Application Note



Introduction

The ICOM IC-9100 multiband transceiver supports the RS-BA1 Internet server-client remotecontrol software suite. With RS-BA1, you can configure a remote control system through the Internet or a LAN (Ethernet) network. Most functions and modes of the transceiver, including interference rejection functions and IF filter settings, can be controlled. Also, S-meter, SWR and RX Voice and more are available.

The IC-9100 has a expanded frequency range and may be used as a remote receiver. This Application Note does not contain any guidelines regarding transmission functionalities, but deals exclusively with the installation of the RS-BA1 cli-

Configuration of RS-BA1 Remote Control Software

- Install the RS-BA1 software from the CD
- Start "Remote Utility"
- Configure "Network Setting"

🔤 RS-BA1 Remote Utilit	у		
Network Setting		•	? Help
Network About			1
PC Name	IC-9100		
Control Port(UDP)	50001		
Serial Port(UDP)	50002		
Audio Port(UDP)	50003		
Internet Acccess Line	ADSL/CATV	_	
		Apply	
	RS-BA1 Remote Utilit Network Setting Network About PC Name Control Port(UDP) Serial Port(UDP) Audio Port(UDP) Internet Acccess Line	RS-BA1 Remote Utility Network Setting Network About PC Name IC-9100 Control Port(UDP) 50001 Serial Port(UDP) 50002 Audio Port(UDP) 50003 Internet Acccess Line ADSL/CATV	RS-BA1 Remote Utility Intervork Setting PC Name IC-9100 Control Port(UDP) S0001 Serial Port(UDP) S0002 Audio Port(UDP) S0003 Internet Acccess Line ADSL/CATV Apply

- PC Name: IC-9100
- Control Port (UDP): 50001
- Serial Port (UDP): 50002
- Audio Port (UDP): 50003
- Internet Access Line: ADSL/CATV

The "PC Name" depends on the server settings.

The UDP ports are default and may be accepted.





🔤 RS-BA1 Remote Utility	
Radio Operation 🗸	? Help
Radio Let Server List About	1
Add Remove Properties Connect	Disconnect

- Enter the information of the IC -9100 server in the "Radio Operation" and "Server List" categories
- Press "Add"

Please, notice that the IP address "80.x54.x8x.1xx" is solely an example used in this Application Note.

The	"Server	Registration"	win-
dow	is opene	d	

- Enter the IP address or the name of the server in "Network Setting"
- Control Port (UDP): 50001
- User ID: user1
- Password: < password >
- ♦ Press "OK"

The "Server Address" or "Computer Name" depends on the server settings.

The "User ID" and the "Password" information must also be fetched from the server.

Server Description	
C-9100	
Network Setting	
Server Address or Computer Name	Control Port (UDP)
80.x54.x8x.1xx	50001
User ID	Password
user1	******
☐ Disable	25.
	OK Cance

Application Note



🔛 RS-BA1 Remote U	tility		-		
Radio Operation		•			? Help
Radio List Server List	About				
IC-9100	Address Control Port(UDF User ID	80 x54 x8x 1xx 50001 user1			
	Add	Remove P	roperties	Connect	Di)connect

٠	After the server Installation,
	the Server List" should look
	like the illustration to the left

Next press "Connect"

- If the connection is established, the term CONNECT-ING is displayed below "IC-9100"



Application Note

IC-9100	IIC-9100 89,x54; Serial Data 19200bps Virtual CBM Po Audio Device AF Output	(8x.1xx) art Number 16 Detault Device	
	Moro Inpur Virtual Audio	Deraur Device ICOM_VAUDIO-1 [I=0 0=1]	AF MOD
1			

•	The	cor	rect	sett	ings	must
	now	be	ente	ered	in	"Radio
	List"					

 Clicking "Settings" opens the "Network Setting" menu

	AF Tra	Insmission		MOD Transm	hission	
Sample Rates	16kHz		-	8kHz		-
Codecs	u-law 1ch	8bit	-	u-law 1ch 8bit		-
Prebuffer(ms)	—		- 250		E	250
	🔽 Retrar	smission			Recomme	ended
Client Device Set	Retrar	msmission M16			Recomme	ended
Client Device Set Virtual COM Port I AF Output Device	Retrar	M16 Mult Device			Recomme	ended
Client Device Set Virtual COM Port I AF Output Device MOD Input Device	Retrar	M16 M16 Fault Device fault Device			Recomme	ended

- Enter the "Virtual COM Port Number" in "Virtual COM Port" under "Client Device Settings". The standard value is COM16"
- All other settings are default values and may be accepted without changes
- Select the "Recommended" menu

Application Note



Select Network	? ×
Choose the connection method to a server.	
C LAN	
Direct or is connected via a network hub.	
Internet	
Connected via the Internet.	
Connected via VPN, please choose this.	
	Next Cancel

 The "Select Network" menu contains the settings for LAN or Internet connectivity

Jpdates the connection inform	nation in the following content, OK?
F Transmission : ENABLED	
Sample Rates : 16kHz	
Codecs : u-law 1ch 8bit	
Prebuffer : 250	
AOD Transmission : ENABLED	
Codect : uslaw 1 ch 8hit	
Codecs, d law Ichobic	
Prebutter: 250	
Sample Rates : 8kHz Codecs : u-law 1ch 8bit	

- In "Remote Utility" all AF und MOD (modulation) settings are shown
- These default values may be changed at any time

When transmission functionality is not required "MOD Transmission" in "Network Setting" should be set to "Not use".





<pre><connect>></connect></pre>	(IC-9100-803x54 x8x-1xx) Senial Data 192000pp Virtual CDM Port Number 16 Audio Device AF Output Default Device	
	Remote Utility	AF MOD
	OK	>

 The client-server connection is now established and the AF level is displayed

- Open "RS-BA1 Remote Control", the remote control application for the IC-9100
- Click "Connect Setting" to open the corresponding menu

RS-BA1 Remote Contro	5l					
File View Option He	elp					
		REMOTE CONTROL SOFTWARE	RS-BA1 BAN	ID FILTER		
TUNER			1.8	FILTER TWIN-PBT		
TUNE			7			
ANT			10	PBT-CLR		
MONI			18	NOTCH		
BK-IN			21			
FUNCTION			24			
ATT			50	NOTCH1		
AGC	MC	DF				
SSB	CW RTTY P	SK AM FM	DV 120	0 TPF		
R POWE	MEMO	RY	GEN	E DIGI-SEL		
COMP	MP-W	MP-R SPLIT	DUP			
ТВШ	мемо	BANK A/B	A=B			
MIC SET	L RF GAIN DOWN UP D		ING TS			
SET C		M-CLR TON/DSQ	VSC TS			

Application Note



Model	
IC 9100	
Remote Utility	
IC-9100	2
	Search
-CI-V	
COM Port	Baud rate(bps)
16 💌	19200 💌
CI-V address (Radio)	CI-V address (RS-BA1)
70	EO 💌
Audio Device Moice	e Memoru)
ICOM_VAUDIO-1	(Icom Virtual Aud 🔄

Enter the remaining information in "Connect Setting":

- Model: IC-9100
- Remote Utility: IC-9100
- COM Port: 16
- The other settings may be accepted without changes
- Click "Connect ON/OFF" to start the data transfer
- Depending on the type of connection, a few moments – for an Internet connection typically 3-5 seconds - may pass until receiver data are available
- To operate the transceiver use the left and Right mouse buttons

RS-BA1 Remo	te Control				
File View Option Help					
TRANSMIT	Сом		BAI BAND FILTER		
	BW 2.3k SFT -50		1.8 FILTER		
TUNER	XI.		3.5 TWIN-PBT		
TUNE	RX USB FILE TS: 10	<u>_</u>			
E ANT	6.348.000	\rightarrow			
I MONI	MEMO 1:- BLANK-		14 PBI-CLR		
BK-IN	BANK 1:		21		
FUNCTION	3579 +20 +40 +60 S∕Po	ANT : 1 ROOFING : 15k PAMP: OFF NOTCH1 : OFF	24		
PAMP	0 10 25 50 100%	ATT : OFF NOTCH2 :	28		
ATT	COMPO 5 10 15 20 4B	I AGU : MID AFF : S TRW : WIDE	50 NOTCHT		
			144 NOICH2		
AGC	MOL	DE	430 APF		
L NB	SSB CW RTTY PSI	C AM FM D	1200 TPF		
I NR		v Mr	GENE DIGI-SEL		
COMP	MP-W	MP-P SPLIT DUP			
TBW		A/B A=E	XFC		
	AF-@-SQL RF GAIN	BANK	AFC		
MIC SET	DOWN UP DO	NN UP SIGNALING			
SET		M-CLR TON/DSQ VSG			

Application Note



Since more than thirty years Wavecom Elektronik AG has developed, manufactured and distributed high quality devices and software for the decoding and retrieval of information from wireless data communication in all frequency bands. The nature of the data communication may be arbitrary, but commonly contains text, images and voice. The company is internationally established within this industry and maintains a longstanding, world-wide network of distributors and business partners.

Product Information

Products	http://www.wavecom.ch/product-summary.php
Datasheets	http://www.wavecom.ch/brochures.php
Specifications	http://www.wavecom.ch/product-specifications.php
Documentation	http://www.wavecom.ch/manuals.php
Online help	http://www.wavecom.ch/content/ext/DecoderOnlineHelp/default.htm
Software warranty	One year free releases and bug fixes, update by DVD
Hardware warranty	Two years hardware warranty
Prices	http://www.wavecom.ch/contact-us.php

System Requirements

	Minimum	Recommended
CPU	Core i5 or Core i7 2.8 GHz	Core i7-6700 3.4 GHz
Memory	4 - 8 GB RAM	16 - 32 GB RAM
OS	Windows 7	Windows 10 32-bit or 64-bit

Distributors and Regional Contacts

You will find a list of distributors and regional contacts at http://www.wavecom.ch/distributors.php



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