

### The Guardian Technological Advances

''Smart Phone'' as Central Control Module

Radio Frequency Receive / Transmit—System (wireless)\*

Infrared/Ultrasonic with Microprocessor Detection Analyzer\*

Multi-signal data train of alarm condition to ''A.R.M.'' Central Control Center''\*

Integrated System — End-to-End responsibility

Automatic dial tone seizure

Ring Trip "Program"

Busy signal redial to "A.R.M." Central Control Center"

Ambush "Program"

System test "Program"

Digitized Voice Chip

Wireless 123 DB speaker

Wireless 1,000,000 Lumen Strobe

Digital Subcarrier\*

Real Time Internal/External Digital Clock

Long Distance Access Button

Remote Panic (Radio Frequency Transmitted)

Liquid Crystal Display

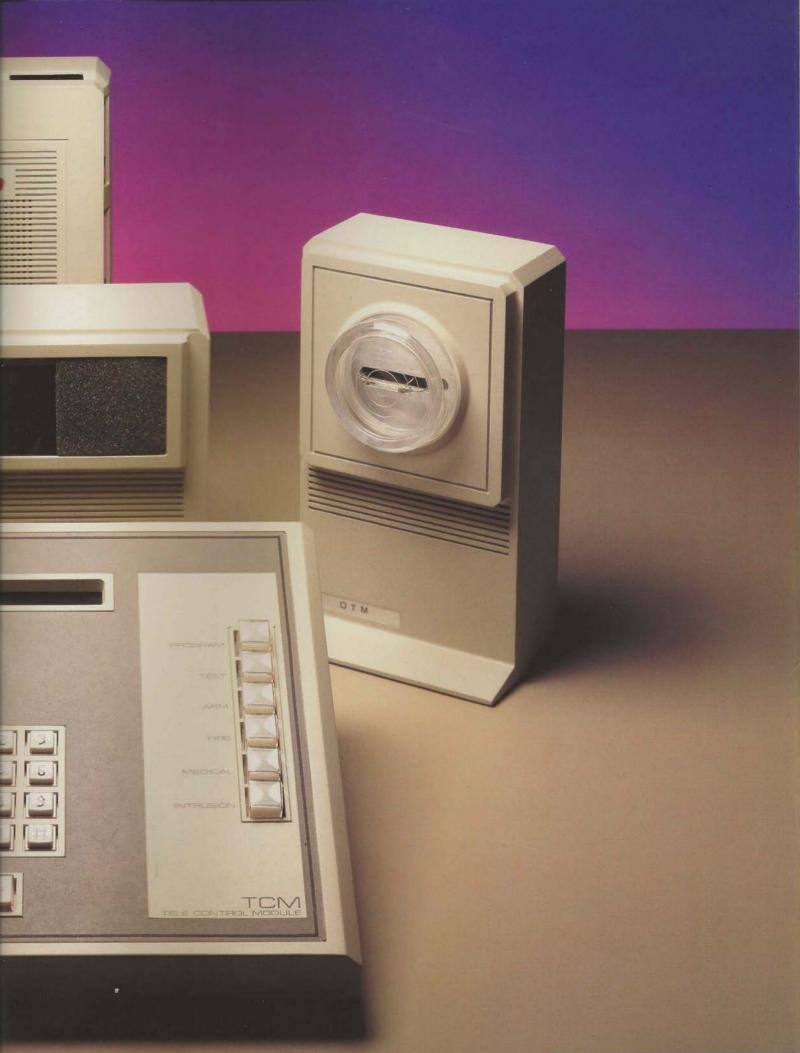
<sup>\*</sup>Patent applied for

### The Evolution of a New Era in Communications

Innovations Timing Objectives Divestiture Product Development Research Residential Mass Market Advanced Mass Market Microprocessors Telephone Distance Access **CMOS** Smoke/Fire Detection Security Detection Smoke/Fire Detection Insurance Discounts Competition Appliance Control Transmit Analysis of Facts Quality Manufacturing Distribution Channel(s) Distributor Benefits Value to Existing Base Mass Market Independent Telcos Residential Mass Market Common Carriers Rent/Lease/ Sell Add-on Revenue A.R.M. Marketing

**Guardian**One Who Manages the Affairs of Others





The incredible technological opportunities created by the microprocessor have opened windows that were totally closed less than a decade ago. A.R.M., Inc. has synergistically applied advanced microprocessor technology with other leading-edge technologies to create a fully integrated communications system. This is the basis for The Guardian and the genesis of a new era in communications.



## TCM

Telecontrol Module

he Guardian is the successful result of combining the four basic marketing factors of human needs, technology, value and distribution with the disciplines of telephony, energy control, smoke/fire detection and security detection.

The TCM is the functional BRAIN of The Guardian system. Through its microprocessor common control, it can receive and transmit individual instructions (4,000 in the MCC) to and from the wireless discrete submodules and A.R.M.'s Central Control Center.

The TCM is a scientific advancement in applied system development. It can simultaneously communicate with the central control center, multiple submodules, manage multiple zones of electric control functions, and receive and place local, national and international telephone calls. The innovations contained in the TCM represent a quantum leap forward in "communication management".

### TCM Voice Chip Features

"Intruder Call Police!"

Activates at intrusion and repeats for length of programmed entry delay.

Activates following analysis of smoke density and repeats until manually reset.

"Low Ballery unit ( )."

Activates at receipt of low battery signal, identifies unit transmitting low battery signal, and repeats until battery is changed.

"System armed, thank you."

Activates when the system is armed, and repeats three times.

"System disarmed, thank you."

Activates when the system is disarmed, and repeats three times.

"Test complete.

Activates when manual test is complete, and repeats one time.

"Test fault Call A R M."

Activates when manual test is complete, and repeats one time

"Caution Call A R M "

Activates when alarm condition occurs and system resets, and repeats until the system is disarmed.

### **TCM Features**

Receive and Place Calls

Busy Signal — Auto Redial

Speed Dial — Two Digit Code (10 Total)

Single Button — OCC Access

DTMF/Touch Tone Capabilities

Liquid Crystal Display

Digital Subcarrier

Appliance/Lighting Control

Programmable Real Time Clock (On Hook Program)

Radio Frequency (Receive and Transmit)

''Complex'' Digital Word Data Train

Automatic Intrusion
Identification and Transmit

Automatic Smoke and Fire Identification and Transmit

Manual Lifeline Identification and Transmit

Panic Automatic Identification and Transmit

Ambush Automatic
Identification and Transmit

Automatic Dial Tone Seizure

Multi Transmit of Alarm Condition to "Central Control Center"

Microprocessor Control/CMOS Technology

Digitized Voice

Ring Trip Hang Up

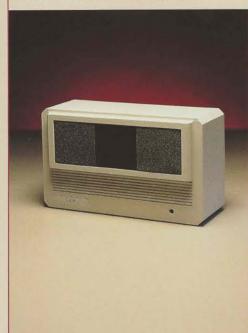
Battery Backup for Power Outages

System Test Function

Lightning/Transient Arrestor

Complete System Features Programmable from TCM

# IDM Intrusion Detection Module



# A MAJOR TECHNOLOGICAL BREAKTHROUGH

he IDM is the first intrusion detection unit to merge two major detection technologies: ultrasonic (motion) and passive infrared (heat). These two technologies are monitored and controlled by A.R.M.'s new scientific microprocessor comparator analyzer.\* When the analyzer is alerted by either of the two detectors, it runs an interrogation routine to determine (based upon preprogrammed instructions) if an actual intrusion has occurred.

When an intrusion has been verified by the analyzer, an alarm condition signal is transmitted to the TCM via A.R.M.'s unique integrated radio frequency system.\* The "complex" design of the word data train transmitted to the TCM virtually eliminates the possibility of duplication from electromagnetic interference.

Utilization of both ultrasonic and infrared technologies enables the IDM to actively and passively monitor up to 600 square feet, and is specifically designed to virtually eliminate the major problem inherent in existing security systems . . . ''false alarms.''

### **IDM Features**

Completely Wireless
Passive Infrared Detection
Active Ultrasonic Detection
Microprocessor Comparator
Analyzer
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Radio Frequency (Receive and Transmit)

"Complex" Digital Word Data Train

"Standby" Radio Frequency Receiver

Battery Operated (9 Volt)

Low Battery Indication Transmitted to TCM

Low Battery Indicator at IDM

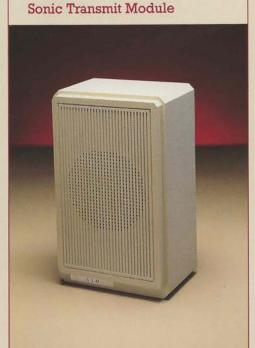
Programmable Radio Frequency Transmission Identification

Adjustable Infrared Optics

Walk Test Function

\*Patent applied for

# STM



he STM is unique in that it incorporates a radio frequency receiver and transmitter. Following a command from the TCM, the STM is activated and produces a piercing 123 decible warbling sound designed as an intrusion deterrent.

### STM Features

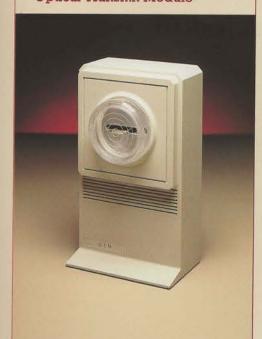
Completely Wireless 123 Decible Alarm Radio Frequency (Receive and Transmit)

"Complex" Digital Word Data Train

110 AC to DC Conversion

Programmable Automatic Timeout and Reset Sequence

# **OTM**Optical Transmit Module



he OTM gives The Guardian an added dimension in intrusion deterrence. Upon command from the TCM via the RF link, the OTM is instructed to trigger a one million lumen candle power strobe which pulses at 80 to 120 strobes per minute. Research and actual usage have shown that when the Optical Transmit Module works in conjunction with the Sonic Transmit Module they create an extremely effective intrusion deterrent.

### **OTM Features**

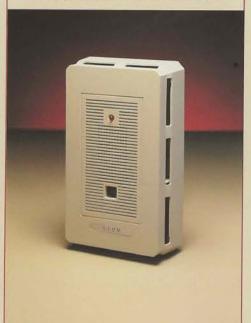
Completely Wireless 1,000,000 Lumen Candle Power Radio Frequency (Receive and Transmit)

"Complex" Digital Word Data Train

110 AC to DC Conversion
Pulsed Light-Emitting Optics
Adjustable Timeout and Reset

## **SFDM**

Smoke/Fire Detection Module



he SFDM incorporates a unique state-of-the-art photoelectric beam smoke analyzer. Operating in a 24-hour dependent/independent mode, the analyzer allows smoke/fire detection whether the TeleControl Module is in the armed or disarmed position.

The SFDM's photoelectric beam analyzer examines air samples at 5-to-1 second intervals. When the air density increases, the sample interval increases proportionately. When a 1-second interval level occurs, the SFDM automatically sounds an alarm and sends a RF signal to the TCM. The TCM transmits a coded signal to the central control center to dispatch the local fire department.

### SFDM Features

Completely Wireless
Photo Electric Beam Smoke Density
Analyzer
5-Second Pulse Air Sampler
Battery Operated
Radio Frequency (Receive.and
Transmit)
"Complex" Digital Word Data
Train to TCM

24-Hour Automatic Supervision Low Battery Indication to TCM Low Battery Indication to SFDM

### The Central Control Center

The installation of a state-ofthe-art computer network with nationwide monitoring and response capabilities completed the Company objectives of system integrity and end-toend responsibility.

The center provides reliable emergency service to the Guardian subscribers, minimizes false alarms and aids the local emergency service in performing their duties.

The Guardian's 24-hour monitoring service plays a vital roll in responding to alarm conditions transmitted by the TCM. All alarms are instantaneously verified and when appropriate an emergency service is dispatched.

The Company will convey, through continuous national programs, this twenty-four-hour "Lifeline" concept to all subscribers of THE GUARDIAN.

### Monitoring Methodology

Upon receipt of an alarm signal from the subscriber's TCM, the Central Control Center will automatically perform the following activities:

An alarm signal is received with specific encoding instructions to indicate which type of alarm condition exists (fire, intrusion, etc.).

The central monitoring computer station receives the data record and validates it by using "check digit" verification methods.

The verified data is transmitted to the central database which contains all pertinent subscriber information for immediate, on-line access.

A flash alarm screen will automatically present the subscriber information on the CRT screen at the operator's console. As the information is presented, a call is immediately outpulsed to the subscriber telephone for verification. This call is auto-

dialed by the computer to avoid any margin of error.

If the individual contacted confirms that the alarm was generated in error, they must clear the system by entering a predetermined "clearance code". If the "clearance code" is not accurate or is unobtainable, the system autodials the appropriate local emergency service, based on the type of alarm and relays all pertinent information.

After a preprogrammed interval the local emergency service will be contacted for verification of all events. All follow-up information will be stored online for statistical reporting.

