



CommSync II
Model 385
Redundant GPS Synchronized
Time and Frequency System
User's Manual

Document 385-8000
Revision AB



File Name: commsync ii manual.pdf

Size: 4000 KB

Type: PDF, ePub, eBook

Category: Book

Uploaded: 6 May 2019, 21:44 PM

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Document Revision AB Changed specifications to be consistent with published specifications. Added Section 5 and Section 6. Rev B Changed applicable pages to reflect KDC V, GTF V firmware changes, and added external Sync Input related descriptions. Rev C Changed applicable pages in Section 6 to reflect the addition of the TIME OFFSET capability in the Time Code module, 02. Rev D Added SAASM specific information. Changed Section 6 to reflect module status information. Corrected typographical errors. Rev E Added DTFspecific information. Rev F Updated LPN Sine wave information for new modules. Rev H Separated out Section 6, Option Module information to new User s Manual . Rev J Added Paragraph 2.2 Rev K Added Power Supply specifications to General Specifications. Updated Declaration of Conformity. Added information for DTF setup. Rev AA Updated with Kill backup memory SAASM, HINT Information and Baud rate setting options. Rev AB Updated for New xx SAASM GTF Modules, added Dual Port Ethernet module. 5 Legal Information 5 WARRANTY FEIZyfer, Inc. Warranty terms and conditions are explained in the Standard Terms and Conditions of Sale provided with the quotation. DISCLAIMER This document reflects the specifications and features of the equipment that were current at the time of release of this manual. FEIZyfer, Inc. disclaims responsibility for any errors contained herein, and reserves the right to make changes to this manual and related equipment without notice or obligation. TRADEMARKS Windows 95, Windows 98, and Windows are registered trademarks of Microsoft Corporation. All brand names and product names used in this document are trademarks, registered names of their respective holders. FEIZyfer, Inc. is not associated with any referenced product or manufacturer mentioned in this document. FEDERAL COMMUNICATIONS COMMISSION FCC This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC

Rules. http://clubelsendero.com/img_pag/carrier-tstatccprh01-b-thermidistat-thermostat-manual.xml

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These limits are design to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures Reorient or relocate the receiving antenna. Increase the separation between the equipment and the receiver Connect the equipment into a outlet on a circuit different from that to which the receiver is connected. THIS PRODUCT IS NOT AUTHORIZED FOR USE AS A CRITICAL COMPONENT IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESSED WRITTEN CONSENT OF THE CHIEF EXECUTIVE OFFICER OF FEIZYFER, INC. 6 6 Safety Information WARNINGS Warning statements in this manual call attention to conditions or practices that could result in injury or loss of life. CAUTIONS Caution statements in this manual call attention to conditions or practices that could result in damage to the CommSync II unit. GENERAL SAFETY PRECAUTIONS Always locate heavy equipment towards the bottom of the cabinet rack to avoid accidental tipover of the cabinet rack. Never apply a voltage to any terminal that is outside the range specified for the terminal If the

instrument is configured to operate from an AC power source, pay special attention to the following
o o o o o Connect the instrument only to a properly rated supply circuit The supplied 3prong power
cord provides safety grounding. Do not defeat this
feature. [http://www.farrowmemoryspeakers.com/userfiles/carrier-tstatccpb501-thermostat-manual.x
ml](http://www.farrowmemoryspeakers.com/userfiles/carrier-tstatccpb501-thermostat-manual.x
ml)

It is applicable for CommSync II systems that are configured as GPS Timing and Frequency Systems GTF as well as those units that are configured as Distribution Timing and Frequency Systems DTF. This manual also provides detailed information regarding the various power supply options that are available for the CommSync II system. The serial interface commands are detailed in FEIZyfer Serial Communications Protocol document Related Manuals and Reference Documents The following table identifies all of the reference documents and utility programs referred to in this manual Serial Communications Protocol describes the complete command set and provides detailed instructions for using a computer to control the CommSync II system. Option Module User s Manual provides information on removal and installation of the available option modules as well as the operation, configuration, and specifications for each available option modules for the CommSync II. CommSync II Fiber Optic Antenna Option Users Manual describes how to setup and use an optional fiber optic antenna system that replaces the direct connection between the CommSync II and antenna with a fiber optic link. Boot Code and Firmware Upgrade Instructions instructions for the upgrading of new firmware from via the serial port into the CommSync II. TFTP Remote Upgrade Instructions instructions for the upgrading of new firmware from a remote location into the CommSync II. ZyferTFTP.exe TFTP server utility for remote upgrade of CommSync II firmware. FEIZyfer custom MIB document that lists all of the SNMP commands available for the control and monitoring of the CommSync II system. Zyfer CS2 GUI Graphical User Interface utility program that can be used for the control and monitoring of the CommSync II system. GTF Hot Start Procedure tells how to perform a hot start on CommSync II units equipped with SAASM GPS receivers. 18 18 Section 1 Manual Overview 1.

4 Conventions This manual uses the following conventions Names of front panel indicators, rear panel indicators, system operational modes, and front panel LCD menus appear in italics. Names appear in the manual in the same case that they are displayed on the CommSync II panels and menus. Front panel LCD screen text and general notes also appear in italics. References to front panel control keys and editable menu fields appear in BOLDFACE type. Names of connectors and ports also appear in BOLDFACE type, but they are also enclosed within double quotation marks . 1.5 Where to Look Section 2, Quick Start Guide GPS Timing and Frequency System GTF on page 19 briefly describes the very basics of setting up a GTF equipped CommSync II System as a GPSdisciplined time and frequency reference. Section 3, Quick Start Guide Distribution Timing and Frequency System DTF on page 21 briefly describes the very basics of setting up a DTF equipped CommSync II System as time and frequency distribution system synchronized to and external source. Section 4, General Information on page 23 provides a full description of the CommSync II system. Section 5, GPS Timing and Frequency Systems on page 35 provides all of the operational details for setting up and using a GTF based CommSync II System. Section 6, Distribution Timing and Frequency Systems on page 61 provides all of the operational details for setting up and using a DTF based CommSync II System. Section 9, Maintenance and Repair on page 107 contains the periodic service, troubleshooting, and repair procedures. Section 10, Power Supply Modules on page 117 provides all of the specifications and operational details for the power supplies options available for the CommSync II. Appendix A Declaration of Conformity, on page 130 provides a list of all of the standards to which conformity is declared. Section Install the CommSync II into the equipment cabinet Mount the antenna in the desired location.

<https://www.becompta.be/emploi/bosch-sds-max-manual>

At the antenna, connect one end of the antenna cable to the antenna connector. Connect power source to the CommSync II. If communication is desired, the CommSync II comes with a standard RS232 port on the GTF module's front panel. Connect a serial cable between this port and a PC serial port. Apply power to the system at this time the following events occur: After a moment, the front panel display backlight illuminates and the system runs through its self-test diagnostics. Initially, upon powerup, the GTF module's internal receivers default to the Survey mode; at this point the GTF modules report that they are not ready and that they are in Warmup mode. Note: After relocating the system, it is recommended that the user perform a Cold Start to clear stored parameters/almanac in the GPS receiver. The Time To First Fix (TTFF) depends on the satellite visibility. When operating in the Survey mode at powerup and with many satellites visible, the receiver requires a minimum of 2 minutes and at most 30 minutes to determine the coarse antenna position First Fix. When Survey is complete the GTF automatically switches to the Known mode. Note: The SAASM Receiver operates in Dynamic mode only. Further operation is automatic. After the internal timing and oscillator frequency have been adjusted sufficiently to provide accurate output signals, the Time and Status screen indicates the exact time, Time Figure Of Merit (TFOM), and the status Time Locked. The GTF module's front panel Ready indicator illuminates. These input modules can be located in either Slot 15 Primary or Slot 14 Secondary or both. The Primary slot communicates directly with the online DTF module, while the Secondary slot communicates directly with the offline redundant DTF module. The external reference sources can be applied to the module's EXT SYNC A input, the B input, or both inputs. Both inputs to a module should be the same frequency. The module can then be configured to auto select A priority or A or B.

<https://jdlgroup.ca/images/bv-25-service-manual.pdf>

Connect power source to the CommSync II. If communication is desired, the CommSync II comes with a standard RS232 port on the DTF module's front panel. The Time Figure Of Merit (TFOM) is an indication of the frequency accuracy referenced to the external input, the reported time is the running time clock and the status WarmUp. DTF Input Configuration: The external reference type 1PPS or frequency for each DTF module must be selected; this can be done via the front panel controls. Further operation is automatic. After the DTF modules have an external reference input, the disciplining of the internal timing and frequency starts. Menu 7 Screen 1 is for the primary control Slot 15, and Menu 7 Screen 2 is for the secondary control Slot 14. Primary CTL Slot 15 Input AUTO To BOTH Ext In 10MHz Status 0x1A. To configure the module, press Edit. If the external reference input is applied and the module is configured properly, the DTF Ext Sync In indicator will illuminate, indicating that the DTF is receiving the input signal. Setting DTF Time: The DTF default time mode is RUN time. The Time displayed on Menu 1 is the time days, hours, minutes, and seconds that the DTF system has been in operation. In many cases this is sufficient. If time output is desired, time can be set either by manual time entry or with the optional Time Code Input module via an IRIG-B time signal. In this configuration the CommSync II provides highly accurate timing and frequency output signals that are synchronized to Coordinated Universal Time (UTC) via the Global Positioning System (GPS). The CommSync II GTF module utilizes the GPS system's 1 PPS as a reference to discipline an internal oscillator; this disciplined oscillator allows the CommSync II system to continue providing accurate outputs whenever sufficient GPS signals are unavailable.

<https://artoftheark.com/images/bv7985-manual.pdf>

Configured this way, the CommSync II functions as a distribution system with all the functionality of the GPS-referenced system, but synchronized to an external source instead of the GPS system. If an optional input module is installed, an external frequency source of 1 MHz, 5 MHz or 10 MHz, or an alternate 1 PPS source can be used as the reference source instead of the 1 PPS source connected to the DTF module's Sync Input connector. The serial interface commands are detailed in the FEI-Zyfer Serial Communications Protocol document. Option Modules: The system has many possible

option modules. See the Option Module User's Manual, for details and specifications. 25 Section 4 General Information Reference The following table identifies all of the reference documents referred to in this manual Table 41 Reference Documents and Programs Document Number Document Title All Systems Serial Communications Protocol Option Module User's Manual Boot Code and Firmware Upgrade Instructions Fiber Optic Antenna Equipped Systems CommSync II Fiber Optic Antenna Option Users Manual Ethernet Equipped Systems FEIZyfer Custom MIB CommSync II Family Graphical User Interface Software TFTP Remote Upgrade Instructions FEITFTP TFTP server utility for remote upgrade of CommSync II Family firmware SAASM Equipped Systems GTF Hot Start Procedure Note All of the documents listed in Table 41 are available at Basic System Description The following paragraphs contain a summary of the basic system and its options Chassis The basic system consists of a chassis with a 3U 5.25 x17.65 frame and a passive backplane. The chassis mounts in a standard 19 rack. Cooling is through conduction and natural convection. No cooling fan is required Front Panel Optionally available is a front panel mounted Keypad and LCD module. When provided, the backlit display provides indication of time, position, satellite information, operating status, oscillator performance, system setup and installed option modules.

The Keypad allows for data entry and display screen selection. The upper connector is the antenna connection for GTF Module 1 located in the farleft slot of the chassis, and the lower connector is the antenna connection for GTF Module 2 located in the far right slot of the chassis. These connectors also provide a DC voltage used as the power source for the active GPS antennas. In a Distribution Chassis, the antenna connectors may be omitted. The Mark III and subsequent GTFs versions include the external synchronization input feature. The Mark IV and subsequent GTF versions also include additional memory space for future option module support. Each GTF module contains a selfcontained Frequency Discipline Machine FDM, consisting of an ultrastable oscillator either rubidium or ovencontrolled crystal, a GPS receiver, along with a microprocessor Controller and bus interface drivers. While locked to GPS the GTF module learns the characteristics of its precision oscillator, using GPS as reference. This learned data is used to maintain the stability of the time and frequency outputs if the system enters holdover loss of GPS lock condition. While locked to GPS, the GTF module's output signals and the system's time are synchronized to UTC. The module's GPS receiver 1 PPS output is used as reference to align the system's 1 PPS output to UTC 1 PPS. 28 28 Section 4 General Information In a system configured with a Mark III or later GTF module refer to Table 42 for GTF types and part numbers, an external 1 PPS signal connected through the Sync Input port can be used as reference in the event the GPS reference is not available or is interrupted. The GTF may also be commanded to use this sync input. See FEIZyfer document, DISC command. In the Switch mode, GPS is the default reference source. If GPS becomes unavailable and the external reference input is present, the module will automatically switch to the external 1 PPS.

If the external 1 PPS is not present, then the module will go into Coasting or Holdover mode. When GPS becomes available again, the module will return to the GPS source. Note The system 1 PPS output is normally aligned with the GPS reference. If the external 1 PPS reference source is not aligned with the system 1 PPS output, then the system 1 PPS output will be synchronized to the external input. The DTF modules also include a selfcontained Frequency Discipline Machine FDM consisting of an ultrastable oscillator either Rubidium or OCXO along with the microprocessor Controller and bus interface drivers. While locked, the DTF module will also learn the characteristics of its oscillator. This learned data is used to maintain the stability of the time and frequency outputs if the system enters holdover loss of external reference condition. Note In a DTF distribution system, time can be manually set and the system's 1 PPS alignment is dependent on the reference source. 29 Section 4 General Information Rear Panel Modules There are a total of 16 rear panel option slots. Slots 1 and 16 are designated for Power Supply modules. Slot 2 is used for the GPS antenna inputs in GTF systems Slot 2 is unused in DTF systems. Each rear panel module has two LED indicators to provide immediate visual status. These are typically module power green and module fault red. See

Option Module User's Manual, Power Supply and for more information. Any of the available power supply options can be used in any combination. Refer to, TFTP Remote Upgrade Instructions, CommSync II Family, for more information Output Option Modules Slots 3 through 15 accept a wide variety of option modules. Typically, each output module contains its own VCXO to minimize the effects of a fault induced switchover. 3.3 Section 4 General Information Online GTF Selection The online, or active GTF module selection is determined within the GTF modules themselves and is governed by a few simple rules.

If the online GTF module develops a fault, it will switch offline and the redundant module will take over Fault Switchover Rules There are two categories of switchover criteria Hard Faults If a GTF module is online and develops a fault, it causes a switch over to the other module if the other module is not faulted and is Ready completed warmup. All Hard Faults are latched. Replacing the module can only reset the latch. Soft faults are not latched, as they could recover Storage Considerations SAASM Receivers xx SAASM GTFs that have not been on for more than 24 hours and are going to have power removed for more than two 2 days must have their SRAM memory reset xx SAASM GTFs that have been on for more than 24 hours and are going to have power removed for more than five 5 days must have their SRAM memory reset. When reset, the xx SAASM GTF will have the following information cleared Crypto Key, Almanac, Ephemeris and Location. Refer to paragraph for SRAM memory reset instructions. View more All rights reserved. No part of this document may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, User's Manual The evaluation kit can be used in either Quick Installation Guide US English. Product contents. Introduction. PC System Requirements DualBay RAID Storage Enclosure for two 3.5inch Serial ATA Hard Drives. User Manual March 31, 2014 v1.2 www.akitio. This kit can be used in either a laboratory User's Manual Installation Guide ENGLISH. www.bandg.com www.simradyachting.com www.lowrance.com Type the abstract of the document here. The abstract Content Overview 2 Package contents 2 Introduction 3 Product Specifications 3 Hardware ADSL Modem Installation Guide At all times when using the apparatus you must follow these Important USB Data Link Cable User's Manual 1 This unique cable allows you to easily connect two computers with USB port and instantly transfer Instruction Manual. USB 2.

0 to VGA Multi Monitor External Video Adapter Disclaimer This document is supplied by Installation Guide With this print server you can share your printer with all the computers in your Operation is subject to the following two conditions 1 this device may not cause harmful interference, and 2 this This guide is designed to acquaint you with the features and functionality of the 2100 GCS661U Part No. M1069 M1069 2 Table of Contents User Notice 4 A Note About Terminology 5 Overview 6 Features 7 Package Contents 8 Requirements 9 Operating System Support These limits are designed to provide reasonable protection Earthmate GPS BT20. Bluetooth All rights reserved. Kinivo is a trademark of Kinivo LLC. Bluetooth word mark and the Bluetooth logo are registered trademarks of Bluetooth SIG. All Model 70A001 GSM Cellular Communications Center Operation Manual Document Number 70I001 Rev A August, 2009 Contents Description. 1 Use with security systems.1 Everyday use.2 These limits are designed Updated versions of this document All rights reserved. No part of this document may be reproduced, stored in User's Manual To use this website, you must agree to our Privacy Policy, including cookie policy. Time Code Input Module 3854040. The 385404001 Time Code Input Module has connections for IRIGB input timeThe IRIGB input isThe synchronization input signals are used toIRIGB input time information, and connections for a RS232 serial command port. Slot 7Secondary. The Primary slot communicates directly with the online GTF module,Module in Slot 8. The 385404003 module may also be used in conjunction with the 385403802 or 03. Ethernet input module, when installed in an adjacent slot. The module is "hot swappable". It can be removed or installed without removing powerThe module's LEDs indicate the status of theThe Green LED indicates power to the module. The Red LED is the Alarm indicator thatGreen LEDs at each input connector illuminateModule Configuration.

The following table includes the signalPart NumberTime Code Input Module Configurations.

StatusSlot 3 Comp TTL Output Module. Status 0x31There are no commands specific to this output module.The pulse output signals are synchronized to the 1 PPS and phasecoherent to theNumber of Outputs. 4. Connector Type.BNC female. Rate. User Selected. Synchronization Reference.UTC. Synchronization. Rising leading edge ontime. Source Impedance.50 nominal. Output Drive. Low Level. GPSdisciplined time and frequency reference systems for Expertise in integrated PNT Equipment HAE integrator and ISO 90012008 certified.GBGRAM, IRIG, 10 MHz, 1PPS, BITS. AFCEA reserves the right to edit or remove material that does not meet these criteria.Join the community that has been the connection for global security since 1946. Please upgrade your browser to improve your experience. Rubidium or OCXO oscillators provide for excellent holdover performance in the event of failure of the reference inputs. In addition, they may be configured as Distribution Time and Frequency DTF systems that are synchronized by an external reference.When no GPS signal is present the unit may be locked to an applied IRIG B time reference. A user programmable time zone offset is available when using GPS as the time reference.It provides three buffered IRIG B122 time code outputs. An internal twelve channel GPS receiver automatically acquires all inview satellites upon power up and locks the internal IRIG B time code generator to the GPS time reference. When a GPS signal is not present the unit will automatically switch to an IRIG B reference input. If neither reference is available the 6115G8SA will automatically switch to an internal clock and continue generating the output IRIG B signals. The time code output is synchronized with UTC time unless a time offset has been programmed.

A twelve channel GPS receiver automatically acquires all inview satellites upon power up and locks an internal IRIG B time code generator to the GPS time reference. If the GPS lock is lost the 6115G8V2 will automatically switch to an internal clock and continue generating the output IRIG B signal. No discernible change in the IRIG B output will occur due to this transition. Additionally a battery backed up internal clock maintains time during power loss. An external event may be time tagged by applying an Event Trigger to the Trigger Input. The time of the event will be captured and stored until output via the serial port. The maximum event burst rate is 100KHz and the event buffer can store up to 127 events. The time code output is synchronized with UTC time unless a time offset has been programmed. If the GPS lock is lost the 6115G8 will automatically switch to an internal clock and continue generating the output IRIG B signal. The maximum event burst rate is 100KHz and the event buffer can store up to 127 events. The internal time code generator is synchronized with UTC time derived from GPS or an IRIG B reference input as selected by the operator. If the reference lock is lost the 6115G8S will automatically switch to an internal clock and continue generating the output IRIG B signal. No discernible change in the IRIG B output will occur due to this transition. The timer has built in almanac timings fixed in nonvolatile ram so that the user does not have to programme the unit from time to time. This has added advantage over daily dial or weekly timers. Timer provides two outputs to drive contractors of different ratings. These outputs can be used with different combinations to achieve desired output. Timer is provided with manual override facility. Optional detachable external keyboard unit provided to avoid unauthorized access. These time switch can also be synchronised with clock.

It includes a twelve channel GPS receiver which automatically acquires all inview satellites upon power up and locks an internal IRIG B time code generator to the GPS time reference. If the GPS lock is lost the 6155E will automatically switch to an internal clock and continue generating the output IRIG B signal. No discernible change in the IRIG B output will occur due to this transition. The unit automatically acquires all inview satellites upon power up and locks an internal IRIG B time code generator to the GPS time reference. If the GPS lock is lost the 400D will automatically switch to an internal clock and continue generating the output IRIG B signal. No discernible change in the IRIG B output will occur due to this transition. Once the time is established, a loss of GPS lock will cause the 6225GC to automatically switch to the internal clock that will increment the time display

until the GPS signal is reacquired. The default format is UTC time. It is also possible to program a time offset to convert from UTC to local time. This offset is entered via the keyboard or RS232 port. All configuration and programmed values are stored in nonvolatile memory and remain until overwritten. Register Now. In this work, we show a complete model and implementation of a lightweight OS4RS supporting preemptable and clockscalable hardware tasks. We also propose a novel, lightweight scheduling mechanism allowing for timely and prioritybased reservation of reconfigurable resources, which aims at usage of preemption only at the time it brings benefits to the performance of a system. The architecture of the scheduler and the way it schedules allocations of the hardware tasks result in shorter latency of system calls, thereby reducing the overall OS overhead. Finally, we present a novel model and implementation of a channelbased intertask communication and synchronization suitable for softwarehardware multitasking with preemptable and clockscalable hardware tasks.

It allows for optimizations of the communication on per task basis and utilizes pointtopoint message passing rather than sharedmemory communication, whenever it is possible. Extensive overhead tests of the OS4RS. Download PDF In this work, we show a complete model and implementation of a lightweight OSRS supporting preemptable and clockscalable hardware tasks. We also propose a novel, lightweight scheduling mechanism allowing for timely and prioritybased reservation of reconfigurable resources, which aims at usage of preemption only at the time it brings benefits to the performance of a system. The architecture of the scheduler and the way it schedules allocations of the hardware tasks result in shorter latency of system calls, thereby reducing the overall OS overhead. Finally, we present a novel model and implementation of a channelbased intertask communication and synchronization suitable for softwarehardware multitasking with preemptable and clockscalable hardware tasks. It allows for optimizations of the communication on per task basis and utilizes pointtopoint message passing rather than sharedmemory communication, whenever it is possible. Extensive overhead tests of the OSRS services as well as application speedup tests show efficiency of our approach. 1. Introduction Research on Dynamically Partially Reconfigurable DPR FieldProgrammable Gate Arrays FPGAs is motivated by their superior flexibility, when compared to traditional FPGAs and ApplicationSpecific Integrated Circuits ASICs, as well as their potential to increase overall system performance and reduce dynamic power consumption by adapting to varying processing requirements of a system. However, the concept of the HW tasks is difficult to accomplish that, the OSRS must provide the HW tasks with an adequate interface to access those services.

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