	8	Enter digital filter2 threshold: 0=no filter2; 1-254=filter2 be used only when vibration in ±0.25d*(1-254); 255= filter2 be always used
	FT2.ST	0-255	240	Digital filter2 intensity: 0-255=weak to strong
	END			Press b to confirm to end, and the scale will back to submenu1.
10.DSP		NO	NO	Display weight at 10 times division number under primary unit

n.

Serial Communication

- Serial port: Wires come from RS232 connector, and **TXD1**, **RXD1** and **GND** are used.
- USB port: Wires come from USB connector, and **TXD0**, **RXD0** and **GND** are used.
- The baud rate and byte format is set by **USER-COM-BAUD.RT** and **USER-COM-BYT.FMT**. Responses to serial commands will be immediate, or within one weight measure cycle of the scale. One second should be adequate for use as a time-out value by remote (controlling) device.

TYPE-0 and TYPE-1 INTERFACE

Most POS Systems, ECRs and some TEC POS Systems.

1) PROTOCOL

<enq></enq>	-	Initiate comm	unication
<dc2></dc2>	-	Request of we	ight data
	←	<ack></ack>	: Acknowledge the request of weight data
 			Inquiry
	←	<stx></stx>	: Start Transmission
	←	<id></id>	: Scale type identifier
	←	<w5></w5>	: Weight data
	←	<w4></w4>	: Weight data
	←	<w3></w3>	: Weight data
	←	<w2></w2>	: Weight data
	←	<w1></w1>	: Weight data
	←	<bcc></bcc>	:Block Check
	←	<etx></etx>	: End Transmission

Scale Type Identifier

2kg -> G (47H)	-
5kg -> H (48H)	5lb -> K (4BH)
6kg -> C (43H)	-
10kg -> I (49H)	10lb -> L (4CH)
15kg -> A (41H)	15lb -> F (46H)
20kg -> J (4AH)	20lb -> M (4DH)
25kg -> P (50H)	-
30kg -> B (42H)	30lb -> D (44H)
-	50lb -> N (4EH)
60kg -> 0 (4FH)	60lb -> E(45H)
-	120lb-> Q(51H)

Block Check Character

: <BCC> has all data bytes except <STX> and <ETX> through exclusive OR(XOR).

* Parity Bit : Even

- Data Byte : <STX><ID><W5><W4><W3><W2><W1><BCC><ETX>

= Discontinual RS-232C Interface ►				TYPE-2 I	INTER	FACE		
$\blacksquare SHARP ER-AXXX, ER-A450T, New SANYO ECRs using RS-232, TOLEDO 3213 et 1) PROTOCOL <\!\!\! <\!\!\! <\!\!\! <\!\!\! <\!\!\! <\!\!\! <\!\!\! <\!\!$: 1	Discontinual RS-	232C Inter	face ►				
1) PROTOCOL <>>>>>>>>>>>>>>>>>>>>>>>>>>>>>		SHARP	ER-AXXX, I	2R-A4501, Ne	ew SANY	O ECRs usin	ig RS-232,TO	LEDO 3213 e
$\langle W \rangle \longrightarrow \\ \qquad \qquad$	1) P	ROTOCOL						
 	,							
 								
$\begin{array}{cccccccccccccccccccccccccccccccccccc$								
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	<'	W>→						
$(STX > 0XXXX < CR > : is weighing mode or \langle STX \rangle XXXXX < CR > : kg weighing mode CR = STATUS BYTE == (ASCII code) STX : 02H (ASCII code) STX : 02H (ASCII code) STX : 02H (ASCII code) CR : 0DH (ASCII code) CR : 0DH (ASCII code) EX) Weight : 12.34 lb ECR \qquad SCALE = (ASCTI SCALE + (ASCTI$					Res	sponse	omv	
$Error message : ? == STATUS BYTE == $ $PARITY ALWAYS == 1 \qquad ZERO \qquad MINUS \qquad OVERLOA \qquad MOTION \\ \hline Bit 7 \qquad Bit 6 \qquad Bit 5 \qquad Bit 4 \qquad Bit 3 \qquad Bit 2 \qquad Bit 1 \qquad Bit 0 \\ \hline cf) \qquad W : 57H (ASCII code) STX : 02H \\ (ASCII code) \\ CR \qquad : ODH (ASCII code) \\ \hline Ex) Weight \qquad : \qquad 12.34 lb \\ ECR \qquad SCALE \\ W < 57H > < $			<stx> UXX</stx>	XX <cr> : Ib</cr>	weighin	g mode or	<\$1%>	
$== STATUS BYTE ==$ $\boxed{PARITY ALWAYS==1} \qquad ZERO \qquad MINUS \qquad OVERLOA \qquad MOTION \\ \hline Bit 7 \qquad Bit 6 \qquad Bit 5 \qquad Bit 4 \qquad Bit 3 \qquad Bit 2 \qquad Bit 1 \qquad Bit 0 \\ \hline Cf) \qquad W: 57H (ASCII code) STX: 02H \\ (ASCII code) \\ CR \qquad : ODH (ASCII code) \\ \hline Ex) Weight \qquad : \qquad 12.34 lb \\ \hline ECR \qquad SCALE \\ W<57H> \\ \leftarrow \qquad <02H><30H><31H><32H><33H><34H><0DH> \qquad : ASCII code \\ \hline STX \qquad 0 \qquad 1 \qquad 2 \qquad 3 \qquad 4 \qquad CR \\ \hline \end{tabular}$			XXXXX <uf Error moss</uf 	x > : Kg weight	ing mode	e wto> <cp></cp>		
$== STATUS BYTE ==$ $\begin{array}{c c c c c c c c c c c c c c c c c c c $			Error mess	age : <51 x>?	<status t<="" td=""><td>Jyte><cr></cr></td><td></td><td></td></status>	Jyte> <cr></cr>		
$== \text{ STATUS BYTE} ==$ $\begin{array}{c c c c c c c c } \hline \textbf{ALWAYS} == 1 & \textbf{ZERO} & \textbf{MINUS} & \textbf{OVERLOA} & \textbf{MOTION} \\ \hline \textbf{Bit 7} & \textbf{Bit 6} & \textbf{Bit 5} & \textbf{Bit 4} & \textbf{Bit3} & \textbf{Bit 2} & \textbf{Bit 1} & \textbf{Bit 0} \\ \hline \textbf{Bit 7} & \textbf{Bit 6} & \textbf{Bit 5} & \textbf{Bit 4} & \textbf{Bit3} & \textbf{Bit 2} & \textbf{Bit 1} & \textbf{Bit 0} \\ \hline \textbf{Cf} & \textbf{W}: 57H (ASCII code) STX : 02H \\ (ASCII code) \\ CR & : ODH (ASCII code) \\ \hline \textbf{CR} & : ODH (ASCII code) \\ \hline \textbf{Ex}) Weight & : & 12.34 \text{ lb} \\ \hline \textbf{ECR} & SCALE \\ N<57H>+ \\ \hline () \\ () \\ \hline () \\ () \\ \hline ($								
PARITYALWAYS==1ZEROMINUSOVERLOAMOTIONBit 7Bit 6Bit 5Bit 4Bit3Bit 2Bit 1Bit 0cf)W: $57H$ (ASCII code) $STX: 02H$ (ASCII code)CR: ODH (ASCII code)Ex) Weight: 12.34 lbECRSCALEN<57H> $\leftarrow< 02H > < 30H > < 31H > < 32H > < 34H > < 0DH > : ASCII codeSTX01234CR$				== STAT	US BYTE	:==		
Bit 7Bit 6Bit 5Bit 4Bit 3Bit 2Bit 1Bit 0cf)W: 57H (ASCII code)STX: 02H(ASCII code)CR: ODH (ASCII code)Ex) Weight:12.34 lbECRSCALEW<57H>> \leftarrow <02H><30H><31H><32H><34H><0DH>: ASCII codeSTX01234CR	PARITY	ALWAYS==1		ZERO		MINUS	OVERLOA	MOTION
cf) W: 57H (ASCII code) STX: 02H (ASCII code) CR : ODH (ASCII code) Ex) Weight : 12.34 lb ECR SCALE $N < 57H > \cdots \rightarrow $ $\leftarrow \cdots \leftarrow \sim < 02H > < 30H > < 31H > < 32H > < 33H > < 34H > < 0DH > : ASCII code STX 0 1 2 3 4 CR$	Bit 7	Bit 6	Bit 5	Bit 4	Bit3	Bit 2	Bit 1	Bit 0
cf) W: 57H (ASCII code) STX : 02H (ASCII code) CR : ODH (ASCII code) Ex) Weight : 12.34 lb ECR SCALE $W < 57H > \cdots \rightarrow $ $\leftarrow \cdots \rightarrow $ $< 02H > < 30H > < 31H > < 32H > < 33H > < 34H > < 0DH > : ASCII code$ STX 0 1 2 3 4 CR								
(ASCII code) CR : ODH (ASCII code) Ex) Weight : 12.34 lb ECR SCALE $W<57H> \cdots \rightarrow$ $\leftarrow \cdots \rightarrow$ $<02H><30H><31H><32H><33H><34H><0DH> : ASCII code STX 0 1 2 3 4 CR$	cf) W:	57H (ASCII code	e) STX : 02F	1				
Ex) Weight : 12.34 lb ECR SCALE N<57H> < 02H><30H><31H><32H><34H><0DH> :ASCII code STX 0 1 2 3 4 CR	(AS		(codo)					
Ex) Weight : 12.34 lb ECR SCALE N<57H>+ < <02H><30H><31H><32H><34H><0DH> :ASCII code STX 0 1 2 3 4 CR	CK	: UDH (ASCII	couej					
Ex) Weight : 12.34 lb ECR SCALE $W<57H> \leftarrow <02H><30H><31H><32H><34H><0DH> : ASCII code STX 0 1 2 3 4 CR$								
ECR SCALE $W < 57H > \cdots \rightarrow$ $\leftarrow \cdots \qquad <02H > <30H > <31H > <32H > <34H > <0DH > : ASCII code$ STX 0 1 2 3 4 CR	Ex) Weight	: 12.34 lt	0					
W<57H>→ ← <02H><30H><31H><32H><34H><0DH> : ASCII code STX 0 1 2 3 4 CR	FCR	SCALF	7					
← <02H><30H><31H><32H><33H><34H><0DH> : ASCII code STX 0 1 2 3 4 CR	N<57H>	→	-					
STX 0 1 2 3 4 CR	↔	<02H	><30H><3	1H><32H><	33H><34	4H><0DH>	: ASCII co	de
		STX	1	2 3	4	CR		

TYPE-3 INTERFACE
: Continual RS-232C Interface
SHARP ER-AXXX, New SANYO ECRs using RS-232, TOLEDO 3213 etc
1) PROTOCOL
<w>→</w>
← Response
<stx> 0XXXX <cr> : Ib weighing mode</cr></stx>
<stx> XXXXX <cr> : kg weighing mode</cr></stx>
Error message : <stx>?<status byte=""><cr></cr></status></stx>
<cr>→ Stop transmitting data</cr>
Ex) Weight : 12.34 lb
ECR SCALE
W<57H>→
←<02H><30H><31H><32H><34H><0DH> : ASCII code
STX 0 1 2 3 4 CR
←<02H><30H><30H><30H><30H><0DH> : ASCII code
STX 0 0 0 0 CR
←<02H><3FH><44H><0DH>
STX ? MINUS CR
2) TRANSMISSION PROCEDURE
(1) POS SCALE sends data to External Device whenever weight is changed after receiving <w> signal from</w>
the External Device.
(2) POS SCALE stops sending data when receives <cr> signal from the External Device.</cr>
ECR SCALE
<₩>→
← DATA (If weight is changed)
← DATA (If weight is changed)
<cr>→ Stop transmitting data</cr>

Г

TYPE-4 INTERFACE

NCI ECR(NCR2170), SAMSUNG ER-5100, ER-5115, CRS .etc

1) PROTOCOL

<W> -----→ <CR> ----→ Inquiry ←----- <LF> XX.XXX LB <CR> ←----- <LF> S b1b2 <CR><ETX> lb CASE $\leftarrow ----- < LF > XX.XXX$ KG <CR> ←----- <LF> S b1b2 <CR><ETX> XX.XXX = Weight value (A) = The Characters L and B (B) LB (C) KG = The Characters K and G (D) S = The Character S (E) b1b2 = Two status Characters

i> Status Bytes

Bit7	Parity Bit	Parity Bit
Bit6	0	0
Bit5	1 (Always 1)	1 (Always 1)
Bit4	1 (Always 1)	1 (Always 1)
Bit3	0	0
Bit2	0	0
Ri+1	1 = Scale at Zero	1 = Over Capacity
DILI	0 = Not at Zero	0 = Not Over Capacity
D:+0	1 = Scale in Motion	1 = Under Capacity
BILU	0 = Stable	0 = Not Under Capacity
ii>	Simplified Status Codes	

B1	B2	
ASCII Character	ASCII Character	STATUS
(ASCII Code)	(ASCII Code)	Definition
0 (30H)	0 (30H)	ОК
1 (31H)	0 (30H)	Motion
2 (32H)	0 (30H)	Scale at Zero
0 (30H)	1 (31H)	Under capacity
0 (30H)	2 (32H)	Over capacity

TYPE-5 INTERFACE

► NCI GENERAL, SAMSUNG ER-5115, ER-5100 and Most P.O.S Software

1) PROTOCOL

<w></w>	→		
<cr></cr>	→		
•••••			Inquiry
	←	<lf> XX.XXX</lf>	LB <cr></cr>
	←	<lf> b1b2 <cr< th=""><th>><etx></etx></th></cr<></lf>	> <etx></etx>
	•••••		lb CASE
	←	<lf> XX.XXX</lf>	KG <cr></cr>
	←	<lf> b1b2 <cr< th=""><th>><etx></etx></th></cr<></lf>	> <etx></etx>
	XX.XXX = Weig	ght value (Decima	ıl point: variable)
	LB = The Char	acters L and B	
	KG = The Char	acters K and G	
	OZ = The Char	acters O and Z	
	b1b2 = Two st	atus Characters	

i>	Status	Bytes
----	--------	-------

Bit7	Parity Bit	Parity Bit
Bit6		0
Bit5	1 (Always 1)	1 (Always 1)
Bit4	1 (Always 1)	1 (Always 1)
Bit3		0
Bit2		0
D;+1	1 = Scale at Zero	1 = Over Capacity
DILI	0 = Not at Zero	0 = Not Over Capacity
Di+0	1 = Scale in Motion	1 = Under Capacity
BILU	0 = Stable	0 = Not Under Capacity

ii> Simplified Status Codes

B1	B2	
ASCII	ASCII	STATUS
Characte	Characte	Definiti
0	0	ОК
1	0	Motio
2	0	Scale at Zero
0	1	Under capacity
0	2	Over capacity

					TY	PE-6	INT	ERFA	CE				
		- 8 D	ata bit										
		- Nor	ne pari	ty									
► 1 stop bit													
		- SAI	MSUN	G ECR	(ER-67	70)							
	1) PROI	OCOL										
EXTERNA	L DEVI	CE			POS	SCALI	Ε						
<enq></enq>				→ Iı	nitiate	comm	unicati	on					
		←		~	<ack>:</ack>	Acknow	vledge t	he requ	lest of v	veight d	ata		
<dc1> or</dc1>	<dc2></dc2>		→	[DC1 : Fo	or Weig	ht Data						
				Γ	DC2 : Fo	or All Da	ata						
		←		9	Send Da	ata Bloc	k						
• The	Data Tı	rain											
• The "DC1" SOH STX	Data Ti STA	rain SIGN	W5	W4	W3	W2	W1	W0	UN1	UNO	BCC	ETX	EOT
• The "DC1" SOH STX Command	Data Ti STA	rain SIGN	W5	W4	W3 DATA I	W2 BLOCK	W1	W0	UN1	UNO	BCC	ETX	EOT

TYPE-7 INTERFACE Continuous output **Continuous output** <STX> XXXXX.XX^oz<ETX> or <STX> XXXXXXX^oz<ETX> <STX> XXXX.XXX^kg<ETX> or <STX> XXXXX.XX^kg<ETX> <STX> XXXX.XXX^lb<ETX> or <STX>XXXXX.XX^lb<ETX> **TYPE-8 INTERFACE** Output when stable Output when stable When the scale shows a positive weight and stable signal it will broadcast **once** the following data train. <STX> XXXXX.XX^oz<ETX> or <STX> XXXXXXX^oz<ETX> <STX> XXXX.XXX^kg<ETX> or <STX> XXXXX.XX^kg<ETX> <STX> XXXX.XXX^lb<ETX> or <STX>XXXXX.XX^lb<ETX>

Connectors and Jumpers

Overview of Connectors or jumpers on PCB



Load Cell Connector

PIN	DEFINITION	IN/OUT/POWER	ELECTRICAL LEVEL
1	Excitation +	Power output	5±0.3 Vdc (≤0.12A)
2	Sense +	Power input	5±0.3 Vdc
3	Excitation-	Power ground	0Vdc
4	Sense -	Power input	≤0.5 Vdc
5	Signal +	Signal Input	2.5±0.3 Vdc
6	Signal -	Signal Input	2.5±0.3 Vdc
7	Shield	-	-

Adapter

PIN #	DEFINITION	IN/OUT/POW	ELECTRICAL LEVEL
1	Adapter input voltage – (GND)	Power ground	0Vdc
2	Adapter input voltage +	Power input	6.5Vdc(6-9Vdc,≥0.5A)

Serial Input Output Connector

PIN #	DEFINITION	IN/OUT/POWER	ELECTRICAL LEVEL
2	RS232 Transmit on UART0	Output	-12 to +12Vdc
3	RS232 Receive on UART0	Input	-12 to +12Vdc
5	GND	Power ground	0Vdc

USB					
PIN #	DEFINITION	IN/OUT/POWER	ELECTRICAL LEVEL		
1	GND of VDD	Power ground	0Vdc		
2	USB D+		0-5Vdc		
3	USB D-		0-5Vdc		
4	USB Power	Power input	5±0.25 Vdc		

Calibration switch

CONNECTED PINS	FUNCTION
push	Calibration Enabled
No push	Calibration Disabled

- NET Socket J2 and J3: used for display
- JTAG used by Manufacture

Troubleshooting Error Codes

0	Zero point is over the setting range
0	Zero point is below the setting range
Ad	Signal to ADC is over max. range
Ad	Signal to ADC is below min. range
	Weight is over upper limitation, or display data is over limitation
	Weight is below lower limitation
EEP.E1	CONFIG or CAL parameters are not correctly set
EEP.E2	USER parameter is not correctly set
Lo.bAt	Battery voltage is lower than setting.
САР	Next displaying content is Capacity
CAP.ER	Parameters about Capacity is not correct
CAL.Px	Calibration on point(x)
CA.OFF	Calibration Seal Switch is on OFF position
CAL.ON	Calibration Seal Switch is on ON position
CAL.Er	Calibration error, maybe input data or loaded weight is incorrect, unstable, un-linear
CA.End	Calibration is end
OFF	Power OFF the indicator

Troubleshooting						
SYMPTOM	PROBABLE CAUSE	REMEDY				
Ad	Load cell wires to indicator are incorrectly connected, or shorted, or opened; or ADC, load cell are damaged	Make sure wires are ok and correctly connected. Replace load cell or ADC chip, Service required.				
0	Weight reading exceeds Power On Zero limit.	Make sure scale platform is empty. Perform zero calibration.				
0	Weight reading below Power On Zero limit.	Install platform on scale. Perform zero calibration.				
	Weight reading exceeds Overload limit, or The weight value cannot be displayed in the current unit of measure because it exceeds 6 digits	Reduce load on scale until weight value can be displayed. Use a more appropriate unit of measure. Re-set some parameters of COFIG or UAER.				
	Weight reading below Under load limit.	Install platform on scale. Perform zero calibration				
EEP.E1	CONFIG or CAL parameters are not correctly set	Re-set items in CONFG, do calibration				
EEP.E2	USER parameter is not correctly set	Re-set items in USER				
CAP.ER	Capacity parameters are not correct	Set PRIM.N/PRIM.d/ SECD.N to correct number, make sure capacity not more than 6 digit				
CAL.Er	Calibration error, maybe input data or loaded weight is too small, too big, unstable, un-linear	Input correct data, load correct weight onto platform, Service required				
Not turn on.	Power cord not plugged in or properly connected. Power outlet not supplying electricity. Battery discharged. Other failure.	Check power cord connections. Make sure power cord is plugged into the power outlet. Check power source. Replace batteries. Service required.				
Cannot zero the display or will not zero when turned on.	Load on scale exceeds allowable limits. Load on scale is not stable. Load cell damage.	Remove load on scale. Wait for load to become stable. Service required.				
Battery symbol is empty or Lo.bAt is shown	Batteries are discharged.	Charge batteries				

RS-232 cable pinout

SCALE	CABLE(9 pins)	HOST
DB9(Female)		DB9(Male)
PIN2 TXD	33	PIN2 RXD
PIN3 RXD	22	PIN3 TXD
PIN5 GND	5555	PIN5 GND

Interface reference

Cash register	Туре	Baud rate	Parity	Pinout
Description				
Sharp	2	9600	7E1	22
				33
				55
Sam4S	4	9600	7E1	23
				32
				55
Samsung SPS 520	4	9600	7E1	23
				32
				55
Sharp UP-820N	2	9600	7E1	23
				32
				55
TEC 1595	1	2400	7E1	23
				32
				55
Uniwell DX 795	2	9600	7E1	23
				32
				55
PC America	4	9600	7E1	
Maitre'D	2	9600	7E1	22
				33
				55
				4
				6 Jumped together
				8
Casio TE 2200	4	9600	7E1	22
and TE 2400				
				33
				55
			Female side	46 Jumped together
				78 Jumped together

Maitre'D Setup

(Maitre'D Millennium, and later versions of Maitre'D)

Maitre'D Setup

System Configuration / View / Options / Devices

Scale Type:

Weigh-Tronix 6710 (lbs)

Note: Other than the scale's weight limit, the interface is also limited to a maximum price of 99.99

Restaurant	Matériel	
 Configuration Région Rapport Matériel Ontions 	i Port de l'Ecriveur de Cartes	Ned
- Transport Répertoires	Madèla d'Estivour de Cates	Panacord
Frais Fixes Page d'accueil		Maide Teneir (2710 (ba)
	Type de Balance	
	Afficheur de Cuisine	rosera cvm en sene / arricneur externe ▼
	Afficheur Externe	Aucun
	Lecteur Biométrique	DigitalPersona U.are.U
	Module d'enregistrement des ventes	Aucun
() +		

P.O.S. Control / Workstations / Options / Workstation # / Peripherals / Scale

- **Type:** Serial
- **Port:** #
- Driver: Generic

Configuration Périphérique
Balance
Ivpe Série 🔹
Port Port #1
Pilote Générique 🔹

P.O.S. Control / Revenue center / Items Setup / Function

Function: Scale

Division: Weight

Eonction teur tion Division Poids Couleur de CVM Par défaut Classe d'Item Non defini Item Principal du Combo Description Ouverte Prix Ouvert	roduit	🐺 Fonction	
	 Fonction ptions ens Compteur onfiguration 	Eonction Eonction Division Poids Couleur de CVM Par défaut Classe d'Item Non defini Item Principal du Combo Description Ouverte Prix Ouvert	

P.O.S. Control / Revenue center / Items Setup / Links

If necessary, enter a weight, in thousandth of pounds, in the Tare field.

Detions	Options			
Liens		Inclus dans r	apport	
Configuration		☑ Disponible		
		Eiche d'évalu	lation	
	Autres			
	Décalage/Tare	0	0.000 lb	
	Nombre d'items de CVM	0		
	Nombre de Repas	0		
	Priorité d'affichage	0		

Cabling

From To DB-9 Female DB-9 Male

Pin 2→	Pin 2
Pin 3→	Pin 3
Pin 5→	Pin 5
Shell→	Shell
Pin 4	
Pin 6 Jumped toge	ther
Pin 8	

Scale Setup

- Set CAL switch into calibration mode
- Turn on scale
- Press menu key to enter call mode screen will show CAL
- Press menu key screen will show **USER**
- Press zero key Screen will show COM
- Press zero key screen will show CMD.SR
- Press zero key
- Press menu key to scroll. Select RS232

- Press zero key to confirm screen will show CMD.SR
- Press menu key to confirm and go to next step
- Screen will show INTFC press zero to confirm
- Press menu key to scroll. Select **TYPE 2** and press zero key to confirm
- Press menu key to confirm and go to next step
- Screen will show **BUD.RT** press zero to confirm
- Press menu key to scroll. Select 9600 and press zero key to confirm
- Screen will show BUD.RT press zero to confirm
- Press menu key to go to next step
- Screen will show BT.FMT Press zero to select
- Press menu key to scroll. Select **7E1** and press zero key to confirm
- Press menu key to scroll. Select END and press zero key to confirm
- Press menu key to scroll. Select END and press zero key to confirm
- Press menu key to scroll. Select END and press zero key to confirm
- Set CAL switch into normal mode

Pc America Setup

Scale Setup

- Set CAL switch into calibration mode
- Turn on scale
- Press menu key to enter call mode screen will show CAL
- Press menu key screen will show USER
- Press zero key Screen will show **COM**
- Press zero key screen will show CMD.SR
- Press zero key
- Press menu key to scroll. Select RS232
- Press zero key to confirm screen will show CMD.SR
- Press menu key to confirm and go to next step
- Screen will show INTFC press zero to confirm
- Press menu key to scroll. Select TYPE 4 and press zero key to confirm
- Press menu key to confirm and go to next step
- Screen will show BUD.RT press zero to confirm
- Press menu key to scroll. Select 9600 and press zero key to confirm
- Screen will show BUD.RT press zero to confirm
- Press menu key to go to next step
- Screen will show BT.FMT Press zero to select
- Press menu key to scroll. Select **7E1** and press zero key to confirm
- Press menu key to scroll. Select END and press zero key to confirm
- Press menu key to scroll. Select END and press zero key to confirm
- Press menu key to scroll. Select END and press zero key to confirm
- Set CAL switch into normal mode

Setup CRE/RPE

Once the KPOS 1530 has been setup and connected to the computer, and powered on you can configure it in CRE/RPE.

- To configure the scale in CRE/RPE
- Select Setup and then Setup Screen



Under the Hardware tab, use the Weight Scale Type as Weightronics NCI-6720 then selecting the appropriately matching COM port.

