Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for RANE RPM 2. You'll find the answers to all your questions on the RANE RPM 2 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

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RANE HARDWARE MANUAL RPM 2
PROGRAMMABLE MULTIPROCESSOR

QUICK START

This section is intended to help you make the physical connections and software manipulations necessary to get up and running with your sleek new RPM 2. If you don't read the entire Hardware Manual, at least read this section. It is also recommended that you read the Quick Start section of the Drag Net Software Manual. If the Drag Net software is not yet installed on your computer, please install it now.

To be safe, leave the audio connections until last. Begin by connecting the IEC power cord. Observe that the **POWER** LED on the front panel illuminates. After a few seconds, the **STATUS** LED should turn from red to yellow to green, and the **PRESET** display should have a number in it (00, if it's the first time you've powered the device). If the **POWER** comes on, but the **STATUS** LED does not turn green, contact the factory.

Connect one end of the Ethernet crossover cable (supplied with the unit) to the **10Base-T** jack on the rear panel. Connect the other end of the cable to an Ethernet port on your computer. The **LINK** LED on the rear panel should be lit. If it is not, verify that you are indeed using a crossover cable, not a standard Ethernet cable. Only use a standard Ethernet cable if you are connecting the RPM 2 and a computer indirectly using an Ethernet switch. Launch the **Drag Net** application and follow the steps to create a new project and new RPM 2 device configuration. Click the **Configure Hardware IP** shortcut and follow the instructions to set the unit's IP address to be compatible with your computer's Network settings. *Tip: If you aren't sure what IP to use, try the address 192.168.69.69 and subnet 255.255.255.0. This finds the default factory address without manually setting it.*

Now click the **Poll** button in the toolbar. A device name and IP address should appear under the **Live** folder in the **Project** window. If a device does not appear, consult Drag Net's online **Help** for instructions on configuring and verifying your computer's Network settings.

The audio path within the RPM 2 is displayed in Drag Net's **Device Configuration** window as a collection of blocks wired together to form a **Processing Map**. These maps are created offline as **Storage** configurations, which are then transferred to a **Live** unit. Drag blocks from the **Palette** onto the **Processing Map** and wire them together to create the audio path. Save this file frequently using the **File > Save command**. Transfer the selected **Storage** configuration to a **Live** unit using the **Transfer Config** button in the **Project** window. A new, minty green **Device Configuration** window opens once the transfer is complete, indicating you are now online with a **Live** device. Double-click a processing block to display and adjust its **Properties** (parameters) in real time on a **Live** device — there is no need to go offline to make parameter changes.

Once you have a useful configuration in the unit, connect balanced audio **INPUTS** and **OUTPUTS** to the Euroblocks on the rear panel, then turn on the amplifier. As a precautionary measure, all outputs are muted during *and* after a configuration transfer. Unmute each output individually, or use the handy **Mute Outputs** button in the toolbar. Once all outputs are unmuted, audio passes through the unit along the connections you defined.

WEAR PARTS: This product contains no wear parts.

Manual-1

Manual abstract:

If you don't read the entire Hardware Manual, at least read this section. It is also recommended that you read the Quick Start section of the Drag Net Software Manual. If the Drag Net software is not yet installed on your computer, please install it now. To be safe, leave the audio connections until last. Begin by connecting the IEC power cord. Observe that the POWER LED on the front panel illuminates. After a few seconds, the STATUS LED should turn from red to yellow to green, and the PRESET display should have a number in it (00, if it's the first time you've powered the device). If the POWER comes on, but the STATUS LED does not turn green, contact the factory. Connect one end of the Ethernet crossover cable (supplied with the unit) to the 10Base-T jack on the rear panel. Connect the other end of the cable to an Ethernet port on your computer.

The LINK LED on the rear panel should be lit. If it is not, verify that you are indeed using a crossover cable, not a standard Ethernet cable. Only use a standard Ethernet cable if you are connecting the RPM 2 and a computer indirectly using an Ethernet switch. @@@@@@This finds the default factory address without manually setting it. Now click the Poll button in the toolbar.

@@If a device does not appear, consult Drag Net's online Help for instructions on configuring and verifying your computer's Network settings. The audio path within the RPM 2 is displayed in Drag Net's Device Configuration window as a collection of blocks wired together to form a Processing Map. These maps are created offline as Storage configurations, which are then transferred to a Live unit. Drag blocks from the Palette onto the Processing Map and wire them together to create the audio path. Save this file frequently using the File > Save command.

Transfer the selected Storage configuration to a Live unit using the Transfer Config button in the Project window. A new, minty green Device Configuration window opens once the transfer is complete, indicating you are now online with a Live device. Double-click a processing block to display and adjust its Properties (parameters) in real time on a Live device -- there is no need to go offline to make parameter changes. Once you have a useful configuration in the unit, connect balanced audio INPUTS and OUTPUTS to the Euroblocks on the rear panel, then turn on the amplifier. As a precautionary measure, all outputs are muted during and after a configuration transfer. Unmute each output individually, or use the handy Mute Outputs button in the toolbar. Once all outputs are unmuted, audio passes through the unit along the connections you defined. WEAR PARTS: This product contains no wear parts. Manual- Front Panel Description PRESET 1 2 1 2 PROGRAMMABLE MULTIPROCESSOR RPM 2 INPUT OUTPUT VIP ETHERNET STATUS POWER 1 1 2 3 456 1 Signal/Overload LED meters indicate the presence of significant audio signal or overload for Inputs and Outputs. These 3-color meters indicate the available headroom once the analog signal has been converted to digital: -4 dBFS (red, near clipping), -12 dBFS (yellow, high normal level), and -48 dBFS (green, low level).

The signal level in the RPM 2 depends on the input and output settings and is displayed in Drag Net's Meter window when the Converters tab is selected. 2 PRESET LED displays the number of the most recently recalled Preset, numbered 0 through 24. 3 VIP LED flashes when a change is detected on the Versatile Input Port (VIP). This port is used for direct electrical connections to potentiometers, switches or other logic ports. See page Manual-4 for details. 4 ETHERNET LED flashes when an Ethernet data packet for this device is received. 5 STATUS LED reflects the overall status of the unit: Red - initializing (briefly) or possible internal error. Yellow - working, but not yet processing audio. Green - processing audio. 6 POWER LED lights solidly when the unit is powered on.

Rear Panel Description RPM 2 MADE IN U.S.A. RANE CORP. FOR CONTINUED GROUNDING PROTECTION DO NOT REMOVE SCREW COMMERCIAL AUDIO EQUIPMENT 24TJ 10Base-T VERSATILE INPUT PORT 0-5V +5V 100 mA 6 7 8 REF GND OUTPUTS 2 + 1 + INPUTS 2 + 1 + R 1 DEFAULT ACN 001 345 482 2 3 4 5 LAN LINK 1 2 3 4 5 6 7 8 REF GND THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES FOR A CLASS 'B' COMPUTING DEVICE.

100-240V 50/60 Hz 20 WATTS + + + + 1 7 6 5 4 3 2 1 POWER IEC jack connects to AC line voltage, 100-240 VAC ±10%. 2 Balanced analog audio INPUTS 1 and 2 on Euroblock connectors. See "Audio Connections" on the next page. 3 Balanced analog audio OUTPUTS 1 and 2 on Euroblock connectors. @@5 LAN and LINK reflect the state of the Ethernet connection.

@@LAN flashes when communicating with another Ethernet device. @@7 DEFAULT button recalls Preset 1 when pressed. @@@@@@@@@· Connect the cable shield to the shield terminal. @@@@@@@@@@@@@@@@@@@@@@@Analog Output Stage Each analog output uses a similar approach. @@@@VIP pins are used with contact closure switches for Preset recall, or with potentiometers for remote Level control. The functionality (Preset recall versus control) of each pin is assignable as part of the Device Configuration. · The maximum allowable voltage on any VIP pin is 5.3 VDC. · Use of twisted pair cable is recommended for lower noise. · If an external device is used to generate a 0 to 5 volt signal, connect the ground of the external device to the VIP GND.

*Preset Recall Using Contact Closure Switches The minimum "low" voltage required to detect a contact closure and change Presets is 2.5 V. Since the internal pull up is 100 k to +5 V, it is possible to calculate the maximum allowable cable length, provided the wire resistance per foot (or meter) is known. Example: To be safe, let's allow a maximum of 80 k worth of cable resistance. This value keeps the voltage divider formed by the 100 k internal resistance and 80 k cable resistance from dropping below 2.5 V. (5 V * 100 k) / (100 k + 80 k) = 2.777 V If the cable resistance is 30 per 1,000 feet (305 meters) (1,000 ft / 30) * 80,000 = 2,666,666 ft (813 km) Thus, you can only use 2,666,666 feet (505 miles) of twisted pair cable before the Preset recall functionality becomes intermittent (assuming the cable is properly twisted and not run through excessive magnetic or electric fields). Remote Level Control Using Potentiometers The VIP inherently prefers linear taper 10 k potentiometers, which provide a nice audio taper "feel" for the end user. When used with suitable twisted pair wiring, the 10 k value also offers acceptable noise immunity and long cable lengths.*

AMX and Crestron Control There are two ways to control a Drag Net device from an AMX or Crestron system. Use either Ethernet connectivity or use the rear panel Versatile Input Port (VIP). Each of the 8 VIP pins supports either switch closure Preset recall or zero-to-five volt control of Level.

Many AMX/Crestron applications require simple Level control and/or Preset recall. This is most easily accomplished using the VIP (Versatile Input Port) found on all Drag Net devices.

There are always more Drag Net products coming -- both hardware and software, so check our home page for the most recent. VIP Preset Recall Connect a switch closure or relay to a VIP pin and short it to the ground (GND) pin to recall the corresponding Preset. For example, shorting VIP pin 1 to the GND terminal recalls Preset 1; pin 2 recalls Preset 2, etc. @@@@@@@@This permits a hierarchy of Presets when using VIP pin closures for tiered priority paging. Since there are only eight VIP pins, you can only recall up to eight Presets using switch closures.

There are two ways to recall more than eight presets. Either use the Drag Net software Recall button which is only intended for the system installer/designer, or use an Ethernet command from an AMX or Crestron Ethernet-equipped product. [When using Drag Net's Auto Mixer/Ducker block, you have the ability to link a VIP pin closure to a push-to-talk switch in a paging or boardroom application. When using the Ducker block in these applications, the VIP pins act independently provided you Group the appropriate VIP pin with the Auto Mixer/Ducker's Input in Drag Net's Remote Map. Again, see our Drag Net Applications for examples.] VIP Level control Connect a zero to five volt DC voltage to a VIP pin from an AMX or Crestron c.