JUMA TX136/TX500 serial command and query protocol

OH2NLT

Protocol version 1.00 / 15.10.2009

General

JUMA TX136/TX500 serial protocol is JUMA TX136/TX500 native way to communicate with another system. The JUMA TX136/TX500serial command and query protocol is activated from the TX136/TX500 config page. Set RS232 = TX136/500.

Note 1.

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 TX136/TX500 protocol

Start and end delimiters. Messages always start with a question mark (?) or equal sign (=). Message always terminated with CR (carriage return character). ? mean 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

Messages may be only one character long (command character only) or command and parameters. See command descriptions bellow.

Command	Parameter
Character	
F	Frequency
· .	
0	Operating mode
T	PTT status
K	Keyer type
S	CW speed
Р	TX Power level
X	Spare I/O state
Α	Pre amplifier state
С	Frequency converter state
M	Beacon Message
E	Save beacon msg to the EPROM
В	Beacon control
1	System Info

Frequency [F]

TX frequency resolution is 1Hz.

F Query		
?	F	CR

TX	136/	ΓX500 resp	onse (e	example
=	F	500000	LF	CR

FS	et		
=	F	543210	CR

All 6-digits must be set.

Operating mode [O]

0 (Query	/
?	0	CR

TX	136/	ΓX500	respor	nse (e	example)
_	0	1	1 F	CR	

0.5	Set		
=	0	0	CR

Number	Operating Mode
0	STANDBY
1	OPERATE
2	TUNE

PTT status [T]

PTT status is query only command.

T Query
? T CR

TX136/TX500 response (example)
= T 1 LF CR

Number	PTT
0	Off
1	On

Keyer type [K]

K Query

TX136/TX500 response (example)
= K 2 CR LF

K Set = M 0 CR

Number	Keyer
0	Dot priority
1	lambic A
2	lambic B
3	Straight

4	Beacon
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CW speed [S]

S Query		
?	S	CR

	TX136/TX500 response (example)				;)		
ĺ	=	S	1	5	0	LF	CR

SS	Set				
=	S	0	0	5	CR

CW speed resolution is 0.1 wpm. All 3 digits must be entered. 200 = 20.0 wpm, 005 = 0.5wpm. Acceptable range is from 0.1 wpm to 50.0 wpm.

TX power level [P]

P Query		
?	Р	CR

TX136/TX500 response (example)
= P 2 CR LF

P S	Set		
=	Р	0	CR

Number	Power level
0	MIN
1	LOW
2	HI
3	MAX

Spare I/O state [X]

X C	X Query		
?	Χ	CR	

TX136/TX500 response (example)
= | X | 0 | CR | LF

X Set			
=	Χ	1	CR

Number	Spare I/O state
0	Off
1	On

Pre Amplifier state [A]

ΑC	Query	/		
?	Α	CR		
TX	136/7	ΓX500	respor	nse (example)
=	Α	0	CR	LF

A S	Set		
=	Α	2	CR

Number	Spare I/O state
0	Off
1	10dB
2	20dB

Frequency converter state [C]

CC	C Query					
?	С	CR				

TX	136/	ΓX500	respor	nse (e	xample)
=	С	0	CR	LF	

C S	Set		
=	С	1	CR

	Number	Frequency converter
ĺ	0	Off
	1	On

Beacon message [M]



TX136/TX500 response (example)

= M vvv vvv de JUMA Beacon # CR LF

M 5	Set			
=	M	\P1vvv\P2 vvv\P3vvv de OH2NLT 500kHz Beacon #	CR	l

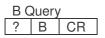
Beacon message can be 238 characters long. See Beacon instructions for special control character actions. M command does not store message into the EPROM. Use E command for EPROM write.

Store beacon message to the EPROM memory [E]

ES	Set	
=	Ε	CR

E is a set only command.

Beacon control [B]



TX	136/	ΓX500	respor	nse ((example)
=	В	0	CR	LF	

BS	Set		
=	В	C	CR

Parameter	Beacon
0	Beacon Off
19	Beacon On for n times
С	Beacon On continously
Т	Beacon Transmit once

=BT command behaves same way as =B1 command except it restores keyer type and TX operating mode after message transmission. =B1 leaves TX to Beacon mode.

System info [I]

System info is a query only command.

ΙQ	uery				
?	Ι	CR			
Or					
2	1	Sub	ommand	CB	

Sub command	Action
none	System info
1	System info
Р	Power meter reading
S	SWR meter reading
В	Battery voltage
D	Drain current

System Info
Query
? I I CR

TX136/TX500 response (example)

= | I | I | JUMA-TX500, SW v1.01, DATE 11.10.2008 | CR | LF

TX Power, resolution 0.1W. Example 527 = 52.7W. Query

? I P CR

TX136/TX500 response (example)

= | I | P | 5 | 2 | 7 | CR | LF

SWR meter reading. Example 100 = 1.00 Query

? I S CR

TX	TX136/TX500 response (example)						
=	1	S	1	0	0	CR	LF

Battery voltage, resolution 10mV. Example 1350 = 13.50V.

Query ? I B CR

TX	136/	ΓX50	0 res	pons	e (ex	camp	le)		
=	1	В	1	3	5	0	CR	ΙF	

Drain current, resolution 0.1A. Example 12 = 1.2A.

Query
Place | Place |

	TX	136/	ГХ50	0 res	pons	е	(exa	mple)	
ſ	=	1	D	1	2		ìR	ΙF	

No action characters

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

0x0A	Line feed
0x00	NUL