



CB Electronics

TFT Remote

Release

Getting Started

Version 1.0





CB Electronics

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Introduction

The TFT Remote control can be used with any of our existing systems or as a new installation with a RM-6 Rack mount synchroniser.

Features

- Connects to RM-6 or existing systems via 9 pin 'D' connector (1:1).
- 9 pin and USB inputs for Consoles and/or CBServer
- 18 LCD Macro keys – Label changes with function
- Matching panels and colour to consoles
- Jog wheel on Larger panels or can replace four switches on DFC Panel
- User configurable panels
- GPIO for special functions

This guide will introduce the TFT Remote control with examples and illustrations

Further information and software upgrades can be found at

www.colinbroad.com/cbsoft/tftremote/tftremote.html

Connections

The TFT Remote has four connectors on the rear as follows

- Serial A: 9 pin 'D' female: Console/CBServer/2nd TFT Remote Input
- Serial B: 9 pin 'D' female: Connection to RM-6 2nd Remote
- USB: Used for Power Console/CBServer/2nd TFT Remote Input.
- 10 pin IDC: GPIO Connector

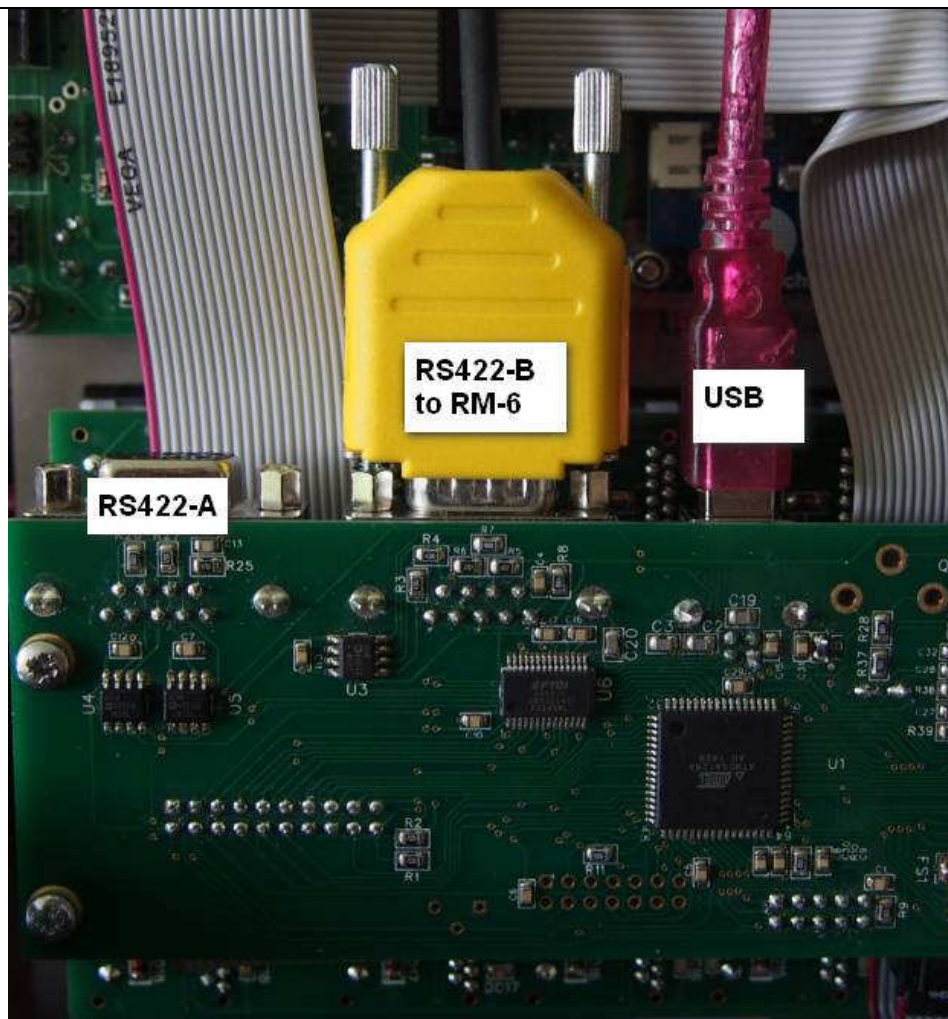


Figure 2: TFT Remote Connections

Installation

The TFT Remote is normally supplied as a panel to drop into your console. We have standard panels for a number of existing consoles (AMS Neve DFC, Harrison, Euphonix...). The unit should be sited in any convenient position away from sources of moisture or excessive heat. The tft display and the LCD button brightness may be adjusted via the setup menu to optimise viewing under different lighting conditions.

Note: the LCD Switch contrast ratio is set by the supply voltage, 5v via the USB is optimal 4.7v is low.

Connecting to a RM-6

Port 'B' on the TFT Remote connects to Port F on the RM-6 using a 1:1 cable(appendix T4).

Connecting to a SR-4

Port 'B' on the TFT Remote connects to Port A on the SR-4 using a 1:1 cable provide the links are set on the SR-4 to Input.



Connecting to a X4/X2 remote

Port 'B' on the TFT Remote connects to Port A on the X2/X4 Remote using a 1:1 cable (appendix T4). Alternatively you can connect to ports 'C' or 'D' on a X4 remote using a Tx:Rx Invert cable (appendix T3)

You can find block diagrams of typical installations at the end of this manual.

Operation

The TFT Rmote control panel provides access to all the available functions of the RM-6. There are a number of different pages that may be selected on the TFT Display using the shift key followed by a Numeric key as follows

<p>Group Page:</p> <p>The group page is the default page on power up and is accessed using [Shift] followed by [1]</p> <p>The Group page displays the currently selected Machine(s). If the selected machine is the Master or a Slave(Chasing) then at the Master machine and all chasing machines are displayed.</p>	
<p>All Page:</p> <p>The All Page is accessed using [shift] followed by [2].</p> <p>The All Page displays the connections to all available ports.</p>	

Arm Page:

The Arm Page is accessed using [shift] followed by [3].

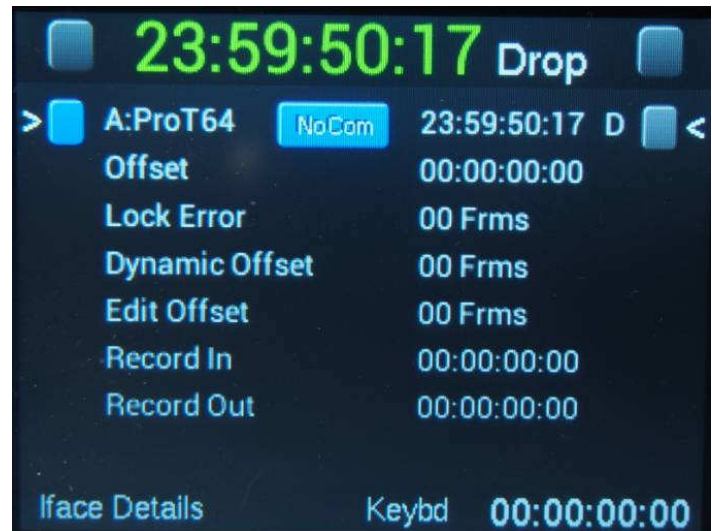
The Arm page displays the track arming on the current record machine (The last selected Record Enabled machine. The current record machine Port, Name and Position are displayed on the top line and the arm status of up to 48 tracks is displayed below. If there are more than 48 tracks [Shift] followed by [3] (arm) will select between pages.



Details Page:

The Details Page is accessed using [shift] followed by [4].

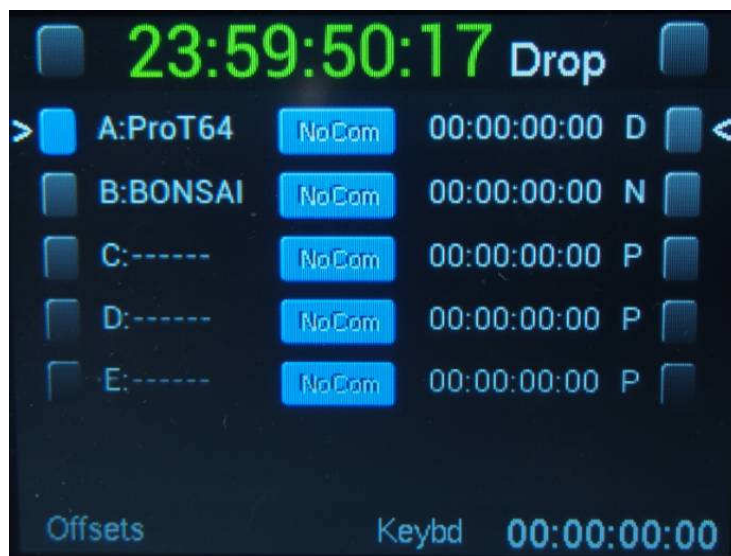
The Details Page displays the parameters for the currently selected machine.



Offset Page:

The Offset Page is accessed using [shift] followed by [5].

The offset page displays the current offset for any machine in the system



System Page:

The Offset Page is accessed using [shift] followed by [6].

The system page displays system user settings as shown



Top Line display:

All Pages have the same top line this displays System Lock, Master Position, Master Standard and System Record. The Master standard is Optional and when disabled the Timecode display is larger.

Setup Menu:

The Setup menu is entered by holding the [Store] or [Recall] key depressed for about 3 seconds, The [Store] key will access the Last Menu accessed, the [Recall] key is used to

access a specified menu directly, enter the number of the required menu and then hold the [Recall] key depressed for about 3 seconds.

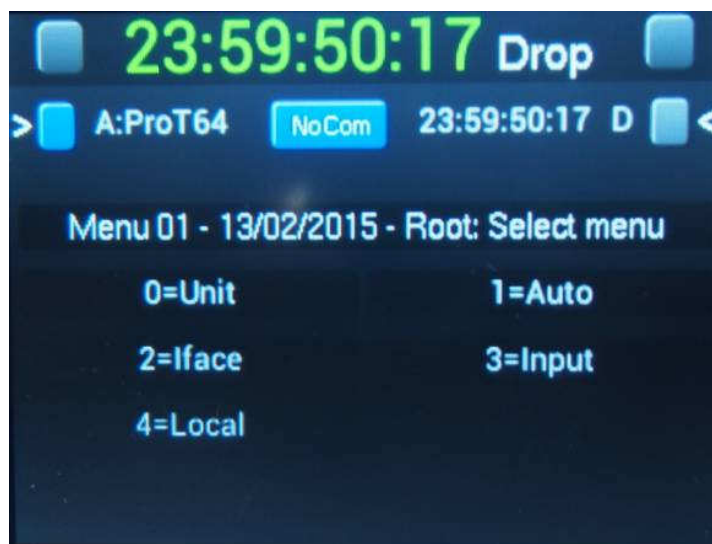
Once the menu is displayed selection is made using the numeric keys and navigation using the [Store] key to access the next menu and the [Recall] key to access the previous menu

See the System Setup section of this manual for more information

Setup Menu:

Access the Setup Menu by holding [Store] or [Recall] depressed for approx 3 seconds. To navigate the Menu first use the keyboard to select the Menu Group required then use [Store] to step to the next menu and [Recall] to step to the previous Menu. Use the keyboard to select the setting.

To exit hold [Store] depressed to return to the root menu, then hold [Store] depressed to exit.



TFT Remote Controls

Apart from the numeric keypad, [Shift], [Store] and [Recall] all keys on the keyboard are programmable using the UR-422-Mac or UR422-Win program. 18 of the keys are LCD keys so that when the function changes the key label and led colour when the key is re-programmed.

Note. As the UR-422 program is written for a number of keyboards. You must select the appropriate keyboard before programming the keys. Once selected the program will remember your selection.



Setting up TFT Remote for the first time or Software Update

Factory Default:

We recommend that you start from the factory default initially and when update the software.

Special Key Combinations

There is never space for enough keys, The following key combinations are used for commands that are also available as macro keys.

Make Master

[Shift] followed by the machine select key – Reader, Generator, A, B, C, D, E

Note. The normal keys are green when selected or part of a group, the master is Blue

Add/Remove Machines from group

Macro Keys

Most of the keys on the TFT Remote keyboard are macro keys, the only exceptions are the Numeric Keyboard, Store, Recall, and Shift. There are two settings for the keyboard, Factory and User, the Factory setting allow a quick return to a know layout. The user setting once programmed can be recalled just as quickly. By default the keyboard macros are locked, you must unlock the keyboard before you can make any changes!

Locking/Unlocking the keyboard macro's

The Macros may be Locked from the Macro Protection menu in the Configuration Menu
Root\Unit\Generic

Recalling Factory Macro's

The factory setup may be Recalled from the Macro Protection menu in the Configuration Menu
Root\Unit\Generic

Recalling User Macro's

The User setup may be Recalled from the Macro Protection menu in the Configuration Menu
Root\Unit\Generic

Saving the current keyboard to user memory

The User setup may be stored in non volatile user memory from the Macro Protection menu in the Configuration Menu
Root\Unit\Generic

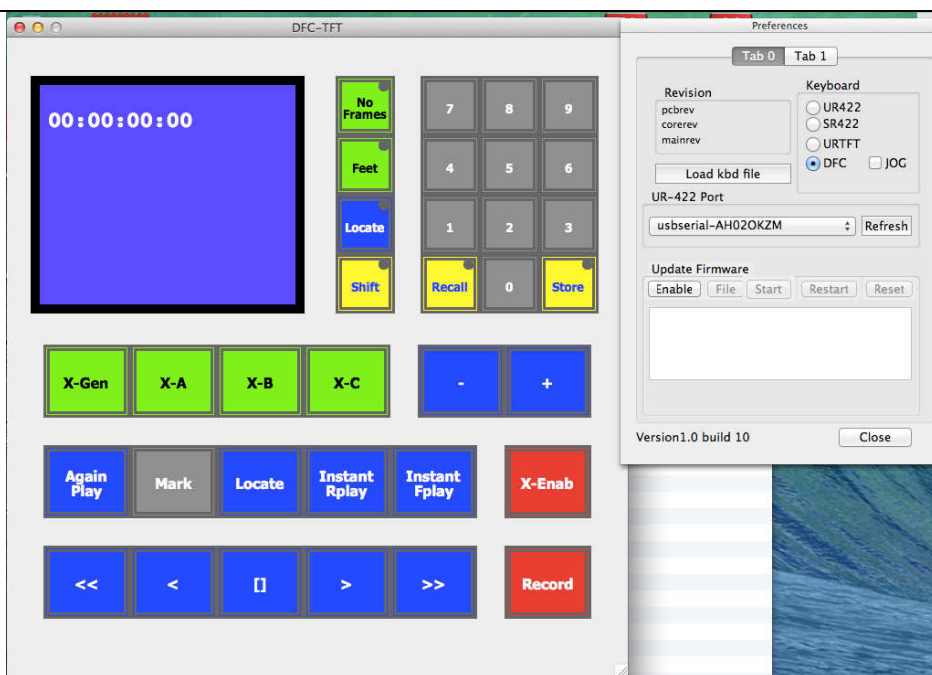
Programming the macro keys from Windows or Mac

Download and install UR422usb-win.zip or UR422usb-mac.zip from here

<http://www.colinbroad.com/cbsoft/ur422usb/UR422usb.html>

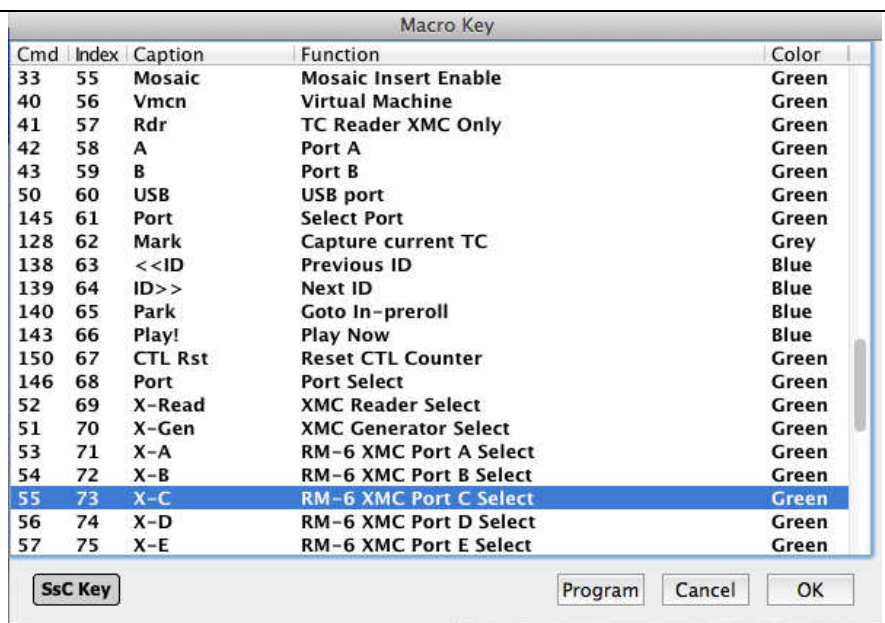
You may also need to install the FTDI VCP drivers on the PC or earlier Mac's (The driver is included from Mavericks onwards), you can find a link to FTDI on the same page.

Connect the keyboard to the PC or Mac using the USB, run the program and select the appropriate keyboard from view/preferences. You can also select the serial port from the same window.



To reprogram a key, right click on the key to display a list of available key functions. Select the required function and then Click on OK. This will close the window and immediately program the key.

You can save, recall, lock and unlock the key macro's from the Read/Write keys menu.





Programming keys from the keyboard

Every macro command has a number; you can see this number in the Cmd column in the macro window of the ur422usb program. You can recall the Cmd number of any key using [Shift], followed by [Recall], followed by the key.

Examples –

[Shift], [Recall], [Stop] will display

Macro 15:00:00:01

Where 15 is the key number and 00:01 is the macro number

[Shift], [Recall], [Instant Replay] will display

Macro 10:00:01:34

Where 10 is the key number and 01:34 is the macro number

The key number is not used as you can program any macro to any key!

To change the [Instant Replay] key to [Rollback], enter the rollback command number (136), the display will then show

Keybd 00:00:01:36

Then [Shift] followed by [Store] followed by [Instant Replay], the display will show

Macro 10:00:01:36 and the key label will change to [Rollback].

System Setup

The Setup menu is entered by depressing holding the [Store] or [Recall] key depressed for about 3 seconds, The [Store] key will access the Last Menu accessed, the [Recall] key is used to access a specified menu directly, enter the number of the required menu and then hold the [Recall] key depressed for about 3 seconds.

Once the menu is displayed selection is made using the numeric keys and navigation using the [Store] key to access the next menu and the [Recall] key to The setup menu is entered by holding the [Page] depressed for approximately 3 seconds

Root Menu:

Use the Numeric keys to make selections and [Store] step forward and [Recall] to step backwards though the menu.

Note: S/W Build Date in the Root menu.



- | | |
|----------------|---|
| 0=Unit | Select unit setup menu, global parameters that determine system operation and are not machine specific. |
| 1=Auto | Auto Record/ADR Loop entry and Option selection |
| 2=Iface | The currently selected Serial port protocol and its connected machine control parameters, once setup is entered it is not possible to change the selected port. |
| 3=Input | Sony P2 Setup, this menu controls the interface between the system and any RS422 controller connected to the system |
| 4=Local | Controller Display and keyboard options |

Unit Menu's



Menu 02 – Select Unit Menu

Menu 02 - Select Unit menu			
0=Record	1=Chase	2=Code	3=Generic

After selecting 0= Unit from the ROOT hyperlinks to access different sections.

- 0= Rec** Record functions
- 1= Chase** Chase/Synchroniser functions
- 2= Code** Timecode Reader/Generator functions
- 3= Generic** Other functions

Unit Record Menu's

Menu 03 – Initial Record Command

Menu 03 - Initial Record Command		
0=Record	1=Record+Play	2=None

From play, use either the RECORD key only or both RECORD and PLAY to enter record.

Menu 04 – Check Lock Status

Menu 04 – Check Lock Status	
0= Yes	1= No

- 0= Yes** Check for system lock before record
- 1= No** No check for system lock before record

Menu 05 – Master or Rec Enabled Offset Change

Menu 05 – Master or RecordEnabled Offset Change	
0= Disabled	1= Enabled

- 0= Disabled** Offset change on record enabled machines is disabled.
- 1= Enabled** Offset change on record enabled machines is enabled



Menu 06 – Virtual Record Tally

Menu 06 – Virtual Record Tally	
0= Off	1= On

0= Off Record tally is on only if one or more machines are in Record.

1= On Record tally is ON if a record command has been sent or one or more machines are in Record.

Menu 07 – Track Arm Keys

Menu 07 – Track Arm Keys			
0= System	1= Follow Mcn	2= Follow Enab	3= Macro

The track arm keys have four modes of operation as follows:

0= System The track arming keys may access any combination of tracks and machines across the system. The Track Arming keys may be programmed individually (enter Mcn:Track followed by [Shift] followed by [Store] followed by Track arm key) or the tracks from the currently enabled machines may be mapped across the record keys by depressing [Record] and [track arm key 1].

1= Mcn The track arming keys are assigned to a single machine selected with the current selected machine.

2= Enabled Track arming keys are assigned to a single machine that follows the last record enabled machine selected.

3= Macro Track arming keys are assigned to a single machine selected by macro keys 104..107. It is not necessary to select this mode in the menu as it is selected when a macro key is depressed.

Menu 08 – Record track Arm

Menu 08 – Record Track Arm		
0= Ready	1= Ready/Record	2= Record

This modifies the way in which track arming operates as follows:-

0= Ready Track arming as per multitrack, track arm keys put tracks into ready on or ready of mode. Depressing the Record key or Record & Play keys will then send the command.



1= Ready/Record Track arming as per video machine, track arm keys put tracks into ready if the machine is not in record, if the machine is in record then the track arm keys will put the selected tracks into record.

2= Record Track arming as per film, track arm keys will put tracks into record directly, there is no ready state.

Menu 09 – Check for Record

Menu 09 – Check for Record

0= Off

1= On

When Enabled, the system will stop if any record enabled machine is NOT in record after a record command has been sent.

Menu 10 – Rec-In & Rec Out Keys

Menu 10 – Rec In & Rec Out Keys

0= Mark & Store

1= Off

2= Store

The Function of the [In] and [Out] keys when used without Shift/Store/Recall/Trim active is modified by this parameter.

0= Mark & Store Grab the current machine position and store as Record In or Out.

1= Off No Action.

2= Store Store the current keyboard display as record In or Out.

Menu 11 – Default Analog & Video Record Ready

Menu 11 – Default Analog & Video Record Ready

0= Disable

1= A1-A2

2= A1-A2+V

3= Asmb

When a new video machine is connected to the system the initial setting of its Analogue, Video and Assemble Enable parameters will be configured dependant on this parameter.

Note1. To Insert edit on the timecode or cue tracks (A3, A4), select 3= Asmb

Note 2. To Enable Crash Record select 3= Asmb

Menu 12 – Default Record Enable

Menu 12 – Default Record Enable

0= Off

1= Audio Machines

2= All Machines

Off: Machines will not be record enabled when connected



Audio: Audio machines when connected will be record enabled, video machines will not

All: All machines will be record enabled when connected

Menu 13 – Record Disable Transport Keys

Menu 13 – Record Disable Transport Keys	
0= No	1= Yes

No: All Transport keys are active when in record.

Yes: All transport keys except Stop and Play are disabled when in record.

Menu 14 – Mark Record In

Menu 14 – Mark Record In	
0= Yes	1=No

0=Yes: The timecode value at which the record key is depressed is saved in the Mark Store

1=No: No action.

Unit Chase Menu's

Menu 15 – Wait for Slaves

Menu 15 – Wait for Slaves	
0= No	1= Yes

0= No Play the master machine when play key depressed.

1= Yes When the play key is depressed stop the master machine and wait for all slaves to park before sending a play command to the master machine. This is indicated by the Play LED flashing.

Menu 16 – Group Locates

Menu16 – Group Locates	
0= No	1= Yes

1= Yes All chasing machines will locate independently to the cue point after a locate command.

0= No All chasing machines will follow the master machine during a locate.



Menu 17 – Master when in Play

Menu 17 – Master when in Play	
0= Off	1= Generator

This allows the user to specify the generator as the master machine in Play

Menu 18 – Stop Command

Menu 18 – Stop Command		
0= Pause/Stop	1= Locate Here	2= Separate

Menu 19 – Timed Start Enable

Menu 19 – Timed Start Enable									
0= Off	1= 2frms	2= 4frms	3= 6frms	4= 8frms	5= 10frms	6= 12frms	7= 14frms	8= 16frms	9= 18frms

Unit Time Code Menu's

Menu 20 – Reader Dropout / Master Code Jump

Menu 20 – Rdr Dropout / Master Code Jump		
0= Ignore Dropout	1= 10 frm dropout	2= Re-Lock

Menu 21 – System Standard

Menu 21 – System Standard			
0= 25	1= 30	2= 24	3= Drop

In normal operation the system will setup the timecode standard automatically by reading the timecode standard of the master machine. Any machine with a different standard to the master machine will be indicated by adding a letter to indicate the standard at the end of the machine name (P=PAL, N=NTSC, D=Drop, F=Film). Note: Drop and Non-Drop codes may be mixed.



Menu 22 – Stationary Code

Menu 22 – Stationary Code	
0= 2 Secs	1= Continuous

Menu 23 – Film Speed

Menu 23 -		
0= 25	1= 30	2= 24

When the Time/Feet macro key is enabled this is the assumed standard of the film footage when displayed and will be used for all conversions. The footage displayed is calculated as follows:-

Footage = (Timecode - Local Zero)*Film Speed/Timecode Standard

Menu 24 – Default Timecode Standard

Menu 22 – Default Timecode Standard	
0=	1=

When a new machine is connected to the system the initial setting of its timecode standard source parameter is determined by this global parameter.

0= Auto Use the timecode standard as reported by the machine

1= Use System Use the System timecode Standard.

Default Setting 1= Use System.

Menu 25 – TC Reader -> Serial Port

Menu 25 – TC Reader -> Serial Port					
0= Off	1= A	2= B	3= C	4= D	5= E

The timecode reader may be used for positional information in preference to the serial data, this menu selects which port uses the timecode reader data.

Menu 26 – Reader Incremental & Direction Test

Menu 26 – Reader Incremental & Direction Test	
0= On	1= Off

This turns off both the incremental code test and the direction test on the LTC timecode reader. This may be useful chasing generated code e.g. from the MWA VFS film control system, or DA-88.

Menu 27 – System Frame Reference

Menu 27 – System Frame Reference		
0= Video	1= Reader/Video	2= Reader

To allow non-standard frame rates the timecode reader frame edge may be used as the master reference to the system

Unit Generic Menu's

Menu 28 – Macro protection

Menu 28 – Macro Protection				
0= Off	1= On	2= Read User	3= Read Factory	4= Write User

This menu provides two functions

- 1) Enable and disable changes to the keyboard, Macro keys, pre-roll ...
- 2) Control access to the EEPROM and FACTORY setups

The addition of an EEPROM to the system allows the user to select between three different settings as follows:

- 1)Current: destroyed when Read User or Read Factory are selected or a Hard Reset command.
- 2)User: selected by Read User or a hard reset command
- 3)Factory: selected by Read Factory

This Menu controls access to user settings and the EEPROM

- 0= Off** Macro's can be changed from the keyboard.
- System Track Arm Keys may be changed from the keyboard
- Pre/Post Roll May be changed from the keyboard
- 1= On** Macro's cannot be changed from the keyboard
- System Track Arm Keys cannot be changed from the keyboard
- Pre/Post Roll cannot be changed from the keyboard



- 2= Rd Usr** On exit from Setup the unit will read User Setup from EEPROM, the macro protection will default to 1= On. This is activated on leaving setup. Simultaneous depression of [Recall] and [7] will read the User setup.
- 3= Rd Factory** On exit from Setup the unit will read the Read Factory Setup from EPROM, the macro protection will default to 1= On. This is activated on leaving setup. Simultaneous depression of [Recall] and [4] will read the Factory setup.
- 4= Wr Usr** Setup the unit to work in your preferred manner then select to write current setup to EEPROM, the macro protection will default to 1= On. This is activated on leaving setup and may take up to 20 seconds to complete the write. Simultaneous depression of [Store] and [7] will write to the user setup to memory.

Menu 29 – Power up Settings

Menu 29 – Power Up Settings	
0= Battery ram	1= reset to User

Menu 30 – GP Outputs 4,5,6

Menu 30 – GP outputs 4,5,6						
0=GP	1=Record	2=Tally	3=Mcn	4=Master	5=Reader	6=ADR

The SR-4 and RM-6 have 6 GP Outputs in total. On the SR-4 the outputs are TTL and active high. On the RM-6 the outputs are Open Collector and Active Low.

The functions of GP Outputs 4,5,6 are determined by this setting:-

- 0=GP** Scratch pad stores "Shift-1", "Shift-2", "Shift-3" are used as timecode coincidence detectors, the GP Outputs are active when the master timecode is the same as the stored value. e.g. to fire GP Output 4 at 01:00:00:00, enter 01:00:00:00 to the keyboard display then [Store] followed by [Shift] followed [1]
- 1=Rec** GP Output 4 (pin 6): RECORD ON High for one frame at 'Rec Adv' before the record in point.
- GP Output 5 (pin 19): RECORD OFF High for one frame at 'Rec Adv' before the record out point.
- GP Output 6 (pin 7) : Streamer Trigger High for one frame at a preset time (Nominal 3 seconds, scratch pad store "Shift-9" is used to set the streamer advance) before the Record In point or before Scratch pad store "9".



[Recall] or [Store] followed by [Record] will access the Rec Adv memory.

[Recall] or [Store] followed by [Shift] followed by [9] will access the Streamer Advance memory.

2=Tally GP Outputs 4,5,6 are used with a parallel remote control as encoded tallies.

3=Mcn GP Outputs 4,5,6 are used as encoded outputs to indicate the current selected Port.

Port A = 000, Port B = 001, Port C = 010, Port D = 011, Port E = 100

4=Master GP Outputs 4,5,6 are used as encode outputs to indicate the current selected Master Port.

Port A = 000, Port B = 001, Port C = 010, Port D = 011, Port E = 100

5=Rdr GP Outputs 4,5,6 are used as encoded machine control outputs when the Reader is selected. For example when used with a Telecine.

Stop = 000, Play = 001, Rvs Play = 010, Fast Fwd = 011, Fast Rvs = 100,

Rvs Crawl = 101, Fwd Crawl = 110

6=ADR GP Output 4 (pin 6): Red Light High during pre-roll and record.

GP Output 5 (pin 19): Beep High for one frame three times at 0.6 second intervals before the record in point.

GP Output 6 (pin 7) : Streamer Trigger High for one frame at a preset time (Nominal 3 seconds, scratch pad store "Shift-9" is used to set the streamer advance) before the Record In point or before Scratch pad store "9".

[Recall] or [Store] followed by [Record] will access the Rec Adv memory.

[Recall] or [Store] followed by [Shift] followed by [9] will access the Streamer Advance memory

Menu 31 – GP Output 3 Mute / Red Light

Menu 31 – GP output 3 Mute/Red Light

0= Mute Play	1= Play+Rvs	2= Play+Rec	3= ADR	4= Red Light
--------------	-------------	-------------	--------	--------------

GP Output 3 may be used as a Mute or Red Light output.

0= Mute PL Mute except when in Locked Play

1= Mute PL+R Mute except when in Locked Play or Reverse play

2= Rec Mute Mute when in record or rehearse.



3= ADR Mute always when rehearse, Auto, or Manual ADR modes are active.
Normal Mute Play when Rehearse mode active or ADR off.

4= Red L Use GP3 as a Red light output, see also Macro No.

Menu 32 – Enable Auto-In when NOT Play

Menu 32 – Enable Auto-In when NOT Play

0= No

1= Yes

When enabled all record enabled channels will switch to input monitor when not in Play (assuming machine accepts command).

Note. On the Doremi V1 this command illuminates the Record Tally.

Menu 33 – Setup Menu Access

Menu 33 – Setup Menu Access

0= Recall+Store

1= Shift

2= Password

This menu controls access to the Setup Menu

0= Setup Depress [Setup]

1= Shift, Setup Depress [Shift] followed by [Setup]

2= Password Enter the password 00:00:19:84 then Depress [Setup]

Menu 34 – ID<> Key Function

Menu 34 – ID <> Key Function

0= Auto

1= Mark

2= Loop

3= Step

4= VS Link

IFACE Menu's

Menu 35 – Select Iface Menu

Menu 35 -

0= Record

1= Chase

2= General

Hyperlink to required section



IFACE Record Menu's

Menu 36 – Record Tracks

Menu 36 - Record Tracks								
0= Off	1= Analog	2= 8	3= 16	4= 24	5= 48	6= 64	7= 80	8= 96

The record command sent to the machine depends on the number of digital channels as follows:-

- 0= Off** No Track arm commands sent to machine, track arm on the machine or machine remote.
- 1=Alg** Analogue 1-4, Video, and Assemble only
- 2=8** Analogue 1-4, Video, Assemble and up to 8 Digital Record channels.
- 3=16** Analogue 1-4, Video, Assemble and up to 16 Digital Record channels.

.....

Menu 37 – Analog & Video Record Ready

Menu 37 – Analog & Video Record Ready			
0= Disable	1= A1-A2	2= A1-A2+V	3= Asmb

To enable crash record or insert edit on the Timecode or Cue tracks (A3 & A4) select 3=Asmb.

Menu 38 – Record Tally

Menu 38 – Record Tally		
0= Record or Edit	1= Record	2= Edit

Some non-edit machines give a permanent Edit tally (for example the VO9600), if this is the case select the appropriate tally source to disable.

Menu 39 – Record Command

Menu 39 – Record Command		
0= Edit On/Off	1= Record/Play	2= Arm Only

Some Non-Edit machines will only accept a record command and not an Edit command



Menu 40 – Rehearse Advance

Menu 40 – Rehearse Advance									
0	1	2	3	4	5	6	7	8	9
frm	frm	frms	frms	frms	frms	frms	frms	frms	frms

This parameter sets the individual machine record advance for use in Auto or instant record. Adjust this parameter to set the actual record in point using auto record.

Menu 41 – Record Advance

Menu 41 – Record Advance									
0	1	2	3	4	5	6	7	8	9
frm	frm	frms	frms	frms	frms	frms	frms	frms	frms

This parameter sets the individual machine record advance for use in Auto or instant record. Adjust this parameter to set the actual record in point using auto record.

Menu 42 – Track Ready Tallies

Menu 42 – Track Ready Tallies				
0= Valid	1= Display	2= Ready/Status	3= Status	4= Invalid

0= Valid Valid Tallies from Machine, use Tallies to display and generate new commands.

1= Disp Use tallies to display only

2= RdyStat Use Tallies from "Request Ready Status" command only.

3= Stat Use Tallies from "Request Status" command only.

4=NV Tallies Not valid use last track ready command as tally.

The SR-4 is set-up to give true record tallies to the user, when the machine gives true tallies this works very well, unfortunately not all machines give true tallies, in this case the only solution is to use the SR-4 commands to generate dummy tallies.

Menu 43 – Auto Record

Menu 43 – Auto Record		
0= Mid Frm	1= Start Frm	2= Tell Machine



Menu 44 – Crash Rec Set Generator

Menu 44 – Crash Rec Set Generator	
0= No	1= Yes

Menu 45 – Record Inhibit

Menu 45 – Record Inhibit	
0= Valid	1= Ignore

IFACE Chase Menu's

Menu 46 – Chase Type

Menu 46 - Chase Type						
0= Cmd	1= Play	2= Loc-Play	3= RS422-	4= RS422+	5= RS422-+	6= ISync

Using the Machine's internal Synchroniser

0= CMD Issue chase command to machine

Using Just Play and Locate

1= Play Issue Play command to machine

2= Loc-Play Locate Ahead and Issue Play command to machine

Using the SR-4 Synchroniser

3= RS422- Lockup one frame behind and then Accelerate

4= RS422+ Lockup one frame ahead and then Decelerate

5= RS422-+ Lockup from behind or ahead with acceleration or deceleration

6- ISync Pro Tools "Play from Here" Command

Menu 47 – Initial Play Command

Menu 47 – Initial Play Command			
0= Play	1= Variplay	2= Play No Audio	3= ISync

Menu 48 – Slew Command

Menu 48 - Slew Command					
0= Vari-Play	1= Shuttle	2= jog	3= Prog Play	4= VariP>ProgPlay	5= Offset

Select the Slew command type:-

- 0= Vari-P** Use variplay command followed by play
- 1= Shutt** Use Shuttle command followed by play
- 2= Jog** Use jog command followed by play
- 3= PP** Use Programable Play command
- 4= V->PP** For variplay for initial lock and Programable Play for subsequent attempts.
- 5= Offset** Send Play Command then correction command

Menu 49 – Start Advance in Frames

Menu 49 – Start Advance in Frames									
0	1	2	3	4	5	6	7	8	9

Only valid when used with Park Offset or Delayed Play, to set this parameter select chase type 1, and adjust for 0 or -1 frame offset from stop to play (Chase type 3), or 0 or 1 frame offset (Chase type 4), +/-1 frame offset (Chase type 5).

Menu 50 – Learn Start Advance

Menu 50 – Learn Start Advance?		
0= Learn	1= Learn Off	2= Learn Off+10

Menu 51 – Park Offset / Locate Ahead

Menu 51- Park Offset / locate Ahead									
0=	1=	2=	3=	4=	5=	6=	7=	8=	9=
0frm	5frms	10frms	15frms	20frms	25frms	30frms	35frms	40frms	45frms



The park offset is not normally used for video machines. A park offset will allow more consistent starts and allow time for the machine to lace.

Menu 52 – Wait for Stable Code

Menu 52 – Wait for Stable Code									
0=	1=	2=	3=	4=	5=	6=	7=	8=	9=
0frm	3frms	6frms	9frms	12frms	15frms	18frms	21frms	24frms	27frms

After the initial play command is issued the SR-4 will wait for the specified number of frames before attempting to servo the slave machine. This parameter is useful on machines (for instance the DA-88) which give incorrect positional information during start-up.

Menu 53 – Minimum Slew Speed

Menu 53 – Minimum Slew Speed			
0= Off	1=	2=	3=

Menu 51 – Maximum Slew Speed

Menu 54 – Maximum Slew Speed									
0	1	2	3	4	5	6	7	8	9=Max

This parameter limits the maximum speed of the machine when locking. When locking the lock algorithm determines the speed of the machine dependant on the distance to lock, the father away from lock the faster or slower the machine. Some servo's lose stability at high speeds, hard disk machines may not be able to output audio above a certain speed.

Menu 55 – Wait for Lock Tally

Menu 55 – Wait for Lock Tally	
0= Yes	1= No

Normally set to Yes for tape based machines, after slewing to lock, the system waits for 5 frames and then a lock tally from the machine before checking for lock. Set to NO for Pro-Tools, the system will then check after 5 frames without waiting for a lock tally.

Menu 56 – Report Lock On

Menu 56 – Report Lock On



0= Servo Lock	1= Play Tally	2=Play Tally if Master
---------------	---------------	------------------------

A number of machines do not support a servo lock tally (MX2424 as a master, Doremi without video syncs) This parameter allows you to select the play tally as a lock tally. For Pro Tools use 2=Play tally if Master.

Menu 57 – Acceptable Error

Menu 57 – Acceptable Error									
0= None	1= frm	2= frms	3= frms	4= frms	5= frms	6= frms	7= frms	8= frms	9= frms

After the initial lock and 1 second of locked play no action will be taken unless the error exceeds the acceptable error window. this should be normally set at one frame to allow for occasional jitter. This parameter allows the playback from machines where the timecode has been recorded incorrectly.

Menu 58 – Serial Position Request

Menu 58 – Serial Position Request			
0= Middle	1= Start	2= Middle Only	3= Start Only

This parameter controls the timing of the serial communications between the SR/MR and the controlled machine as follows:-

- 0= Mid** Position request sent in mid frame, Status request sent at start of frame.
- 1= Start** Position request sent at start of frame, Status request sent in Mid frame.
- 2= Mid-Only** Position Request and Status request send in middle of alternate frames.
- 3= Start-Only** Position Request and Status request send at the start of alternate frames.

Menu 59 – Reverse Slew Command

Menu 59 – Reverse Slew Command			
0= Vari-Play	1= Shuttle	2= Jog	3= Offset

Select the command to use for reverse play synchronisation, the best is Vari-Play, but not all machines implement this command or allow more than *1 reverse play. Check the setup of your video machine!

Menu 60 – Locate Speed

Menu 60 – Locate Speed				
0= Tapeless	1= Fast	2= Medium	3= Slow	4= Very Slow



0= Tapeless Instant Hard Disk access

Chasing a Master at Play Speed

The Locate speed determines whether a slave can catch up with a moving master, as the slave gets closer to the master its locate speed will decrease, once the slave locate velocity is at play speed it can never catch up with the master.

Set this parameter when chasing a master in play from behind, start from 0 and increase until the slave catches up with the master and enters play

Menu 61 – Locate Type

Menu 61 – Locate type		
0= Locate	1= Locate & wind	2= Locate not Fast
0= Locate	Locate by issuing Locate command	
1= Loc+Wind	If distance greater than 1 minute then Wind, when distance less than 1 minute then locate to point.	

Menu 62 – Locate Interval

Menu 62 – Locate Interval							
0= 1 frm	1= 3 frms	2= 5 frms	3= 7 frms	4= 9 frms	5= 11 frms	6= 13 frms	7= 15 frms

Menu 63 – Dynamic Offset

Menu 63 – Dynamic Offset									
0=	1=	2=	3=	4=	5=	6=	7=	8=	9=
-1 frm	0 frms	1 frm	2 frms	3 frms	4 frms	5 frms	6 frms	7 frms	8 frms

Some Machines can have an offset between the RS422 and Timecode when in play, this parameter allows you to specify a correction factor to adjust for this.

Note: The correction factor is not used when the machine is not playing.

To check the correct value for this parameter

1) Select Root | 0=Unit | 2= Code | Menu 25: Slave Tally Source 2= Error. This will enable the error display in frames and 1/10's in the centre of the upper line.

2) Connect the timecode output from the machine to the timecode input on the timecode and GPI In/Out on the SR/MR controller.

3) Select the machine port required.



4) Play the machine and check the error. Changing this parameter will directly adjust the error displayed

Menu 64 – Edit Offset

Menu 64 – Edit Offset									
0=	1=	2=	3=	4=	5=	6=	7=	8=	9=
-1 frm	0 frms	1 frm	2 frms	3 frms	4 frms	5 frms	6 frms	7 frms	8 frms

Menu 65 – Reverse Offset

Menu 65 – Reverse Offset						
0= -3frms	1= -2frms	2= -1frm	3= 0 frms	4= +1frm	5= +2frms	6= +3frms

Menu 66 – Continuous Timecode Chase

Menu 66 – Continuous Timecode Chase	
0= Off	1= On

This parameter has been added to allow continuous off-speed synchronisation. To synchronise off speed video syncs are not used and the timecode reader must be used as the positional reference for the machine for the off speed machine. This parameter will default to zero!

IFACE General Menu's

Menu 67 – Machine Type

Menu 67 – Machine Type			
0= VTR	1= Digital VTR	2= ATR	3= DAT 1

This parameter determines some initial settings depending on the machine type

VTR	VTR with no digital audio tracks
Digital VTR	VTR with Digital Audio tracks
ATR	Audio Recorder



DAT-1

TFT Remote Control

A Stereo DAT with stereo record only.

Menu 68 – Position Request

Menu 68 – Position Request				
0= LTC	1= VITC	2= LTC+VITC	3= Timer-1	4= LTC+VITC+Timer

Menu 69 – Pause/Stop Command

Menu 69 – Pause/Stop Command			
0= Normal	1= Stop	2= Jog@Zero	3= Shuttle@Zero

Some video machines will unlace if a STOP command is sent, for these machine it is possible to send a Jog or Shuttle at Zero Velocity which will stop the VTR in a laced mode.

Menu 70 – Timecode Standard

Menu 70 – Timecode Standard	
0= Auto	1= Use System

0= Auto Use Standard as reported by machine

1= Use System Use Master Standard as defined by the Master machine or in Unit Setup.

Menu 71 – Auto Unlace

Menu 71 – Auto Unlace	
0= Enabled	1= Disabled

This parameter allows you to disable the auto-unlace and rely on the machines unlace function.

Menu 72 – Colour Framing

Menu 72 – Colour Framing		
0= Off	1= 4 Field	2= 8 Field

This Parameter determines the colour framing of the machine when in Play and a Slave. At all other times the Colour framing is determined by the machine Setting (switch or menu).

The normal setting for audio applications is 0= Off. Any other setting can cause sync problems.



Menu 73 – Extended Status Request

Menu 73 – Extended Status Request	
0= On	1= Off

The serial interface requests the status data in two blocks of 8 bytes, some machines have not implemented the offset status data request and always return the same data. This parameter allows the user to disable the extended status request.

Menu 74 – Machine Jog Response

Menu 74 – Machine Jog Response							
0 Min	1	2	3	4	5	6	7 Max

Menu 75 – Disable Tally Check

Menu 75 – Disable Tally Check			
0= Off	1= Local	2= No Coms	3= Local+No Coms



Auto Menu's

Menu 76 – Auto Record and Rehearse

Menu 76 – Auto record and Rehearse		
0= ADR Mode	1= Command	2= Editor

The Auto-Record and Rehearse keys may be one shot Commands (1= Cmd ,2= Editor) or modes (0= Mode) that change the operation of the unit. Loop operation is only available when the mode is selected.

0= Mode Select Auto, Rehearse, Manual, Review Mode by depressing Mode key. Leave Mode by depressing illuminated Mode key

Whilst mode is active the Locate command will locate pre-roll before record in. Record On and Record off commands are global, the record advance may be changed by entering required record advance followed by Store followed by Record.

1= Cmd Perform an auto edit, rehearse, review, manual by depressing the selected command key. The system will locate record in and perform edit/rehearse. Whilst active the selected command LED will be illuminated, Once finished the LED will extinguish. Record On and Off commands are performed individually by each serial port, the record advance for each machine may be individually adjusted using Root | Iface | Record | Menu 40:- Record Advance.

2= Editor This is the same as 1= Cmd except that, all group enabled machines are selected and the system then performs an auto edit/Review. Once the edit is finished the machines are released and become individual again.

Menu 77 – At end of Auto Record

Menu 77- At end of Auto Record					
0= Redo	1= Stop	2= Goto In	3= Review	4= Play	5= All Stop

When the auto record out is activated this parameter selects what the system will do next.

Menu 78 – ADR Backup Machine

Menu 78 – ADR Backup Machine					
0= None	1= A	2= B	3= C	4= D	5= E



When either Auto-Record or Manual-Record mode are enabled a DAT machine may be used as a backup recorder on the specified serial port.

Note: Once a backup dat machine is enabled an extra delay of 70 frames is added to allow for the lockup and PNO record of the DAT. If the pre-roll is too short the system will not go into record even if locked.

Menu 79 – Get loops from Keyboard or CBServer

Menu 79 – Get loops From	
0= Keyboard	1=CBServer

Menu 80 – Auto Increment Loop Number

Menu 80 – Auto-Inc Loop	
0= No	1= Yes

Menu 81 – Backup in Auto & Manual

Menu 81 – Backup in Auto & Manual	
0= Master Run	1= Always

Input Menu's

Menu 82 – Serial Input Ports RM-6(SR-4)

Menu 82 – Serial Input Ports RM-6(SR-4)				
0= F(A)	1= E,F(A,B)	2= D,E,F(A,B,C)	3= C,D,E,F	4= B,C,D,E,F

Menu 83 – Input Lock tally from

Menu 83 – Input Lock Tally from	
0= System	1= Master

Normally Set to System, Set to master if using with Avid or Pro-tools auto-edit

Menu 84 – Convert Remote Fast forward and Rewind to Shuttle

Menu 84 – Convert Remote Fwd/Rwd to Shuttle

0= No	1= Video	2= All
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Use if Remote Fwd/Rwd commands cause video to lose picture.

Menu 85 – P2 Remote Control of

Menu 85 – P2 Remote Control of

0= Master	1= Selected Machine	2= All Machines
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When controlling the system from a Serial Sony P2 controller via the input port, are commands routed to the Master or the currently selected machine. When All machines is selected the command will be sent to all machines

Menu 86 – External Machine ID

Menu 86 – External Machine ID

0= Previous Menu	1= Record	2= CB	3= A	4= B	5= C	6= D	7= E
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When controlling the system from a Serial Sony P2 controller via the input port, this parameter determines which device ID is reported by the system

- 0= Previous menu** The ID reported follows either the Master machine or selected machine dependant on Menu 85
- 1= Record** The ID reported follows the current selected Record machine.
- 2= CB** The ID reported is a unique CB ID
- 3=A 4=B 5=C 6=D 7=E** The reported ID is the same as the machine on the selected port.

Menu 87 – RM-6 Ports D and C Track Arm Destination

Menu 87 - RM-6 Ports D,C Track Arm

0= RecMcn	1= System	2= Off	3= All	4= A	5= B	6= C	7= D	8= E
-----------	-----------	--------	--------	------	------	------	------	------

When using the serial port C or D as an input the record track arming command is sent to:-



- 0= RecMcn** (Record Machine) The currently selected Record Machine as displayed in the middle of the lower line on the RM6 and on the Record Page
- 1= System** To the System Record Map, this may be mapped on a track by track basis across all the machines/tracks in the system.
- 2= Off** Track arming is ignored, dummy tallies are generated.
- 3= All** Track arming is copied to all Record Enabled machines.
- 4=A 5=B 6=C 7=D 8=E** External track arming direct to machine port specified.

Menu 88 – – RM-6 Port E Track Arm Destination

Menu 87 - RM-6 Port E Track Arm

0= RecMcn	1= System	2= Off	3= All	4= A	5= B	6= C	7= D	8= E
-----------	-----------	--------	--------	------	------	------	------	------

When using the serial port E as an input the record track arming command is sent to:-

- 0= RecMcn** (Record Machine) The currently selected Record Machine as displayed in the middle of the lower line on the RM6 and on the Record Page
- 1= System** To the System Record Map, this may be mapped on a track by track basis across all the machines/tracks in the system.
- 2= Off** Track arming is ignored, dummy tallies are generated.
- 3= All** Track arming is copied to all Record Enabled machines.
- 4=A 5=B 6=C 7=D 8=E** External track arming direct to machine port specified.

Menu 89 – RM-6 Port E Input Track Arm

Menu 89 – RM-6 Port E Track Offset

0= 1-48	1= 40-96
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Menu 90 – External Play Command

Menu 90 – External Play Command

0= Wait for Slaves	1= Immediate
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This determines the systems response to an External Play command

- 0 = Wait Slave** Wait for slave(s) to park before going into play



1= Immediate Master goes into play without waiting for slaves

Menu 91 – External Master Position and Std

Menu 91 – External Position and Std	
0= Generator	1= Machine

Menu 92 – GP In 6 Record On

Menu 92 – GP In 6 Record On		
0=Off	1= 0v	2= +5v

Menu 93 – External Record Commands to Video machines

Menu 93 – Ext Record Commands ro Video Mcn	
0=Normal	1= Convert to Edit On/Off

Menu 94 – DAW Port for PD-1

Menu 94 – DAW Port for PD-1					
0= None	1= A	2= B	3= C	4= D	5= E

Menu 95 – PD-1 Record Command

Menu 95 -	
0= DAW Only	1= Global

Local Menu's



Menu 96 – Mcn Select On RM-6

Menu 96 -	
0= Yes	1= No

Menu 97 – Wind Speed

Menu 97 – Wind Speed					
0= Max	1= 2x	2= 4x	3= 6x	4= 8x	5= 10x

Menu 98 – Locate with Preroll

Menu 98 – Locate with Preroll	
0= No	1= Yes

Menu 99 – PreRoll

Menu 99 - PreRoll							
0= 3 Secs	1= 4 Secs	2= 5 Secs	3= 6 Secs	4= 8 Secs	5= 10 Secs	6= 12 Secs	7= 15 Secs

Menu 100 – Switch Brightness

Menu 100 - Switch Bright							
0 Min	1	2	3	4	5	6	7 Max

The LCD Switch Brightness can be adjusted to suit ambient light levels

Menu 101 – TFT Brightness

Menu 101-TFT Bright							
0 Min	1	2	3	4	5	6	7 Max

TFT Brightness can be adjusted to suit ambient light levels

Menu 102 – RM-6/SR-4

**Menu 102 – RM-6/SR-4**

0= RM-6

1= SR-4

Menu 103 – Master Timecode

Menu 103 – Master TC

0= With Standard

1= Large

Menu 104 – Test Display

Menu 104 – Test Display

0= Normal

1= Key

2= Macro

3= Jog

4= Video

5=

6= Debug

USB Port

Power

The TFT Controller uses about 400mA, this is within the 500mA maximum for a USB port, we recommend that the TFT Controller is the only device connected to the port or use a powered Hub. New computers are often fitted with high power USB ports. If you are not using the USB Serial port you can use a 5v USB power supply.

Sony P2 or CBServer Port

Firmware Updates

The USB Port is also used to update the TFT-P2 firmware. Updates are posted on the TFT Controller product page: <http://www.colinbroad.com/cbsoft/tft-control.html>

You will find links to both a Mac and Windows version of "ur422" software on the same page which can be used to send firmware update to the tft-control as well as program the keyboard.

Note: the progress bar on the TFT Controller shows the total space available and will not reach the end. The Progress bar on the UR422 software shows the update length and will be cleared once finished

Recovery

In case of power failure or other problems when updating the TMC-1 firmware.

1. Abort and exit from UR422
2. Unplug the USB then reconnect whilst depressing [Store] and [Recall]. The Software Download screen will be displayed.

Core build: 23/12/2014
Software Download: \$000000
Ready to Update

flashpage	02F2 00 00
flashmode	02F6 00
flashtest	02F7 00
pageofst	02F0 00 00

3. Restart the UR422 software,,

RS422 pin Connections

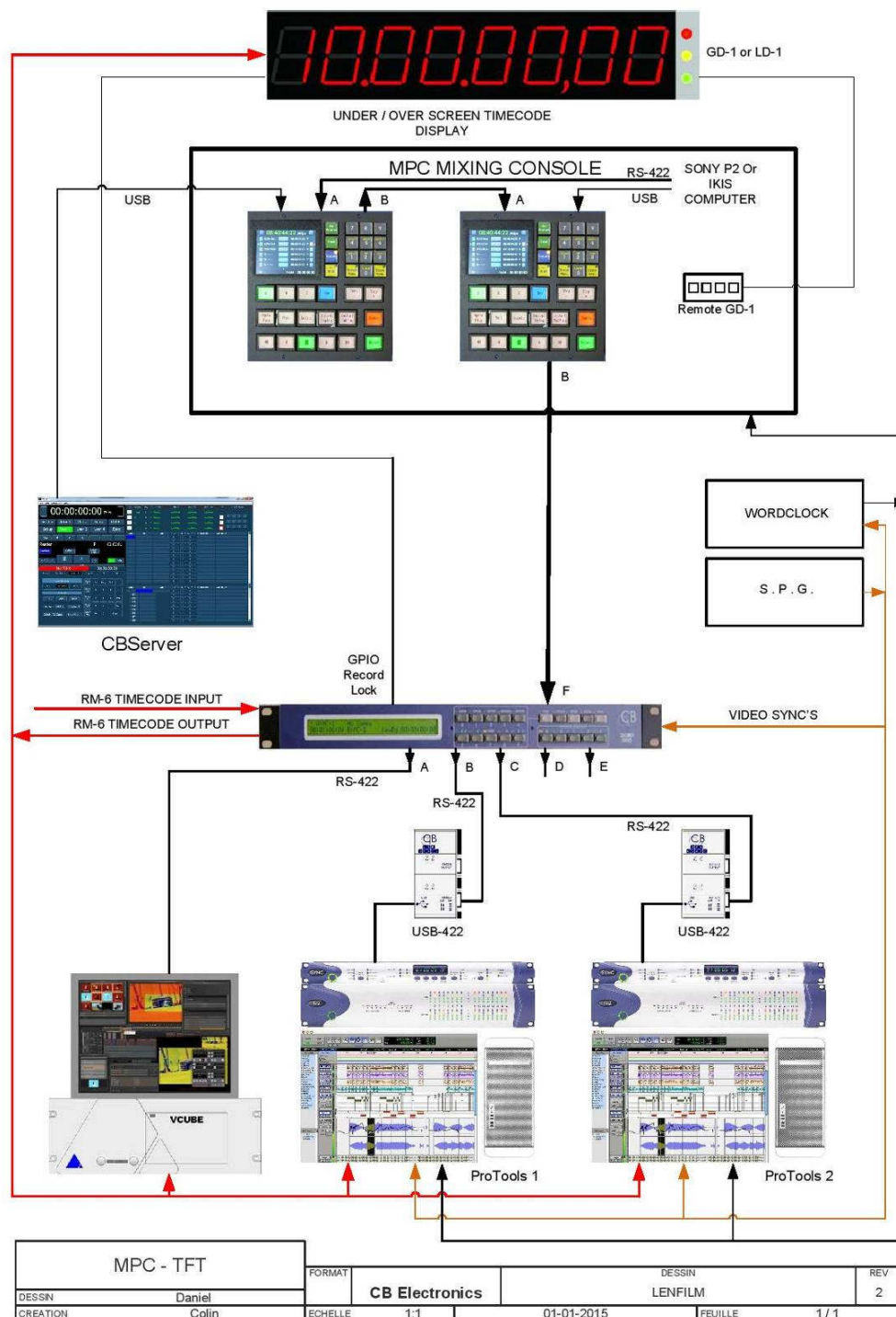
Pin No.	Controller	Device	Note
1			Most RS-422 cables are 1:1 and connect between a Controller and Device.
6			
2	Rx-	Tx-	Where a port can be input or output you should check, On the RM-6 Port E has links to enable the pins to be configured as a Controller(Output) or Device (Input). Ports A,B,C,D are fixed as controllers and a Tx-Rx Invert cable may be required.
7	Rx+	Tx+	
3	Tx+	Rx+	
8	Tx-	Rx-	
4	Ground	Ground	
9			
5			

T5.04 Tx-Rx Invert Sony 9 pin CABLE

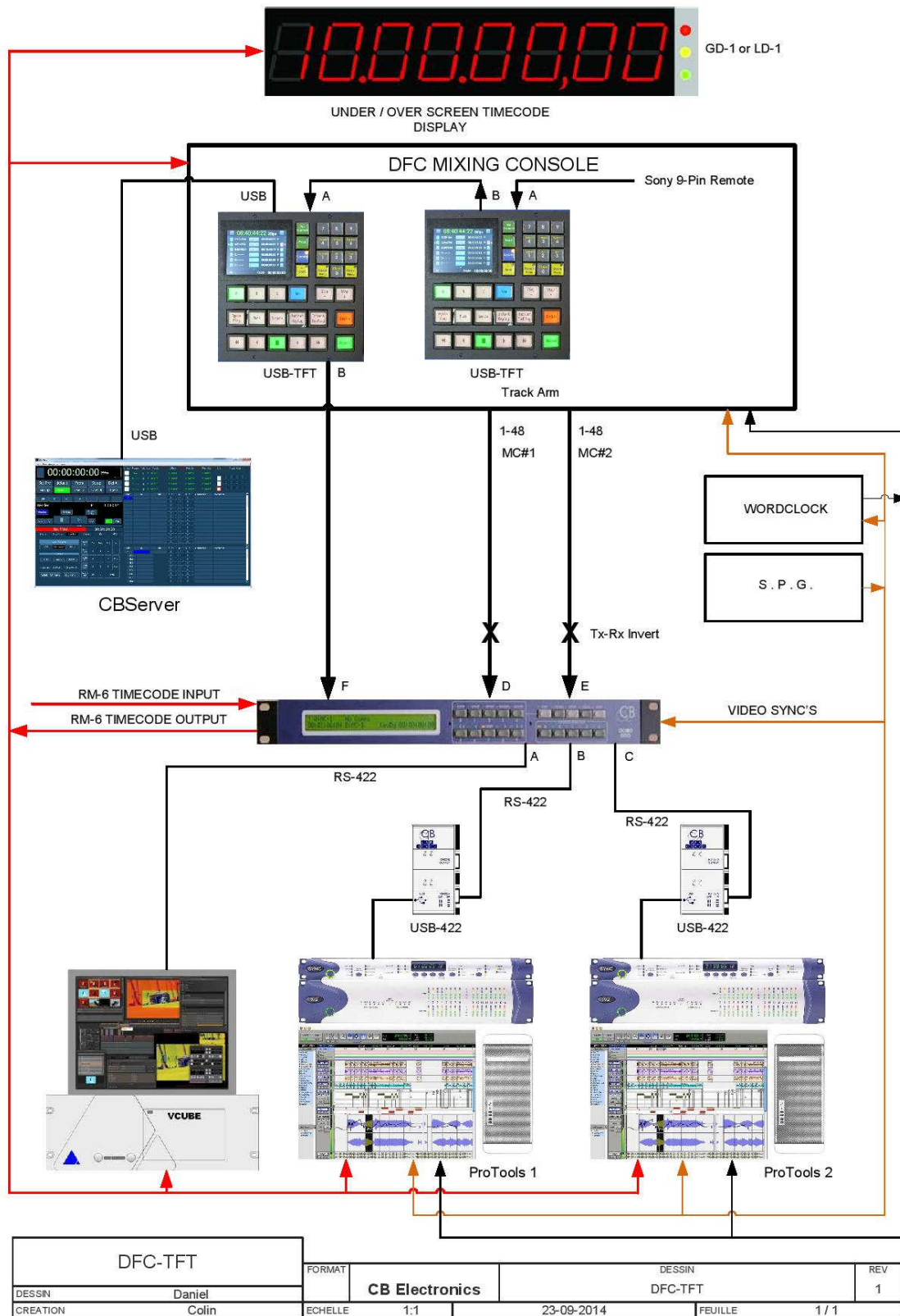
Use On RM-6 ports B,C,DE when connected as an output to a machine

	9 pin 'D' Male on Cable	9 pin 'D' Male or Female	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	

Typical Instalations



Lenfilm: MPC console with Dual TFT Remote



Twickenham DFC: added to existing Remote
 Note: DFC can only arm 48 tracks per port, Dual outputs are used for up to 96 tracks



Glossary