

GATEWAY CONTROL SOFTWARE **RS-RP2C** Set Up Instructions

For Revision 2

IMPORTANT

READ THIS INSTRUCTION MANUAL CAREFULLY before attempting to operate the GW

software.

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SAVE THIS INSTRUCTION MANUAL. This manual contains important safety and experience in

manual contains important safety and operating instructions for the RS-RP2C.

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ABOUT GW CONTROL SOFTWARE

1. Summary

Communications between D-star repeaters across the internet require a D-star Gateway (GW) to be connected to the D-star repeater. A GW is a PC running a Linux operating system with RS-RP2C Gateway Control Software that has two Ethernet ports, one connected to an ID-RP2C (or ID-RP1D) and the other to an internet connection via a router. A D-star repeater system with a GW that is connected to the internet and is equipped with an ID-RP2D (or ID-RP1D) will permit an ID-1 in the DD (Digital Data) mode to access the internet at data rates up to 128 kbps.

A D-star network consists of a D-star Trust Server and one or more GW's interconnected by the internet (public or private).

(1) D-star Trust Servers

One of the new features of the Revision 2 RS-RP2C Gateway Control Software is that the D-star Trust Server plays a key role in communications between D-star repeaters across the internet. A D-star Trust Server (Trust Server) must be highly reliable system configured in a manner to have virtually no down time.

Contact your regional lcom office for information on currently available national, regional or world Trust Servers. The new GW system administrator should contact the Trust Server administrator to coordinate bringing the new GW system on-line.

2. New features

The following features have been added compared with Revision 1 of the RS-RP2C Gateway Control Software.

• Web browser-based (CGI) user interface and user information management.



- The Revision 2 GW software enables user management through a web browser. The current world Revision 1 D-star Gateway Software Trust Server network will have a Revision 2 D-star Gateway Software Trust Server complex to facilitate the conversion of Revision 1 D-star Gateway systems to the Revision 2 D-star Gateway Software.

If it is decided that a Trust Server is going to be established in a region the first GW can be designated as the Trust Server. The Trust Server must have a fixed IP internet connection. It is strongly suggested that the new Trust Server administrator coordinate their activity to establish a Trust Server with the world Trust Server administrators to make sure that there are not any network interconnection issues.

(2) Start up the second GW or later

In the case that a Trust Server has already been established in a D-star network the GW would be configured as a GW, rather than a Trust Server, and would specify the established Trust Server IP address in the TRUST_SERVER parameter of the "dsipsvd.conf" file; see page 19.

- A user can register for GW access through a web browser, which the GW administrator must approve before access is granted.
- The "reserve" command which is executed manually in the Revision 1 GW software is executed automatically in the background when the new user is approved.
- Approved users can perform a terminal registration assigning or deleting user IP's to their user through a web browser.
- A GW list and user terminal lists may be read through a web browser.
- The Revision 2 GW software reduces the work load for the GW administrator such as assigning the user terminal IP's.
- GW administration is performed through a web browser for the following management functions:
- · User management (reading the user list, registration approval, user deletion)
- GW management (reading the GW list, connection refuse)
 Terminal management (reading the terminal list, terminal registration, terminal deletion, etc.)
- The web browser improves both the user interface and the ability to maintain the GW system databases.

- Comply with Dynamic IP address.
 - A significant new feature of the Revision 2 GW software is that the GW can now use a dynamic IP address rather than a fixed IP address. Only the Trust Server is required to have a fixed IP address.
- Introduce Relational Database management system (PostgreSQL).
 - The introduction of RDBMS (Relational Database Management System) contributes to separating the data from the application. This permits the data to be used by applications other than the GW application.
- Improve the synchronization mechanism between GWs.



- Bad data entries will not remain in the database which will improve the GW synchronization process and the speed it takes for each GW synchronization.
- Data synchronization and updating cannot be performed if a Trust Server is not available or functioning with the Revision 2 GW Software, however in a network emergency a GW could be designated as the Trust Server for the network, but every GW on the network would have to update the TRUST_SERVER parameter in their dsipsvd. conf configuration file to point to the "new" Trust Server IP. Note: Remember that a Trust Server must have a fixed IP address.
- DV or DD mode communication without location information updating can be made between available GWs even when no Trust Server is available/ functioning.

• Multicast Area CQ call to more than one area.



- In the Revision 1 GW software only a call from one area/port to another area/port can be made. The Revision 2 GW software permits a CQ call to be made up to 10 area/ports at the same time.
- Only one port per repeater controller can be specified if several ports per repeater controller are available in an area.
- Create install shell.
 - The Revision 2 GW software installation has been improved has been improved, compared to the Revision 1 GW software, through the use of a semi-automatic shell script.

PREPARATION

System requirements

The following units and/or environments are required to build D-star gateway server.

♦ PC		♦ Internet line
• OS	: Linux [®] CentOS 5 (recommended) Compatible software version Linux [®] Kernel 2.4.20 or later	 Line speed : Up to 1 Mbps (approximate effective speed*) for both uplink/downlink *Measure typical speed (through put) using with a line speed test site, etc.
• CPU • Memory • LAN board	glibc 2.3.2 or later BIND 9.2.1 or later : 2.4 GHz or faster : At least 512 MB : 2 (NIC from Intel [®] is recommended)	<maximum calculation="" put="" through=""> The following effective speed is necessary for each operating mode. DV mode: 30 kbps/connection DD mode: 180 kbps/connection</maximum>
HDD Middleware	: At least 10 GB of free space (incl. OS installation) =: Apache 2.0.59 Tomcat 5.5.20 mod_jk2 2.0.4 OpenSSL 0.9.8d J2SE 5.0 postgreSQL 8.2.3 (Above middlewares are installed at the same time when installing the GW soft- ware.)	 Example: When connecting three digital voice (multicast operation) and one data repeater; DV mode: multicast (max. 10 areas) 30 kbps × 10 areas × 3 port = 900 kbps DD mode: one port 180 kbps Required maximum effective speed: 900 kbps + 180 kbps = 1080 kbps
		Fixed IP address (for Trust Server only)
		• Apply to the ISP to acquire a fixed global iP address.
		♦ Router
		Following function/s is/are additionally required for the common router.
		• Glass A subhet mask (255.0.0.0) can be set for LAN

Linux[®] downloading

NOTE: If you have Linux OS CD (specified distribution and software version), skip this instruction and refer to "■ CentOS 5 installation" (p. 2).

The following hardware and software are required for $\mathsf{Linux}^{\texttt{B}}$ OS downloading.

• CD-R drive

Another PC

• CD writing software

The software have capability to burning a CD with an ISO image.

The PC must be connected to internet.

Downloading the OS

Download the Linux[®] OS ISO images from the appropriate distributor's site. http://www.centos.org

Recording the CD

Records the downloaded ISO image into the CD. The ISO image is the same format as the recorded in a CD. When this ISO image is recorded in CD as a file, OS cannot be installed with the CD.

NOTE: See the instruction manual of the CD writing software about a detailed operation, the ISO image recording procedures, etc.

CentOS 5 installation

- ① Insert the CD into the appropriate CD drive.
- (2) The screen below appears automatically.
 - Press [Enter] key.



③ The "Media test" screen as below appears automatically.

Press [Tab] key to select <Skip>, then press [Space] key to skip the media test.



⑤ Select the desired language for the installation instruction, then click [➡<u>N</u>ext].

Ce	ntOS 5		
0	What language would you like to use during the installation process?		
Chin	ese(Simplified) (简体中文)		
Chin	ese(Traditional) (繁體中文)		
Croa	tian (Hrvatski)		-
Czeo	:h (Čeština)		
Dan	ish (Dansk)		
Duto	h (Nederlands)		
Engl			
Esto	nian (eesti keel)		
Finn	ish (suomi)		
Fren	ch (Français)		
Gerr	nan (Deutsch)		
Gree	εκ (Ελληνικά)		
Guja	irati (ગુજરાતી)		
B	elease Notes	ack	Click

6 Select the appropriate keyboard type, then click [➡<u>N</u>ext].

CentOS 5	
Select the appropriate keyboard for the system.	
Slovenian	-
Spanish	
Swedish	
Swiss French	
Swiss French (Idulta)	
Swiss German (Jatin])	
Tamii (Inscript)	
Tamil (Typewriter)	
Turkish	
U.S. English	
U.S. International	
Ukrainian	
United Kingdom	
	Click
Belease Notes 4	Back

⑦ Select the appropriate partitioning and click
 [➡<u>N</u>ext].

Installation requires partition	ning of your hard drive.			
reasonable for most users. to use this or create your ow Remove linux partitions on	You can either choose m.	ate default lavout. 🗘	1	
Select the drive(s) to u	se for this installation.		,	
🔶 Advance	ed storage configuration			
Review and modify partit	tioning layout			
B Deleses Notes			(da Bar	



1 Select "eth1" then click [Edit]. CentOS 5 letwork Devices Active on Boot Device IPv4/Netmask IPv6/Prefix Edit Click eth0 10.0.0.2/8 Disabled Select Set the hostname manually localhost.localdomain (e.g., host.domain.com) Miscellaneous Settings Gateway: Primary DNS: Secondary DNS: ⊕ Back ■ Next ■ Belease Notes

12 Click "Enable IPv4 support" and "Activate on boot" to apply check mark, "✓," and then enter the IP address (e.g.; "172.16.0.20") and the prefix number (e.g.; "24") into the "Address" and "Prefix (Netmask)" columns, respectively. Click [←OK].

Edit Interface eth1
Configure eth1 - Digital Equipment Corporation DECchip 21140 [FasterNet] Hardware address: 00:03:FF:3B:C4:E2 Use dvnamic IP configuration (DHCP) Enable IPy support
Enter the prefix number "24"
Address Prefix (Netmask) IPvg: //
Enter the IP address, "172.16.0.20" Click

 Enter the gateway address, "10.0.0.1," and domain name server address into "<u>G</u>ateway:" and "<u>P</u>rimary DNS:" columns, respectively. Click [➡<u>N</u>ext].

CentOS	55						' D-		
Network Devic	es								
Active on Boot	Device	IPv4/Netmask	IPv6/Prefix	Edi	:				
	eth0	10.0.0.2/8	Disabled						
Hostname									
Set the hostnam	e:								
	y via DH								
<u> manually</u> I m	calhost.	localdomain			(e.g., host.c	domain.cor	n)		
Miscellaneous	Setting	5							
Gateway:	10.0.0.1								
Primary DNS:	127.0.0	.1			1				
Secondary DNS:					า				
					_				
								(Click
<u>R</u> elease Note						(⇔ <u>B</u> ack		⊯ <u>N</u> ext
			@ C	Conti	nue te	o the	nex	t pa	age

■ CentOS 5 installation— continued



(5) Enter the desired password into both the "Root <u>Password:</u>" and "<u>C</u>onfirm:," then click [⇒<u>N</u>ext].
• The same password should be entered.

CentOS 5			
Confirm:	ed for administering the word for the root user.	— Enter passw	ord
Release Notes		4	Back Next

(6) Click "<u>C</u>ustomize now" to apply check mark, "•," then click [➡<u>N</u>ext].

Deskton - Gnome		
Desktop - KDE		=
Server		
C		
Please select any additional repositorio	es that you want to use for software installation.	
Add additional software repositorion for the software	es	
management application.		
Customize later Olyptomize r	low	
*	Click to apply "•"	

 ⑦ Click to select "Servers" then click "DNS Name Server" to apply check mark, "✓."

CentOS 5	
Desktop Environments	DNS Name Server
Applications	
Development	Legacy Network Server
Servers	All Server
Base System	👔 🗆 MySQL Database
	Network Servers
	News Server
Cluster rorage	I PostgreSQL Database
Select group allows you to run a D	Click to apply "√"
	1 of 1 optional packages selected
	Optional packages
Belease Notes	Back Dext

(8) Click to select "Development" then click "Development Tools" to apply check mark, "√."
 Click [●Next]

CentOS 5	
Desktop Environments Applications Development Servers Base Sy tem Virtualiz ution Cluster is for age Cluster is tor age Select Inses tools include core development tor debuggers.	Image: Solutional packages selected
	Optional packages
<u>Release Notes</u>	
Ine dialog as at right Wait until the package completed.	checking dependencies in packages selected for installation
19 Click [⇒ <u>N</u> ext].	
CentOS 5	
	Click next to begin Installation of CentOS. A complete log of the Installation can be found in the file 'roooting your system. A kickstart file containing the installation options selected can be found in the file 'rooQanaconda-ks.ctg' after rebooting the system.
Release Notes	Click



(3) "Welcome" screen as below appears, click
 [➡ Forward] to setup various features.



24 Set Firewall as desired.

 When deactivating Firewall; Click and select "Disabled," then click [⇒ Forward].
 Go to step ⁽²⁵⁾

Welcome Firewall	E Firewall
SELINUX Date and Time Create User	You can use a firewail to allow access to specific services on your computer from other computers and prevent unauthorized access from the outside world. Which services, if any, do you wish to allow access to?
Sound Card Additional CDs	Frewall: Disabled
	Click and select "Disabled" Tusted severes Serie
	Click
CentOS 5	A Back

• When activating Firewall;

- 1 Click and select "Enabled."
- 2 Click to apply check mark, "✓," with "SSH" and "Secure WWW(HTTS)" in "Trusted services:."
- 3 Select "20005/tcp," "40000/udp" and "40001/ tcp" in other ports, and click [➡<u>A</u>dd] to add ports for particular communication between servers is recommend.
- 4 Click [\Rightarrow <u>F</u>orward].

Welcome Firewall SELinux Date and Time Create User Sound Card Additional CDs	Firewall	ď,"
Click to	apply SSH Samba	
"√"	Secure WWW (HTTPS)	Click
	♥ Other ports Perts 20005 40000 40001	Prot tcp udp tcp
	Select	Click
CentOS 5		ack 🖨 Eorward

Continue to the next page...

CentOS 5 installation— continued

5 The dialog below appears, click [$\checkmark \underline{Y}$ es].



25 Click and select to SELinux security system function from "Disabled" or "Enforcing."

Click [➡<u>F</u>orward]. Select "Enforcing" is recommended.

Welcome Firewall > SELInux Date and Time Create User Sound Card Additional CDs	SELLINUX Security Enhanced Linux (SELinux) provides finer-grained security controls than those available in a traditional Linux system. It can be set up in a disabled state, a state which only warms about things which would be denied, or a fully active state. Most people should keep the default setting.
	SELinux setting
CentOS 5	Click

26 Set date and time, then click [➡Forward].

27)	Click	"Net <u>w</u> ork	Time	Protocol"	tab

28 Click "Enable Network Time Protocol" to apply check mark, " \checkmark ," and select the desired NTP server then click [+Add]. Click [\Rightarrow Eorward].

IMPORTANT!: Accurate time must be set to the server's clock using with the desired NTP server.

Welcome Firewall SELinux Date and Time Create User Sound Card Additional CDs	Date and Time Please set the date and time for the system. Date & Time Protocol Out computer can synchronize its clock with a remote time server using the Network Time Protocol
Click to appl check mark "√"	y Enable Network Time Protocol Click
Â	Show advanced options
	A Back

29 "Create User" screen appears, click [\Rightarrow Forward]. • "dstar" and "postgres" users will be creating later in GW installation (p. 14).

Welcome Firewall SElmux > Date and Time Create User Sound Card Additional CDS	Image: Second	Welcome Firewall SELmux Date and Time • Crate User Sound Card Additional CDs	Create User Is recommended that you create a username' for regular (non- dministrature) used ryour system. To create a system 'username', please provide the information reguested below. Username: Username: Dessword: Dessword:
CentOS 5	Click	Centos 5	Click



DNS name server installation

Install the DNS name server if not installed.



- ④ "Packages in DNS Name Server" screen as below appears, click to apply check mark, "✓," at "Bindchroot."
 - Click [× Close] after the setting.



(5) Click [\checkmark Apply] to start the installation.

File View	Package Manager Heln	
Brows	se 💊 Search 🔚 List	
Des App Dev Serv Bas	ktop Environments lications elopment vers e System ktop Environments S DNS Name Server S DNS Name Server	
	This package group allows you to run a DNS name server (BIND) on the system.	
	1 of 1 optional packages selected	s
	Click	🖌 🖌 Дрр

Compiler installation

Install the compiler if not installed.



SYSTEM SETUP 2

Gateway server connections

♦ Connecting to the ID-RP1 system



♦ Connecting to the ID-RP2 system



Router settings

♦ IP address setting

Set the specified IP addresses for both WAN and LAN as follows.

IP address (WAN) : Enter the suitable IP address for the D-star system condition. For Trust Server, enter a fixed IP address.

IP address (LAN) : 10.0.0.1

NOTE: The same IP address (for LAN; 10.0.0.1) is used for all gateways. **NEVER** use other private IP address.

♦ Port forwarding setting

Set the following port number with protocol to transferring to the IP address "10.0.0.2."

Port No. /Protocol	Usage	File location
20005/TCP	IP server synchro- nization	PORT_SYNC (/etc/dsipsvd.conf)
40000/UDP	Voice transfer	GW_VCPORT (/ etc/dsgwd.conf)
40001/TCP	Data transfer	GW_DTPORT (/ etc/dsgwd.conf)
443/TCP	https	<u> </u>

NOTE: IP filter must be set to allowing Internet remote access to local IP address "10.0.0.2." Otherwise the D-star gateway will not work due to the firewall.

■ Server settings

♦ LAN card settings

Set up the installed LAN card as follows if it has not been set when installing CentOS 5.



NOTE: The fixed value for both the IP address and subnet mask must be set to both eth0 and eth1. Otherwise the gateway server cannot communicate to another D-star gateway.

③ Select [Statically set IP address], then enter the specified IP address, subnet mask and default gateway (router side; eth0 setting only), as below. Click [OK], then close "Ethernet Device" screen.

	Ethernet Device		×
⊴eneral <u>H</u> oute <u>H</u> ardwar Nickname: eth1 ☑ Activate device wher	Displays	s the LAN ca elected in st	ard name eps ②.
Allow all users to ena	ble and disable the device		
O Automatically obtain	P address settings with: dhc	eth0: 255.0 eth1: 255.2).0.0 255.255.0
Hostname (optional): Automatically obta Statically set IP addre	in DNS information from provi	eth0: 10.0. eth1: 172.1	0.2 6.0.20
Address:	172.16.0.20		
<u>S</u> ubnet mask:	255.255.255.0 🔸		
Default gateway addre	ess:	eth0 eth1	: 10.0.0.1 : Blank
	(Click	

④ Click [DNS] tub in "Network Configuration" screen, then enter the address "127.0.0.1" (fixed value) into "Primary DNS" column.



Named setting

• Setting with the script

If executing the following script, the setting completes automatically.

- ① Insert the RS-RP2C CD into the CD drive.
- Double click "Computer" icon.
- ③ Double click "CD" icon.
- ④ Click [<u>File</u>] menu then select and click "Open In <u>T</u>erminal."



- (5) Enter the command, "sh ds_bind-install," then execute.

 root@localhost:/medla/ICOM

 File Edit View Terminal Tabs Help

 [root@localhost ICOM]# ls

 apl
 DOL ds bind-install dstar_db-backup middle

 bindinst.tar.gz
 dstar_gw-install

 [root@localhost ICOM]# sh ds bind-install
 Command
- 6 Enter "y," and then press [Enter] key on the keyboard to start setting.



Manual setting

If the Named is not working properly when setting the Named with the script described as above, set the Named manually as follows.

IMPORTANT!: Master the basis of BIND with a reference book of Linux, before starting the named setting.

 Add local zone setting file (dstar.local.) to "/var/ named/chroot/etc/named.conf" or "/etc/named. conf", depending on the setting condition.



 (2) Create database, "/var/named/chroot/var/named/ dstar.local.db" or "/var/named/dstar.local.db," for local D-star as the following example.
 NOTE: A full-stop period must be applied into 2nd, 3rd and 10th lines. And set the separator as below at the end of the line.
 ; ##DSTAR A RECORD

• e.g.;/var/named/chroot/var/named/dstar.local.db

New Open Save Print. Undo Redo Cor Copy Paste Rind Replace StrL: 86400 SORIGIN dstar.local. 0 dstar.local. 1D IN SOA 1D IN NS dstar.local. 1D IN NS dstar.local. 1D IN NS dstar.local. Sol-dstar122 IN A 211.9.57.122 router IN A 10.0.0.1 gw IN A 10.0.0.2	stop period , 1. adams) top period
© dstariocal.db × \$TTL 86400 \$QRTGIN dstar.local. 1D IN SOA 1D IN SOA 1D IN NS sol-dstar122 IN A 211.9.57.122 Fouther IN A 10.0.0.1 gw IN A 10.0.0.2	stop period ^{1. adams)} top period
sTL 86400 SORGIN dstar.local. a b IN SOA dstar.local.root (42 ; serial (9 ; refresh 15 ; retry 10) ; minimum 10 IN NS dstar.local. ← Full s sol-dstar122 IN A 211.9.57.122 router IN A 10.0.0.1 gw IN A 10.0.0.2	d. adams)
1D IN NS dstar.local. ← Full s sol-dstar122 IN A 211.9.57.122 router IN A 10.0.0.1 gw IN A 10.0.0.2	top period
sol-dstar122 IN A 211.9.57.122 router IN A 10.0.0.1 gw IN A 10.0.0.2	
router IN A 10.0.0.1 gw IN A 10.0.0.2	
_	
;## dstar a record ← Separator	-
Ln 28, C	ol 1 INS

♦ Starting the Named service

1 Open "Service Configuration" screen with the following mouse operation. System 1 Click 🖙 Preferences ٠ 🞑 Administration 2 Select 🚱 Documentation 🕙 Date & Time 💷 Display 🔞 Help 😤 Hardware ំណំ About GNOME 🅥 Keyboard



② Click the check box beside "named," then save the changed setting if no check mark, "✓," is applied.



♦ DNS function verification



dig router.dstar.local

③ Select "named" item, then click [Restart] to restart the named setting.



(3) When the correct router IP address "10.0.0.1" is displayed in the answer section as below, the GW setup is succeeded.



Gateway control software

♦ Installation

- ① Start up the server and login root.
- Insert the RS-RP2C CD into the CD drive.
- 3 Double click "Computer" icon
- ④ Double click "CD" icon.
- (5) Start up "Open In <u>T</u>erminal" with the following mouse operation.



(6) Enter the command "sh dstar_gw-install" as below.



⑦ Press [Enter] key on the keyboard to start GW software installation.



(8) License agreement appears. Read all of the term.
Press [Space] or [Enter] key on the keyboard to select the next page.

Elle Edit View Jerminal Tabs Help Sun Microsystems, Inc. Binary Code License Agreement for the JAVA 2 PLATFORM STANDARD EDITION DEVELOPMENT KIT 5.0 SUN MICROSYSTEMS, INC. ("SUN") IS WILLING TO LICENSE THE SOFTWARE IDENTFIED BELOW TO YOU ONLY UPON THE CONDITION THAT YOU ACCEPT ALL OF THE TERMS CONTAINED IN THIS BINARY CODE LICENSE AGREEMENT AND SUPPLEMENTAL LICENSE TERMS (COLLECTIVELY "AGREEMENT"). PLEASE READ THE AGREEMENT CAREFULLY. BY DOWNLOADING OR INSTALLING THIS SOFTWARE, YOU ACCEPT THE TERMS OF THE AGREEMENT INDICATE ACCEPTANCE BY SELECTING THE "ACCEPT" BUTTON AT THE BOTTOM OF THE AGREEMENT AND THE DOWNLOAD OR INSTALL PROCESS WILL NOT CONTINUE. 1. DEFINITIONS. "Software" means the identified above in Dianary form, any other machine readable materials (including, but not limited to, libraries, source files, header files, and data files), any updates or error corrections provided by Sun, and any user manuals, programming guides and other documentation provided to you WORCE If you agree the license terms, enter "y" then press [Enter]. Into installation is continued. Iool@localinost/media/ICOM Iool@localinost/media/ICOM
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Do you agree to the above license terms? [yes or no]

① DB (Data Base) creation will start. Enter "y," and press [Enter] key.

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Continue to the next page...

♦ Installation—continued



1 Click

3 Click

Nickname

2 Select

System setup

♦ Setup example



Control software settings

♦ dsgwd.conf screen description



— Zone Repeater's Information —

TR_ADDR

Sets the zone repeater's IP address (the IP address 6 in ♦ Setup Example).

The same IP address that is programmed in "IP" (for the ID-RP1D maintenance) or "IP Address" (for the utility for ID-RP2C) cell in "Communication Settings" should be set.

2 ZR_CALLSIGN

Sets the zone repeater's call sign.

The same call sign that is programmed in "Callsign" cell in "General" of the ID-RP1D maintenance or the utility for ID-RP2C should be set.

SZR_PORT

Sets the zone repeater's transmit/receive port number (the port number $\boxed{6}$ in \diamond Setup Example).

The same port number that is programmed in "Port" cell in "Communication Settings" of the ID-RP1D maintenance or the utility for ID-RP2C should be set.

— DNS Server's Information —

ONS_ADDR

Sets the zone DNS server's IP address (the IP address 3 in \diamond Setup Example).

G DNS_MAC

Sets the zone DNS server's MAC address (the MAC address 3 in ♦ Setup Example).

Set the MAC address of the connected router with dividing by hyphen (-).

— GW's Information —

6 GW_ETHIFNAME

Sets the interface name of the LAN card (the interface name 4 in \diamond Setup Example).

The interface name can be confirmed with the "ifconfig" command.

O GW_VCPORT

Sets the port number for voice operation (UDP). Use the default setting.

3 GW_DTPORT

Sets the port number for data operation (TCP). Use the default setting.

9 GW_ZRPORT

Sets the port number of the gateway server self for the communication with the zone repeater (UDP). Use the default setting.

Sets the port number of the IP address managing

server for call sign inquiry (UDP). Use the default setting.

MGSV_UDPORT

Sets the port number of the IP address managing server for updated location information request (UDP).

Use the default setting.

CON_WAIT_INTERVAL

Sets the application timer.

The application timer is the waiting timer (unit: second) until the connection is succeeded when making a new connection to another gateway in data mode operation.

Use the default setting.

CON_REFRESH_INTERVAL

Sets the decide timer (unit: second) to impossible to connect to the gateway which is failed in connection once in data mode operation. Use the default setting.

CON_MAX_GW

Sets the maximum number of simultaneous connections to another gateway in data mode operation.

Use the default setting.

— IP Server —

QUERY_POLLING_TIMEOUT

Sets the standby time period (unit: millisecond) when position information retrieval inquiry is send to the IP server.

Use the default setting.

Isipsvd.conf screen description

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New Open - Save Print Undo Redo Cut Copy Paste Find Replace	
🗇 dsipsvd.conf 🗙	
# # dsipsvd.conf # Configuration file for D-STAR IP-Server Daemon # (C) 2004-2007 Icom Inc. Revision 2.0 #	
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IP Server comm. Info. TRUST SERVER = 0.0.0.0 ← PORT SYNC = 20005 ← SEND RECV TIMEOUT = 10 ← CON_WAIT_INTERVAL=2 ←)) ()
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<pre># DataBase Info. DB_IP=127.0.0.1</pre>	
Ln 1, Col 1	INS

— Communication Port Number —

PORT_SEARCH

Sets the port number of the IP address managing server for call sign inquiry (UDP). Use the default setting.

PORT_RENEWAL

Sets the port number of the IP address managing server for updated location information request (UDP).

Use the default setting.

— IP Server comm. Info.—

3 TRUST_SERVER

Sets the IP address of the "TRUST SERVER". The Trust Server's IP address can be set in FQDN format. However, the application restarting is necessary in case of the IP address in FDQN format is changed, because of the read IP address is effected when starting up an application.

9 PORT_SYNC

Sets the port number for the user information in MNG, GIP and RIP table synchronization. (TCP) Use the default setting.

SEND_RECV_TIMEOUT

Sets the time-out period for the user information in MNG, GIP and RIP table synchronization. Use the default setting.

CON_WAIT_INTERVAL

Sets the application timer.

The application timer is the waiting timer (unit: second) until the connection is succeeded when making a new connection to another gateway. Use the default setting.

– My IP Server Info. –

ZR_CALLSIGN

Sets the call sign of the zone repeater.

The same call sign that is programmed in "ZR_ CALLSIGN" in "dsgwd.conf" file should be set.

ONS_ZONE_FILE_PATH

Specifies the DNS zone file for D-star.

() IS_MY_TRUST_SERVER

Sets Trust Server capability.

- 0: Setup this server as regular gateway server.
- 1: Setup this server as Trust Server.

MULTICAST_ENABLE

Sets the multicast operation capability.

0: The server operate in unicast mode.

1: The server operate in multicast mode.

— Named Pid File Name —

1 NAMED_PID_FILE

Sets the PID (Process ID) of the named setting.

- WEB VERSION -

GW_WEB_VERSION

Sets the revision number of the gateway control software. Use the default setting.

— DataBase Info. —

Sets database accessing condition as follows. Use the default setting for them.

B DB_IP

Sets the IP address that the database file is stored server.

DB_PORT

Sets the port number for database connection.

DB_NAME

Sets the file name of the database.

DB_USER

Sets the name for database user.

DB_PASSWORD

Sets the password for database user.

B DB_COMMAND_PATH

Specifies the directory path that the database file is stored in the server.

DB_DRIVER

Specifies the database driver for accessing.

■ IP server operation for administrator

♦ Login

- ① Start up WEB browser and enter "https://xx.xx. xx.xx/Dstar.do" into the address bar.
- "xx.xx.xx.xx" is the IP address of the gateway server.
 ② Enter the zone repeater's callsign and password then click [Login].

NOTE: Enter the callsign with capital letters due to the system case sensitive.



♦ User information screen

The following operations can be performed within the User Information screen.

- User list indication*
- User searching
- · Registration approval to the gateway server
- User information deletion

- Administrator registration

Administrator-self should be registered at the first time of accessing the gateway server.

 Click "License" check box to apply check mark, "✓," then click [Update].



② The confirmation dialog appears as below. Click [~OK].



- *Up to 1,000 users can be displayed in the screen. However, search with the desired condition to refinement the list is recommended for your convenient.
- ③ The dialog, "processing was completed.," appears. Click [₩OK].



- ④ "OK" appears in "License" cell instead of check mark, "✓."
 - User can be registered with the same manner.
 - Un-registered user cannot access to the gateway server



- User searching

Registered users can be searched with the desired condition as below.

→ Enter the desired of callsign or a part of the callsign into "Callsign" cell, then click [Filter].

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D-STAR	D-STAR	Gateway Sys	tem (XXXXX)	()	в	EVISION 1.0
Multicast Information	User Information	GW Information	Terminal Informatio	Lo	gin : XXXXXX Personal Infor	Logout
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N N				ок ОК	Г	
Callsign	Filter	— 1 Ente — 2 Click	er the des	sired		acter
	\sim			\sim	\sim	
• The calls	ign, that includ	es "N," ar	e listed i	n the	e exa	mple

above.

- User information deletion

① Click to apply check mark, "✓," into the desired "Del" check box to be deleted, then click [Update].

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			\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc	Update

② The confirmation dialog appears as below. Click [~OK].

😜 https://10.0.0.2 🗙
? Are you sure?
Click
③ The dialog, "processing was completed.," appears Click [₩OK].
👌 https://10.0.0.2 🗙
processing was completed.
Click
NOTE: When an user information is deleted, the

all information of the user, including terminal information will also be deleted.

♦ Multicast Information

The following operations can be performed within the Multicast Information screen.

- Multicast group list indication
- Multicast group add and delete
- Area repeater callsign setting

- Adding multicast group

- 1) Enter the desired multicast group name within 7character, then click [Add].
 - Usable characters: A-Z, 0-9, space and /

NEVER enter "/" at the 1st character, because of "/" at the 1st character stands for to specify-ing the callsign (group name in this case) is used as area CQ call for the transceiver side setting.

,	D-STAR Gat	eway System - Mozilla	Firefox	
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A CentOS 🗀 Support				
D-STAR	D-ST	AR Gateway Sys	stem (XXXXXX)	REVISION 1.0
				Login : XXXXXX Logout
	User Information	GW Information	Terminal Information	Personal Information
Please input the M Please note that M Multicast Group	Iulticast Gr jp below and click Ad jp must be less than MULTIA Ad	d putton. 1 7 characters and alphanumeric(d 2	Enter the g upper case only) including a space Click	roup name
		SEARCH RESULT: 0 Results	1	
Rulticast Group	AreaRFT CS 1 AreaRFT C AreaRFT CS 6 AreaRFT C	S 2 AreaRFT CS 3 A S 7 AreaRFT CS 8 A	reaRFT CS 4 AreaRFT CS reaRFT CS 9 AreaRFT CS 3	5 Del
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	-			

- Area repeater callsign setting

① Click to apply check mark, "√," into the desired check box, and then enter the desired area repeater's callsign within 7-character.

• Usable characters: A-Z, 0-9, space and /

Usable characters: A–2, 0–9, space and /
NEVER enter "/" at the 1st character, because of "/" at the 1st character stands for to specifying the callsign is used as area CQ call for the transceiver side setting.
ONLY one port for each area repeater can be specified.
If two or more ports are specified in the same area repeater, the first entry is effected only.

Click [Update].



How to make a multicast group call ?

Enter slash, "/," then enter the desired group name into "Your Callsign" ("UR" or "U"). e.g.: /MULTI A

2 The dialog, "processing was completed.," appears. Click [~OK].

2	https://10.0.0.2	>
	processing was completed.	
		Click
		Фок

3 The confirmation dialog appears as below. Click [~OK].

2	https://10.0.0.2	×
?	Are you sure?	
	Click	ж
④ The	dialog, "processing was completed.," ap	opears.
Click	k [₩OK].	
Click	k [₩OK]. https://10.0.0.2	×
	k [₩OK]. https://10.0.0.2 processing was completed.	×
	k [₩OK]. https://10.0.0.2 processing was completed. Click	х х



- Deleting multicast group

 Click to apply check mark, "✓," into the desired "Del" check box to be deleted, then click [Update].

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<i>_</i>							Login : XXXXX	Logout
Multic	ast Information	User Inform	nation	GW Information	Termi	nal Information	Personal Inf	ormation
	Please input the Please note that	Municast Group belo Multicast Group must	w and click Add t be less than 7	characters and alphanume	eric(upper case on	ly) including a space	and "7" sign.	
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② The confirmation dialog appears as below. Click [~OK].

0	https://10.0.0.2
?	Are you sure?
	Click Cancel
③ The Clic	e dialog, "processing was completed.," appears k [✔OK].
2	https://10.0.0.2
1	processing was completed.
	Click

♦ GW Information

The following operations can be performed within the GW Information screen.

- Gateway list indication
- Gateway searching
- · Connection refuse setting

NOTE: Gateway information deletion can also be performed in the Trust Server.

For the Trust Server administrator: When a new GW is registered, check mark, " \checkmark ," is applied in "connection refuse" check box as the default. (The GW not joined into the D-star network yet.) Remove check mark, " \checkmark ," from "connection refuse" check box when the GW registration is approved.

- Connection refuse

- ① Click to apply check mark, "✓," into the desired "connection refuse" check box to be refused the communication, then click [Update].
 - When check mark is applied, all of the inbound data of synchronous command, digital voice and data communication should be blocked.
 - · Click the "connection refuse" check box again to release check mark when permit the communication.



(2) The confirmation dialog appears as below. Click [~OK].

2 Are you sure?	
Click	
🗙 Cancel	к

3 The dialog, "processing was completed.," appears. Click [~OK].

e	https://10.0.0.2	×
<u>.</u>	processing was completed.	
		Click
		Фок

NOTE: When a GW information is deleted, the all information registered in the GW, such as terminal of users, also deleted at the same time.

♦ Terminal Information

The following operations can be performed within the Terminal Information screen.

- Terminal list indication
- Terminal searching
- Black list setting
- Terminal information deletion

- Terminal searching

- Enter the desired callsign or a part of the callsign into "Target CS," "AreaRPT CS" and/or "ZoneRPT CS" text boxes, then click [Filter].
 - When no callsign or a part of the callsign is entered, all information will be listed.
 - The latest access time is displayed in "Receive Time" with the repeaters that are in the zone of this gateway server.

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Target CS	AreaRPT CS	ZoneRPT CS	RPT CS	ZoneRPT CS	Filter	Black List	
Target CS	AreaRPT	ZoneRPT CS	RPT CS	ZoneRPT CS	Local IP	Black List	
Target CS Target CS	AreaRPT CS	ZoneRPT CS XXXXXX XXXXXX	RPT CS	ZoneRFTCS	Filter	Black List	
Target CS	AreaRPT CS	ZoneRPT CS XXXXXX XXXXXX XXXXXX	RPT CS	ZoneRPT 08	Filter	Black List	
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- Black list setting

- Click to apply check mark, "✓," into the desired "Black List" check box to be prohibited the gateway communication, then click [Update].
 - When check mark is applied, digital voice and data communication to outside is blocked.

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Target CS	AreaRPT CS	ZoneRPT CS	Receive Time (UTC)	PCN	lame	Local I	Black Del List
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		XXXXXX	1970-01-01 00:00:00				
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② The confirmation dialog appears as below. Click [~OK].

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?	Are you sure?
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	🗙 Cancel
③ The Clic	dialog, "processing was completed.," appears. k [₩OK].

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1	processing was completed.	
		Click
		Фок

Terminal Information screen— continued

- Deleting terminal information

① Click to apply check mark, "√," into the desired "Del" check box to be deleted, then click [Update].

NOTE: The terminal information deletion can be performed to your entry only— cannot be performed to other GW's entry. All entries can be delete from the Trust Server.

			D-STAR Gate	way System - Mozilia Fir	efox		
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p-st	AR		D-STA	R Gateway Syste	em (XXXXX	X)	REVISION 1
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Multicast Inf	ormation	User	Information	GW Information	Terminal Informat	ion	Personal Information
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				SEARCH RESULT: 8 Results			
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		*****	1970-01-01 00:00:00				
		*****	1970-01-01 00:00:00				
		XXXXXX	1970-01-01 00:00:00				
					2 Clie	ck 🗌	Update

♦ Personal Information

The following operations can be performed within the Personal Information screen.

- Terminal registration

Up to 8 terminals can be registered.

- ① Click to apply check mark, "✓," into the desired terminal's check box to be registered.
- 2 Enter the initial and PC name into "Initial" and "PCname" text boxes, respectively.
 - Usable character for initial: A-F, H-Z, space for PC name: Up to 40-character name; a-z, 0-9, space, / (slash)
- ③ Click [Update]

D-STAR Gateway System - Mozilla Firefox	
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REVISION	1.0
D-STAR D-STAR Gateway System (XXXXXX)	
Login: XXXXXX _ Cogou	5
I Multicast Information I User Information I <u>GW Information</u> Terminal Information Personal Information	
1 Apply check mark "✓ " er making a left check box on.	
7 THERE	
2 Enter the initial 3 Enter the PC name	
Fassword Commin -	
Definition characters follows (G)is a gateway. (S)is a local server.	
Usually RPT(Repeat) isn't checked, initial AreaRPT CS is the port A of ZoneRF CS.	
ITHET Is checked, An UREL CS is the same as Larget CS.	
Check item and change a set value. Update 4 Click	
\sim	-

2 The confirmation dialog appears as below. Click [~OK].

https://10.0.0.2
2 Are you sure?
Click
🗙 Cancel
③ The dialog, "processing was completed.," appears. Click [←OK].
🅹 https://10.0.0.2 🗙
processing was completed.
Click
Фок

- Personal information list indication
- Personal information searching
- Terminal registration/deletion
- (4) The confirmation dialog appears as below. Click [-OK]

🕹 https://10.0.0.2]
? Are you sure?	
Click	
🗙 Cancel	
⑤ The dialog, "processing was completed.," appears Click [←OK].	3.
🕹 https://10.0.0.2 🛛]
processing was completed.	
Click	

NOTE for repeater administrator: It is necessary for making an Area CQ call to be existed at least one Area repeater in the database. For this reason, please note that applying check mark, "✓," into the desired Area repeater's "RPT" check box will be required to register at least one Area repeater.

🖑 ок

- "√," into the desired Area repeater's "RPT" check box

♦ Logout

① Click [Logout].	(2) The confirmation dialog appears as below.	
D-STAR. Gateway System - Mozilla Firefox	Click [←OK].	
pie got view go goownanks joos jepp	👌 https://10.0.0.2 🗙	
D-STAR D-STAR Gateway System (XXXXXX)	2 Are you sure?	
Multisat Information User Information OW Information Territory Lawrence Territory Lawrenc	Click	
	X Cancel	

♦ Editing the user registration agreement

If you want to change the user registration agreement content, change the file stored in the following directory.

/opt/products/dstar/tomcat/webapps/D-STAR/WEB-INF/messages/agreement.txt

When the agreement contents in the screen does not change, clear the cache. To clear the cache, delete the files inside of the following directory.

/opt/products/dstar/tomcat/webapps/work/org/apache/jsp/WEB_002dINF/pages

♦ Starts/Stops gateway operation

D-star gateway system operation starts automatically when the installation is completed.

If you want to start or stop the gateway operation manually, perform as follows.

1 Start up "Service Configuration" with the following mouse operation.



(2) Select "dstar_gw," and click the appropriate button to start or stop the gateway operation.

	Service Co	onfiguration	_ 🗆 🗙
<u>File View Actions</u>	<u>E</u> dit Runlevel <u>H</u> elp		
Save Revert			
Background Services	On Demand Services		
These services are st	arted once and run in th	ne background.	2 Click
You can specify in wh	Runlevel: 3	Editing Runlevel: 5	- to start
Start Stop Res	tar	on 	- to restart
□ cpuspee ☑ crond			- to stop
🗹 cups	Usage: /e	tc/init.d/dstar_gw_{start st	op}
dhcdbd			-1 Select
③ Comman command	d operation d as follow.	i is also avai	ilable. Use th

TO Start.	>service	astar_gw	start
To stop:	>service	dstar_gw	stop
To restart:	>service	dstar_gw	restart

Synchronization encryption

A part of the synchronization frame, that is used between GW communication, can be encrypted by preparing a key file in AES-256 bit format.

Synchronization is concluded only when the same content of encryption key file is set in each GW.

When a different content of the encryption key file is set, never synchronize.

Only a synchronization frame is encrypted between GWs communication. Actual communications between terminals in DD and DV mode operation never encrypted in GW.

• The encryption key file directory

"/opt/products/dstar/dstar_gw/dsipsvd/.dskey" (". (dot)" is necessary before "dskey")

When no encryption key file is stored in the designated folder, the synchronization frame should be transmitted and received with plane text (without encryption).

In addition, the application rebooting is unnecessary even the encryption key file contents are changed.

• The contents of the encryption key file A 256 bit data is necessary.

Create an encryption key with 32 characters in ASCII format.

(example) abcdefghijklm0123456789ABCDEFGHJ

• Example

A Trust Server administrator creates a different encryption key file every month and distributes it to each GW administrator with e-mail, etc.

Each GW administrator replaces the encryption key file on the specified date and time.

Much higher secrecy is provided with the D-star network by changing the encryption key file regularly.

■ IP server operation for user

Registration

- 1 Start up WEB browser. 2 Enter the IP address of the desired gateway server into address bar. Gateway server's top page will be displayed. ③ Click [Register]. way System - Mozilla Fir marks Tools Hel ile <u>E</u>dit <u>V</u>iew <u>G</u>o <u>B</u>oo 🐗 - 🏟 - 🎯 😢 💡 🗈 https://10.0.0.2/Dstar. 💽 💿 💿 💽 A CentOS 🗀 Support **REVISION 1.0** D-STAR D_STAR Cateway System (XXXXXX) 1 Enter the IP address Already registered? gin with Callsign and Password t Callsign and Password are ca allsign must be in Upper Case! Login Register 2 Click 10.0.0.2 🛅
- 4 Register screen as below is displayed. Read the agreement carefully.
- (5) If agreed the agreement, click to apply check mark "•," in the radio button "Yes."
- 6 Enter your callsign, name, E-mail address and password with the following condition, then click [OK].
 - Callsign : Up to 7 characters (usable characters: A-Z, 0-9, space and /)
 - Name : Up to 32 characters (usable characters: all alphabets, numbers and symbols except \ and ')
 - E-mail address
 - : Up to 128 characters
 - Password

: Within 8 to 16 characters

IMPORTANT!: Keep the record of the registered information as above to access the server next time for your personal information maintenance.



8 The "Registration is submitted." screen appears as below.



- 9 Wait until the gateway server administrator approves the registration.
- 1 Access the server again to edit your personal information. (see "♦ Login" and "♦ Personal information" for details.)

2 SYSTEM SETUP

♦ Login

To login the server, your registration should be approved by the server administrator.

After the registration, wait a while, then access to the gateway server again.

- 1 Start up the WEB browser, then enter the IP address of the server.
- (2) Enter the registered your callsign and password into the appropriate text boxes, then click [Login].

Elle Edit View Go Bo	okmarks Tools Help
🗣 - 🏟 - 🥵 📀	
A CentOS 🗀 Support	
D-STAR	1 Enter the address tem (XXXXXX)
	Already registered?

♦ User Information screen

The following operations can be performed within the User Information screen.

- User information list indication
- User information searching

- User Information list

Up to 1,000 users can be displayed in the screen. When the desired callsign cannot be found in the screen, search the user.

- User searching

You can search users with the desired condition in this screen.

→ Enter the desired callsign or a part of the callsign into the text box, then click [Filter].

D-STAR	D-STAR G	ateway System (X	XXXXX)	REVISION 1.0
UserInformation	1 Enter the or part of	desired call f the callsign	sign —	Login : Logout
	Callsign	Name		
	Gallsign	Filter	2 Click	

♦ GW Information

The following operations can be performed within the GW Information screen.

- Zone repeater/Gateway server list indication
- Zone repeater/Gateway server searching

- Zone repeater/Gateway server searching

Enter the desired zone repeater's callsign or a part of the callsign into the text box, then click [Filter].



♦ Terminal Information

The following operations can be performed within the Terminal Information screen.

- Terminal information list indication
- Terminal information searching

- Terminal information searching

- Enter the desired station (user's), area and/or zone repeater's callsign or a part of the callsign into Target CS, AreaRPT CS and/or ZoneRPT CS text boxes, respectively, then click [Filter].
 - When no callsign or a part of the callsign is entered, all information will be listed.
 - The latest access time is displayed in "Receive Time" with the repeaters that are in the zone of this gateway server.



Personal Information

The following operations can be performed within the Personal Information screen.

- Personal information list indication
- Personal information edit

- Personal information edit When editing the registered information

- Click to apply check mark into the desired item to be edited from Name, E-mail, Password and your terminal initial.
- ② Enter the desired name, E-mail address, new password, initial and/or PC name into the appropriate text boxes, respectively.
- ③ Click [Update] to store the edited contents into the server.



Apply check mark into "RPT" check box when registering a repeater, which microwave link repeater(s) (ID-RP2L/ID-RP1L) is/are connected.

④ The confirmation dialog as below appears. Click [OK].



(5) The dialog, "processing was completed," appears. Click [OK].



When adding the terminals

- ① Click to apply check mark into the desired line's check boxes.
- (2) Enter the desired initial and PC name into the appropriate text boxes, respectively.
- ③ Click [Update] to store the edited contents into the server.

1 Apply chec	ck mark "√" to	be added	
	3	Enter the desi	resd PC name
User Information	GW Information	Terminal Information	Personal Information
	Please, edit after m	iking a left check box on.	
	□ Name		
	E-mail		
	Password	*****	
	Password Confirm		
if the station has multi Definition character a: Usually RPT(Repeate If RPT is checked, Are	iple radios, Target CS are distinguished s follows (G)is a gateway. (S)is a loc sr) isn't checked, initaial AreaRPT CS is saRPT CS is the same as Target CS.	by initial(last character) of a space or a capit al server. the port A of ZoneRPT CS.	al english letter.
In	itial RPT local IP	pcname	Del
□ 1: <u>A</u>			Г
☐ 2:			
Г 3: Г			
- 4:			
F 5:			
F 6:			
7:			
8:			
2 Enter the	initial pdate button.	Update	4 Click

- No check mark into "RPT" check box is necessary when an user registers terminal usually. Apply check mark into "RPT" check box when registering a repeater, which microwave link repeater(s) (ID-RP2L/ID-RP1L) is/are connected.
- ④ The confirmation dialog as below appears. Click [OK].



(5) The dialog, "processing was completed," appears. Click [OK].



♦ Logout

① Click [Logout].	② The confirmation dialog appears as below.	
D-STAR. Gateway System - Mozilla Firefox		
Ele Edit View Go Bookmarks Tools Help		
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D-STAR Gateway System (XXXXXX) Login: Logint Utar Information Utar Information Utar Information Click Login: Logint Personal data	Are you sure you want to Logout? Click	
	X Cancel	

2 SYSTEM SETUP

Data base maintenance (Backup and Restore)

1 Insert the RS-RP2C CD into the CD drive. 2 Double click "Computer" icon. 3 Double click "CD" icon. ④ Click [<u>File</u>] menu then select and click "Open In Terminal." P 1 Click -------Shift+Ctrl+N Create Document Shift+Ctrl+O 1 Open Parent Alt+Up Open Location... Ctrl+L Connect to Server... Unmount Volume <u>Ej</u>ect Properties Alt+Return 2 Select and click 📁 Open In <u>T</u>erminal (5) Enter the command, "dstar db-backup [options1] [option2]," then execute. • [options1] is target table option. {ALL|sync_gip|sync_mng|sync_rip|unsync_ gip| nsync mng|unsync multicast mng| unsync user mng} • [option2] is mode option. {read|write} • Example 1: Read all and output files to /home/postgres root@localhost:/media/ICOM <u>File Edit View Terminal Tabs H</u>elp bie Eux yew yether [root@localhost ICOM]# ls apl DDL ds_bind-install dstar_db-backup hindinst.tar.gz doc dsinst.tar.gz dstar_gw-install bindinst.tar.gz doc dsinst.tar.gz dstar_gw-install read middle [root@localhost ICOM]# dstar_db-backup ALL read COPY 6 COPY 28 COPY 27 COPY 27 COPY 2 COPY 8 COPY 0 Enter the command COPY 8 *** finished *** [root@localhost ICOM]#

PostgreSQL is necessary for database backup tool.





3 SOFTWARE UNINSTALLATION

Uninstallation

1 Login root.

- 2 Insert the RS-RP2C CD into the CD drive.
- 3 Double click "Computer" icon.
- ④ Double click "CD" icon.
- (5) Click [<u>F</u>lle] menu then select and click "Open In <u>T</u>erminal."



(6) Enter the command, "sh dstar_gw-install uninstall," then execute.



⑦ Deactivating "dsipsvd."
 Enter "y," and press [Enter] key.



⑧ Deactivating "tomcat." Enter "y," and press [Enter] key.	
root@localhost:/media/ICOM	
<u>File Edit View Terminal Tabs H</u> elp	
[root@localhost ICOM]# Is DDL bindinst.tar.gz ds_bind-install dstar_db-backup middle apl doc [root@localhost ICOM]# sh dstar_gw-install uninstall *** dsispd is running, *** (95-1) Do you want to stop? (Y/n) y	
≫ tomcat is running. **** (98-1)	
Enter "y" then press [Enter]	

③ Confirmation appears. Enter "y," and press [Enter] key to start uninstallation.



- ① Deleting and rolling back the following items and directory.
 - Enter "y," and press [Enter] key for each item.
 - user "dstar"
 - user "postgres"
 - ".bashrc"
 - "syslog.conf"
 - "syslog"
 - directory "/opt/products"
- The message, "uninstall successfully finished.," appears as below when the uninstall is completed.



APPENDIX 4

Refer to the following files in the RS-RP2C's CD for each license.

♦ Apache

/doc/Licence/Apache/LICENSE

♦ Tomcat

/doc/Licence/Tomcat/LICENSE

- mod_jk2
 /doc/Licence/mod_jk2/LICENSE
- OpenSSL /doc/Licence/OpenSSL/LICENSE
- ♦ J2SE /doc/Licence/J2SE/LICENSE
- PostgreSQL /doc/Licence/PostgreSQL/LICENSE

Count on us!