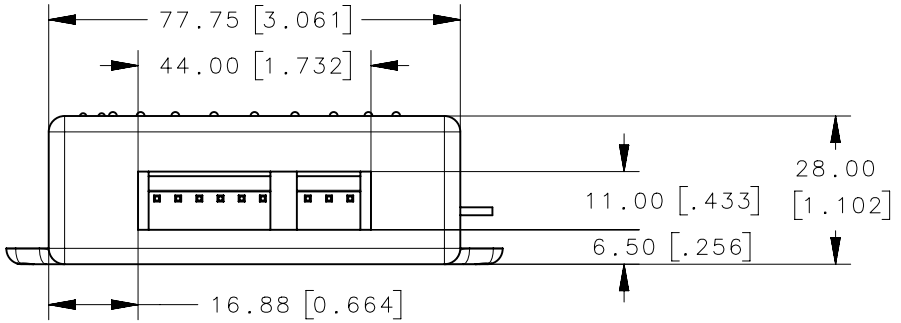
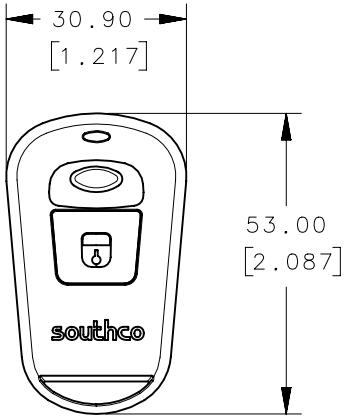
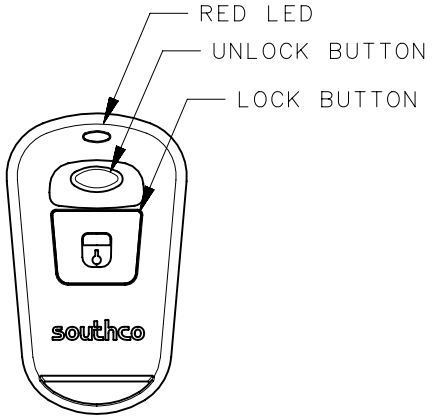
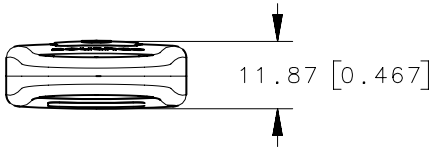
NOTES:
1. KEY FOB TRANSMITTERS: TWO TRANSMITTERS (TX) ARE INCLUDED PER CONTROLLER KIT. RECEIVER (RX) SUPPORTS UP TO FOUR COMPATIBLE TRANSMITTERS. FOR ADDITIONAL KEYFOB TRANSMITTERS ORDER P/N EA-R02-102 SEPARATELY. THE RECEIVER (RX) IS PRE-PROGRAMMED TO WORK WITH THE TRANSMITTERS PROVIDED. EACH TRANSMITTER REQUIRES TWO TYPE CR2016 3V BATTERIES. BATTERIES ARE REPLACEABLE BY OPENING THE TRANSMITTER ENCLOSURE.
2. RECEIVER MODULE:
   a. ALL CONNECTIONS TO BE MADE USING PROVIDED 1 METER WIRE HARNESS (NOT SHOWN, SEE J-EA-W82-170 FOR DETAILS).
      i. J1 - POWER & AUX CONNECTOR (TYCO P/N 640250-3).
      ii. J2 - LOCK & UNLOCK RELAY CONNECTOR (TYCO P/N 640250-6).
   b. POWER:
      i. SUPPLY VOLTAGE: 12VDC (±10%)
      ii. IDLE CURRENT: 10mA (MAXIMUM), NO ATTACHED DEVICES
      iii. OPERATING CURRENT: 1A (MAXIMUM), NO ATTACHED DEVICES
3. THE RECEIVER SHOULD BE MOUNTED IN A LOCATION TO MINIMIZE RF SHIELDING. THE RECEIVER SHOULD BE PROTECTED AGAINST EXPOSURE TO WATER. TWO SCREW BOSSES ARE PROVIDED FOR MOUNTING.
4. OPERATING RANGE FOR THE SYSTEM IS APPROXIMATELY 18 METERS (60 FEET) IN UNOBSTRUCTED OPEN AIR AND STANDARD CONDITIONS. THE INSTALLED RANGE WILL BE AFFECTED BY THE AMOUNT OF SHIELDING BETWEEN THE RECEIVER AND TRANSMITTER.
5. SEE SOUTHCO DOCUMENT J-EA-R02-M FOR USER INSTRUCTIONS.

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
C	24APR2012	BGL/BB	PRN: P2012-0552

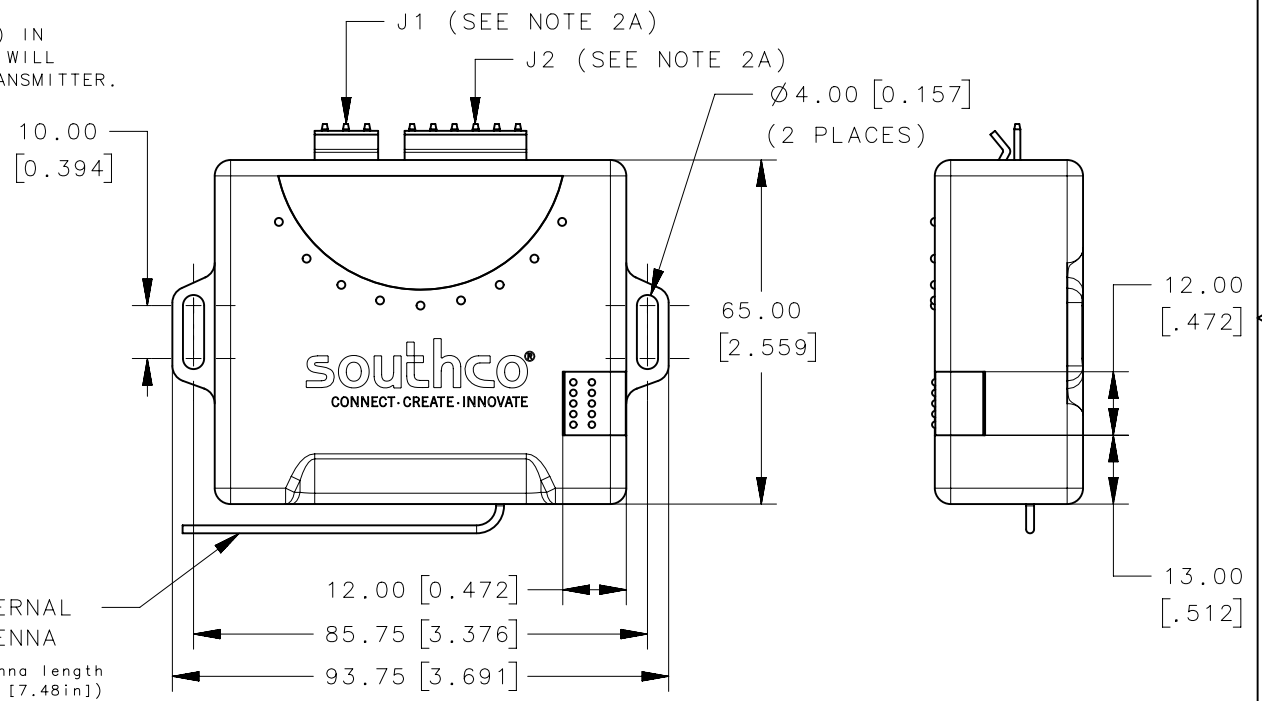








EA-R02-102 KEYFOBS

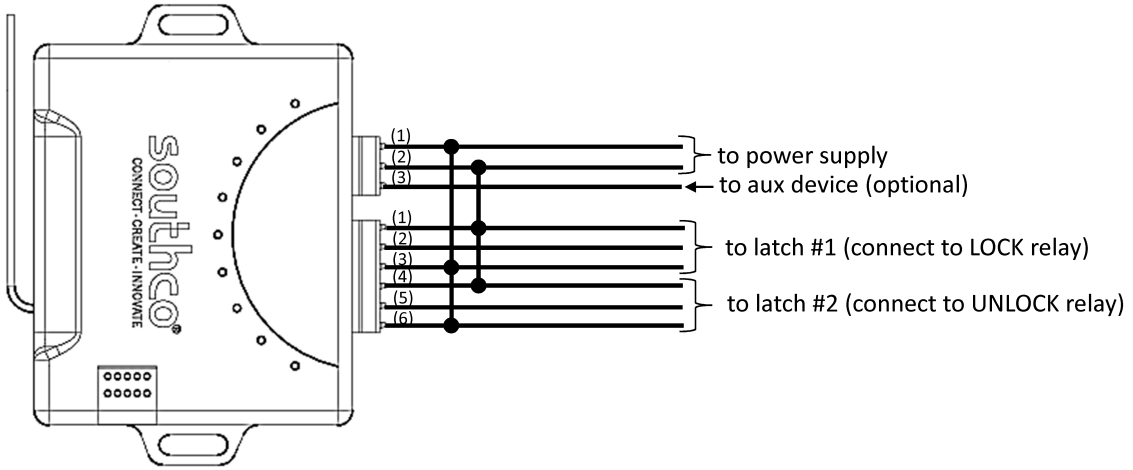


EA-R02-202 RF CONTROLLER

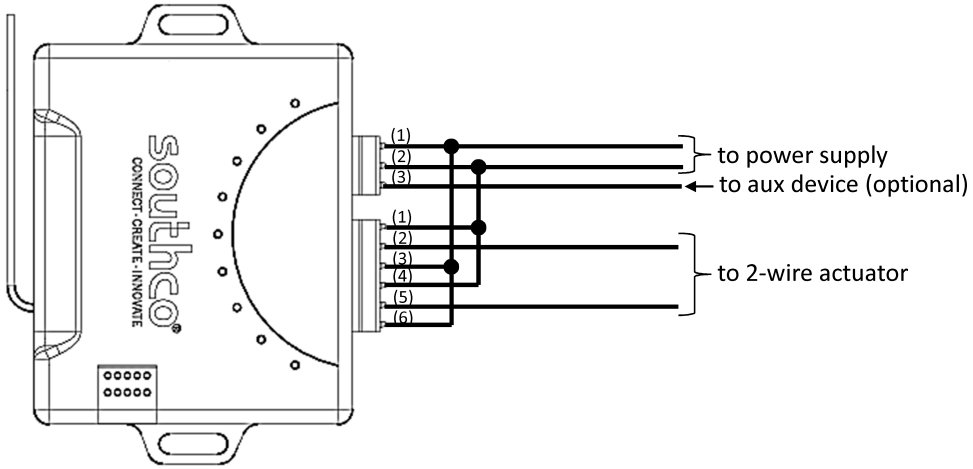
SURFACE AREA	THIRD ANGLE PROJECTION	southco® CONNECT·CREATE·INNOVATE
VOLUME	MILLIMETERS [IN]	DESCRIPTION: KEYFOB KIT
PROPRIETARY ITEM EXCEPT FOR USES EXPRESSLY GRANTED IN WRITING, INFORMATION DISCLOSED HEREON IS CONFIDENTIAL AND ALL RIGHTS, PATENT AND OTHERWISE, ARE RESERVED BY SOUTHCO, INC.	TOLERANCES UNLESS OTHERWISE NOTED ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.	SIZE: A4 · SYSTEM: NX · DWG NO.: J-EA-R02
	PER ASME Y14.5M-1994	DRAWN BY: MJS/WJB · DATE: 03AUG2011 · SCALE: 0.75:1 · SHEET: 1 OF 5

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
C	24APR2012	BGL/BB	PRN: P2012-0552

EA-R02-202 Connection Diagram – Three Wire Latch (power, ground, command)



EA-R02-202 Connection Diagram – Two Wire Actuator



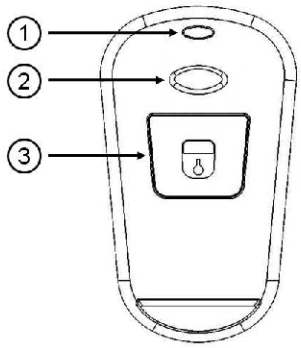
	THIRD ANGLE PROJECTION	southco® CONNECT · CREATE · INNOVATE
	MILLIMETERS [IN]	
SURFACE AREA	TOLERANCES UNLESS OTHERWISE NOTED	DESCRIPTION: KEYFOB KIT
VOLUME	ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.	SIZE: A4 · SYSTEM: NX · DWG NO.: J-EA-R02
PROPRIETARY ITEM	PER ASME Y14.5M-1994	DRAWN BY: MJS/WJB · DATE: 03AUG2011 · SCALE: 0.75:1 · SHEET: 2 OF 5

EA-R02 Keyfob Controller Kit
Operating Instructions

Package Contents

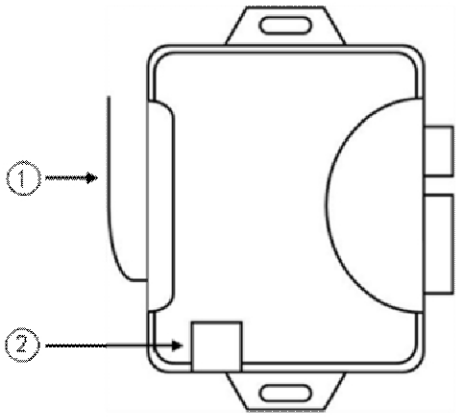
- EA-R02-202 Receiver
- EA-R02-102 Keyfob
- Power/Auxiliary Connector Wire Harness
- Lock/Unlock Relay Connector Wire Harness
- User Instructions

EA-R02-102 Transmitter



1. red transmit LED
2. UNLOCK button
3. LOCK button

EA-R02-202 Receiver



1. Antenna
2. Access Tab for Programming Switches

Features

- Receiver supports up to four transmitters (two pre-programmed keyfobs included with kit)
- Selectable LOCK/UNLOCK pulse duration (250ms or 10sec)
- Two user-configurable lock/unlock relay outputs
- One 12V auxiliary relay output.

Specifications

Receiver Power:	12VDC (±10%)
Receiver Idle Current:	10mA (maximum), no attached devices
Receiver Operating Current	100mA (maximum), no attached devices
Receiver Outputs:	three Form C relays, rated 15A at 14VDC
Receiver Operating Temp:	-20 to 80°C
Operating Range:	up to 60 feet / 18 meters (open air)
Operating Frequency:	433.92MHz
Coding Type:	Fixed Code (24-Bit)
Transmitter Power:	Type CR2016 3VDC battery (qty 2 per transmitter)

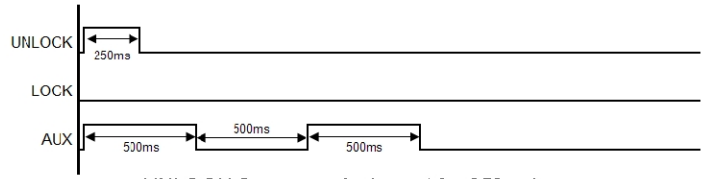
Normal Use

The keyfob transmitter can be used to lock and unlock the system.

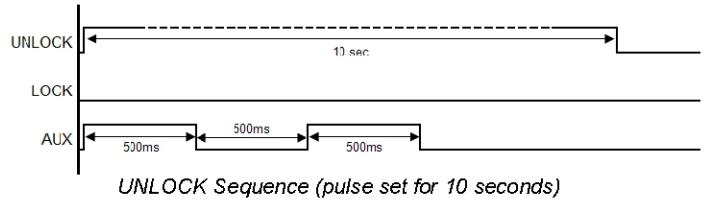
Unlocking the System

To unlock the system, press the UNLOCK button on the transmitter once. The red transmit LED will turn on to indicate transmission.

The system will unlock and the auxiliary output will pulse twice, as shown in the figure below:



UNLOCK Sequence (pulse set for 250ms)

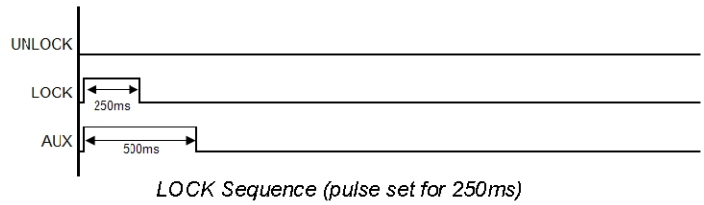


UNLOCK Sequence (pulse set for 10 seconds)

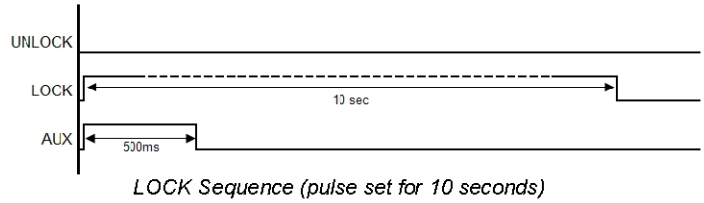
Locking the System

To lock the system, press the LOCK button on the transmitter once. The red transmit LED will turn on to indicate transmission.

The system will lock and the auxiliary output will pulse once, as shown in the figure below:



LOCK Sequence (pulse set for 250ms)



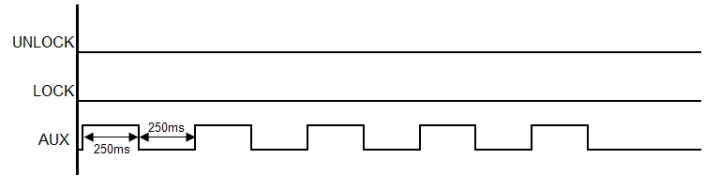
LOCK Sequence (pulse set for 10 seconds)

EA-R02 Keyfob Controller Kit
Operating Instructions

Pulsing Auxiliary Output

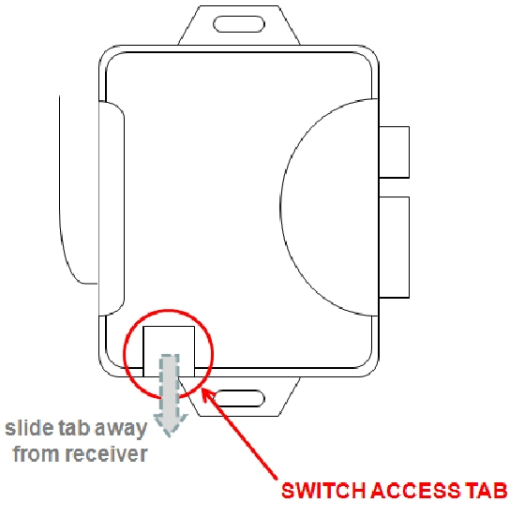
To pulse the auxiliary output, press the LOCK and UNLOCK buttons on the transmitter at the same time. The red transmit LED will turn on to indicate transmission.

The auxiliary output will pulse five times, as shown in the following figure:

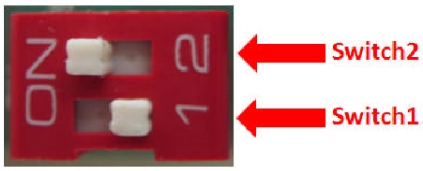


Enrolling Transmitters and Setting LOCK/UNLOCK Pulse Duration

Enrolling additional transmitters or setting the LOCK/UNLOCK pulse duration will require access to the programming switches on the EA-R02-202 receiver's circuit board. To access the switches, remove the switch access tab by sliding the tab away from the receiver unit as shown below.



Two switches will be visible thru the tab window (default positions shown):



- Switch1 – Used to enroll transmitters. Default setting = "OFF" position.
- Switch 2 – Used to set LOCK and UNLOCK pulse duration:

Switch2 Setting	Duration
ON (default)	250ms (default)
OFF	10sec

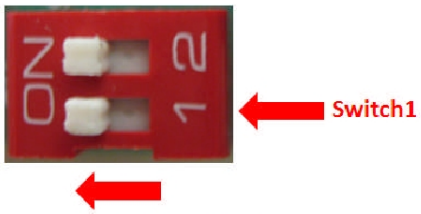
⚠ **NOTE:** The switch access tab must always be re-installed when done changing the settings.

Enrolling Transmitters

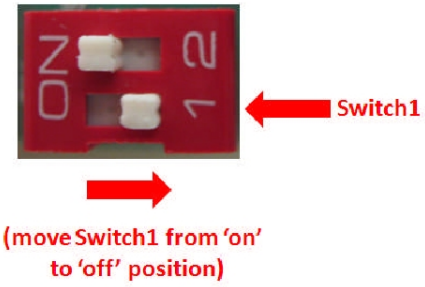
The EA-R02 kit is shipped with one EA-R02-202 receiver and two pre-enrolled EA-R02-102 keyfob transmitters. These transmitters are ready to use with the receiver.

Up to four compatible transmitters can be enrolled with the receiver. To enroll a transmitter:

1. Verify receiver has 12VDC power supply.
2. Move Switch1 from OFF to ON position, as shown below. The auxiliary output will turn on.



3. Within six seconds of moving Switch1 to the ON position, press either the LOCK or UNLOCK button on the new keyfob. The auxiliary output will pulse to indicate the transmitter has been enrolled.
4. If additional transmitters are to be enrolled, press either the LOCK or UNLOCK button on the new keyfob within three seconds of enrolling the previous transmitter. The auxiliary output will pulse twice to indicate transmitter #2 has been enrolled, three times to indicate transmitter #3 has been enrolled, and four times to indicate transmitter #4 has been enrolled.
5. Move Switch1 from ON to OFF position, as shown below:



6. Issue a LOCK or UNLOCK command from the transmitter to verify successful enrollment.

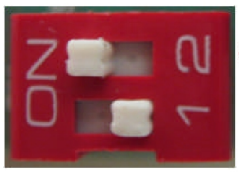
⚠ **NOTE:** Enrolling any transmitters after moving Switch1 from OFF to ON will cause **all previous transmitters that were enrolled to be erased and require re-programming to that receiver**.

EA-R02 Keyfob Controller Kit
Operating Instructions

Setting LOCK/UNLOCK Pulse Duration

The EA-R02-202 receiver is shipped with the LOCK/UNLOCK pulse duration set to 250ms.

The pulse duration of the LOCK and UNLOCK outputs can be set by setting Switch2, shown below. Set the switch to the ON position for 250ms output. Set the switch to the OFF position for 10 second output.



Switch2
"on" – 250ms (default)
"off" – 10 seconds

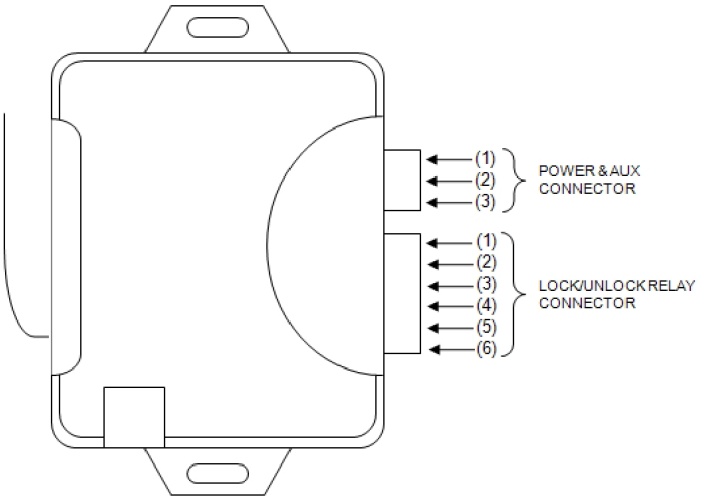
CAUTION: Be sure the LOCK/UNLOCK pulse duration is appropriate for the latch or actuator connected to the EA-R02-202 receiver.

Transmitter Battery Replacement

Replace the transmitter battery with two Type CR2016 3VDC batteries. The batteries can be replaced by opening the transmitter enclosure.

Receiver Unit Mounting and Wiring

The receiver should be mounted in a location to minimize RF shielding. Two mounting screw bosses are provided to mount the receiver.



Power Supply and Auxiliary Output Connector

Pin #	Description
1	VCC (+12VDC Power Supply Input)
2	GND (Ground)
3	Auxiliary Output (Vout = VCC)

LOCK & UNLOCK Relay Connector

Pin #	Description
1	LOCK Relay – Normally Closed (typically connect to GND)
2	LOCK Relay – Common
3	LOCK Relay – Normally Open (typically connect to VCC)
4	UNLOCK Relay – Normally Closed (typically connect to GND)
5	UNLOCK Relay – Common
6	UNLOCK Relay – Normally Open (typically connect to VCC)

FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference and
2. this device must accept any interference received, including interference that may cause undesired operation of the device.

R&TTE Compliance Statement

This equipment complies with all the requirements of DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of March 9, 1999 on radio equipment and telecommunication terminal Equipment and the mutual recognition of their conformity (R&TTE).

The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal Equipment and Satellite Earth Station Equipment) as of April 8, 2000.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

EU Countries Intended for Use

The ETSI version of this device is intended for home and office use in Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

The ETSI version of this device is also authorized for use in EFTA ember states: Iceland, Liechtenstein, Norway, and Switzerland.

EU Countries Not Intended for Use

None.

CE

For technical support of this product contact: info@southco.com or visit: www.southco.com.