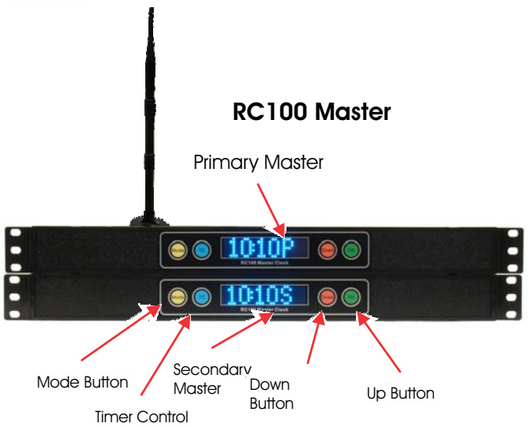
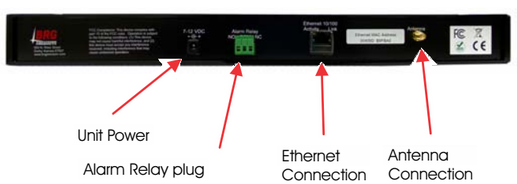
DuraTime Startup Guide

RC161 GPS

RC100 Master





RC150 Mini Master

Allows the RC150 to be used to test for a network signal and sync the time on the RC150 from the RC100

LED indicator light shows:
- Unit has power
- Unit is transmitting
- Unit is receiving
- Unit is out of network range

Allows you to set the RC150 to be a signal repeater for site surveys

The RC150 acts as a master clock using this mode

This powers the RC150 on & off

Setting up the GPS antenna & Transmitter (Optional Component)

- Unpack the box labeled RC161. Mount the GPS antenna somewhere on the roof where it can have a clear view of the sky or mount it on a window sill with a clear view of the sky. (Try to locate within 150 ft of master clock)
- Attach the 50 ft of GPS antenna cable to the connection on the transmitter.
- Plug power adapter into the transmitter and into an available 110VAC receptacle.
- The Red status LED or light indicates power to the unit.
- The Green LED or light flashes once a second when it has not synced with a satellite. It flashes slowly once it has synced with a GPS satellite. The Green LED flashed rapidly for about 5 seconds when transmitting the time RC100

Setting up the Master Clock(s)

- Unpack your RC100(s) and plug the supplied power adapter into the unit(s). The Time, Date and Transmitting Time indicators should show up immediately.
- If you are using redundant master clocks, the primary indicator (P) and the secondary indicator (S) will appear on the LCD display letting you know which master clock is which.
- NTP Time
  - Plug the master(s) into a live Ethernet Connection(s).
  - Once the master(s) have received time sync with either an internal NTP time server or with a NTP timer server on the internet, an asterisk will appear on the LCD Screen
- GPS Time
  - The master clock(s) will automatically receive a time signal from the GPS antenna transmitter. (Dependent on GPS transmitter and master clock being within 150 ft of each other or that they have a continuously live multi-path network setup between the two.)
- Both NTP & GPS Time Sources can be used simultaneously.
- If using the Alarm Relay, you will need to attach wires to the relay plug. The BRG Alarm Schedule Software is used in conjunction with the alarm relay to activate bells or horns.
- The programming switch is used for setting DST rules.
- Once the "T" and "*" appears on your master clock, you are ready to set the time on the Mini Master.

Setting the Time on the Mini Master

- Unbox the RC150 Mini Master. The unit will come in handy when installing the analog and digital secondary clocks.
- Press the Yellow button to turn on the RC150. You should see the Red LED light up and blink twice a second. This is normal and means that it's not receiving a signal from the master clock.
- Once the signal is picked up by the RC150, the LED will blink once per second.
- Press the Blue button once to put in receive mode. Press Blue button once more to store the current time in the Mini Master.
- When you are ready to start powering the secondary clocks, press the Red button to start transmitting the time from the RC150 to the secondary clocks.

Installing the Secondary Clocks

- Create a staging area for preparing the clocks for installation
- Place the RC150 Mini Master in the room in transmit mode
- For Battery Analog Clocks:
  - Install four AA alkaline batteries.
  - The hands will take about 4 minutes to move to a cardinal point, usually 12:00.
  - Once the analog clock receives the time from the RC150, it will start moving it's hands to the correct time.
  - The clock is now ready to install.
- For Electric Analog Clocks:
  - Remove the set pin in the back of the movement.
  - Plug or connect the clock to the electrical supply.
  - The clock is now ready to install.
  - The hands will take about 4 minutes to move to a cardinal point, usually 12:00.
  - Once the analog clock receives the time from the RC150, it will start moving it's hands to the correct time.
- For Digital clocks
  - Hang on the wall and plug into electricity, they will receive the signal and set to the correct time in a few seconds
- The correct operation of your clocks depends on the multi-path network that is created when the secondary clocks are installed
  - Each clock needs to be within approximately 150 ft or less of another secondary clock.
  - There must be a secondary clock or repeater with 150 ft or less of the master clock(s).
  - The secondary clocks have the opportunity to capture one of the 86,400 time signals that are sent out from the master clock per day.
- If a secondary analog clock does not receive a signal from the master clock, the second hands will start stepping two seconds at a time.
  - This indicates one of three possibilities:
    - 1) The clock is not close enough to another clock in the multi-path network.
    - 2) The signal is not reaching that room.
    - 3) The receiver on that clock is not receiving.
  - To test for signal:
    - Press the Yellow button on the RC150 to turn on the power.
    - Press the Blue button on the RC150 to set it in "Receive Only" mode.
      - If the Red LED blinks once a second, then there is an adequate signal.
      - If the Red LED blinks twice a second or not at all, then there is not an adequate signal in that location.
        - Add another clock to the system to bridge the ap in the network or add a repeater to the /stem to bridge the gap in signal.

RC185 Wireless Audio Player/ Tone Generator/Relay

The RC185 is used to play pre-recorded audio files over your existing PA system. The unit comes with over 70 audio files. Connect the unit to your PA Amplifier with an RCA cable. The RC185 receives a wireless transmission from the master clock. The alarm schedule software comes with the system. It's easy to set up and you can program up to 99 alarms and control up to 16 different zones.

Signal Repeaters

RC142

The RC142 is designed to be placed in a drop ceiling. It measures 12" x 24" and comes with a filler panel to placed in a 24"x24" ceiling grid. The window allow you to easily see the power light. It requires 110VAC power.

RC142

RC145

The RC145 is designed to be mounted permanently on a wall. Simply mount the unit and plug into 110VAC.

RC145

BRG Technical Support
800-295-0220 or
1-316-788-2000

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Installation Tips

The example below shows how the DuraTime System creates a multi-path network. Each piece of equipment is a piece of the network. It receives the DuraTime Signal and transmits it to the next unit in the network. BRG recommends having a clock every 150 ft to maintain the multi-path network. The RC150 Mini Master can be utilized to make sure that the signal is reaching the area where you want to install the next clock. Simply put it in receive mode. As long as the LED on the RC150 is blinking once a second, the signal is being received from the multi-path network.

BRG recommends that you install the master clock and GPS, if applicable, first. Then start at the master clock and install outwardly from the master clock. This will let you ensure that the network is operational. If this is not feasible, then turn the RC150 Mini Master into a transmitter and use it to set the time on the clocks during installation.

If you have questions, call BRG Technical Support at 800-295-0220.