

LP-II

**Electronic Price Computing
Label/Receipt Printing Scale**

NETWORK MANUAL

REV: 2.00 Jan. 2002

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TABLE OF CONTENTS

PAGE

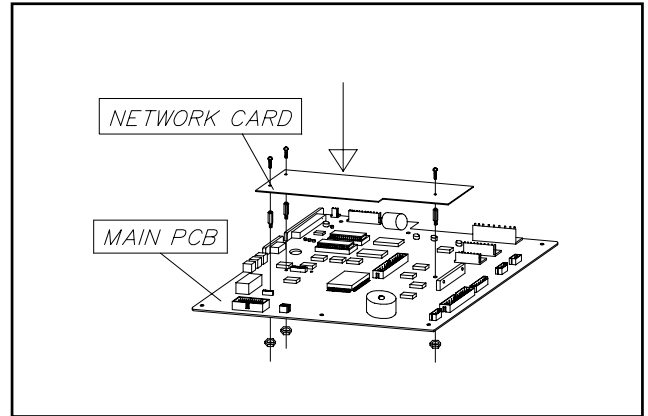
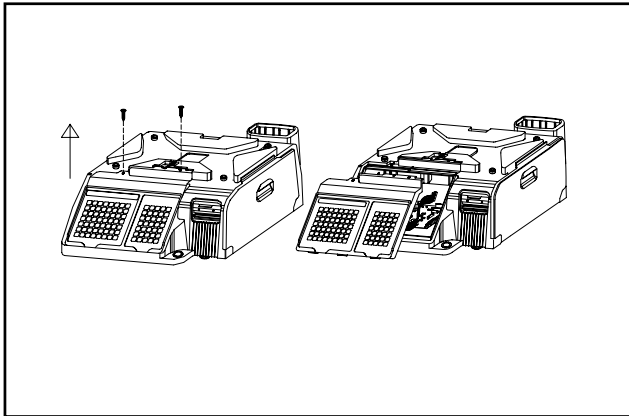
1 Network Installation.....	1
1.1 Installing the Network Memory Card	1
1.2 Interface	2
1.2.1 PC master Ethernet connection.....	2
1.2.2 Scale master Ethernet connection with PC (RS232C)	3
1.2.3 Scale master Ethernet connection without PC	4
1.3 Wire configuration	5
1.3.1 Ethernet wire – straight cable and crossover cable.....	5
1.3.2 RS232C wire	5
1.4 Network Mode Settings - CAL Mode.....	6
1.5 Network Considerations	8
1.6 Installing the Slave Scales (#2 to 32#)	8
1.7 Installing the Master Scale (#1)	8
2 Network Management - Program Mode	9
2.1 Network Mode	9
2.2 Network Copy	12
2.3 PLU Delete.....	15
2.4 Lock Network.....	16
2.5 Unlock Network	17
2.6 Check Scale	17
3 Floating Clerk.....	18
3.1 Networked Floating Clerk Option	18
3.2 Non-Networked Floating Clerk Option	19
3.3 VOID key in Floating Clerk Mode	19
APPENDIX : Network connection example.....	21

1 Network Installation

1 Network Installation

1.1 Installing the Network Memory Card

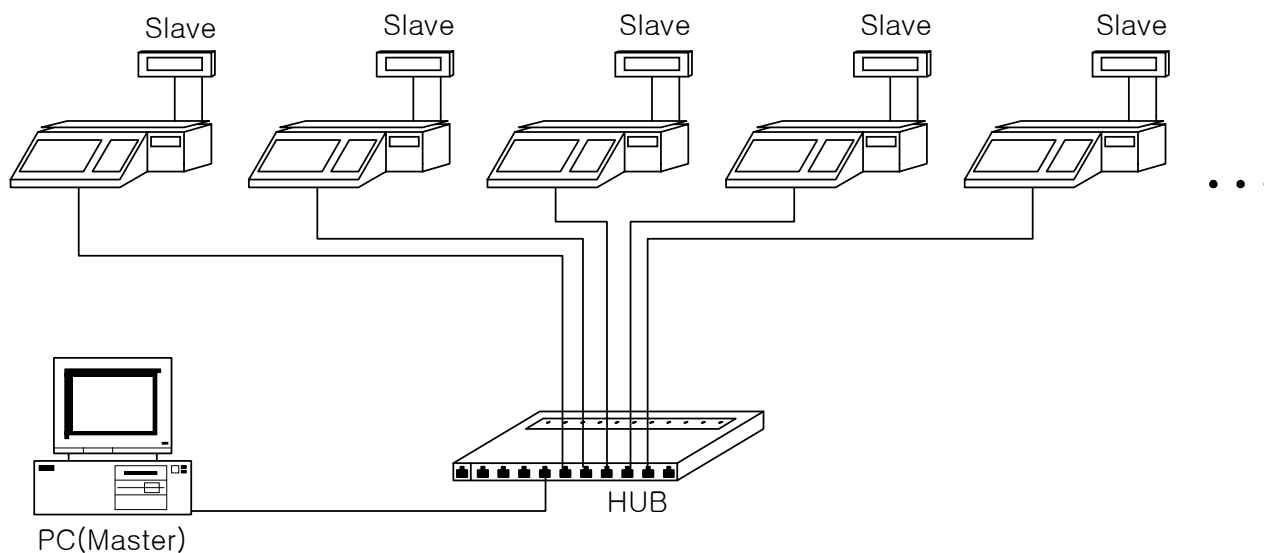
1. **Make sure that the Main Power switch is OFF & that the scale is unplugged.**
2. Remove the keyboard:
 - A. Remove the 2 keyboard screws on top of the upper case.
 - B. Lay the keyboard face down.
3. Plug the Network Card into connectors J5 & J6 on the Main PCB. **Make sure that all of the pins are aligned properly and that the 2x9 connector is facing to the rear of the scale.**
4. Attach the 2 grounding screws to the Network Card PCB. **Do not over tighten.**
5. Reassemble in reverse order.



1 Network Installation

1.2 Interface

1.2.1 PC master Ethernet connection

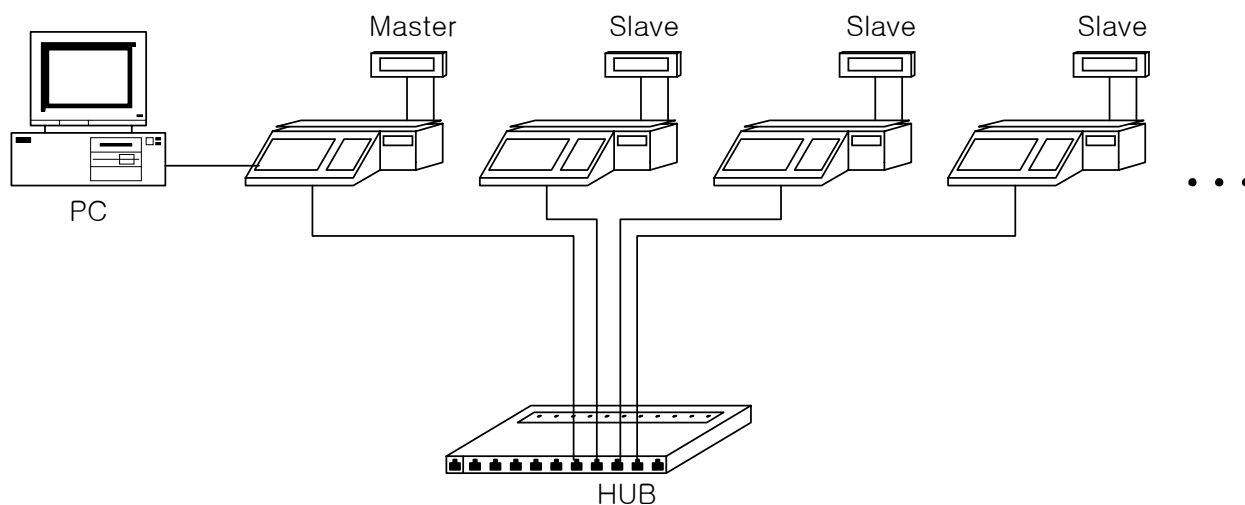


NOTE: Only 31 scales can be connected in this method.
PC must have Ethernet card.
Master scale number(#1) cannot be used.

1. Scale number(for slave) : 2~32
2. PC master setting : Yes (refer to 1.4 Network Mode Settings – CAL Mode)
3. Ethernet(10BaseT) SPEC
 - maximum segment length : 100 meter
 - media : Unshielded twisted-pair cable
 - topology : star

1 Network Installation

1.2.2 Scale master Ethernet connection with PC(RS232C)

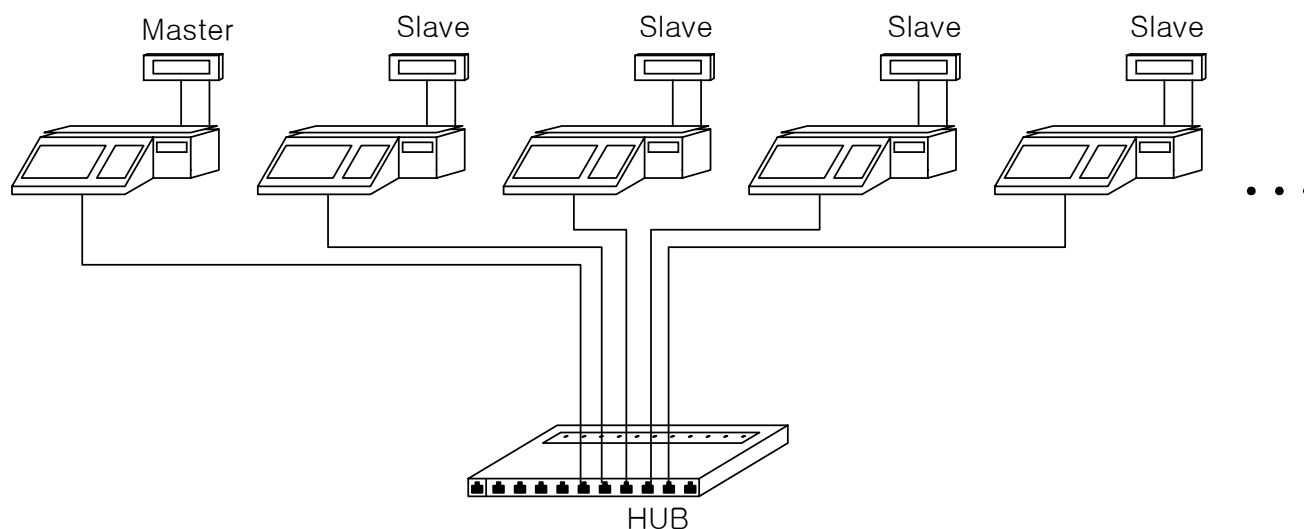


NOTE: Only 32 scales can be connected in this method.

1. Scale number(for master) : 1
2. Scale number(for slave) : 2~32
3. PC master setting : No (refer to 1.4 Network Mode Settings – CAL Mode)
4. RS232C SPEC
 - baud rate : 19200 bps
 - data length : 8 bit
 - parity : none
 - stop bit : 1 bit
5. Ethernet(10BaseT) SPEC
 - maximum segment length : 100 meter
 - media : Unshielded twisted-pair cable
 - topology : star

1 Network Installation

1.2.3 Scale master Ethernet connection without PC



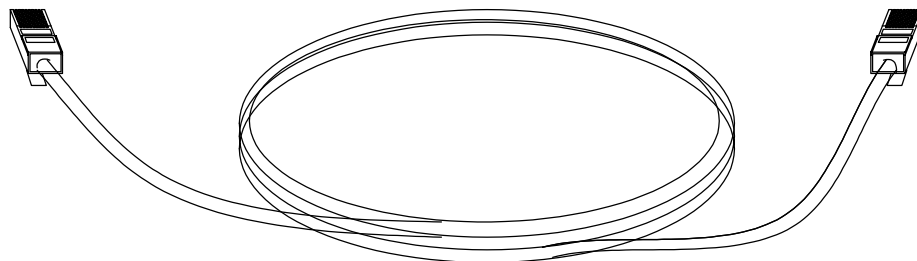
NOTE: Only 32 scales can be connected in this method.

1. Scale number(for master) : 1
2. Scale number(for slave) : 2~32
3. PC master setting : No (refer to 1.4 Network Mode Settings - CAL Mode)
4. Ethernet(10BaseT) SPEC
 - maximum segment length : 100 meter
 - media : Unshielded twisted-pair cable
 - topology : star

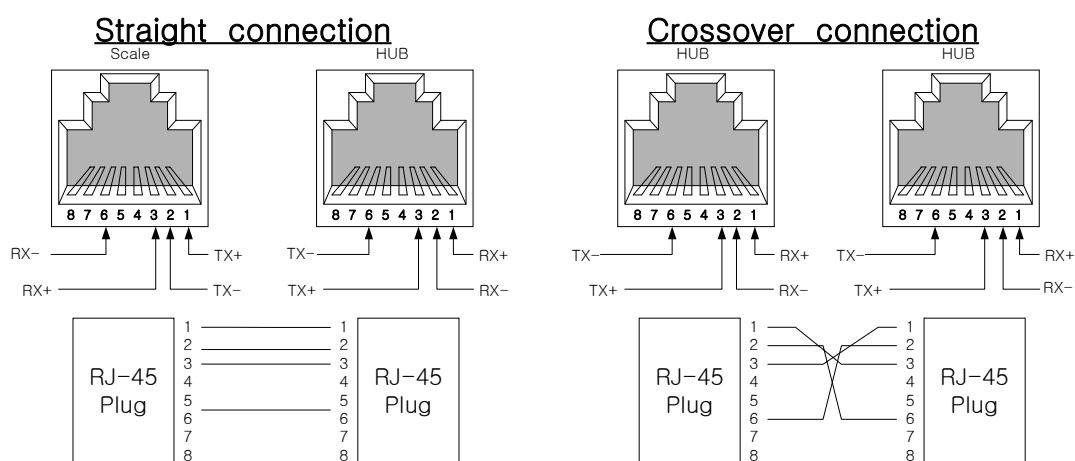
1 Network Installation

1.3 Wire configuration

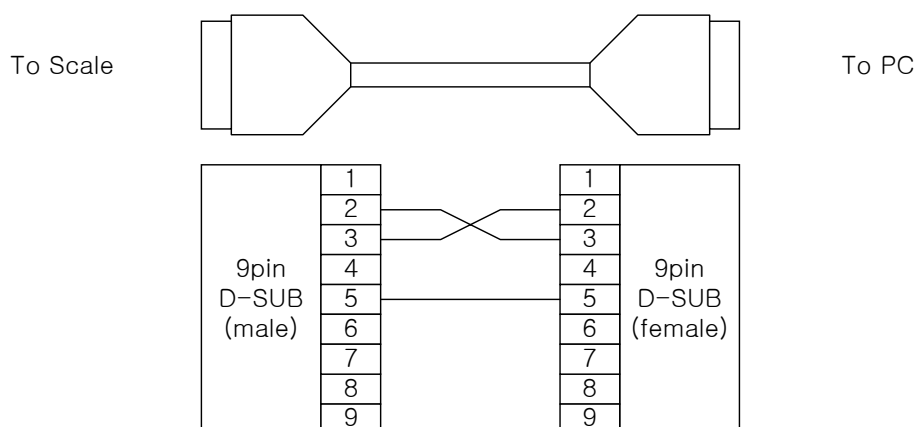
1.3.1 Ethernet wire – straight cable and crossover cable



NOTE: Twisted pair Category-5 (UTP) cable with RJ45 Plug

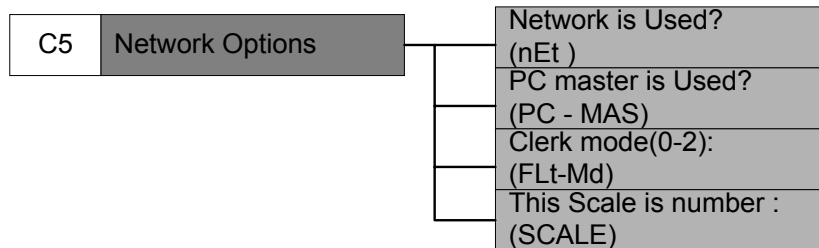


1.3.2 RS232C wire



NOTE: 1,4,6,7,8,9 pin do not use.

1 Network Installation



1.4 Network Mode Settings - CAL Mode

Enter the CAL Mode : refer to Service manual

*** IF You want to know detail explanation about TCP/IP AND UDP, refer to RFC 793, RFC 768 참조**

Once at the CAL Main Menu screen, press the 5 key for Network Options. The Network Options screen will then appear as follows:

		NUMERIC
< CAL: NETWORK OPTIONS >		
Network Is Used?	(Y/N) :	[Y]
PC Master is Used?	(Y/N) :	[N]
Clerk Mode (0-2) :		[1]
This scale is number	:	[1]

Network Is Used: This determines whether the scale will communicate through the Network. **This setting is independent of Network Card Detection, so be sure to follow the Network Installation instructions.**

PC Master is Used: This determines the master type.

C5-1	nEt
	4
C5-2	PC-MAS
	4

Floating Clerk Mode: you can select Floating clerk mode from 0 to 2.

(0: no-floating clerk 1: Floating clerk 2: Standard Clerk)

C5-3	FLt-Md
	0

This scale is number: Enter the Scale number. Scale Master is number 1. If you select PC master, you have to assign from number 2 to number 32.

C5-4	SCALE
	1

1 Network Installation

Once at the CAL : NETWORK OPTIONS screen, press the Y key for PC Master Options. The Network Options screen will then appear as follows:
All options have default value.

NUMERIC

(1 / 2) < CAL: NETWORK OPTIONS >

Scale IP Address	:	[192.168.0.1]
Sub Net Mask	:	[255.255.0.0]
Gateway	:	[192.168.0.254]
PC IP Address	:	[192.168.0.254]
Scale UDP Port	:	[2002]	

Scale IP Address: you must assign Scale IP. This is used of scale and PC networking

Reply suitable answer about sub-options

CS - 1

5- IP

192.168.

Sub Net Mask:

Input subnet mask to come under your Network system

CS - 2

MASK

255.255.

Gateway:

Input Gateway to come under your network system

CS - 3

GATEWAY

192.168.

PC IP Address: Input Master PC IP Address

CS - 4

PC-IP

192.168..

Scale UDP Port

: UDP port in TCP/IP to receive data from PC. Default is 2002.

CS - 5

5-Port

2002..

1 Network Installation

		NUMERIC
(2/ 2)	< CAL: NETWORK OPTIONS >	
PC UDP Port		: [2001]

PC UDP Port

: UDP port in TCP/IP to receive data from scale. Default is 2001.

CS - 6	PCPort
	2001

1.5 Network Considerations

The LP-2 uses a special high speed network called Ethernet. This allows you to connect up to 32 scales per installation site. The network is setup as a Master/Slave network that allows you to take consolidated reports, transmit program data remotely, and manage up to 32 departments per site. The network conduit configuration is star-topology. With a maximum speed of 4 Mbps and a max length of 100 meters (325 feet), the LP-2 network can handle just about any application.

Please review the following when installing a network.

1. Check the overall network size and make sure that it falls within the limits.
2. Even though Ethernet cabling can be used, the use of Twisted pair Category-3,4,5 cable is preferred.
3. The network can run with a Master scale and no Mirror Master.
4. If you run into any trouble, please contact the CAS Service Department. We have on-staff network specialists that can assist you if you run into any trouble or need to exceed network specifications.

1.6 Installing the Slave Scales (#2 to 32#)

1. Install slave scale in its final location.
2. (Optional) Span calibrate the scale and go to REG mode when done.
3. Follow all of the directions for section **1.1 Installing the Network Memory Card**.
4. Continue for this procedure (steps 1 to 4) for all slave scales #3 to #32.
5. All scales should be OFF at this time.

1.7 Installing the Master Scale (#1)

1. Install the Master scale in its final location.
2. (Optional) Span calibrate the scale and go to REG mode when done.
3. Follow all of the directions for section **1.1 Installing the Network Memory Card**.
4. The Master scale should be OFF at this time.
5. If Pc master is selected, don't use master scale number(#1)

3 Floating Clerk

2 Network Management - Program Mode

Enter the Program Mode : refer to owner's manual

When the screen is at the **Main Menu** Press **0**, enter a level 3 password when prompted, and then the screen will read:

< NET : NETWORK MANAGEMENT >

1.Network Mode	4.Lock
2.Network Copy	5.Unlock
3.PLU Delete	6.Check Scale

P0

1

nEt

ModE

You can see Network Management menu by using arrow key or page Up and Page down key.

2.1 Network Mode

Once at the **NET : NETWORK MANAGEMENT** menu screen, press the **1** key. The Scale Mode Settings screen will appear as follows:

< NET: NETWORK MODE >

1.Network Setting
2.Clerk Mode Setting
3.Application

P01

1

nEt

SEtting

The **Network Setting** option allows you to change the scale's number. The scale number is a unique identifier for networking. There can only be 32 scales a CAS NET(Network). Each scale must have a unique number; therefore, no two scales may share the same id. Scale 1 is the Master scale. Scale numbers 2 through 32 are slaves. You can either activate or deactivate the network, or you can use Floating Clerk or non-Floating Clerk.

3 Floating Clerk

OVR/CAPS

< NET : NETWORK MODE >

Network Is Used? (Y/N): [Y]

This scale is number: [1]

Scale mode setting menu screen, press the **1** key.
The **Clerk Mode Setting** option allows you to choose the type of clerk system you wish to use.

P011- 1

NetUSE

4

P011- 2

SCALE

1

Select whether network is used (or not).

After pressing enter key, assign Scale number.

(1/2)

< NET : CLERK MODE SETTING >

Use Custom Number? (Y/N): [N]

Auto Logoff Each Transaction? (Y/N): [N]

Print Label Each Transaction? (Y/N): [N]

Print Total with Barcode (Y/N): [Y]

Print Total with Label Format (Y/N): [N]

Scale mode setting menu screen, press the **2** key.
The **Clerk Mode Setting** option allows you to choose the type of clerk system you wish to use.

(2/2)

< NET : CLERK MODE SETTING >

Timed Logoff Delay Seconds (0~255):[30]

Remember that you can press **SAVE** at any time or the **ENTER** key while the cursor is on the last field in order to save the current screen contents and return to the previous menu. The **ESC** key exits and returns to the previous menu. For the Scale Mode screen, simply selecting one of the four options returns you to the previous menu.

When you choose the Floating Clerk option, the Sale Mode PLU Keyboard changes slightly. See section **The Sales Mode PLU Key Pad Configuration(Owner’s manual)** for details on the keyboard configuration for Floating Clerk. Also, for details on Floating Clerk, see section **3 Floating Clerk**.

3 Floating Clerk

P012- 1	CUSum
	n

Use Custom Number?: If this options is selected, Custom number is used after each transaction.

P012- 2	OFF-tr
	4

Auto logoff Each Transaction: If this option is selected, the clerk log off after each transaction.

P012- 3	Prt _ tr
	n

Print Label Each Transaction: If this option is selected. the scale prints a label after each transaction.

P012- 4	ttLbAr
	n

Print Total with Barcode: If this option is selected, the scale prints the Total label with barcode.

P012- 5	ttLFmt
	4

Print Total with Label Format : if this option is selected, the scale prints the Total label format.

P012- 6	OFFSEL
	30

Timed logoff Delay Seconds: This value is the waiting time when the scale search for clerk in a network of scales. If the clerk is not found, the scale makes new clerk data.

The **Application** option allows you to choose application settings.

OVR/CAPS /ENG	
< NET : APPLICATION >	
PLU Automatic Download? (Y/N) :	[N]

P013	A-PLU
	4

PLU Automatic Download: for future use

3 Floating Clerk

2.2 Network Copy

Once at the **NET : NETWORK MANAGEMENT** menu screen, press the **2** key. You will then see the Network Copy screen as follows:

< NET : COPY DATA >

1. All (Cloning)

2. PLU Data

3. Global Data

4. Speed Key

5. Label format

This copy function is to copy data files from one scale to another on a network. This allows you to quickly reprogram a new scale, a replacement scale, or simply update an outdated program file. All files are copied from the master to a specified scale.

P02

1

ALL

CLoning

Network Copy Screen of the 7-segment display.

NUMERIC

< STR: COPY ALL DATA >

To Scale Number: [3] (0=ALL)

To copy All data, press the **1** key from the **NET: COPY DATA** screen. The display will change to the **STR: COPY ALL DATA** screen: Press **ESC** key to exit **COPY DATA**.

P021

SCALE

3

Select Scale number to copy all master data.

3 Floating Clerk

NUMERIC	
< NET: COPY PLUS >	
To Scale Number:	[3] (0=ALL)
Start Dept Number:	[1] Bakery Departm
PLU Number:	[1] Yellow Cake
End Dept Number:	[1] Bakery Departm
PLU Number:	[5] Chocolate Cake

To copy PLU data, press the **2** key from the **NET: COPY DATA** screen. The display will change to the **NET: COPY PLUS** screen:

PO22 - 1	SCALE
	2

Select Scale to copy PLU data from master.

PO22 - 2	S dEPt
	2

Start Department to be copied.

PO22 - 3	S PLU
	1

Start PLU to be copied.

PO22 - 4	E dEPt
	2

End Department to be copied.

PO22 - 2	E PLU
	2

End PLU to be copied

3 Floating Clerk

To copy other data, press the **3** key from the **NET : COPY DATA** screen. The display will change to the **NET : COPY PLUS** screen:

< NET: COPY GLOBAL DATA >

1. All

2. Store Name

3. Departments

4. Scale Assignments

5. Users

6. Scroll Messages

7. Scroll Sequences

8. Sales Messages

9. Tax Rates

0. Origin

P023 1

ALL

You can see all menus by using arrow key or Page-up, Page down key.

From the **Copy Global Data** screen you can select what data you wish to transmit over the network. Once you have selected an option, the screens all look very similar.

NUMERIC

< STR: COPY DEPARTMENTS >

To Scale Number:

[2] (0=ALL)

Start Item Number:

[1]

End Item Number:

[1]

P0233-1

SCALE

3

Select Scale number to copy department

P0233-2

5-ITEM

1

Select Start item number to copy department

P0233-3

E-ITEM

32

Select End item number to copy department

The Start Item Number is (in this case) the starting Department and the End Item Number is the ending department. They comprise the range of departments to be copied into the target scale listed in the To Scale Number field. So, whether it's Department, Store Data, or Label Formats, the Item Number fields represent the range of that particular which you are going to copy. However, if you select **ALL**,

3 Floating Clerk

the scale will simply prompt you "Are you sure (Y/N)?" and if you press **Y** then all of the items from the Master will be copied to the target scale or scales.

Once you have entered all of the required data, press the **SAVE** key or press the **ENTER** key while the cursor is on the last field in order to initiate the data copy. Press the **ESC** key to exits.

To copy Speed KEY data, press the **4** key from the **NET: COPY DATA** screen. The display will change to the **NET: COPY SPEED KEY** screen:

NUMERIC

< NET: COPY SPEED KEY >

To Scale Number: [3] (0=ALL)

P024

SCALE

2

Enter a Scale number to copy Speed key.

2.3 PLU Delete

Once at the **NET : NETWORK MANAGEMENT** menu screen, press the **3** key. The Scale Mode Settings screen will appear as follows:

NUMERIC

< NET: PLU DELETE >

To Scale Number: [0] (0=ALL)

Start Dept Number: [1] Bakery Departm

PLU Number:[1] Yellow Cake

End Dept Number: [1] Bakery Departm

PLU Number:[10] Chocolate Cake

Delete PLUs of selected scales except master scale. If you want to delete PLUs of master scale, see section **Deleting PLUs(Owner's manual)**.

P03 - 1

SCALE

3

Select Scale number for the PLU deletion

3 Floating Clerk

P03 - 2	5 dEPt
	1

Select Start Department number for the PLU deletion

P03 - 3	5 PLU
	1

Select Start PLU number for the PLU deletion

P03 - 4	E dEPt
	2

Select End Department number for the PLU deletion

P03 - 5	E PLU
	10

Select End PLU number for the PLU deletion

2.4 Lock Network

Once at the **NET: NETWORK MANAGEMENT** menu screen, press the **4** key. The scale will place the LOCK command on the network queue and wait for you to return to <REG> mode. To return to <REG> mode, press **ESC** until you get to <REG> mode. All the scales on the network will look as follows:

NETWORK LOCK

The master will not display this message. Also, only scale in sales mode (REG, MGR, or RPK) will show this message. Even if you turn the scale OFF and ON, or if you unplug it and plug it from the AC power and/or the network, the scale WILL remain in the LOCK mode. The only way to come out of a LOCK condition is to issue an UNLOCK command from the master scale.

Any slave that is not in a sale mode will remain unlocked until the user ESCAPES into a sale mode in which case the LOCK command will take effect.

	LoCK

3 Floating Clerk

2.5 Unlock Network

Once at the **NET: NETWORK MANAGEMENT** menu screen, press the **5** key. The scale will place the UNLOCK command on the network queue and wait for you to return to <REG> mode. To return to <REG> mode, press **ESC** until you get to <REG> mode.

<REG>		12:12:00 PM			
WEIGHT	lb	UNIT \$	/ lb	TOTAL PRICE	\$
0.00		0.00		0.00	

0.00	0.00
	0.00

The LOCK and UNLOCK features are especially useful when you wish to do sales reporting and you do not want anyone to register any sales before you finish your reports

This is different from the LOCK scale option on the Main menu. The LOCK scale option of the Main menu only locks the scale in which you select the LOCK scale option. It then requires a level 1 password to unlock as opposed to the Network Lock, which can only be locked and unlocked by the Master scale.

If you have a scale that is Network Locked and you cannot unlock it through the master, please contact your Authorized CAS Dealer for service. You may have a network hardware problem, or a scale hardware problem.

Scale oneself lock/unlock : if you press ALT and 1 key in any program mode, lock command is sent oneself. When you want to return program mode, press any key and level one password.

2.6 Check Scale

Once at the **NET: NETWORK MANAGEMENT** menu screen, press the **6** key. You will then see the Check Scale screen as follows:

1	.	3	.	5	.	.	.	.	.
.	.	.	14	.	.	.	.	.	20
.
.	32								

PO	6	SC	1
CHECK...			

The scale number means that the master was able to see that node; indicates a failure to communicate to that node.

If you have problems with this test, please review the network installation instructions and run the test again. If a problem persists, contact the CAS Service Department.

3 Floating Clerk

3 Floating Clerk

3.1 Networked Floating Clerk Option

When using floating clerk mode, make sure that the SAVE, AUTO, and PRE-PACK are off. Also, make sure that you have not begun an ADD-UP transaction. Generating a floating clerk transaction is the same as any sales mode transaction except that you do NOT press the **PRINT** key; instead you must press one of the Clerk-Speed keys (1 through 4) or press the **CLERK** key and enter your password. To total a receipt you simply press the **ST/TL** key and select your clerk number when requested.

For example, press the **MISC By-Weight PLU** key, place an item on the platter, enter a price, and then press the **CLERK 1** key. The scale will not generate a label. Go to another scale and do the same thing. Next, go to a third scale and do the same thing. Finally, while at the third scale, press the **ST/TL** key. You will see the following screen:

< Clerk Total of A Sale >

Clerk Number (1~99) [1]

At this point, select clerk number 1 as this is the clerk under which you made the 3 transactions. If there were other clerks on the network making floating transactions, they could be totaled from here also. **So be very careful in selecting YOUR clerk number ONLY!**

	CLERK
	0

After selecting clerk 1, press the **PRINT** key. A screen will be displayed that shows you the status of your transactions as follows:

	Print
	SEL y n

SubTotal of this floating sale
:<Clerk 1 ADD> 3 ITEMS, \$13.68

Print total report of this sale ?(Y/N)

If you select YES, then a detailed receipt will be printed and Clerk 1 transactions for the current customer will be cleared.

If you select NO, then you can continue to make floating sales transactions for that customer.

3 Floating Clerk

3.2 Networked Standard Clerk Option

When using Standard clerk mode, make sure that the SAVE, AUTO, VOID and PRE-PACK are off. Also, make sure that you have not begun an ADD-UP transaction. Generating a floating clerk transaction is the same as any sales mode transaction; To total a receipt you simply press the **ST/TL** key and select your clerk number when requested.

CLERK	NUMBER
	0

3.3 Non-Networked Floating Clerk Option

When using floating clerk in Non-Network mode, the scale works in the same manner as mentioned above except that you can only do transactions on one scale. Because the network is disabled for clerk transactions, any sales transactions that you make in one scale will not be contained at any other scale. The only advantage to using the scale in this mode, is that you can share one scale with multiple clerks simultaneously and not have to worry about mixing-up different customer's sales transactions. This is true **so long as the clerks use their own clerk numbers and NO ONE ELSE!**

3.4 VOID key in Floating Clerk Mode

From the Sales Mode screen, press the **VOID** key. You will input level 2 -password and get the following screen:

< VOID Floating Transaction >
Clerk Number (1~99) [1]

Select your clerk number and press the **PRINT** key.

	CLERK
	0

After selecting your clerk number, you will see the following screen:

No:	PLU	Dept	Wgt/Pcs	Price	Scl
1:	1	1	1.000	1.23	1
2:	1	1	1.000	4.56	1
3:	1	1	1.000	7.89	1
<< Total : 3 items \$13.68 >>					
Selection : Void/More (Y/N)?					

Selecting NO will return you to the Sales Mode screen or list another page of items if there are any.

Any items listed as number 0 are previously VOIDed items.

3 Floating Clerk

However, after selecting your clerk number, item that be sold recently is voided in 7-segment VFD version. You will see the following screen.

0.00	0.00
	0.00

If you select YES in graphic version, then you will see the following screen:

< Select Void Number >	
Void Number ?	[3]

Select the number of the item from the previous screen that you wish to VOID and then press the **PRINT** key.

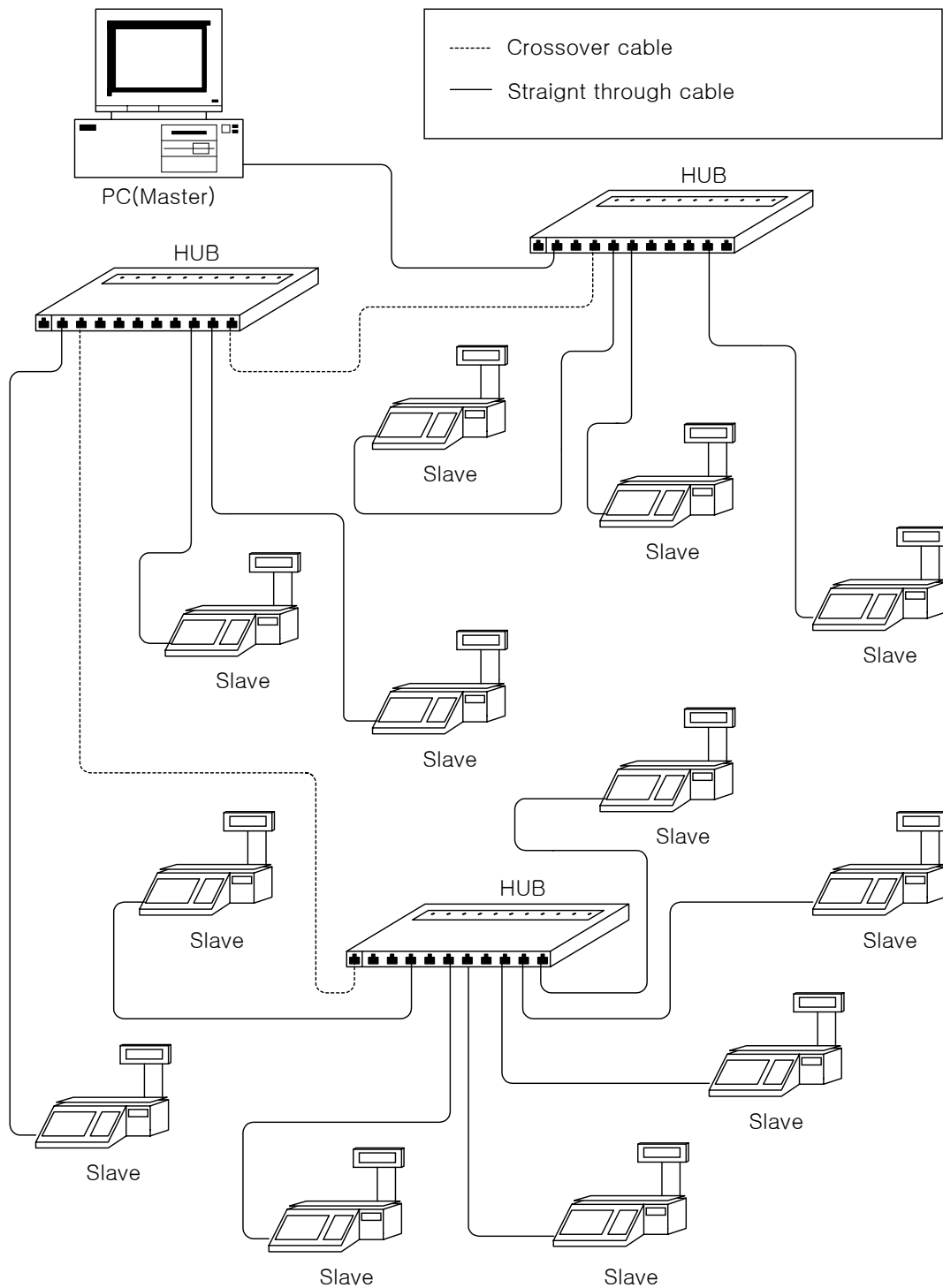
The number always defaults to the most recent transaction.

Once you select the number of the item you wish to VOID, press **PRINT**. That item will appear on the receipt in ~~STRIKE THROUGH~~ format. It will continue to be listed but you will see that all VOIDed items are numbered as number 0.

Voiding any number 0 items will not do anything at all.

APPENDIX : Network connection example

PC Master Type



Scale Master Type with PC

