

Crestron ECB 62e Demo Program

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This program demonstrates the ability for a Crestron CNMSX system to control an ECB 62e with two (ECM 82e)s. From this program input and output levels along with routing are controlled on each Port. Each Microphone on the ECM 82e can be turned on or off. Muting and UnMuting all microphones are demonstrated by the use of Memory recalls using the Mic Setting memory type. Video-Follows-Audio camera switching is also demonstrated by the use of retrieving the Opstat message from the ECB 62e. An Opstat message consist of 19 bytes of information (See the ECB 62e RW Manual-29).

Starting operation of this program begins with the system initialization (S-1 : Analog Initialize). From S-1 the ECB 62e address is currently set to 4. The other initializations are used to setup the RaneWare memory recalls, the ECS address for the two (ECM 82e)s and the Mics on and Mics off status for the (ECM 82e)s. Pressing the System On button (RaneWare Logo) sets SysOn high which initializes all Rane modules and starts S-5 : Delay.

S-5 performs three delays:

1. InitMem (Initialize Memory 1 - Recall Memory 1 all units (S-30 : Rane Recall Memory))
2. InitLev (Initialize Levels - Get Port parameters (S-12 : Rane ECB 62 Port 1))
3. StartOpstats (Starts S-4 : Oscillator to get Opstats from S-11 : Rane ECB 62 System)

S-4 : Oscillator

This Crestron Symbol produces a .5 second running pulse that is sent to the Digital Input OPSTATS on the S-11 : Rane ECB62 System. This oscillator is controlled by SysOn and any LevelEvent signal. A LevelEvent is generated whenever a volume level is changed and is used to stop the oscillator.

S-3 : Rane RW232 Processor

This module is used to improve the programming of all the other RW232 modules by accepting a simplified version of the RW232 commands and placing the command along with its length into a Queue. The data structure of the string RW232\$ is Device Type, Address, Command, Data ... All in Hex. Note – You no longer need the know the data length, checksum or when to add the extra hex FBs. Also, you need not worry about the timing of a level controls or anything else. This module does all the worrying for you.

The received data from the Rane device are also processed through this module to simplify the programming of all the other RW232 modules. This module removes any extra hex FBs and adds a prefix to the front of the received data (Device Type and Command). The prefix is used by the other RW232 modules as a maker to process or not to process the data.

To make your life even easier during operation this module will report error conditions at the Viewport. If there is an error due to invalid data or loss of communication with the Rane device, you will be able to view the error. This will save you lots of debugging time due to setting the wrong device address on the Rane equipment or an bad cable. Another feature this module offers is a SYS_RDY output (System Ready). If there is an error condition, this output goes low causing all other Rane modules to stop, including button feedback.

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S-11: Rane ECB 62 System

In this program this module is used to request and retrieve the Opstat message for Video-Follows-Audio applications. Other features of this module include a Chairman and Noise Gate operation. For Video-Follows-Audio applications this module outputs the Master Mic number, Mic Signal, Program Signal and Port Signal status. A typical application uses the Mic Signal to determine that someone is talking in the room and switch the camera to the current Master Mic position. When the Mic Signal goes low for three seconds the camera position is set to a wide angle shot. The Program Signal can be used to lock the camera to the Master Mic position even if the Mic Signal times out.

Another feature that these signals can be used for is an automatic power-down. The Mic and Program signals can be used to restart a 10 minute countdown time. If the timer expires the system will power-down.

S-12 : Rane ECB 62 Port 1

This module is used to retrieve all of the ECB 62e Port parameters during the system initialization or selecting a memory recall.

This module allows for:

- ECB 62e RaneWare Address Initialization upon startup.
- Port 1 Input and Output Up/Down level control.
- Mute toggle function.
- An input level control that can be set by dragging the bar graph of a touchpanel or by an initialization from the program.
- A level feedback to the touchpanel for a bar graph level indicator.
- A level initialization which retrieves all input parameter information for the ECB 62e.
- Matrix routing operation for Port 1

S-16 – S-20 : Rane ECB 62 Port 2 through 6

Each of these modules control their respective Port levels and matrix routing settings. This module allows for:

- ECB 62e RaneWare Address Initialization upon startup.
- Up/Down level control.
- A Mute toggle function.
- An input level control that can be set by dragging the bar graph of a touchpanel or by an initialization from the program.
- A level feedback to the touchpanel for a bar graph level indicator.
- A level initialization which retrieves all of the output parameter information for the ECB 62e.
Note – Use only one module to retrieve this data.
- Matrix routing operation for the respective port. Note – only Port 5 (S-20) allows for its input to be connected to its output.

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S-14 – S-15 : Rane ECM 82 Mixer

Each of these modules control their respective Mixer.

This module allows for:

- ECM 82e ECS Address Initialization upon startup.
- Individual Microphone On/Off control with feedback.
- Individual Microphone Force on control that sets the microphone to Force Detection while pressed and Threshold Detection when released. This function can be used in conjunction with the Chairman operation located on the Rane ECB62 System module.
- A Mixer On/Off operation with feedback.
- A Mixer Status analog input that allows for each Microphone On/Off and the Mixer On/Off feedback's to be set by an external source. This allows for the use of a memory recall that mutes and unmutes a group of microphones without having to recall all of the mixer parameters. In this program S-24 : Analog Value is used to initiate the mixer with Mstatus1 (All on). When the Memory 2 Mic Setting (Mute Mics) button is selected, S-23 : Analog Value selects Mstatus2 (All Mics off and Mixer on).

S-26 – S-30 : Rane RW232 Memory Recall

These modules are generic to all RW232 products.

This module allows for:

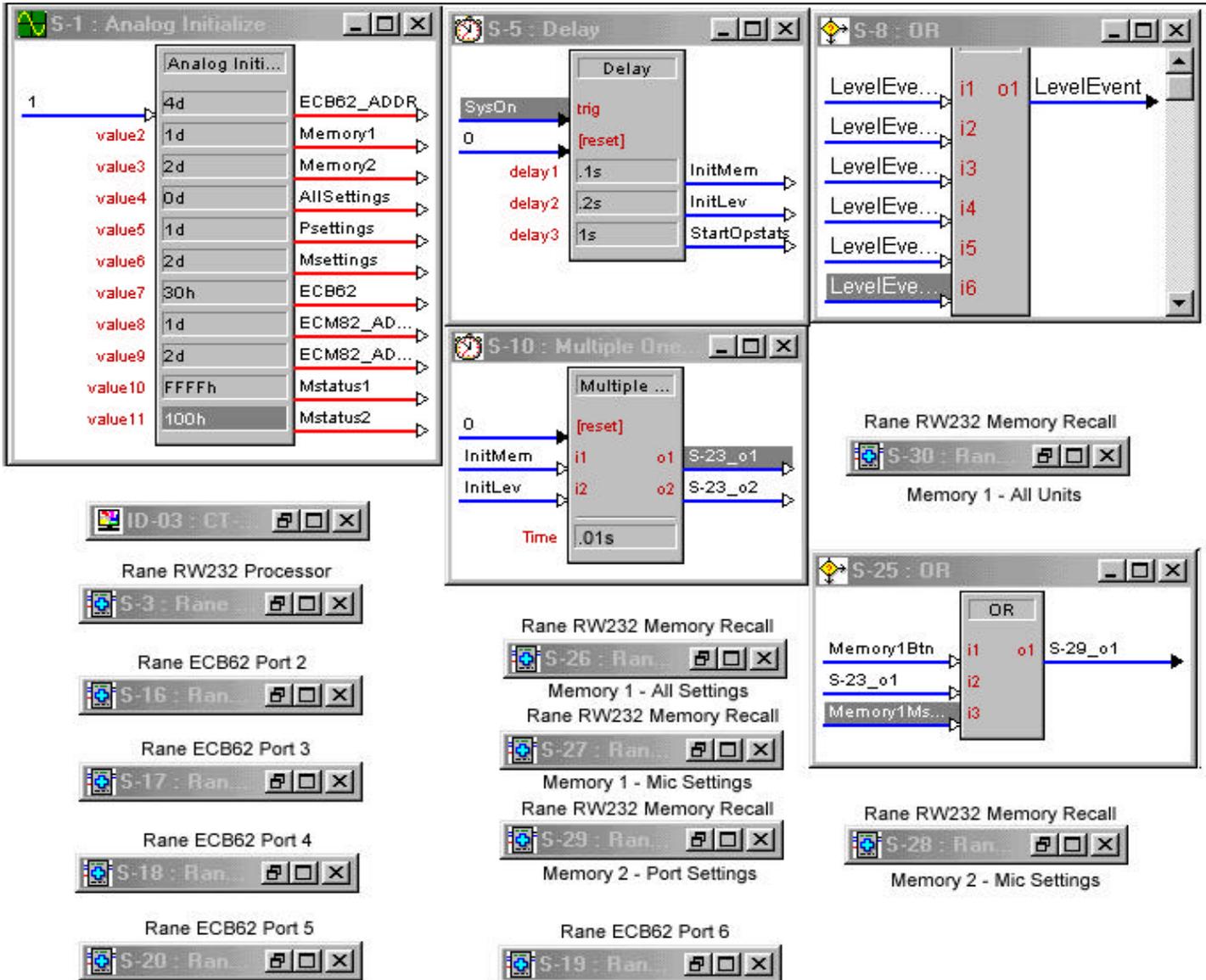
- *RaneWare Address - Set to 0 for Broadcast to all units.
 - *Memory type or Channel Number
 - *Memory Number
 - Memory button
- * Initialization upon startup

Set the MEM_TYPE to a corresponding Memory Type or Channel number at startup:

ECB 62e:		RPE 228d:	
MemType	Description	MemType	Description
0	All Memory	0	Both Channels
1	Port Settings Only	1	Channel 1
2	Mic Settings Only	2	Channel 2
3	Mixer Settings Only		
4	Mic and Mixer settings Only		

ECB 62e:	
MemType	Description
0	All Memory
1	Input Settings Only
2	Output Settings Only

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