ST600-KIPRO
User Manual

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REVISIONS

1.00	01/24/17	Original draft.

NOTE: KiPro Rack does not support Search to Time or Shuttle or Slomo functionality.
KiPro Ultra does not support Shuttle or Slomo functionality.

1. GETTING STARTED

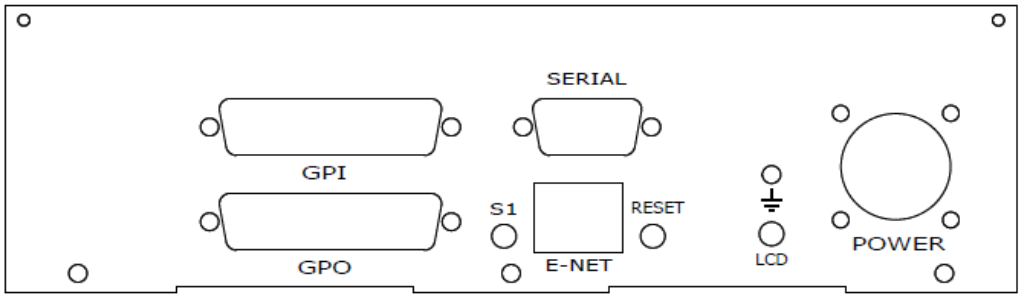
1. Go to Installation Section to set up ST600.
2. Go to System Configuration Section to set static IP address, Subnet Mask, and Gateway address.
3. Go to Remote Device Assignment Section to enter IP addresses for remote devices that ST600 will communicate with.
4. Go to System Configuration section to set default settings.

2. EQUIPMENT LIST

Qty	Component	DNF Part Number
1	ST600 Panel	ST600-KIPRO
1	ST600 POWER SUPPLY	included
1	POWER CORD	included

3. INSTALLATION

1. Connect supplied power supply to POWER connector
2. Connect Ethernet cable to ETHERNET connector.



Rear View

DEFAULT ETHERNET CONFIGURATION

IP Address:	**192.168.10.217**
Subnet Mask:	**255.255.255.0**
Gateway:	**192.168.10.1**

The ST600 is configured using a standard web browser (Internet Explorer, Firefox, and Chrome). Enter the IP address in the Address/ URL bar, typically located at the top of the web browser page, to access the Home Page. Use the links on the left side of the Home Page to access the desired configuration web pages.

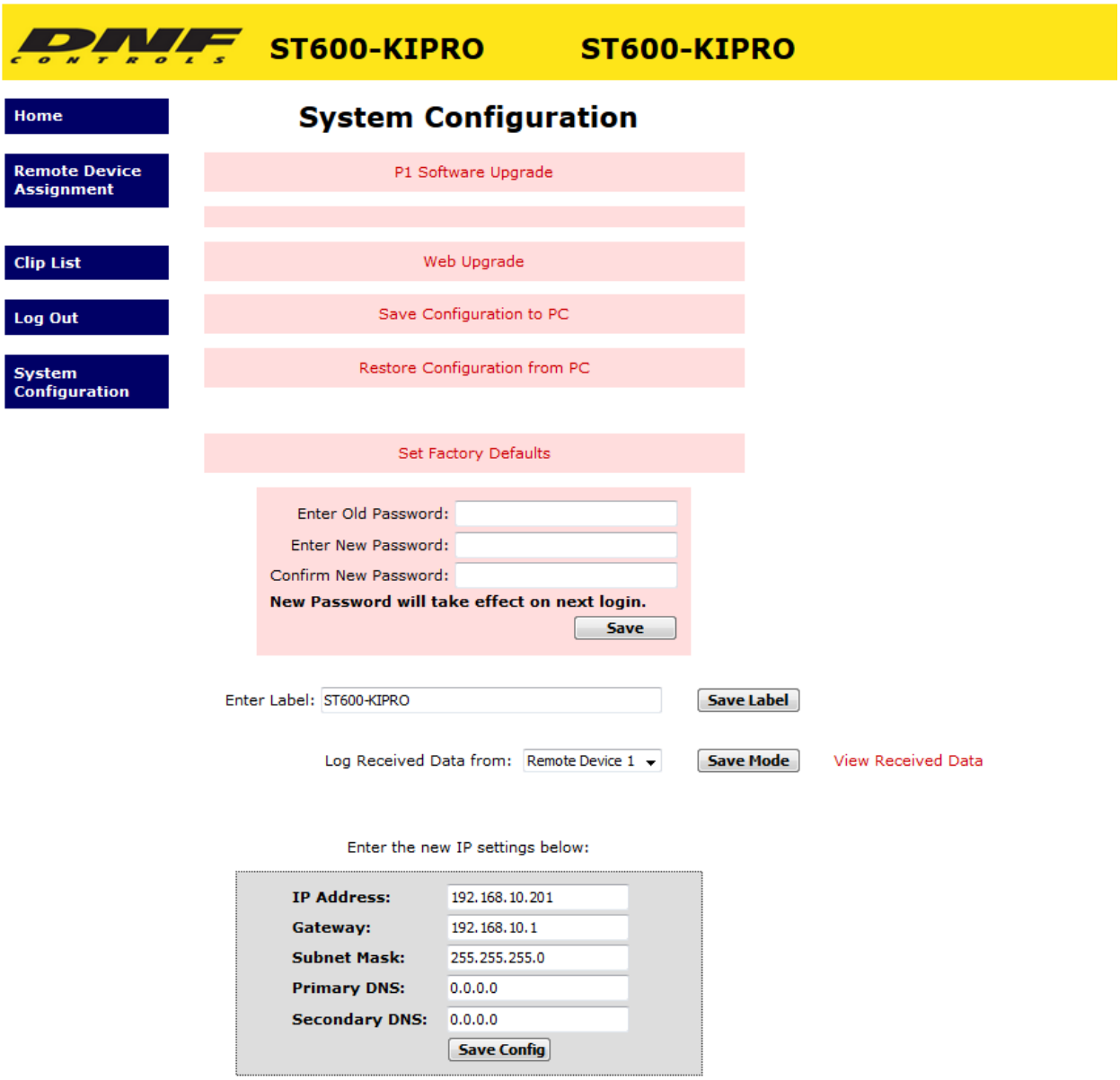
All configuration settings are saved in non-volatile memory in the ST600. Settings are retained when power is removed.

Settings may be uploaded to a computer as a configuration file (.dnf) for storage. Configuration files may be downloaded from a computer into the ST600 to restore a saved configuration. A configuration file contains all of the ST600's configurations except IP address, subnet mask, and gateway address. The ST600 does not support partial configuration upload or download. The configuration file is a not a text formatted file. It cannot be viewed or modified with a text editor.

To access the System Configuration web page, use the following log-on when prompted:

Username: dnfuser
Password: controls

4. SYSTEM CONFIGURATION WEB PAGE

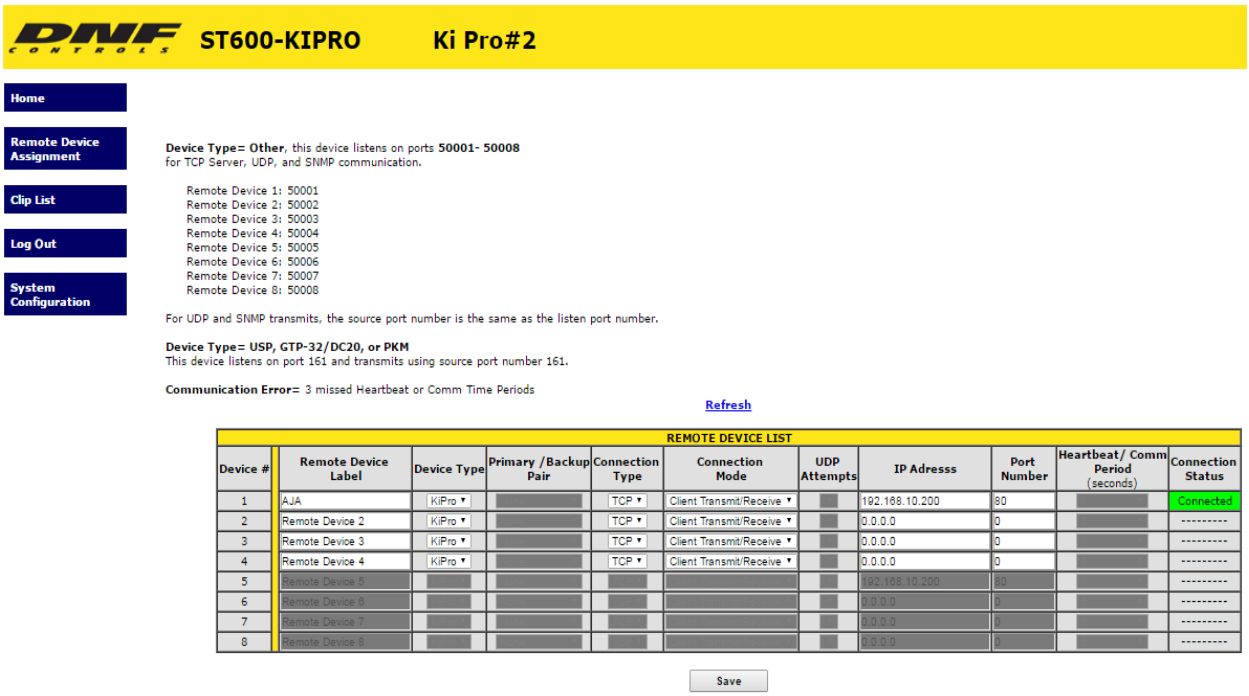


SELECTION	DESCRIPTION
P1 Software Upgrade:	Use this link to install the P1 upgrade file provided by DNF Controls
P2 Software Upgrade:	Use this link to install the P2 upgrade file provided by DNF Controls
Web Upgrade:	Use this link to install the Web pages upgrade file provided by DNF Controls
Save Configuration to PC:	Use this link to save the ST600 current configuration to a configuration file on a computer. The web browser will prompt for file name and directory. The file extension must be 'dnf'.

SELECTION	DESCRIPTION
Restore Configuration from PC:	Use this link to download a configuration file from your computer to the ST600. The web browser will prompt for directory and configuration file name. The file extension must be 'dnf'.
Set Factory Defaults:	Use this link to reset all ST600 configuration settings to factory defaults. This will NOT change the IP address, subnet mask or gateway address. The ST600 will automatically reboot.
Enter Label:	Enter label to be displayed on top right of all web pages
Enter the new IP settings below:	Enter the new IP address, Gateway, and Subnet Mask. Click on "Save Config" to save the new entries. The ST600 will automatically reboot.

5. CONNECTION TO KI PRO

1. Using a Web browser, enter the IP address of the ST600-Kipro panel to access the configuration pages.
2. Select the Remote Device Assignment link located on the left hand side of the web page.
3. In the Remote Device Assignment page, create a device label for the AJA KIPRO you will be connecting to.
4. In the “Device type” column, select “KIPRO” from the dropdown menu.
5. In the “Connection type” column, select “TCP” from the dropdown menu
6. In the “Connection Mode” column, select “Client Transmit/Receive” from the dropdown menu.
7. In the “IP Address” column, enter the IP address of the Ki Pro. Next under “Port Number” set the Port number to “80”.
8. Press “Save” to save your changes.



The ST600-KiPro communicates over IP to AJA KiPros using the KiPros's native control protocol. The native control protocol does not provide a means to synchronously roll multiple units. As a result, transport commands are sent to each KiPro, one at a time. There will be a delay between KiPros based upon inherent IP network delays and each KiPro's command processing delay after receiving the command.

6. OPERATION

LCD DISPLAY

During normal operation, the top row of the display shows the selected time mode and current time location of the selected Ki Pro.
For example: 01:12:09:23

Second Row shows name of loaded clip.
For example: Clip: SC1TK47

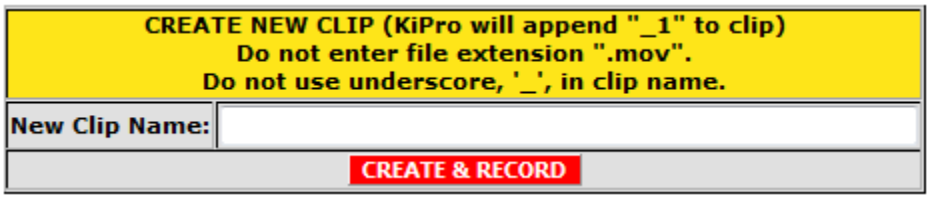
TRANSPORT CONTROL

Select the desired transport function by pressing the appropriate key. The Real-Time Status Indicators will light to indicate the DDR's current transport mode.

See Function Table (Pg 12) for a full list of functions and a description of each function.

CREATE AND RECORD CLIP FROM WEB PAGE

1. Using a Web browser, enter the IP address of the ST600-Kipro panel to access the configuration pages.
2. Select the Clip List link located on the left hand side of the web page.
3. In the Clip list page, create a new clip in the following window:



4. Press the “Create and Record” button to create the desired clip and to begin the recording.

LOAD CLIP FROM WEB PAGE

1. Using a Web browser, enter the IP address of the ST600-Kipro panel to access the configuration pages.
2. Select the Clip List link located on the left hand side of the web page.
3. In the Clip list page, select the desired clip to load and select the LOAD button under the Load Clip column.

   Your clip will now be loaded and ready to play.

LOAD A CLIP FROM ST600-KIPRO

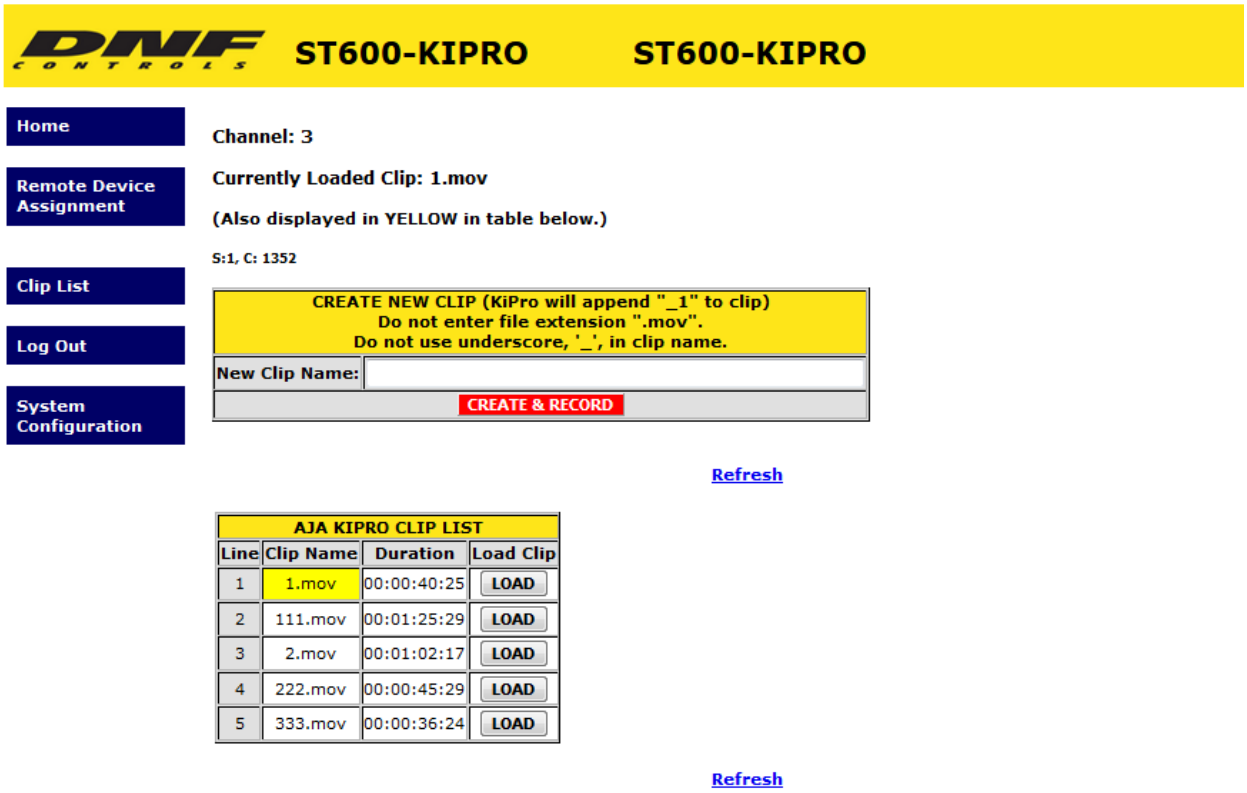
1. Press **[SHIFT/ESC] + [LOAD]** to set the ST600-KiPRO into a “LOAD” mode.
2. Once in “LOAD” mode, use numeric keys 0-9 of the panel (yellow silkscreen) to call up the desired clip number
3. After the numeric clip ID is entered, Press [**LOAD**] key to execute the load.

   Your clip will now be loaded and ready to play.

CUE POINTS

1. Press the [**MARK**] key to mark the Ki Pro’s current time into the selected cue point #.
2. Use **[↑]** or **[↓]** to step through marked cue points.
3. Press the [**LOAD**] key to load the currently selected cue point.

7. CLIP LIST WEB PAGE



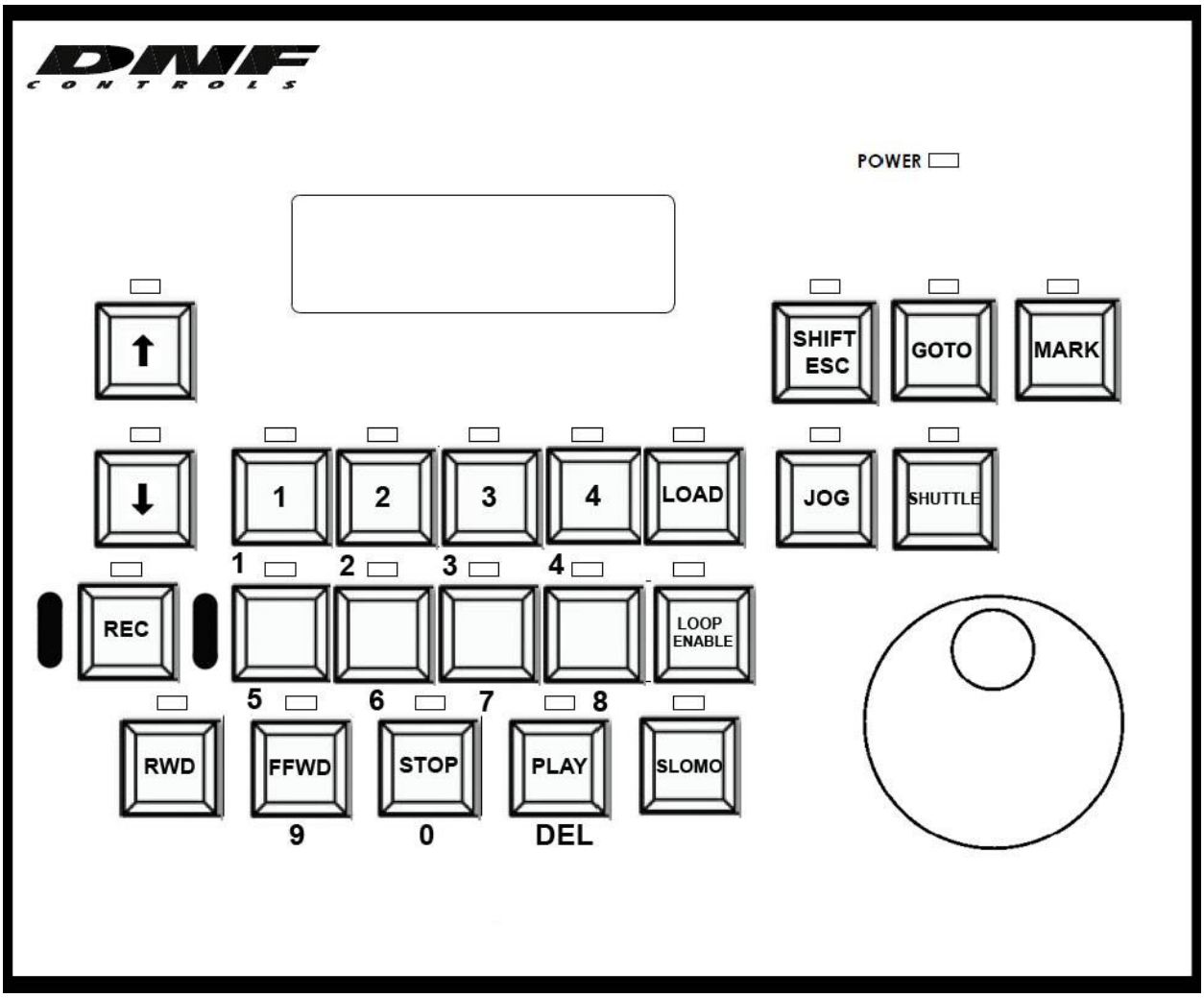
Load Clip For Play	Choose from the list of Clips and simply press “LOAD”. Clip will load and show time and name of loaded clip on ST600 LCD display.
Create Clip for Record	Type in name you wish to create for your clip and click on “Create & Record” on ST600 Clip List web page to create the desired clip. ***Record will start once “Create & Record” is pressed on web page or when Record key is pressed on the ST600***

8. Function table

FUNCTION	KEYPRESS	DESCRIPTION
JOG	[**JOG**]	Select JOG mode and enable the Wheel.
MARK CUE POINT	[**MARK**]	Save the current time in the currently displayed Cue Point. Mark only affects currently selected DDR. Cue points are save in non-volatile memory. *Marking a cue point in gang mode only affects the Master (Blinking LED) Ki-Pro DDR channel. All other channels in gang will not be marked.
RECORD	[**REC**]	Creates new clip and places Ki Pro into record
REWIND	[**RWD**]	Press RWD to Rewind Clip ***Note**- pressing RWD more than once will put into the following Reverse speeds: 1st press= 2X speed 2nd press= 4X speed 3rd press= 8X speed 4th press= 16X speed
Fast Forward	[**FFWD**]	Press FFWD to Fast Forward Clip ***Note**- pressing FFWD more than once will put into the following Reverse speeds: 1st press= 2X speed 2nd press= 4X speed 3rd press= 8X speed 4th press= 16X speed
SLOMO	[**SLOMO**]	Not supported by Ki Pro
STOP	[**STOP**]	Press once to stop clip transport or exit record
Enter Search Time mode	[**GOTO**]	Search the Ki Pro to a specific time To enter a GOTO location without altering the contents of the Cue Point, Press [**SHIFT/ESC**] **+ [GO TO]**. Enter the desired timecode using the designated keys with yellow silkscreen. Press [**GOTO**] to search to the entered time. Press [**SHIFT/ESC**] to exit without searching.
PLAY	[**PLAY**]	Press PLAY key to start transport
SHIFT/ESC	[**SHIFT/ESC**]	Pressing key will exit out of search time mode
Select **Ki Pro** For control	**[1], [2], [3], [4]**	Select which Ki Pro to control by pressing either **[1]**, **[2]**, **[3]** or **[4].** Red LED will indicate which Ki Pro is currently being controlled
EE Mode	[**STOP**]	Pressing “STOP” key twice will put AJA Ki Pro into EE

FUNCTION	KEYPRESS	DESCRIPTION
Select a Cue Point	[**UP ARROW**] ↑ Or [**DOWN ARROW**] ↓	Press either [↑] or [↓] to step through the Cue Points. Once desired cue point is shown on ST600 LCD, press the [**GOTO**] key **Maximum of 20 cue points per Ki Pro*

9. KEY LAYOUT


DMF CONTROLS
POWER
SHIFT ESC
GOTO
MARK
1
2
3
4
LOAD
JOG
SHUTTLE
REC
1
2
3
4
LOOP ENABLE
5
6
7
8
RWD
FFWD
STOP
PLAY
SLOMO
9
0
DEL

10. SPECIFICATIONS

Note: Serial and GPI/O connection are not supported at this time.

REAR PANEL CONNECTORS	
POWER 1:	+12V DC, 3.33Amps (Max)
RESET Switch:	Press to reset ST600-KIPRO
ETHERNET:	RJ45 100baseT, Full Duplex
S1 Switch:	Press and hold 10 seconds to reset IP address to 192.168.10.217 and configuration to factory default
SERIAL CONNECTOR:	

Pin	RS232 DTE	RS422 Controller	RS422 Device
1	N/C	Frame Ground	Frame Ground
2	RxD	Receive A (-)	Transmit A (-)
3	TxD	Transmit B (+)	Receive B (+)
4	Tied to 6	Receive Common	Receive Common
5	Ground	N/C	N/C
6	Tied to 4	Transmit Common	Transmit Common
7	N/C	Receive B (+)	Transmit B (+)
8	N/C	Transmit A (-)	Receive A (-)
9	N/C	Frame Ground	Frame Ground

REAR PANEL DB25 CONNECTORS

GPI CONNECTOR 1-8:
Opto-isolator Inputs

NOTE:
GPI (+) is opto-isolator anode
GPI (-) is opto-isolator cathode

To WET GPIs:

Connect GPI + to nearby +V pin.

Connect GPI – to Ground to turn on GPI.

Pin #	Description	Pin #	Description
1	Ground	14	GPI 8 **+**
2	GPI 8 –	15	+V
3	+V	16	GPI 7 –
4	GPI 7 **+**	17	GPI 6 **+**
5	GPI 6 –	18	+V
6	+V	19	GPI 5 –
7	GPI 5 **+**	20	GPI 4 **+**
8	GPI 4 –	21	+V
9	+V	22	GPI 3 –
10	GPI 3 **+**	23	GPI 2 **+**
11	GPI 2 –	24	+V
12	+V	25	GPI 1 –
13	GPI 1 **+**		

GPO CONNECTOR 1-8:
Isolated Relay
Contact Closures

To WET GPOs:

Connect external power supply output to Common Bus, pin #1.

Connect GPO commons to nearby Common Bus pins

There is no need to connect power supply Ground to GPO connector

Pin #	Description	Pin #	Description
1	Common Bus	14	GPO 8 N.O
2	GPO 8 Common	15	Common Bus
3	Common Bus	16	GPO 7 N.O.
4	GPO 7 Common	17	GPO 6 N.O.
5	GPO 6 Common	18	Common Bus
6	Common Bus	19	GPO 5 N.O.
7	GPO 5 Common	20	GPO 4 N.O.
8	GPO 4 Common	21	Common Bus
9	Common Bus	22	GPIO 3 N.O.
10	GPO 3 Common	23	GPO 2 N.O.
11	GPO 2 Common	24	Common Bus
12	Common Bus	25	GPO 1 N.O.
13	GPO 1 Common		

11. DNF CONTROLS LIMITED WARRANTY

DNF Controls warrants its product to be free from defects in material and workmanship for a period of one (1) year from the date of sale to the original purchaser from DNF Controls.

In order to enforce the rights under this warranty, the customer must first contact DNF's Customer Support Department to afford the opportunity of identifying and fixing the problem without sending the unit in for repair. If DNF's Customer Support Department cannot fix the problem, the customer will be issued a Returned Merchandise Authorization number (RMA). The customer will then ship the defective product prepaid to DNF Controls with the RMA number clearly indicated on the customer's shipping document. The merchandise is to be shipped to:

DNF Controls
19770 Bahama St.
Northridge, CA. 91324
USA

Failure to obtain a proper RMA number prior to returning the product may result in the return not being accepted, or in a charge for the required repair.

DNF Controls, at its option, will repair or replace the defective unit. DNF Controls will return the unit prepaid to the customer. The method of shipment is at the discretion of DNF Controls, principally UPS Ground for shipments within the United States of America. Shipments to international customers will be sent via air. Should a customer require the product to be returned in a more expeditious manner, the return shipment will be billed to their freight account.

This warranty will be considered null and void if accident, misuse, abuse, improper line voltage, fire, water, lightning or other acts of God damaged the product. All repair parts are to be supplied by DNF Controls, either directly or through its authorized dealer network. Similarly, any repair work not performed by either DNF Controls or its authorized dealer may void the warranty.

After the warranty period has expired, DNF Controls offers repair services at prices listed in the DNF Controls Price List. DNF Controls reserves the right to refuse repair of any unit outside the warranty period that is deemed non-repairable.

DNF Controls shall not be liable for direct, indirect, incidental, consequential or other types of damage resulting from the use of the product.

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