Timecode *Buddy* : system

quickstart guide

wifi master : tx : app

Firmware Revision v5.01 master/tx

Timecode *Buddy* : system

Welcome to **Timecode Buddy.** Here we give you a quick tour of your new **Timecode Buddy: system**, guiding you through its key features so you can get up and running straight away.

What's covered?
The basics to getting started with our three core products:
- **Timecode Buddy: wifi master**
- **Timecode Buddy: tx**
- **Timecode Buddy: app (free to download)**

Your timecode revolution starts here...

Tips
If you're like most of the Buddy team and tend to avoid manuals, then make a mental note of these top tips:
- Every Buddy 'on set' needs to be given a different WiFi name (SSID) to avoid network clashes – please check when setting up.
- Use 'Stealth' mode to conserve AA battery life when using all the bells and whistles. WiFi is fairly power hungry.
- Within your iOS WiFi settings screen always turn ON Auto-Join, to ensure a more robust connection to your Buddy.
- If the Timecode Buddy: app is unresponsive, then press the 'connected to' tab top right of the app screen to resync to your Buddy.
- Always use external power and fresh batteries when updating product.
- Don't forget the manuals are on the Buddy: wifi master itself if you need them

Copyright Notice

A guided tour of your highly accurate timecode, TV sync generator and multi-channel digital timecode transceiver.
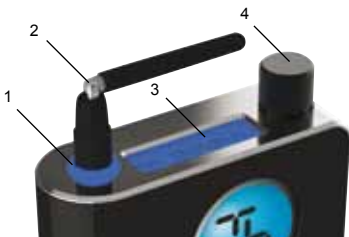
Control

The **Timecode Buddy: wifi master** settings are accessed and controlled from the top panel. This handy position gives you full and easy control of the unit even when it's in a sound mixer bag or camera pouch.

1. Halo lightpipe

Glows either blue, green or red.

- Blue flash - WiFi ON
- Green flash - WiFi OFF
- Red flash – Warning messages

2. Antenna

For the digital transceiver module
operating in 870MHz (CE) or 915MHz (FCC/IC) bands.
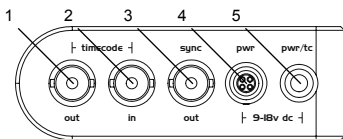
3. LCD backlit display

Shows the unit's status and settings.

4. Control knob

Allows one finger navigation through menus.

Power

For all power and syncing go to the bottom panel.

1. T/C out
SMPTE Timecode OUT, BNC socket (2V p/p)
2. T/C in
SMPTE Timecode IN, BNC socket (0.5V to 5V p/p)
3. TV Sync out
TV Sync OUT, BNC socket (1V p/p)
4. Power input
Hirose HR10a power socket (9-18V DC, Pin 1 GND, PIN 4 POS)
5. Power input and TC in and out socket
Standard Lemo5 socket with power IN pin (9-18V DC) and T/C in/out
(Pin 1 GND, Pin 2 T/C IN, Pin 4 POS , Pin 5 T/C OUT)

Attach

Securely fit your Timecode Buddy: wifi master to any
camera from the **side panel.**

1. Coldshoe adaptor
You have three options:

- Reverse to stow away in the product case
- Attach directly to a camera.
- Fit snugly into a Timecode Buddy: bracket holder.
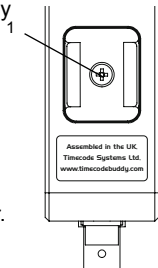
Customise

On-screen menus allow you to easily customise the settings of the
Timecode Buddy: wifi master to meet the exact needs of your shoot.

The default display shows (on time-out also):

T/C + FPS + MODE + RF CHANNEL + SIGNAL STRENGTH

Turning the knob on the top panel clockwise takes you to the **information screens:**

1. T/C + USER BITS
2. TV SYNC TYPE
3. POWER STATUS (external PSU or internal AA batteries)
4. WIFI Network Mode + WiFi SSID name
5. WiFi IP address (type this into any browser to connect to Timecode Buddy: web view)

Button basics

The top button makes it easy to navigate the menu options.

From an information screen…
Press the knob to go directly to the menu for the corresponding feature.

From the default display…
Press the knob to enter the menu for:

1. Timecode mode
2. Int generator
3. RF Setting
4. WiFi
5. Backlight on/off
6. System settings
7. Exit

More on menus

Each menu allows further customisation of your Timecode Buddy: wifi master.

Timecode mode. Choose from five settings:
- **Int Gen.** Activates the highly accurate internal generator. From here you can set your own T/C, user bits and FPS settings.
- **Ext RF.** Constantly jam syncs the internal generator from the received T/C via Buddy DataLink. If Buddy loses signal of received T/C, the T/C output continues using the internal generator for five seconds then freezes.
- **Ext RF (cont).** Constantly jam syncs the internal generator from the received T/C via Buddy DataLink. If Buddy loses signal of received T/C, the T/C output continues using the internal generator.
- **Ext BNC.** Constantly jam syncs the internal generator from the received T/C via the BNC I/P socket or LEMO 5 socket. If Buddy loses signal of received T/C, the T/C output freezes immediately.
- **Ext BNC (cont).** Constantly jam syncs the internal generator from the received T/C via the BNC I/P socket or LEMO 5 socket. If Buddy loses signal of received T/C, the T/C output continues using the internal generator.

Internal generator. Choose from:
- **Set timecode.** Turn to set flashing digits, press to enter, repeat for each pair.
- **Set user bits.** Turn to set flashing digits, press to enter, repeat for each pair.
- **Set FPS.** Set to 25, 23.98, 24, 29.976, 29.976DF, 30, or 30DF.

RF settings. From here select:
- **Channel no.** 1 to 14
- **RF TX On/Off.** When in Internal or BNC modes the Timecode Buddy: wifi master can transmit its SMPTE timecode data via Buddy DataLink to any other Timecode Buddy: wifi master listening on the same channel.

WiFi. Unlocks WiFi enabled features including wireless streaming of timecode to Timecode Buddy: app and **Movie★Slate** logging app:
- **Turn on/off.** The antenna halo flashes blue every second (with running timecode) when WiFi is ON. If the WiFi is switched OFF, the antenna halo flashes green every second (with running code).
- **Network type.** Select 'Ad Hoc' for normal iOS app connection/ Timecode Buddy: web view or 'Infrastructure' to connect to a known infrastructure network with internet access to update firmware.
- **Buddy ID number.** Give your Timecode Buddy: wifi master its own SSID name* (choose a number from 001 to 254).

Every Buddy on set needs to be given a different SSID to avoid network clashes.

- **Stealth mode.** This is a battery saving mode. If mode enabled, when power is external WiFi is automatically switched ON. When external power is removed/switched off, WiFi is automatically switched OFF to save internal AA battery consumption.

Backlight on/off. Turns the LCD screen backlight ON or OFF.

System settings. Gives you access to:
- **Set TV sync.** Set to OFF, PAL, NTSC, 720p, 720px2, 1080i, 1080p,1080ix2, 1080px2 (x2 double frame rate). Non-standard TC Sync standards and FPS combinations will be automatically rejected.
- **Set country area** FCC/IC users only have access to 915MHz band with 14 channels. With the CE version you can select the country of use (either UK/CEPT or US/Canada/AU/NZ).
- **Restore defaults.** To remove any customisation.
- **Battery type.** Select the AA battery type (Alkaline, Lithium or Ni-MH) for an accurate battery status display on Buddy and app.
- **Display.** Adjust brightness from 0-100% and flip upside down for left/right handed use.
- **Set Passcode.** Choose a passcode to allow access to settings changes from Timecode Buddy: app or MovieSlate app. Default passcode 1111.

Buddy: webview

Your Timecode Buddy: web view should open in any browser, giving you access to all instructions and setting information wherever you are.

Three simple steps activate this feature:
1. Turn on Buddy WiFi and choose ad-hoc mode. Wait until display flashes 'WiFi Connected.'
2. Take any WiFi enabled device with a browser and scan wireless networks for 'TCBuddyxxx'.
3. When connected type the IP address of your Timecode Buddy: master into the address bar of the browser e.g. 169.254.xxx.1 (xxx is the number of the Buddy chosen).
4. If you are connected to the Timecode Buddy: app or the **Movie★Slate** app then Timecode Buddy: web view is available from a quick launch button directly from app.

Home. Shows the Timecode Buddy you're connected to:

Buddy settings. Displays status and settings of the Timecode Buddy: wifi master.

Configure WiFi. Scan for available wireless networks, type in the network key, and join an infrastructure network for firmware updates to the Timecode Buddy: wifi master and Timecode Buddy: tx.

E-manuals. View basic quick start guides for the Timecode Buddy: wifi master, tx and app.

Update

Check for updates to the Timecode Buddy: wifi master firmware and also send firmware updates to your Timecode Buddy: tx using Timecode Buddy: web view to configure your network connection.

IMPORTANT Always power the Buddy: wifi master via external power and also have a fresh set of AA batteries installed during updates & don't attempt whilst on set and in a rush.

- Click on 'configure WiFi' of web view page.
- Scan for wireless networks, choose a known network and type in the network security key if needed. Be very careful to input key correctly. iOS devices may try to capitalize the first letter. Your Timecode Buddy: wifi master will automatically switch to connect to this infrastructure network. This can take up to two minutes. Web View will no longer be connected to your buddy.
- The Timecode Buddy will flash 'WiFi Connected' once it's been given an IP address by the router.
- Scroll through the information screen on your Timecode Buddy: wifi master to check it's connected to the correct network and has got a new IP address.
- Go to 'System Settings' on your Timecode Buddy: wifi master and press the button in the 'Check for Update' menu option.
- The display will show either 'Update not required' or 'Loading program, Saving program, loading tx, loading HTML' etc. Wait until the program is saved and restarts. This process will repeat until the buddy has checked file integrity
- From the WiFI menu, restore WiFi mode back to Ad-Hoc for normal operation.

Once the Buddy: wifi master has logged onto a secure network connection it will automatically remember the network key. Therefore for future updates via the same internet connection, the Timecode Buddy: web view is not needed. Just change the Buddy: wifi master to infrastructure network mode and check for updates once connected and given a new IP address.

**A whistle stop tour of your
multi-channel digital timecode
transmitter and timecode reader,
designed to transmit a timecode source to any Timecode
Buddy: wifi master listening on the same channel.**

Control

The **Timecode Buddy: tx** settings are accessed and
controlled from the **top panel** control knob.

1. Antenna
For the digital transmitter module in
870MHz (CE) or 915MHz (FCC/IC) bands.
2. Halo lightpipe
Glows blue to show whether stationary
or running T/C is being received.
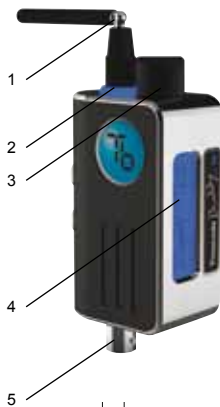**3. Control knob**
Allows one finger navigation through menus.
4. LCD backlit display
Shows the unit's status and settings.
5. T/C IN
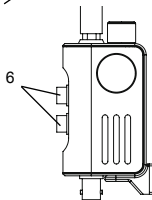SMPTE Timecode IN BNC socket (0.5-5V p/p)

Power

For power sockets go to the **side panel.**

6. Power input HR10a Sockets
Two looped Hirose HR10a power
IN sockets (7-18V DC).

Customise

The on-screen menus allow you to easily customise the settings of the Timecode Buddy: tx to meet the exact needs of your shoot.

The default display shows (on time-out also):

T/C + FPS + MODE + TX RF CHANNEL

Turning the knob clockwise takes you to the following information screen:

T/C + USER BITS

Button basics

The top button makes it easy to navigate the menu options. From either display, press the knob to enter the menu selections:

1. RF Channel
2. Backlight
3. Settings
4. Check for updates (only accessible when the Timecode Buddy: wifi master is in RF mode on the same channel)

More on menus

Each mode allows further customisation of your Timecode Buddy: wifi master.

- **RF Channel.** Use the knob to scroll to select a channel between 1 and 14.
- **Backlight.** Select to turn the display screen backlight ON or OFF
- **Settings.** Use the knob to browse settings menu.
- **Check for updates.** Make sure your Timecode Buddy: wifi master is in RF mode and selected to the same country and channel as your Timecode Buddy: tx. Press the knob to see if a firmware update is required for the Timecode Buddy: tx.

Now your Timecode Buddy hardware is up and running, it's time to activate your free Timecode Buddy: app

Download
Our iOS app is **free** to download from the Apple app store.

Activate
A highly accurate digislate is now at your fingertips.
- Turn on the WiFi of your Timecode Buddy: wifi master.
- When the Timecode Buddy: wifi master displays 'WiFi Connected', open the WiFi settings page on your iOS device.

Press to open

- Select your Timecode Buddy.
- Press the right arrow to open up the information about the Buddy network.
- Turn ON the Auto-Join button.

Press to turn on

- Close settings on iOS device.
- Open your Timecode Buddy: app. This should now show the running timecode from your Timecode Buddy: wifi master.

Tips
- To optimise the performance of your digislate, close all other running apps before opening the Timecode Buddy: app. To do this, double tap the home button on your iOS device to close all running apps (they will be lined up along the bottom). Press and hold your finger against one of the apps until they all 'shake', then click on the minus signs. Press home again to get back to main screen.
- If you want to remotely change any of the Buddy settings via the app, press settings, type in the four-digit passcode (set on the systems menu of your Timecode Buddy) then make changes directly from the app.

Detailed specifications

Timecode Buddy: wifi master

Product features
External dimensions: 29.8mm x 87mm x 110mm
LCD display: two line, 16 character, blue variable brightness backlit
display.
Antenna 'halo' lightpipe: tri-colour LED (blue/green/red).

WiFi activated features
Accurate WiFi streaming of SMPTE timecode data to native iOS app.
WiFi connectivity to allow menu changes via the free to download iOS
app.
Built-in webpages for Timecode Buddy: web view.
WiFi connectivity to see all settings via any connected web browser.
WiFi connectivity to configure advanced WiFi settings of master.
WiFi connectivity to access product manuals directly from the
Timecode Buddy.
Infrastructure WiFi connectivity to allow connection to the internet
for firmware updates to Timecode Buddy: wifi master and Timecode
Buddy: tx products.

Technical specification
Timecode generator accuracy: 0.2 ppm TCXO reference oscillator (less
than one half frame drift a day).
Supported FPS modes: 23.98, 24, 25, 29.97, 30, 29.97DF, 30DF.
Output sync modes: PAL, NTSC, 720p, 720p double frame, 1080i,
1080p, 1080i double frame, 1080p double frame.
Output video sync: 1V pp / 75 ohm.
WiFi: 2.4Ghz IEEE std. 802.11b/g/n compatible, Ad Hoc and
Infrastructure modes, DHCP Server.

Power and timecode sources
External power: 9-24V DC via a 4 pin Hirose connector and five pin LEMO (pin 4 POS, pin 1 GND).
Internal Power: 2 x 'AA' batteries
T/C input: BNC connector or five pin LEMO (pin 2 sig, pin 1 gnd). 0.1 to 5V pp. Multi-channel digital transceiver in 865.050-868.550 MHz (CE Approved) and 915.050-918.650 MHz (FCC/IC Approved).
Dual buffered T/C output: BNC connector and five pin LEMO (pin 5 sig, pin 1 gnd). 1V pp.

Timecode Buddy: tx

Product features
External dimensions: 29.8mm x 44mm x 70mm
LCD display: two line, 16 character, blue backlit display showing T/C, UB, FPS, TX channel.
Antenna 'halo' lightpipe: blue LED

Technical specification
Multi-channel digital transmitter in 865.050-868.550 MHz (CE Approved) and 915.050-918.650 MHz (FCC/IC Approved), using Buddy DataLink protocol.
Supported FPS modes: 23.98, 24, 25, 29.97, 30, 29.97DF, 30DF.

Power and timecode sources
Input Voltage: 7-24V DC via two looped four-pin Hirose connectors.
T/C input: BNC connector. 0.1 to 5V pp.

Frequencies

Timecode Buddy: wifi master and **Timecode Buddy: tx** RF frequencies

Our CE approved products are for use in UK/EU and CEPT* countries.

*Albania, Andorra, Austria, Azerbaijan, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, The Former Yugoslav Republic of Macedonia (FYROM), Romania, Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, Vatican.

1 UK/EU 865.050 MHz
2 UK/EU 865.150 MHz
3 UK/EU 865.250MHz
4 UK/EU 865.350 MHz
5 UK/EU 865.450 MHz
6 UK/EU 865.550 MHz
7 UK/EU 865.650 MHz
8 UK/EU 867.950 MHz
9 UK/EU 868.050 MHz
10 UK/EU 868.150 MHz
11 UK/EU 868.250 MHz
12 UK/EU 868.350 MHz
13 UK/EU 868.450 MHz
14 UK/EU 868.550 MHz

Timecode Buddy: wifi master RF transceiver frequencies and
Timecode Buddy: tx transmitter frequencies

Our FCC frequencies are for use in the USA, Australia and New Zealand.

1 USA/AU/NZ 915.050 MHz
2 USA/AU/NZ 915.150 MHz
3 USA/AU/NZ 915.250 MHz
4 USA/AU/NZ 915.350 MHz
5 USA/AU/NZ 915.450 MHz
6 USA/AU/NZ 915.550 MHz
7 USA/AU/NZ 915.650 MHz
8 USA/AU/NZ 918.050 MHz
9 USA/AU/NZ 918.150 MHz
10 USA/AU/NZ 918.250 MHz
11 USA/AU/NZ 918.350 MHz
12 USA/AU/NZ 918.450 MHz
13 USA/AU/NZ 918.550 MHz
14 USA/AU/NZ 918.650 MHz

Quality declarations

EC Declaration of Conformity

Timecode Systems Limited of Seba House, 97 High St, Stourbridge, West Midlands, DY8 1FA declares that the Timecode Buddy: wifi master and Timecode Buddy: tx products are in conformity with the applicable requirements of the following documents:

ETSI EN300 220-2 V2.3.2 (2010-02)
Tested by TRaC EMC & Safety Ltd, Report TRA 008673-02-W-EU-01
Paul Scurrell - Company Director - 26th March 2012

FCC/IC Declaration of Conformity

Timecode Systems Limited declares that the products Timecode Buddy: wifi master and Timecode Buddy: tx are in conformity with and pass:

FCC CFR47 Part 15(c) /IC RSS-210
Timecode Buddy: wifi master - FCC ID: AYV-TCB01
Timecode Buddy: tx - FCC ID: AYV-TCB02

FCC warning statement:

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

Warranty and technical support

Timecode Systems Limited warrants its products against defects in materials and workmanship for a period of one year from the date of original retail purchase. This is a non-transferable warranty that extends only to the original purchaser.

Timecode Systems Limited will repair or replace the product at its discretion at no charge.Timecode Systems Ltd is not responsible for consequential damages arising from use of its equipment, proper or otherwise.

Please visit **www.timecodebuddy.com** for details of the Service Centre for your area.

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W: **www.timecodebuddy.com**

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