Barton®

TankScan™ W-Series
WC2 Controller

C US

Installation Manual
Version 99L15xz
ID#11680
PRELIMINARY 4/2001

Introduction
The **TankScan Wireless Level System Controller** includes a radio/modem enclosure, an antenna, and an AC power adapter.

System Installation Steps

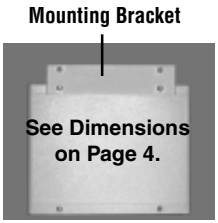
A. Install Controller (distance & line-of-sight location predetermined).
B. Install monitor(s) on the tank(s)
C. Install fill indicator(s) at a accessible location near the fill point.
D. Install software on host PC
E. Power up and configure the Controller
F. Power up the monitor(s) and fill unit(s).

Controller Installation

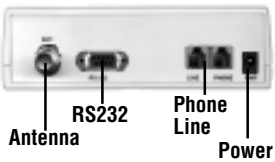
NOTICE

Do not install Controller near any RF sources (TV, Radio, etc.). Interference from such devices can cause data loss and Controller malfunctions.

1. Place Controller on stable flat surface or mount on wall.
   a. If desired, install the self-adhesive rubber feet.
   b. To wall mount, attach mounting plate to bottom of enclosure using supplied screws, then attach the assembly to the wall with the antenna connector facing up.



Note: Controller must be within reach of the power source/outlet, phone jack (if used) and PC (if direct connection is used).



2. Attach Antenna to Controller (pointed upward). *Note: Ant. connector has left-handed thread.*
3. Connect Phone Line, using supplied RJ11 cable. Plug one end into the Controller and the other into the wall phone jack. If a phone is needed, plug it into the second RJ11 socket on the Controller. *Note: RJ11 sockets are in parallel, either can be used for line.*

CAUTION

To reduce the risk of fire, use only No. 28 AWG or larger telecommunications line cord.

Controller Installation *(continued)*

4. Plug in the appropriate Power Adapter (US or EU type included, per order). Plug the barrel-ended connector into Controller and the 3-prong plug into an **unswitched** AC outlet.

(US) Power Adapter

(EU) Power Adapter

5. Check front panel indicator lights to make sure unit is operating.

Front Panel Indicator Lights & Auto Answer Switch

Label	Name	Description
PWR	Power	Unit is on
OH	Off Hook	Phone line off hook
TX	Transmit Data	Modem sending data
RX	Receive Data	Modem receiving data
XMT	Radio Transmit	Radio transmitting data
RCV	Radio Receive	Radio reveiving data
SYNC	Time Sync	Time Sync message being transmitted
ACQ	Aquire Mode	Controller is aquiring field units via radio

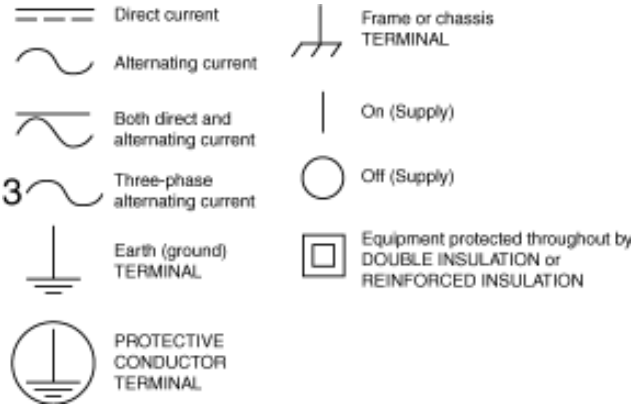
The AUTO ANSWER switch sets the modem's answer mode. If OFF, the modem will not answer incoming calls - it will only call out on a pre-set schedule or alarm.

During normal operation (with no level requests, fill operations, or modem activities), the power light will be on and the "SYNC" light will flash every 32 seconds.

6. Configure the Controller using the DataScan Plus PC software.
7. The Controller is now ready to receive signals from the level Monitor(s) setup during the DataScan Plus PC software configuration process.

Symbol Information

The following symbols may be used in this manual or on the instrument:



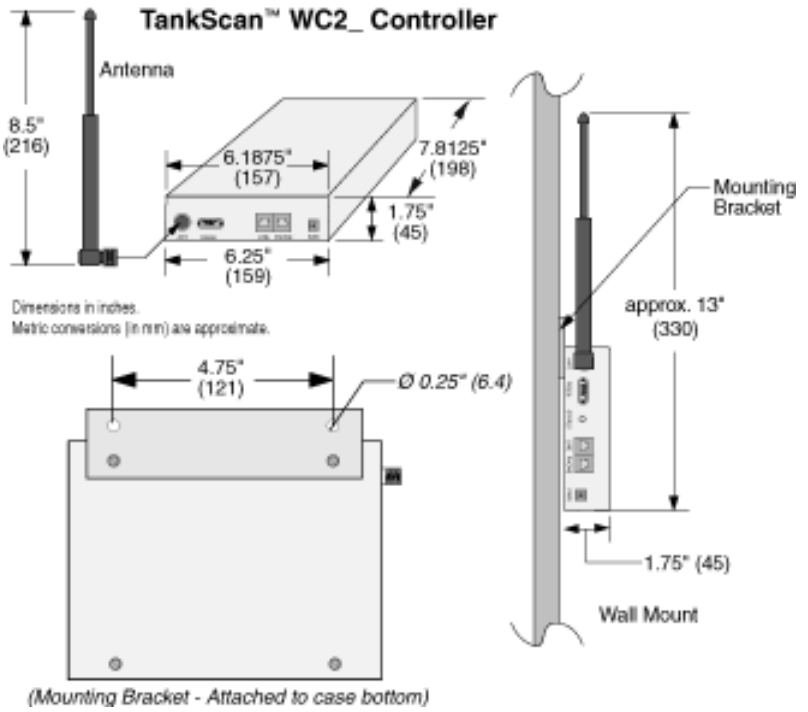
Technical Support/Warranty Service/Repair

US: 626-961-2547 • Canada: 403-291-4814 • Europe: 441243826741

Specifications

Operating Temperature	+32°F to +140°F (0°C to +60°C)
Enclosure	NEMA-1/IP30 - Indoor Use Only
Safety Ratings	UL1950, CSA950, and EN60950
Flame Class Rating	UL94V-0
Power Requirements	110 VAC (60 Hz) US; 220 VAC (50-60 Hz) Europe, 5 VA
Internal Transceiver	(for use with up to 30 field devices) Transmits up to 500 feet (150 m), line-of-sight, in the unlicensed 902-928 MHz band (North America) or 869.7-870 MHz band (Europe)
Phone Modem	Internal (calls host per schedule or alarm and accepts calls from host) Line Impedance: 600 Ohm, transformer coupled (CTR21 - complex impedance) Dial Type: DTMF or Pulse (subject to national approvals) Baud Rate: 2400 (CCITT V.22bis); 1200 (CCITT V.22 or Bell 212A) *Note: This modem will not detect cadenced dial tone, but will blind dial on command.* For compliance and approval statements, see pages 5-7.
Data Storage	Depends upon number of field devices and frequency of readings.
Host Software	Barton DataScan® Plus PC Software
Mounting	Tabletop or wall mount
Shipping Weight (approx.)	Controller, (standard) Antenna, & AC adapter 1.7 lbs (0.8 kg)

Dimensions



Replacement Parts List

Part Description	Part Number
AC Power Adapter (US)	TL10-2009T
Antenna (standard)	TL10-2004T
Optional Outdoor Antenna (with mount):	
20-ft. cable	WC20-2046B-1
30-ft. cable	WC20-2046B-2
Telephone Cable (10')	TL10-2007T
PC Cable	TS10-1173T

COMPLIANCE STATEMENTS

FCC COMPLIANCE STATEMENTS FOR WC20

FCC PART 68 NOTICE

This equipment complies with FCC Part 68 rules. The FCC registration number and Ringer Equivalent Number (REN) are printed on a label attached to the bottom of the enclosure. You must, upon request, provide this information to your telephone company.

The REN number is used to determine the maximum number of devices that may be connected to the phone line and still have all those devices ring when your number is called. To determine the number of devices that may be connected to your line, as determined by the REN, contact your local telephone company.

If your telephone equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. If advanced notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

If there is a problem with the telephone network, the telephone company may ask you to disconnect your equipment from the telephone line until the problem has been corrected or until it is determined that your equipment is not malfunctioning.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

This equipment cannot be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

There are no user serviceable parts in this modem. If there is a problem or the modem needs to be repaired or serviced, return it to the company where it was originally purchased.

FCC applicable REN number is **0.6B**.

FCC PART 15 NOTICE

This equipment has been tested and found to comply with the limits for Class B 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 residential installation.

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. 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: re-orient or relocate the receiving antenna, increase the separation between the equipment and receiver, connect the equipment into an outlet on a circuit different from that to which the receiver is connected, and/or consult the dealer or an experienced radio/TV technician for help.

The user is cautioned that changes and modifications made to this equipment without approval of the manufacturer could void the user's authority to operate this equipment.

Contains Transceiver Module, FCC ID: OKZ-WC20-2040B.

WARRANTY AND REPAIR SERVICE IN THE USA:

Barton Instrument Systems
900 South Turnbull Canyon Road
City of Industry, CA 91745
1-800-291-3550, ext. 269 or (626) 961-2547

CANADIAN COMPLIANCE STATEMENTS FOR WC20

The Industry Canada (IC) label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The department does not guarantee the equipment will operate to the user's satisfaction.

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.

Before installing this equipment, make sure you are permitted to connect it to the facilities of the local telecommunications company. You must install the equipment using an acceptable method of connection. In some cases, you may also extend the company's inside wiring for single individual service by means of certified connector assembly (telephone extension cord). You should be aware, however, that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by a user to this equipment, or equipment malfunctions, may give the telephone communications company cause to request the user to disconnect the equipment.

For your own protection, make sure that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

(IC) applicable REN number is **0.6B**.

CAUTION

Do not attempt to make electrical ground connections yourself, contact the appropriate electrical inspection authority or an electrician.

NOTICE

The Ringer Equivalent Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices, subject only to the requirement that the sum of the REN numbers of all devices does not exceed 5.

EMISSION REQUIREMENT

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulation.

WARRANTY AND REPAIR SERVICE IN CANADA:

Barton Instrument Systems
3840 - 11A Street N.E.
Calgary, Alberta T2E 6M6
(403) 291-4814

Certification No.: CAN 33991032172A

CE COMPLIANCE STATEMENT FOR WC21 *Approvals Pending*

This product has been tested and confirmed to be in compliance with all EU EMC and LVD Directives (in effect at the time of testing) for light industry use. There may be a temporary degradation of performance at extreme levels of electro-magnetic interference. This instrument complies with the Low Voltage Directive 73/23/EEC. For further details, contact Barton Instrument Systems.

EU CTR21 STATEMENT FOR WC21

Network Connection

This apparatus is suitable for connection for direct 2 wire connection to the PSTN and indirect 2 wire connection to the PSTN via compatible extensions on a PABX system.

Facilities

The WC21 Controller's modem has been approved for use with the following facilities:

- Signalling to the PSTN using DTMF signalling only
- Auto-answering
- Auto-call clearing
- Data modem

The modem should be set up for blind dialling (e.g., dial after delay, no dial tone detection).

Any other usage will invalidate the approval of the apparatus if as a result it then ceases to conform with the standards against which approval was gained.

Connection Methods

This apparatus is designed for connection to the PSTN using a modular jack connection (RJ 11).

Connection to national networks in the EU may require an adapter compatible with the national network.

CTR21 Type Approval

Annex II - Type Approval

The equipment has been approved in accordance with Council Decision 98/482/EC for paneuropean single terminal connection to the Public Switched Telephone Network (PSTN). However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point.

In the event of problems, you should contact your equipment supplier in the first instance.

Annex III - Network Compatibility Declaration

We, Barton Instrument Systems of 900 South Turnbull Canyon Road, City of Industry, CA91749, USA, declare under our sole responsibility that the WC20 Controller's internal modem is designed to interwork with the following networks:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

and that there may be interworking problems with the following networks:

Germany, Greece, Portugal, Spain.

The network compatibility is not dependent on physical or software switch settings.

If you wish to use this equipment on another network, please contact your equipment supplier.

Order Code

TankScan W-Series WC2_ Controller CONFIGURATION	ORDER CODE							
	WC2	#	-	X	#	X	#	X
RADIO								
North America (902-928 MHz)		0						
Europe (869.7-870 MHz)		1						
MODEM								
NorthAmerican, Internal				A				
European, Internal (CTR21)				C				
Future (Option)								
None					0			
HEATER (Option)								
None						N		
w/Heater						H		
ANTENNA								
Local, Right Angle (Mounts on Controller)							1	
Remote, Bracket Mount							3	
POWER								
110 VAC/60 Hz (North American Plug)								A
220 VAC (UK Plug)								B
220 VAC (European Plug)								C

Barton Instrument Systems, LLC

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On the Web at www.barton-instruments.com