

INSTALLATION & OPERATION MANUAL

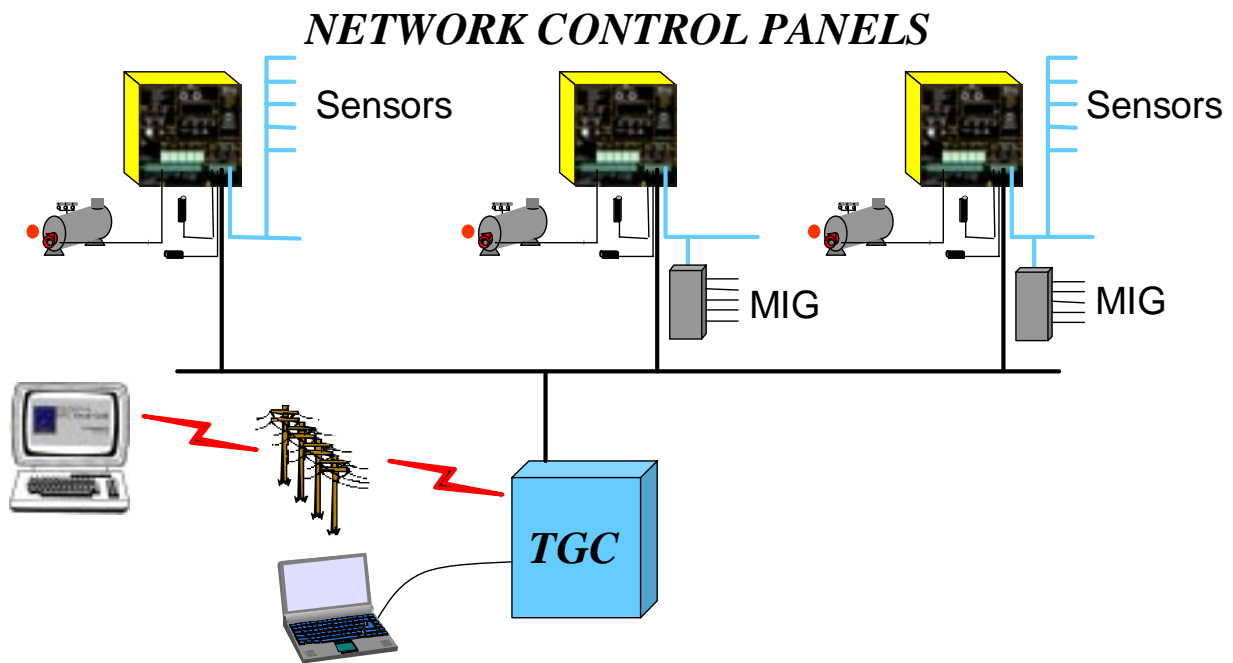
TELECOMMUNICATIONS GATEWAY CONTROL

The Telecommunications Gateway Control (TGC) is designed to network together multiple Heat-Timer panels with Remote Communications capabilities. Using the TGC, up to 20 panels can be connected to a single phone line. The only modem needed is the one which comes standard on the TGC.

When ordering panels to connect with the TGC, they must be ordered with the Visual Gold Package *without* Modem. Any combination of the following panels can be connected to a TGC:

- MPC Steam heating control
- MPCQ Steam heating control for multiple on/off or lo/hi fire stages of heat
- HWR Hot water reset control
- HWRQ Hot water reset control for multiple on/off or lo/hi fire stages of heat
- MOD4 Full modulation control
- SRC Steam control for variable vacuum systems
- SMC Snow melt control

The TGC comes equipped with a 14.4K modem. Indicator lights allow you to see the status of the network at all times. The TGC can power up to 4000' feet of network wiring. The panels can be placed in any configuration on the network.



LIMITED ONE YEAR WARRANTY

This Heat-Timer device was thoroughly tested for defects and workmanship before leaving our factory. We do warrant the equipment to be free of defects under normal use for a period of one year from the date of installation. Transportation charges for factory repairs must be prepaid. Damage to the Heat-Timer device or any of its components due to misuse, abuse, improper installation, or caused by power failures, fire, flood, or lightning are not covered by this warranty. The company assumes no liability for indirect or consequential damages of any nature. This Heat-Timer warranty applies only to the original purchaser/user, is not assignable or transferable, and does not cover damage to the device occurring in shipment. Any service, repairs, modifications or alterations to the unit not expressly authorized by the company will invalidate the warranty. This warranty is in lieu of all other warranties expressed or implied.

HEAT-TIMER
CORPORATION
20 New Dutch Lane, Fairfield, NJ 07004
973-575-4004 Fax 973-575-4052
<http://www.heat-timer.com>

HT #059196-00

INSTALLING THE TGC

SELECT A LOCATION

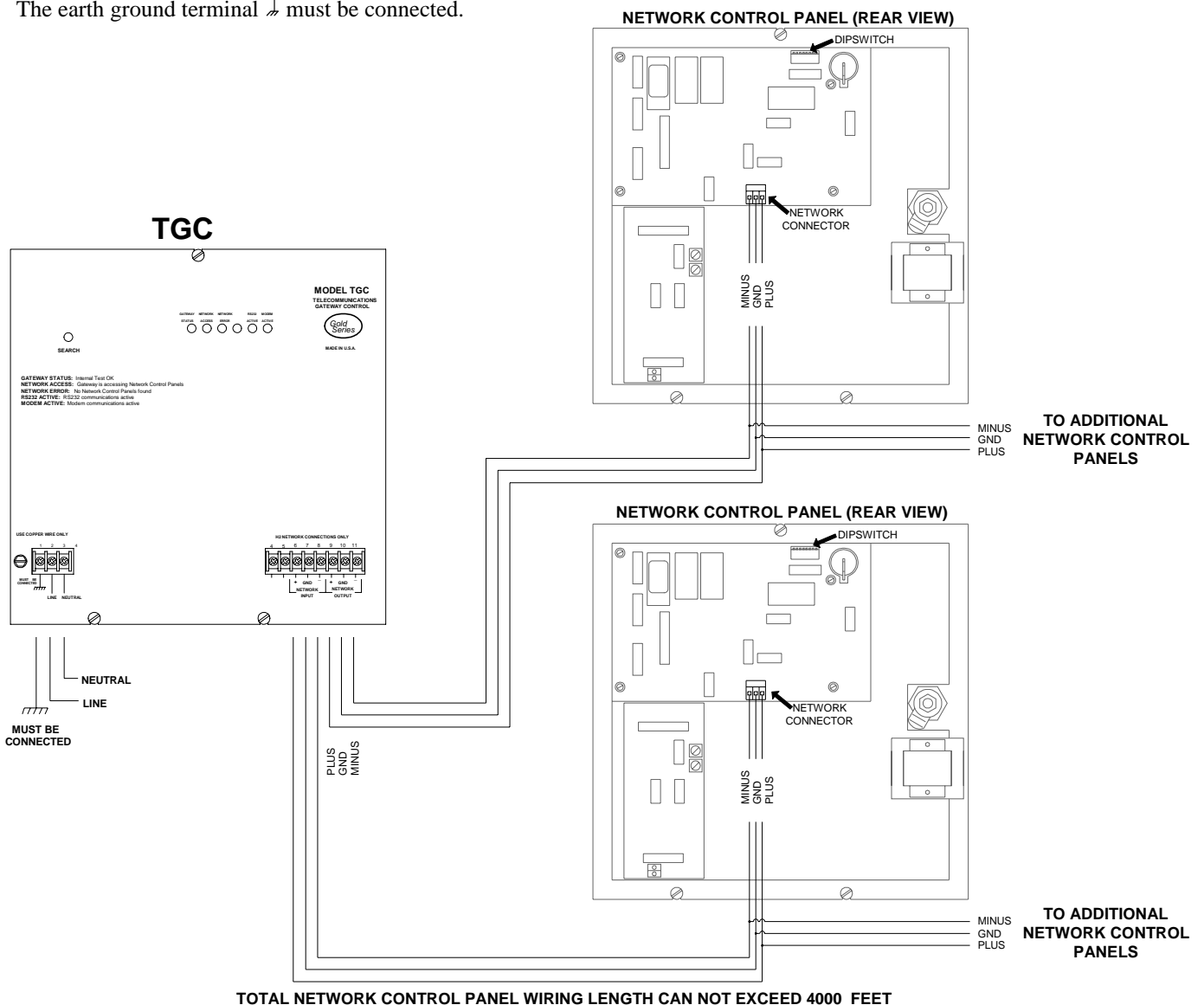
- The TGC can power up to a total of 4000' feet of network wiring.
- The network control panels can be located in any configuration along the 4000' feet of wiring. Although the network configuration is not important, the total wire length of the network may not be more than 4000'.
- Place the TGC in any convenient location on the network wiring.
- The surface must be flat, smooth, and strong enough to hold the weight of the TGC.

MOUNT THE ENCLOSURE

- Take off the gutter cover by loosening the screws at its bottom.
- Remove the top center screw holding the panel to the enclosure.
- Loosen the two screws at the bottom of the enclosure.
- Lift the panel from the enclosure.
- Screw the enclosure to the mounting surface through the three holes provided.
- Return the panel to the enclosure and tighten the screws.

POWER INPUTS

- Bring the power wires through the bottom left KO of the enclosure.
- Use Class 1 copper wire only.
- Attach 120V 60 Hz to terminals *LINE*, and *NEUTRAL*.
- The earth ground terminal \perp must be connected.



WIRING THE NETWORK

NETWORK WIRING

- Use stranded 18 gauge minimum 3-conductor shielded wire.
- The network wiring has three connections, PLUS (+), GND, and MINUS (-).
- The polarity of the connections must always be maintained. GND wires must always go to GND, + to +, and - to -.
- The shield must be connected to the GND terminal at each panel along with the GND wire. **DO NOT** use the shield as the GND wire, both the shield and the GND wire must be run as part of the network.

TGC WIRING

- The TGC has two sets of *NETWORK CONNECTIONS* for wiring convenience. Both sets are identical.
- Bring the network wiring through the bottom right hand KO of the enclosure.
- Bring the + wire to either terminal marked + (terminal 6 or 9).
- Bring the shield and the GND wire to either terminal marked *GND* (terminal 7 or 10).
- Bring the - wire to either terminal marked - (terminal 8 or 11).

NETWORK CONTROL PANEL WIRING

- The panel network wiring is connected to the CPU board located on the rear of the panel.
- In a new installation, connect the network wiring at the same time as the panel's dip switch is set (see the panel's Installation & Operation manual for details).
- On an existing panel, remove the top screw and loosen the two bottom screws that hold the panel into the yellow enclosure. Tilt the panel out of the enclosure to see the CPU board.
- The network connections wire into the black 3-pin removable connector on the edge of the CPU card.
- Bring the + wire to the outer terminal of the connector which is closest to the dip switch.
- Bring the shield and the GND wire to the middle terminal of the connector.
- Bring the - wire to the outer terminal furthest away from the dip switch.
- **DO NOT** crush or short the network wires when screwing the panel back into the yellow enclosure

SETTING UP THE NETWORK CONTROL PANELS

NETWORK CONTROL PANEL ID NUMBERS

- Each network control panel attached to the TGC must have a unique Network ID number.
- The ID number can **NEVER** be 0 (zero). If the ID number is 0, it signifies the panel is a stand-alone panel. The TGC will not be able to access it.
- The ID numbers selected can be from 1 to 20.

SETTING UP THE NETWORK CONTROL PANEL ID FOR MPC, MPCQ, SRC

- Switch the *RUN/PROGRAM* switch to *PROGRAM*.
- Hold down the both buttons marked *HEATING SYSTEM SENSOR* and *FAST CYCLE*.
- The leftmost digital display marked *NORMAL (DAY)* will now display the Network ID number.
- Turn the knob underneath the display to change the ID number.
- When the ID has been set, return the *RUN/PROGRAM* switch back to *RUN*.

SETTING UP THE NETWORK CONTROL PANEL ID FOR HWR, HWRQ

- Switch the *RUN/PROGRAM* switch to *PROGRAM*.
- Hold down the both buttons marked *OUTSIDE TEMP* and *COMPUTER WATER TEMP*.
- The leftmost digital display marked *SYSTEM & PUMP SETPOINT* will now display the Network ID number.
- Turn the knob underneath the display to change the ID number.
- When the ID has been set, return the *RUN/PROGRAM* switch back to *RUN*.

SETTING UP THE NETWORK CONTROL PANEL ID FOR MOD4

- Switch the *NORMAL/SETUP* switch to *SETUP*.
- Press the button through all the LEDs next to the pots, *A1* through *H*.
- The next press of the button will cause all the small pot LEDs to light up. The display now shows the ID number.
- Turn the *SET POINT* knob to change the ID number.
- When the ID has been set, return the *NORMAL/SETUP* switch to *NORMAL*.

TGC OPERATION

LOCATING NETWORK CONTROL PANELS

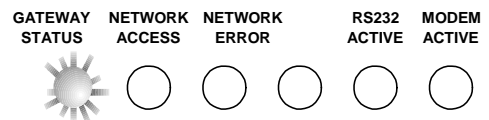
- The network control panels must have their IDs set before the TGC can recognize them (see previous page)
- When the TGC is first powered up, it will automatically access each ID number (from 1 to 20) to determine if a network control panel has been assigned to each number. It may take up to 5 minutes to complete this process.
- If a new network control panel has been attached to the network, press the *SEARCH* button. This will cause the TGC to go through all unconnected ID numbers and look for a new network panel. Hold down the *SEARCH* button until you see the green *NETWORK ACCESS* light blink on.
NOTE: The *SEARCH* button will be ignored if either of the yellow lights *RS232 ACTIVE* or *MODEM ACTIVE* are on.
- The TGC will periodically check all unconnected ID numbers. Therefore, in time the TGC will recognize new network control panels even if the *SEARCH* button is not pressed.
- When a panel ID number is called by HTC VISUAL GOLD software, the TGC will immediately try to access that ID number and determine if a network control panel is assigned to that ID number.

INDICATION LIGHTS

- The green *GATEWAY STATUS* light should always be on. This indicates that the TGC has passed its internal self test and is running correctly. If the *GATEWAY STATUS* light is not on, check the TGC power. If 120VAC power is present, turn the power off and back on. If the *GATEWAY STATUS* light still does not come on, contact the factory for further assistance.
- The green *NETWORK ACCESS* light will blink whenever the TGC attempts to access any of the network control panels. This light should flash periodically during normal operation.
- The red *NETWORK ERROR* light should not come on unless there are no network control panels attached to the TGC. If at least one network control panel is attached and the red light comes on, check the wiring from the TGC to the panels. A wire may have become broken or disconnected.
- The yellow *RS232 ACTIVE* light will come on when the TGC is being accessed directly over the RS232 connection.
- The yellow *MODEM ACTIVE* light will come on when the TGC is being accessed by the modem connection. It will also light when a panel alarm is being dialed out.



SEARCH



GATEWAY STATUS: Internal Test OK
NETWORK ACCESS: Gateway is accessing Network Control Panels
NETWORK ERROR: No Network Control Panels found
RS232 ACTIVE: RS232 communications active
MODEM ACTIVE: Modem communications active