Theater Automation WOW!

THE ROCK

Series Video Processor
With
ROCK PRO Addendum

SETUP MANUAL

V2.0 10/3/03

Theater Automation Wow!

For assistance, contact us at:
www.tawforum.com

Tel: (407) 996-3836
Fax: (407) 996-3837

Introduction

Thank you for purchasing the revolutionary TAW ROCK series video processor.   It is the first flash-upgradeable video processor, and allows the owner to upgrade both firmware and hardware as technology evolves. The ROCK allows Internet downloadable firmware upgrades that can include new and improved video deinterlace algorithms.
The modular architecture of the ROCK series video processor allows the ROCK to be returned to the factory for upgrades to future generation products!

Warranty

TAW warranties this equipment for a period of one year parts and labor only from date of purchase. The software in the ROCK series video processor is licensed from various sources. The software license is paid for by TAW for your continued personal use and pleasure. This software may not be duplicated, modified or removed without prior written permission from TAW. The purchaser of the ROCK series video processor owns the hardware but licenses the software use only. There are no user-serviceable parts in the ROCK. There is no need for any consumer to open the unit. If the unit is opened, the warranty on this equipment is immediately null and void.

Manuals

The ROCK manual is Copyright © 2001,2,3 by TAW Inc. The manual is provided in Acrobat (.pdf) format. You may print this manual for the purpose of setup and operation of the ROCK series video processor.

A more complete OPERATIONS MANUAL can be found on the net :
http://www.tawinc.net/download/manual/OPERATION_MANUAL_v225.pdf
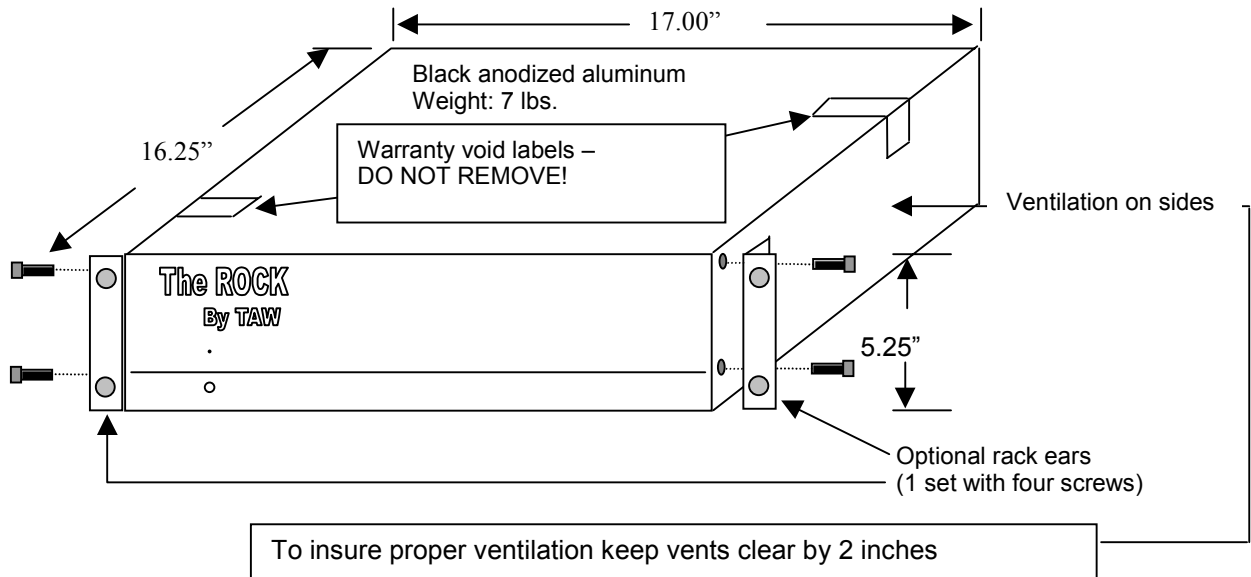
SETUP MANUAL
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INTRODUCTION

Dimensions of Unit

17.00"

16.25"

Black anodized aluminum
Weight: 7 lbs.

Warranty void labels –
DO NOT REMOVE!

The ROCK
By TAW

Ventilation on sides

5.25"

Optional rack ears
(1 set with four screws)

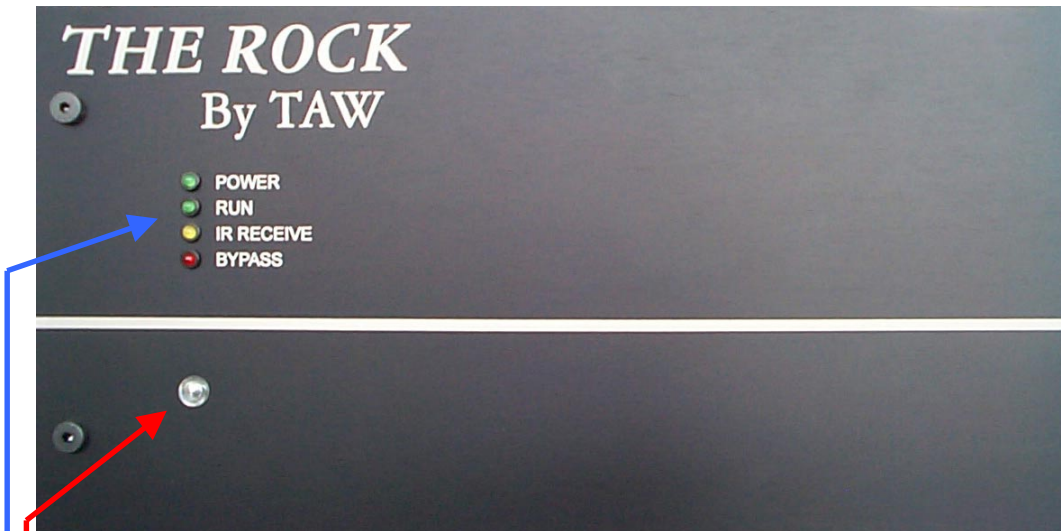To insure proper ventilation keep vents clear by 2 inches

➔ **Rack Ears**
➔ **Removable Feet**

Optional rack ears are available.
These can be removed during rack mounting.

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INTRODUCTION

Front Panel Indicators

IR Window	IR receiver is behind this window. IR repeaters should be attached here. For optimum IR coverage, the IR transmitter (remote control) should be pointed at this window.
Green LED – Top	**POWER** Indicator Lit immediately when power is applied and back switch is turned on.
Green LED – Bottom	**RUN** indicator Lit after the unit is fully initialized when power is applied.
Yellow LED	**IR RECEIVE** indicator. Flashes whenever you press a button on the ROCK remote control.
Red LED	**BYPASS** indicator. Lit whenever the ROCK unit is in HDTV bypass mode.

The Front panel shown above represents the ROCK LITE. The ROCK+, ROCK SDI and ROCK PRO front panel operates the same but is a more elegant ½" thick plate.

ROCK PRO POWER ON/OFF ADDENDUM

This ROCK PRO is equipped with TAWs new IR/RS232 on/off feature.

Using the IR remote to operate the ROCK on/off:

To turn the ROCK on simply turn on the back rocker switch so the "I" is depressed.
The PWR LED will light amber (orange)

With a properly programmed ROCK Remote push the "ON" button on the remote for 2 seconds.
The PWR LED will change to green.

Allow 30 seconds for the ROCK PRO to initialize then the RUN LED with light green.

To turn the ROCK PRO off simply push the "OFF" button on the remote for two seconds.

To operate the ROCK PRO with RS232 commands:

The ROCK PRO will turn on when RS232 is recognized through RS232 on the back.

To turn the ROCK PRO off with RS232 commands send a sys_stop command.

RS232 protocol and examples of use are on the tawforum. Visit us at
www.tawforum.com

A more complete operations manual can be found on the TAW.BIZ web site:
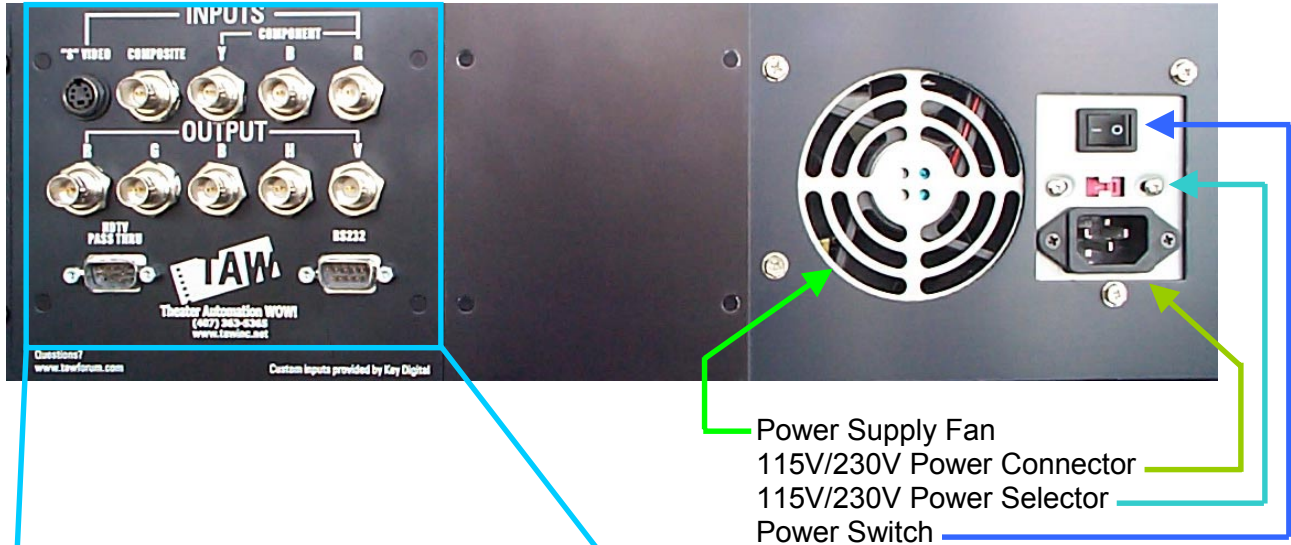
http://www.tawinc.net/download/manual/OPERATION_MANUAL_v225.pdf

OR

Simply click on the picture of the ROCK and on the operation manual button at the bottom of the on line brochure.

INTRODUCTION

Diagram of Rear

Power Supply Fan
115V/230V Power Connector
115V/230V Power Selector
Power Switch

➔ **INPUTS**
   S-Video, Composite, and Component. BNC-to-RCA adaptors are provided to allow use of RCA cables.

➔ **OUTPUTS**
   BNC connectors for connection to output display, using R, G, B, H, V.

➔ **HDTV PASSTHROUGH**
   15-pin high-density VGA connector for use with external HDTV receivers or computer.

➔ **RS232 CONTROL**
   9-pin serial connector for use with flash firmware upgrades and Creston control.

ROCK PRO BACK PANEL ADDENDUM

Below are the ROCK PRO back panel and its hookup:

All inputs are left of the white vertical line. Bypass is simply a male HD15 connector. VGA standard is Pin 1 Red, Pin2 Green Pin 3 Blue Pine 6 red ground, pin 7 green ground and pin 8 blue ground. Pin 13 is h sync and pin 14 is vertical sync. The ROCK PRO does not process signals coming in on this connector and acts as a simple relay bypassing the signals through the ROCK PRO onto the RGBHV BNC output connections.

INPUTS:
SDI is a BNC signal to be used with TAWs DigiLink and DigiLink II SDI digital DVD players.
COMP is composite input. A BNC to RCA adapter is supplied for use with consumer grade RCA cables.
"S" is S video input .
Y is the Y component input. A BNC to RCA adapter is supplied for use with consumer grade RCA cables
B is the Blue (U) component input. A BNC to RCA adapter is supplied for use with consumer grade RCA cables
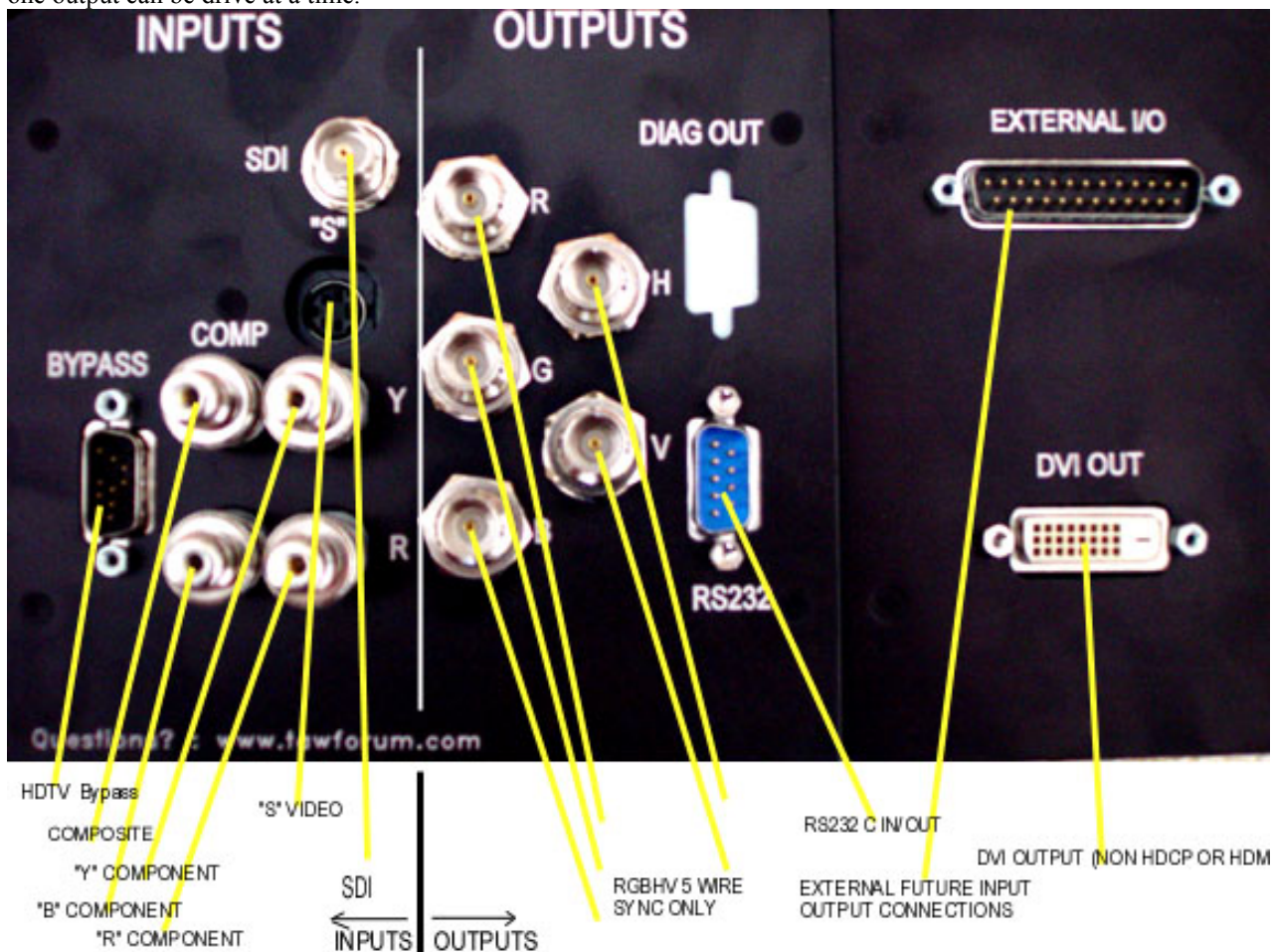**R** is the Red (V) component input. A BNC to RCA adapter is supplied for use with consumer grade RCA cables

OUTPUTS:
RGBHV 5 wire sync only. The ROCK PRO does not output component.
RS232 male DB9 pin for RS232 control. RS232 protocol can be found on the TAW forum. www.tawforum.com. Registration is free. A more complete operations manual can be found on the TAW.biz web site by simply clicking on the ROCK product picture and downloading operation manual at the bottom of the on line brochure.
EXTERNAL I/O is for future field installable modules planned like ATSC and IEEE1394 input interfaces. Stay tuned to the forum for news on these modules.
DVI OUT is a non-HDMI or HDCP licensed DVI output. The ROCK PRO detects either DVI output OR RGBHV output on power up. The display device needs to be on and awaiting DVI input from the ROCK. If DVI is not connected, RGBHV is the default output. Only one output can be drive at a time.

INPUTS   OUTPUTS

DIAG OUT   EXTERNAL I/O

SDI
"S"
COMP
BYPASS
Y
G
H
R
V
R
RS232
DVI OUT

Questions? : www.tawforum.com

HDTV Bypass
COMPOSITE
"S" VIDEO
"Y" COMPONENT
"B" COMPONENT
"R" COMPONENT
SDI
RGBHV 5 WIRE SYNC ONLY
RS232 C IN/OUT
EXTERNAL FUTURE INPUT OUTPUT CONNECTIONS
DVI OUTPUT (NON HDCP OR HDM
INPUTS | OUTPUTS
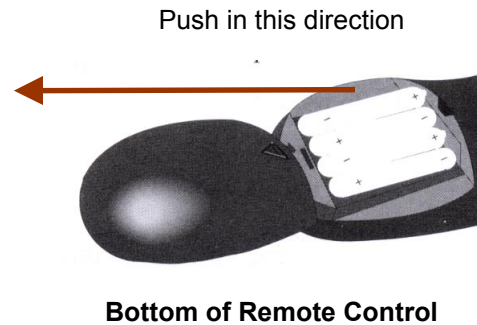
Installing Batteries

The Remote requires 4 "AAA" batteries. The battery compartment is on the bottom, at the back.   To access the battery compartment, slide the back bottom cover back outwards, away from the end of the Remote. Given gentle pressure, it will slide away from remote, exposing the battery compartment.

Insert the four included AAA batteries. Please take careful note of proper polarity as labelled from within the battery compartment.

The Remote has a "super capacitor".
This allows the unit to maintain its programming for several hours without the batteries. After this time, the Remote will need to be reprogrammed.

See the next section, **Programming the Remote**

Push in this direction

Bottom of Remote Control

Programming the Remote

Indicator LED

The Remote may need to be programmed if the batteries have died for long periods of time.
You also may need to reprogram the Remote when you first receive the ROCK.

Before programming, please verify whether your Remote is already programmed by pressing the ROCK button once at the upper-left corner of the remote. Then press the ON button while pointing the Remote to the ROCK unit. If the yellow indicator LED flashes on the ROCK unit, then your ROCK remote control is already programmed.

Programming is easy:

1) **Push the center top button for five seconds.**

   The indicator LED should now be lighted continuously on red.

2) **Push the blank top right button button.**

   The indicator LED should blink once.

3) **Punch in the number 104 by pressing the following three buttons in squeqnce:
   "1" then "0" then "4"**

   The indicator LED should stay on until the last digit is pressed.

4) **Push the top center key again for five seconds.**

   The indicator LED should now be lighted continuously on red.

5) **Push the "ROCK" key.**

   The indicator LED should blink once.

6) **Punch in the number 189 by pressing the following three buttons in squeqnce:
   "1" then "8" then "9"**

   The indicator LED should stay on until the last digit is pressed.

7) **The remote is now programmed to operate the ROCK series video processor.**

Using the Buttons, Part 1

➔ **P2**
Must be initialy pushed to allow the remote to transmit ROCK codes.

➔ **PROG**
Code set button – used to configure the ROCK remote control. See **Programming the Remote** on the previous page.

➔ **ON**
Turns the unit on instantly from sleep mode. On ROCK PRO unit turns on from hard boot.

➔ **OFF**
Instantly puts the ROCK into sleep mode.
Sleep mode simply turns off the video card. Power supply and CPU fans will continue to run. The ROCK can be left in sleep mode indefinetly as it will run very cool and silent. On ROCK PRO Off turns off unit completely including PS and all fans.

➔ **RESET**
Pushing button twice brings up the RESET menu.
Pushing button four times sets 480p positive sync.
Pushing button six times sets 480p negative sync.
This is useful if you are using a projector, such as certain BARCO models, that require negative sync polarity in order to view the image from the ROCK.

➔ **IN ASP (Input Aspect)**
Select different input aspect ratios. Pushing this button will bring up the OSD showing the **Input Aspect Menu***. Pressing this button for the second time will bring up the **Advanced Input Aspect Menu***. Custom aspect ratios can be configured via this menu.

➔ **OUT ASP (Output Aspect)**
Displays the **Output Aspect Ratio*** menu. Configures the aspect ratio of your display. Normally, this is a one-time configuration. Most displays are either 4:3 aspect ratio or 16:9 aspect ratio. However, custom screens and/or anamorphic lens configurations can be be configured.

➔ **ANAMORPHIC**
Pushing toggles between 4:3 mode, anamorphic mode, and non-anamporphic mode.

* Some ROCK series have less/more feature sets. Please refer to the appropriate **TAW ROCK OPERATION MANUAL**.

Using the Buttons, Part 2

➔ **NUMERIC KEYS**
Normal numeric keys to enter codes and selections.

➔ **SR – Scan Rate**
Set output resolutions using this key. Pushing this button activates the **Output Resolution Menu***. Please take extra caution not to exceed the specifications of your display. If you do, please press the **RESET** button twice.

➔ **VI – Video Input**
Seamless selection of input source.
Pressing this button once brings up **Video Input Menu***.
Holding this button down for 1 second will immediately switch to the next input. Component, S-Video, Composite and HDTV Passthrough can be selected with this key.
IMPORTANT NOTE: On ROCK, pushing VI is the only way to get the ROCK out of bypass. On the ROCK PRO any key will take the PRO out of bypass.

➔ **VF – Video Format**
Displays the **Video Format Menu***. You have a choice between NTSC, NTSC Japan, PAL, and PAL60.
All variants of world are supported in the ROCK PRO including SECAM. PAL N, M, NC.

➔ **PA – Picture Adjust**
Displays the **Picture Settings Menu***. Hue, Saturation, Contrast, Brightness and many others settings can be adjusted here. Pressing this button twice displays the **Advanced Picture Settings Menu*** which displays additional adjustment settings.

➔ **ARROW KEYS**
Used to navigate the OSD menu system.
Up & Down allows adjusting menu selection or a setting. Left acts as a back button, to back out of submenus.
Right acts as a forward button, to advance to next menu.

➔ **MENU / ENTER   ENTER / MENU**
Displays the **Main Menu*** if no menu is currently displayed. Otherwise, selects the current menu item in the OSD menu.

➔ **BACK LIGHT (bulb)**
The button lights the keyboard for five seconds. Pushing this button toggles the remote from back lite to non-back lite. See next section (back light) for more details.

* *Some ROCK series have less/more feature sets. Please refer to the appropriate* **TAW ROCK OPERATION MANUAL**.

Other Features of the Remote

➔ BACKLIGHT

In dark enviroments found commonly in home theaters, a properly backlighted remote is a necessity.

The ROCK Remote is equipped with a timed back light. A backlight is by far the most heavy battery drain so in those occasions where the back light is not needed it is recommend that it be turned off.

By pushing the **lightbulb logo** button at the bottom of the remote will toggle on/off the back light function. This lightbulb logo button is made of glow-in-dark material, so even when the remote is in total darkness, this button is still visible.

Pushing this button until the remote is dark will prevent the button from lighting when pushed.

Pushing this button until the remote is lighted will make every button light the remote for seven seconds. Then the timer will automatically darken the remote again until the next button press. The back light will behave in this present state until the lightbulb button is pressed again toggling its state.

➔ RANGE & ANGLE

The ROCK and The ROCK Remote have been tested to have a maximum operating distance of 30 feet with a +/- 20 degree angle. These tests were done in a dark enviroment with fresh batteries. Result may vary within different home theater enviroments.

➔ STORAGE

If the remote needs to be stored over long periods of time, such as well over a month, it is recommended to remove the batteries to protect the remote from battery leakage. Please store the remote in a clean and cool enviroment.

➔ TEMPERATURE TOLERANCE

The maximum operating temperature of this remote is 120 degrees Farenheit, and the maximum storage temperature is 140 degrees Farenheit.

REMOTE

Troubleshooting the Remote

➜ **Problem: Remote has poor range.**
    1) Batteries are weak, replace batteries according to section, **Installing the Batteries**.
    2) No line-of-sight to ROCK sensor.
    3) Interference in the enviroment.
       Turn off flourescent lights, specialty lamps, neon lights, and close the drapes.

➜ **Problem: The ON, OFF, SCANRATE buttons don't work but all other buttons do.**
    1) The remote need to be reprogrammed. Please refer to the section, **Programming the Remote**.

➜ **Problem: The "VI" `VIDEO INPUT` and "VF" `VIDEO FORMAT` buttons don't work.**
    1) The remote needs to be using the ROCK codes. Simply push the ROCK button once.

➜ **Problem: Remote causes yellow LED to flash on ROCK, but nothing happens.**
    1) Make sure that the display is connected to the ROCK and is turned on.
    2) Make sure that the red LED on the ROCK unit is off.
       If it is on, hold down the `INPUT SELECT` button to switch away from HDTV Passthrough.
       This is the HDTV Passthrough LED. When this red LED is on, onscreen menus are invisible.

➜ **Problem: Remote does not work at all.**
    1) Make sure you've waited 30 seconds since plugging in the ROCK and turning on the power switch on the rear of the ROCK.
    2) When you press a button on the remote, verify that its red indicator flashes upon button press.
       If Yes, go to Step 2.
       If No, replace batteries according to section **Installng the Batteries** and then go to Step 3.
    3) Make sure the ROCK codes are active.
       Push the ROCK button once. If still doesn't work go to Step 3.
    4) Reprogram the remote by following the steps in the section, **Programming the Remote**.
    5) Verify that the power is on the ROCK, with both green LED's being lit.
       Verify that the yellow indicator on the ROCK flashes when you press a button
       If not, then go to the next step:
    6) Using the power switch at the rear of the ROCK, turn off the ROCK for 5 seconds and then back on. Wait at least 30 seconds.

TAW Inc.
8114 Firenze Blvd. Orlando, FL 32836
Tel: 407-996-3836   Fax: 407-996-3837

Product: _____

Serial # _____

TAW EQUIPMENT WARRANTY CARD
PLEASE FILL OUT AND MAIL OR FAX BACK WITHIN 20 DAYS OF PURCHASE

Name: _____

Address: _____

City, State, Zip: _____

Telephone # _____   **Fax #** _____

Date of Purchase: _____   **Invoice #** _____

Where Purchased: _____

How did you hear about us? _____

**Please fax or mail a copy of the Warranty Card to
TAW within 20 days to validate your TAW product
warranty.**

TAW thanks you for your purchase.