

TX136/500 v1.08 menu – F4GCB 05-2016

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Starting up				
PWR (short)	JUMA TX136 1.07a OH2NLT OH7SV	2" delay	----- PWR MIN CW20 STBY 136000	Display mode

Shutdown				
PWR (long)	Pwr OFF after 3s	3" push		Bye bye The user settings are saved in EEPROM.

Service mode starting up				
PWR (start long)	JUMA TX136 1.07a Service Mode	Stop push	Set Ref Osc Freq Osc 20000000 Hz	Service mode

Display mode					Serial protocol : TX136/500
DISPLAY (short)	----- PWR MIN CW20 STBY 136000 ↓	If TX	----- P 4.0 W CW20 TX 136000 ↓	Output power display	Serial query : ?IPCR
	----- SWR N/A CW20 STBY 136000 ↓		----- SWR 1.1 CW20 TX 136000 ↓	SWR display	Serial query : ?ISCR
	----- 13.60 U CW20 STBY 136000 ↓		----- 13.45 U CW20 TX 136000 ↓	Supply voltage display	Serial query : ?IBCR
	----- I --.-A CW20 STBY 136000 ↓		----- I 0.4A CW20 TX 136000 ↓	Drain current display	Serial query : ?IDCR
	Mode 15 T 23:05 WSPR STBY 136000 ↵		S 001:1 T 02:01 WSPR TX 136000 ↵	Timer display only for WSPR mode	Serial query : ?WTCR
DISPLAY (long)	Mode TX Mode = CW	Configuration mode			

Display mode (continued)				Serial protocol : TX136/500
RF PWR	----- PWR MIN CW20 STBY 136000		Set TX power to min level : 4 W	Serial query : ?PCR Serial set : =P0CR
	↓			
	----- PWR LOW CW20 STBY 136000		Set TX power to low level : 15 W	Serial query : ?PCR Serial set : =P1CR
	↓			
	----- PWR HI CW20 STBY 136000		Set TX power to high level : 35 W	Serial query : ?PCR Serial set : =P2CR
	↓			
	----- PWR MAX CW20 STBY 136000		Set TX power to max level : 60 W	Serial query : ?PCR Serial set : =P3CR
	↵			
FREQ+ / FREQ -	----- PWR MIN CW20 STBY 136000		Set frequency : step 1 Hz	Serial query : ?FCR Serial set : =F136000CR
FREQ+ / FREQ - (hold)	----- PWR MIN CW20 STBY 136100	RF PWR	Set frequency : step 100 Hz	Serial query : ?FCR Serial set : =F136100CR
OPER (short)	----- PWR MIN CW20 STBY 136000		Stand By : TX is not allowed.	Serial query : ?OCR Serial set : =O0CR
	↓			
	----- PWR MIN CW20 OPER 136000		Operation : TX ready to transmit.	Serial query : ?OCR Serial set : =O1CR
	↓			
	----- PWR MIN CW20 TUNE 136000		Tune : use a key to tune.	Serial query : ?OCR Serial set : =O2CR
	↵			
OPER (short)	----- PWR MIN CW20 SWR 136000		Stop the alarm display. SWR (see Configuration mode) , CURR (over current from PA) or MSG (see Beacon configuration mode).	

Display CW mode				Serial protocol : TX136/500
CW UP / DOWN	----- PWR MIN CW20 STBY 136000		CW speed Set : 1 to 50 wpm	Serial query : ?SCR Serial set : =S20CR [1 to 50]
KEYER	----- P 4.0W CW20 TX 136000		Run the CW with the keyer.	
Display CW Beacon mode				Serial protocol : TX136/500
PWR (short)	S@d 20 PWR MIN CW STBY 136000	CW UP / DOWN	CW speed Set : 1 to 50 wpm	Serial query : ?SCR Serial set : =S20CR [1 to 50]
	↓			
	TX x01 PWR MIN CW STBY 136000	CW UP / DOWN	CW frame availabled : ... : continuously, xxx : play 1 to 99	Serial query : ?QCR Serial set : =Q1CR [0 to 99]
	↓			
	M@s [TES PWR MIN CW STBY 136000		CW beacon message scrolling display.	Serial query : ?MCR
	← or ↓ if TX			
	T P 4.0W CW TX 136000	TX	The transmitted character is displayed.	
	↵			
OPER (long)	S@d 20 PWR MIN CW OPER 136000		Run the CW beacon with a long OPER button push.	Serial query : ?BCR Serial set : =B1CR CAUTION : force beacon on
	↓			
	T P 4.0W CW TX 136000		The message characters are displayed during the TX. After a message TX the beacon is transmitting again according the frame.	
	↓			
	S@d 20 PWR MIN CW OPER 136000		Stop the beacon.	Serial query : ?BCR Serial set : =B0CR
	↵			

Display QRSS mode				Serial protocol : TX136/500
PWR (short)	Dot 030 PWR MIN QRSS STBY 136000	CW UP / DOWN	QRSS dot time Set : 1 to 120 s	Serial query : ?DCR Serial set : =D30CR [1 to 120]
	↓			
	TX x01 PWR MIN QRSS STBY 136000	CW UP / DOWN	QRSS frame availabled : ... : continuously, xXX : play 1 to 99	Serial query : ?QCR Serial set : =Q1CR [0 to 99]
	↓			
	Mse CTES PWR MIN QRSS STBY 136000		QRSS beacon message scrolling display. The scrolling display ends with '+Id' symbol if the CW identity is selected.	Serial query : ?LCR
	↩ or ↓ if TX			
	T P 4.0W QRSS TX 136000	TX	The transmitted character is displayed.	
	↩			
OPER (long)	Dot 030 PWR MIN QRSS OPER 136000		Run the QRSS beacon with a long OPER button push.	Serial query : ?BCR Serial set : =B1CR CAUTION : force beacon on
	↓			
	T P 4.0W QRSS TX 136000		The message characters are displayed during the TX. After a message TX the beacon is transmitting again according the frame.	
	↓			
	Dot 030 PWR MIN QRSS OPER 136000		Stop the beacon.	Serial query : ?BCR Serial set : =B0CR
	↩			


Display DFCW mode				Serial protocol : TX136/500
PWR (short)	Dot 030 PWR MIN DFCW STBY 136000	CW UP / DOWN	DFCW dot time Set : 1 to 120 s	Serial query : ?DCR Serial set : =D30CR [1 to 120]
	↓			
	Fsk 0.1 PWR MIN DFCW STBY 136000	CW UP / DOWN	DFCW dash shift Set : 0.1 to 5 Hz	Serial query : ?RCR Serial set : =R10CR [1 to 50]
	↓			
	TX x01 PWR MIN DFCW STBY 136000	CW UP / DOWN	DFCW frame availabled : ... : continuously, xXX : play 1 to 99	Serial query : ?QCR Serial set : =Q1CR [0 to 99]
	↓			
OPER (long)	Mse CTES PWR MIN DFCW STBY 136000		DFCW beacon message scrolling display. The scrolling display ends with '+Id' symbol if the CW identity is selected.	Serial query : ?LCR
	↵ or ↓ if TX			
	T P 4.0W DFCW TX 136000	TX	The transmitted character is displayed.	
	↵			
OPER (long)	Dot 030 PWR MIN DFCW OPER 136000		Run the DFCW beacon with a long OPER button push.	Serial query : ?BCR Serial set : =B1CR CAUTION : force beacon on
	↓			
	T P 4.0W DFCW TX 136000		The message characters are displayed during the TX. After a message TX the beacon is transmitting again according the frame.	
	↓			
OPER (long)	Dot 030 PWR MIN DFCW OPER 136000		Stop the beacon.	Serial query : ?BCR Serial set : =B0CR
	↵			

Display JASON mode				Serial protocol : TX136/500
PWR (short)	Normal PWR MIN JSON STBY 136000	CW UP / DOWN	JASON speed available (characters/min) : Slow (0.3), Slow+ (0.6) , Normal (2.5), Normal+ (5), Fast (20), Fast+ (40). Unfortunately the TX136 DDS resolution is incompatible with slow speed. No tested with TX500.	Serial query : ?JSCR Serial set : =B1CR [2 to 5]
	↓			
	TX ... PWR MIN JSON STBY 136000	CW UP / DOWN	JASON frame available : ... : continuously, xxx : play 1 to 99	Serial query : ?JFCR Serial set : =JF0CR [0 to 99]
	X			
	Mse [TES PWR MIN JSON STBY 136000		JASON beacon message scrolling display. The scrolling display ends with '+Id' symbol if the CW identity is selected.	Serial query : ?LCR
	↩ or ↓ if TX			
OPER (long)	T P 4.0W JSON TX 136000	TX	The transmitted character is displayed.	
	↩			
	Normal PWR MIN JSON OPER 136000		Run the JASON beacon with a long OPER button push.	Serial query : ?BCR Serial set : =B1CR CAUTION : force beacon on
	↓			
OPER (long)	T P 4.0W JSON TX 136000		The message characters are displayed during the TX. After a message TX the beacon is transmitting again according the frame.	
	↓			
	Normal PWR MIN JSON OPER 136000		Stop the beacon.	Serial query : ?BCR Serial set : =B0CR
OPER (long)	↩			

Display OPERA mode				Serial protocol : TX136/500
PWR (short)	Mode 2 PWR MIN OPRA STBY 136000	CW UP / DOWN	OPERA mode availabled : OPERA 2, 4, 8, 16, 32 and 65	Serial query : ?HSCR Serial set : =HS0CR [0 to 5]
	↓			
	TX 50% PWR MIN OPRA STBY 136000	CW UP / DOWN	OPERA frame availabled : x1 : one play, 100% : continuously, 50% : 1 timeslot out of 2, 33% : 1 timeslot out of 3, 25% : 1 timeslot out of 4, 20% : 1 timeslot out of 5.	Serial query : ?HFCR Serial set : =HF2CR [0 to 5]
	↓			
	Mse [NOC PWR MIN OPRA STBY 136000		OPERA beacon message scrolling display. The scrolling display ends with '+Id' symbol if the CW identity is selected.	Serial query : ?WCCR
	↩ or ↓ if TX			
	S 001:1 P 4.0W OPRA TX 136000	TX	The transmitted symbol is displayed.	
	↩			
OPER (long)	Mode 2 PWR MIN OPRA OPER 136000		Run the OPERA beacon with a long OPER button push.	Serial query : ?BCR Serial set : =B1CR CAUTION : force beacon on
	↓			
	S 001:1 P 4.0W OPRA TX 136000	⇔	00:01:27 PWR MIN OPRA WAIT 136000	The symbol number (1 to 239) and the symbol value (0 to 1) are displayed during the TX. After a timeslot TX the beacon is waiting the next available timeslot.
	↓			
	Mode 2 PWR MIN OPRA OPER 136000		Stop the beacon.	Serial query : ?BCR Serial set : =B0CR
	↩			

Display WSPR mode				Serial protocol : TX136/500
PWR (short)	Mode 2 PWR MIN WSPR STBY 136000	CW UP / DOWN	WSPR mode available : WSPR-2 and WSPR-15	Serial query : ?WSCR Serial set : =WS0CR [0 or 1]
	↓			
	TX 25% PWR MIN WSPR STBY 136000	CW UP / DOWN	WSPR frame available : x1 : one play, 100% : continuously, 50% : 1 timeslot out of 2, 33% : 1 timeslot out of 3, 25% : 1 timeslot out of 4, 20% : 1 timeslot out of 5.	Serial query : ?WFCR Serial set : =WF4CR [0 to 5]
	↓			
	Mse [N0C PWR MIN WSPR STBY 136000		WSPR beacon message scrolling display. The scrolling display ends with '+Id' symbol if the CW identity is selected.	Serial query [call] : ?WCCR Serial query [locator] : ?WLCR Serial query [power] : ?WPCR Serial query [loc GPS] : ?WRCR
	↵ or ↓ if TX			
	S 001:1 T 02:01 WSPR TX 136000	TX	The transmitted symbol is displayed.	
	↵			
OPER (long)	Mode 2 T 01:50 WSPR OPER 136000		Run the WSPR beacon with a long OPER button push.	Serial query : ?BCR Serial set : =B1CR CAUTION : force beacon on
	↓			
	00:00:10 T 01:53 WSPR WAIT 136000		The beacon is waiting the next timeslot.	
	↓			
	S 001:1 T 02:01 WSPR TX 136000	↔	00:03:14 T 03:55 WSPR WAIT 136000	The beacon transmits when the timeslot is enabled. The symbol number (1 to 162) and the symbol value (0 to 3) are displayed during the TX. After a timeslot TX the beacon is waiting again the next available timeslot.
	↓			
	Mode 2 T 02:02 WSPR OPER 136000		Stop the beacon.	Serial query : ?BCR Serial set : =B0CR
	↵			

Display script mode				Serial protocol : TX136/500
PWR (short)	TX x1 PWR MIN SCRI STBY 136000	CW UP / DOWN	Script frame availabled : ... : continuously, xXX : play 1 to 99	Serial query : ?ZF C R Serial set : =ZF1 C R [0 to 99]
	↓			
	Script [PWR MIN SCRI STBY 136000		Script scrolling display.	Serial query : ?V C R
	← or ↓ if TX			
	00:00:24 PWR MIN SCRI WAIT!136000	TX	Script delay time display if programmed.	
	←			
OPER (long)	TX x1 PWR MIN SCRI OPER 136000		Run the script execution with a long OPER button push.	Serial query : ?B C R Serial set : =B1 C R CAUTION : force script on
	↓			
	T P 4.0W DFCW TX !136000		The script execution starts and the character '!' is added before the frequency.	
	↓			
	TX x1 PWR MIN SCRI OPER 136000		Stop the script execution.	Serial query : ?B C R Serial set : =B0 C R
	←			

Configuration mode				Serial protocol : TX136/500
DISPLAY (short)	TX Mode Mode = CW	UP / DOWN	TX Mode availabled : CW, QRSS, DFCW, JASON, OPERA, WSPR, COMMAND.	Serial query : ?GCR Serial set : =G0CR [0 to 6]
	↓			
	WSPR Timer T 59:00	UP / DOWN	WSPR Timer Set minute timer with the help of beep  Start at 59:00	Serial query : ?WTCR Serial set : =WT3540CR [0 to 3559]
	OR			
	WSPR Timer T^23:17		WSPR Timer Set timer automaticaly with the GPS if connected and availabled	
	↓			
	Pre Amplifier Select = OFF	UP / DOWN	Pre Amplifier Set : OFF, 10dB, 20 dB	Serial query : ?ACR Serial set : =A0CR [0 to 2]
	↓			
	10MHz Converter Select = OFF	UP / DOWN	RX Converter : ON / OFF 10 MHz (TX136), 3.5 MHz (TX500)	Serial query : ?CCR Serial set : =C0CR [0 or 1]
	↓			
	CW Keyer Type Keyer = Iambic B	UP / DOWN	CW Keyer Type availabled : Dot priority, Iambic A, Iambic B, Straight, Beacon	Serial query : ?KCR Serial set : =K2CR [0 to 4]
	↓			
	CW Sidetone Tone = 700Hz	UP / DOWN	CW Sidetone Set : OFF, 250 to 2000 Hz, step 50 Hz	
	↓			

Configuration mode (continued)					Serial protocol : TX136/500
DISPLAY (short)	SWR Prot PWR MIN Limit = 30.0	RF PWR	SWR Prot PWR MIN Limit = 30.0	UP / DOWN	Max SWR acceptable for PWR MIN Set : 1 to 101, step 0.1
	↓		↓		
	SWR Prot PWR LOW Limit = 15.0		SWR Prot PWR LOW Limit = 15.0	UP / DOWN	Max SWR acceptable for PWR LOW Set : 1 to 101, step 0.1
	↓		↓		
	SWR Prot PWR HI Limit = 6.0		SWR Prot PWR HI Limit = 6.0	UP / DOWN	Max SWR acceptable for PWR HI Set : 1 to 101, step 0.1
	↓		↓		
	SWR Prot PWR MAX Limit = 3.0		SWR Prot PWR MAX Limit = 3.0	UP / DOWN	Max SWR acceptable for PWR MAX Set : 1 to 101, step 0.1
	↵		↵		
	Displ Brihtness LCD BL = 100	UP / DOWN	Display Brightness		Set : 0 to 1100, step 50
	↓				
	Displ Contrast Contrast = 2000	UP / DOWN	Display Contrast		Set : 0 to 3500, step 50
	↓				
	Serial Protocol RS232 = Terminal	UP / DOWN	Serial Protocol		Serial Protocol availabaled : TX136/500, Terminal, GPS NMEA
	↓				
	Serial Speed Baud Rate=9600	UP / DOWN	Serial Speed		Set : 2400 to 115200 bauds
	↓				
	TX Control Select = Auto	UP / DOWN	TX Control		MOX or Auto
	↓				

Configuration mode (continued)				Serial protocol : TX136/500
DISPLAY (short)	SPARE I/O signal Select = OFF	UP / DOWN	SPARE I/O signal : ON / OFF	Serial query : ?XCR Serial set : =X0CR [0 or 1]
	↵			
DISPLAY (long)	----- PWR MIN CW20 STBY 136000	Display mode		CW Beacon text and/or Script are saved in EEPROM if Modified.
PWR (short)	CW beacon TEST DE JUMA BEA	Beacon configuration mode		

Beacon configuration mode					Serial protocol : TX136/500
DISPLAY (short)	CW Beacon TEST DE JUMA BEA	UP / DOWN	CW beacon text Move the cursor	The CW beacon text can have until 255 characters. Valid ASCII characters : 20h (space) to 5Fh (Z). More informations with CW Beacon programming page.	Serial query : ?MCR Serial set : =MTEST DE JUMA BEACONCR
	↓	FREQ+ / FREQ-	Modify the charater selected		
		OPER	Delete character at current cursor		
		RF PWR	Add character after cursor		
	QRSS/DFCW/JASON TEST	UP / DOWN	QRSS/DFCW/JASON beacon text Move the cursor	The QRSS, DFCW & JASON beacon text can have until 16 characters. Valid ASCII characters : 20h (space) to 5Fh (Z).	Serial query : ?LCR Serial set : =LTESTCR
	↓	FREQ+ / FREQ-	Modify the charater selected		
		OPER	Delete character at current cursor		
		RF PWR	Add character after cursor		
	CWID/WSPR/OPERA N0CAL ok	UP / DOWN	CW ID/WSPR/OPERA call text Move the cursor	The CW identity, WSPR & OPERA call must be a standard callsign with 6 characters max. add-on prefix or suffix are not allowed. Valid characters : a-z 0-9 If the call is not valid, nok is displayed then during the eeprom save, an msg alarm is started and the default value is imposed.	Serial query : ?WCCR Serial set : =WCN0CALCR
	↓	FREQ+ / FREQ-	Modify the charater selected		
		OPER	Delete character at current cursor		
		RF PWR	Add character after cursor		
	WSPR Locator JJ00 ok	UP / DOWN	WSPR locator text Move the cursor	The WSPR locator must be 4-character maidenhead grid. Valid characters : A-R 0-9 If the WSPR locator is not valid nok is displayed then during the eeprom save an MSG alarm is started and the default value is imposed.	Serial query : ?WLCR Serial set : =WLJJ00CR
	↓	FREQ+ / FREQ-	Modify the charater selected		
		OPER	Delete character at current cursor		
		RF PWR	Add character after cursor		
	WSPR Power 30 dBm PWR MAX	UP / DOWN	WSPR power Set : 0 to 60 dBm for PWR MAX Step according to WSPR protocol	The WSPR level will be automatically modified according the TX136/500 power and the WSPR protocol.	Serial query : ?WPCR Serial set : =WP30CR [0 to 60]
	↓				

Configuration mode					Serial protocol : TX136/500
DISPLAY (short)	WSPR GPS Locator Locator = OFF	UP / DOWN	WSPR GPS locator Set : OFF, ON	The WSPR locator can be replaced by the GPS locator if this last is valid.	Serial query : ?WGCR Serial set : =WG0CR [0 or 1]
	↓				
	CW Identity Select = OFF	UP / DOWN	CW Identity Set : OFF, 12 or 24 WPM	The CW identity is added at the end of the frame. Because the CW identity can use several times more bandwidth than the selected mode, it must be used with caution.	Serial query : ?YCR Serial set : =Y0CR [0 to 2]
	↓				
	Script =G2=530=B1=ZT20	UP / DOWN	Script Move the cursor	The script can have until 127 characters and is a sequence of serial set codes to have a TX136/500 automation. For a delay time during the script execution the serial set code ZT can be used (1 to 9999 s). In the script a tx beacon is run once regardless of its frame configuration.	Serial query : ?VCR Serial set : =V=G2=S30=B1=ZT20CR Script delay time : Serial set : =ZT20CR [1 to 9999]
	↵	FREQ+ / FREQ-	Modify the charater selected		
OPER		Delete character at current cursor			
RF PWR		Add character after cursor			
PWR (short)	TX Mode Mode = CW	Configuration mode			
DISPLAY (long)	----- PWR MIN CW20 STBY 136000	Display mode		CW Beacon text and/or Script are saved in EEPROM if modified.	

Service Mode			
DISPLAY (short)	Set Ref Osc Freq Osc 20000000 Hz	UP / DOWN	Set Reference Oscillator Frequency Default : 20 MHz (TX136), 6 MHz (TX500) Set : ± 1000 Hz step 10 Hz
	↓		
	SUPPLY 13.60 V Cal mult = 135	UP / DOWN	Supply Voltage Calibration Factor Default : 135 Set : 100 to 200
	↓		
	Beep len, 0=OFF Beep = 50 ms	UP / DOWN	Beep Time Default : 50 ms Set : 0 to 100 ms
	↓		
	Forward Power Cal mult = 20	UP / DOWN	Forward Power Calibration Factor Default : 20 Set : 0 to 100
	↓		
	Drain Current Cal mult = 4000	UP / DOWN	Drain Current Calibration Factor Default : 4000 Set : 3000 to 5000
	↓		
	CW break period 07 Units	UP / DOWN	CW break period Default : 7 Set : 5 to 10
	↓		
	WSPR timer Cal 10 Units	UP / DOWN	WSPR Timer Calibration Factor : if the timer puts back increase the value, else decrease the value. Default : 10 Set : 0 to 20
	↓		
	Auto Power On Jumper Q4 = OFF	UP / DOWN	Jumper Q4 state (Auto power on if power failure) : OFF or ON If ON then the user settings are saved in EEPROM at each beacon running.
	↓		
	Push OPER long = Factory defaults	OPER (long)	Factory setup ok
	↩		Display mode
OPER (short)	Calibr. Saved		Display mode

Serial command and query protocol

General :

JUMA TX136/TX500 serial protocol is JUMA TX136/TX500 native way to communicate with another system.

The JUMA TX136/TX500 serial command and the 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).

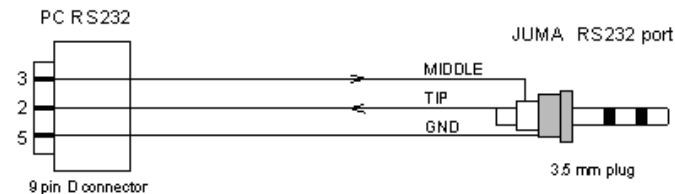
? mean query and = means set message. LF is added to the response messages. This makes it lot easier to test the commands with a terminal program.

Start	Message	Stop
?	Query Message	CR
=	Set message	CR

No action characters :

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

0x0A	Line feed
0x00	NUL



CW Beacon programming

1. Select the CW mode.	TX Mode Mode = CW	See	Configuration mode
↓			
2. Enter your message.	CW beacon TEST DE JUMA BEA	See	Beacon configuration mode
↓			
3. Select the speed.	Spd 20 PWR MIN CW STBY 136000	See	Display mode
↓			
4. Select the TX frame.	TX x01 PWR MIN CW STBY 136000	See	Display mode

Valid characters			Valid control characters (starting with back slash)
US ASCII a-z and A-Z	? Question mark	: Colon	\pn Power level, n = 0...3.
Numbers 0-9	@ At sign	; Semicolon	\fnnnnnn Frequency, nnnnnn in Hz.
<space> Space	" Quotation mark	! Start	\gn Mode, n = 0 to 5
, Comma	' Apostrophe	(..... Parenthesis open "KN"	\snn CW speed, nn = 01...50
- Hyphen/minus	\$ Dollar sign	& Wait "AS"	\dnnn QRSS and DFCW dot time, nnn = 001 to 120
. Dot) Parenthesis closed	# End of message "AR"	\rnn DFCW dash shift, nn = 01 to 50
/ Slash	+ Plus	* End of contact "SK"	\c Play a carrier during a QRSS dot time
= double dash			

The message can include also control characters which are controlling TX136/500 parameters during transmission. These parameters are CW mode (CW, QRSS, DFCW), CW speed (WPM), CW dot time (s), DFCW dash shift (DDS steps number), Output power (MIN, LOW, HI, MAX), the Transmitter frequency (Hz) and play carrier in CW message.

Because of that it is possible to use CW beacon mode to send long QRSS or DFCW message which starting with the control charater \g1 or \g2 or to create a ' NDB ' with a carrier followed by the call (example : « \D020\C CALL »).

QRSS Beacon programming

1. Select the QRSS mode.	TX Mode Mode = QRSS	See	Configuration mode
↓			
2. Enter your message.	QRSS/DFCW/JASON TEST	See	Beacon configuration mode
↓			
3. Add or not a CW identity.	CW Identity Select = OFF	See	Beacon configuration mode
↓			
4. Select the speed.	Dot 030 PWR MIN QRSS STBY 136000	See	Display mode
↓			
5. Select the TX frame.	TX x01 PWR MIN QRSS STBY 136000	See	Display mode

DFCW Beacon programming

1. Select the DFCW mode.	TX Mode Mode = DFCW	See	Configuration mode
↓			
2. Enter your message.	QRSS/DFCW/JASON TEST	See	Beacon configuration mode
↓			
3. Add or not a CW identity.	CW Identity Select = OFF	See	Beacon configuration mode
↓			
4. Select the speed.	Dot 030 PWR MIN DFCW STBY 136000	See	Display mode
↓			
5. Select the dash shift.	Fsk 0.1 PWR MIN DFCW STBY 136000	See	Display mode
↓			
6. Select the TX frame.	TX x01 PWR MIN DFCW STBY 136000	See	Display mode

JASON Beacon programming

1. Select the JASON mode.	TX Mode Mode = JASON	See	Configuration mode
↓			
2. Enter your message.	QRSS/DFCW/JASON TEST	See	Beacon configuration mode
↓			
3. Add or not a CW identity.	CW Identity Select = 12 WPM	See	Beacon configuration mode
↓			
4. Select the JASON speed.	Normal PWR MIN JSON STBY 136000	See	Display mode
↓			
5. Select the TX frame.	TX ... PWR MIN JSON STBY 136000	See	Display mode

OPERA Beacon programming

1. Select the OPERA mode.	TX Mode Mode = OPERA	See	Configuration mode
↓			
2. Enter your standard callsign.	WSPR/OPERA call N0CAL ok	See	Beacon configuration mode
↓			
3. Add or not a CW identity.	CW Identity Select = 12 WPM	See	Beacon configuration mode
↓			
4. Select the OPERA speed mode.	Mode 2 PWR MIN OPRA STBY 136000	See	Display mode
↓			
5. Select the TX frame.	TX x1 PWR MIN OPRA STBY 136000	See	Display mode

WSPR Beacon programming

1. Select the WSPR mode.	TX Mode Mode = WSPR	See	Configuration mode		
↓					
2. Enter your standard callsign.	WSPR/OPERA call N0CAL ok	See	Beacon configuration mode		
↓					
3. Enter your 4-character main grid locator.	WSPR locator JJ00 ok	See	Beacon configuration mode		
↓					
4. Enter the dB level for the TX136/500 power max.	WSPR power 30 dBm PWR MAX	See	Beacon configuration mode		
↓					
5. Select GPS locator option.	WSPR GPS locator Locator = OFF	See	Beacon configuration mode		
↓					
6. Add or not a CW identity.	CW Identity Select = 24 WPM	See	Beacon configuration mode		
↓					
GPS used on JUMA RS232 port	7. select RS232 = GPS NMEA.	Serial Protocol RS232 = GPS NMEA	See	Configuration mode	The optional GPS receiver must provide a \$GPGGA NMEA sentence.
	7 bis. select Baud rate = 4800.	Serial Speed Baud Rate=4800	See	Configuration mode	Some GPS receivers can use a different baud rate from the NMEA standard.
	7 ter. Connect the GPS receiver to the JUMA TX136/500 RS232 port.	WSPR Timer T^23:17	See	Configuration mode	If the \$GPGGA NMEA sentence is read correctly then the ^ character is displayed with GPS timer value.
or					
GPS used on control module J1	7. Connect the GPS receiver to the JUMA control module J1 pin (UART2).	WSPR Timer T^23:17	See	Configuration mode	Automatic detection between 4800 and 9600 baud rate at the starting up. If the \$GPGGA NMEA sentence is read correctly then the ^ character is displayed with GPS timer value.
or					

WSPR Beacon programming (continued)

No GPS	7. Set the minute timer.	 WSPR Timer T 59:00	See	Configuration mode
↓				
	8. Select the WSPR speed mode.	Mode 2 PWR MIN WSPR STBY 136000	See	Display mode
↓				
	9. Select the TX frame.	TX x1 PWR MIN WSPR STBY 136000	See	Display mode

Script programming

	1. Select the script mode.	TX Mode Mode = SCRIPT	See	Configuration mode
↓				
	2. Enter the script	Script =G2=S30	See	Beacon configuration mode
↓				
	3. Select the TX frame.	TX x1 PWR MIN SCRI STBY 136000	See	Display mode

