OpenCockpits A320 Chronometer Module

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Hidls result:

Device Found
  Vendor id:     0000
  Prouct id:     001c
  Device path:   /dev/hidraw0
  Serial_number:
  Manufacturer: Opencockpits
  Product:       IOCard-Chrono320

Initialization string:        AA AA AA AA AA AA AA 0F
  (i.e. blank off all display digits and decimal points)

- Buttons and switches (reported in single 8-byte packet, every 10-11 seconds!):

- Idle state (every 10-11 seconds): 1 1 0 0   . 1 1 1   . . . .   1 1 1 1  C70B

- PushButtons (values Off = 0, On – 1):
      RST          byte 6 bit 3        . . . .   . . . .   . . . .   1 . . .  C70A
      CLK_CHR      byte 7 bit 0        . . . .   . . . 0   . . . .   . . . .  C60B
      CLK_DATE     byte 6 bit 0        . . . .   . . . .   . . . .   . . . 1  C70A

- Encoder (turning right, 4 steps):     B         9         D         F       C70X
      UTC          byte 6 bit 2-1      . 0 1 . | . 0 0 . | . 1 0 . | . 1 1 .

- Switches (normally 0; 1 when selected):
      GPS_OFF      byte 7  bit 7-6     1 1 . .   . . . .   . . . .   . . . .  C70B
      GPS_INT      byte 7  bit 7-6     1 0 . .   . . . .   . . . .   . . . .  870B
      GPS_SET      byte 7  bit 7-6     0 1 . .   . . . .   . . . .   . . . .  470B
      RUN_OFF      byte 7  bit 2-1     . . . .   . 1 1 .   . . . .   . . . .  C70B
      RUN_STP      byte 7  bit 2-1     . . . .   . 1 0 .   . . . .   . . . .  C50B
      RUN_RST      byte 7  bit 2-1     . . . .   . 0 1 .   . . . .   . . . .  C30B

- (Bytes 5 – 0 always 0)

- Displays (encoded in single 8bit output buffer):

      CL_CHR      bytes 7 – 6
      CL_UTC      bytes 5 – 3
      CL_ET       bytes 2 – 1
      DOT_CHR     byte 0 bit 4
      DOT_UTC1    byte 0 bit 6
      DOT_UTC2    byte 0 bit 5
      DOT_ET      byte 0 bit 7

- (byte 0 bits 3 – 0 always 1)
```

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            X-Plane datarefs / commands:

RST    Clock_timer_reset        sim/instruments/timer_reset
CHR    Clock_timer_start_s      sim/instruments/timer_start_stop
SET    Clock_date_time          sim/instruments/timer_show_date
RUN    Clock_ET_StartStop       AirbusFBW/ClockETSwitch

       Clock_timer_minutes      sim/cockpit2/clock_timer/elapsed_time_minutes
       Clock_timer_seconds      sim/cockpit2/clock_timer/elapsed_time_seconds
       Clock_UTC_year           -nothing; all zeroes!-
       Clock_UTC_month          sim/cockpit2/clock_timer/current_month
       Clock_UTC_day            sim/cockpit2/clock_timer/current_day
       Clock_UTC_hours          sim/cockpit2/clock_timer/zulu_time_hours
       Clock_UTC_minutes        sim/cockpit2/clock_timer/zulu_time_minutes
       Clock_UTC_seconds        sim/cockpit2/clock_timer/zulu_time_seconds
       Clock_ET_hours           AirbusFBW/ClockETHours
       Clock_ET_minutes         AirbusFBW/ClockETMinutes

                   Available in X-Plane 10.41:
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%sim/instruments/timer_cycle	Timer start-stop-reset.
%sim/instruments/timer_is_GMT	Timer is GMT.
%sim/instruments/timer_mode	Timer/Clock mode for chronos.
%sim/instruments/timer_reset	Reset the timer.
%sim/instruments/timer_show_date	Show date on the chrono.
%sim/instruments/timer_start_stop	Start or stop the timer.

sim/cockpit2/clock_timer/current_day	day	Numeric day of month
sim/cockpit2/clock_timer/current_month	month	Numeric month of the year
sim/cockpit2/clock_timer/date_is_showing	boolean	True if date is showing (date button pressed recently)
sim/cockpit2/clock_timer/elapsed_time_hours	hours	Elapsed time on the timer, hours
sim/cockpit2/clock_timer/elapsed_time_minutes	minutes	Elapsed time on the timer, minutes
sim/cockpit2/clock_timer/elapsed_time_seconds	seconds	Elapsed time on the timer, seconds
sim/cockpit2/clock_timer/hobbs_time_hours	hours	Hobbs meter time, hours
sim/cockpit2/clock_timer/hobbs_time_minutes	minutes	Hobbs meter time, minutes
sim/cockpit2/clock_timer/hobbs_time_seconds	seconds	Hobbs meter time, seconds
sim/cockpit2/clock_timer/local_time_hours	hours	Local time, hours
sim/cockpit2/clock_timer/local_time_minutes	minutes	Local time, minutes
sim/cockpit2/clock_timer/local_time_seconds	seconds	Local time, seconds
sim/cockpit2/clock_timer/timer_is_GMT	boolean	True if time shown is GMT
sim/cockpit2/clock_timer/timer_mode	enum	TODO
sim/cockpit2/clock_timer/timer_running	boolean	True if timer is running
sim/cockpit2/clock_timer/zulu_time_hours	hours	Zulu time, hours
sim/cockpit2/clock_timer/zulu_time_minutes	minutes	Zulu time, minutes
sim/cockpit2/clock_timer/zulu_time_seconds	seconds	Zulu time, seconds

```
               (Not all of these are actually used…)


                   Hans Jansen 2020-06-10
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