



CL5000 Series

Network's Manual **(English)**

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F/W Version. 1.00, 1.01, 1.02, 1.03, 1.04, 1.08

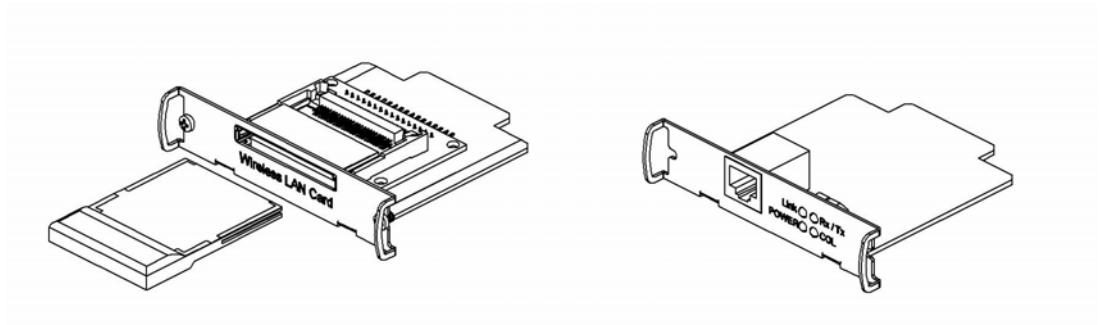




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1. Introduction

Getting started

This chapter introduces you to the network features about CL5000.
CL5000 supports 2 unique communication modes.
(Server – Client mode, Master – slave mode)



1.1 Network card

You need network card for communication. We supports wire, and wireless network card.


< Ethernet LAN Card >



< Wireless LAN Card >



NOTE: Wireless care has only card module only.

You need to purchase CF wireless card in local area with  certification mark

Install common CF type LAN Module. This is comparable with Intersil PRISM chip-set.

- Protocol : Standard IEE 802.11b(DSSS 2.4Ghz)
- Security : 64 or 128 bit WEP



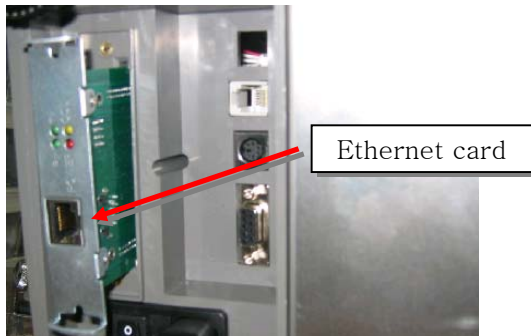
1.2. Install Network card

Install Ethernet LAN card

- 1) Turn power off and remove power cord
- 2) Remove Ethernet card cover



- 3) Insert Ethernet card onto slot (use same slot for wireless module)



- 4) Turn on power when installation is finished
- 5) Set up communication configuration (menu code:1900)



Install Wireless LAN card

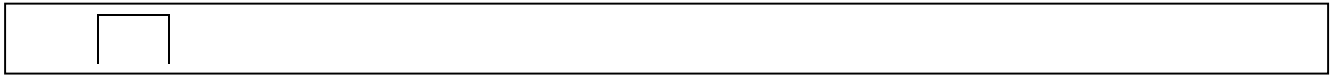
- 1) Turn power off and remove power cord
- 2) Remove Ethernet card cover
- 3) Insert Wireless LAN Card.
 - i. Insert local wireless CF card



- 4) Turn on power when installation is finished

IMPORTANT

For wireless networking you need to setup **wireless HUB (Access Point = AP)**
(Purchase at local market)



2. Scale and System Configuration

You can understand the concept of communication system and configuration.

2.1. General Terms

CL5000 supports 3 types of network communication

1. Master - Prior scale that contains all standard data
2. Slave - Sub scale for Master scale
3. Network - communicating between Server, Client scale

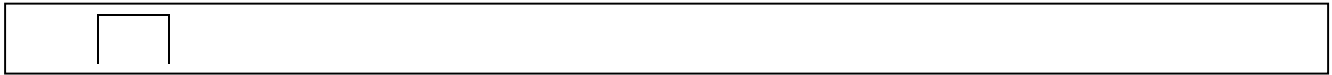
You can select 1 of the 3 types at network.

For maser-slave network; there is only 1 maser for all network system.

Review following steps for prior network settings.

1. Do I want to set separate IP address for each scale or not?
NOTE: For setting IP address for each scale, set IP
For DHCP server set scale DHCP (Auto IP address setting)
2. What's the Gateway values correspond with IP address?
If you set as USE IP address must set Gateway
3. What's the Sub net mask values correspond with IP address?
If you set as USE IP address must set Subnet-mask
4. At scale TCP/IP setting (1913), what's the Port value? (20304 factory setting)

* Cheek list (1~4) needs to follow local TCP/IP communication regulation. You can ask local Network webmaster.



2.2. How to set Network method and scale

2.2.1. PC Control

A. Feature

You can control scale with PC or any computing environment such as, data table up/down loading, deleting.

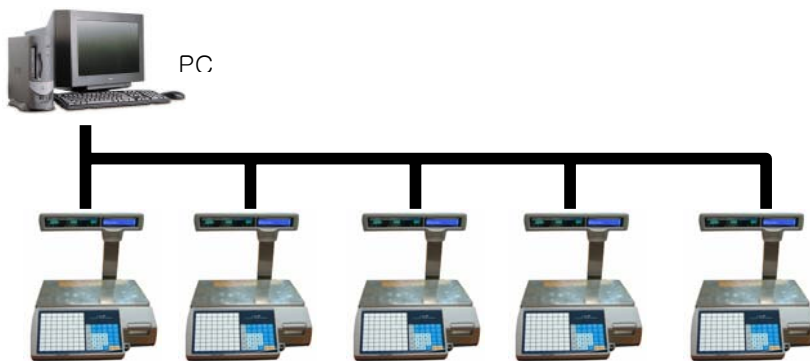
B. Pre-caution

Set each Scale ID different (for individual scale management)

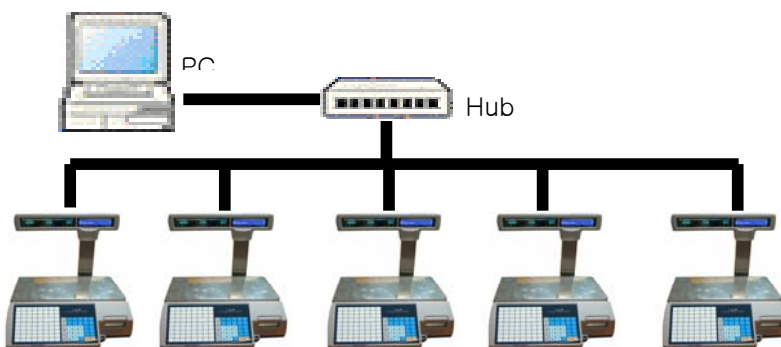
Especially for report feature in CL-Works needs individual scale ID to locate report data.

C. Communication concept diagram

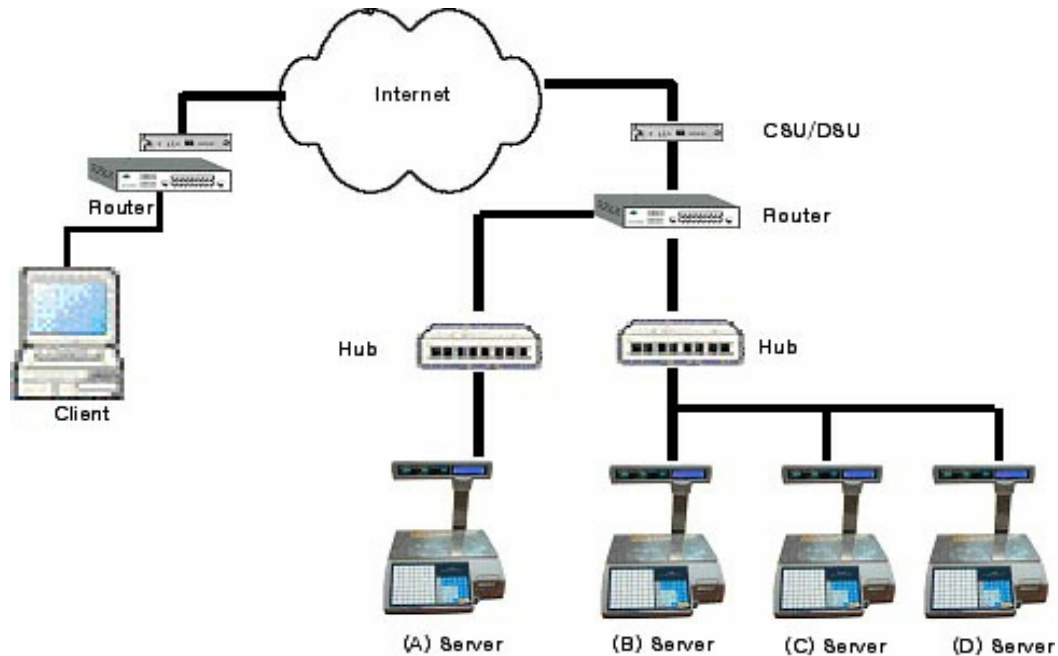
Following picture describes how to set-up the network between scale and PC



(Figure 1: general connection)



(Figure 2: Using Hub connection)



(Figure 3. Internet communication with PC and Scale)

If you know the scales IP address and register into PC, you can access scale individually or all together to monitor report and update PLUs.

NOTE: If you have set HUB (Bridge, Repeater, etc...) use PC manager to search correspond scales

For setting figure 1, 2 network setup; you must input individual IP address for connection test.

Figure 3 can access scale via internet; when you know the scale IP address you can access scale like any other network scale.

D. Before setting the network

- Each scale needs fixed IP address.
- Do not use DHCP without prior notice to CAS. If so CL-Works will not able to retract the right scale because access IP address will change constantly.
- You need to assign proper IP, Gateway, Subnet Mask address from webmaster.

NOTE: These 3 elements are basic information to operate internet / intranet.

Please get prior training on internet network; otherwise recommend get advice from network personals.

- You can set scale up to 99 for PC control networking.



E. Scale Configuration

■ summary of scale network configuration

- 1) Set service type 3 at MENU 1911 and Scale ID.
- 2) Input IP, Gateway, Subnet mask, and PORT at MENU 1913.

1910			NETWORK SETTING 1. Service Type 2. DHCP 3. IP
------	--	--	---

STEP1. Scale Network Configuration

For Scale network setting following figure.

1910			NETWORK SETTING 1. Service Type 2. DHCP 3. IP
------	--	--	---

MENU	9	1
------	---	---

1911			SERVICE TYPE Scale No. : [1] Service Type (0-3): [3] 3. Network
------	--	--	--

1. Changing Service Type

You can set Scale No. up to 1~99, which use to distinguish one another. Also you can not use same ID# at Master/Slave mode

Ex) Scale No = 1
Service Type (0-3) = 3

For factory setting scale ID as 1 and service type 3
Scale No = 1, Service Type=3

SERVICE TYPE Scale No. : [1] Service Type (0-3): [3] 3. Network
--

NOTE: If Service Type has changed scale will restart



STEP2: Setting IP and Port

1913			IP Scale IP: [010.010.003.033] Gateway: [010.010.000.001] Subnet Mask: [255.255.000.000]
------	--	--	--

1. 2. Set IP address and Port

Scale need to have own TCP/IP

NOTE: Recommend to get this information from authorized network personals

If scale does not connected to internet or any other POS system, you can set initial IP address (192.168.1.1) and Gateway (192.168.1.1), Subnet Mask (255.255.255.0)

If connecting only 2 scale just set different IP address. Therefore set #1 for 192.168.1.1, and other 192.168.1.2 Set Gateway 192.168.1.1 Leave Port as factory setting.

If IP address changes scale will reboot

IP (1/2) Scale IP: [010.010.003.033] Gateway: [010.010.000.001] Subnet Mask: [255.255.000.000]

IP (2/2) TCP Port: [20304]

F. Confirmation

1940			Check Scale Server: 10.10. 3. 33 TCP Port: 20304
------	--	--	--

NOTE: If this figure appear on screen is normal. During the data transitions VFD display TR mark will blink



2.2.2. Floating Clerk (Vender)

A. Feature

You can set Floating clerk set at MENU 1810, if Sale Mode is [1] REG: Ticket & Floating or [4] REG Label & Floating for Floating Clerk Mode.

NOTE: If you operating with only 1 scale there are no need to switch master mode. If not (operating with up to 9) you must set 1 master and others become slave scale.

B. Pre-caution

Recommend to set MENU 1920 "Allow sale in cont" Trans [Y] which allows making a sale during the data transition more effectively.

NOTE: For Master (1)/Slave (8) network up to 9

C. Communication concept diagram

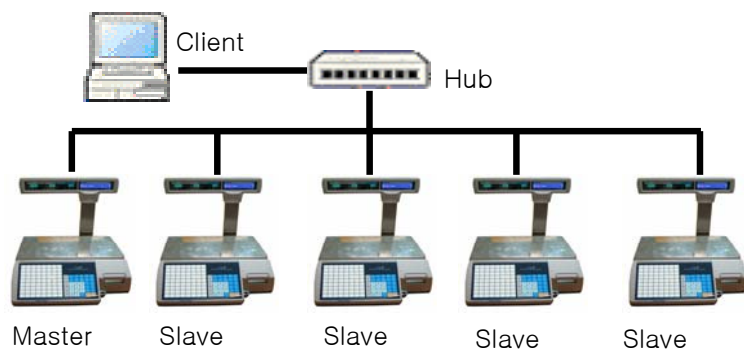
Set Floating Mode at MENU 1810

Set Master or Slave at MENU 1911

Set IP address at MENU 1913

- Follow next step Slave Floating Mode.

Set Remote IP at MENU 1914



D. Before setting the network

- Master: reference 2.2.3

- Slave: reference 2.2.3



E. Configuration

This section explains how to configure master scale and slave scale(s).

The following is an example of configuring of master and 2 slave scales.

- Set Master scale as followings;
 - IP: 192.168.1.1
 - Gateway: 192.168.1.1
 - Subnet Mask: 255.255.255.0
- Set master scale number to 1 (The master scale number may be any of 1~99 and it must be different from slave scale number).
- Set 1st slave scale as followings;
 - IP: 192.168.1.2
 - Scale Number: 2
- Set 2nd slave scale as followings;
 - IP: 192.168.1.3
 - Scale Number: 3

E.1. How to configure Master Scale

STEP1: Select one of "Floating Modes" in Sale Mode.

1810			SALE MODE Select Sale Mode : [2] REG: Label
------	--	--	--

There are two Floating clerk Modes.

Selecting [1] is to use Ticket and Floating mode.

Selecting [4] is to use Label and Floating mode.

SALE MODE Select Sale Mode : [1] REG: Ticket & Floating
--

Now, select [1] in this case.



STEP2: Select service type as master

1911			SERVICE TYPE Scale No. : [1] Service Type (0-3): [3] 3. Network
------	--	--	--

There are three service types;

- [1] 1. Master
- [2] 2. Slave
- [3] 3. Network

NOTE: The scale number may be any of 1~99.

Do not set Master scale number must not mach with slave scale number

Ex) Scale No = 1
Service Type (0-3) = 1

Select [1] 1. Master as a service type

SERVICE TYPE Scale No. : [1] Service Type (0-3): [1] 1. Master

STEP3: IP set-up

1913			IP Scale IP : [010.010.003.033] Gateway : [010.010.000.001] Subnet Mask : [255.255.000.000]
------	--	--	---

Scale need to have own TCP/IP for each.

NOTE: Recommend to get this information from authorized network personals

If scale does not connected to internet or any other POS system, you can set initial IP address (192.168.1.1)
Gateway (192.168.1.1),
Subnet Mask (255.255.255.0)

Set Service Type as Master mode

If IP address changes scale will reboot

IP (1/2) Scale IP: [010.010.003.033] Gateway: [010.010.000.001] Subnet Mask: [255.255.000.000]

IP (2/2) TCP Port: [20304]



E.2. Setting first Slave scale

STEP1: Set Scale as Floating clerk Mode

1810			SALE MODE Select Sale Mode : [2] REG: Label
------	--	--	--

1. Set scale Floating Mode

You can select Floating Mode in 1 of 2 kinds
[1] Is allowing Ticket printing in Floating mode
[4] is allowing Label printing in Floating mode
For example, select [1] as Ticket printing

SALE MODE Select Sale Mode : [1] REG: Ticket & Floating
--

STEP2: Setting Network Service Type

1911			SERVICE TYPE Scale No. : [1] Service Type (0-3): [3] 3. Server
------	--	--	--

2. Setting Slave Scale

You can set Scale No. up to 1~ 10 values for purpose of differentiate scale in network. Therefore do not use same number for master or slave.

NOTE: You can set Scale No up to 1~99 but in Master / slave setting mode limit available scale number up to 1~10.

Ex) Scale No = 2
Service Type (0-3) = 2

Set Service Type as Slave

SERVICE TYPE Scale No. : [2] Service Type (0-3): [2] 2. Slave

--	--	--	--	--	--	--	--	--	--

STEP3: Set IP address

1913			<p style="text-align: right; margin: 0;">IP</p> <p>Scale IP: [010.010.003.033]</p> <p>Gateway: [010.010.000.001]</p> <p>Subnet Mask: [255.255.000.000]</p>
------	--	--	---

3. Set IP address and Port

You can set Scale No. up to 1~10 value for purpose of differentiate scale in network. Therefore do not use same number for master or slave.

Ex) Set IP as 192.168.1.2

Scale will restart when IP address been reset

			<p style="text-align: right; margin: 0;">IP (1/2)</p> <p>Scale IP: [192.168.001.002]</p> <p>Gateway: [192.168.001.001]</p> <p>Subnet Mask: [255.255.255.000]</p>
--	--	--	---

			<p style="text-align: right; margin: 0;">IP (2/2)</p> <p>TCP Port: [20304]</p>
--	--	--	---

STEP4: Set Remote IP

1914			<p style="text-align: right; margin: 0;">REMOTE IP</p> <p>Remote IP : [000.000.000.000]</p> <p>TCP Port [20304]</p>
------	--	--	---

Setting Remote IP

Remote IP is Master scale's IP address.

NOTE: Every slave scale need to input remote IP, order to get newest information form master scale

Input Remote IP 192.168.1.1
 Input TCP Port 20304

			<p style="text-align: right; margin: 0;">REMOTE IP</p> <p>Remote IP : [192.168.001.001]</p> <p>TCP Port [20304]</p>
--	--	--	---

E.3. Setting second Slave and others

Repeat slave scale setting except, set scale number as 3 and IP address 192.168.1.3

NOTE: Get a note of scale location and IP address for A/S



2.3. Wireless LAN

CL5000 Series supports Wireless LAN

<Use of wireless network terms>

SSID (Service Set Identifier): Name of Access Point (wireless HUB)

WEP (wired equivalent privacy): You can set Password of accessing network. This password can use up to 4 passwords for different purpose. You need to set WEP Key (password) and it can be decoded in 64 or 128bit.

NOTE: CL5000 can set 4 different WEP key

A. Setting wireless LAN

STEP 1

1916			WLAN SETTING SSID: [CAS_WEP] Use WEP (0:Dis,1:64,2:128) :[2] WEP Key: [1]
------	--	--	--

Set Access Point (AP)

SSID: Name of Access Point device. CL5000 can scan local AP ID and select. Press [Test] key to scan AP(s) and select number of AP

Set WEP key

0: Disable

1: 64 bit password (input 5 digit character passwords)

2: 128 bit password (input 13 digit character passwords)

Default set as 0

WLAN SETTING (1/2) SSID: [CAS_WEP] Use WEP (0:Dis,1:64,2:128) :[0] WEP Key: [1]
--

WLAN SETTING (1/2) SSID: [CAS_WEP] Use WEP (0:Dis,1:64,2:128) :[1] WEP Key ID: [1]

WLAN SETTING (2/2) WEP Key: [00000]

Scanning SSID ...

0. CAS_WEP 1. CAS_RND [TEST]=Rescan, [0-3]=Select



3. Application

3.1. Time Synchronize

Step 1: Set Remote IP

Set remote IP of master scale for PLU downloading

NOTE: If you want to locate certain scale that needs downloaded input that IP address.

1914			REMOTE IP Remote IP : [000.000.000.000] TCP Port [20304]
------	--	--	---

Setting Remote IP

Remote IP: master scale's IP address

Ex)

Set Remote IP as 192.168.1.1

Set TCP Port 20304

REMOTE IP Remote IP : [192.168.001.001] TCP Port [20304]

Step: Setting Application

1920			APPLICATION (1/3) Time sync from Server : [N] Delete PLU Sync from Server : [N] Discount Sync from Server : [N]
------	--	--	---

Set Time Sync from server [Y] and save

After setting remote IP scale will rest at automatically and new IP address will be applied.

The time will be set automatically according to the master scale.

APPLICATION (1/3) Time sync from Server : [Y] Delete PLU Sync from Server : [N] Discount Sync from Server : [N]



3.2. Remote Call PLU

Step 1: Set Remote IP

Set master scale's IP address for Remote call PLU

1914			REMOTE IP Remote IP : [000.000.000.000] TCP Port [20304]
------	--	--	--

Setting Remote IP

Remote IP: master scale's IP address

Ex)
Set Remote IP as 192.168.1.1
Set TCP Port 20304

REMOTE IP Remote IP : [192.168.001.001] TCP Port [20304]
--

Step 2: Setting sync application

1920			APPLICATION (1/3) Time sync from Server: [N] Delete PLU Sync from Server: [N] Discount Sync from Server : [N]
------	--	--	--

1920			APPLICATION (2/3) Buzzer on Network Err [N] Allow Sale in Cont. Trans. [N] Send changed PLU: [N]
------	--	--	---

Set Send changed PLU as [Y]
If you want to call up Discount information from remote IP
Set Discount Sync from Server as [Y]

If you want to call up unused PLU information from remote IP scale will know PLU is not exist and start apply onto slave scale automatically.
Set scale Delete PLU sync from Server as [Y]

NOTE: After you have set remote IP property. Just a changing master scale will affect the all the slave scales (Report, PLU control, Scroll message, Time, clerk management.)