

JUMA-TRX2 serial command and query protocol

OH2NLT

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General

JUMA-TRX2 serial protocol is JUMA-TRX2 native way to communicate with another system like the JUMA PA100 linear amplifier. The JUMA-TRX2 serial command and the query protocol is activated from the TRX2 232 config page. Set RS232 = JUMATRIX2.

Note 1.

The JUMA-TRX2 serial command and query protocol is implemented only in firmware version v1.05 and newer.

Note 2.

RS232 serial port baud rate should be set to match with two communicating units. High values of Baud rates are recommended 38400bd and up. High transmission speed keeps transaction times short.

Description of the JUMA-TRX2 protocol

Start and end delimiters. Messages always start with a question mark (?) or equal sign (=). Message always terminated with CR (carriage return character). ? means query and = means set message. LF is added to the response messages. This makes it lot easier to test the commands with a terminal program.

Start	Message	Stop
?	Query Message	CR
=	Set message	CR

First character of the message is the required parameter. Messages may be only one character long.

Character	Parameter
F	Frequency
V	VFO #
M	Mode
R	RIT status
A	Audio filter
W	Audio filter width
B	Band, query only
S	S /PWR meter, query only

Frequency [F]

F Query

?	F	CR
---	---	----

TRX2 response (example)

=	F	03699000	LF	CR
---	---	----------	----	----

F Set

=	F	14700000	CR
---	---	----------	----

VFO # [V]

V Query

?	V	CR
---	---	----

TRX2 response (example)

=	V	1	LF	CR
---	---	---	----	----

V Set

=	V	25	CR
---	---	----	----

VFO number is a single or a two decimal digit. Range: 0 to 25 (A-Z).

Mode [M]

M Query

?	M	CR
---	---	----

TRX2 response (example)

=	M	2	CR	LF
---	---	---	----	----

V Set

=	M	2	CR
---	---	---	----

Number	Mode
0	LSB
1	USB
2	CW
3	Tune

Rit status [R]

R Query

?	R	CR
---	---	----

TRX2 response (example)

=	R	1	LF	CR
---	---	---	----	----

R Set

=	R	0	CR
---	---	---	----

0=RIT Off, 1 = RIT On

Audio Filter # [A]

A Query

?	A	CR
---	---	----

TRX2 response (example)

=	A	2	CR	LF
---	---	---	----	----

A Set

=	A	1	CR
---	---	---	----

Number	Filter
0	NAR
1	MID
2	WID

Audio filter width [W]

W Query

?	W	CR
---	---	----

TRX2 response (example)

=	W	2500	CR	LF
---	---	------	----	----

W Set

=	W	2300	CR
---	---	------	----

Set selected audio filter width. Limitations are the same as tuning from the TRX2 front panel controls. Set frequency is truncated to nearest SCAF clock step.

Band query [B]

B Query

?	B	CR
---	---	----

TRX2 response (example)

=	B	2	CR	LF
---	---	---	----	----

Number	Band
0	N/A
1	1.8
2	3.5
3	7
4	10
5	14
6	18
7	21
8	24
9	28

Query only, there is no Set command for Band information.

S / Power meter [S]

S Query

?	S	CR
---	---	----

TRX2 response (example)

=	S	24	CR	LF
---	---	----	----	----

S-meter / Power meter range 0 to 47. Query only. Response is S-meter while RX and PWR meter when TX.

PTT / TX control & status [T]

T Query

?	T	CR
---	---	----

TRX2 response (example)

=	T	0	LF	CR
---	---	---	----	----

T Set

=	T	1	CR
---	---	---	----

1 = PTT/TX On, 0 = PTT/TX Off

No action characters

For input format flexibility, certain characters are defined as no action characters.

. 0x2E	Period
, 0x2C	Comma
0x20	Space
0x0A	Line feed
0x00	NUL

Following command formats yields same result

=	F	369900	CR
---	---	--------	----

=	F	3.699.00	CR
---	---	----------	----

=	F	3699,00	LF	CR
---	---	---------	----	----

=	F	NUL 3 699 00	CR
---	---	--------------	----