Telephone Modem with Voice Synthesizer
Model VS1

Campbell Scientific's VS1 voice-synthesizer modem allows a CR510, CR10(X), or CR23X datalogger to transmit by voice, real-time, or historical data.

The 9-pin serial port connects the VS1 to a datalogger via an SC12 cable. The RJ11C Modular Telephone Jack connects the VS1 to a surge protected telephone line. The screw terminals (GND, RING, TIP) connect the VS1 to a phone line when the phone company does not provide surge protection.

Features:

- Anyone can call a VS1-equipped site from any phone (including cellular) to receive a verbal report of site conditions; verbal reports are constructed with words on the VS1 PROM or with customized words and phrases.*
- The VS1 enables the datalogger to call you and recite a verbal warning if specified conditions occur.
- You can program the datalogger to report specific conditions or to allow selection of information by pressing numbers on a touch-tone phone.
- Real-time information can be recited since you call the datalogger directly.

You can use any phone to call a VS1-equipped site and receive a verbal report of real-time conditions

*See page 3.

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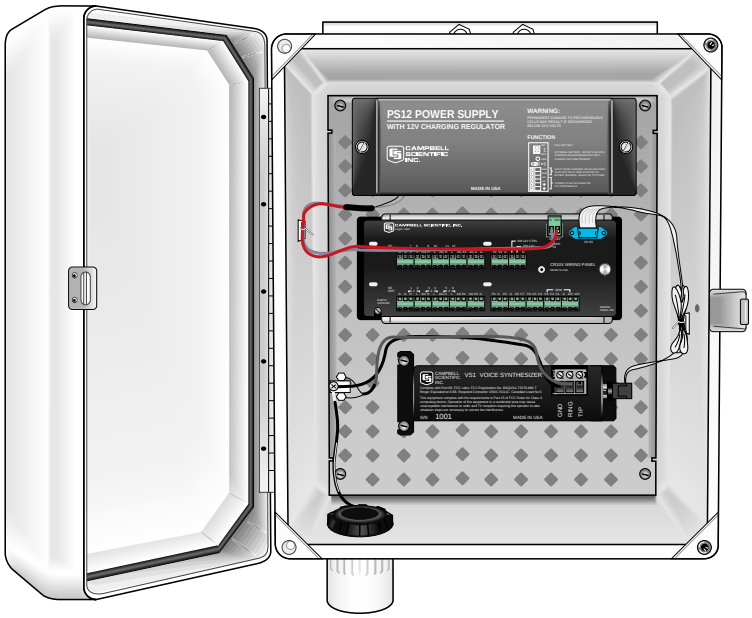
Required Equipment

- Phone. A rotary phone can be used to receive a verbal report only when the report does not require user participation (e.g., pressing numbers to select information). Otherwise, a touch-tone phone is required.
- Surge protector at the datalogger site if one is not installed by the phone company. Campbell Scientific offers the model 6362 (mounts inside enclosure) or model 2372-01.
- VS1 voice-synthesizer modem (includes SC12 cable)
- CR510, CR10(X), or CR23X (the CR10 requires a Library Special PROM)
- Environmental Enclosure (typically ENC 12/14 or ENC 16/18)
- Power supply**



An ENC 12/14 enclosure housing a CR10X, PS12LA power supply, a VS1, an SC12 cable and a surge protector. Sensor cabling and solar panel not shown.

Datalogger/computer communication also requires (at the computer site): an IBM-PC or compatible computer with our Windows or DOS-based Datalogger Support Software package, an SC25PS or equivalent modem cable, and a user-supplied Hayes-compatible modem.

Specifications

Bits per second:	300/1200
Typical current drain:	50 µA quiescent 110 mA active (voice transmitting) 75 mA active (data transmitting)
Operating voltage:	5 volts from datalogger
Operating temperature range:	-25° to +50°C
Dimensions:	5.2" x 1.7" x 3.6" (13.1 x 4.3 x 9.2 cm)
Weight:	0.75 lbs (0.34 kg)
FCC Compliance:	Equipment complies with FCC Rules Part 68 and requirements in Part 15 of FCC Rules for Class A computing devices.
FCC Registration No.:	B9QUSA-75378-MM-T
Ringer Equivalence No. (REN):	0.6 B
Canadian Load No.:	5
Compatibility:	Compatible with Bell 212A and CCITT V.22 phones and Hayes "AT" command set.

** For information on analyzing your system's power requirements, please request a copy of Campbell Scientific's Power Supply brochure or application note 5-F.

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Standard VS1 PROM Word List

"Required Words" must be in the PROM for the VS1 to operate properly. "Optional Words" are included in the PROM but may be replaced by customer-requested words.

Required Words

AGAIN
AND
BY [BYE]
CALLBACK
CAMPBELL
CODE
DEGREES
DEW [DO]
DISCONNECT
E08'S
EIGHT
EIGHTEEN
EIGHTY
ELEVEN
ENTER
EPROM
FIFTEEN
FIFTY
FIVE
FLAG
FLAGS
FOLLOWING
FORTY
FOUR [FOR]
FOURTEEN
GOODBYE
HAVE
HEAR [HERE]
HIGH [HI]
HUNDRED
INPUT
IS
KEY
KILOBYTES
LOCATIONS
LOW
MEMORY
MENU
MESSAGE
MILLION
MINUS
MONITOR
NINE
NINETEEN
NINETY
NUMBER
OF
ONE
OVERRUNS
PLEASE
POINT
PORT
PORTS
POUND
PRESS
PREVIOUS
PROGRAM
RETURN
REVISION
SCIENTIFIC
SECURITY
SELECTED
SELECTION
SEVEN
SEVENTEEN
SEVENTY
SIGNATURE
SIX
SIXTEEN
SIXTY
STAR
STATUS
TABLE
TEMPERATURE
TEN
THE
THIRTEEN
THIRTY
THOUSAND
THREE
THROUGH
TOGGLE
TWELVE
TWENTY
TWO [TO, TOO]
VERSION
YOU
YOUR
ZERO

Optional Words

ACRE
AIR
ALARM
ARE
AT
AVERAGE
BAROMETRIC
BARS
BATTERY
CALIBRATE
CELSIUS
CENTI
CHILL
CLOSED
CONDUCTIVITY
CUBIC
CURRENT
DAM
DATA
DATALOGGER
DAY
DEPTH
DEVIATION
DIRECTION
D-O
DOWN
DRAW
EQUAL
E-T
EVENT
EXCEEDS
EXTERNAL
FAHRENHEIT
FALL
FEET
FLOW
FROM
GALLONS
GRAM
HELLO
HOUR [OUR]
HUMIDITY
IN
INCHES
INTERNAL
KILO
LAST
LEVEL
LITER
MAXIMUM
MERCURY
METER
METERS
MICRO
MILES
MILLI
MINIMUM
MINUTE
MOISTURE
MONTH
MULTIPLIER
NEW
N-T-U
OFF
OFFSET
ON
OPEN
OVERFLOW
PARTS
PER
PERCENT
P-H
PRECIPITATION
PRESSURE
PROGRESS
P-S-I
RADIATION
RAIN
RATE
REFERENCE
RELATIVE
RESET
R-P-M
SAMPLE
SECOND
SECONDS
SET
SIEMENS
SITE
SNOW
SOIL
SOLAR
SPEED
SQUARED
STAGE
STANDARD
STATION
STORM
TIME
TURBIDITY
VELOCITY
VOLTAGE
VOLTS
WARNING
WATER
WATTS
WEATHER
WELL
WIND

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