SR2200

OPERATING MANUAL

HIGH-END
BLACK-BOX RECEIVER

25 MHz- 3 GHz

High frequency stability +/- 1ppm

High sensitivity & selectivity

PC control by USB or serial port

Discriminator OUT

10.7 MHz I.F. OUT

DISPLAY

AOR
SR2200

ANT
PWR
DC
USB
REMOTE
ACC
PHONES EXT.SP
IF OUT

This manual is a temporary version and all content is subject to change without prior notice. (Version of Oct.25, 2005)

Safety notices

Every effort has been made to make this manual correct and up to date. Due to continuous development of the product and by error or omission, anomalies may be found and this is acknowledged.

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Level of risk

As the SR2200 is powered from 12V DC, there is little chance of serious injury as long as common sense is applied.

DC input is a nominal 12V DC wired centre positive. Reverse polarity connection will damage the SR2200 and potentially could lead to the risk of fire or explosion under severe circumstances.

NEVER connect the SR2200 directly to an AC outlet.

Handling the SR2200

Use a soft, dry cloth to gently wipe the SR2200 clean, never use abrasive cleaners or organic solvents which may damage certain parts. Treat the unit with care, avoid spillage or leakage of liquids into the cabinet. Special care should be taken to avoid liquid entering via the connection sockets.

Special remarks

Do not use or leave the SR2200 in direct sunlight. It is best to avoid locations where excessive heat, humidity, dust and vibration are expected. Always keep the SR2200 free from dust and moisture.

Other warnings

There are no internal operator adjustments. In the unlikely event of servicing being required, please contact your dealer for technical assistance.

Although carefully designed, the SR2200 (like all receivers) suffers from a degree of internal noises known as spurii. They are a product of the receiver circuitry and do not represent a fault. The reception might be affected by interferences produced by nearby electrical appliances such as television, PC, walkie-talkies, etc... The reception might be strongly affected by powerful transmissions if the receiver or the antenna are located nearby a transmitter (such as TV broadcasting transmitter).

Transmissions with encrypted content cannot be decoded by this receiver.

Specification is typical but not guaranteed, subject to change without notice due to continuous development of the product.

TECHNICAL SPECIFICATIONS

Configuration	Triple conversion superheterodyne			
Frequency coverage	25MHz - 3GHz			
Reception modes	AM / NFM / WFM / SFM			
Sensitivity	Band	Sensitivity	IP3 (dBm)	S/N (dB)
IP3 S/N	25M-225MHz	NFM: 0.35uV (12dB SINAD)	1	40
		AM: 0.6uV (10dB S/N)		
		WFM: 2.0uV (12dB SINAD)		
	225M-1.7GHz	NFM: 0.35V (12dB SINAD)	1	35
		AM: 0.8uV (10dB S/N)		
		WFM: 2.0uV (12dB SINAD)		
	1.7GHz -2.7GHz	NFM: 0.6uV (12dB SINAD)	1	32
	2.7GHz-3GHz	NFM: 1.5uV (12dB SINAD)	1	30
IF frequencies	1st IF: 255.3MHz, 744.3MHz			
	2nd IF: 10.7MHz			
	3rd IF: 455kHz			
Tuning steps	100 Hz to 100 kHz (10 Hz incremental)			
Selectivity	NFM: +/-10kHz, 60dB			
	AM/SFM: +/-6kHz, 60dB			
	WFM: +/-180KHz, 60dB			
Spurious Sensitivity	60dB>			
Adjacent Selectivity	55dB >			
Dynamic Range	90dB>			
Unwanted Spurious emissions	< -57dBm			
IP3	+1.0 dBm			
Frequency stability	+/-1ppm (0-50℃)			
Audio output	1.2W (8 Ohm) max.@ 10% distortion (no internal speaker!)			
Power requirements	12 - 16V DC, 0.5 A with 1W audio output			
Aerial connection	50 Ohm BNC			
IF output	10.7MHz			
Control interface	RS-232C / USB , 19200bps			
Operation temperature	0 to 50℃			
Dimensions	200(W) x 31(H) x 230(D) mm, without projections			
Weight	1.23kg			
Nominal filter bandwidths	6kHz, 15kHz, 300kHz.			
Memory channels	1000 (10 banks)			
Search banks	40			
Scan/Search Rate	25 steps per second.			
Pass frequencies	2000			
Priority channels	1			

SUPPLIED ACCESSORIES

-DC power cable

-Operating manual on CD

-Basic control software for testing purposes, on CD. This software does not support USB connections, only RS-232C. If your PC (particularly laptops) does not feature a RS232C port, you may alternatively use a "USB to SERIAL" adapter.

(The regular control software is currently under development, nevertheless the complete COMMAND LIST is provided in this manual, to allow you to develop your own control software.)

-USB driver on CD.

Refer to this diagram for connections:
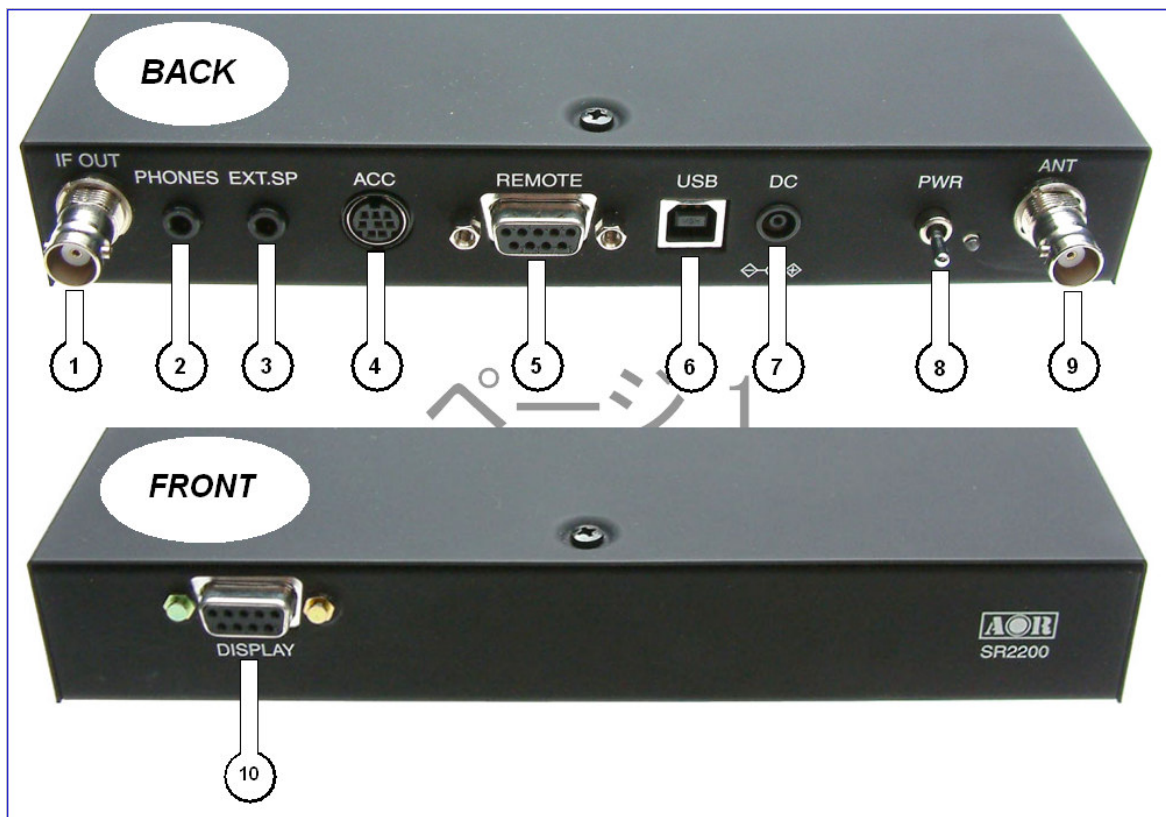
(1) This **10.7MHz IF OUT** socket provides output to drive the optional AOR SDU5600 Spectrum Display unit, with +/- 5MHz of bandwidth.

(2) **Headphone** socket (3.5mm mono jack, also wired for stereo plug). When this socket is used, any external speaker connected to socket (3) will be automatically disconnected.

(3) External speaker socket (3.5mm mono). The speaker should have a nominal 8 Ohm impedance and power handling of 2 Watts or greater.

(4) Accessory socket. Provides output for audio and discriminator, or other applications you might create. Pin allocation as follows:
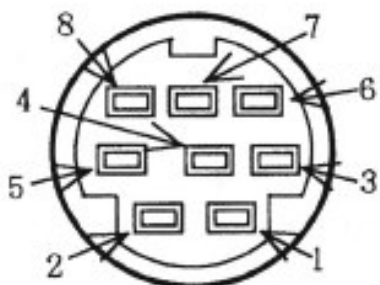
PIN NUMBER	CONNECTION
1	5V DC@30mA MAX
2	Discriminator out, 500mVp-p
3	No connection
4	No connection
5	No connection
6	AF out (H),120mV@600 Ohm
7	AF out (L), 60mV@600 Ohm
8	Ground

Values for pins 2,6,7 are for a 3kHz FM deviation at antenna input level.

(5) **RS-232C socket for PC control**. The connection cable is not supplied. Please note that the socket name "REMOTE" will be changed on production units, to a more suitable name.

(6) **USB socket for PC control**. The connection cable is not supplied.

When you connect the SR2200 (power ON) to the PC for the first time, Windows will detect the USB connection and ask you for a driver. At this time insert the supplied CD and find the folder named rUSB DRIVERn Driver installation will be automatic.

Please note that the supplied SR2200 control software does not function with a USB connection. You may use the Windows "Hyper Terminal" software which is allowing USB connections.

(7) **12V DC input socket**. The DC power cable is supplied. Please connect it to a power unit providing 12 to 16V DC, with minimum 0.5 A. Center pin is positive.

(8) **Power switch and power LED**. Unit is powered and the green LED is lit, when the switch is in the upper position.

(9) **Antenna** socket. BNC type. Preferably use an antenna with coaxial lead matched to 50 Ohm, for optimal performance.

(10) **Remote control panel** socket for testing purposes only. A control panel head similar to the control panel of AR-ONE is used to test functionality of the receiver, when a PC is not available. So far there is no plan to market this unit, nevertheless you can inquire us in case you would have such a need.

Please note that the socket name "DISPLAY" will be changed on production units, to a more suitable name.

COMMAND LIST

The SR2200 is operated via PC using the RS232C, or USB port. The commands necessary to that effect, are described in this chapter.

Microsoft Windows Hyper Terminal may be used to control the SR2200, or you may write your own software.

Delimiter

■PC → SR2200

<CR> （0x0d）

 or

<CR><LF> （0x0d 0x0a）

Note: <LF> will be ignored

■SR2200 → PC

· "OK" response when the command has been correct:

  <SP><CR><LF> （0x20 0x0d 0x0a）

· Response when the command has been incorrect:

  ？<CR><LF> （0x3f 0x0d 0x0a）

· Response to the read command:

Following the output of the parameter, the correct response should read:

<SP><CR><LF> （0x20 0x0d 0x0a）

Numerical parameter auto-correct

The SR2200 does correct the numerical command parameter to the digit format applying to the given parameter. In the following example, the DB command has to be followed by a 3-digit number.

Ex.: DB003 <CR>

The SR2200 will add one or two "0" in order to achieve three digits.

DB3<CR> .... processed as DB003<CR>

DB03<CR> .... processed as DB003<CR>

However be aware that for some commands like Memory Channel or Search Bank, if you input MQ33 for MQ303 (bank 3, channel 3), the SR2000 would mistakenly correct your entry to MQ033 which means bank 0, channel 33.

Command list details:

COMMUNICATION PARAMETERS		REMARKS
Baud rate	19200 BPS	
Data length	8 bits	· ^A nn [cr],[LF] ... ^A = 13 Hex ... nn = Receiver's ID #
Stop bit	2 bits	(Note) In case ID # = 00 (DEFAULT VALUE),the command can be input directly.
Parity	NON	
Flow control	Xon/Xoff	

COMMAND NAME	REQUEST CMD CMD or HEADER	R/W	COMMAND DESCRIPTION
· POWER ON	x	W	When the receiver's power is off, any key will power it on.
· POWER OFF	QP	W	POWER-OFF the receiver
· REMOTE ON	^Ann	W	^Ann ... nn = ID # ... means control unit A with ID # = 00 to 99
			(Note) In case ID # = 00 (DEFAULT VALUE),the command can be input directly.
· REMOTE OFF	EX	W	Stop control of remote receiver
· ID (REMOTE)	IDnn	W	nn = 00 - 99 (Setting an ID to the remote receiver)
		R	IDnn
· Rx-MODE	Vx ...	W	VFO selection. x = A - J (DEFAULT is VFO-A)
	MRmnn		Memory Read. m = BANK # from 0 - 9 and n = CH # from 00 - 99.
	MSm		Memory Scan. m = BANK # from 0 - 9
	SM		Memory Select
	SSmm		Normal Search. mm = BANK # from 01 - 40
	RX	R	RFU STATUS
			MR MXmnn RFnnnnnnnnnn STnnnnnn AUn MDn BWn ATn AMn TMxxxxxxxx
			MS MXmnn RFnnnnnnnnnn STnnnnnn AUn MDn BWn ATn AMn TMxxxxxxxx
			SM MXmnn RFnnnnnnnnnn STnnnnnn AUn MDn BWn ATn AMn TMxxxxxxxx
			SSmm RFnnnnnnnnnn STnnnnnn AUn MDn BWn ATn AMn TTxxxxxxxx
			Vx RFnnnnnnnnnn STnnnnnn AUn MDn BWn ATn AMn
			(Priority Channel) PPmnn RFnnnnnnnnnn STnnnnnn AUn MDn BWn ATn AMn TMxxxxxxxx
· FREQUENCY	RFnnnnnnnnnn	W	Active VFO's Frequency in Hz.
	RFnn.nn		Active VFO's Frequency in MHz
	RFnnn		Active VFO's Frequency in MHz
	Vx ...		Vx nnnnnnnnnn (Hz) VFO selection followed by frequency in Hz.
	RF	R	Active VFO's Frequency. RFnnnnnnnnnn (Hz)
· FREQ STEP	STnnnnnn	W	Frequency STEP in Hz. Not valid for Search. (AUTO MODE will be set to off)
	STnn.nn		Frequency STEP in KHz.
	STnn		Frequency STEP in KHz.
	ST	R	Frequency STEP in Hz. STnnnnnn (Hz)
· AUTO MODE	AUn	W	If active, automatically choses Reception MODE, Frequency STEP, Bandwidth, DE-ENPHASIS, HPF, and LPF.
			n = 0 for AUTO MODE OFF
			n = 1 for AUTO MODE ON
	AU	R	AUn
· RECEPTION MODE	MDn	W	n = 0 ... NFM (BW = 15 K)
			n = 1 ... WFM (BW = 300 K)
			n = 2 ... AM (BW = 6 K)
			n = 3 ... SFM (BW = 6 K)
			n = 4 ... WAM (BW = 15 K)
	MD	R	MDn
· AGC	AC n	W	n = 0 ... AGC-OFF
			n = 1 ... AGC-FAST
			n = 2 ... AGC-SLOW
			n = 3 ... AGC-MIDDLE
	AC	R	ACn
· RF-ATTENUATOR	ATn	W	n = 0 ... 00 dB
			n = 1 ... 10 dB
			n = 2 ... 20 dB
			n = 3 ... AUTO (Depending on the signal level, RF-AMP will automatically change to on or off)
	AT	R	ATn (n = 3 ... AUTO ATT/AMP)
· RF-AMP	AMn	W	n = 0 ... RF-AMP OFF
			n = 1 ... RF-AMP ON
			n = 2 ... AUTO (Depending on the signal level, ATT will automatically change to on or off)
		R	Amn (n = 3 ... AUTO ATT/AMP)
· NOISE-SQUELCH THRESHOLD	RQnnn	W	RQnnn ... nnn = 000 - 255
			This command can be applied to VFO, MEMORY and SEARCH DATA
			When the optional Remote Control Panel is connected, the AF-volume must be turned to minimum for the command to function.
	RQ	R	RQ nnn
· LEVEL-SQUELCH THRESHOLD	DBnnn	W	DBnnn ... nnn = 000 - 255 (Default is 000 for off)
			This command can be applied to VFO, MEMORY and SEARCH DATA
			When the optional Remote Control Panel is connected, the AF-volume must be turned to minimum for the command to function.
	DB	R	DB nnn

· AF·GAIN	AGnnn	W	AGnnn ... nnn = 000 · 255 (Default is 255)
			When the optional Remote Control Panel is connected, the AF·volume must be turned to minimum for the command to function.
	AG	R	AG nnn
· MANUAL·GAIN	MGnnn	W	MGnnn ... nnn = 000 · 255 (Default is 255)
			AGC must be set to OFF.
	MG	R	MG nnn
· SELECT SQUELCH	SQn	W	n = 0 ... NOISE·SQ (DEFAULT)
			n = 1 ... LEVEL·SQ
	SQ	R	SQn
· SIGNAL·LEVEL	LM	R	ATn AMn NSQm LMnnn ... When NOISE·SQ is selected (nnn = 000 · 999)
			ATn AMn LSQm LMnnn ... When LEVEL·SQ is selected (nnn = 000 · 999)
			m = 0 ... SQUELCH closed
			m = 1 ... SQUELCH open
· AUTO SIGNAL LEVEL	LCn	W	n = 0 ... OFF
			n = 1 ... ON (When the squelch opens, signal level and frequency are returned)
	LC	R	LCn
		R	SQm LCnnn RFnnnnnnnnnn
			m = 0 ... When NOISE·SQ is selected.
· SCAN/SEARCH RE·START CMD	SGn	W	When scan/search is in operation: when it stops, the squelch opens and closes again. Then scan/search resumes . This SG command repeats the process.
			n = 0 ... NO·OPERATION
			n = 1 ... Re·starts [SG]
	SG	R	SGn
· DELAY·TIME	DD...	W	DD n.n ... n.n = 0.0 · 9.9 sec (DEFAULT = 2.0 sec)
			Delay before shifting to next channel.
			nn = FF ... HOLD
	DD	R	DDn.n or DDFF
· FREE SCAN	SP...	W	SPnn ... n.n = 0.0 · 9.9 sec (decimal can be omitted)
			n.n = 0.0 ... FREE·SCAN OFF (DEFAULT)
			= 0.1 · 9.9 sec
	SP	R	SPn.n
· SELECT S·METER	SF...	W	n = 0 ... DIGTAL METER ... dBuV (DEFAULT)
			n = 1 ... DIGTAL METER ... dBm
		R	SFn
· DUPLEX ON/OFF	OFnnx	W	OFnnx ... nn = 00 · 47 (00 = OFF)
			... x = + or ·
	OF	R	OF xnn
· DUPLEX FREQ SETTING	OLmm nnn...n	W	OLmm nnnnnnnn00 ... mm = 01 · 19
			... nnnn... n = FREQ·DATA (up to 1000 MHz, 100 Hz step)
	OLmm	R	OLmm nnnnnnnnnn
	OL		OLmm nnnnnnnnnn
· INTERVAL TIME OF AUTO ATT/AMP	ABnn		ABnn ... nn = 02 · F0
			nn = 02 ... APPROX 100 ms
			nn = 03 ... 150
			nn = 08 ... 350
			nn = 0B ... 500 (DEFAULT)
			nn = 10 ... 700
			nn = 30 ... 2000
			nn = F0 ...
	AB		ABnn
· S·METER LEVEL (dBuV)	LU	R	LU ... S·METER LEVEL (dBuV)
			LU nnn ... ·nn ~ nnn
· S·METER LEVEL (dBm)	LB	R	LB ... S·METER LEVEL (dBm)
			LB nnn ... ·nnn ~ nnn
· S·METER GAIN (constant)	KKnn	W	KKnn ... nn = 00 · 99 (1.00 · 1.99)
	KK	R	KK nn
· SEARCH DATA	SEnn ...	W	SEnn ... nn = 01 · 40 ... BANK #
			SLnnnnnnnnnn (START·FREQ) ... Refer to RF command
			SUnnnnnnnnnn (STOP·FREQ) ... Refer to RF command
			AUn ………………………………… Refer to AU command
			STnnnnnn, MDn, BWn, ENn, ATn, AMn, AC n ... Separate commands with one blank space.
			TTxxxxxxx (TITLE) ... Use if necessary. Spaces are OK.
· SEARCH DATA LIST (settings)	SRnn	R	SR ... CURRENT BANK'S SEARCH·DATA (Format as below)
			SRnn ... nn = 01 · 40 ... Search data of specific search bank (Format as below)
			SRn ...... n = 1 · 4 ... Search data in one of the 10 memory channel banks.
			(1=bank 1 to 10, 2=11 to 20, 3=21 to 30, 4=31 to 40)
			SR%% ... Search data of all banks
		R	SRn SLnnnnnnnnnn SUnnnnnnnnnn AUn MDn BWn ATn AMn TTxxxxxxx
			SRn ··· (BLANK)
· PASS·FREQ	PW...	W	PW ...... Make the current frequency, a PASS Frequency.
			PWnnnnnnnnnn ... Manually input a pass frequency.

· PASS-FREQ LIST	PR...	R	PRnn ... nn = 01 · 40 (BANK #)
			There are 50 frequencies in each of the 40 banks, total 2000 frequencies.
			   PR00 nnnnnnnnnn
			   PR01 nnnnnnnnnn
			   ⋮
			   PRmm ···

· DELETE PASS-FREQ	PD...	W	PDmmnn ... mm = 01 · 40 (BANK #) / nn = 00 · 49 (PASS-CH #) ... A given pass frequency of a specific bank are deleted, PDmm%% ... mm = 01 · 40 (BANK #) ... All pass frequencies from a given bank are deleted.
· DELETE SRCH DATA WITH PASS-FREQ	QSnn	W	QSnn ... nn = 01 · 40 ... The search data and pass frequencies inside a given bank will be deleted. QS%% ... The search data and pass frequencies of ALL banks will be deleted.

· COPY TO VFO	SV...	W	SVn ... n = 0 · 9 (VFO·A · VFO·J) ... Copy the current search data to VFO.
			   n = 0 ... VFO·A
			   ⋮
			   n = 9 ... VFO·J (DEFAULT 時、VFO·J へ)

· MEM DATA SETTINGS	MX ...	W	MXmnn ... Write CURRENT RX·DATA to BANK # = m, CH # = nn MXmnn ... m = 0 · 9 ... BANK # / nn = 00 · 99 ... CH # RFnnnnnnnnnn (FREQUENCY) ... Refer to RF command. AUn ……………………………… Refer to AU command. STnnnnnn, MDn, BWn, ENn, ATn, AMn, AC n ... Separate each command with a space. GAn ... (GA ... M·SEL ON/OFF) ... Separate each command with a space. TMxxxxxxxx (TITLE) ... Use if necessary. Spaces are OK.

· MEM DATA LIST	MA...	R	MAm ... m = 0 · 9 (BANK #) (Format as below)
			MAmnn ... m = 0 · 9 (BANK #) / nn = 00 · 99 (CH #) ... Only for the specified memory channel.
			   MXmnn MPn Gan RFnnnnnnnnnn AUn MDn BWn ATn AMn TMxxxxxxxx
			   MXmnn ···

· MEMORY SELECT ON/OFF	GA...	W	n = 0 ... OFF n = 1 ... ON
	GA	R	GAn
· SEL MEM LISTING	GR...	R	GRnn ... nn = 00 · 99 (Display of specified memory channel) GR%% ... ALL·CH (MAX 100·CH) GRn ... n = 0 · 9 (10 channels are set and displayed) GR ... List up content of all 10 channels GRnn mxx ... nn = CH # / m = MEM·BANK # / xx = MEM·CH #
· DELETE MEM	MQn	W	MQn ... n = 0 · 9 (BANK #) MQ%% ... ALL·BANK

· MOVE TO VFO	MV...	W	MVn ... n = 0 · 9 (VFO·A · VFO·J) ... Apply the current memory data to VFO.
			   n = 0 ... VFO·A
			   ⋮
			   n = 8 ... VFO·I (DEFAULT)
			   n = 9 ... VFO·J

· MEM·CH READ	MRmnn	W	MR ... READ CURRENT MEMORY DATA MRmnn ... m = 0 · 9 ... BANK # / nn = 00 · 99 ... CH #
· MEMO WRITE	MW		MW ... To save the data of the frequency currently being received. Automatic memory channel allocation.
· MEMORY BLANK CHANNEL LIST	MB...	R	MBm ... m = 0 · 9 (BANK #) Searches for available channels in a bank. Channels are displayed by groups of 10, delimited by [···]. example: 002 005 028 034 044 ... 078 ···
· SELECT PRIO·CH	PPmnn	W	PPmnn ... m = 0 · 9 ... BANK # / nn = 00 · 99 ... CH #
	PP	R	PPmnn RFnnnnnnnnnn (NORMAL) or RF··· (BLANK)
· INTERVAL TIME OF PRIORITY	TInn	W	TInn ... nn = 01 · 20 sec (DEFAULT = 05 sec)
	TI	R	TInn

· PRIO ON/OFF	PQn	W	PQn ... n = 0 or 1
			   n = 0 ... OFF PRIORITY OPERATION
			   n = 1 ... ON PRIORITY OPERATION

	PQ	R	PQn ... n = 0 or 1
· LEVEL WAIT	LTnn	W	LTnn ... nn = 01 · 95 · Time during which the level is put on hold until it stabilizes. n = 1 ... APPROX 1 ms
	LTnn	R	LTnn

· DISPLAY FLASH
MEMORY
	DMnnnn	R	DMmmmm ... mmmm = 0000 · FFFF (ROM ADDRESS) ...Last of 4 digits must be "F".
			   DMmmmF:nn nn …… nn ... 16 bytes per line, 8 lines.
			        (Space command allows view of following ROM address)

· EDIT FLASH· MEMORY DATA	CM [SPACE]	W	CMmmmm ... mmmm = 0000 · FFFF (ROM·ADDRESS) mmmF:nn nn …… nn (To display the original 16 byte data) mmmF: xx xx (enter data instead of xx, separate with blank space) CMA00F 5A C3 ... ... 5A C3 ==> Changed to 00 00, Flash memory is initialized with [RESET] or [PWR·ON]
· MODIFY FLASH MEMORY	MM...	W	MMmmmF nn nn nn nn ... nn (At the address mmmF, 16·BYTE DATA is input)
· PLL UNLOCK WAIT·TIME	LW...	W	LWnn ... nn = 02 · 20 ms (DEFAULT = 02) (Time setting for PLL lock after frequency change. Wrong timing might create PLL errors.)
	LW	R	LWnn
· SQ WAIT·TIME	SW...	W	SWnn ... nn = 00 · 50 ms (DEFAULT = 10) Signal squelch check time after the PLL is locked.
	SW	R	SWnn

· BIRDIE CANCELL REQUEST	PLn	W	Shifting the PLL data from the current reception frequency. n = 0 ... OFF n = 1 ... +200K n = 2 ... -200K
	PL	R	PLn
· MAIN VERSION #	VR	R	VR ... MAIN VERSION # VR yyyy-mm-dd
· VFO DEFAULT	CL [cr]	W	CL ... Reset the VFO to default.
· RESET	RS [cr]	W	Flash ROM is re-initialized, after switching the receiver off and on again. (SRCH-DATA and MEM-DATA will be lost!)
· SERIAL #	SNnnnnnnnnnn	W	SNnnnnnnnnnn ... nnnnnnnnnn ... SERIAL # (10 digits)
	SN [cr]	R	SNnnnnnnnnnn

USING THE SUPPLIED "SR2200 CONTROL SOFTWARE"

The software is supplied "as is" for testing purposes, with no warranty nor formal support.
The "SR2200 CONTROL SOFTWARE" only recognizes the receiver's RS232C connector.
If your PC (particularly laptops) does not feature a RS232C port, you may alternatively use a
USB to SERIAL adapter.

System requirements:
-IBM PC compatible receiver with an available RS232C port.
-Microsoft® Windows® 98, ME, 2000 or XP.
-Pentium® 300MHz processor or faster (at least the minimum to run the newer operating
systems.)
-RAM and hard disk space requirements are negligible.

(1) Connect the SR2200 to your PC using a serial cable.
In case you would like to use a "USB to serial" adapter, install this adapter first as specified by the
manufacturer's instructions.
(2) **Install and launch the control software.** The main control window looks like this:
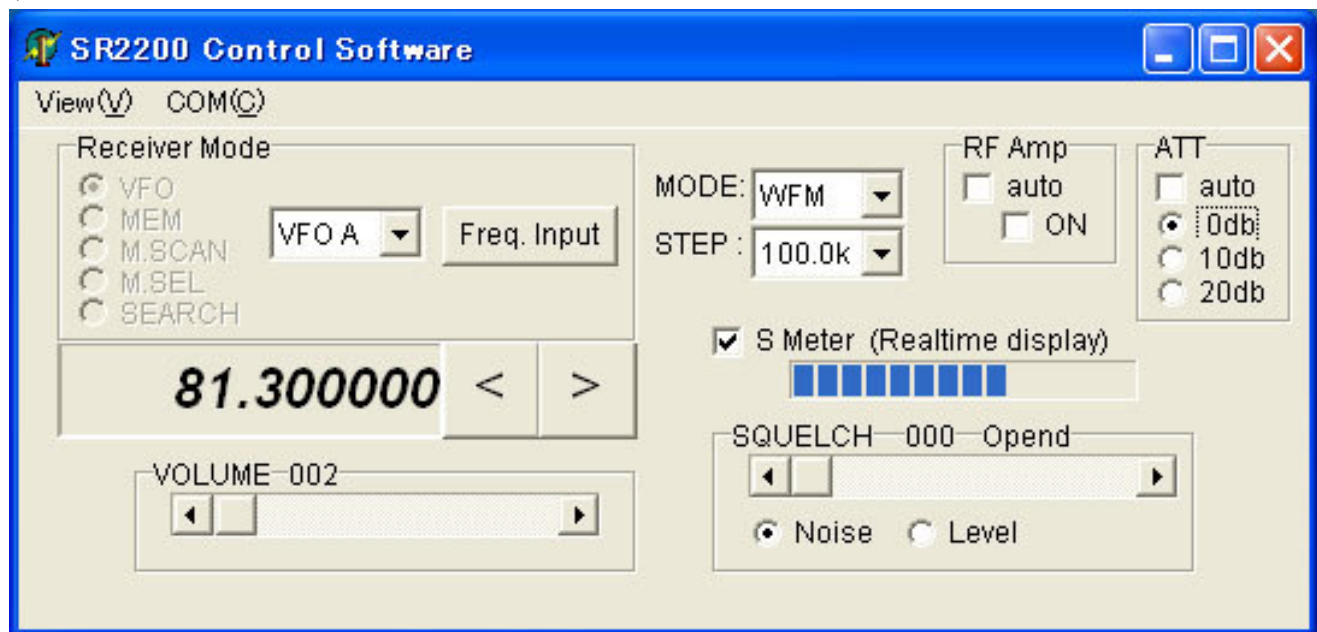
The default COM PORT 1 setting should allow you to control your receiver right away. Depending on you PC's configuration, the COM PORT to which you connected the SR2200 can be different from COM1. In this case it is necessary to select the appropriate number as pictured on the right.
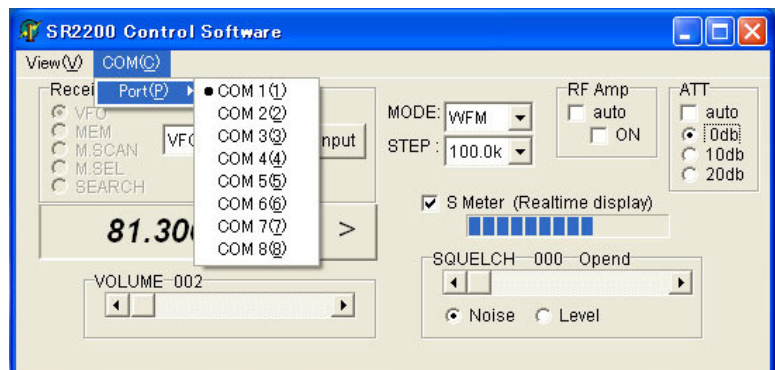
When using a "USB to serial" adapter, the COM number Windows automatically assigns can be quite high, such as 5 to 8. You will need to select the correct COM port, as pictured. It is possible that you then may have to close the program and to start it again, for the connection to be recognized.
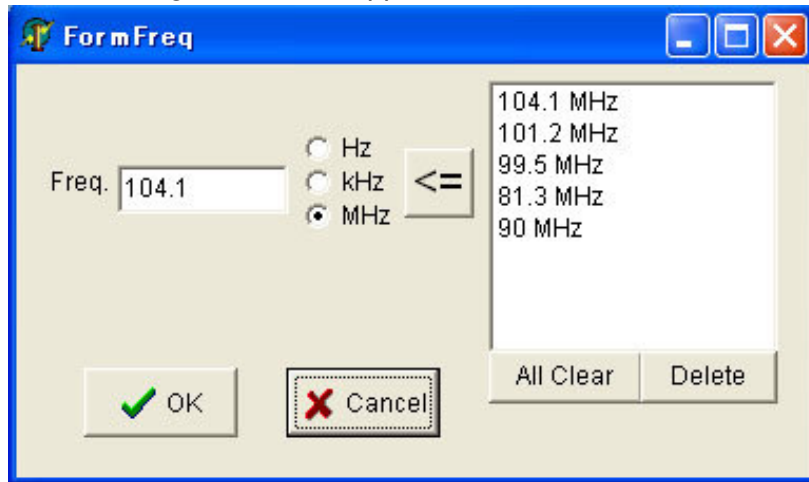
HOW TO INPUT A FREQUENCY

(1) First select the VFO (VFO A to J) in which the frequency will be stored. If the VFO already contains a frequency, then the receiver will be tuned to it.
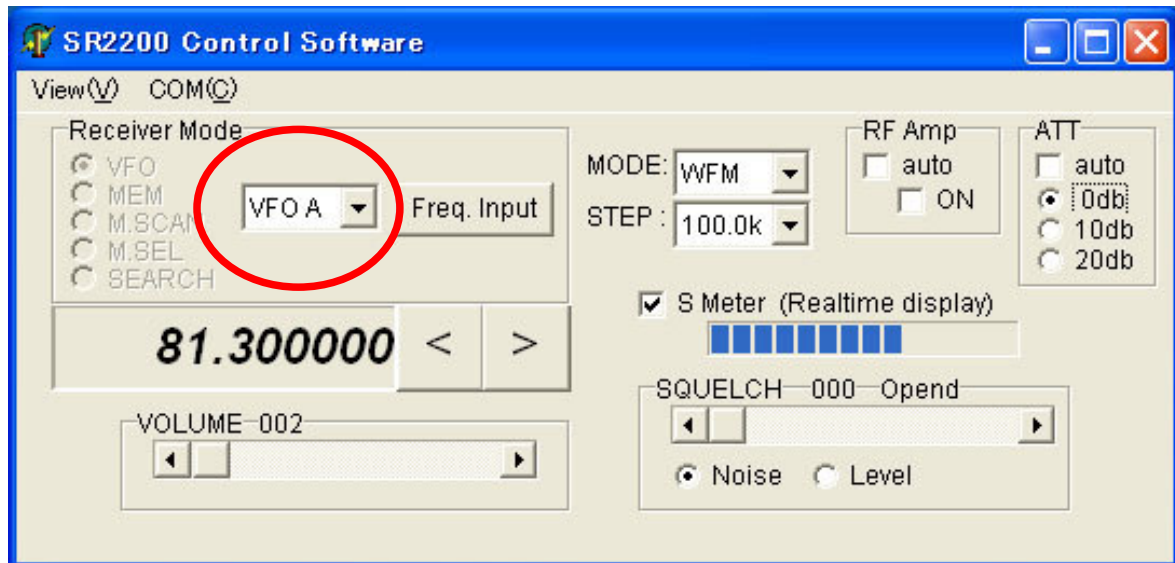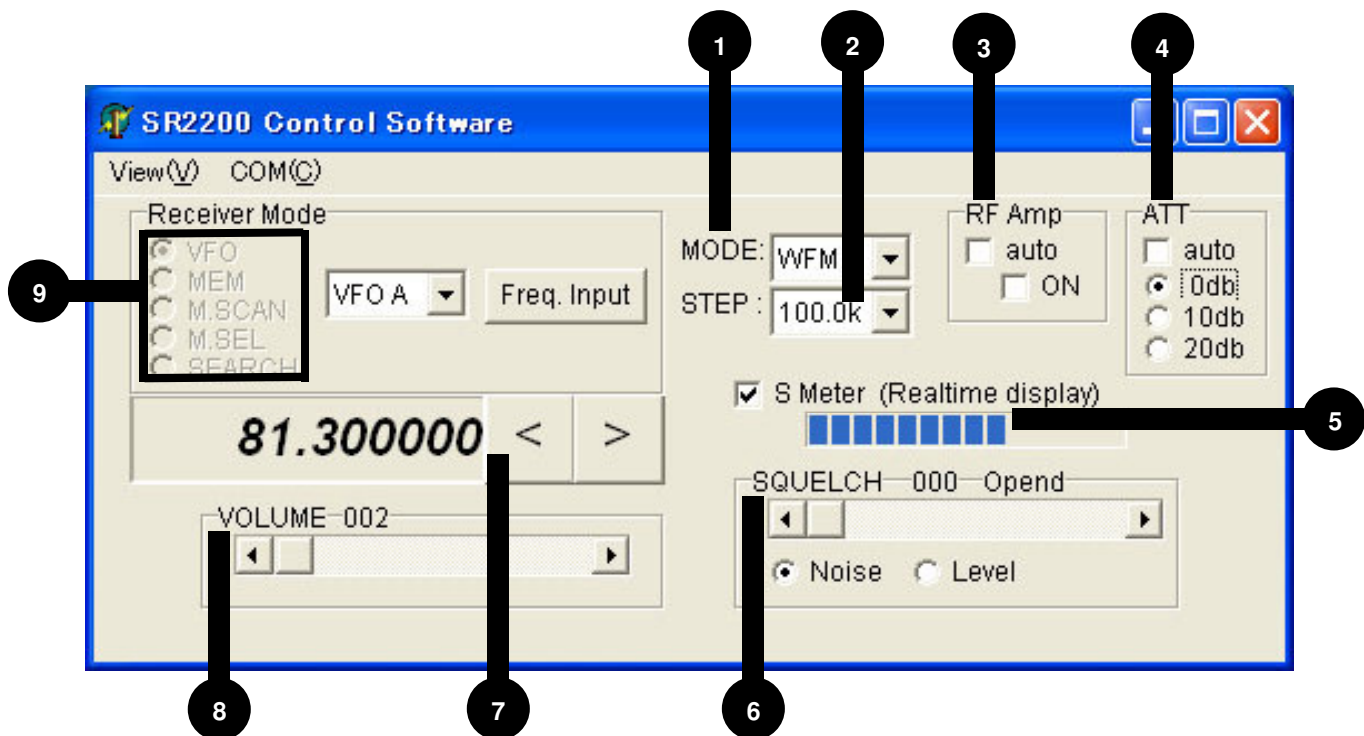

(2) Click the "Freq.Input" button:
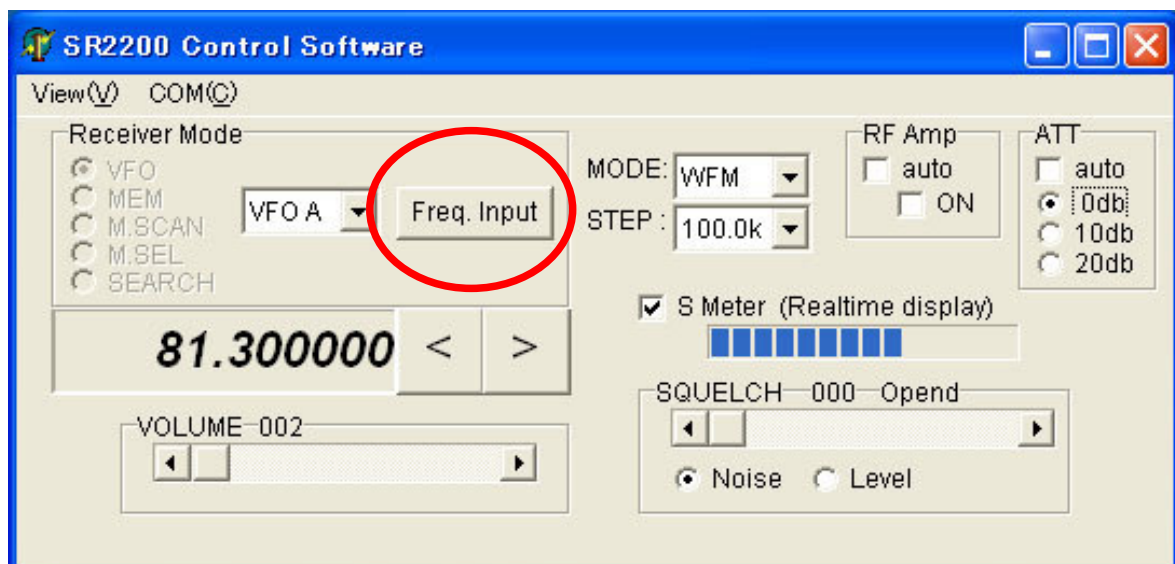
The following window will appear:

3) Input the desired frequency in the left frame and click OK. If other frequencies have been stored previously in other VFO s, you may select one in the right window, transfer it to the left window by clicking on the <= arrow, and validate with OK.

OTHER FUNCTIONS

(1) **Reception Modes:** You have to manually choose between:

-AM (Amplitude Modulation). IF filter bandwidth of 6 kHz.

-NFM (Narrow Band Frequency Modulation): IF filter bandwidth of 15kHz.

-WFM (Wide Band Frequency Modulation): IF filter bandwidth of 15kHz.

-SFM (Super Narrow Frequency Modulation): IF filter bandwidth of 6kHz.

(2) **Frequency Step size:** You have to manually choose between 0.1, 0.5, 1, 2, 5, 6.25, 9, 10, 12.5, 20, 25, 30, 50, and 100kHz.

(3) **RF Preamplifier:** Select either "auto", "ON" or no selection for disabling the preamplifier.

(4) **RF Attenuator:** Select either "auto", "0dB", "10"dB, or "20dB" of attenuation.

(5) **Signal Strength Meter**: It is for relative signal strength comparison and calibration may not be totally reliable.

(6) **Squelch Control:** There are 2 types supported, NOISE squelch and (signal) LEVEL squelch. Move the slide to the right (for values from 0 to 255) until the unwanted noise disappears.

(7**) Manual Frequency Tuning:** Using the left arrow (for tuning down) or the right arrow (for tuning up) you can decrease or increase the frequency by the value defined in the (2) Frequency Step section. For finer tuning, use lower STEP values.

(8) **Volume Control**: Represents the AF audio output through the external speaker & headphones sockets. The SR2200 has no internal speaker!

Volume scale is from 000 to 255. Beware of excessive volume level when using headphones.

(9) Functions not yet supported.

TERMINAL-THE COMMAND WINDOW

Although this function is more for testing purposes, and still under development, you may access the Terminal window through the VIEW menu.
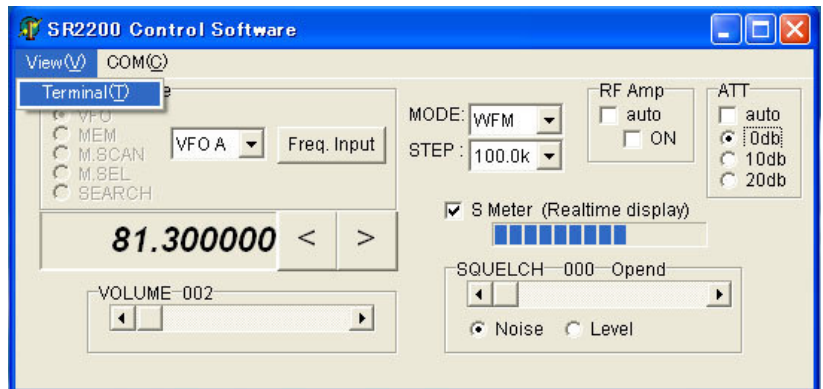
This window allows you to monitor the data flowing from the SR2200 to the PC, and to check upon the SR2200 data response when a Command Instruction has been entered. So far, only READ commands are supported, WRITE commands are not.
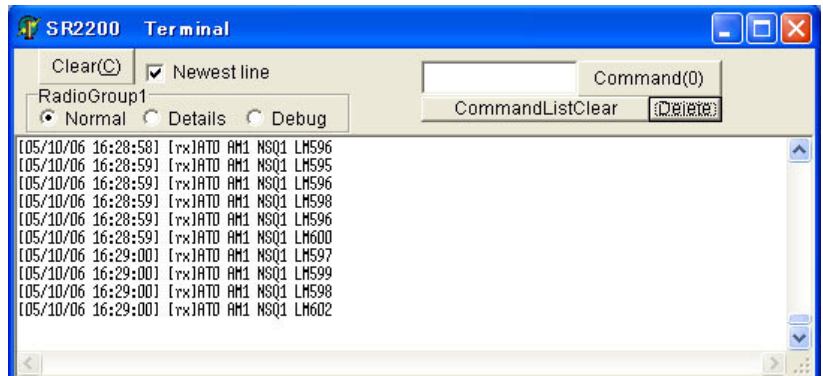
If you would like to use READ AND WRITE commands easily and extensively, we would advice the WINDOWS TERMINAL SOFTWARE, included in all Windows versions.

This manual is a temporary version and all content is subject to change without prior notice.