SAM™
AFETY ALERT MONITOR

EAS Compliance Solutions

No matter what EAS Compliance Solution you choose, the MIP-921e is at the heart of it.

The Technology to Meet EAS Requirements

The MIP-921e (Multiple Input Processor) has been specially designed by HollyAnne Corporation to meet the Federal Communication Commission's mandate for cable television system compliance with the new Emergency Alert System rules. HollyAnne Corporation's 18 plus years of experience in the emergency warning industry has made it an acknowledged leader in the cable television warning field. The MIP 921e's designer collaborated with the National Weather Service in the development of the Specific Area Message Encoding system. The SAME system was the precursor of and is completely compatible with the new digital EAS protocol. HollyAnne Corporation and its distributors offer the knowledge and experience to ensure the most appropriate solution to your system's needs.

The Capabilities For National and Local Alerting

The MIP-921e receives both national and local messaging via two internal AM, FM or weather band radios. It also can receive emergency messages via its telephone modem. The MIP-921e incorporates the required EAS encoder and decoder. It responds to the National Weather Service's digital SAME protocol as well as the mandated EAS digital format.

Multiple inputs from the internal radios, a telephone interface, and inputs for external radios exceed the FCC's requirements for a minimum of two alerting sources, allowing flexibility to handle additional alerting sources including local government agencies which may be dictated by franchise requirements.

The MIP-921e is capable of completely automatic operation. Events selected by system management in advance activate the MIP-921e. These events include national warnings, weekly and monthly tests and those emergency events deemed important by system management. Logging is done by the on-board printer or external customer supplied printer. The audio portion of the message is stored and played back by the internal digital voice storage module. A separate "Tune To" voice storage module is standard.

The MIP-921e immediately and automatically passes information to a character generator (to override video signals) and to each modulator's I.F. interface (or combining network) to override audio signals on all channels carried by the cable system. The system is also capable of manual operation. All functions are password protected.

The Flexibility For In-Home Alerting

The MIP-921e has been designed to accommodate in-home alerting devices to deliver emergency information, no matter the customer indoor activity, via a 52 MHZ carrier.

Certified under Parts 11, 15 & 68 of FCC Rules FCC ID: GRQMIP-921

MIP-921e

FEATURES	ADVANTAGES	BENEFITS
2 on-board radios (3rd optional radio may be AM/FM or weather band)	No external radios required (up to two may be used)	Reduces rack space requirement & costs
130 "event" storage in non-volatile memory	Protects FCC required EAS logs	Provides "backup" log in case of paper jam or printer failure
Full duplex on-board telephone modem	Allows "off-site" access to encoder/decoder	Ability to initialize or change programming and retrieve logs of encoder/decoder from remote site with no additional equipment Permits local franchise authorities emergency access via telephone
On-board UPS	Provides steady power to encoder/decoder	Protects e-prom from voltage variations and power failure
Initialization or modification of encoder/decoder programming via 286 or newer PC	Permits rapid initial set-up or modification of encoder/decoder programming	Cuts time necessary to initialize encoder/decoder Can be performed from remote location
Selectable auto-weekly test	Permits unattended weekly Test of EAS system	Allows the scheduling of the required weekly test during early AM hours or other light viewing periods
Local commercial insertion protection	Prevents the interruption of locally inserted commercials by EAS tests or messages (except EAN's)	Protects revenue from ad sales on channels that permit local insertion
Control of down stream devices via optional 52 Mhz modulator	Permits the use of hub controllers that switch channels inserted at hub-sites (PEG channels)	Facilitates compliance with EAS rules at hub sites without installing complete EAS system
Control of in-home alerting devices via optional 52 Mhz narrow band modulator	Enhances warning capabilities for cable customers	Permits offering a valuable cable-only, value added service Enhances revenue and cable system image
Front panel microphone input, (mike optional)	Allows for input of "tune to" announcements of up to 60 seconds in length	Permits custom voice announcements, keyed to local requirements

Configuration Option 1:
All-Channel Audio Override On All Channels

A cost effective solution for cable systems using baseband audio and video switching

The Application
Provides audio and video information on all channels on the cable system. Text appears full screen to satisfy requirements of the Americans with Disabilities Act, deaf subscribers are alerted by the video information on every channel; the blind are alerted by audio on every channel.

The Equipment
The EAS encoder/decoder (MIP-921e) drives a character generator that feeds a baseband switch controller. The controller in turn sends a control signal to operate the audio and video switches, as well as sending the emergency audio and video to the switches. All events are logged on either the MIP-921e's on-board printer, or a customer-supplied external printer.

The Activation Process
When an emergency or test message is received, the MIP-921e sends the data to the character generator. The CG then sends the video to the baseband controller. The MIP-921e sends the audio and control directly to the baseband controller. The baseband controller activates the audio and video switches, replacing the program audio and video with the emergency audio and video. Once the End of Message code is received, normal audio and video is resumed.

The Advantage
Operators of cable systems who don't have IF loops and/or switches installed in their modulators, may find this option cost effective.

Configuration Option 2:*
All-Channel Audio Override/Video Interrupt

An R.F. solution allowing for override after the combining network

The Application
Provides audio override with video interrupt across all channels, with one channel designated for both audio and video information. Video interrupt displaces the picture with a grey raster screen for short periods. The SAM receiver also carries audio alerts and voice warnings.

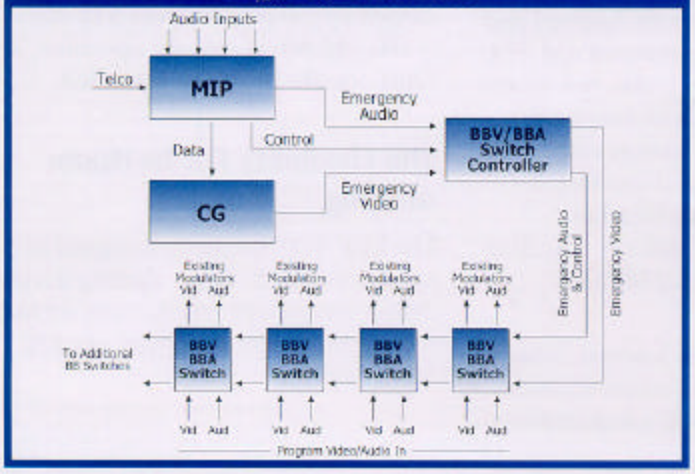
The Equipment
This configuration does not require separate inputs to each processor and modulator on the system. The EAS encoder/decoder drives a character generator/switcher, the output of which feeds a modulator for the designated audio/video channel. The Comb Generator is fed with the combined RF outputs of the cable headend, allowing the "trunk out" of the headend to be switched during the activation, feeding all channels, except the designated channel, emergency audio. All events are logged on either the onboard printer or a customer supplied external printer.

The Activation Process
When an emergency or test message is received, the MIP-921e activates the character generator, which passes the emergency text and audio messages to the modulator, for the single A/V information channel. The MIP-921e's output to the comb generator, which feeds the distribution system, overrides the regular programming with emergency audio and video raster.

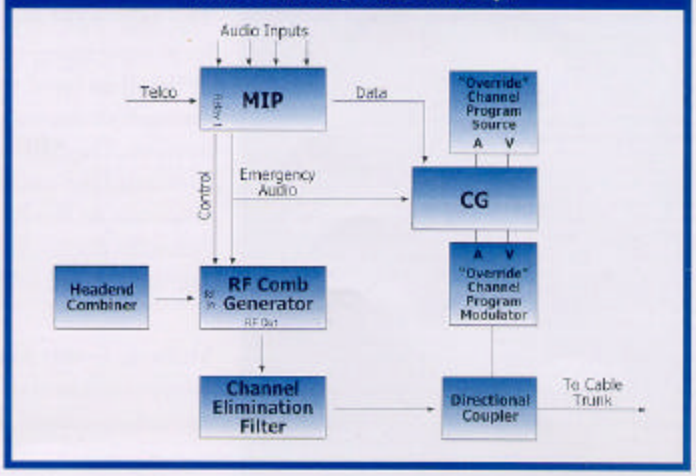
The Advantage
Less labor intensive than Configuration Option 1 and 4, the R.F. solution will appeal to cable operators whose headends are not already I.F. equipped.

** This option limited to cable systems serving fewer than 5,000 customers.*

Option 1: Audio/Video Override on All Channels using BBV/BBA Switches



Option 2: All Channel Audio Override/Video Interrupt



Configuration Option 3:
Audio/Video Override On All Channels

An RF solution allowing for override after the combining network

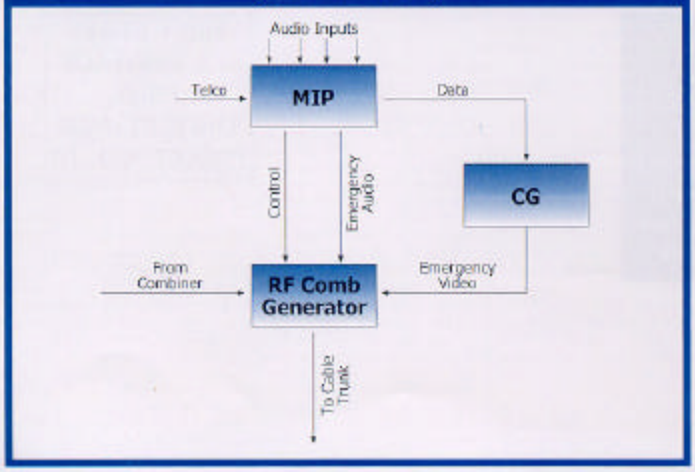
The Application
Provides audio and video information full screen on all channels on the cable system (up to 120 channels). To satisfy requirements of the Americans with Disabilities Act, deaf subscribers are alerted by the video information on all channels; the blind are alerted by audio on all channels.

The Equipment
This configuration does not require separate inputs to each processor and modulator of the system. The EAS Encoder/Decoder (MIP-921^e), drives a character generator, the output of which feeds the audio video comb generator. The comb generator is fed with the combined RF outputs of the cable headend, allowing the "trunk out" of the headend to be switched during the activation, feeding all channels with the emergency audio and video. All events are logged on either the onboard printer or a customer supplied external printer.

The Activation Process
When an emergency or test message is received, the MIP-921^e activates the character generator which passes the emergency message video to the comb generator where it, along with the emergency audio from the MIP-921^e, is inserted on all channels (up to 120). There it replaces normal programming until the digital end of message signal is received by the MIP-921^e. If desired, a single channel may be selected as a details channel. If this option is selected, the details channel may be left in place for a length of time, directed by the MIP-921^e. The details channel option requires a band pass filter as shown in option 2.

The Advantage
Less labor intensive than configurations 1 and 4. The audio/video solution will appeal to cable operators whose head ends are not already IF equipped, but who wish to provide both audio and video warning on all channels.

Option 3: All Channel Audio/Visual Override (Comb Generator)



Configuration Option 4:
Audio/Video Override On All Channels

A cost-effective solution for cable systems with I.F. switching capabilities

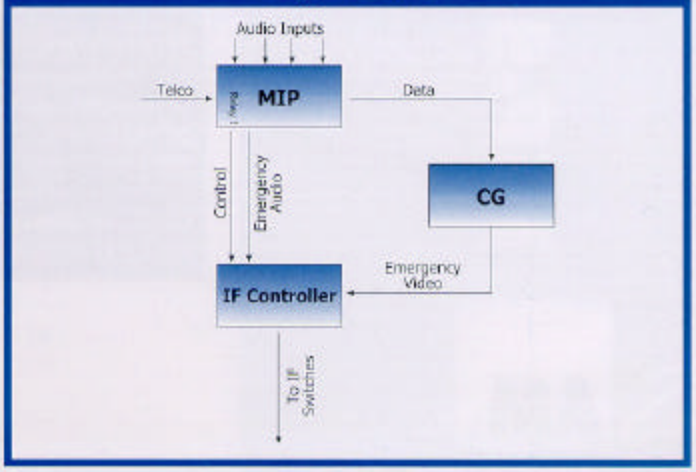
The Application
Provides audio and video information on all channels on the cable system. Text appears full screen to satisfy requirements of the Americans with Disabilities Act, deaf subscribers are alerted by the video information on every channel; the blind are alerted by audio on every channel.

The Equipment
The EAS encoder/decoder (MIP-921^e) drives a character generator that feeds an I.F. controller. In turn, the I.F. controller feeds an I.F. signal carrying the audio and video messages into each modulator and processor in the headend. All events are logged on either the on-board printer or a customer-supplied external printer.

The Activation Process
When an emergency or test message is received, the I.F. controller's modulator output delivers the override information to the input of each processor and modulator in the headend. The I.F. controller activates the I.F. switching modules on each modulator/processor, overriding the regular programming. Once the End of Message code is received, normal programming is resumed.

The Advantage
Operators of cable systems with I.F. switching **already** installed for every channel may find this option cost effective.

Option 4: Audio/Video Override On All Channels using IF Override



Configuration Option 5:
Audio/Video Crawl On All Channels

A less intrusive solution for cable systems that wish to crawl emergency messages over program video

The Application

Provide audio and video emergency information on all channels on the cable system. The video information appears as a crawl at a location on the screen that does not interfere with closed caption messaging. To satisfy requirements of the Americans with Disabilities Act, deaf subscribers are alerted by the video crawl on each channel. Blind customers are alerted by the audio message on every channel.

The Equipment

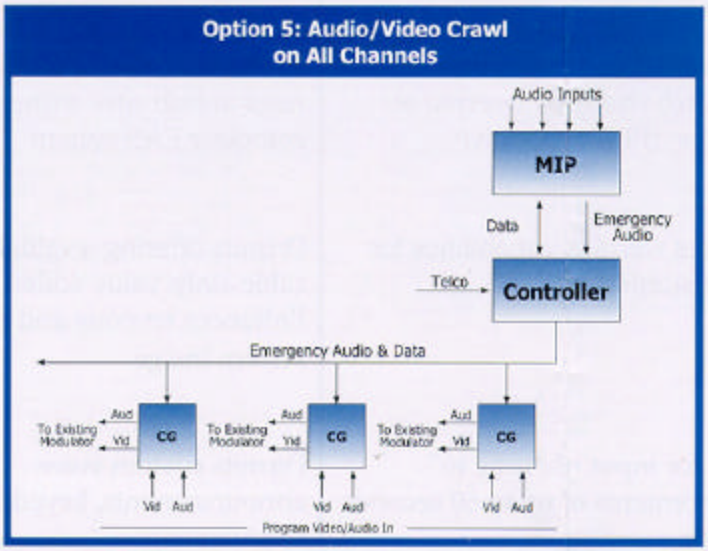
The EAS Encoder/Decoder (MIP-921^e) drives a controller. The controller drives individual character generators. Each character generator is an audio/video generator lock module. The CG synchronizes the program video with the emergency video when it is activated. Each cable channel requires an audio/video generator lock module. All events are logged on the on-board printer, or on a customer supplied external printer.

The Activation Process

When an emergency or test message is received, the MIP-921^e sends data and emergency audio to the controller. The controller then sends data to the CG and activates the audio/video generator lock module to synchronize the emergency video on each channel's regular program video and replaces the regular program audio with emergency audio. Upon receipt of the End of Message signal, normal programming is resumed.

The Advantage

Operators of cable systems that choose this option will be able to provide emergency announcements and test messages in a less intrusive manner than other options that produce a full screen interruption. While this "crawl" option is more costly than those that depend on full screen interruption, the less intrusive nature of crawl may pay for itself in improved customer relations.



MIP-921e Integrated EAS Encoder/Decoder

SAM™
SAFETY ALERT MONITOR

Specifications

Protocol

FCC EAS Codes, ASCII Seven Bit Characters,
SAME Compatible

Inputs

- 4 balanced internal or external, 600 ohms, .5Vp-p to 2Vp-p
- Data channel simplex ASCII (serial port)
- Standard telephone input with RJ11 jack
- Optional front panel microphone

Outputs

- 2 independent control signals activated when a selected message is decoded
- Audio output 600 ohms balanced on terminal and through port
- Data channel full duplex 1200 Baud, ASCII (Serial Port)
- Optional narrowband RF out for in-home units
- Override control port (serial port)
- Optional RF out for hub controller option

Mechanical

- Operating temperature 0-50 C degrees
- Size 3.50"x19"x7"
- Weight 5 lbs. Approx.
- Input power 115 VAC 15 watts
- On-board printer
- On-board uninterruptible power supply
- Output for optional impact printer

Controls & Indicators

- 4 button access for performing set up, printer operation, activation and testing
- Programming via PC (286 or better) - optional
- LCD & LED signalling

Radio Receivers (two on board - 3rd optional)

FM Receiver

- Digitally tuned from MIP-921e
- 75 ohm antenna input
- RF Sensitivity: (s/n=26db) 2uv
- Frequency range 88-108 MHz
- THD .8% maximum

AM Receiver

- Digitally tuned from MIP-921e processor
- 75 ohm antenna input
- RF Sensitivity: (s/n=26db) 55uv
- Frequency range 530-1700 MHz

Weather Receiver

- Digitally tuned from MIP-921e processor
- Sensitivity: 1uV for BER of 10^{-5} or 12dB S/N
- 75 ohm antenna input
- Frequency range includes all (7) NOAA weather frequencies

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