

INTELLIGENT instruments



CruzPro

www.cruzpro.com

ABOUT CRUZPRO INSTRUMENTS



Welcome to the new **CruzPro** brochure. Now we bring you the new 55/60/65 series that match the style of the existing 110mm range with silicon rubber key buttons and some exciting new product additions.

CruzPro manufactures a broad range of intelligent and accurate instruments in seven categories: Accessories, AC & DC Electrical Monitoring, Depth and Speed Instruments, Digital Engine Gauges, Fuel & Tankage Monitoring, Gas Detectors and Multi-Function Instruments. Many of these products are available with either round or rectangular bezels.

Most **CruzPro** instruments work on both 12V and 24V systems and contain built-in user settable high and low alarms. The fuel, tankage and engine gauges have built-in calibration curves for all popular senders, both American and European resistance ranges, or 'learn' the sender characteristics and tank shape. Most **CruzPro** instruments output NMEA 0183 serial data for data logging or use with remote data repeaters, or this output line can be programmed as an external alarm output. **CruzPro** instruments have a common user interface, intelligently thought out, that makes each new instrument easy to learn and use.

Most **CruzPro** products are CE certified and RoHS (Reduction of Hazardous Substances) compliant. Full specifications, photos, wiring diagrams and all the user manuals can be downloaded from the **CruzPro** website at www.cruzpro.com



CruzPro Instruments

STYLISH • MODERN • FUNCTIONAL

CONTENTS

Accessories	12/24V	NMEA	Alarms	Page
AM60 Digital rudder angle indicator	Both	✓	✓	7
CH55 Low Cost Chain Counter	Both	-	-	7, 8, 10
CH60 Intelligent windlass controller/chain counter	Both	✓	-	7, 10
CT60 Clock/watch/race timer/with GPS interface	Both	✓	✓	7, 10
HY60 Hydraulic pressure gauge for 4-20mA senders	Both	✓	✓	7, 8, 10
NC20 4 & 8 Channel NMEA combiners	Both	✓	-	10
RP60 Trainable NMEA 0183 remote data repeater	Both	-	-	7
RP110 Trainable NMEA 0183 remote data repeater	Both	-	-	9
T65 Digital temperature gauge for three zones	Both	✓	✓	7, 10
AC & DC Electrical Monitoring				
A60 Programmable digital ammeter	Both	✓	-	6
DI60 8 and 16 amp light dimmers	Both	-	-	6
ER1 10 amp external alarm switching relay	Both	-	-	10
SAR20 Multi-step smart alternator regulator	Both	-	-	-
V55 Digital Voltmeter & Alarm for one battery	Both	✓	✓	6
V60 Digital Voltmeter & Alarm for three batteries	Both	✓	✓	6
VAF60 AC volts/amps/frequency/kW monitor	Both	✓	✓	6
VAF110 AC volts/amps/frequency/kW monitor	Both	✓	✓	9
VAH60 Volts/amps/amp-hour monitor with 150A shunt	Both	✓	✓	6
VAH65 Volts/amps/amp-hour monitor with 450A shunt	Both	✓	✓	6
VAH110 Volts/amps/amp-hour monitor with 450A shunt	Both	✓	✓	9
Depth/Speed/Seawater Temperature instruments				
Active NMEA 0183 depth/temperature transducers	12V	✓	-	12
D60 Depth sounder with keel offset	12V	-	✓	7
D110 Depth sounder with keel offset	12V	✓	✓	9
PcFF80 PC based color fishfinder for Windows™	12V	✓	✓	11
SLT60 Speed log/temperature gauge	Both	✓	✓	7
SLT110 Speed log/temperature gauge	Both	✓	✓	9
WTP65 Precision digital seawater temperature gauge	Both	✓	✓	7, 10
Digital Engine Gauges				
OP60 Engine oil pressure gauge	Both	✓	✓	6
PY60 1200degC Pyrometer/w Ktype thermocouple	Both	✓	✓	6
RH60 RPM/Engine hours/elapsed time	Both	✓	✓	6
RH110 RPM/Engine hours/elapsed time	Both	✓	✓	9
SB2 Sender Buffer for two single station senders	Both	-	-	10
T60 Engine water temperature gauge	Both	✓	✓	6
Fuel and Tankage Gauges				
F60 Digital fuel gauge	Both	✓	✓	6
FU60 Digital fuel consumption computer/fuel gauge	Both	✓	✓	6
TL55 Digital tank level gauge	Both	✓	✓	6
TL60 Digital tank level gauge for three tanks	Both	✓	✓	6
Gas Detectors				
GD10 Gas detector with internal sensor	12V	-	✓	-
GD20 Intelligent gas detector/w remote sensor(s)	Both	-	✓	-
GD55 Gas detector with remote sensor	12V	-	✓	7
Multi-Function Instruments				
Max110 Engine/Depth/Speed/Electrical/NMEA monitor	Both	✓	✓	4-5



The **MaxVu110** multifunction unit is a radical new concept in instrumentation. The **MaxVu110** will simultaneously display five sets of data on three digital displays and two bar graphs. You decide what set of five data to view on each "Display Configuration".

As your instrumentation needs change you can quickly select from 16 different display configurations with the push of a button.

Each of the 16 display configurations are highly flexible and any particular set of data can be directed to one of the digital displays and/or one of the two bar graphs.

Display configurations are easily edited to show the data that you want to see from a list of 34 different data sources. Changes are automatically saved to a nonvolatile memory.

UNDER WAY

FUNCTION TABLE

- 1 Engine RPM
- 2 Engine Temperature #1
- 3 Engine Oil Pressure
- 4 Engine Hours
- 5 Engine Maintenance Alarm
- 6 Fuel Remaining
- 7 Trip Fuel Used
- 8 Total Fuel Used
- 9 Boat Speed
- 10 Temperature #2 for Seawater, etc.
- 11 Trip Log
- 12 Total Log
- 13 Time-of-Day Clock
- 14 Elapsed Trip Time
- 15 Eight settable time-of-day alarms
- 16 Race Timer #1
- 17 Race Timer #2
- 18 Battery Bank #1 Volts
- 19 Battery Bank #2 Volts
- 20 Battery Bank #3 Volts
- 21 Trim Angle display
- 22 Temperature #3 Input
- 23 NMEA #1 input A
- 24 NMEA #1 input B
- 25 NMEA #2 input A
- 26 NMEA #2 input B
- 27 NMEA #3 input A
- 28 NMEA #3 input B
- 29 NMEA #4 input A
- 30 NMEA #4 input B
- 31 NMEA #5 input A
- 32 NMEA #5 input B
- 33 Second Trim Angle display
- 34 Second Tank Level display



Engine RPM
Boat Speed
NMEA Depth
Oil Pressure
Engine Temperature

The **MaxVu110** contains circuitry to measure and display 34 different functions. Measure and display data such as RPM, engine temperature, engine oil pressure, fuel and tank levels, battery voltage, etc. You select up to five items to display from the 34 functions for each of the 16 display configurations.

Individual high and low alarm values can be set on each of the five sets of displayed data. When data on any of the five displays falls outside the acceptable range the built-in alarm will sound and that display will blink.

The **MaxVu110** contains built-in calibration curves for all popular engine temperature, oil pressure, fuel and tank level senders manufactured by VDO, Teleflex, Faria and Stuart-Warner. Both American and European resistance ranges are recognized.

UP TO 10 NMEA 0183 INPUTS

PARTIAL LIST OF 3700+ RECOGNIZED NMEA SENTENCES

DBT	Depth below transducer
DPT	Depth
HDM	Heading - Magnetic
HDT	Heading - True
MWD	Wind Direction & Speed
MWV	Wind Speed and Angle
ROT	Rate of Turn
RSA	Rudder Sensor Angle
VDR	Set and Drift
VTG	GPS Ground speed
VTG	Track made good
VWR	Relative Wind Speed
WCV	Waypoint Closure Velocity
WDR	Distance to Waypoint
XTE	Cross-Track Error



NMEA Depth • NMEA Bearing to Waypoint • NMEA Distance To Waypoint • Oil Pressure • Engine Temperature

The **MaxVu110** can read up to 10 NMEA 0183 sentences on five separate data input channels. The **MaxVu110** recognizes thousands of different NMEA sentences and can display NMEA data such as depth, wind speed/direction, GPS bearing and distance to waypoints, exhaust temperature, etc.

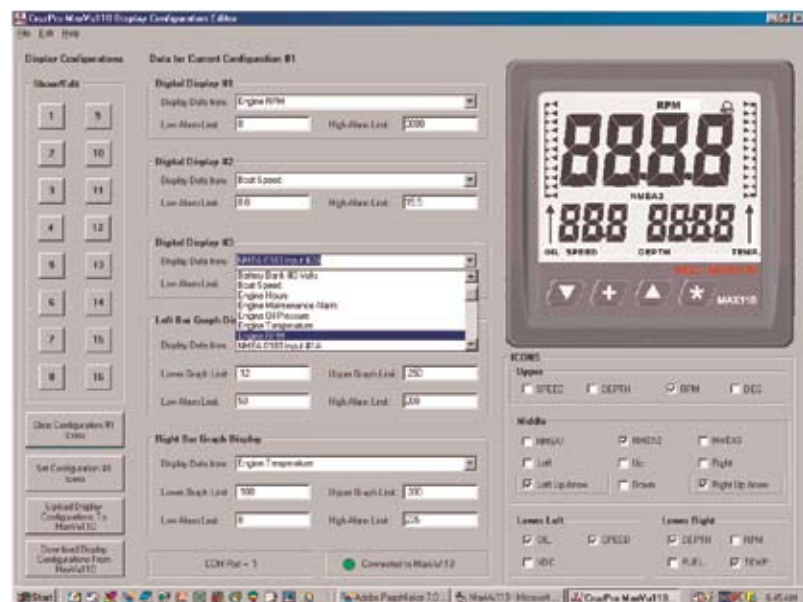
AT ANCHOR

NMEA Depth • Battery Bank #1 Volts • Time of Day • Water tank level • Fuel

The **MaxVu110** is many instruments at once in a space-saving 110mm format. You simply select the display configuration that is best suited for what you are doing. With simple, quick installation in a standard 2-1/8" (54mm) round hole, the MaxVu110 is perfect for the boatbuilder or aftermarket replacement. The **MaxVu110** has five levels of backlighting and works on both 12V and 24V. The internal software can be updated via the internet to add features and functions as they become available.



DESIGN YOUR OWN INSTRUMENT



All 16 display configurations are pre-programmed at the factory, but you can customize each configuration on the unit itself or train the **MaxVu110** with your PC using the supplied Windows™ software shown here.

 <p>A60S</p>	 <p>VAH65S</p>	 <p>F60S</p>
 <p>V55S</p>	 <p>DI60S</p>	 <p>T60S</p>
 <p>V60S</p>	 <p>TL55S</p>	 <p>OP60S</p>
 <p>VAF60S</p>	 <p>TL60S</p>	 <p>RH60S</p>
 <p>VAH60S</p>	 <p>FU60S</p>	 <p>PY60S</p>

<div>SLT60S</div> <div></div>	<div>ROUND OR SQUARE – YOU CHOOSE THE LOOK</div> <div>All the 55/60 and 65 series CruzPro instruments are available in square or round bezels. When selecting your instruments, merely specify the individual product code followed by ‘S’ for Square or ‘R’ for Round.</div>		<div>D60R</div> <div></div>
<div>D60S</div> <div></div>	<div>CH55S</div> <div></div>	<div>RP60S</div> <div></div>	
<div>T65S</div> <div></div>	<div>CH60S</div> <div></div>	<div>AM60S</div> <div></div>	
<div>GD55S</div> <div></div>	<div>CT60S</div> <div></div>	<div>WTP65S</div> <div></div>	
<div>HY60A</div> <div></div>	<div>COLOUR LEGEND</div> <div><div> ELECTRICAL</div><div> FUEL & TANKAGE</div><div> ENGINE</div><div> DEPTH & SPEED</div><div> ACCESSORIES</div></div>		

NEW – CRUZPRO EXTENDS ITS RANGE OF FUNCTIONS

The new **HY60** Hydraulic Pressure Gauge displays pressure in Psi or Bars. It has built-in calibration curves for most popular 4-20 mA hydraulic pressure senders manufactured by Ashcroft, Omega, Midas, Gems and others (sender not provided).

The maximum pressure is easily selected from 30 psi to 10,000 psi in 16 steps. Low and High pressure alarms can be set over the entire range. Five levels of backlighting can be selected and all setup, calibrations constants, alarm values and sender data are saved to nonvolatile memory.

Data is output on an NMEA 0183 compatible serial data output or you can program this output line as an External Alarm Output.



The new low cost **CH55** Chain Counter tells you how much chain you have let out making anchoring both easier and safer. You will be able to deploy the correct amount of chain from the cockpit without having to stand at the bow.

With a push of a button the **CH55** will also display the windlass battery voltage so you always know its condition. Calibration of the **CH55** is a very simple procedure to get you up and running quickly. The **CH55** automatically remembers the amount of deployed chain even without power so you can turn it off for the night.

The **CH55** works off both 12V/24V and has 5 levels of backlighting, including OFF. All calibration constants and backlighting levels are stored to a nonvolatile memory.

THE 110 SERIES OFFERS A COMPREHENSIVE RANGE OF INSTRUMENTS

D110 Depth Sounder

1000ft compact full-featured DSP (Digital Signal Processing) depth sounder with shallow / deep / anchor drag alarm, keel offset adjust and NMEA 0183 data output. 12V operation.



RH110 RPM / Engine Hours Gauge

Digital RPM, engine hours, elapsed time gauge. Accurate to 1 RPM. Displays elapsed trip time and total engine hours. Set maintenance alarms to remind you when to change oil, etc. Five levels of backlighting. NMEA 0183 data output. 12 / 24V operation.



SLT110 Speed / Temperature / Log

Speed, temperature, log, trip log with race timer and time display. Speed range from 0 up to 50 knots, temperature range from 32°F - 90°F (or Centigrade equivalent, in tenths), log to 9999 miles. Accurate boat speed in knots, mph or kph. Race timer with two pre-settable countdown times and separate elapsed time clock. 12 / 24V operation.



VAH110 Volts / Amp / Amp-Hour Monitor

An accurate fuel gauge for your battery. At the touch of the button, you know exactly what percentage of your battery charge remains, or when to stop charging. Set accurate high and low voltage alarms for each of three battery banks individually. Low charge alarm. Five levels of backlighting, NMEA 0183 data output, charger control, etc. NMEA 0183 or external alarm output. 12 / 24V operation.



RP110 NMEA0183 Data Repeater

Trainable NMEA 0183 Remote Data Repeater with four input channels. Displays both standard and **CruzPro** proprietary NMEA 0183 sentences. 200 pre-programmed sentences to choose from and has the ability to download new sentences into re-programmable flash memory. Easy to use. 12 / 24V operation.



VAF110 AC Volts / Amps / Frequency / kW Monitor

Accurate digital display of AC volts, amps, frequency and kW. At a touch of the button, you know exactly what your shore power or genset is doing. Set accurate high and low voltage and high and low frequency alarms. Five levels of backlighting. NMEA 0183 data output. NMEA 0183 or external alarm output. 12 / 24V operation.



CruzPro takes intelligent

ACCESSORIES



WTP65S



HY60S



CH55S

AM60 – Digital rudder angle indicator. Works as master or slave with all popular senders. Independent user settable port and starboard limit alarms. NMEA 0183 output, 12/24V operation, five-level backlighting.

WTP65 – Precision sea water temperature gauge. Displays water temperature in tenths of a degree F or C. NMEA 0183 output, 12/24V operation, five-level backlighting. Transom and thru-hull senders available separately.

CH55 – Low cost chain counter complete with sensors. Displays amount of chain deployed and windlass battery voltage. 12/24V operation, five-level backlighting.

CH60 – Intelligent chain counter and windlass controller complete with sensors. Displays amount of chain deployed and windlass battery voltage. Slows windlass when anchor nears bow roller. Auto up-down programming and much more. NMEA 0183 output, 12/24V operation, five-level backlighting.

BWA20 – Reliable electronic bilge water alarm complete with stainless water sensor and 15ft (5m) cable. 9V battery lasts up to 2 years. Simple installation, low battery alarm, no moving parts.

ER-1 – External control relay with 10 amp potential free outputs for **CruzPro** instruments with NMEA 0183 / external control outputs.

HY60 – Hydraulic pressure gauge displays pressure in Psi or Bars. Built-in calibration curves for most popular 4-20 mA senders. User settable low and high limit alarms. NMEA 0183 output, 12/24V operation, five-level backlighting.

NC20 – 4 and 8 channel NMEA combiners. Combine 4 or 8 channels of NMEA 0183 data onto a single output line. NMEA 0183 and RS232 compatible output. Selectable 4800 or 9600 BAUD output. 12/24V operation.

CT60 – Accurate ships watch clock with 8 settable time of day alarms for FAX and radio schedules, etc. Settable downcounting watch alarm. Sets itself and stays accurate when GPS connected. NMEA 0183 output, 12/24V operation, five-level backlighting.

T65 – Digital temperature gauge for three zones with independent low and high alarms for each zone. Measurement range of -20 deg F (-29 C) to +140 deg F (+60 C). Plastic, bronze and other temperature sensors available separately. NMEA 0183 outputs for each zone, 12/24V operation, five-level backlighting.

SB2 – Dual sender buffer for two single station analog senders, such as oil pressure, engine temperature etc, that allows you to add **CruzPro** digital gauges to two existing analog gauges without adding or removing the existing senders or gauges.

technology into the future ... **NOW**

DUAL FREQUENCY COLOR FISHFINDER



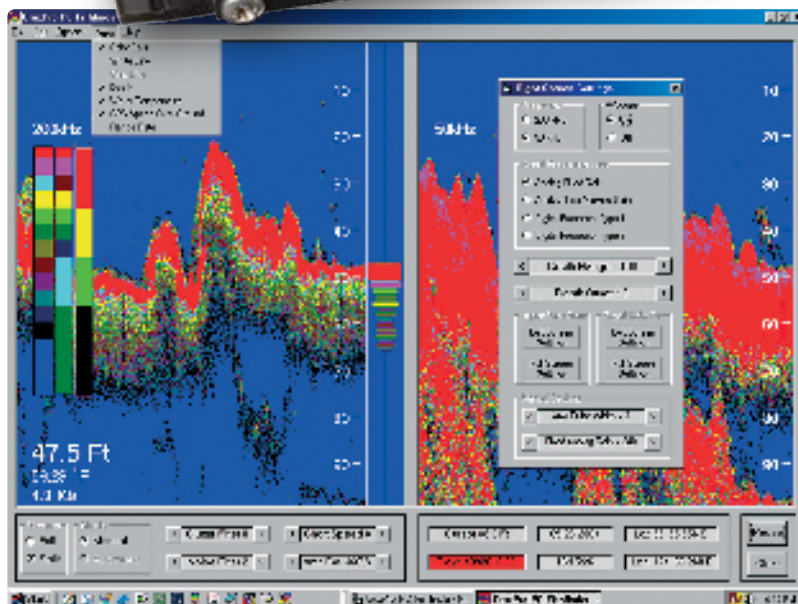
PcFF80 50/200Khz PC-based high resolution color fishfinder for Win98, WinXP and Win2000.

Turn your laptop or desktop PC into a full-featured color fishfinder with a huge high resolution display.

The **PcFF80** black box connects to your PC and the supplied dual frequency depth/temperature transducer to provide a clear sonar picture. Use the full power of your PC and Windows software to adjust depth range, zoom range, pulse width, power, receiver gain, surface clutter filtering, noise filtering and more. Record data to files for later playback and analysis. GPS latitude, longitude and ground speed can be displayed on-screen as well as saved to log files if a GPS is connected to your PC.

- Download free demo and sample data file at:

www.cruzpro.com



Requirements:

500 Mhz or better Windows PC with Win98, WinXP or Win2000. 128MB of RAM, 1024 x 768 video display, mouse and serial and/or USB port (both supported). +12VDC at 0.15 amps average, 4.7 amps peak required to power the interface box.

Output power 2560 watts peak-to-peak (320 watts RMS). Depth range of 1000+ft at 200Khz and 1500+ft at 50Khz.



CruzPro has brought the technology of advanced digital signal processing (DSP) to a line of high performance depth/temperature transducers. Miniature micro processor circuitry and DSP enables us to place all the electronics inside the transducer housing, eliminating all the losses associated with long cables between the sensitive transducer and electronics.

The **ACTIVE TRANSDUCER** technology provides recreational and commercial boaters the ability to add depth and sea water temperature readouts to many onboard electronics packages such as radar, chart plotter/charting displays and NMEA 0183 repeaters and PC screens.

The new **ACTIVE TRANSDUCER** can be connected to any device capable of reading the standard NMEA 0183 \$SDDBT, \$SDDBT depth, and/or \$SDMTW water temperature data strings. Devices such as a NMEA repeater, chart plotting system, radar screens and PC-based charting system can now be upgraded with an **ACTIVE TRANSDUCER** to display depth and water temperature.

ACTIVE TRANSDUCERS are available in a variety of popular transducer formats:

- 1) Low profile thru-hull retractable skin fitting transducer. The retractable insert allows for easy transducer removal for inspection or repair without hauling the boat. Retractable units are supplied with a blanking plug and are available in both glass reinforced nylon and corrosive resistant bronze housings.
- 2) Low profile non-retractable transducer. A lower cost version of the retractable with a fixed transducer element. These are available in either a plastic or bronze housing.
- 3) High speed, high performance transom-mounted transducer. This unit offers the maximum performance for your boat in a high speed transom-mounted transducer. This unit is designed to be easily fitted onto vessels and usually does not require you to haul the boat.

All the **CruzPro** models can be ordered with or without water temperature and are available with either 450ft or 1000ft depth capabilities and at a variety of frequencies (please see website for available options).

CruzPro INTELLIGENT technology