

Configuration Jumpers

There are nearly 40 jumpers on the SPIRIT-2 circuit board which add great flexibility and power to the design. Care must be used to set all jumpers properly or improper operation will result.

Shorting Bar Jumpers

Jumper pins with shorting bar jumpers are labeled with JP designations. All shorting bar jumpers are on the component side of the circuit board. Pin 1 for shorting bar jumpers is always designated by a square solder pad on the solder side of the board.

Solderpad Jumpers

Solder pad jumpers are labeled with SP designations. All solder pad jumpers are on the solder side of the circuit board.

When changing an SP jumper, check if a default shorting trace exists which will need to be cut.

100% TNC-2 Compatible

To make the SPIRIT-2 100% TNC-2 compatible set the following jumpers:

JP12	1-2	JP13	Open	JP15	Open	JP18	All Open	JP19	1-2
JP20	Open								

OPT LED Jumpers

The following jumpers affect the OPT LED:

JP14	JP17	JP18	JP20	JP22	JP23
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Standard Jumper Configurations

Factory Configuration, Standard Model

PacComm 3.3 or later firmware, 128k RAM, no secondary modem filters.

JPB	Closed	JP1	2-3	JP2	2-3	JP3	2-3	JP4	2-3
JP5	2-3	JP6	Open	JP7	Closed	JP8	1-2	JP9	Closed
JP10	Open	JP11	7-8, 17-18	JP12	1-2	JP13	2-3	JP14	1-2
JP15	Open	JP16	2-3	JP17	All Open	JP18	All Open	JP19	2-3
JP20	Open	JP21	2-3	JP22	1-2	JP23	1-2	SP1	Open
SP2	Closed	SP3	2-3	SP4	1-2	SP5	Closed	SP6	All Open
SP7	Closed	SP8	Closed	SP9	Closed	SP10	1-2	SP11	2-3
SP12	1-2	SP13	1-2	SP14	1-2	SP15	1-2	SP16	N/A
SP17	N/A	SP18	Open	SP19	Closed	SP20	Closed	SP21	Closed

Bold print entries in the following tables indicate settings which are different from the Standard Model settings.

Factory Configuration, Node Model (10 MHz)

Network jumpers are shown set to the TheNet configuration.

JPB	Closed	JP1	2-3	JP2	2-3	JP3	2-3	JP4	2-3
JP5	2-3	JP6	Open	JP7	Closed	JP8	1-2	JP9	Closed
JP10	Open	JP11	7-8, 17-18	JP12	1-2	JP13	2-3	JP14	1-2
JP15	Open	JP16	2-3	JP17	2-3	JP18	1-2, 2-4	JP19	1-2
JP20	Open	JP21	2-3	JP22	2-3	JP23	2-3	SP1	Open
SP2	Closed	SP3	2-3	SP4	1-2	SP5	Closed	SP6	All Open
SP7	Closed	SP8	Closed	SP9	Closed	SP10	1-2	SP11	2-3
SP12	1-2	SP13	1-2	SP14	1-2	SP15	1-2	SP16	N/A
SP17	N/A	SP18	Open	SP19	Closed	SP20	Closed	SP21	Closed

Factory Configuration, Satellite Model

JPB	Closed	JP1	2-3	JP2	2-3	JP3	2-3	JP4	2-3
JP5	2-3	JP6	Open	JP7	Closed	JP8	1-2	JP9	Closed
JP10	Open	JP11	7-8, 17-18	JP12	1-2	JP13	2-3	JP14	1-2
JP15	Open	JP16	2-3	JP17	All Open	JP18	All Open	JP19	2-3
JP20	Open	JP21	2-3	JP22	1-2	JP23	1-2	SP1	Open
SP2	Open	SP3	2-3	SP4	1-2	SP5	Open	SP6	All Open
SP7	Closed	SP8	Closed	SP9	Closed	SP10	1-2	SP11	2-3
SP12	1-2	SP13	1-2	SP14	1-2	SP15	1-2	SP16	N/A
SP17	N/A	SP18	Closed	SP19	Open	SP20	Closed	SP21	Closed

Factory Configuration, Backbone & 20 MHz Node Models

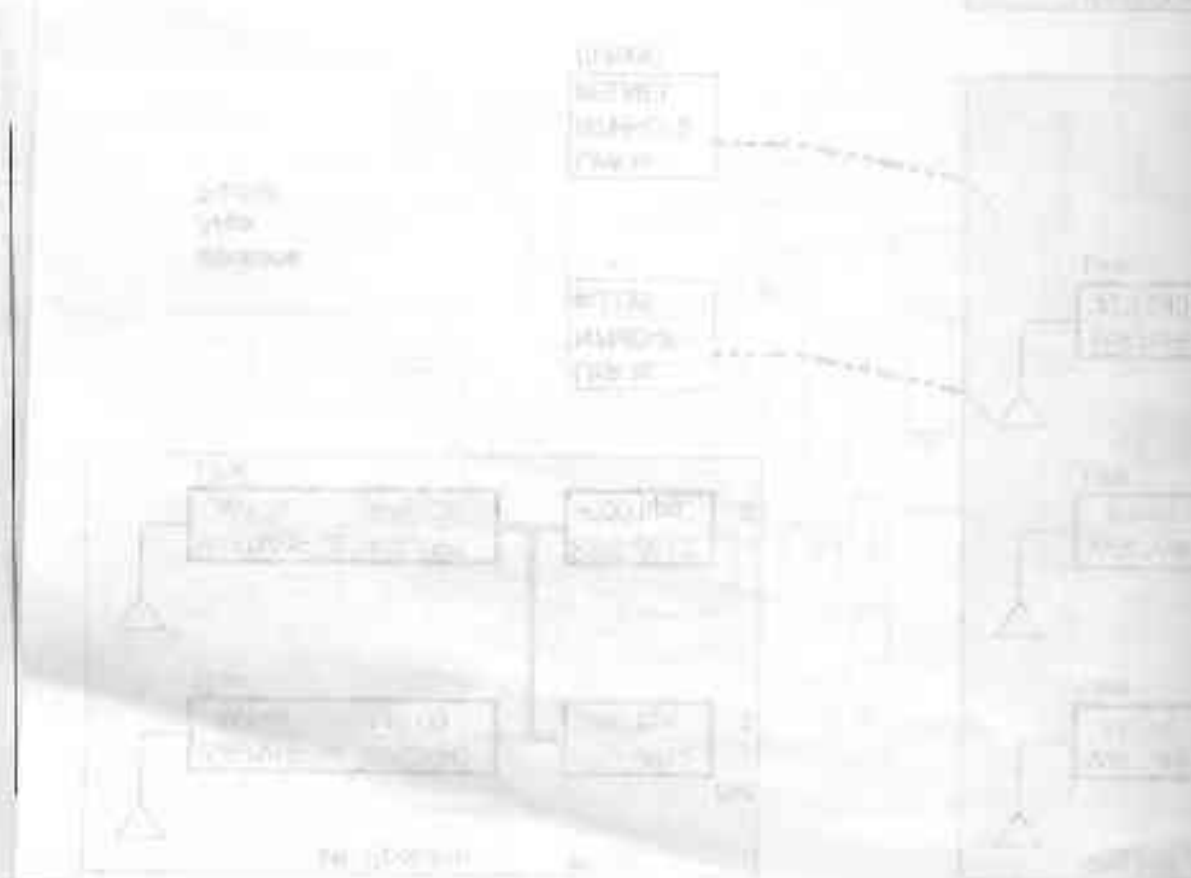
Network jumpers are shown set to the TheNet configuration.

JPB	Closed	JP1	2-3	JP2	2-3	JP3	2-3	JP4	2-3
JP5	2-3	JP6	Open	JP7	Closed	JP8	1-2	JP9	Closed
JP10	Open	JP11	1-2, 11-12	JP12	1-2	JP13	1-2	JP14	1-2
JP15	Open	JP16	2-3	JP17	2-3	JP18	1-2, 2-4	JP19	1-2
JP20	Open	JP21	2-3	JP22	2-3	JP23	2-3	SP1	Open
SP2	Closed	SP3	2-3	SP4	1-2	SP5	Closed	SP6	All Open
SP7	Open	SP8	Open	SP9	Open	SP10	1-2	SP11	2-3
SP12	1-2	SP13	1-2	SP14	1-2	SP15	1-2	SP16	N/A
SP17	N/A	SP18	Open	SP19	Closed	SP20	Closed	SP21	Closed

JP1-4 Transmit Waveform Default: 2-3

- 1-2 - Modified waveform.
- 2-3 - Normal waveform.

These jumpers select the waveform pattern to be used to condition the transmitted signal from the modem transmit EPROM. By setting the four jumpers in different patterns a total of 16 different waveforms may be selected. Note: The factory setting works best in most all cases. Other settings may be selected on a trial-and-error basis for different radios.



TextNet Firmware

The following jumpers apply specifically to TextNet TNC use.

SPI2	2-3	SPI3	2-3	SPI4	1-2 or 2-3	SPI5	1-2 or 2-3	-	-
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TheNet XIJ Firmware

The following jumper settings are for use with TheNet XIJ firmware on Node or Backbone models with 32k RAM. Consult the documentation with later versions for current information. CoaxLAN jumpers are shown enabled.

JP12	1-2	JP13	1-2	JP14	1-2	JP15	Open	JP17	2-3
JP18	1-3, 2-4	JP19	1-2	JP20	Closed	JP22	2-3	JP23	2-3

ROSE firmware

The following jumper settings are for use with TheNet XIJ firmware on Node or Backbone models with 32k RAM. Consult the documentation with later versions for current information. CoaxLAN jumpers are shown enabled. Jumpers set differently than factory default Node model are in bold type.

JP12	1-2	JP13	1-2	JP14	1-2	JP15	Open	JP17	3-4
JP18	1-2, 3-4	JP19	1-2	JP20	Closed	JP22	2-3	JP23	2-3

Jumper Diagrams and Definitions

Jumper placement diagrams for SPIRIT-2, Revision 1.1 are included below. There are three diagrams of the component side of the SPIRIT-2 and three diagrams of the solder side of the SPIRIT. Each diagram is enlarged for readability to show one third of the circuit board.

The following identification code is used to identify standard factory jumper defaults when default varies by model:
 Standard = S, Node = N, Satellite = T, Backbone and 20 MHz Node = B.

JPB Backup Battery Default: Closed

- Open - Backup battery disabled, RAM contents lost at power-off.
- Closed - Backup battery enabled, RAM contents preserved.

JPB makes or breaks the backup battery connection to the RAM which preserves RAM contents when power to the SPIRIT-2 is off.

JPB may be removed to clear the RAM contents. Wait several minutes with the jumper off for the RAM to clear. When changing network firmware EPROMs, the RAM must be cleared before operation with the new code.