M.A.M.I. MULTI BASE STATION DECODER

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RELAY BOARD (338D03)

NOTE: Connections: ( on the D9 connector)
1. Green
2. 
3.
4.
5.
6. Shield
7. Yellow
8. Red
9. Blue

MIMIC CONNECTIONS

NOTE: To Smart Base serial connection

NOTE: Direct connection from the relay PCB to the receiver

16V AC

NOTE: Connect the shield:
- For MultiBase to positive
- For SmartBase to ground

D9 Connector

176F16, 176H22 OR 176H24
RECEIVER UNIT

NOTE: Connections (on the D9 connector):
16 - 18v dc in (opt)
17v dc pos (in)
16v ac

Blue
Red
Yellow
Green
Shield
Reset switch to positive
Reset switch to ground

176F16, 176H22 OR 176H24
RECEIVER UNIT

NOTE: Direct connection from the relay PCB to the receiver

16V AC

NOTE: Connect the shield:
- For MultiBase to positive
- For SmartBase to ground

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NOTE: Connections (on the D9 connector):
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16v ac

Blue
Red
Yellow
Green
Shield
Reset switch to positive
Reset switch to ground
COMPONENTS FROM CONTROL ROOM

The **M.A.M.I** MULTI BASE station consists of the following:

- A decoder unit with built in receiver and power supply.
- Telephone plug in module.
- Tone decoder module.

For a complete base station setup, a decoder unit, computer, printer (optional), as well as a base station antenna are required. This is shown in the following diagram.

**DECODER FEATURES**

The **M.A.M.I** MULTI BASE unit has the following features:

- On-board 1.5 A battery charger and a 6.5 A/H backup battery.
- Built in backlit LCD display to show incoming signals & alarms.
- Real time clock.
- Acknowledge button to accept incoming alarms.
- Date/time button to view time and date programmed in the unit.
- Volume control to listen for incoming signals.
- Squelch adjustment control.
- Four status LEDs indicating: RUNNING/ RECEIVING SIGNAL ERROR DETECTED AUXILIARY SQUELCH INDICATION
- Can expand to three telephone lines (optional). (One line standard from factory).
- Onboard relay providing for buzzer or siren output.
- RS-232c interface for linking to your computer or printer.
- Capability of receiving: **M.A.M.I** radio signals
  **SESCOA** SUPERFAST (telephone communicators only)
  **SESCOA** STANDARD (telephone communicators only)
  **M.A.M.I** Contact ID signals via radio and telephone
  **ADEMCO** Contact ID telephone signals
- Can be programmed to display “Descriptive Zone Information”
- Optional 4-wire (I2C) interface for mimic or relay panels
- Various alarm display formats

**NEW FEATURES**

**BASE STATION DECODER CONNECTION DIAGRAM**
INSTALLING THE RECEIVER-DECODER UNIT

The M.A.M.I MULTI BASE receiver/decoder is very simple to install as there is minimal wiring required. Just follow these steps below for a successful installation.

- Ensure that the computer, base decoder and printer are switched off.
- Connect the base decoder to the computer with the supplied 9-pin serial plug to the serial port. This connection can be made either to port one or to port two of your pc. (D25 plug available on request)
- Connect the optional printer to the computer’s parallel port.
- Connect the antenna cable to the base decoder receiver. This is the receiver section of the base decoder and is usually a PL259 connection. (See antenna installation manual.)
- Connect the telephone line to the telephone interface on the back of the decoder unit. (optional).
- Connect the supplied ac transformer to the mains socket outlet.
- Switch the computer, decoder and printer on.
- Your computer should display the Windows Desktop after startup.
- Set the volume and squelch levels on the base decoder if audio is required. (Note that neither the squelch or the volume control effect the receiver sensitivity in any way).
- The base decoder unit should display the following start up message on the LCD display
  "MULTI BASE"
  "0000 00 S0031CXX"

OPERATING THE BASE STATION DECODER

- After correct installation the base station should operate in the following manner:
  (Note: Make sure the battery terminals are connected to the battery)

  DECODER POWER UP

- When powered up, the decoder unit will display the initial start-up message on the LCD display.
  "MULTI BASE"
  "0000 00 S0031CXX"

  - The clock will start from date: 01:01:98 And the time from: 00:00:00
  - The green LED will flash at 1 second intervals.
  - The system is now ready for the CRIME software installation. (See CRIME installation guide).

SETTING THE REAL TIME CLOCK

- Switch the decoder unit off.
- Hold down the yellow button on the decoder front panel, and switch the decoder back on.
- Release the yellow button after 5 seconds.
- The LCD display will prompt you to set the year. Push the red button once to increment the year.
  Holding this button down will increment the year at a faster rate.
- Press the yellow button to set the month. Push the red button to increment the month to the correct value. Again holding the red button down will increment the months at a faster rate.
- Press the yellow button to set the day. And again press the red button to increment.
- Follow this sequence until the time and date are correctly set.
- Pressing the yellow button will toggle between alarm record display and time display.

TECHNICAL SPECIFICATIONS

| DIMENSIONS | - Decoder dimensions approx. 34cm x 22cm x 7.5cm |
| POWER SUPPLY | - 16VAC in. |
| | - 13.8VDC 1.5A out (to backup battery) |
| DECODER CURRENT CONSUMPTION | - 180mA, with no relays energized |
| SIGNAL INPUTS | - 1 radio, 1 telephone line (3 line up gradable) |
| SIGNAL COMAPTIBILITY | - M.A.M.I. Radio, plus either |
| | - M.A.M.I. Communicator |
| | - SESCOA SUPERFAST 3+3+1 Communicator |
| | - SESCOA 4+2 Communicator |
| | - Contact ID |
| DATA TO HOST | - RS-232C signal levels |
| | - 1200/4800 baud rate |
| RADIO RECEIVER FREQUENCY | - VHF - 138 to 172MHz (ICASA licence required) |
| | - UHF - 402 to 405Mhz (RKU) |
| AUDIO OUTPUT | - Internal audio speaker and squelch adjustment |
| MODULATION (FM) (Transmitters) | - Approved for 12.5KHz channel spacing |
| TRANSMITTER RANGE | - UHF = MAX 3-4Km in good conditions |
| | - VHF (RKF) = ± 25Km in good conditions |
| | (Above ranges depend on type and location of the antenna, as well as environmental conditions) |
| CONNECTIONS PROVIDED | - 16VAC plug in transformer |
| | - Serial port D9 / D25 female connector |
| | - 1 telephone plug (expandable to 3) |
| POWER SUPPLY | - 16VAC in. |
| | - 13.8VDC 1.5A out (to backup battery) |
| DECODER CURRENT CONSUMPTION | - 180mA, with no relays energized |
| SIGNAL INPUTS | - 1 radio, 1 telephone line (3 line up gradable) |
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| | - SESCOA SUPERFAST 3+3+1 Communicator |
| | - SESCOA 4+2 Communicator |
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| DATA TO HOST | - RS-232C signal levels |
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| CONNECTIONS PROVIDED | - 16VAC plug in transformer |
| | - Serial port D9 / D25 female connector |
| | - 1 telephone plug (expandable to 3) |
RECEIVING SIGNALS

IN STANDBY MODE
- The green LED on the decoder will flash at 1 second intervals.
- The red and yellow LED will remain off.
- The buzzer (if connected) will be silent.

WHEN A RADIO SIGNAL IS RECEIVED
- The green LED will flicker with the incoming signal as it is being received.
- If the code is accepted by the decoder unit, the buzzer relay will latch.
- The yellow LED on the front panel will switch on.
- If the signal is rejected, the red LED will switch on for one second period. (Code ignored)
- Received signals (alarms) will be displayed on the LCD display.
- Received signals can also be heard on the internal speaker, by adjusting the volume and squelch settings on the front panel.
- Pressing the red acknowledge button on the front panel will silence the beeper and switch the yellow LED off.
- NOTE: To toggle the beeper function ON or OFF, hold the red Acknowledge button in and press the yellow button once. Two bleeps indicate that the bleeper will come on with received signals; one beep for when the beeper is disabled.

MAMI MULTI BASE STATION-TO-HOST PROTOCOL

The following is a description of the code structure sent from the MAMI MULTI BASE to the host computer. Note that the code, excluding the start-of-text and end-of-text sequence, is displayed on the decoder LCD display unit.

1. DATA STRUCTURE FROM BASE STATION DECODER TO COMPUTER

1.1 DATA FORMAT

<table>
<thead>
<tr>
<th>MAMI / CLASSIC BAUD RATE / PRINTER</th>
<th>SURE GUARD BAUD RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIGNAL TYPE = RS-232C</td>
<td>SIGNAL TYPE = RS-232C</td>
</tr>
<tr>
<td>DATA BITS = 8</td>
<td>DATA BITS = 7</td>
</tr>
<tr>
<td>DATA RATE = 4800 BPS</td>
<td>DATA RATE = 1200 BPS</td>
</tr>
<tr>
<td>STOP BITS = 1</td>
<td>STOP BITS = 1</td>
</tr>
<tr>
<td>PARITY = NONE</td>
<td>PARITY = EVEN</td>
</tr>
</tbody>
</table>

1.2 CODE STRUCTURE

The structure of the data sent to the computer is as follows:

DATA STRING TO COMPUTER: [STX][XXXX,,,,][ETX][CR][LF]

Start of text character ____________
Type character ____________
Space ____________
4-digit subscriber number ____________
Space ____________
8 alarm zone information chars ____________
Space ____________
Control character 1 ____________
Control character 2 ____________
End of text character ____________
Carriage return ____________
Line feed ____________

NOTE: Printer output can be raw code or screen print with time and date.

The BASE may be programmed to suit the type of operation required. Programming is done using the M.A.M.I. RKF_PROGRAMMER.

OPTIONS REGISTER ‘1’

Data is entered from bit 1 to bit 8. Enter a ’0’ or a ’1’, corresponding to your choice.

A list of these choices is shown in the programming sheet below and are self explanatory.

The different display formats that appear on the LCD display and the printer when an alarm signal is received can be programmed using bits 1,2 and 3 and are shown in “PROGRAM REGISTER 1”. For specific monitoring applications, the messages to be displayed may be customized.

PROGRAMMING THE OPTION REGISTER

Factory-programmed default settings:

- ENTER YOUR SELECTIONS HERE

<table>
<thead>
<tr>
<th>BIT NO.</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0000</td>
<td>0000</td>
<td></td>
<td></td>
<td></td>
<td>01</td>
<td>01</td>
<td>01</td>
<td>01</td>
</tr>
<tr>
<td>2</td>
<td>0000</td>
<td>0000</td>
<td></td>
<td></td>
<td></td>
<td>01</td>
<td>01</td>
<td>01</td>
<td>01</td>
</tr>
<tr>
<td>3</td>
<td>0000</td>
<td>0000</td>
<td></td>
<td></td>
<td></td>
<td>01</td>
<td>01</td>
<td>01</td>
<td>01</td>
</tr>
<tr>
<td>4</td>
<td>0000</td>
<td>0000</td>
<td></td>
<td></td>
<td></td>
<td>01</td>
<td>01</td>
<td>01</td>
<td>01</td>
</tr>
</tbody>
</table>

On request the BASE can be configured so that the installer can program the range of transmitter numbers that can be received.

The highest transmitter number to be received is programmed into register 'B'.

Registers ‘A’ and ‘B’ will then define the ‘window transmitter numbers’ that can be received by the BASE.

Valid codes are any decimal values between ‘0000’ and ‘9999’.

LOWEST CODE REGISTER ‘A’
This defines the LOWEST transmitter ID code that will be accepted by the BASE. Any received ID code below this number will be ignored.

Data is entered from digit 1 to digit 4.

HIGHEST CODE REGISTER ‘B’
Any transmitter whose number is higher than this number will be ignored by the receiver.

PROGRAMMING THE RANGE OF VALID CODES

I.D. CODE OF THE FIRST TRANSMITTER BEING MONITORED

A | 1   | 2   | 3   | 4   | ENTER A 4-DIGIT NUMBER

I.D. CODE OF THE LAST TRANSMITTER BEING MONITORED

B | 1   | 2   | 3   | 4   | ENTER A 4-DIGIT NUMBER

Factory Defaults

M000045
Programming Procedure

Now that the programmable selections have been made, the MULTI-BASE unit can be programmed. This is done using the RFK programmer.

The following procedure applies to all registers.

1. Remove power from the MULTI-BASE receiver.
2. Disconnect the LCD display cable from the pinstrip adjacent to the microprocessor, noting carefully which row of holes in the ribbon cable header connects to the pinstrip.
3. Plug the programmer ribbon cable onto the pinstrip, so that the cable passes over the MULTI-BASE screw-connector strip.
4. While holding the "#" key apply power.
5. After a short delay release the "#" key, the '+' character will appear on the programmer. You can now start programming.
6. To program a particular register hold down that register number until a '+' is displayed. Release the key, and enter the selections that you previously made.
7. To read an existing setting, press the register key BRIEFLY. The setting will be displayed sequentially on the programmer display.
8. If you wish to program another register, repeat steps 6 and 7 above.
9. When programming is complete, press the '+' key and remove the programmer from the MULTI-BASE pinstrip.
10. Remove power from the MULTI-BASE.
11. Reconnect the LCD display ribbon cable to the pinstrip and apply power.

Please refer to contact ID format library.
alarm via telephone
subscriber no. 4321
all zones normal
test transmission received

In the above the test transmission is generated either by the user or by the regular-interval autotest facility built in to our radio transmitters and communicators.

alarm via radio
subscriber no. 1234
zone 3 = new alarm
all other zones normal
wireless detector 3 alarm
signal to go via repeater no. 1

alarm from 4+2 communicator
subscriber no. 2143
received alarm = '1A1'
ignore last 5 characters
unused control characters

alarm from superfast communicator
subscriber no. 2143
received alarm = '1A1'
ignore last 5 characters
unused control characters

3. COMMUNICATOR CODE STRUCTURES

The base station will accept communicator codes of type SESCOA SUPERFAST and 4+2, 1800HZ CARRIER, 2300HZ HANDSHAKE, 20PPS, as well as the standard M.A.M.I. radio and communicator signals.

SESCOA SUPERFAST DATA STRING TO COMPUTER
The data string to the computer is the same as previously described, but the meaning of the different characters is different. Note that a 4+2 code is always indicated by a '5' as the first character, and a SUPERFAST code is always indicated by a '6' as the first character.

D.S.C. CONTROL PANEL
<table>
<thead>
<tr>
<th>CONDITION CODE</th>
<th>CONDITION CODE</th>
<th>CONDITION CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z1 ALARM [0A1]</td>
<td>Z1 RESTORE [031]</td>
<td>PANIC [AEE]</td>
</tr>
<tr>
<td>Z2 ALARM [0A2]</td>
<td>Z1 RESTORE [032]</td>
<td>DURESS [ADD]</td>
</tr>
<tr>
<td>Z3 ALARM [0A3]</td>
<td>Z1 RESTORE [033]</td>
<td>TEST / 24HR [ADB]</td>
</tr>
<tr>
<td>Z4 ALARM [0A4]</td>
<td>Z1 RESTORE [034]</td>
<td>ARMED [AC1]</td>
</tr>
<tr>
<td>Z5 ALARM [0A5]</td>
<td>Z1 RESTORE [035]</td>
<td>DISARMED [AB1]</td>
</tr>
<tr>
<td>Z6 ALARM [0A6]</td>
<td>Z1 RESTORE [036]</td>
<td>MAINS FAIL [AEB]</td>
</tr>
<tr>
<td>Z7 ALARM [0A7]</td>
<td>Z1 RESTORE [037]</td>
<td>BATTLOW [AEA]</td>
</tr>
<tr>
<td>Z8 ALARM [0A8]</td>
<td>Z1 RESTORE [038]</td>
<td>------------ [000]</td>
</tr>
</tbody>
</table>

CORENELL COMMUNICATOR
<table>
<thead>
<tr>
<th>CONDITION CODE</th>
<th>CONDITION CODE</th>
<th>CONDITION CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z1 ALARM [1A1]</td>
<td>Z1 RESTORE [031]</td>
<td>PANIC [AEE]</td>
</tr>
<tr>
<td>Z2 ALARM [2A2]</td>
<td>Z1 RESTORE [032]</td>
<td>DURESS [0D1]</td>
</tr>
<tr>
<td>Z3 ALARM [3A3]</td>
<td>Z1 RESTORE [033]</td>
<td>TEST / 24HR [0D2]</td>
</tr>
<tr>
<td>Z7 ALARM [7A7]</td>
<td>Z1 RESTORE [037]</td>
<td>BATTLOW [0AE]</td>
</tr>
<tr>
<td>Z8 ALARM [8A8]</td>
<td>Z1 RESTORE [038]</td>
<td>------------ [000]</td>
</tr>
</tbody>
</table>
EXPLANATION OF CHARACTERS

Type Character:  
Radio MAMI 0  
Telephone ADEMCO 1  
Security Number 2  
SESCOA 3 + 1  3  
RNET Format 4  
SESCOA 4 +2  5  
SESCOA Superfast 6  
Local (CRAM) 7

Alarm Zones Code:  
0  Not Used  
1  New Alarm  
2  New Open  
3  New Restore  
4  New Close  
5  Normal  
6  Still in Alarm  
7  Wireless Alarm  
8  Wireless Sensor Battery  
9  Not Active  
A  Active  
B  Wireless Tamper  
C  Not Used  
D  Not Used  
E  Not Used  
F  Not Used

I.D. Code  
The I.D. Code is the Subscriber code that the Administrator gives to a client.

Control Bit 1  
0  Not Used  
1  Panic  
2  Duress  
3  Test / Cancel-Alarm  
4  System On  
5  System Off  
6  System Mains Failed  
7  System Battery Low  
8  System Battery Restore  
9  System Battery Restore

Control Bit 2  
0  No Repeaters  
A  Repeater 1  
B  Repeater 2  
C  Repeater 3  
D  Repeater 4  
E  Repeater 5  
F  Repeater 6

USER NUMBER:  
To indicate which user sends information such as ARM/DISARM the Zone relevant to the user number is reduced by ‘4’.  
eg:  
1. ‘0 1234 99AAAA 40’ is the same as ‘0 1234 99A6AAAA 40’ with the added information in the latter that it was sent by USER 4. The 6 in Zone 4 means that the operation (ARMING) was performed by user four and if 4 is added to that zone an ‘A’ is obtained which means that that Zone was active (see Alarm codes).

2. If the information was sent by USER 1 the same signal will be send as ‘0 1234 59AAAAAA 40’. Note the position of the ‘5’ or ‘6’ to determine the user number. The ‘5’ is still classified as a ‘9’ (Non-active) and the ‘6’ as a ‘A’ (Active), thus no other information is lost when user information.

3. In the same way up to 35 users can be obtained if these zone locations are added together. At least one zone must contain either a ‘9’ or ‘A’ to conform to new signal format.

4. User 35 is the unit user number and thus will an Auto-arm be signaled as an arm by User 35.

_SESCOA SUPERFAST (40pps) the mark/space is 15msec/10msec, with a 300msec inter-character
_SESCOA 4+2 (20pps) the mark/space is 30msec/20msec, with a 600msec inter-character

The tones must be ON for min. 6 Msec and OFF for at least 6msec. The interval between characters is measured, and if it is less than 450msec it is assumed to be SUPERFAST timing, a counter is incremented. This counter holds the number of intercharacter spaces of less than 450msec.

_SESCOA SUPERFAST FORMAT (3+3+1 40PPS, 2300Hz HANDSHAKE, 1800Hz TONE, PARITY). 

A1 A2 A3 Z1 Z2 Z3 P  
3-digit pentadecimal account  
X X X  
3-digit alpha alarm code  
X X X  
Parity  
X

converted to: 6 CCCC AAA55555 00  C = ACCOUNT NUMBER, A = ALARM CODE

_SESCOA SLOW FORMAT (4+2) (20PPS, 2300Hz HANDSHAKE, 1800Hz TONE, NO PARITY). 

A1 A2 A3 A4 Z1 Z2  
4-digit account  
X X X X  
2-digit alarm code  
X X

Converted to: 5 CCCC AA555555 00  C = ACCOUNT NUMBER, A = ALARM CODE

_SESCOA 3+1 FORMAT (20PPS, 2300Hz HANDSHAKE, 1800Hz TONE, NO PARITY). 

A1 A2 A3 A4 Z1  
3-digit account  
X X X X  
1-digit alarm code  
X

(Converted to: 3 CCCC A5555555 00  C = ACCOUNT NUMBER, A = ALARM CODE

Installed 01/06/1994)
### R-Net Format

**Message Format:**

4, 1234, 12000000, Ctrl 1, Ctrl 2

<table>
<thead>
<tr>
<th>Which</th>
<th>What</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Control Character Coming 0</td>
</tr>
<tr>
<td>1</td>
<td>Zone 1</td>
</tr>
<tr>
<td>2</td>
<td>Zone 2</td>
</tr>
<tr>
<td>3</td>
<td>Zone 3</td>
</tr>
<tr>
<td>4</td>
<td>Zone 4</td>
</tr>
<tr>
<td>5</td>
<td>Zone 5</td>
</tr>
<tr>
<td>6</td>
<td>Zone 6</td>
</tr>
<tr>
<td>7</td>
<td>Zone 7</td>
</tr>
<tr>
<td>8</td>
<td>Zone 8</td>
</tr>
<tr>
<td>9</td>
<td>Panic</td>
</tr>
<tr>
<td>A</td>
<td>Duress</td>
</tr>
<tr>
<td>B</td>
<td>Test / Cancel - Alarm</td>
</tr>
<tr>
<td>C</td>
<td>System On</td>
</tr>
<tr>
<td>D</td>
<td>System Off</td>
</tr>
<tr>
<td>E</td>
<td>System Mains Failed</td>
</tr>
<tr>
<td>F</td>
<td>System Battery Low</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control Bit 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Used.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control Bit 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No Repeaters</td>
</tr>
<tr>
<td>A</td>
<td>Repeater 1</td>
</tr>
<tr>
<td>B</td>
<td>Repeater 2</td>
</tr>
<tr>
<td>C</td>
<td>Repeater 3</td>
</tr>
<tr>
<td>D</td>
<td>Repeater 4</td>
</tr>
<tr>
<td>E</td>
<td>Repeater 5</td>
</tr>
</tbody>
</table>

### Signals Related to guard Monitoring Units

**Identification:** Set as user 34 (User 35 - Automatic - see Auto arm)

**Abbreviated as GRS (Guard Route Monitoring)**

**This section should be read in accordance with the section on USERS**

**Type of signals that can be expected:**

1. Panic per point (16 expandable to 32)

   Eg: 0 1000 59999999 10 PANIC POINT NO 1 (USER 1 PANIC)

2. Visit to a point

   Eg: 0 1000 59999999 C0 VISIT POINT NO 1

3. System enable (GRS - ON)

   Eg: 0 1000 59555555 40 GRS ARMED [ON] (ARM USER 34)

4. System disable (GRS - OFF)

   Eg: 0 1000 59555555 50 GRS DISARMED [OFF] (DISARM USER 34)

5. Starting a patrol sequence

   Eg: 0 1000 AAAAAAAA C0 START PATROL [OFF] (GRS USER 0)

6. Fail Patrol

7. Patrol Completed successfully

   Eg: 0 1000 59555555 C0 PATROL COMPLETED (GRS USER 34)

### NOTE ON SESCOA FORMATS

- If you are receiving SESCOA SUPERFAST format from tel communicators, the alarms that will be received from the communicator are as follows:

  - New alarm (All zones)
  - Closing (System armed)
  - Restoral (All zones)
  - Opening (System disarmed)
  - Panic
  - AC fail
  - Test transmission
  - Low battery
  - 24 hour report

- If you are receiving SESCOA SLOW format from tel communicators, the alarm codes must be programmed into the communicator as follows:

  **(Note: this format is 4/2, 20 bps, 2300Hz handshake)**

**TO RECEIVE THIS**  | **PROGRAM THIS CODE ON THE COMMUNICATOR**
-----------------------|------------------------------------------
ALARM ZONE X 2X (X=ZONE NO.) |                          |
RESTORE ZONE X 3X |                          |
TROUBLE 1A |                          |
DURESS AA |                          |
TEST/24 HR REPORT 8A |                          |
CLOSING 4A |                          |
OPENING 5A |                          |
AC FAIL/LOW BATTERY 7A |                          |

**TEST**

- RING LINE 1 FOR 600 MS
- RING LINE 2 FOR 600 MS
- RING LINE 3 FOR 600 MS
- RING LINE 4 FOR 600 MS
- RING LINE 5 FOR 600 MS

**SEND A 2300 HZ ACK** (1.3 secretary)

**TEST_SESCOA_1800**