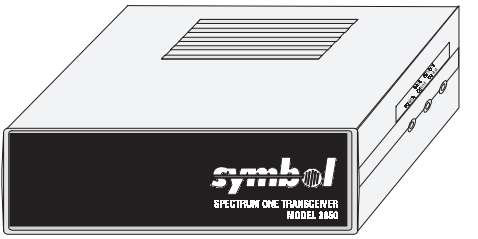
Spectrum One Release 2 & 3 385x Transceiver

Quick Reference



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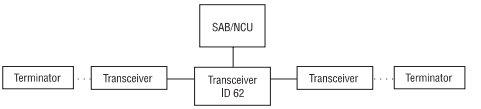
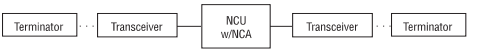
385x Transceiver

The Symbol 385x Spectrum One transceiver links the network control unit (NCU) or serial access bridge (SAB) with Symbol remote terminals and wireless point-of-sale (WPOS) units.



Release 2 Transceiver Topology

In Spectrum One Release 2 topology, the primary transceiver connects directly to the SAB or NCU through a serial interface. The primary transceiver ID is 62. Transceiver IDs distinguish connected transceivers within the Spectrum One network. In Release 2 IDs are stored in transceivers non-volatile memory (NVM). Release 2 transceivers do not support WPOS.



Release 3 Transceiver Topology

In Spectrum One Release 3, the network control adapter (NCA) installed in the NCU can be considered the primary transceiver. The NCA does not function as a transceiver but maintains a transceiver ID. Transceiver IDs distinguish connected transceivers within the Spectrum One network. IDs are known as silicon serial numbers. Silicon serial numbers are burned into the transceivers and are located on the manufacturing label.

In both releases, the NCU or SAB can be at any point on the coaxial link. Terminate the ends of the continuous coaxial link with *50-ohm terminators* (not included with transceiver).

Note: Release 2 and 3 transceivers are not compatible.

The transceiver includes:

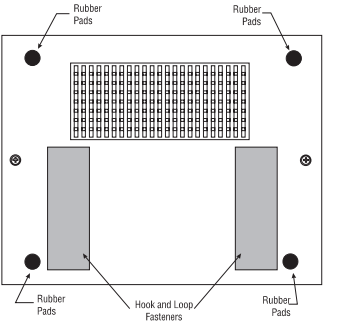
- a T-connector
- a power supply
- two hook-and-loop fastener strips
- four adhesive-backed, round black rubber pads
- an alcohol cleaning pad.

Note: The transceiver requires an antenna ordered through a Symbol sales representative. The site survey determines the antenna type and placement.

Mounting Transceiver

Before installing, decide whether to flat mount or wall mount the transceiver. Do not use the rubber pads if wall mounting.

1. Set unit upside-down on a flat, stable surface and clean areas marked for rubber pads or fasteners with alcohol cleaning pad.



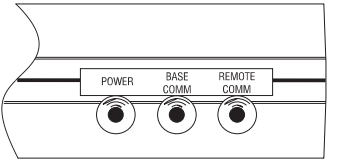
2. For flat mount, remove plastic backings from rubber pads and press into place. Flat mount is complete.

   For wall mount, remove plastic backings from hook side and press into place. Fasteners have a hook side and a loop (fuzzy) side. Leave the sides together during installation.

3. Check cable run and verify mounting plan. Once mounted, fastener adhesive can not be reused.
4. Remove any dirt and oils from mounting surfaces with alcohol pad.
5. Remove plastic backings from loop side.
6. Position unit close to desired mounting location using fingers to space between unit and surface.
7. Slide fingers out and press firmly into place.

Interpreting Indicators

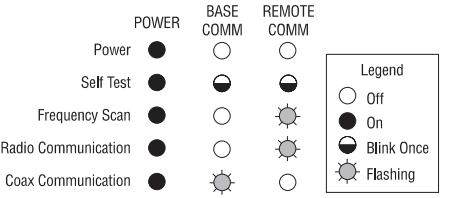
The LED indicators are located on the side of the unit. They provide some information on the activity of the network and transceiver.



Release 2 Transceiver

When the transceiver is turned on, BASE COMM and REMOTE COMM blink once to indicate a self-test. BASE COMM flashes the tens digit of transceiver ID and REMOTE COMM flashes the ones digit. No flashing indicates an ID 00. Indicators remain off until network activity begins. REMOTE COMM flashes for 7 seconds after Spectrum One network becomes active to indicate a frequency scan.

During normal operation, BASE COMM flashes to indicate communications within the coaxial link and REMOTE COMM flashes to indicate remote unit communication with transceiver.



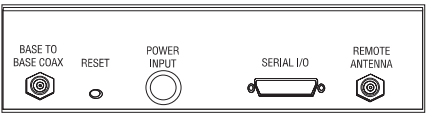
Release 3 Transceiver

When the transceiver is turned on but not connected to the network, BASE COMM and REMOTE COMM blink intermittently to indicate no connections. When NCA is powered on, BASE COMM flashes to indicate its connection.

During normal operation, the BASE COMM flashes to indicate it is receiving communication on the coaxial link and REMOTE COMM flashes to indicate it is receiving remote unit communication.

Cable Connections

The cable connectors are located at the rear of the transceiver.



Base to Base Coax connection to other transceivers *or* Release 3 NCA *or* 50-ohm terminator (for single transceiver network).

Power Input AC power connection to transceiver power supply.

Serial I/O (Release 2 only)	RS-232 or RS-422 interface cable connector to NCU or SAB or loopback connector.
Remote Antenna	antenna cable connector.

Clearing Release 2 Transceiver NVM

Before installing a transceiver, clear its NVM. To clear the NVM of a transceiver already installed in a network, take the transceiver off the network.

To set the transceiver ID to 00:

1. Power down transceiver.
2. Attach a loopback connector to the serial port.

   Note: If a loopback connector is not available, short pin 5 with pin 20 to reset. In some versions it may be necessary to short pin 2 with pin 3.

3. Power on transceiver, power off, and power it on again. This is equivalent to using the RESET switch.

   The indicators flash. The transceiver clears the NVM and freezes.

4. Power off transceiver.
5. Remove loopback connector and install transceiver to network. After a frequency scan, the NCU or SAB assigns a transceiver ID.

To display the transceiver ID, power off and power on the unit. The LEDs will count out the ID.

To set the transceiver as the primary transceiver with ID 62:

1. Verify transceiver is set to ID 00 and is on.
2. Attach loopback connector
3. Power off and power on the unit. Wait for about 20 seconds.

   The transceiver clears the previous 00 ID and flashes 62. The unit is ready for installation as a primary transceiver.

   Note: Release 3 transceiver NVMs do not require clearing.

Connecting Release 2 Primary Transceiver

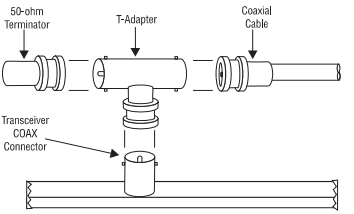
1. With transceiver off the network, clear its NVM and set unit to transceiver ID 62. Power off transceiver and remove loopback connector.
2. Connect DB-25 serial cable from NCU or SAB to primary transceiver.
3. Attach T-connector to primary transceiver and attach antenna to REMOTE ANTENNA.
4. Attach 50-ohm terminator to BASE TO BASE COAX (not included). (If installing a single-base network, attach a 50-ohm terminator to the BASE TO BASE connector.)
5. Power up NCU or SAB and primary transceiver. Wait until indicators show a frequency scan.

Additional Release 2 Transceivers on New Network

Install additional transceivers one at a time with the network up.

1. With transceiver off the network, clear its NVM and verify ID is 00. Power off transceivers and remove loopback connector.
2. Attach antenna to REMOTE ANTENNA.
3. Attach a T-connector to transceiver.
4. Connect primary transceiver to next transceiver with coaxial cable through T-connectors.
5. Attach 50-ohm terminators to T-connectors on coaxial link ends.

   Note: Verify one end of coax is properly grounded.



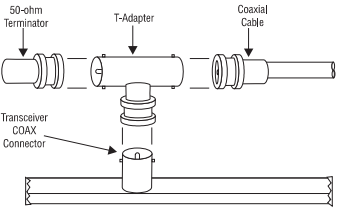
6. Power on. Wait until indicators show a frequency scan.
7. Power off and on to display ID. Record ID on transceiver and mounting plan.
8. Continue adding transceivers to next coax positions one at a time.

Release 2 Transceivers on Existing Network

1. Clear transceiver NVM and verify the ID is 00.
2. With network active, power off new transceiver and connect it to the network.
3. Power on. Wait until indicators show a frequency scan.
4. Power off and on to display ID. Record ID on transceiver and mounting plan.

Connecting Release 3 Transceivers

1. Connect T-connectors to NCA coaxial connector on rear of NCU and transceiver.
2. Attach antenna to REMOTE ANTENNA.
3. Connect coaxial cable between the T-connectors.
4. Connect 50-ohm terminators to T-connectors on NCA and transceiver (not included).



5. Connect power supply to transceiver and plug power cord to an AC outlet.
6. Verify power and coaxial connections. Turn on NCU, transceiver, and then cradle. NCU software configures transceiver.

Additional Release 3 Transceivers

1. Remove terminator from T-connector on one end of coaxial link.
2. Attach antenna to REMOTE ANTENNA.
3. Connect T-connector on transceiver.
4. Connect coaxial cable between T-connectors.
5. Connect 50-ohm terminator to T-connector. Verify coaxial link ends have terminators.
6. Power on transceiver and allow it to configure to the network (approximately 2-5 seconds).
7. Continue installing additional transceivers, bringing each up individually.

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