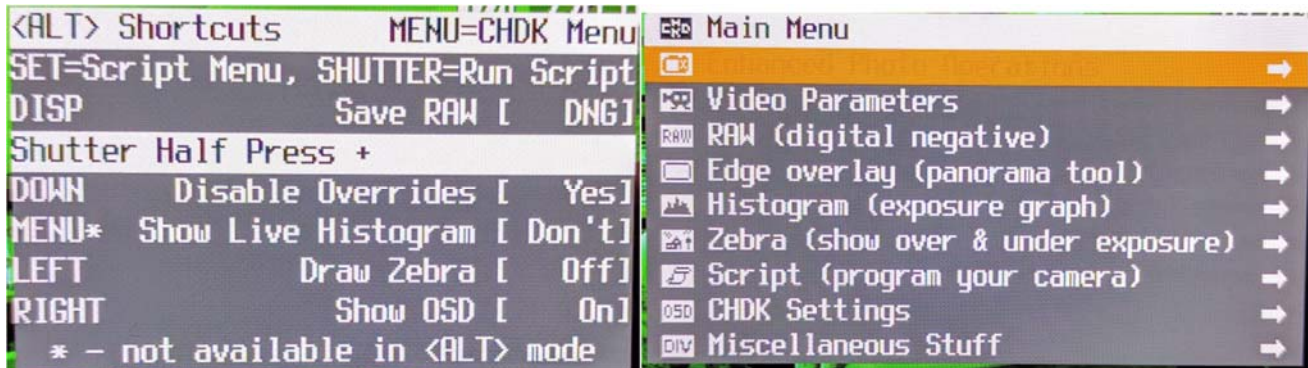


Canon S95 UAS Guide

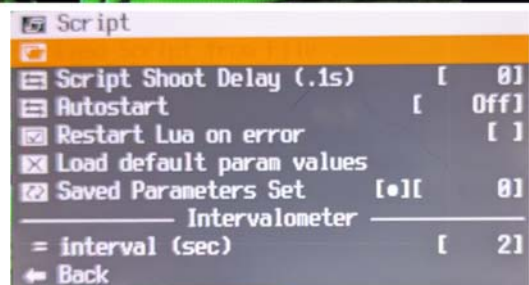
Jerry Davis, FSU Institute for GIScience. Methods first developed by Pete Christian.

CHDK Canon Hack Development Kit : Intervalometer



- <http://chdk.wikia.com/wiki/CHDK>
- Download correct version, install files and CHDK folder on SD Card
- Put SD card in locked mode before installing in camera
- Turn on with Play button, go to the menu, scroll up and update firmware 1.0.0.0 to 1.1.0.0
- S (alt) to get to CHDK menus and start previously setup scripts, e.g. intervalometer (then starts with shutter).










- Note display bug: highlighted line in orange hides whatever is displayed there, so you have to move the highlight away to see the effect.
- Set interval in Script menu. 2 s is about minimal.



Making Settings

Manual settings like focus set to infinity is a good idea so it simplifies exposures and doesn't get confused with motion. You may also want to set manual exposure, and you'll want to do this first so you can use both the circle  and the ring . With CHDK, to get to these settings, get out of program with S (alt), then half-press the shutter to get out of play-back mode and into photography mode. Some settings:







- Manual Exposure. Selector to M, then  for shutter speed and  for f stop.
- Manual Focus (MF):  then select MF. Move the circle  to infinity.
-  gets to lots of things like white balance, RAW, ISO.
- White Balance: normally set to auto AWB. Set to custom (for altered camera perhaps):
  : Make sure the entire screen is covered with plain white image (paper, cloud) and press MENU to set. Tint will change. Using RAW, you can also change this later.

Intervalometer

Start by S (alt) – should still be loaded, otherwise load program in CHDK menu.

Run intervalometer by pressing shutter, then turn off with shutter.

UAS Field Protocol

1. Mount camera securely, but so that you can get to the controls on the back as well. A modified GoPro mount works well for this since it can be loosened and the camera rotated.
2. Start CHDK
 - a. Playback to turn on
 - b. MENU
 - c. ^ to FIRM UPDATE, OK
3. Half-press shutter to get to camera mode.
4. White balance   MENU.
5.  ISO.
6. Test flight for getting good manual exposure settings:
 - a. Selector to Tv, set to good fast speed: 1/400 s.
 - b. S (alt) Enable current program (intervalometer)
 - c. Start intervalometer with shutter
 - d. Manual fly to good view, hover for photos
 - e. RTH to land.
 - f. Stop intervalometer with shutter
 - g. S (alt) Disable intervalometer.
 - h. Playback to check f stop of good photo
 - i. Use to set manual settings,  to set f stop.
7. Manual Focus (MF):  then select MF. Move the circle  to infinity.
8. Real flight (camera part only, flight planning separate instructions)
 - a. S (alt) Enable current program (intervalometer)
 - b. Start intervalometer with shutter
 - c. Run flight plan.
 - d. Stop intervalometer with shutter
 - e. S (alt) Disable intervalometer.