

SDU5600 COMMAND LIST

The SDU5600 is fully controllable by PC via the RS-232C serial port.

1 The SDU5600 RS-232C specification

Data bits: 8
Stop bits: 2
Parity: None
Baud rate: 9600 bps
Flow control: RTS/CTS

2 Delimiter

<CR> --- 0x0d (in hexadecimal)

or

<CR><LF> --- 0x0d,0x0a (in hexadecimal) (Note: <LF> will be ignored.)

Response to the command:

When correct, <SP><CR><LF> --- 0x20,0x0d,0x0a (in hexadecimal)

When incorrect, ? <CR><LF> --- 0x3f,0x0d,0x0a (in hexadecimal)

Response to the read command:

Parameter output followed by <SP><CR><LF> --- 0x20,0x0d,0x0a (in hexadecimal)

3 Command list

Commands are divided into four categories:

S = Spectrum analysis

V = Visual command

U = User Interface

I = Information

The following format is used for tabular presentation, and Windows ® Hyper Terminal® may be used to control.

Function	Read/Write	Command category	Type of command	Parameter
Center Freq.	R	S	CF	

Example: RSCF<CR> --- Response: SCF79.5<SP><CR><LF>

In this example, the center frequency is read.

Command = Read

Category = Spectrum analysis

Type of command (abbreviation) = CF

Parameter (variable) = Not used in this example

Example of input = RSCF<CR> Response from SDU5600 = SCF79.5<SP><CR><LF>

A correct WRITE command results in the action being carried out and <CR><CR><LF> being returned. An incorrect command results in a question mark "?" followed by <CR><LF> being returned.

4 Spectrum analysis

Command : WSCF Function : SET CENTER FREQUENCY Command category: WRITE
Parameter : Min- Max (in MHz)
Example : WSCF79.5<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Frequency entry for out of receive range will be respond by ?<CR><LF>, and the command will be ignored.

Command : RSCF Function : READ CENTER FREQUENCY Command category: READ
Parameter : N/A
Example : RSC<CR><LF> Response: SCF79.5<SP><CR><LF>
Remarks: Frequency is displayed in MHz.

Command : WSSP Function : SET SPAN FREQUENCY Command category: WRITE
Parameter : 0.16 ~ 10 (MHz)
Example : WSSP0.32<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Data entry for out of range will be respond by ?<CR><LF>, and the command will be ignored.

Command : RSSP Function : READ SPAN FREQUENCY Command category: READ
Parameter : N/A
Example : RSSP<CR><LF> Response: SSP0.32<SP><CR><LF>
Remarks: Frequency is displayed in MHz.

Command : WSBW Function : SET RBW Command category: WRITE
Parameter : 1 ~ 4
Example : WSBW1<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Parameter vs. RBW is as follows: 1 = 4 KHz, 2 = 32 KHz, 3 = 64 KHz, 4 = 128 KHz Data entry for out of range will be respond by ?<CR><LF>, and the command will be ignored.

Command : RSBW Function : READ RBW Command category: READ
Parameter : N/A
Example : RSBW<CR><LF> Response: SBW4<SP><CR><LF>
Remarks: Parameter vs. RBW is as follows: 1 = 4 KHz, 2 = 32 KHz, 3 = 64 KHz, 4 = 128 KHz.

Command : WSGN Function : SET AMPLITUDE Command category: WRITE
Parameter : -30 ~ 0
Example : WSGN-30<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Amplitude is set in 10 incremental. Data entry for out of range will be respond by ?<CR><LF>, and the command will be ignored.

Command : WSCM Function : SET CURSOR Command category: WRITE
Parameter : 1 ~ 3
Example : WSCM3<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Parameter : 1 = MARKER, 2 = PEAK, 3 = C-PEAK To use this command, you need to set the trigger level by using the WSTL command. Data entry for out of range will be respond by ?<CR><LF>, and the command will be ignored.

Command : RSCM Function : READ CURSOR Command category: READ
Parameter : N/A
Example : RSCM<CR><LF> Response: SCM1<SP><CR><LF>
Remarks: Parameter : 1 = MARKER, 2 = PEAK, 3 = C-PEAK

Command : WSTL Function : SET PEAK TRIGGER LEVEL Command category: WRITE
Parameter : -90 ~ 0
Example : WSTL-80<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Data entry for out of range will be respond by ?<CR><LF>, and the command will be ignored.

Command : RSTL Function : READ PEAK TRIGGER LEVEL Command category: READ
Parameter : N/A
Example : RSTL<CR><LF> Response: STL-80<SP><CR><LF>
Remarks: Read the trigger level in the Peak mode.

Command : WSDM Function : SET DATA MODE Command category: WRITE
Parameter : 1 ~ 4
Example : WSDM2<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Parameter: 1 = NORMAL, 2 = AVR, 3 = MAX, 4 = MED If AVR or MED is selected, you need to set the WSME command before executing the command. Data entry for out of range will be respond by ?<CR><LF>, and the command will be ignored.

Command : RSDM Function : READ DATA MODE Command category: READ
Parameter : N/A
Example : RSDM<CR><LF> Response: SDM3<SP><CR><LF>
Remarks: Parameter: 1 = NORMAL, 2 = AVR, 3 = MAX, 4 = MED

Command : WSAV Function : SET AVR SAMPLING Command category: WRITE
Parameter : 2 ~ 31
Example : WSAV10<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Set AVR sampling and set the DATA mode to AVR. Data entry for out of range will be respond by ?<CR><LF>, and the command will be ignored.

Command : RSAV Function : READ AVR SAMPLING Command category: READ
Parameter : N/A
Example : RSAV<CR><LF> Response: SAV10<SP><CR><LF>

Command : WSME Function : SET MED SAMPLING Command category: WRITE
Parameter : 2 ~ 4
Example : WSME4<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Set MED sampling and set the DATA mode to MED. Data entry for out of range will be respond by ?<CR><LF>, and the command will be ignored.

Command : RSME Function : READ MED SAMPLING Command category: READ
Parameter : N/A
Example : RSMED<CR><LF> Response: SMED4<SP><CR><LF>

5 VISUAL COMMAND

Command : WVPM Function : SET PLOT MODE Command category: WRITE
Parameter : 1 ~ 2
Example : WVPM2<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Parameter: 1 = PAINT, 2 = OUTLINE Data entry for out of range will be respond by ?<CR><LF>, and the command will be ignored.

Command : RVPM Function : READ PLOT MODE Command category: READ
Parameter : N/A
Example : RVPM<CR><LF> Response: VPM1<SP><CR><LF>
Remarks: Parameter: 1 = PAINT, 2 = OUTLINE

Command : WVDD Function : SET F-DIR Command category: WRITE
Parameter : 1 ~ 2
Example : WVDD2<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Parameter: 1 = NORMAL, 2 = REVERSE Data entry for out of range will be respond by ?<CR><LF>, and the command will be ignored. This command is available only when the receiver is selected either Other(10M) or Other (45M).

Command : RVDD Function : READ F-DIR Command category: READ
Parameter : N/A
Example : RVDD<CR><LF> Response: VDD1<SP><CR><LF>
Remarks: Parameter: 1 = NORMAL, 2 = REVERSE

Command : WVWF Function : SET WATERFALL FUNCTION Command category: WRITE
Parameter : 1 ~ 2
Example : WVWF2<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Parameter: 1 = NORMAL, 2 = WATERFALL Data entry for out of range will be respond by ?<CR><LF>, and the command will be ignored

Command : RVWF Function : READ WATERFALL FUNCTION Command category: READ
Parameter : N/A
Example : RVWF<CR><LF> Response: VWF2<SP><CR><LF>
Remarks: Parameter: 1 = NORMAL, 2 = WATERFALL

Command : RVIM Function : READ VISUAL IMAGE Command category: READ
Parameter : N/A
Example : RVIM<CR><LF> Response:
Remarks: While this command is executed, the communication speed will be changed to 115200bps. After data read is completed, the data speed will return to 9600 bps.

6 USER INTERFACE

Command : WUMD Function : SET RECEIVER MODE Command category: WRITE
Parameter : 1 ~ 15
Example : WUMD1<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Parameter: 1 = WFM, 2 = NFM, 3 = SFM, 4 = WAM, 5 = AM, 6 = NAM, 7 = LSB, 8 = USB, 9 = CW, 10 = AUTO, 11 = AMW, 12 = FM, 13 = FMN, 14 AMN, 15 = CWN Data entry for out of range or any mode that is not supported by the associated receiver will be respond by ?<CR><LF>, and the command will be ignored

Command : RUMD Function : READ RECEIVER MODE Command category: READ
Parameter : N/A
Example : RUMD<CR><LF> Response: UMD1<SP><CR><LF>
Remarks: Parameter: 1 = WFM, 2 = NFM, 3 = SFM, 4 = WAM, 5 = AM, 6 = NAM, 7 = LSB, 8 = USB, 9 = CW, 10 = AUTO, 11 = AMW, 12 = FM, 13 = FMN, 14 AMN, 15 = CWN

Command : WUAT Function : SET ATT Command category: WRITE
Parameter : 1 ~ 2
Example : WUAT2<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Parameter: 1 = ON, 2 = OFF Data entry for out of range or the attenuator function is not supported by the associated receiver, the SDU5600 will respond by ?<CR><LF>, and the command will be ignored

Command : RUAT Function : READ ATT MODE Command category: READ
Parameter : N/A
Example : RUAT<CR><LF> Response: UAT2<SP><CR><LF>
Remarks: Parameter: 1 = ON, 2 = OFF

Command : WUST Function : SET STEP FREQ. Command category: WRITE
Parameter : Size in KHz
Example : WUST12.5<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Data entry for out of range or if the input freq. step is not supported by the associated receiver, the SDU5600 will respond by ?<CR><LF>, and the command will be ignored

Command : RUST Function : READ STEP FREQ. Command category: READ
Parameter : N/A
Example : RUST<CR><LF> Response: UST12.5<SP><CR><LF>
Remarks: Size in KHz

Command : WURX Function : SELECT RECEIVER Command category: WRITE
Parameter : 1 ~ 10
Example : WURX3<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Parameter: 1 = Other (10M), 2 = Other (45M), 3 = AR5000, 4 = AR3000A, 5 = AR8600 (10M), 6 = AR8600 (45M), 7 = AR8200, 8 = AR-ONE, 9 = IC-R8500, 10 = IC-R7100, 11 = RFU5600 Data entry for out of range will respond by ?<CR><LF>, and the command will be ignored.

Command : RURX Function : READ RECEIVER TYPE Command category: READ
Parameter : N/A
Example : RURX<CR><LF> Response: URX3<SP><CR><LF>
Remarks: Parameter: 1 = Other (10M), 2 = Other (45M), 3 = AR5000, 4 = AR3000A, 5 = AR8600 (10M), 6 = AR8600 (45M), 7 = AR8200, 8 = AR-ONE, 9 = IC-R8500, 10 = IC-R7100, 11 = RFU5600

Command : WUMC Function : SET MARKER FREQ. AS RECEIVE FREQ.
Command category: WRITE
Parameter : N/A
Example : WUMC<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: This command is not available for the Other (10M) or Other (45M) receiver.

Command : WUDS Function : MOVE MARKER POSITION Command category: WRITE
Parameter : 1 ~ 2
Example : WUDS2<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Parameter: 1 = 1 step left, 2 = 1 step right Data entry for out of range will respond by ?<CR><LF>, and the command will be ignored.

Command : WUOM Function : SET MONITOR MODE Command category: WRITE
Parameter : 1 ~ 3
Example : WUOM1<CR><LF> Response: if correct: <SP><CR><LF> if incorrect: ?<CR><LF>
Remarks: Parameter: 1 = Spectrum analyzer mode, 2 = StepReso. mode, 3 = Channel mode Data entry for out of range will respond by ?<CR><LF>, and the command will be ignored.

Command : RUOM Function : READ MONITOR MODE Command category: READ
Parameter : N/A
Example : RUOM<CR><LF> Response: UOM1<SP><CR><LF>
Remarks: Parameter: 1 = Spectrum analyzer mode, 2 = StepReso. mode, 3 = Channel mode

Command : WUCS Function : PROGRAM CHANNEL MODE Command category: WRITE
Parameter : 3 parameter entry
Example : WUOS 79.5 10 81.1<CR><LF> Response: if correct: <SP><CR><LF>
if incorrect: ?<CR><LF>
Remarks: Enter START freq. and END freq. in MHz, and STEP freq. in KHz. Enter the <SP> (Space) between each parameter. Data entry for out of range will respond by ?<CR><LF>, and the command will be ignored.

Command : RUCS Function : READ CHANNEL MODE Command category: READ
Parameter : N/A
Example : RUCS<CR><LF> Response: USCS 79.5 10 81.1<SP><CR><LF>
Remarks: Respond START freq. and END freq. in MHz, and STEP freq. in KHz. There is space between each parameter.

Command : WUBP Function : SET BEEP ON/OFF Command category: WRITE
Parameter : 1 ~ 2
Example : WUBP1<CR><LF> Response: if correct: <SP><CR><LF>
if incorrect: ?<CR><LF>
Remarks: Parameter: 1 = BEEP ON, 2 = BEEP OFF

Command : RUBP Function : READ BEEP ON/OFF Command category: READ
Parameter : N/A
Example : RUBP<CR><LF> Response: UBP1<SP><CR><LF>
Remarks: Parameter: 1 = BEEP ON, 2 = BEEP OFF

Command : WUBE Function : BEEP SETTING Command category: WRITE
Parameter : 1 ~ 7
Example : WUBE6<CR><LF> Response: if correct: <SP><CR><LF>
if incorrect: ?<CR><LF>
Remarks: Parameter: 1 = Emit "click" when key is pressed,
2 = Emit "click" when key entry is ignored.
3 = Beep when correct entry is made.
4 = Beep when entry data is out of range.
5 = Beep when key entry is cancelled.
6 = Beep when On/Off parameter is set to ON.
7 = Beep when On/Off parameter is set to OFF.
Data entry for out of range will respond by ?<CR><LF>, and the command will be ignored.

7 INFORMATION

Note: The following table is used only during production of the SDU5600 to assist testing, and therefore, the commands are given for completeness only.

Command : RVIM Function : READ VISUAL IMAGE Command category: READ
Parameter : N/A
Example : RVIM<CR><LF> Response:
Remarks: When this command is sent to the SDU5600, it will respond as follows: 1. Respond to the command by sending <SP><CR><LF> to PC. 2. Wait for approximately 400 mS. 3. Change baud rate to 115200bps automatically. 4. Output VIM (0x56, 0x49, 0x4d in hexadecimal). 5. Output 1 dot (= 1 byte) of screen image data in 2 characters (in hexadecimal). (Example) 0x4a data = 1A (2 byte) 0x31, 0x41 (in hexadecimal) 356 x 236 dot (= 168032 characters) 6. Output X (0x58 in hexadecimal). 7. Wait for approximately 100 mS. 8. Return baud rate to 9600 bps again. 9. Output OK response <SP><CR><LF>.

Command : RIGD Function : GRAPHIC DOWNLOAD Command category: READ
Parameter : N/A
Example : RIGD<CR><LF> Response:
Remarks: When this command is sent to the SDU5600, it will respond as follows: (Example): ===== Start from here ===== IGD<SP><CR><LF> /<SP><CR><LF> F5.70000, L-90<SP><CR><LF> F5.73125, L-90<SP><CR><LF> (Some lines omitted) F7.73125, L-86<SP><CR><LF> F7.76250, L-86<SP><CR><LF> (Some lines omitted) F15.66875, L-90<SP><CR><LF> F15.70000, L-90<SP><CR><LF> /<SP><CR><LF> ===== End =====

Command : RICD Function : CURSOR DOWNLOAD Command category: READ
Parameter : N/A
Example : RICD<CR><LF> Response:
Remarks: Read output level of the cursor frequency. (Example): ===== Start from here ===== f10.70000, l-78<SP><CR><LF> ===== End =====
Note: Use small F or L (not a capital) for this command.

Command : RIFD Function : HIGH SPEED DATA DOWNLOAD Command category: READ
Parameter : N/A
Example : RIFD<CR><LF> Response:
Remarks: Read output level on each frequency on the screen as 1 byte data. (Example): ===== Start from here ===== IFD<SP><CR><LF>

<SP>CR><LF> (Some lines omitted. These are level data area.) #%\$-+#! (Some lines omitted) <SP><SP>
<SP><CR><LF>
===== End =====

Note: Use small F or L (not a capital) for this command.

Command : **RIVE** Function : **READ FIRMWARE VERSION** Command category: **READ**

Parameter : **N/A**

Example : RIVE<CR><LF> Response:

Remarks: (Example):
===== Start from here =====
IVE<SP>Ver.<SP>007<SP>307C<SP><SP><CR><LF>
===== End =====

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