Timecode Systems
GENERATE. SYNC. SHARE

System One Controller (S1C)

manual

Welcome to **Timecode Systems modular S1C** PCB.

Here we give you a quick tour of this super accurate LTC & Genlock generator, with integrated sub GHz Transceiver and 2.4GHz 802.11b/g WiFi.

This will guide you through its key features so you can get up and running straight away.

Your timecode revolution starts here…

Copyright Notice

:S1C

A guided tour of your highly accurate timecode, genlock generator and multi-channel digital timecode transceiver with integrated WiFi

Timecode Mode. Choose from three 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 (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 LTC.** 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.

RF Settings. From here select:

- **Channel no.** 1 to 14
- **RF TX On/Off.** When in Internal or BNC modes the Timecode can transmit its SMPTE timecode data via Buddy DataLink to any other Timecode Buddy listening on the same channel.
- **RX UBits On/Off.** When On the unit will display and output the UserBits received via RF. If Off the unit will display and output its own UserBits set.

WiFi. Unlocks WiFi enabled features including wireless streaming of timecode to the **Timecode Buddy: app**

System settings. Gives you access to:
- **TV sync type.** Set to OFF, PAL, NTSC, 720p, 720px2, 1080i (PSF), 1080p,1080px2 (x2 double frame rate). Non-standard TC Sync standards and FPS combinations will be automatically rejected.
- **TV sync level.** Set to Std O/P Level for single 75ohm load or High O/P Level for dual 37.5ohm load (2 cameras on T-Piece)
- **Restore defaults.** To remove any customisation.

Detailed specifications

S1C Technical specification

Timecode generator accuracy: 0.1 ppm TCXO reference oscillator (less than one half frame drift a day). Zero ppm when RF locked.

Supported FPS modes: 23.976, 24, 25, 29.97, 30, 29.97DF, 30DF.

Output sync modes: PAL, NTSC, 720p, 720p double frame, 1080i(PSF), 1080p, 1080p double frame.

Output video sync: 0.6V pp / 75 ohm and 0.6V pp /37.5 ohm for 'High Level/ Dual load'

WiFi: 2.4 GHz IEEE std. 802.11b/g, SoftAP and Infrastructure modes, DHCP Server, Web server.

Frequencies

S1C RF transceiver frequencies

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

INDUSTRY CANADA STATEMENTS

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This radio transmitter **10427A-TCB11** has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Name / Model	Gain	Impedance
Taoglas/TG.09.0113	**2.0dBi**	**50 ohm**

FCC WARNING STATMENTS

- 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, and
  (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 for 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

This radio transmitter **AYV-TCB11** has been approved by Industry FCC operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Name / Model	Gain	Impedance
Taoglas/TG.09.0113	**2.0dBi**	**50 ohm**

OEM Responsibilities

The Product name here Module has been certified for integration into products only by OEM integrators under the following conditions:

1.   The antenna(s) must be installed such that a minimum separation distance of 20cm is maintained between the radiator (antenna) and all persons at all times.
2.   The transmitter module must not be co-located or operating in conjunction with any other antenna or transmitter.

As long as the two conditions above are met, further transmitter testing will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

IMPORTANT NOTE: In the event that these conditions can not be met (for certain configurations or co-location with another transmitter), then Industry Canada and FCC certification is no longer considered valid and the IC & FCC Certification Numbers cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate Industry Canada authorization.

End Product Labeling
The Product Name here Module is labeled with its own IC and FCC Certification Numbers. If the Certification Numbers are not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module: In that case, the final end product must be labeled in a visible area with the following:

"**Contains Transmitter Module IC10427A-TCB11**"
Contains Transmitter Module FCC ID: AYV-TCB11"
or
"**Contains IC: 10427A-TCB11**"
"**Contains FCC ID: AYV-TCB11**"

The OEM of the Product Name here Module must only use the approved antenna(s) listed above, which have been certified with this module.

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module or change RF related parameters in the user's manual of the end product.

The user's manual for the end product must include the following information in a prominent location:

"To comply with Industry Canada and FCC RF radiation exposure limits for general population, the antenna(s) used for this transmitter must be installed such that a minimum separation distance of 20cm is maintained between the radiator (antenna) and all persons at all times and must not be co-located or operating in conjunction with any other antenna or transmitter."

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.

Timecode Systems Ltd
Unit 6, Elgar Business Centre
Moseley Rd, Hallow
Worcester, WR2 6NJ, UK
T: **+44 (0) 1700 808 600**
E: **contact@timecodesystems.co.uk**
W: **www.timecodebuddy.com**

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