



JR100 Series

VoIP Phone Installation and User Guide



J&R Technology Ltd



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Foreword

The JR100 series VoIP telephones are fully contained within a corrosion resistant cast aluminum weatherproof case providing complete protection against dust and moisture ingress, resulting in a highly reliable product with a long MTBF.

The unique robust handset is manufactured from moulded bulk molding compound and designed specifically to withstand arduous use in all environments, armored cord to provide additional resistance to vandalism or heavy industrial use.

The JR100 series Weatherproof Telephones are designed for use by the railways, power stations, the armed services and heavy industry which require very reliable telephony under adverse conditions.

1. General Operating Instructions

1. All of the weatherproof telephone in FK (full keypad) version, CB (hotline, auto-dial) version, and SC (handsfree) version are designed for connection to dial ports with analogue connection points.
2. The handset is fitted with a stray-field coil for connecting hearing-aids. People who use hearing-aids which have an inductive receiver can receive the earphone signal directly.
3. The CB (hotline, auto-dial) version and SC (handsfree) version are not equipped with keypad, therefore not all the features are available with this version.
4. If you take longer than 2 minutes before you begin making a choice, the power supply of the exchange may be switched off. If that occurs, you will no longer hear a dialing tone. In that case, please replace the handset and wait 2 seconds before picking it up again.
5. Forgetting the PIN is the equivalent of losing a key. If you forget the PIN, please contact our technical support.

2. Warnings and Safety Instructions



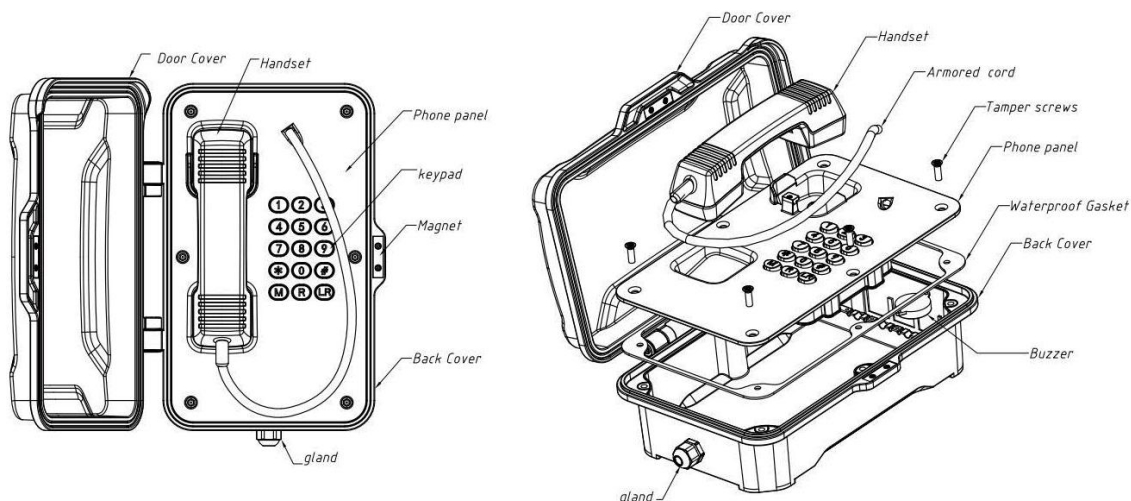
This equipment is a weatherproof telephone specifically designed for operation in indoor. The following warning and safety instructions must be heeded:

1. Do not connect or operate the telephone with voltages other than the voltages specified. All cabling should be routed such that it does not present a tripping hazard.
2. The telephone must only be operated under the specified ambient conditions. Adverse ambient conditions, such as ambient temperatures which are too high or too low, are not permissible because this promotes the failure of electronic components.
3. When operating the telephone, please heed the legal and commercial / industrial regulations, accident-prevention regulations and electrical regulations / provisions.
4. Repairs are only permissible with original spare parts which must be replaced by a specialist. Other replacement parts can cause damage and render the guarantee invalid.
5. The telephone must be installed on a plane surface only, in vertical operating position.
6. Magnetic fields with energy technical frequencies can cause a slight impairment of the listening quality. If this is the case, please ensure that the telephone is installed at a suitable location.
7. Upon mounting or demounting the device, do not damage the cover seal, which keeps the cover tight.
8. Upon repairing the apparatus for use in dust, the repaired parts should once again be subjected to a routine test.
9. Changes to the products which are in the interests of technical progress are possible even without prior notice.

3. Product Features

- ✓ Standard SIP/VoIP phone
- ✓ Power supply: PoE (Power over Ethernet), or 12V DC, RJ45 port connector
- ✓ Can be programmed remotely by Web
- ✓ Robust construction, aluminum alloy material
- ✓ Weather proof protection: IP66 - IP67
- ✓ FK Version: waterproof silicone keypad with memory
- ✓ SC version: without keypad, handsfree operation, push button to call
- ✓ CB version: without keypad, programmable for auto-dial
- ✓ Can be programmed remotely by tone phone or locally via keypad
- ✓ Fast-fit terminal connection
- ✓ Non-volatile memory
- ✓ Tamper resistant fixings. Simple installation
- ✓ Various mounting option, Wall/Pillar mounted
- ✓ CE, FCC, IP67, IK10, RoHS, ISO9001 compliant

4. Overview of the Device

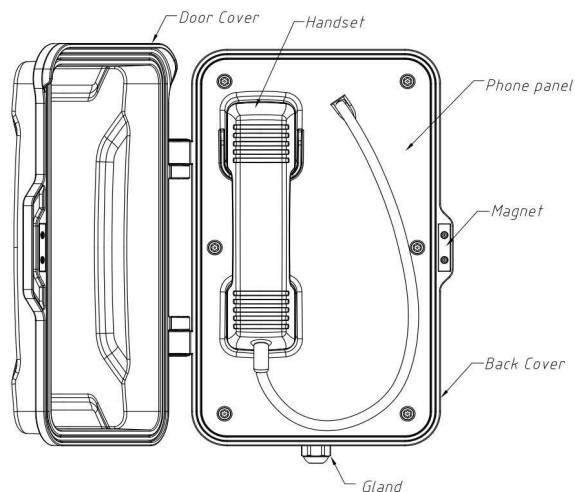


5. Contents After Unpacking

- The delivery includes:
- ★ Weatherproof telephone
 - ★ Operating instruction
 - ★ Beacon, Horn (optional)
 - ★ 2 mounting bars for installation
 - ★ Mounting screws and tamper screwdriver

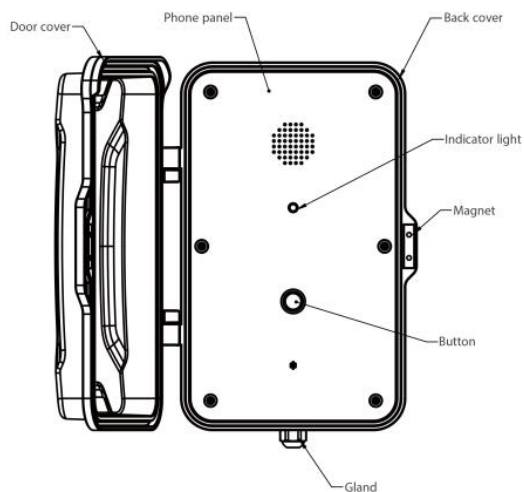
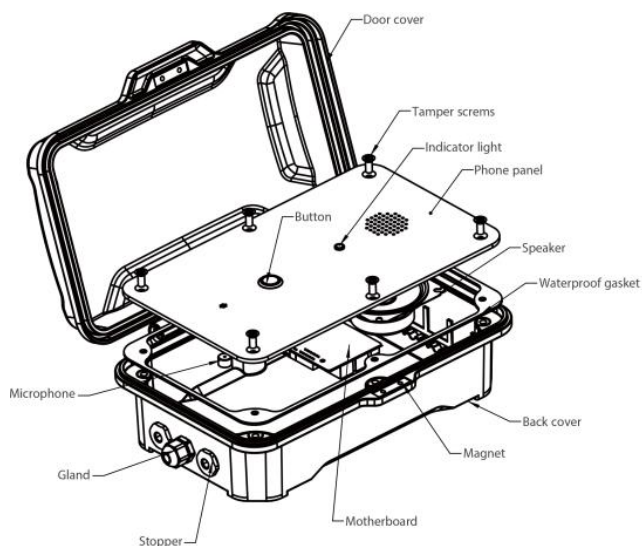
6. CB Version Notes

The Auto dial number can be pre-programmed on Web by it's IP address (See Advanced Settings).



7. SC Version Notes (JR102-SC)

The Auto dial number can be pre-programmed on Web by it's IP address (See Advanced Settings).



8. Technical Data

SIP Specifications

Power supply	PoE powered or 12V DC powered
Power adapter	100~240VAC 50~60Hz / 12V DC
Power consumption	Idle 1W / Working 2.4W
SIP protocol	SIP 2.0 (RFC3261)
Network port parameters	WAN Port: 10/100Base- T RJ-45 for LAN, Auto MDIX , LAN Port: 10/100Base- T RJ-45 for PC, Auto MDIX
Voice coders	G.711 A/U, G.722 8000/16000, G.723, G.729
Communication mode	Full duplex
Ringing volume	90~95 dB (A) @ 1 meter

Technical Specifications

Compatible with most SIP-based IP-PBX servers that comply with SIP RFC 3261
PoE 802.3af enabled (Power-over-Ethernet) or alternate power source
PoE power supply, supports connecting the external loudspeakers (No external power supply needed)
Supports automatic dialing with delay after picking up the phone, and 4 groups of sequential calling
Supports automatic switching between primary and backup servers
Supports remote Telnet debugging
Supports MIC mute function
Supports call transfer
Supports two relays to remotely control external devices
Operating temperature -40°C to 65°C / Storage temperature -40°C to 75°C
M.T.B.F. exceeds 50,000 hours under normal operating conditions

Network Web Management

Fully configurable through any internet browser
Static IP address provisioning or DHCP support
Product self-diagnostic testing available through the web interface
Network-adjustable earpiece volume and microphone sensitivity
Firmware upload via web interface
Echo cancellation: Supports G.168, and hands-free can support 96ms
Supports SIP domain, SIP authentication (none, basic, MD5), and DNS name of server
DTMF: SIPINFO, INBAND, RFC2833
Dials Plan: Flexible dial-up configuration, support hotline

Network Features

WAN/LAN: Supports Bridge mode
Supports static IP address
Supports DHCP to obtain an IP address on WAN port
Supports VLAN
Supports web config
Data Protocols: IPv4, TCP, UDP, ICMP, ARP, RTP, SRTP, ONVIF, SNMPv1, RTCP-XR, 802.1x, Static IP/DHCP IP Assignment, IEEE 802.1p/Q, QoS/ToS, HTTP/HTTPS/DHCP, NTP, FTP/TFTP, CDP/LLDP VLAN Configuration, LDAP

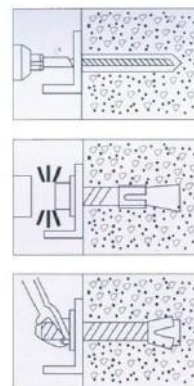
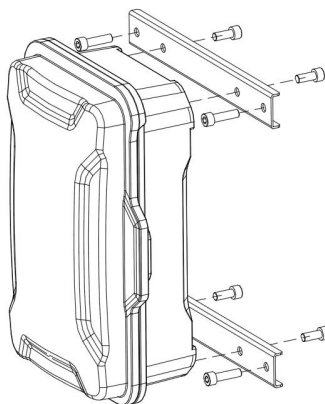
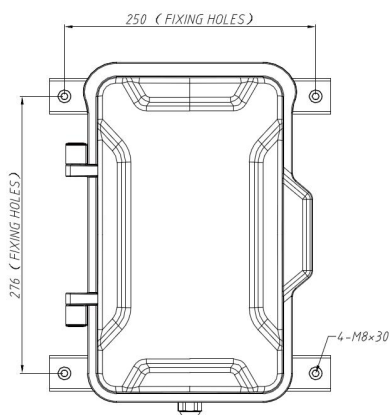
9. Package Specifications



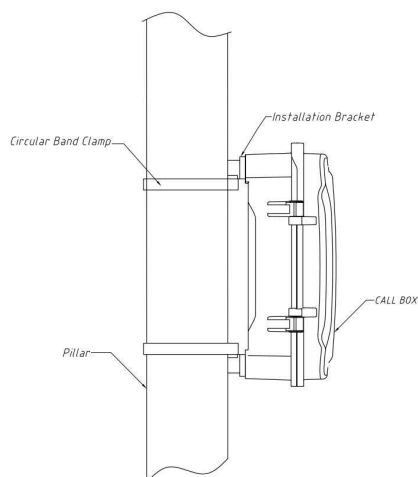
Material: Pearl cotton, Carton
Dimensions: 440x270x190 mm
Product weight: 6 Kg
Gross weight: 7 Kg

10. Installation

1. Wall Mounting



2.Column Mounting



11. Advanced Settings (Quick Set-up)

1. Introduction

This manual is intended for system administrators who are responsible for setting up and configuring IP phones. Users can run an easy-to-use web interface on a web browser (Microsoft® Internet Explorer browser is recommended).

2. Web interface

You can use any standard web server (such as Microsoft Internet Explorer) to access the web interface of the IP phone. The IP address used to access the web interface is the IP phone address, received from a DHCP server or manually configured (static IP address)

Enter the phone's web interface:

1). Connect the phone's WAN port to the IP network (use your local Internet service provider's network cable or ADSL modem).

Determine the IP address obtained from the DHCP server, you can see the IP address on the LCD display; or after the phone connects to the network (it takes 40 ~ 60 seconds to successfully connect to the network), you can hear the voice of the IP address broadcast.

2) Open the web interface and enter the IP address of the phone (such as 192.168.0.188) in the URL address field, as shown below:



The web login window appears:

Web login window

A screenshot of a web login window. It has a title 'Sign in' and a URL 'http://192.168.0.16'. A warning message states 'Your connection to this site is not private'. There are input fields for 'Username' and 'Password'. At the bottom, there are 'Sign in' and 'Cancel' buttons.

3).Enter the User name and Password, and then click OK.

Note:The administrator' s default login user name and password are “admin” and “admin” respectively.

4). When there is no DHCP server, the phone cannot obtain a dynamic IP address. This phone has a second IP address. This IP address is static. You can connect to the phone through 192.168.188.200.

3. Quick Setup

To quickly setup your phone:

Access the ‘Quick Setup’ page (Quick Setup menu)

Quick Setup Web Fields

The screenshot displays the J&R Technology web interface. On the left is a teal sidebar with a menu: Quick Settings, Status Information, Basic Settings, Advanced Settings, System Settings, Security Settings, Device Management, Remote Management, and Debugging. The main content area is titled 'Quick Settings' and contains three sections: Network Settings, Server Settings, and Line Settings. In Network Settings, DHCP is turned ON, and IP Address is 192.168.0.188. In Server Settings, Proxy Address is 192.168.0.181 (highlighted with a red box and labeled 'SIP SERVER ADDRESS') and Proxy Port is 5060. In Line Settings, Enable is turned ON, Line Number is 1000, and Authentication Username is 1000.

This is a close-up of the 'Line Settings' form. It includes an 'Enable' toggle set to ON, a 'Line Number' field with the value 1000, an 'Authentication Username' field with the value 1000, and an 'Authentication Password' field with four asterisks. A teal 'Submit' button is located at the bottom of the form.

If shown in the figure above:

1. Fill in the IP address of the IP server in the Proxy Server Address field. Other parameters remain unchanged as shown in the figure.
2. Fill in the line identification username, password and other information in the Line Settings field, then click Submit to complete the registration.
3. After successful submission, you can view the registration results in the VOIP status bar, as shown in the following figure:

Go to "VOIP Information" page (status TAB → Staus Information → VOIP Information)

The screenshot shows the 'VOIP Information' page. The left sidebar is the same as in the previous figure, but 'VOIP Information' is now highlighted. The main content area has a title 'VOIP Information' with a close button. Below the title are several fields: 'Line' (a dropdown menu showing 'Line1'), 'Registration Status' (a field showing 'Unregistered'), 'Call Status' (a field showing 'Idle'), 'Server Information' (a field showing '192.168.0.181:5060'), and 'Line Enable' (a toggle switch set to ON).

4. Configure the static IP address

The phone's WAN configuration includes defining a method for obtaining an IP address. The IP address of the phone can be static. By manually entering the IP address, it can also automatically obtain an IP address from a DHCP server. The method of setting the static IP address is as follows:

Go to the Quick Configuration page (Quick Setup menu)

Quick Configuration Page Field

The screenshot shows the 'Quick Configuration' page of the J&R Technology web interface. The left sidebar has 'Quick Settings' selected. The main content area is titled 'Network Settings' and contains the following fields:

- DHCP: ☐ OFF
- IP Address:
- Subnet Mask:
- Default Gateway:
- DNS:

Below these fields is a section for 'Server Settings'.

Turn off DHCP at the top of IP mode, then enter the static IP address you want to set in the IP address box, fill in 255.255.255.0 in the subnet mask box, fill in the default gateway address in the Default gateway box, and click Submit.

Note: Please record the modified static IP address to avoid being unable to log in to the WEB configuration page if you forget it.

5. Modify the user login credentials

Go to the "Account Settings" page (System Settings → Account Settings)

System Authorization Page Field

The screenshot shows the 'Account Settings' page of the J&R Technology web interface. The left sidebar has 'Account Settings' selected. The main content area contains the following fields:

- Username:
- Old Password:
- New Password:
- Confirm Password:

A green 'Submit' button is located at the bottom of the form.

In the old password field, enter the old password.

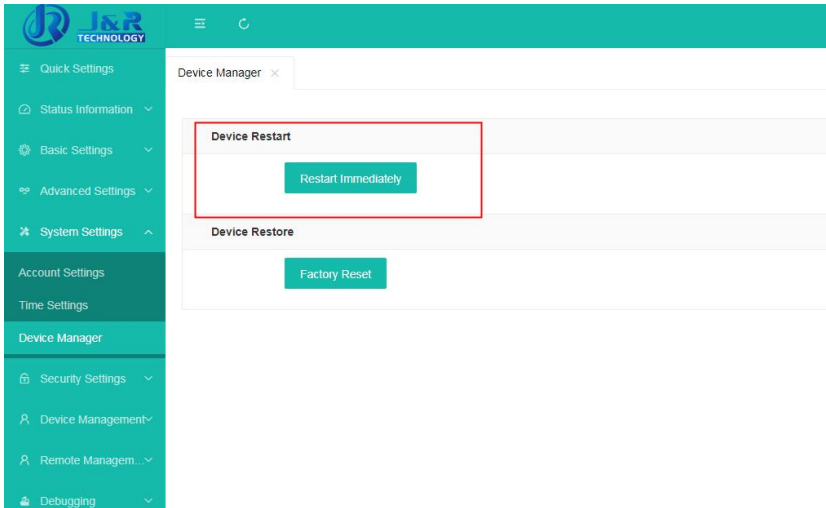
In the password field, enter a new password, and then re-enter the new password in the confirm password field.

Click submit.

6. Restart the phone

Go to "restart" page (System Settings → Device Manager → Device Restart)

Restart the system Page Field



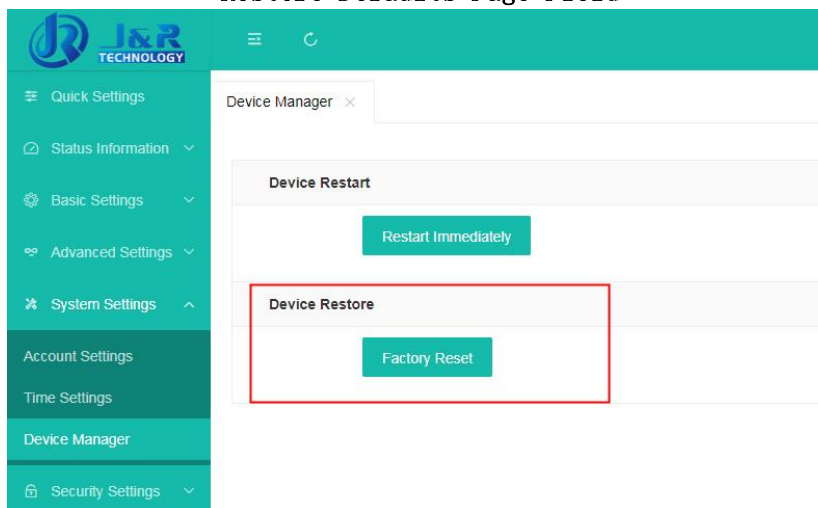
Click the restart button, a confirmation box will appear, prompting you to confirm, then click confirm.

7. Restore factory settings

Restore the factory default settings of the phone:

Go to the “Reset System” page (System Settings → Device Manager → Device Restore).

Restore Defaults Page Field



Click the submit button; a confirmation box will appear, prompting you to confirm, then click confirm.

8. Speed Dialing

The speed dial function allows you to call a specified number by pressing a speed dial button.

Speed Dialing Page Field

The screenshot shows the J&R Technology web interface. The left sidebar has a menu with the following items: Quick Settings, Status Information, Basic Settings, Advanced Settings, Media Settings, Function Settings, Dialing Settings, Dialplan Settings, Output Settings, Relay Settings, Multicast Settings, System Settings, Security Settings, and Device Management. The main content area is titled 'Dialing Settings' and includes sections for 'Dialing Function' and 'Speed Dialing'. Under 'Dialing Function', there are toggle switches for 'Allow Offline Outgoing Calls' and 'SpeedDial Half-duplex Mode', both set to 'OFF'. Under 'Speed Dialing', there are six rows, each with a 'Speed Dialing' label (1 through 6), a text input field containing '0', and a 'CLICK' button.

This phone supports 9 groups of speed dials and can set 9 shortcut keys. The switch at the back is the trigger mode. When turned on, long press will take effect. When turned off by default, one press of the button will make a call.

9. Configure Automatic Dialing (CB Version)

To configure Automatic Dialing:

Access the Function Settings page (Advanced Settings >Function Settings > Auto Dialing)

The screenshot shows the J&R Technology web interface. The left sidebar has a menu with the following items: Quick Settings, Status Information, Basic Settings, Advanced Settings, Media Settings, Function Settings, and Dialing Settings. The main content area is titled 'Function' and includes settings for 'Auto Answer', 'Auto Dialing', 'Auto Dialing Dest', 'Auto Dialing Delay', 'Auto Redial', and 'Call In Break'. The 'Auto Dialing' toggle is turned 'ON'. The 'Auto Dialing Dest' text input field is highlighted with a red box and contains the value '1009'.

This setting is for auto dial phones,as the setting on the above picture, the phone will dial to 1009 when you lift the handset.

12. Service

The weatherproof telephone is manufactured by J&R and subject to stringent quality controls. If you have questions regarding the telephone or if a malfunction has occurred – even after the guarantee period – please contact J&R or the distributor in your area.

Please have the type and series number ready (these numbers can be found on the telephone side or on the PCB) when you contact us.

Maintenance and servicing

The telephone is maintenance-free. Nevertheless, if the telephone is deployed in areas with significant impurities due to dust, grease, oil etc., then it should be cleaned from time to time. The handset and the telephone should be wiped with a damp cleaning cloth. Caution!

Never use sharp objects for cleaning.

Waste disposal

The device may be completely recycled as electronic waste. Upon disassembling the device, the plastic, metal and electronic components must be disposed of separately.

In every single case the national requirements and regulations for waste disposal must be observed. The waste-disposal requirements of your country must be observed.

13. Warranty Replacement

1. J&R offers free repair for the following products within 1 year, but additional warranties are available at additional cost:

- Scope: ① Hardware damage under normal using according to standard operation criterion of J&R.
② Other defects authorized by J&R.

J&R's responsibility for product defects is limited to repair or replacements service as determined by J&R in its sole discretion, J&R is not responsible for direct, special, incidental or consequential damages resulting from any breach of warranty or condition.

2. Operation flow of repair

- Apply for a valid RMA number from J&R.
- J&R will check whether the product qualifies for replacement and will respond within one working day via fax or e-mail.
- Purchaser should send the defective products with original packaging to J&R after obtaining the valid RMA number.
- Within 1 week days of receipt of the returned products, J&R will send the replacement to the purchaser.

3. Relative explanation

- J&R recommends that you return products by reputable freight forwarders in order to avoid damage or loss during shipment.
- J&R is NOT responsible for any damage or loss of products during shipment.
- During the warranty replacement period, J&R reserves the ownership of the defective components after replacement.

4. Consider purchasing new equipment

Customers are encouraged to consider purchase of new equipment under warranty, for both the improved reliability of new product, the possibility of a more cost effective solution, and the warranty coverage provided with the new equipment.



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