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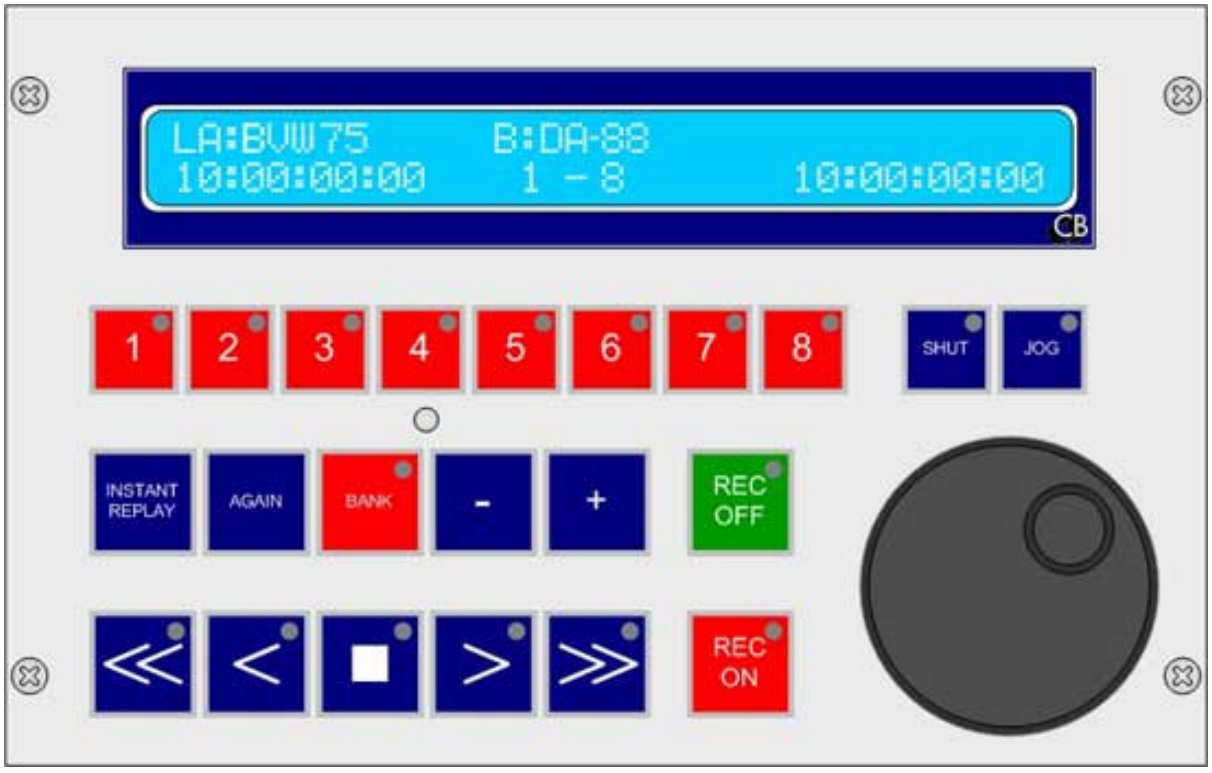
UR422: universal RS422 remote

* Sony P2 protocol Future versions will include Midi and DVD Protocols
* Two RS422 ports ..... Two Outputs or One Input and One Output
* Plug & Play ..... Recognises connected machines and Configurs automaticaly
* Large Display ..... 2 line by 40 character display
* 22 User Definable keys with LED's ..... All keys are user definable via PC Program
* Field software update ..... Software may be updated by user using PC with serial port
* Key functions include ..... Track Arm, Monitor, Edit, Locate, Loop's, Macro's
* Special CB Macro functions ..... Instant Replay, Instant Forward, Again
* Two packages ..... Low Profile Desktop or 2U Rack Mount with tilting panel
* Jog Wheel ..... Precision weighted Low Profile Jog Wheel

UR422 remote is designed as a low cost remote control for general-purpose use. The keyboard is user definable and may be configured to suit specific applications.

When configured with input and output the controller may be connected to a DAW to provide track arming and a Jog/shuttle machine control interface.

When configured with two outputs one may be used to control a video the other to control track arming and master record on/off on a multi-track hard disk or tape.



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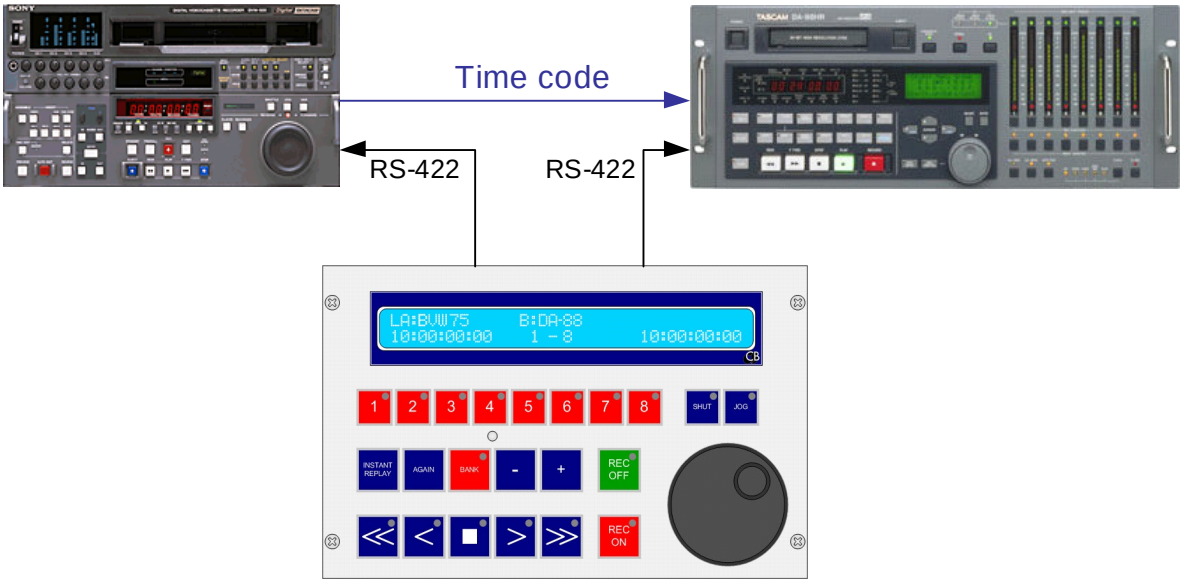
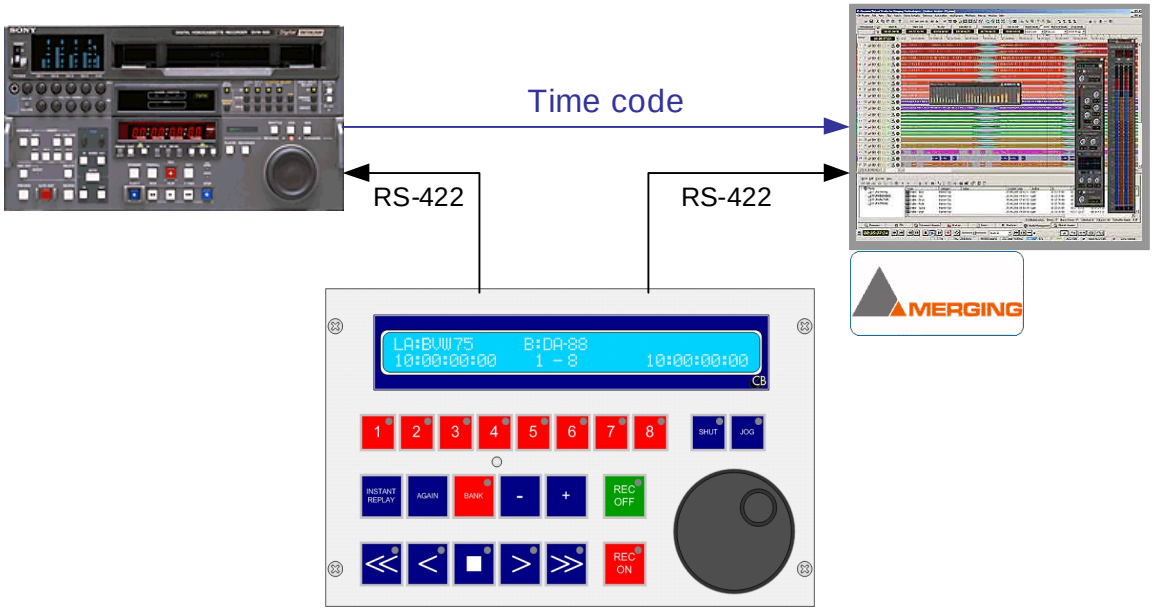
1 Examples

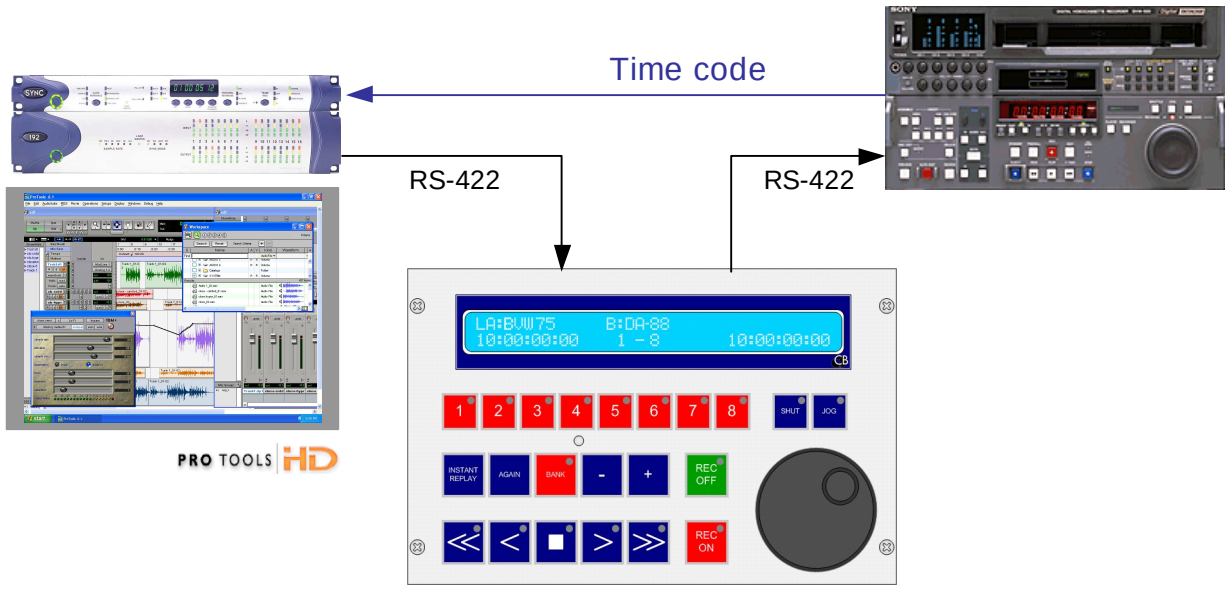
1.1 Controlling a Video and recording on a DA-98 with the UR-422



1.2 Controlling a Video and recording on a DAW(Pyramix) with the UR-422

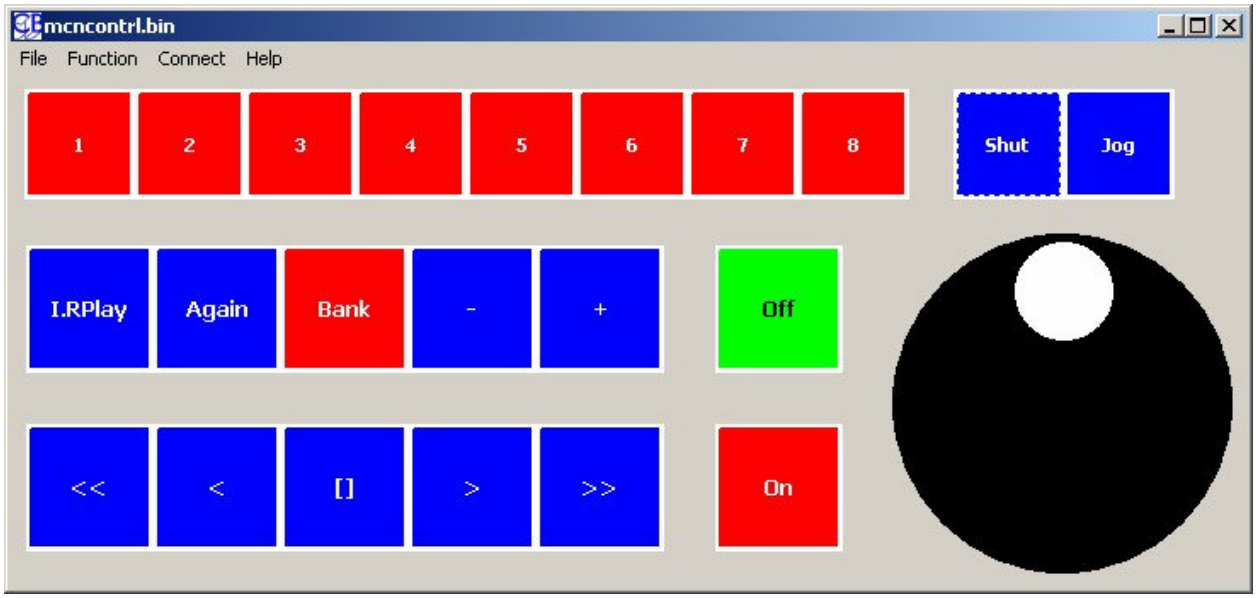


1.3 Using the UR422 in line between a DAW and Video



2 Programming the UR422 key functions

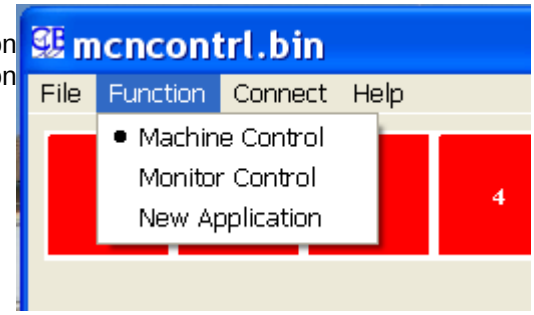
All the keys on the UR422 are user programmable, a free visual programming tool is available from web site www.colinbroad.com.



1 Install the ur422 keyboard definition program on your computer.

1 Launch the program.

1 In the menu select 'Machine Control' from the function column, select monitor control when defineing the keys on our new Monitor Control Unit.



You are now ready to define the keys.

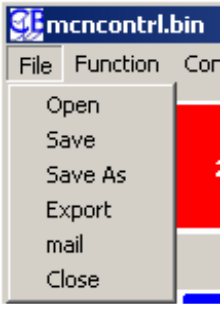
1 Right clicking on any key will bring up a key definition window, select the function for that key.

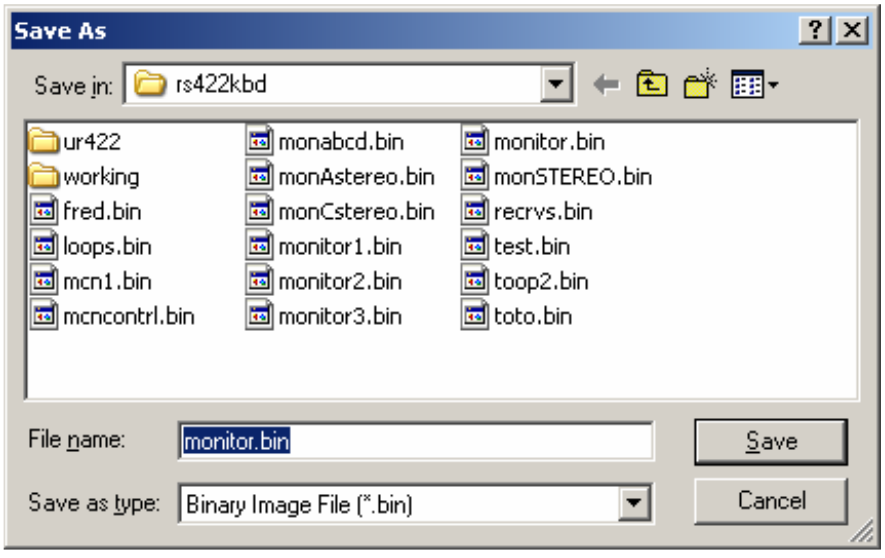
1 The paper key labels may be changed to suit your desired keyboard layout.

1 For exhibition and fixed locates the loops and fixed locate points may be programmed by left clicking on the appropriate keys.

1 Once your keyboard definition file is finished you should save it to disk using 'Save As' . Altenativly you can load and modify an existing file
.

1 Once you have named or loaded a named file the file name is shown in the title bar.





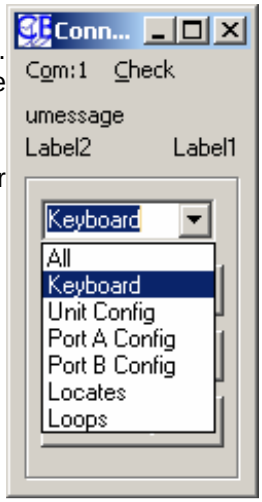
1 Once your keyboard definition file is finished click on 'Connect' in the menu to display the download window.

1 The first time that you use the program you will need to select the comm port number, Click on 'Com' to set, usually '1'.

1 Connect your computer to the UR422 interface port A. The UR422 has a RS422 port, you will need an RS232-RS422 converter. We use the K2 Systems part, these are available from Rapid Electronics in the UK .

1 Ensure that the A port on the UR422 is selected to Input. With the K2 RS422 converter use the Tx-Rx Invert cable at the end of this manual.

1 When sending data to the keyboard (Download) either all data or one section of data may be sent.



2.1 Operation

The keyboard layout may be user defined to suit the application for which you need the remote. As this may be changed at any time, you do not have to get it right first time, but it helps. The Menu may also be used to change the way in which the unit operates, however if you are switching between the two ports continously then fit a port select key!

2.2 Transport control

The transport commands may be sent to either output port or to both at the same time. Basic Transport functions include

Fast Reverse, Reverse Play, Stop, Pause, Play, Fast Forward, Jog, Shuttle

2.3 Locate Commands

The user may select different locate functions as follows

2.31 Again Play

Locate to the last point at which a play command was issued and go into play.

2.32 Instant Replay

Go back 10 Seconds and Enter play

2.33 Locate to entry

First depression selects keyboard entry and flashes LED, enter the required timecode value using the top row of keys (1..8, 9, 0). Depress the locate key again to locate the displayed value. Double clicking the Locate key will repeat locates.

2.34 Step Forward

Locate to the next frame

2.35 Step Reverse

Locate to the previous frame

2.36 Cue to In

Locate to a pre-defined record in point (Define using the [Mark In] key.

2.37 Preroll

Locate to pre-roll before the record in point.

2.38 Locate to Cue (1-8)

Eight keys that may be used as cue and locate keys. Hold the key depressed to capture the current timecode value. Depress and release to locate the stored value.

2.39 Locate to Constant (1-8)

The Timecode cue point is entered using the Windows program, use for constant timecode values, for example if you always start at 00:59:58:00.

2.4 Track arming

The Track arming is determined by both key selection and by the setup menu.

2.41 Assignable Record Keys

Record keys 1-8 are assignable, their function is determined by the menu entrys for each port ('Record Tracks' and 'Analog and Video Record Ready'), the Unit 'Record Cmds' menu, and the Record Bank key. The Record Bank key will cycle through the available tracks on one or both ports dependant on these settings.

Use these keys if you record on more than eight tracks.

2.42 Fixed Record Keys

Keys A-1..A8, A-A1, A-A2, A-TC, A-A4, A-Video, A-Asmb and B-1..B8, B-A1, B-A2,BA-TC, B-A4, B-Video, B-Asmb are port specific and permanently assiged to the specified track. Use these keys if you record on a limited number of tracks.

2.43 Port Record Keys

Keys M-1..M8, M-A1, M-A2, M-TC, M-A4, M-Video, M-Asmb are permanently assiged to the specified track but switch to the current machine port. Use these keys if both machines are the same and you are recording on more that 4 tracks per machine.

3 Setup Menu

The menu is controlled by the top row of keys, the eight keys to the left are the 1-8 numeric keys, the two keys to the right are previous and next keys.

To enter the menu depress the two keys to the right simultaneously.
To step forward through the menus use the next(right key) key.
To step backward through the menus use the left key.
To return to the Root menu depress the two keys to the right simultaneously
To Exit from the menu depress the two keys to the right simultaneously when in the root menu.

3.1 Root Menu

Root Menu, Hyperlink to different menu sections, depress previous & next together to exit from setup menu.

Menu 1 - ROOT: Select Setup Required 1= Unit 2= Port-A 3= Port-B

3.2 Unit Parameters

The unit parameters control the operation of the unit.

3.21 Serial Port A

Serial Port A, This port may be configured as an input (Machine Emulation) or as an output (Controller).

Menu 2 - Port A type 1= O/P 2= I/P

3.22 Transport Commands

The transport commands may be sent to either or both machines

Menu 3 - Transport Cmds 1= Port-A, 2= Port-B, 3= Ports A&B

3.23 Record Cmds

This selects the range of the record bank key.

Menu 4 - Record Cmds 1=Off 2=Port-A 3=Port-B 4=Ports A&B

3.24 Wind Speed

This controls the command sent to the machine when the FWD and RWD keys are depressed.

Menu 5 - Wind Speed 1= Wind, 2= 4*, 3= 6*, 4= 8*, 5= 10*

3.25 Jog Response

This controls the response of the jog wheel,

Menu 6 - Jog Response 1= 2= 3= 4= 5= 6= 7= 8=

3.26 Display type

The user may select to display either the current cotrolled machine and the current record bank or The Current controlled machine and the position of the secodn machine.

Menu 8 - Display 1=Record Bank 2= Two Machines

3.27 Test Display

Used to check the keyboard and jog wheel for faults

Menu 7 - Test Display 1= Normal, 2= Keys, 3= Jog

3.3 Port Parameters

The port parameters are set individually for each port. The port parameters are set from the factory setup when a new machine is discovered, they my then be modified by the user.

3.31 Record Tracks

This value is used by the bank switch to determin how many record tracks to display. The Track amring

command and track arm data request are also controlled by this command.

Menu 9 - Record Tracks 1=Off 2=Alg 3=8 4=16 5=24 6=32 7=40 8=48

3.32 Analog and Video Rec Rdy

Enable or mask record commands to analog and video tracks.

Menu 10 - Analog and Video Rec Rdy 1= Disable 2= A1-A2 3= A1-A2+V 4=Asmb

3.33 Position

This menu selects the position request command sent to the machine and will detewrmin the displayed position of the machine.

Menu 11 - Position 1= LTC 2= VITC 3= L+V 4= Tim-1 5= L+V+T

4 Connections

4.11 T5.03 RS422 (Sony 9 pin) CABLE

Use on UR422 Ports A, B as Controller Outputs

Function UR422 (Controller)	9 pin 'D' Male on cable (Both Ends)	Cable Colour	Function (Controlled Device)
	1		
Rx-	2	Red	Tx-
Tx+	3	Yellow	Rx+
Ground	4	Screen	Ground
	5		
	6		
Rx+	7	Blue	Tx+
Tx-	8	White	Rx-
	9		

4.12 T5.04 RS422 Tx-Rx Invert CABLE

Use on Port A when connected to a Controller

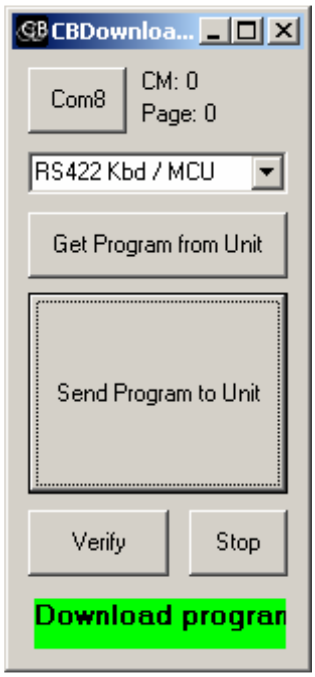
Function	9 pin 'D' Male on Cable	9 pin 'D' Male on cable	Cable Colour
	1	1	
Tx-	2	8	Red
Rx+	3	7	Yellow
Ground	4	4	Screen
	5	5	
	6	6	
Tx+	7	3	Blue
Rx-	8	2	White
	9	9	

4.13 GPIO Connector

Function	9 pin 'D' Male on cable (Both Ends)	Colour	Function
Ground	1		
In 1	2		Tx-
In 2	3		Rx+
In 3	4		Ground
In 4	5		
Out 1	6		
Out 2	7		Tx+
Out 3	8		Rx-
Out 4	9		

5 Software updates

The flash rom of the UR422 may be programmed via the serial port. Software updates will be available on the www.colinbroad.com web site. Use the Download program distributed with this program to update the software via serial port 'A'. We recommend that you get and save the current software before sending new software to the unit.



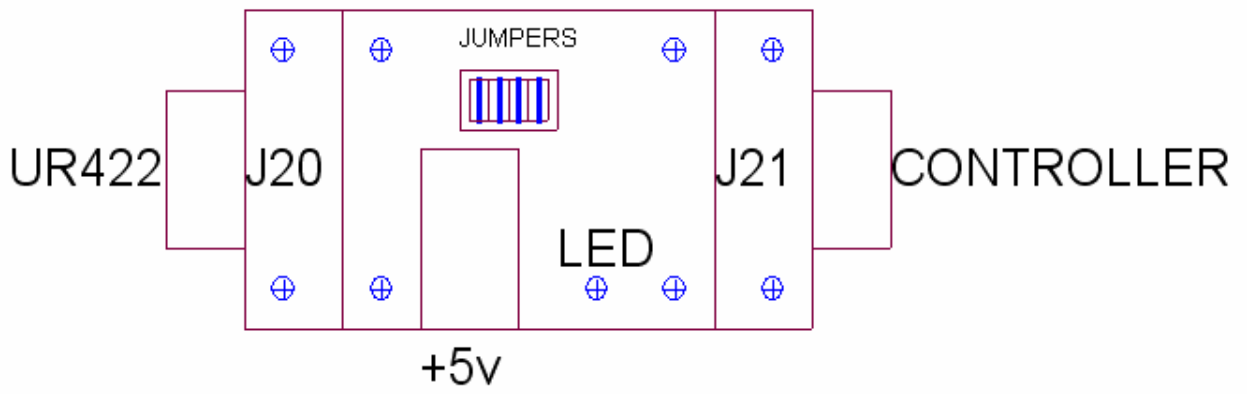
6 TX-RX Invert and Power Adaptor

The power supply adaptor provides two functions

- Power input reducing the number of cables connected directly to the UR422
- Port A is connected as a controller, the jumpers provide a Tx-Rx invert to allow connections as either a controller or as a device.

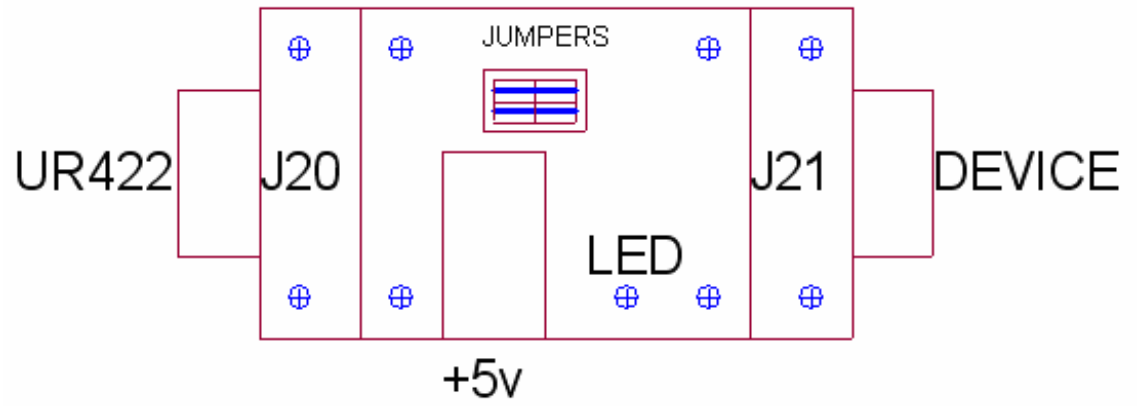
Note: we recommend that you tywrap the power lead to one of the 9 pin cables to prevent acidental disconnection.

6.1 Serial-A: Input power adaptor jumpers when connected to a



controller

6.2 Serial-A: Output: power adaptor jumpers when connected to a



device