

## Re: Info needed on Spectracom 8171A clock... Help

**Source:** <http://sci.tech-archive.net/Archive/sci.electronics.equipment/2004-08/0259.html>

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**From:** Dennis (*Dennis\_The\_Menace\_at\_no\_spam.net*)

**Date:** 08/14/04

Date: Sat, 14 Aug 2004 07:35:42 -0500

In article <bec993c8.0408140413.530d0a4d@posting.google.com>, shoppa@trailing-edge.com says...

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>Dennis <Dennis\_The\_Menace@no\_spam.net> wrote in message news:<10hnmbgs2042aac@corp.supernews.com>...

>> --

>>

>> *I have a Spectracom 8171A WWVB Synchronized clock.*

>> *Need a manual on this clock, or some good operating*

>> *information. Much appreciated.*

>

>*I believe that it uses the same protocols as the Spectracom*

>*8170, which is well documented in many places including the NTP*

>*source code. From refclock\_wwvb.c:*

>

> *\* This driver supports the Spectracom Model 8170 and Netclock/2 WWVB*

> *\* Synchronized Clocks and the Netclock/GPS Master Clock. Both the WWVB*

> *\* and GPS clocks have proven reliable sources of time; however, the*

> *\* WWVB clocks have proven vulnerable to high ambient conductive RF*

> *\* interference. The claimed accuracy of the WWVB clocks is 100 us*

> *\* relative to the broadcast signal, while the claimed accuracy of the*

> *\* GPS clock is 50 ns; however, in most cases the actual accuracy is*

> *\* limited by the resolution of the timecode and the latencies of the*

> *\* serial interface and operating system.*

> \*

> *\* The WWVB and GPS clocks should be configured for 24-hour display,*

> *\* AUTO DST off, time zone 0 (UTC), data format 0 or 2 (see below) and*

> *\* baud rate 9600. If the clock is to used as the source for the IRIG*

> *\* Audio Decoder (refclock\_irig.c in this distribution), it should be*

> *\* configured for AM IRIG output and IRIG format 1 (IRIG B with*

> *\* signature control). The GPS clock can be configured either to respond*

> *\* to a 'T' poll character or left running continuously.*

> \*

> *\* There are two timecode formats used by these clocks. Format 0, which*

> *\* is available with both the Netclock/2 and 8170, and format 2, which*

> *\* is available only with the Netclock/2, specially modified 8170 and*

> *\* GPS.*

> \*  
> \* *Format 0 (22 ASCII printing characters):*  
> \*  
> \* *<cr><lf>i ddd hh:mm:ss TZ=zz<cr><lf>*  
> \*  
> \* *on-time = first <cr>*  
> \* *hh:mm:ss = hours, minutes, seconds*  
> \* *i = synchronization flag (' = in synch, '?' = out of synch)*  
> \*  
> \* *The alarm condition is indicated by other than ' ' at a, which occurs*  
> \* *during initial synchronization and when received signal is lost for*  
> \* *about ten hours.*  
> \*  
> \* *Format 2 (24 ASCII printing characters):*  
> \*  
> \* *<cr><lf>iqyy ddd hh:mm:ss.fff ld*  
> \*  
> \* *on-time = <cr>*  
> \* *i = synchronization flag (' = in synch, '?' = out of synch)*  
> \* *q = quality indicator (' = locked, 'A'...'D' = unlocked)*  
> \* *yy = year (as broadcast)*  
> \* *ddd = day of year*  
> \* *hh:mm:ss.fff = hours, minutes, seconds, milliseconds*  
> \*  
> \* *The alarm condition is indicated by other than ' ' at a, which occurs*  
> \* *during initial synchronization and when received signal is lost for*  
> \* *about ten hours. The unlock condition is indicated by other than ' '*  
> \* *at q.*  
> \*  
> \* *The q is normally ' ' when the time error is less than 1 ms and a*  
> \* *character in the set 'A'...'D' when the time error is less than 10,*  
> \* *100, 500 and greater than 500 ms respectively. The l is normally ' ',*  
> \* *but is set to 'L' early in the month of an upcoming UTC leap second*  
> \* *and reset to ' ' on the first day of the following month. The d is*  
> \* *set to 'S' for standard time 'I' on the day preceding a switch to*  
> \* *daylight time, 'D' for daylight time and 'O' on the day preceding a*  
> \* *switch to standard time. The start bit of the first <cr> is*  
> \* *synchronized to the indicated time as returned.*  
>  
> *Tim.*

Tim,

thank you for your response. This clock does not receive the WWVB signal directly, instead it is inputted via a WWVB receiver. The receiver that can be used are the 8160,8161, 8164, and 8165. At this point I guess I need one of those receivers.

Dennis

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