Section IX - SAFECOM

In this section you will find information on the SAFECOM Two-Way Long Range Radio System and its accessories.

IX

SAFECOM

Product Selection Guide

SAFECOM TWO-WAY LONG RANGE RADIO SYSTEM

- Remote Radio Communicators can transmit FULL DATA from digital alarm communicators in most major digital communications formats (e.g. Radionics Modem II/IIe/IIIa², Ademco Contact ID/High Speed/4+2 Express, BFSK, FBI SuperFast, and 4-2 and 3-1 Pulsed).
- UL Listed for Grade "AA" burglary/security systems (i.e., Line Security classification, UL 365, UL 1023, UL 1076, and UL 1610) for reporting of alarm information using radio as the PRIMARY communications path.
- UL Listed for COMMERCIAL FIRE systems (UL 864, NFPA 72) and RESIDENTIAL FIRE systems (UL 985) for reporting of alarm information using radio as the *PRIMARY* or *ONLY* communications path.
- Ability to program, monitor and control up to 2,500 Remote Radio Communicators from the central monitoring station.
- Automatically manages up to 8 radio channels.
- Operates in the 400-512 MHz (UHF) and 136-174 MHz (VHF) frequency bands. (Other frequency bands available upon request.)
- Monitors telephone line for failures and reports these to central monitoring station.
- Up to 8 supervised EOL inputs for security protection with or without a functional TELCO line.
- Uses state-of-the-art radio technology to allow signals to be sent and received with superior reliability compared to other systems on the market today.
- Operates directly from the protected premises to the central station or through radio repeaters.
- System events can interface with central station automation alarm monitoring software and are permanently recorded on a printer.
- Network engineering and design performed by Radionics for each SAFECOM system.
- Radionics RF Applications Engineer commissions each system and performs training at your central monitoring location.

SAFECOM RADIO NETWORKS

The SAFECOM Network infrastructure provides a means of reporting alarm events to a central station for monitoring. The following chart is a listing of major components and assemblies contained in each of the SAFECOM Network (SCNET) and SAFECOM System (SCSYS) packages.

UHF								
Radio Network	SC9001 Computer	ST1000 Software	RF2000 Radio Modem	SC801 Repeater	IT1500 RF Tester (2 ea.)	SC820 Spare Repeater	RF2000 Spare Radio Modem	UL Listed Config.
SCNET-XX	●	●	●		●		●	●
SCNET1-XX	●	●	●	●	●	●	●	●
SCNET2-XX	●	●	●	●	●	●	●	●
SCNET4-XX		●	●		●		●	
SCNET5-XX		●	●	●	●	●	●	
SCNET6-XX		●	●	●	●	●	●	
SCSYS-XX			●					●
SCSYS1-XX			●	●				●
SCSYS2-XX			●	●				●
VHF								
Radio Network	SC9001 Computer	ST1000 Software	RF2000 Radio Modem	SC801 Repeater	IT1500 RF Tester (2 ea.)	SC820 Spare Repeater	RF2000 Spare Radio Modem	UL Listed Config.
SCNETV-XX	●	●	●		●		●	●
SCNET1V-XX	●	●	●	●	●	●	●	●
SCNET2V-XX	●	●	●	●	●	●	●	●
SCNET4V-XX		●	●		●		●	
SCNET5V-XX		●	●	●	●	●	●	
SCNET6V-XX		●	●	●	●	●	●	
SCSYSV-XX			●					●
SCSYS1V-XX			●	●				●
SCSYS2V-XX			●	●				●

All SAFECOM Radio Networks require procurement of SCCERT from the Ancillary Service Section of this catalog

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Communications between the protected premises and the central station is accomplished in one of two ways:

1. Direct from the protected premises to the central station with an omni-directional network.
2. From the protected premises, to a SAFECOM Repeater, then to the central station.

The SAFECOM Repeater is normally located on a communications tower, mountain top or tall building overlooking the area to be serviced.

Repeater sites are given one of the following classifications: SCHEMED or NON-SCHEMED. A Schemed site makes use of a "master antenna system" to which all radio repeaters on the site are connected (via a multi-coupler/combiner). A Non-Schemed site requires the installation of a new antenna dedicated solely to the SAFECOM Repeater.

NOTE: *The **"V"** at the end of a SCNET designator indicates that the system operates in the **VHF** frequency band (typically 136-174 MHz). **Without the "V"** the network is defined as using radios that operate in the **UHF** band (typically 400-512 MHz).*

The actual number used for ordering includes a **"-XX"** suffix. The **"-XX"** is a 2 character designator which defines the specific frequency pair used by the system (e.g., SCNET-D3). Radionics assigns a frequency designator for each SAFECOM system frequency pair.

SCNET-XX UL Listed, Omni-Directional Radio Network - UHF
SCNETV-XX UL Listed, Omni-Directional Radio Network - VHF

- Two-way radio communications with remotes is accomplished via an omni-directional antenna at the central monitoring station.
- Requires: (1) SAFECOM RF Hardware kit (SCRFHDyy) and (1) SC900 Series antenna

SCNET1-XX UL Listed Radio Network, with One UL Non-Schemed Repeater - UHF
SCNET1V-XX UL Listed Radio Network, with One UL Non-Schemed Repeater - VHF

- Two-way radio communications with remotes is accomplished via a SAFECOM Repeater system at a non-schemed location.
- Requires: (2) SAFECOM RF Hardware kits (SCRFHDyy) and (2) SC900 Series antennas

SCNET2-XX UL Listed Radio Network, with One UL Schemed Repeater - UHF
SCNET2V-XX UL Listed Radio Network, with One UL Schemed Repeater - VHF

- Two-way radio communications with remotes is accomplished via a SAFECOM Repeater system at a schemed location.
- Requires: (1) SAFECOM RF Hardware kit (SCRFHDyy) and (1) SC900 Series antenna

SCNET4-XX Non-UL, Omni-Directional Radio Network - UHF
SCNET4V-XX Non-UL, Omni-Directional Radio Network - VHF

- Two-way radio communications with remotes is accomplished via an omni-directional antenna at the central monitoring station. The computer is not provided.
- Requires: (1) SAFECOM RF Hardware kit (SCRFHDyy) and (1) SC900 Series antenna

SCNET5-XX Non-UL Radio Network, with One Non-Schemed Repeater - UHF
SCNET5V-XX Non-UL Radio Network, with One Non-Schemed Repeater - VHF

- Two-way radio communications with remotes is accomplished via a SAFECOM Repeater system at a non-schemed location. The computer is not provided.
- Requires: (2) SAFECOM RF Hardware kits (SCRFHDyy) and (2) SC900 Series antennas

SCNET6-XX Non-UL Radio Network, with One Schemed Repeater - UHF
SCNET6V-XX Non-UL Radio Network, with One Schemed Repeater - VHF

- Two-way radio communications with remotes is accomplished via a SAFECOM Repeater system at a schemed location. The computer is not provided.
- Requires: (1) SAFECOM RF Hardware kit (SCRFHDyy) and (1) SC900 Series antenna

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SAFECOM EXPANSION SYSTEMS

These systems are used to expand the coverage area of a network or provide a second RF path for UL Listed fire protection without telephone line backup.

SCSYS-XX UL Listed, Omni-Directional Add-On for the Central Station - UHF
SCSYSV-XX UL Listed, Omni-Directional Add-On for the Central Station - VHF

- Includes an RF2000 Radio Modem and an SC9004 Four Port Serial Interface card with a cable assembly.
- Requires: (1) SAFECOM RF Hardware kit (SCRFHDyy) and (1) SC900 Series antenna

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SCSYS1-XX UL Listed Add-On Non-Schemed Repeater - UHF
SCSYS1V-XX UL Listed Add-On Non-Schemed Repeater - VHF

- Includes an RF2000 Radio Modem and an SC9004 Four Port Serial Interface card with a cable assembly.
- Requires: (2) SAFECOM RF Hardware kits (SCRFHDyy) and (2) SC900 Series antenna

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SCSYS2-XX UL Listed Add-On Schemed Repeater - UHF
SCSYS2V-XX UL Listed Add-On Schemed Repeater - VHF

- Includes an RF2000 Radio Modem and an SC9004 Four Port Serial Interface card with a cable assembly.
- Requires: (1) SAFECOM RF Hardware kits (SCRFHDyy) and (1) SC900 Series antenna

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SCSYS3-XX UL Listed Add-On Mini-Repeater - UHF
SCSYS3V-XX UL Listed Add-On Mini-Repeater - VHF

- Includes an RF2000 Radio Modem and an SC9004 Four-Port Serial Interface card with a cable assembly.
- Requires: (2) SAFECOM RF Hardware kits (SCRFHD-XX) and (2) SC900 Series antenna

RF HARDWARE PACKAGES

One (1) SAFECOM RF Hardware Kit (SCRFHD-YY) is required for each RF2000 Radio Modem and each SAFECOM Repeater assembly installed. Packages include all necessary hardware to connect the RF2000 or SAFECOM Repeater system to the antenna.

RF HARDWARE Packages include:

· Low-loss coaxial cable
· RG-9 jumper, for connection between the lightning suppressors and the radio equipment
· Three (3) grounding kits per each 100 feet of coaxial cable
· Cable ties or cable hangers to attach the coaxial cable to the antenna support structure
· Connectors for the RG-9 jumper and coaxial cable
· Lightning suppressors

SAFECOM RF Hardware kits are grouped according to the "Low-Loss coaxial cable" diameter as follows:

SCRFHDA1 50 ft. 1/2" Low-Loss Coaxial Cable

- For use at the Central Station between the RF2000 Radio Modem or SAFECOM Repeater system and the antenna

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SCRFHDA2 100 ft. 1/2" Low-Loss Coaxial Cable

- For use at the Central Station between the RF2000 Radio Modem or SAFECOM Repeater system and the antenna

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SCRFHDA3 200 ft. 1/2" Low-Loss Coaxial Cable

- For use at the Central Station between the RF2000 Radio Modem or SAFECOM Repeater system and the antenna

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SCRFHDB1 100 ft. 7/8" Low-Loss Coaxial Cable

- Used for SAFECOM Repeater sites

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Product Selection Guide

SCRFHDB2 150 ft. 7/8" Low-Loss Coaxial Cable

- Used for SAFECOM Repeater sites

SCRFHDB3 200 ft. 7/8" Low-Loss Coaxial Cable

- Used for SAFECOM Repeater sites

SCRFHDB4 250 ft. 7/8" Low-Loss Coaxial Cable

- Used for SAFECOM Repeater sites

SCRFHDC1 250 ft. 1-1/4" Low-Loss Coaxial Cable

- Used for SAFECOM Repeater sites

SCRFHDC2 325 ft. 1-1/4" Low-Loss Coaxial Cable

- Used for SAFECOM Repeater sites

SCRFHDC3 400 ft. 1-1/4" Low-Loss Coaxial Cable

- Used for SAFECOM Repeater sites

NETWORK INSTALLATION AND CERTIFICATION

SAFECOM network commissioning and performance certification performed by a Radionics/SAFECOM RF Applications Engineer.

NOTE: For international travel to test and certify a SAFECOM network, the cost of travel expenses will be incurred by the customer in addition to the SCCERT fees. The cost of airfare, meals, lodging and local transportation will be invoiced separately.

SCCERT

- Final hook-up, operational check, and certification of performance and compliance to UL standards of the SAFECOM Network
- Includes training of: a) operational personnel on central station SAFECOM receiver system software, and b): technician/installation personnel on proper installation procedures for the installation of SAFECOM radio communicators

SAFECOM ANTENNAS

One (1) antenna is required for each operational RF2000 Radio Modem and each SAFECOM Repeater system at a non-schemed site. Omni-directional antennas are used to provide line-of-site, two-way radio communications from the central station direct to the radio communicators at the customer site or from the SAFECOM Repeater site direct to the radio communicators at the customer site and back to the central station.

Directional (Yagi) antennas are used to communicate between the central station and the SAFECOM Repeater site.

SC911-XX UHF (410-490 MHz), 10.4 dB Gain, 20 ft. Open Dipole
SC911V-XX VHF (136-174 MHz), 6.7 dB Gain, 22 ft. Open Dipole

- For use at central stations using RF2000 Radio Modems for direct to protected premises communications, or for SAFECOM Repeater sites where the antenna size, wind and ice loading factors are not a consideration

SC912-XX UHF (400-520 MHz), 6.6 dB Gain, 10 ft. Open Dipole
SC912V-XX VHF (136-174 MHz), 3 dB Gain, 10 ft. Open Dipole

- For use at central stations using RF2000 Radio Modems for direct to protected premises communications, or for SAFECOM Repeater sites where wind and ice loading factors are not a factor, however the antenna size is a consideration

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SC913-XX UHF (400-520 MHz), 10 dB Gain, 22 ft. Colinear
SC913V-XX VHF (136-174 MHz), 6 dB Gain, 22 ft. Colinear

- For use at central stations using RF2000 Radio Modems for direct to protected premises communications, or for SAFECOM Repeater sites where wind and ice loading factors are a consideration, however the antenna size is not a consideration

SC914-XX UHF (400-520 MHz), 7 dB Gain, 13 ft. Colinear
SC914V-XX VHF (136-174 MHz), 3 dB Gain, 10 ft. Colinear

- For use at central stations using RF2000 Radio Modems for direct to protected premises communications, or for SAFECOM Repeater sites where the antenna size, wind and ice loading factors are all a consideration

SC915-XX UHF (400-520 MHz), 10 dB Gain Yagi (directional)
SC915V-XX VHF (136-174 MHz), 9.5 dB Gain Yagi (directional)

- For use at Central Stations using an RF2000 Radio Modem for direct communications to the SAFECOM Repeater site

SC930 Antenna Mounting Bracket

- Up to 18 inch extension from the tower leg
- For use with any of the high gain, omni-directional antennas used at central station or repeater sites; the purpose is to extend the antenna off the face of the tower legs to permit a more unobstructed RF propagation pattern

SC931 Antenna Mounting Bracket

- Up to 8 ft. extension from the tower leg
- For use with any of the high gain, omni-directional antennas used at central station or repeater sites; the purpose is to extend the antenna off the face of the tower legs to permit a more unobstructed RF propagation pattern

RADIO COMMUNICATORS

AD2104-XX Analog Data Transfer, 4 Inputs - UHF
AD2104V-XX Analog Data Tranfer, 4 Inputs - VHF

- *Special order only -- contact Radionics for conditions*
- Analog data collection device with 4 analog inputs
- Each input converts 0 to 5 volts to digital value of 0 to 255 (19.5 mV per step)
- Each input is MOV and diode protected against lightning, static and over voltage
- The dealer must create their own application software to use analog information from RS232 port of the SC9001 Computer at central station, includes antenna, battery and battery charger

IT1500-XX Sales and Installation RF Tester - UHF
IT1500V-XX Sales and Installation RF Tester - VHF
IT1500M Sales and Installation Tester - No RF

- System RF tester used to test communications path from proposed radio locations back to central monitoring facility
- Provides sales and installation personnel with easy means to ensure radio communications are reliable to and from customer's sites
- Instant visual "Pass/Fail" indication, includes antenna, battery and 110 VAC transformer

SC2104-XX Two-Way, 4/8 Zone Slave Communicator - UHF
SC2104V-XX Two-Way 4/8 Zone Slave Communicator - VHF

- Provides for 4 (field expandable to 8) EOL supervised inputs with or without functional TELCO line
- Monitors for telephone line failures (via the RJ31X phone jack), reports to central monitoring station
- Ideal for accounts that require basic alarm data reporting with reliability of two-way radio
- Remotely programmed via radio, includes antenna, battery, and battery charger

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SC2104B-XX Two-Way, 4/8 Zone Slave Communicator - NO Battery Charger - UHF
SC2104BV-XX Two-Way, 4/8 Zone Slave Communicator - NO Battery or Charger - VHF

- Same description as SC2104, except with no battery or charger

SC2104MA Two-Way, 4/8 Zone Slave Communicator - Without Radio

- Same description as SC2104, except without radio (radio supplied by the Dealer)
- Prepared for connection to Maxon SD125 RF module

SC2104ME Two-Way, 4/8 Zone Slave Communicator - Without Radio

- Same description as SC2104, except without radio (radio supplied by the Dealer)
- Prepared for connection to E.F. Johnson RF module

SC2104MT Two-Way, 4/8 Zone Slave Communicator - Without Radio

- Same description as SC2104, except without radio (radio supplied by the Dealer)
- Prepared for connection to TEKK RF module

SC3100-XX Two-Way, Full Data Transfer Radio Communicator - UHF
SC3100V-XX Two-Way Full Data Transfer Radio Communicator - VHF

- FULL DATA transfer with reliability of two-way radio primary communications
- Data transfer accomplished via patented* SAFECOM digital dialer interface which supports most formats (e.g., Radionics Modem II/IIe/IIIa[2], Ademco Contact ID/High Speed/4+2 Express, BFSK, FBI SuperFast, and 4-2 and 3-1 Pulse)
- Remotely programmed via radio; includes antenna, battery and battery charger
* Patent # 5,134,644

SC3100B-XX Two-Way, Full Data Transfer Radio Communicator - NO Battery or Charger - UHF
SC3100BV-XX Two-Way, Full Data Transfer Radio Communicator - NO Battery or Charger - VHF

- Same description as SC3100, except with no battery or charger

SC3100MA Two-Way, Full Data Transfer Radio Communicator - Without Radio

- Same description as SC3100, except without radio (radio supplied by the Dealer)
- Prepared for connection to Maxon SD125 RF Module

SC3100ME Two-Way, Full Data Transfer Radio Communicator - Without Radio

- Same description as SC3100, except without radio (radio supplied by the Dealer)
- Prepared for connection to E.F. Johnson RF Module

SC3100MT Two-Way, Full Data Transfer Radio Communicator - Without Radio

- Same description as SC3100, except without radio (radio supplied by the Dealer)
- Prepared for connection to TEKK RF Module

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RADIO COMMUNICATORS continued

SC4000-XX UL Listed, Two-Way, Full Data Transfer Radio Communicator - UHF
SC4000V-XX UL Listed, Two-Way, Full Data Transfer Radio Communicator - VHF

- Premier product for two-way, wireless full data transfer of most alarm data
- UL Listed for Grade AA Burglary and Commercial Fire (NFPA 72) reporting by radio only or via radio primary with digital backup
- 4 output relays available to remotely control devices such as gates, lights, sounding devices, pressure valves, etc.
- 4 EOL supervised inputs, field expandable to 8, for added versatility
- Data transfer accomplished via patented* SAFECOM digial dialer interface which supports most formats (e.g. Radionics Modem II/IIe/IIIa2, Ademco Contact ID/High Speed/4+2 Express, BFSK, FBI SuperFast, and 4-2 and 3-1 Pulse)
- SC4000s remotely programmed via radio
- Tamper-protected enclosure
- Includes antenna and 110 VAC transformer
* Patent # 5,134,644

SC4000MA UL Listed, Two-Way, Full Data Transfer Radio Communicator - Without Radio

- Same description as SC4000, except without radio (radio supplied by the Dealer)
- Prepared for connection to Maxon SD125 RF module

SC4000ME UL Listed, Two-Way, Full Data Transfer Radio Communicator - Without Radio

- Same description as SC4000, except without radio (radio supplied by the Dealer)
- Prepared for connection to E.F. Johnson RF module

SC4000MT UL Listed, Two-Way, Full Data Transfer Radio Communicator - Without Radio

- Same description as SC4000, except without radio (radio supplied by the Dealer)
- Prepared for connection to TEKK RF module

SC4000F-XX UL Listed, Two-Way, Radio Communicator for SSWF Applications - UHF
SC4000FV-XX UL Listed Two-Way Radio Communicator for SSWF Applications - VHF

- Specifically designed to meet UL 864 standards for Sprinkler Supervisory & Waterflow (SSWF) applications, monitoring through radio communications only
- Eliminates requirements for phone line, fire control panel and digital communicator by connecting SSWF devices directly to the SC4000F
- Enclosure is red
- Includes antenna and 110 VAC transformer

SC4000FMA UL Listed, Two-Way Radio Communicator for SSWF Applications - Without Radio

- Same description as SC4000F, except without radio (radio supplied by the Dealer)
- Prepared for connection to Maxon SD125 RF module

SC4000FME UL Listed, Two-Way Radio Communicator for SSWF Applications - Without Radio

- Same description as SC4000F, except without radio (radio supplied by the Dealer)
- Prepared for connection to E.F. Johnson RF module

SC4000FMT UL Listed, Two-Way Radio Communicator for SSWF Applications - Without Radio

- Same description as SC4000F, except without radio (radio supplied by the Dealer)
- Prepared for connection to TEKK RF module

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RADIO COMMUNICATORS continued

SC5000-XX Supervised Radio-Only Alarm Panel - UHF
SC5000V-XX Supervised Radio-Only Alarm Panel - VHF

- Integrated control panel/radio communicator for radio-only applications
- Full reporting, two-way supervision and programming via radio
- Fire and burglary zone programming parameters provide wide range of user-convenient features
- 8 EOL terminated loops/zones, all are programmable
- Loop response time 125 ms, loop resistance 3.3 kohms
- Smoke detector power, auto smoke detector reset, bell output (steady or pulsed)
- 4-wire keypad includes 12 user keys (3 panic, 7 user authority levels, 5 user codes), zone status, system status (additional keypads are available)
- Includes antenna and 110 VAC transformer

NO DIALER - NO TELCO INTERFACE - RADIO ONLY (FOR NON-DOMESTIC APPLICATIONS ONLY)

SC5000MA Supervised Radio - Only Alarm Panel - Without Radio

- Same description as SC5000, except without radio (radio supplied by the Dealer)
- Prepared for connection to Maxon SD125 RF module

SC5000ME Supervised Radio - Only Alarm Panel - Without Radio

- Same description as SC5000, except without radio (radio supplied by the Dealer)
- Prepared for connection to E.F. Johnson RF module

SC5000MT Supervised Radio - Only - Without Radio

- Same description as SC5000, except without radio (radio supplied by the Dealer)
- Prepared for connection to TEKK RF module

RADIO COMMUNICATOR ACCESSORIES - ANTENNAS

C740A UHF Omni-Directional Antenna

- 3 dB gain, omni-directional whip antenna
- Includes a 3/4" mount, "L" bracket, 15 ft. RG-58 coaxial cable and BNC male connector
- Operates in 450 to 470 MHz band

C742A UHF Directional Antenna

- 10 dB gain, directional (Yagi) antenna
- Includes U-bolt clamp for mounting, operates in 450 to 470 MHz band
- Does not include coaxial cable or connectors (one C722 and one C729 connector recommended)

SC921-XX Antenna

- 1/2 wave rubber duck, UHF 400-520 MHz

SC921V-XX Antenna

- 1/2 wave rubber duck, VHF 136-174 MHz

SC932 Mounting Washer

- For replacing knock-out plug on panel enclosure

SC933 L-Bracket

- For mounting antenna on side of panel or remotely

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RADIO COMMUNICATOR ACCESSORIES - BATTERIES

22436 Battery, 12 VDC, 0.8 Ah

D126 Battery, 12 VDC, 7 Ah

- Used for the SC4000, SC4000F and SC5000 Radio Communicators
- UL Listed battery
- Sealed lead acid rechargeable battery

D72 Battery, 7.2 VDC Nicad

- For discontinued SC2004 and SC3000 Radio Communicators

33435B Enclosure Support Bracket

- Used for AD2104, SC2104 and SC3100 Radio Communicators

33436B Battery Enclosure Holder

- Used for AD2104, SC2104 and SC3100 Radio Communicators

33437B Enclosure Bottom

- Used for AD2104, SC2104 and SC3100 Radio Communicators

33438B Enclosure Cover

- Used for AD2104, SC2104 and SC3100 Radio Communicators

80010-603 Enclosure

- For SC4000 Radio Communicator

INDIVIDUAL RADIOS

SC120A-XX Maxon

- VHF or UHF radio, frequency synthesized, 12.5 KHz bandwidth, UL Listed

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SC120E-XX E.F. Johnson

- UHF radio with crystals, UL Listed, 25 KHz bandwidth

SC210EV-XX E.F. Johnson

- VHF radio with crystals, UL Listed, 25 KHz bandwidth

SC120T-XX TEKK

- UHF radio with crystals, UL Listed, 25 KHz bandwidth

INDIVIDUAL CIRCUIT BOARDS

CM100PWA Computer Watchdog Module

- Circuit board ONLY

DK1000PWA Kenwood Repeater Intelligence Module

- Circuit board ONLY

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INDIVIDUAL CIRCUIT BOARDS continued

DP1000PWA Universal Repeater Intelligence Module

- Circuit board ONLY

IT1500PWA Installation Tester

- Circuit board ONLY

LS500PWA Phone Line Voltage Simulator

- Circuit board ONLY for SC4000

RF2000PWA Radio Modem

- Circuit board ONLY

SC500RA-1 Radio Adapter for TEKK Radios

- Circuit board ONLY

SC500RA-2 Radio Adapter for E.F. Johnson Radios

- Circuit board ONLY

SC500RA-3 Radio Adapter for Maxon SD125 Radios

- Circuit board ONLY

SC2104PWA

- Circuit board ONLY

SC2104RA and SC500RA-1 (1 each)

- Circuit boards ONLY

SC3100PWA

- Circuit board ONLY

SC4000PWA

- Circuit board ONLY

SC4000FPWA

- Circuit board ONLY

SC5000PWA

- Circuit board ONLY

SP100PWACharger

- Circuit board ONLY for AD2104, SC2104 and SC3100 Radio Communicators

SAFECOM RADIO COMMUNICATOR COMPONENTS - KEYPADS

SC5000K Keypad

- Used for the SC5000 Radio Communicators

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SAFECOM RADIO COMMUNICATOR COMPONENTS - MICROPROCESSORS & EEPROMS

SCK1000MC-FF20 Microprocessor

- CPU for DK1000

SCP1000MC-FE12 Microprocessor

- CPU for DP1000

SC1500EE-02 EEPROM

- EEPROM for IT1500

SC1500MC-02 Microprocessor

- CPU for IT1500

SC2104MC-0441 Microprocessor

- CPU for SC2104

SC3100MC-0346 Microprocessor

- CPU for SC3100

SC4000MC-01 Microprocessor

- CPU for SC4000

SC4000EE-0167 EEPROM

- EEPROM for SC4000

SC5000MC-05 Microprocessor

- CPU for SC5000

SAFECOM RADIO COMMUNICATOR COMPONENTS - RF ATTENUATORS

Used on the IT1500 Installation Tester to reduce the radiated power and receiver sensitivity of the tester to simulate the attenuation (signal strength reduction) of the radio signal due to through-building penetration, trees, foliage, and free space distance radiation losses. The results of reducing the performance of the RF Tester is to establish a fade margin for determining the correct location of the antenna and the expected performance of the SAFECOM radio communicator.

SC960 RF Attenuator

- 2-Watt, 3 dB

SC963 RF Attenuator

- 2-Watt, 6 dB

SC965 RF Attenuator

- 2-Watt, 10 dB

SC969 RF Attenuator

- 2-Watt, 20 dB

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SAFECOM RADIO COMMUNICATOR COMPONENTS - TRANSFORMERS

D1625 Transformer

- 16.5 VAC, 20 VA
- Used for the RF2000 Radio Modem

D1640 Transformer

- 18.5 VAC, 40 VA
- Used with SC4000, SC4000F, and SC5000 Radio Communicators

SC1500-1 Transformer and Cable Assembly

- 18.5 VAC, 40 VA charger for IT1500

SAFECOM RADIO COMMUNICATOR COMPONENTS - RF CABLE & WIRE HARNESSES

80070-120 RF Extension Cable with BNC Connectors

- 3 feet in length

SC210 Wire Harness for SC2104, Black Connector

SC211 Wire Harness for SC2104, White Connector

SC220 Wire Harness for TEKK Radio

SC221 Wire Harness for Maxon Radio

SC230 Wire Harness for SC3100, Black Connector

SC231 Wire Harness for SC3100, White Connector

SC245 Wire Harness for SC3000

SC246 Wire Harness for SC2004

REPEATER ASSEMBLY

SC801-XX Repeater Assembly for Non-Schemed Repeater Site, UHF
SC801-XX Repeater Assembly for Non-Schemed Repeater Site, VHF

- Complete SAFECOM Repeater system for use with SAFECOM radio network
- SAFECOM Repeaters are used to extend a radio network's area of coverage and/or to provide a second radiocommunications path required for NFPA 72 radio only fire alarm and SSWF alarm reporting
- Non-schemed version comes with a duplexer and isolator to allow repeater to transmit to and receive fromSAFECOM radio communicators and the central station
- Includes back-up batteries and tamper protected cabinet
- Does not include antenna, RF cable, and RF hardware accessories

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REPEATER ASSEMBLY continued

SC802-XX Repeater Assembly for Schemed Repeater Site, UHF
SC802-XX Repeater Assembly for Schemed Radio Site, UHF

- Complete SAFECOM Repeater system for use with SAFECOM radio network
- SAFECOM Repeaters are used to extend a radio network's area of coverage and/or to provide a second radio communications path required for NFPA 72 radio only fire alarm and SSWF alarm reporting
- Schemed version is for use with existing master antenna system and mulitcoupler/combiner equipment
- Includes back-up batteries and tamper protected cabinet
- Does not include duplexer, isolator, antenna, RF cable, and RF hardware accessories

REPEATER COMPONENTS

D1273 Battery, 12 VDC, 73 AH for the Repeater Assembly

- Used in SC801 and SC802 series repeater assemblies to provide back-up DC power
- Normally each repeater is configured with 3 each for 219 AH of back-up power

22003-102 Battery Cable Assembly

- Used in SC801 and SC802 series repeater assemblies to connect repeater back-up batteries to charger and repeater

26002-002 Conversion Kit DC TKR820

26002-005 Repeater Equipment Cabinet

- Measures 22" x 22" x 36"
- Enclosure for SC801 and SC802 series repeater assemblies

80034-101 Tamper Switch Assembly

- Used in the SC801 and SC802 series repeater assemblies, SC4000 and SC4000F

SC720K-XX Radio Repeater with DK1000 Intelligence Board, VHF

- UL Listed radio repeater modified by Radionics into SAFECOM Smart Repeater
- Used in the SC801 and SC802 series repeater assemblies, included in all SAFECOM radio network repeater packages and in spares kits, includes DK1000 Intelligence Board

SC820K-XX Radio Repeater with DK1000 Intelligence Board, UHF

- Same description as SC720-XX except for UHF frequencies

SC840K Lightning Suppressor, Non-Schemed Repeater Assembly

- Used to protect SC801 and SC802 series repeaters from lightning induced electrical damage
- Requires quantity of 1 per repeater

SC860 AC Power Sensor

- 120 VAC transformer, used in SC801 and SC802 series repeater assemblies to provide a 12 VDC voltage to trip input on SC2104 repeater watchdog to monitor 120 VAC primary power supply

SC861 Repeater Back-up Battery Charger

- Used in SC801 and SC802 series repeater assemblies to provide 13.5 VDC to charge back-up batteries in SAFECOM Repeater
- Input voltage selectable for 120 VAC or 220 VAC

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REPEATER COMPONENTS continued

SC950 Bandpass Duplexer, VHF

- Used in SC801V repeater assemblies
- Provides RF filtering and protection to pass only specific transmit and receive frequencies in high density RF environments, 136 - 174 MHz

SC951 Bandpass Duplexer, UHF

- Used in SC801 repeater assemblies
- Provides RF filtering and protection to pass only specific transmit and receive frequencies in high density RF environments, 400 - 440 MHz

SC952 Bandpass Duplexer, UHF

- Used in SC801 repeater assemblies
- Provides RF filtering and protection to pass only specific transmit and receive frequencies in high density RF environments, 440 - 470 MHz

SC953 Bandpass Duplexer, UHF

- Used in SC801 repeater assemblies
- Provides RF filtering and protection to pass only specific transmit and receive frequencies in high density RF environments, 470 - 512 MHz

RADIO MODEMS

RF2000-XX Two-Way Radio Modem, UL Listed

- Located at central station for two-way radio communications with SAFECOM security network and radio communicators
- Communicates with SAFECOM computer configured with ST1000 Operational Software or ST50 Remote Monitoring Software, also may be located at remote repeater sites (even in different city or state with use of SC9010 and SC9011 TELCO Line Modem)
- Optional DS power modification is available for interface with ST50 Remote Monitoring Software
- Includes 110 VAC transformer
- With 400 - 520 MHz radio, UL Listed

RF2000MA Radio Modem

- Without radio, prepared for Maxon Radio Module

RF2000MT Radio Modem

- Without radio, prepared for TEKK Radio Module

RF2000ME Radio Modem

- Without radio, prepared for E.F. Johnson Radio Module

RF2000V-XX Radio Modem

- With 136 - 174 MHz radio, UL Listed

BASE STATION COMPONENTS

ST1000 SAFECOM Central Station Receiver Software

- Provides radio network intelligence processing for alarm messages and routing to automation software, system supervision/polling, radio communicator programming, and network control

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Product Selection Guide

BASE STATION COMPONENTS continued

ST1000UPG Upgrade for SAFECOM ST1000 Software

- Required when upgrading for use of newer firmware versions of SAFECOM radio communicators

ST50 SAFECOM Remote Monitoring Software - Receive ONLY

- Provides duplicate monitoring capability at remote security site
- Processes alarm messages from selected radio communicators that are transmitted from repeater and received by ST50 software system
- Used at remote monitoring stations for SAFECOM network in addition to primary controlling ST1000 monitoring station, software cannot control radio communicators, e.g., transmit and receive

ST50UPG Upgrade for SAFECOM ST50 Software

- Required when upgrading for use of newer firmware versions of SAFECOM radio communicators

SC9001 UL Listed Computer System

- UL Listed computer (CPU), keyboard, and ST1000 software
- Used with UL configured SAFECOM system

SC9001A UL Listed Computer Monitor

- UL Listed computer monitor - VGA
- Used with UL configured SAFECOM system

CM100 for SC9001 Computer Watchdog Module

- Monitors operation of SC9001 SAFECOM computer
- Audible alert and LED indication of power failure, software malfunction, CPU fan failure/temperature sensor

SC9002 SAFECOM UL Listed Printer

- All events printer, cable and 1 roll of paper
- UL Listed printer; records all alarm events & SAFECOM advisory messages, 40-column dot matrix printer

SC9003 Computer Serial Port Interface Board

- Dual port I/O board, one 9-pin serial port connection
- Used to interface with one RF2000 Radio Modem, if SAFECOM network is configured with more than one RF2000 Radio Modem, then 4- or 8-Port Digi-Board is required

SC9006 4-Port Cable Assembly

- Cable assembly ONLY

SC9007 8-Port Digi-Board

- 8-port I/O board ONLY

SC9008 8-Port Digi Board with Cable Assembly

- 8-port I/O board ONLY

SC9009 8-Port Cable Assembly

- Cable assembly ONLY
- Provides connection and control of up to eight RF2000 Radio Modems

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SC9010 Telephone Modem, AC Powered

- 110 VAC powered, telephone line modem
- Used to remote RF2000 Radio Modem at off-site location from central station where 110 VAC is available
- Typically used to interface with 3002, T-1, or 56K dedicated lease line configuration

SC9011 Telephone Modem, DC Powered

- 12 DC powered, telephone line modem
- Used to remote RF2000 Radio Modem at off-site location from central station where 110 VAC is NOT available, but 12 VDC is available
- Typically used to interface with 3002, T-1, or 56K dedicated lease line configuration

SC9013 A/B Switch

- Crossover switch used when central station is configured with 2 SAFECOM central station receivers
- Manually selects primary or back-up computer interface with associated RF2000 Radio Modems in case of computer failure

SC9015 9-Pin Transient Serial Line Surge Protector

- Installed at central station computer between I/O board and RF2000 Radio Modem

SC9016 25-Pin Transient Serial Line Surge Protector

- Installed at central station computer between I/O board and/or digi-board RF2000 Radio Modem

SC9020 Lightning Surge Suppressor

- Lightning surge suppressor is installed between RF2000 Radio Modem and 1/2" RF cable connector inside of building, and routed to earth ground

RF ENGINEERING STUDIES

Radio propagation study to graphically show the area of coverage obtained from specific repeater and central station sites. Propagation overlays clearly show radio coverage area superimposed over a USGS topographic map, detailing the approximate extent of radio coverage that can be expected from your SAFECOM radio network.

SCTOP-1 Radio Propagation Study for a Central Station and/or 1 Repeater Site

SCTOP-2 Radio Propagation Study for a Central Station and/or 2 Repeater Sites

SCTOP-3 Radio Propagation Study for a Central Station and/or 3 Repeater Sites

SCTOP-4 Radio Propagation Study for a Central Station and/or 4 Repeater Sites

SCTOP-5 Radio Propagation Study for a Central Station and/or 5 Repeater Sites

SCTOP-6 Radio Propagation Study for a Central Station and/or 6 Repeater Sites

SCTOP-7 Radio Propagation Study for a Central Station and/or 7 Repeater Sites

SCTOP-8 Radio Propagation Study for a Central Station and/or 8 Repeater Sites

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SAFECOM LITERATURE

Specification Sheets

An overview of product specifications, features and functions.

Description	L#
SC5000 Alarm Communicator	L797
SC4000F Radio Communicator	L798
SC4000 Radio Communicator	L799
SC3100 Radio Communicator	L800
SC2104 Radio Communicator	L811
Spanish Specification Sheets	
SC5000 Alarm Communicator	L803
SC4000 Radio Communicator	L804
SC3100 Radio Communicator	L805
SC2104 Radio Communicator	L806

Note: Use the "L" number when ordering specification sheets. All specification sheets are packages of 50, unless otherwise indicated.

Brochures

Brochures are full-color, end-user pieces commercial, residential or fire application use.

Description	L#
SAFECOM Security Brochure	L831
SAFECOM Fire Security Brochure	L832
SAFECOM "What if the Phone Line is Cut?"	L871

Note: To order the above, use the "L" number or part number specified in the charts.