CENTRAL STATION RECEIVER SYSTEM SPECIFICATION FOR MODEL SCS-1R

1.0 General

1.1 Manufacturer

Manufacturer of the central station receiver equipment shall be:

Digital Monitoring Products, Inc. (DMP)
2500 N. Partnership Boulevard
Springfield, MO 65803
Telephone (417) 831-9362
Fax (417) 831-1325

1.2 Scope

This specification document provides the requirements for the installation, programming, and configuration of a complete Digital Monitoring Products (DMP) SCS-1R Central Station Receiver. This system shall include, but not be limited to:

- Processor Board
- Three Line Cards
- System Enclosure with processor card rack, modem rack, and cooling fan
- Convenience Panel
- Modem Power Card
- Multibus Power Card
- Transformer Card
- LCD Display membrane keypad

1.3 General Requirements

Furnish and install a complete full-featured digital and host capable alarm receiver system with the performance criteria detailed in this specification. The system shall be inclusive of all necessary functions, monitoring, and control capability as detailed herein and on accompanying Shop drawings.

1.4 Standards

The system shall be listed under the following standards:

- UL 365 Police Connect Burglar
- UL 864 Control Units for Fire Protective Signaling Systems
- UL 985 Household Fire Warning
- UL 1076 Proprietary Alarm Receiving System
- UL 1610 Central Station Burglar Alarm Units
- UL 1023 Household Burglar Alarm Station Units
- UL 1635 Digital Burglar Alarm Communicator System Units NFPA 72 Central Station
- NFPA 72 Local Protective Signaling
- NFPA 72 Remote Station Protective Signaling
- NFPA 72 Proprietary Protective Signaling
- NFPA 74 Household Fire Warning

Intertek (ETL) Certifications:

- EN 50136-1 Alarm Transmission Systems & Equipment
- EN 50136-3 Receiving Centre Transceiver
- EN 50130-5 Environmental Standards
- EN 61000-6-4 Generic Standards – Emission Standard for Industrial Environments
- EN 50130-4 EMC Product Family Standard: Immunity Requirements for Components of Fire, Intruder and Social Alarm Systems

Each system shall be supplied with complete details on all installation criteria necessary to meet all of the above listings.

International Standards

The system shall carry the Intertek Tick Mark. The system shall support ATS categories DP1, DP3, SP2 and SP4.

1.5 Verification of Dimensions

The Contractor shall become familiar with all details of the work, verify all dimensions in the field, and shall advise the Architect of any discrepancy before performing the work.

2.0 Submittals

2.1 General Requirements

The contractor shall submit three (3) complete sets of documentation within 30 calendar days after award of the contract. Indicated in the document shall be the manufacturers' names, catalog number, type, size, style, rating, and catalog data sheets for all items proposed to meet these specifications.

2.2 Shop Drawings

Shop drawings shall be submitted in accordance with Section 01200, SUBMITTALS, and shall consist of a complete list of equipment and materials, including manufacturer's descriptive and technical literature, performance charts and curves, catalog cuts, and installation instructions.

2.3 Spare Parts Data

After approval of the shop drawings, and not later than 30 calendar days prior to the date of beneficial occupancy, a list of spare parts data for each item of specified materials and equipment shall be submitted. The data shall include a complete list of parts and supplies with current unit prices and source of supply. All spare parts shall be on site prior to commencement of acceptance testing. Depleted spare parts shall be replaced prior to beneficial occupancy.

2.4 Operating Instructions

The contractor shall furnish to the architect six copies of operating instructions outlining the step-by-step procedures required for system start-up, operation, and shutdown at least thirty (30) calendar days prior to acceptance test. The instructions shall include the manufacturer's name, system model number, service manual, parts list, and a description of all equipment and their basic operating features.

2.5 Maintenance Instructions

The contractor shall furnish six complete copies of maintenance instructions listing routine maintenance procedures, possible breakdowns and repairs, and troubleshooting guides at least 30 calendar days prior to acceptance test.

2.6 Performance Test Reports

Upon completion and testing of the installed system, test reports shall be submitted in booklet form showing all field tests performed to prove compliance with specified performance criteria.

3.0 System Overview

3.1 Description

The receiver system shall be capable of monitoring digital dialer and data network communication accounts on the same receiver.

The cabinet will house the processor card rack, modem rack, and convenience panel. Built into the front of the system enclosure shall be an LCD display for viewing incoming reports with a keypad for acknowledging reports and configuring the system and its components.

The system shall contain internal cards consisting of a processor board, three line cards, modem power supply card, multibus power supply card, and transformer card.

3.2 Function

The receiver system shall provide central station with computerized monitoring of Digital Monitoring Products Command Processor™ Panel communication format of Synchronous Data Link Control (SDLC). Receiver features shall include automatic logging of alarm, trouble, and supervisory account reports on a local printer with date and time of their occurrence. Capacity of up to 65,535 digital dialer accounts for alarm, trouble, user and system reports.

The receiver system shall provide central station with computerized monitoring of Digital Monitoring Products Command Processor™ Panel communication format of Host asynchronous (HOST). Receiver features shall include automatic logging of alarm, trouble, and supervisory account reports on a local printer with date and time of their occurrence. Capacity for alarm, trouble, user and system reports up to 65,535 host accounts that do not check in and 2,500 accounts that do check in.

3.3 LCD Display and Keypad

The LCD display shall allow the operator to view alarm reports before acknowledging the alarms using the system keypad. The LCD and keypad shall be built-in to the front of the system enclosure.

3.4 Printer

Routine reports shall be logged on an optional printer without need of operator response. Supervisory and alarm reports shall be logged on the printer and displayed on the LCD for operator acknowledgement.

3.5 Additional Reports

Receiver shall be able to process additional reports transmitted to it by Digital Monitoring Product Command Processor™ panels:

- Addition and deletion of code numbers including user number of the person making the change.
- Bypassing and resetting of zones by number and name including the user number of the person making the change.
- Schedule changes including user number of the person making the change.
- Trouble and Restoral report by zone name and number.
- Door access reports including user number and number of the door being accessed.

3.6 Communication and Line Capacity

A. The system shall be capable of communication using the IBM Synchronous Data Link Control format.

B. The receiver shall accommodate up to five incoming lines.

C. Receiver shall have the ability to be configured with digital dialer and data network communication receiving lines.

D. Digital Dialer lines shall have a capacity of 65,535 separate accounts.

E. Data network lines shall have a capacity of 65,535 separate accounts that do not check in or 2,500 separate accounts that do check in.

4.0 General Receiver Requirements

4.1 System Enclosure

A. Enclosure shall provide housing for the receiver processor, power supply, line cards, and associated cables. The enclosure shall measure 8.75" high, 19" wide, and 12" deep.

B. Contained in the top of the system enclosure is the modem rack. The rack shall hold the modem power supply card and up to five line cards. The transformer card for connecting the 120 VAC shall be mounted on the rear of the rack modem.

C. Contained in the bottom of the system enclosure is the multibus rack with cooling fan. The multibus rack holds the processor card and the multibus power supply card.

4.2 Processor Card

The main system processor shall control the line cards, the LCD display, the built-in keypad, and the printer. The processor shall contain the firmware for system operation, the EEPROM memory of operator codes, line configuration, and perform all time keeping functions.

4.3 Line Card

A. Line card shall provide for one incoming line of digital dialer or data network communication to Digital Monitoring Products Command Processor™ panels. Each line card shall have one 10-position flat cable for connection to the processor card and one connector for a phone line or data network line from an RJ11X connection block.

B. When the line card is configured for digital dialer operation, the line card shall monitor the incoming phone line voltage. During a loss of phone line voltage, a red Phone Line Fail LED shall light and an alert sound. The alert shall be silenced by pressing the silence switch on the card. The LED shall remain lit until the phone line is restored.

C. Line card shall have a green LED labeled PWR to be lit when the power supply on the line card is in a good condition.

D. Line card shall have six yellow LEDs indicating the condition of the line card during various stages of communication. Stages indicated shall be: Transmit Data, Receive Data, Carrier Detect, On Line, Ring Detect, and Data Terminal Ready.

E. A Network Interface Card (NIC) shall be integral to the receiver with a built-in network router. External network routers are not acceptable for Ethernet and Internet monitoring.

F. A Network Interface Card (NIC) shall be integral to the receiver with built in network router capable of 128 Bit AES Rijndael Encryption process certified by NIST (National Institute of Standards and Technology).

4.4 Modem Power Supply Card

A. Modem power supply card shall provide power for up to five line cards. Power shall be supplied through the modem rack backplane connectors without additional cabling. The modem power supply card shall also provide monitoring for the LCD connection, UPS system status and 120 VAC input to the receiver.

B. Modem power supply card shall have a green LED labeled PWR. The PWR LED will light when the power supply to the modem power supply card is in good condition. There shall also be a red LED labeled PWR TRBL, which will light when there is a power problem on the modem power supply card along with sounding an alert. The alert shall be able to be silenced by pressing a silence switch on the modem power supply card. The red LED shall remain lit until power problem is corrected.

C. Modem power supply card shall have a trouble LED for the LCD that lights and sounds an alert when the LCD is unplugged. The alert shall be able to be silenced by pressing a silence button on the modem power supply card.

D. Modem power supply card shall have a trouble LED for the UPS that lights and sounds an alert when the UPS Brownout input is opened. The alert shall be able to be silenced by pressing a silence button on the modem power supply card.

E. Modem power supply card shall have a trouble LED for the AC power to the transformer card that lights and sounds an alert when the AC power to the transformer card fails. The alert shall be able to be silenced by pressing a silence button on the modem power supply card.

4.5 Special Applications Features

A. Receiver shall be able to act as a communications path to panels for “Trapping” of Security Panels for Remote Programming/Interrogation processes. Receiver shall work in conjunction with the DMP programming software in pass thru configuration with an Automation System to “Trap” a panel and send notification for the panel to contact the Remote Link Programming Software for remote interrogation in a Network Application. (TCP/IP Network Trapping)

4.6 Multibus Power Supply Card

A. Multibus power supply card shall provide power the processor card through the multibus backplane. It also shall be able to monitor the condition of the processor card, the voltage output of the modem power supply card and its own internal voltages.

B. Multibus power supply card shall monitor the processor through the multibus backplane. There shall be a green OK LED that will light when the processor is operating normally. If the processor stops operating, the red FAIL LED will light and failure buzzer shall sound. The system shall restart after the restart button on the multibus power supply card is pressed. System restart button shall not change system configuration.

C. Multibus power supply card shall monitor three different system voltages, +5, +12, -12 and the modem power supply. Four LEDs shall be located on the multibus power supply card to display any voltage failures.

4.7 Transformer Card

Transformer card shall provide power to the modem power supply card and the multibus power supply card. It shall also have a power cord for connecting to the multibus rack-cooling fan.

4.8 Power Cable

Power cable shall be 2 feet long and connect the different system voltages the transformer card and the multibus power supply card.

4.9 Convenience Panel

Convenience panel shall provide cabling for two RS-232 ports. The two ports shall be for the host output and the activity log printer.

4.10 Printer and Cable

A. An SCS-PRT shall be required for UL Fire Monitoring Applications.

B. Printer shall be an 80-column serial printer with a 10-foot RS-232 cable. The printer can be connected to the all events output connector or the alarm only output connector.

C. Printer shall be configured to 1200 baud, 8 data bits, 1 stop bit and even parity.

4.11 LCD Display and Keypad

A. LCD display shall be a 32-character LCD display with a keypad for entry of information and acknowledgment of alarm signals.

B. LCD display shall be built-in to the front of the system enclosure.

C. Power shall be provided from the multibus power supply card.

5.0 Installation

5.1 Installation of System Components

Materials shall be installed in strict compliance with all local, state, county, province, district, federal and other applicable building, safety, and fire standards, laws, codes, regulations, and guidelines including, but not limited to, all appendices and amendments and the requirements of the local authority having jurisdiction (AHJ).

5.2 Installers Responsibility

Materials shall be installed in strict compliance with local building codes. All work shall be performed in accordance with Digital Monitoring Products, Inc. instructions. The central station receiver and associated components must be installed and serviced by a dealer in good standing that is factory-trained by Digital Monitoring Products.

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