



FIREFLY

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FireFly[®]
Central Radio Unit (CRU)
Quick Reference Guide

Release 2.0
1018-010030E
Rev PE5
July 2008

Full-wave imaging. Put it to work for you.

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Print date: April, 2008

Original publication date: March, 2008

PDF part number: 1018-010030-0001E

To order printed copies of this document, please reference the following part number: 1018-010030-0002E

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FCC ID: MCV-CRU2

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

FCC Modification Rule for User Manuals:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Warning RF Exposure Compliance

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 210cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. Users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance

Getting Started

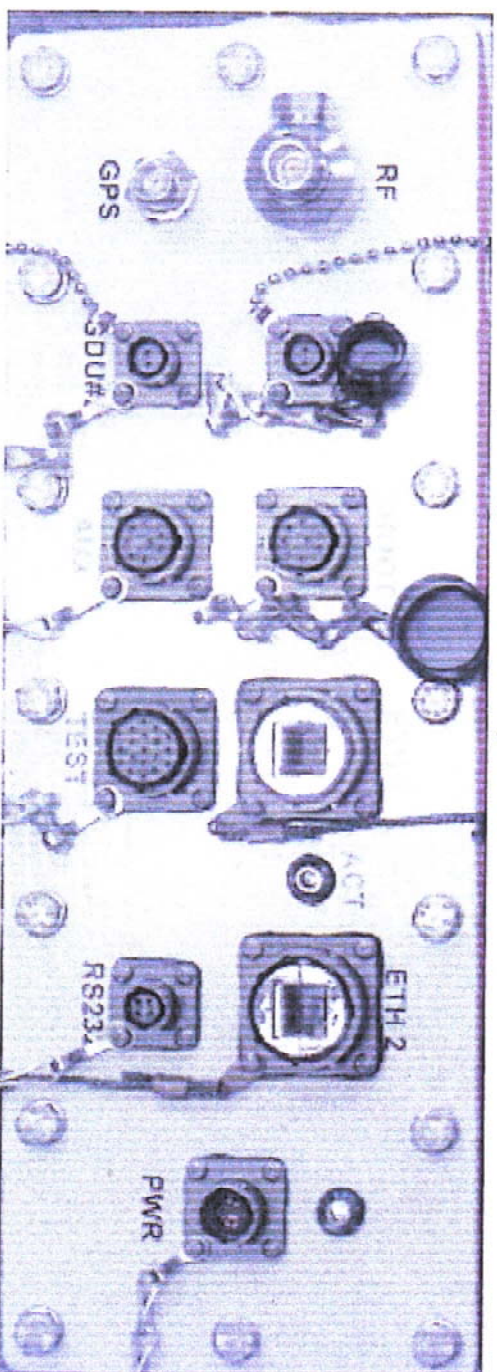
Welcome to the Central Radio Unit (CRU) Quick Reference Guide. This guide provides general information for connecting the CRU to FireFly® system components.

About the CRU

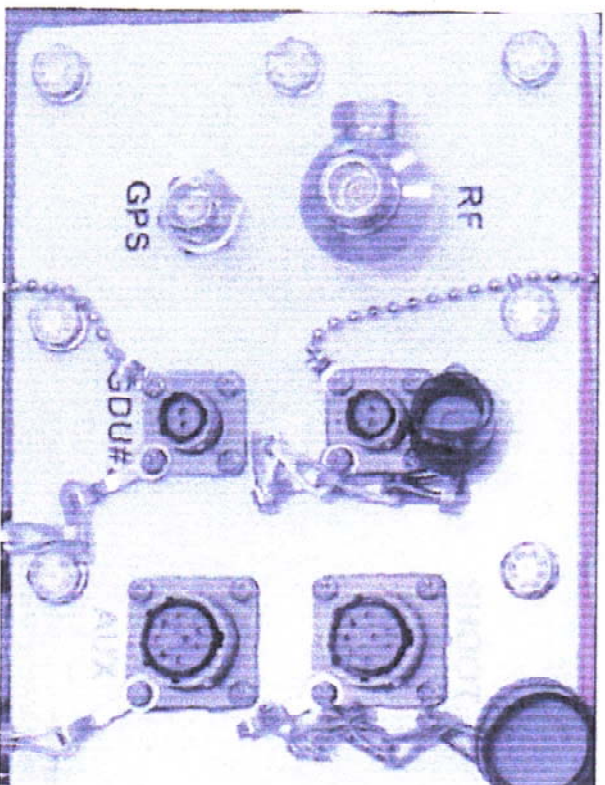
The CRU is a central controller radio that manages the timing of events and provides low-level radio communication. It provides a radio communication interface between the CSC in the recording cab and the Field Station Units (FSUs) in the field.

CRU Hardware Panel

The CRU hardware panel has connectors that interface with FireFly subsystem components, such as the CSC, Truck Interface Module (TIM), and GPS system.

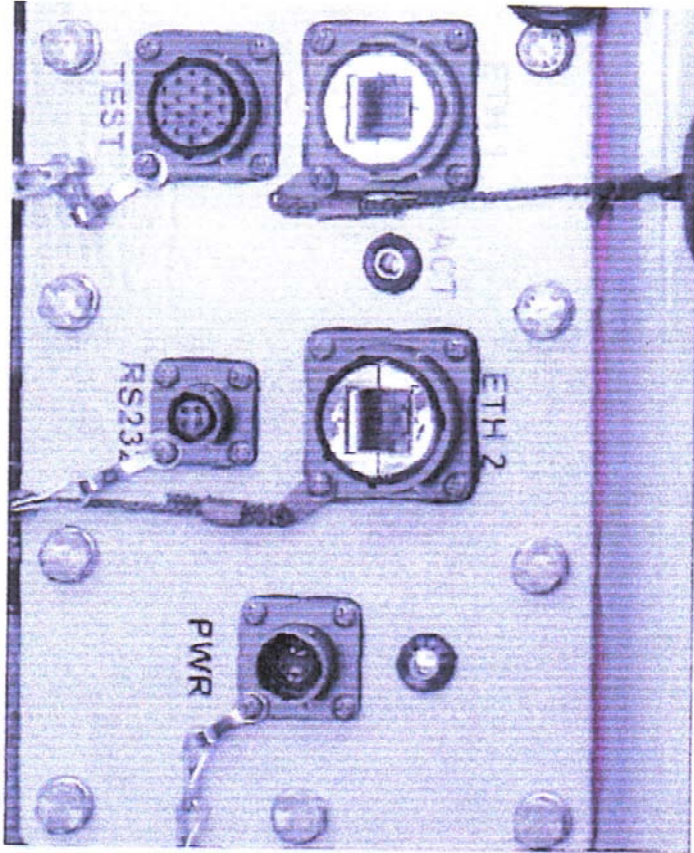


Side Panel - Left Area



Connector	Description	Interfaces With...
RF	Radio Frequency 1 antenna connector	Dummy 300W load or antenna Note: You must attach a dummy load or antenna BEFORE powering the CRU, or the radio circuit board can be damaged.
GPS	Global Positioning System antenna connector	GPS Antenna
GDU1	T/R switching signal	Not used
GDU2		
SHOOT	Pelton VibPro ARM and CLK_TB signals	Pelton VibPro via Y-Splitter cable
AUX		PPS on TIM

Side Panel - Middle Area



Connector	Description	Interfaces With...
ETH1	Ethernet connector	Ethernet switch
TEST		
ETH2	Ethernet connector	
RS232	Serial console connection	CSC or any other computer with serial terminal emulation
Power	Power supply connector	DC power source
Device Status		
Indicator	Description	
LINK	 Ethernet connection enabled	
ACT	 Network activity	
POWER	 Power on	

CRU Interface to Firefly Subsystems

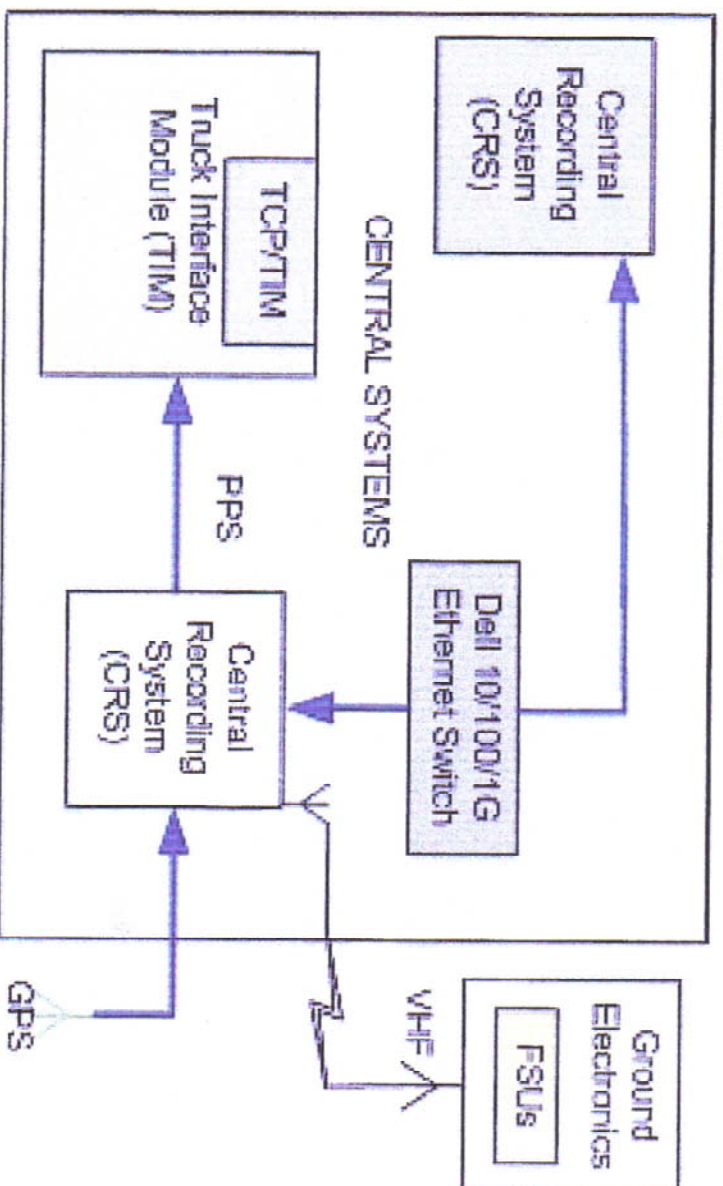


Figure 1-1. CRU Ecosystem with TIM-based Shooting

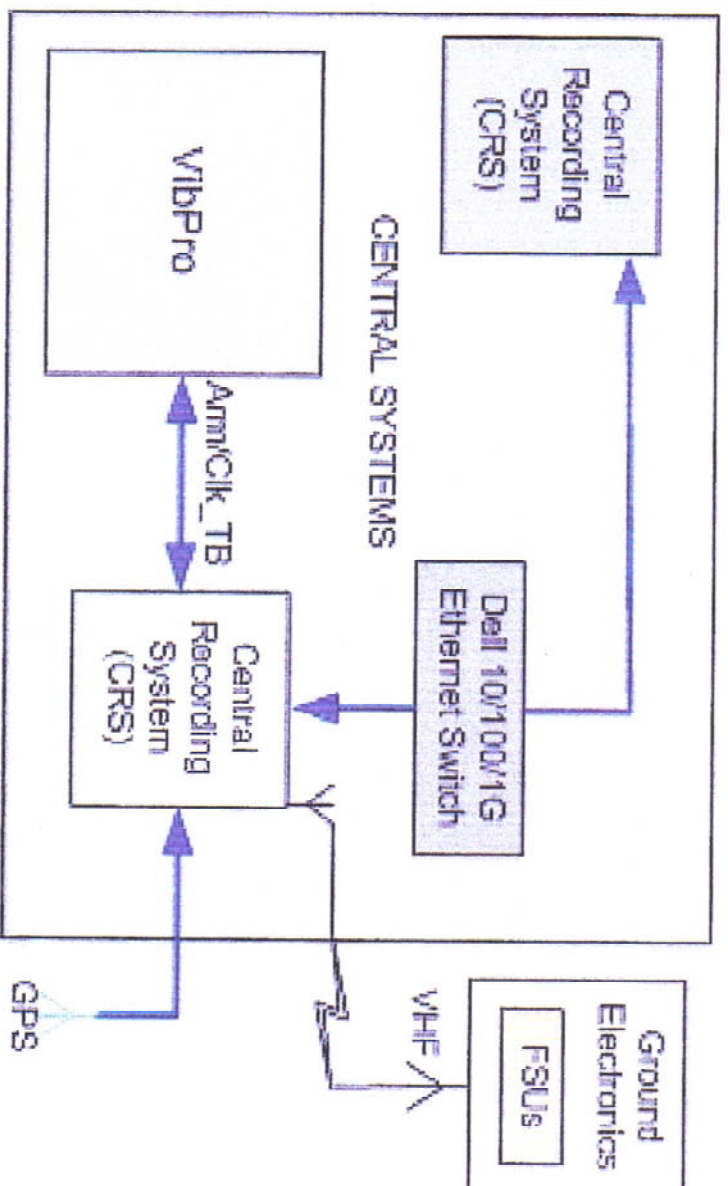


Figure 1-2. CRU Ecosystem with Vib Pro-based Shooting

Cable Routing Table

Use Cable Part Number...	Quantity	Connects From...	Connects To...
	1	RF 1	Radio Frequency Antenna 1
1010-040062	1		
1010-040063	1 of 2	PPS 1	TIM
	2 of 2	PPS 2	Pelton Interface Cable
1010-040068	1	Ethernet	CSC
1014-080009	1	GPS	GPS Antenna
	1	USB	No connect
1010-040064	1	RS 232	No connect
	1	Power	Power Supply

Activating and Shutting Down the CRU

The CRU can be controlled using the CU Logger application installed with the CSC. You can edit the configuration files, restart or shut down the CRU.

Activate the CRU Unit

Before you begin, ensure that the CRU is properly connected to the applicable FireFly subsystems.

1. Turn on the CSC.
2. On the CRU, connect the power supply cable and plug it into a DC power source.
Result: The POWER indicator light is green.
3. Start the FireFly software on the CSC.

Shut Down the CRU Unit

1. Shut down the FireFly software on the CSC.
2. Turn off the CSC.

On the CRU, unplug the power supply cable

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



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