

TheLockit

ACN-CL



Handbook

Safety Instructions

- READ CAREFULLY -

For your own safety and trouble-free use please observe the instructions below. Always keep a copy and hand them out with the unit to other users.

This unit is exclusively intended for indoor use. Keep it safe and away from water, rain, humidity and dry under all circumstances also when powered off. Never let water, detergents or liquids of any kind get into the unit as this will cause risk of short circuits and electrical hazard.

Keep distant from sources of heat and never expose to direct sunlight. Admissible ambience temperature is from +5° to +50° Celsius.

Do not throw or expose to mechanical impact and keep it safe from hard vibrations.

Only use genuine accessories supplied by an authorized dealer. Always observe integrity and the pertinent compatibility with all units connected to.

Do not perform software updates in situations the integrity of power supply cannot be granted such as thunderstorms and remove connections to all devices directly or indirectly connected to mains.

Only use certified power sources compliant with Battery Charging 1.2 of the USB standard to charge or power. On mains adapter, pay attention to the use of LPS sources only in compliance to EN 62368-1. Disregard may cause battery damage and risk of fire.

When using the wireless connection place it centrally and keep it distant from sources of possible interference such as microwaves or electrical devices with large metal surfaces.

Never open the unit. Inappropriate and unauthorized access will void the warranty and imply possible risk of harm to the user.

Dispose the unit following the legal requirements for recycling electronic equipment.

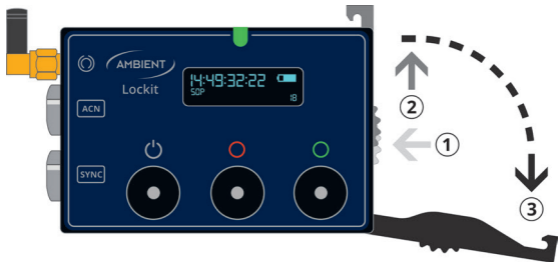
Knowing Your Lockit



1. ACN antenna, SMA RP 2.4GHz, keep attached to unit
2. RGB Status LED
3. OLED Display
4. TC & ACN Socket
5. TC & Sync Socket
6. Power Button
7. Red Button
8. Green Button
9. Battery Door, NP-50 Li-Ion type batteries only
10. USB-C socket

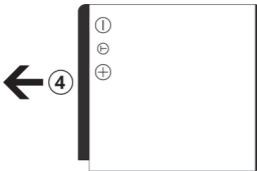
Powering Your Lockit

Only use certified NP-50 compatible Li-Ion batteries and power sources in compliance with USB BC1.2 and EN 62368-1 for external power and charging.



Insert battery with key on lower side.

Connected to a USB source the internal NP-50 battery will be charged in the unit while switched off and in operation.



Socket on Your Lockit

Connectors carry TC in and out as per industry standard, plus sync on one and ACN metadata on the other.

Accept Lemo FGG.0B.305 and compatible push-pull plugs

	ACN	SYNC (yellow cable)
1	GND	GND
2	TC In	TC In
3	ACN TX	PPF Out
4	ACN RX	Sync Out
5	TC Out	TC Out



Getting Started with Your Lockit

Although not necessary, it is recommended to download LockitToolbox from ambient.de/en/downloads for Mac or PC and make initial adjustments. Connect via the supplied USB-C to A cable and click on “connect”.

Select the desired project frame rate, set the internal RTC* to local time and load current date formatted either DD.MM.YY.ED or MM/DD/YY.AD into userbits.

LNA** enhances reception at the cost of battery life. You can also select to Auto Power on the unit with USB power applied. Once on, you must power down manually. Adjust LED brightness and TC Level (ACN port only).

* Real Time Clock, keeps approximate time of day (ToD) and date

** Low Noise Amplifier

Operating Your Lockit

POWER BUTTON

Press and hold until LED lights green to start unit in **Standard Mode**.

Hold 10s until LED lights red to reset unit to default.

In operation brief press toggles display on/off.

Press long to initiate power down sequence.



RED AND GREEN BUTTONS

Press and hold **green** to start **Master Mode**, **red** to start **TRX Mode**.

In operation: **Hold green for 3 seconds** to jam the generator and send out a jam signal over ACN (single jam in Standard, repetitive in Master Mode).

Press both simultaneously to enter menu. Red decrements, green increments parameter value. Press simultaneous again to confirm and proceed.

Hold green and tap red to dim the LEDs.

Hold red and tap green to increase brightness. This can be changed to altering TC level within **LockitToolbox**.

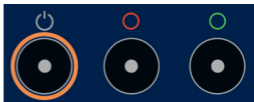
Operating Your Lockit

1. STANDARD MODE

Press & hold power

Regular setting for syncing cameras and recorders.

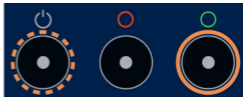
The Lockit will start with muted TC and Sync. To enable the generator with time of day, press the green button on one unit for 3 seconds until the green LED lights up twice. This will also jam other Lockits and thanks to the unrivaled accuracy, this single jam will suffice to run all of them frame sync over days. Additionally you can select to shift the TC reference by 12 hours or start at zero via the local menu.



2. MASTER MODE

Press & hold green, tap power

Same as Standard but the jamming unit will repeat the signal every couple of seconds. This increases accuracy to video line level and lets you add Lockits at any time or replace batteries with automatic re-jam.



Note that only one Master must be active. If an active Master is detected, the unit will fall back to Standard mode and slave to the existing Master before you can set the generator.

3. TRX MODE

Press & hold red, tap power

The Lockit follows an external timecode source incl. frame rate and transmits to other

units in TRX. This can be linear timecode on either 5-pin input or MIDI timecode over USB-C. This mode is exclusively intended for playback applications or to remote roll a suited recorder from e.g. a camera in record run.

As the source camera is not synced to the Lockit this is **NOT** recommended for regular use.



Configuring Your Lockit

Once started you can make all adjustments necessary in the field via the graphical menu.



Tap red and green simultaneously: enter, confirm, proceed.
Red or green: decrease or increase parameter.

Parameters

1. Project Frame Rate (FPS). Options: 23.976, 24, 25, 29.97, 29.97 Drop, 30, 47.95, 48, 50, 59.94, 59.94 Drop, and 60. Adjust to match your cameras setting, press red and green simultaneously to accept and proceed.

Note: SMPTE TC only supports single rates, so a project rate of e.g. 50 will result in a 50 FPS sync but 25 FPS TC.

2. Sync Format. Options: off, i/PsF, P.*
3. ACN Channel. Options: 11 through 26, "off".

* more options through LockitToolbox

4. Generator Reference. Options: RTC, 12hrs offset, 00.
5. Apply Settings. Review changes to confirm or discard. Leave menu by tapping red and green simultaneously.

Sync and ACN channel will be persistent over a reboot until reset or changed. The unit will always start with RTC as reference. To check the current reference, briefly tap the green button. To set the generator, press and hold for 3 seconds. The Led will go from alternating blinking red/green to green and TC will be running on the display.

Jamming the Generator

You can jam the generator either via cable, over ACN, or using the internal reference.

Jam via cable: simply plug in a cable carrying timecode on pin 2. The LED will light on green and start flashing afterwards.

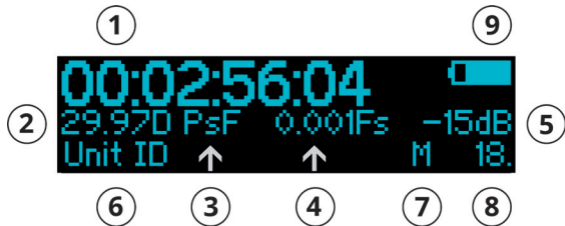
Jam from ACN: if a jam is received on the set ACN channel, the unit will automatically jam to the source.

Jam to internal reference and send out ACN jams: press and hold the green button for approx. 3 seconds until the LED lights up green 2 times.

In standard mode, a single jam broadcast will be sent out, so to jam other units these must be already switched on. In Master, the jam will be repeated every couple of seconds indicated by a green double blink. Slaves powered on later will sync to the next jam broadcast.

A jammed generator will be indicated with LED flashing green every second. Re-jamming via cable is prevented until confirmation, and when slaved to a master, units will reject also ACN jams from other units than the Master.

Display



Toggle screen on/off with power button

1. Generator Timecode (dashes on output mute)
2. Project Frame Rate (FPS)
3. Video Sync Format (shows only when applied)
4. Local TC Output Offset (shows only when applied)
5. TC output level (shows only when applied)
6. Unit ID (shows only when applied)
7. Active Mode. Blank: Standard, unslaved,
S: Standard, slaved to master, **(S)**: Standard, Master lost
(M): Master, generator unset, **M**: Master, active
8. ACN Channel, dotted with active LowNoiseAmplifier
9. Battery Level, alternates "Ext" with power over USB

ACN Channels























Specification including channel assignment follows IEEE 802.15.4 LR-WPAN Standard on 2.4GHz band.

The standard allows for friendly coexistence of different systems on the same channel.

Still, equivalent ARRI remote focus channels listed to further help avoiding interference.

ACN Channel	Carrier [MHz]	ARRI EMIP WRS
11	2405	
12	2410	0
13	2415	1
14	2420	
15	2425	
16	2430	2
17	2435	3
18	2440	
19	2445	
20	2450	4
21	2455	5
22	2460	
23	2465	
24	2470	6
25	2475	7
26	2480	

LED Blink Codes

Mode	1 sec	2 sec	3 sec	Event
ext. power, idle, charging				
ext. power, idle, 75 % charged				
ext. power, idle, fully charged				
int. power, lo bat **		 		
Standard/Master Mode:				
idle, no TC out, RTC lost				
idle, no TC out, RTC OK				
generator set, TC out				
generator set, TC level reduced				
ACN jam transmit				 
ACN jam receive				 *
TRX Mode:				
idle, no TC on input or ACN				
TX (LTC/MTC via cable)		 		
RX (LTC/MTC over ACN)				

 flash

 blink

**ca. 30 min left

*orange: X-jam source, red: incompatible source

Keeping Your Lockit up to Date (and Time)

Check ambient.de/en/downloads for firmware updates.

Your Lockit has an internal buffer battery for the RTC. It will only deplete when the unit is off with no NP-50 loaded and last you a long time. Once the Lockit doesn't hold time it's time to replace.

First, get a CR2016 type battery. Remove NP-50 battery, slightly loosen the nut of the antenna socket by a half turn, and remove the 4 Torx 6 screws on the back. Take off back cover, and slide out the covering lid as per print. Replace battery and reassemble in reverse order.

Warranty

Ambient Recording GmbH warrants against defects in materials and workmanship for a period of ONE (1) year from date of original retail purchase. This is a non-transferable warranty that extends only to the original purchaser. Ambient Recording GmbH will repair or replace the product at its discretion at no charge. Warranty claims due to severe service conditions will be addressed on an individual basis. THE WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE. AMBIENT RECORDING GMBH DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. AMBIENT RECORDING GMBH IS NOT RESPONSIBLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING FROM ANY BREACH OF WARRANTY OR UNDER ANY OTHER LEGAL THEORY. Because some jurisdictions do not permit the exclusion or limitations set forth above, they may not apply in all cases.

For all service, including warranty repair, please refer to your original retailer. If not applicable obtain a return authorization through the contact form on our website to be included with the unit when sending in to the address next page.

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