

## QC-Quick Connect™ System

The QC is a standardized interchangeable portable control system designed to interface with locomotives equipped with American Association of Railroads (AAR) standard Multiple Unit (MU) connections. This makes the QC an extremely cost effective solution when the need arises to control more than one locomotive at your operating facility.

The QC Locomotive Radio Remote Control System offers the Dependability and Safety required for operating locomotives in harsh industrial locomotive and railroad environments.

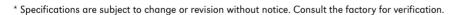
A typical QC comprises: (1) a portable radio remote Operator Control Unit (OCU – optional Paddle-type or Lightweight Ergonomic), (2) a portable locomotive mounted NEMA 4 (IP66) watertight enclosure containing the Locomotive Computer Unit (LCU), and (3) a portable locomotive mounted NEMA 4 (IP66) watertight enclosure containing an Electro-pneumatic interface.

- Enclosures easily transferable from locomotive to locomotive
- STS<sup>TM</sup> (Synchronized Time Sharing) with GPS timing
- Available Infrared OCU Identification and Linking
- Pitch & Catch
- Digital Talkback™ with "InfoLink"
- PC compatible diagnostic software



## Specifications

- STS™ (Synchronized Time Sharing) enables up to 10 systems to operate on one radio frequency
- Simple installation by attaching portable enclosures and plug-in connections for MU sockets
- Infrared identification verifies link between LCU and OCU (Lightweight Ergonomic-type only)
- Digital Talkback™ true two-way digital communication between OCU and LCU through text display and function LED's on the OCU.
- Engine alarm monitoring using single alarm input from MU connector
- · Electrically controlled throttle and electrical direction control (reversing) via MU connector
- Independent braking, independent brake bail, and drag brake functions
- Numeric display of brakepipe, independent and train brake via Digital Talkback on OCU
- Visible status text display on LCU
- Sanding function, Wheel Slip Sensing via MU connector
- Historical monitoring, external event monitoring, and logging of machine data
- Horn and Bell function provided on the LCU
- Solid State Proportional/analog and Electromechanical/pneumatic interfacing capabilities
- Extensive EMI/RFI protection
- · Complete system diagnostic test on power up
- Operating range of 1/2 mile (800 meters) nominal, dependent on power, frequency and antenna. Longer operating ranges available on request.
- Operating environments from approximately -4 $^{\circ}$ F to +140 $^{\circ}$ F (-20 $^{\circ}$ C to +60 $^{\circ}$ C); RH 0 to 95%, non-condensing.
- Special low temperature (-40°F & °C) units available on request.
- Verification of output commands through external monitoring
- Two-stage Automatic Safety Override (ASO) disables only the faulty portion of the locomotive control
- High digital message data security with error checking (BCH)
- Simultaneous & independent data signal processing of all incoming commands by two separate micro-processors
- OCU Push-to-Operate (PTO) bar requires enabling before activating any motion causing command (typically throttle advance, brake release, etc.) – Paddle-type OCU only
- OCU "Vigilance" function standard on Lightweight Ergonomic-type, optional in lieu of PTO bar on Paddle-type
- OCU tilt "man down" sensing returns locomotive throttle to idle, disconnects the generator field, and applies independent brakes





Lightweight Ergonomic OCU



Optional Paddle-type





## www.cattron-theimeg.com

Cattron-Theimeg (USA) Inc.

ISO 9001 Registered Phone: (724) 962-3571 Fax: (724) 962-4310

e-mail: mail@cattron-theimeg.com

Cattron-Theimeg Americas Ltda (Brazil)

Phone: 55-19-3243-7803 Fax: 55-19-3243-9258

e-mail: cattronamericas@cattron-theimeg.com

Cattron-Theimeg Canada Ltd.

ISO 9002 Registered Phone: (905) 873-9440 Fax: (905) 873-9449

e-mail: salescdn@cattron.com

Cattron-Theimeg Europe

GmbH & Co. (Germany) ISO 9001: 2000 Registered Phone: 49-2161-63630 Fax: 49-2161-6363100 e-mail: info@theimeg.de Cattron-Theimeg (United Kingdom) Ltd.

ISO 9001 Registered Phone: 44-1932-247 511 Fax: 44-1932-220937 e-mail: sales@cattronuk.com

Cattron-Theimeg Africa (PTY) Ltd. (South Africa)

Phone: 27-11-425-1123 Fax: 27-11-849-5717 e-mail: cattron@iafrica.com