

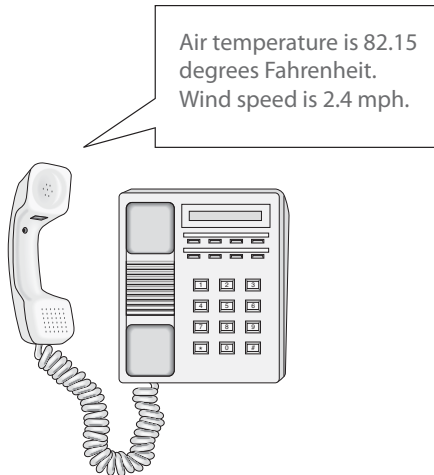
COM320

56k Telephone Modem with Voice Synthesizer

Campbell Scientific's COM320 voice-synthesizer modem provides a CR800, CR850, CR1000, or CR3000 datalogger with speech capability—thus enabling the user to call a site for a spoken summary of real-time or historical data. The COM320 can also act as a standard modem.

Features

- Allows anyone to call a COM320-equipped site from any phone (including cellular) to receive a verbal report of current site conditions.
- Enables the datalogger to call you and recite a verbal warning if specified conditions occur.
- Reports specific conditions or allows selection of information by pressing numbers on a touch-tone telephone.
- Uses voice strings created with CRBasic code.
- Operates over a wide temperature range (-25° to +50°C standard, -40° to +85°C optional)
- Comes with a speaker that aids troubleshooting in the field.
- Supports communication rates up to 115.2 kbps between modem and datalogger (in practice, data transmission through phone lines is generally limited to 33.6 kbps).



You can use any phone to call a COM320-equipped site and receive a verbal report of real-time conditions



The datalogger connects with the CS I/O port on the COM320 via an SC12 or SC12R-6 cable. The RJ-11C jack is for attaching a surge-protected telephone line. Alternatively, the screw terminals (GND, RING, TIP) can be used to connect the COM320 with a phone line via a surge protector.



Required Equipment

- Phone. Typically a touch-tone phone, but a rotary phone can be used to receive a verbal report only when the report does not require user participation (i.e., pressing numbers to select information).
- Analog phone line. Some DBX office phone lines are digital and cannot be used with analog modems such as the COM320.
- Surge protector at the datalogger site if one is not installed by the phone company. Campbell Scientific offers model 6362 (mounts inside enclosure) or model 4330 (similar to the 6362 but without enclosure mounts).
- COM320 voice-synthesizer modem (includes SC12 cable).
- CR800, CR850, CR1000, or CR3000 datalogger.
- Environmental enclosure (ENC12/14, ENC14/16, or ENC16/18).
- Power supply.**

Datalogger-to-computer communication also requires, at the computer site, a PC or laptop running PC400, LoggerNet, or RTDAQ datalogger support software, 7026 serial cable or equivalent modem cable, and a user-supplied Hayes-compatible modem.

Ordering Information

Voice Phone Modem

COM320 Voice Synthesizer Modem

Temperature Range Options (choose one)

- ST Tested for -25° to +50°C range.
- XT Tested for -40° to +85°C range.

Country of Usage Options (choose one)

- US Set for use in US or Canada
- UK Set for use in the UK.
- AU Set for use in Australia.

Accessories

4330 Surge Protector 2-Wire, JOSLYN 2374-01

6362 Surge Protector Kit for 2-Wire Modem with Mounting for Enclosure Use.

17648 USB Cable that is required to change the COM320 operating system or to change settings such as the number of rings before answering a call.

CABLE2CBL-L 2-conductor, 22-awg cable with user-specified length; enter length, in feet, after the -L. Typically, this cable is used when the COM320 is housed in a prewired enclosure. For this application, order the -PW option (see below).

Pigtail Options for CABLE2CBL (choose one)

- PT Cable terminates in pigtails for direct connection to screw terminals.
- PW Cable terminates in a connector for attachment to a prewired enclosure.

Specifications

Standards:	V.92, K56Flex, V.90, V.34, V.32bis, V32, V23, V22bis, V22, V.21, B212, B103
Registration:	FCC US: 3A4M508BSM2-T-W IC 2377 A-SM2TW TBR21
Operation:	Full-duplex over standard analog phone lines
Compatible Dataloggers:	CR800, CR850, CR1000, and CR3000
Operating Voltage:	12 Vdc
Current Drain	
Quiescent:	~125 μ A
Active:	~35 mA

Communication Rate Between Datalogger and COM320 (selected by user):

9600, 38400, 57600, 115200 bps

Operating Temperature Range

Standard: -25° to +50°C
Optional Extended: -40° to +85°C

Dimensions:

6.5-in. x 1.0-in. x 2.6-in.
(16.5-cm x 2.5-cm x 6.6-cm)

Weight:

0.35 lb (0.16 kg)

Ships with:

SC12 cable, ground cable, telephone patch cord, screws, grommets

**Information on analyzing your system's power requirements is provided in our Power Supply brochure and application note. You can also contact an applications engineer who will help you determine an appropriate power supply for your system.

COM320 Word List

The standard word list currently contains the following words. Campbell Scientific may eventually add more words to the standard list. Customer-requested words for specific applications can also be included; consult the factory for details. The COM320's sentences are programmed using CRBasic code.

50MS

- A -

A
A-M
ABOVE
ACCUMULATE
ACKNOWLEDGE
ACRE
ADDITION
ADDITIONAL
AGAIN
AGO
AIR
ALARM
ALL
AMMONIUM
AND
APPROACH
ARE
AREA
AT
AVAILABLE
AVERAGE

- B -

B
BACK-UP
BAROMETRIC
BARS
BATTERY
BAY
BE
BEAVER
BEDS
BEHIND
BELOW
BIG
BILLION
BLAST
BOILER
BUILDING
BY

- C -

C
C-O
CALCIUM
CALIBRATE
CALL
CALLBACK

CALLS
CAMPBELL
CAN
CELSIUS
CEMENT
CENTI
CENTRAL
CHECK
CHILL
CHILLER
CHLORIDE
CHLORINE
CLOSED
CODE
CONDUCTIVITY
CONTACT
CORRECTED
CROSSING
CUBIC
CURRENT
CYCLES

- D -

D
D-O
DAM
DATA
DATALOGGER
DAY
DAYS
DEGREES
DELTA
DEPTH
DEVIATION
DEW
DING
DIRECTION
DISCONNECT
DISTRICT
DIVERSION
DOCK
DOOR
DOWN
DRAW
DURING

- E -

E
E-T-O
E08'S
EAST
EASTERN

EFFLUENT
EIGHT
EIGHTEEN
EIGHTY
ELECTRON
ELEVATION
ELEVEN
EMPTIED
ENGINE
ENTER
EPROM
EQUAL
ERROR
EVENT
EXCEEDS
EXTERNAL

- F -

F
FAHRENHEIT
FAILED
FAILURE
FALL
FALLING
FEET
FIFTEEN
FIFTY
FIRST
FIVE
FLAG
FLAGS
FLOW
FLUORIDE
FOLLOWING
FORTY
FOUR
FOURTEEN
FREEZER
FREQUENCY
FRIDAY
FROM
FUEL

- G -

G
GALLONS
GAS
GATE
GAUGE
GENERATOR
GOING
GOOD

GOODBYE
GRADIENT
GRAM
GRASS
GROUND

- H -

H
H-2-S
HAD
HARDNESS
HAS
HASH
HAVE
HEAD
HEAR
HEAT
HELLO
HERTZ
HIGH
HOLD
HOT
HOUR
HOURS
HUMIDITY
HUNDRED
HYDROLOGIC

- I -

I
IN
INCHES
INDEX
ING
INPUT
INTAKE
INTERNAL
INTRUDER
IRRADIANT
IRRIGATION
IS
IT

- J, K -

J
K
KEY
KILO
KILOBYTES
KNOTS

- L -

L
LAKE
LAST
LAYER
LEVEL
LINE
LITER
LOAD
LOCATED
LOCATION
LOCATIONS
LOGAN
LOW

- M -

M
M-R-P
MANAGEMENT
MAXIMUM
MEMORY
MENDON
MENU
MERCURY
MESSAGE
METER
METERS
MICRO
MID
MID-MOUNTAIN
MIDNIGHT
MILES
MILLI
MILLION
MINIMUM
MINUS
MINUTE
MINUTES
MODEM
MOISTURE
MONDAY
MONITOR
MONTH
MOUNT
MOUNTAIN
MULTIPLIER

- N -

N
N-T-U
NEEDS

COM320 Word List Continued

NETWORK
NEW
NEXT
NINE
NINETEEN
NINETY
NITRATE
NITROGEN
NO
NOON
NORTH
NOT
NUMBER

- O -

O
OF
OFF
OFFSET
OK
ON
ONE
OPEN
OR
OUT
OVERFLOW
OVERRUNS
OZONE

- P -

P
P-H
P-M
P-S-I
PACIFIC
PARAMETER
PARTS
PAST
PEAK
PENDING
PER
PERCENT
PHONE
PLANT
PLEASE

POINT
POND
PORT
PORTS
POTASSIUM
POUND
POWDER
POWER
PRECIPITATION
PREHEAT
PRESS
PRESSURE
PREVIOUS
PROBE
PRODUCT
PROGRAM
PROGRESS
PUMP

- Q -

Q
QUALITY
QUIT

-R-

R
R-P-M
RACE
RADIAL
RADIATION
RAIN
RANGE
RATE
REACHED
READING
RECEIVED
REFERENCE
RELATIVE
RESERVOIR
RESET
RESIDUAL
RETURN
REVISION
RISING
RIVER

ROAD
ROOM
RUN
RUNOFF

- S -

S
S-O-2
SAMPLE
SATURDAY
SCIENTIFIC
SECOND
SECONDS
SECURITY
SEDIMENT
SELECTED
SELECTION
SENSOR
SENSORS
SET
SEVEN
SEVENTEEN
SEVENTY
SHAFT
SIEMENS
SIGNATURE
SINCE
SITE
SIX
SIXTEEN
SIXTY
SKIING
SMOG
SNOW
SODIUM
SOIL
SOLAR
SONAR
SOUTH
SPEED
SPILL
SQUARED
STAGE
STANDARD
STAR

STATES
STATION
STATUS
STORM
STREAMBED
SUMMIT
SUMP
SUNBURN
SUNDAY
SURFACE
SURFACTANCE
SYSTEM

- T -

T
TABLE
TAIL
TEMPERATURE
TEN
TESTING
THANK
THAT
THE
THIRTEEN
THIRTY
THIS
THOUSAND
THREE
THRESHOLD
THRU
THURSDAY
TIME
TING
TO
TODAY
TODAYS
TOGGLE
TOTAL
TRIGGERED
TUESDAY
TURBIDITY
TWELVE
TWENTY
TWO

- U -

U
ULTRAVIOLET
UNITS
UP

- V -

V
V-O-C
VALUE
VELOCITY
VERSION
VERTICAL
VIA
VOLTAGE
VOLTS

- W -

W
WARNING
WAS
WATER
WATTS
WE
WEATHER
WEDNESDAY
WELCOME
WELL
WEST
WHAT
WIND
WITH

- X, Y -

X
Y
YEAR
YESTERDAY
YOU
YOUR

- Z -

Z
ZERO

