

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

**Source:** <http://sci.tech-archive.net/Archive/sci.electronics.design/2004-08/2412.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>...

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>>

>> *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.*

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> *
> * 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.
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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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