

Avatar Custom Electronics

DRILLClock Sports Training Timers

DOC: QS 9852C

A Quick START For The DM-1 Timer

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OPERATING THE DM-1 SEGMENT TIMER

GETTING SET UP

SETTING UP THE TIMER

1. Place the DSP-1 LED display on the tripod stand.
 2. Connect the DSUB-9 pin connector to the display input and secure the thumb screws.
 3. Connect the DM-1 controller to the stand connection box and secure the thumb screws.
 4. The horn phone plug can be left unplugged if you are not needing the high level output. The display has a low level speaker built-in for you to hear during setup.
 5. Plug the battery pack into the stand connection box and secure the plug locking ring.
 6. The display will light and after a short setup routine show "segment number (1) time".
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IMPORTANT!

It is the operators responsibility to make sure that the battery pack cable and power plug are restrained from being accidentally disconnected.

Use the same methods to restrain the DM-1 hand control cable.

USE ONE OR MORE OF THESE METHODS

- A. Looping around the stand cross arm
- B. Velcro straps to the cross arm
- C. Athletic tape to the cross arm

SYSTEM RESET

Momentary disconnection will result in the system being non-responsive. To correct this you should:

1. Fix the disconnection
2. Remove the battery POWER plug for 5 seconds
3. Reconnect the battery POWER plug

OPERATING THE DM-1 SEGMENT TIMER

SYSTEM OVERVIEW

BATTERY PACK

Your timer has enough battery power to work all day and with a slightly reduced brightness level you can continue into the evening! The battery pack has a charger that will deliver the fastest safe charge cycle possible. A full charge in less than 8 hours, typically 6 to 7 hours. You do not have to worry about over charging either. The charger will switch to a float charge cycle automatically when fully charged. It is not a problem to leave it indefinitely. It will use very little electric power and stay fully charged!

WIRED TRIPOD STAND

Your stand is a heavy duty stand custom wired for your timer. The connection box at the stand base gives you a common point to connect the DM-1 control and the Battery pack plus the external trigger inputs for the PADSWITCH that will operate the STOPWATCH timer. Two external trigger jacks are provided as START and STOP triggers. These are momentary contact closure inputs.

DSP-1 DISPLAY

This panel is made up of super bright LEDs visible in the brightest sun. The connection panel is located on the back side and it includes the HORN connection jack and a HI/LO audio out put switch. There is a MODE A/B switch that must remain in the A position for normal operation. This switch has been disabled on some units to avoid accidentally being switched. For our purposes it has no application.

OPERATING THE DM-1 SEGMENT TIMER

TIMER DISPLAY FORMAT: SEGMENT TIMER

The two digits displayed by the DM-1 are referred to as the left digit and the right digit for simplicity. The two digits form the number from which the timer will count down to zero. These two numbers are set individually and are given designations on the controller as:

LEFT DIGIT MM
RIGHT DIGIT M

This is to indicate the left digit as more significant and the right as least significant.

SEGMENT TIMER SPECIAL INFORMATION

THE DM-1 will display special information in a scrolling format. At regular intervals you will be reminded of what segment number is currently counting and how many minutes are left. REST segments identify themselves with the word “rEST” and the word “Period” is spelled out for drill segments.

With seven segments to work with, how best to create letters of the alphabet is a challenge. So while some letters may appear strange at first, the scrolling format will keep coaches and athletes updated as the workout progresses.

OPERATING THE DM-1 SEGMENT TIMER

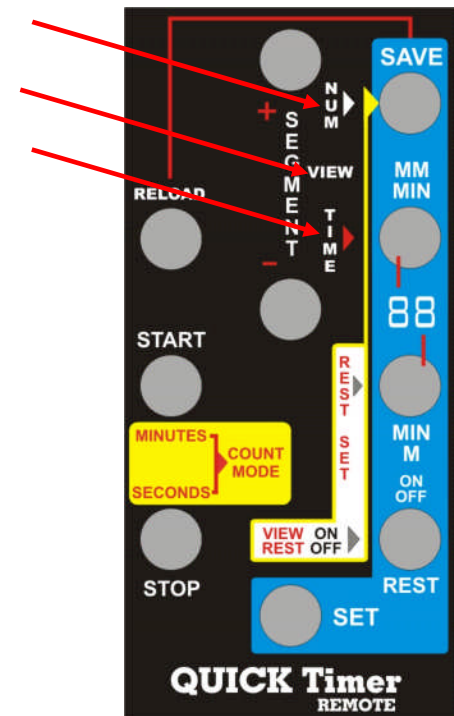
VIEW THE CURRENT SEGMENT'S ID NUMBER

TO IDENTIFY THE NUMBER OF THE SEGMENT YOU ARE VIEWING

VIEW

PRESS **NUM (SAVE)** Your current segment number is displayed

PRESS **TIME (MM MIN)** Time that is set for the current segment



OPERATING THE DM-1 SEGMENT TIMER

EDIT A SEGMENTS TIME

TO CHANGE THE TIME THAT IS SET FOR A SEGMENT

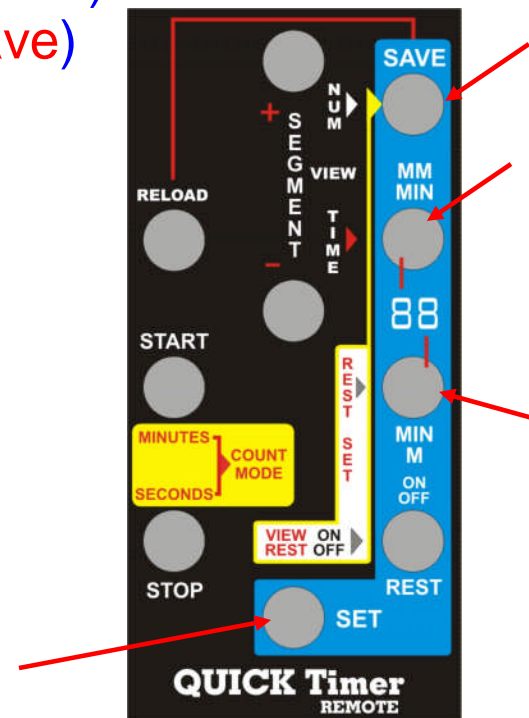
PRESS **SET** To be in the setting mode

PRESS **MIN M** Each press increments the RIGHT DIGIT 0 up to 9 then 0

PRESS **MIN MM** Each press increments the LEFT DIGIT 0 up to 9 then 0

PRESS **SAVE** To save the displayed time (display **Save**)

PRESS **SET** To discard your changes (display **no Save**)



OPERATING THE DM-1 SEGMENT TIMER

SET A SEGMENT TO STOP "PAUSE" THE TIMER AUTOMATICALLY

YOU CAN HAVE THE DM-1 "PAUSE" AT ANY SEGMENT NUMBER BY SETTING "00" FOR TIME

PRESS **SET** To be in the setting mode

PRESS **MIN M** Each press increments the RIGHT digit up to ZERO

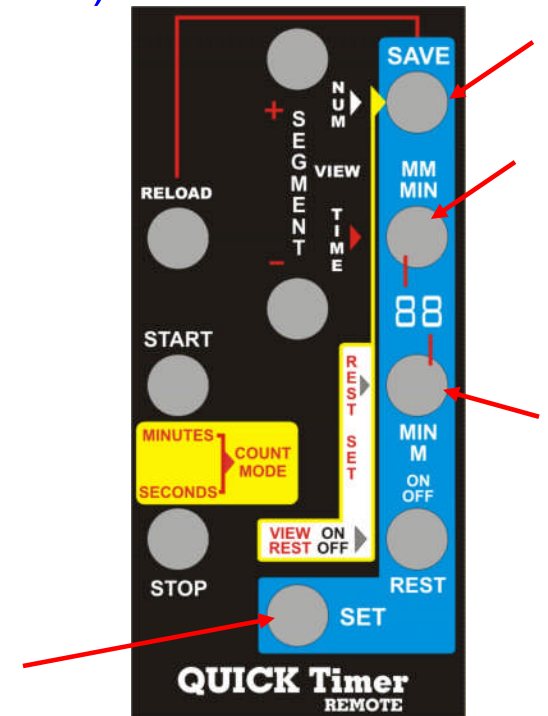
PRESS **MIN MM** Each press increments the LEFT digit up to ZERO

PRESS **SAVE** To save the displayed time (display **Save**)

WHEN THE "00" SEGMENT STARTS THE DISPLAY WILL SCROLL:

Drill Paused.....Press Stop.....

THE MESSAGE WILL REPEAT EVERY 8 SECONDS OR UNTIL THE "STOP" BUTTON IS PRESSED.



OPERATING THE DM-1 SEGMENT TIMER CONTINUE THE DRILL AFTER A "PAUSED" SEGMENT

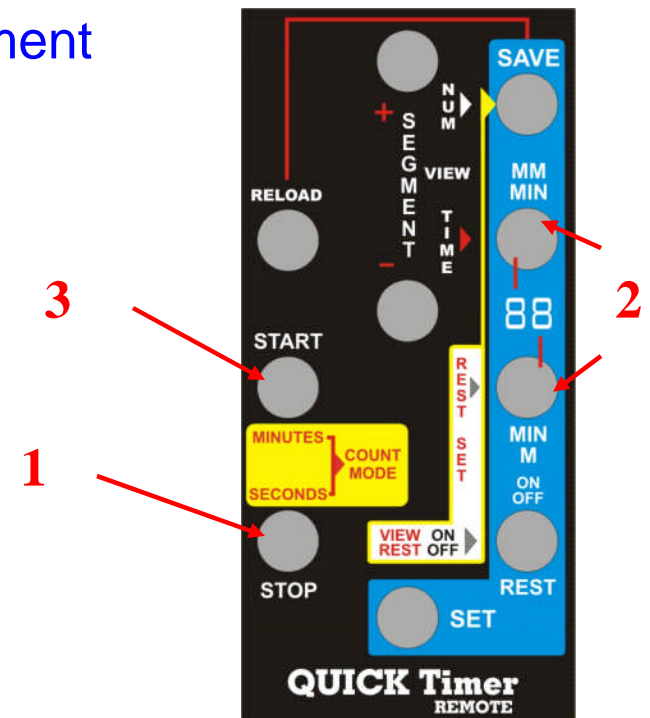
TO CONTINUE THE DRILL YOU MUST MOVE TO A SEGMENT THAT IS NOT SET TO "00"

PRESS **STOP** To UNPAUSE the timer

PRESS **MIN M** To move to the next segment

PRESS **MIN MM** To move to the previous segment

PRESS **START** To continue the drill at this segment



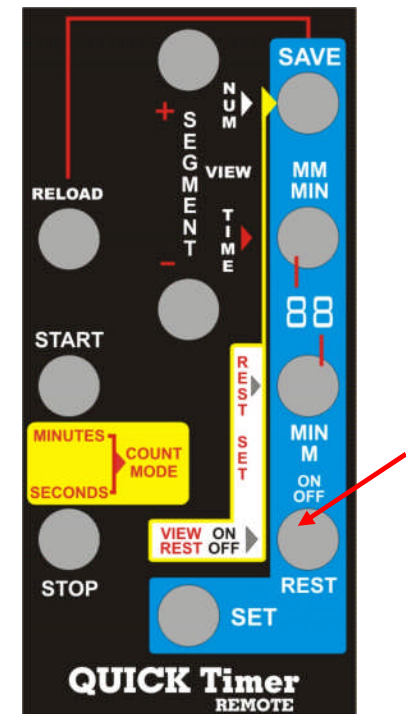
OPERATING THE DM-1 SEGMENT TIMER

VIEW THE REST PERIOD DURATION

REST DURATION COMMON SET ONE TO NINE MINUTES (1 minute increments)

PRESS **REST** (display shows “r” and a number 1 to 9)

PRESS **REST** To exit viewing REST



OPERATING THE DM-1 SEGMENT TIMER

CHANGE THE REST PERIOD TIME DURATION

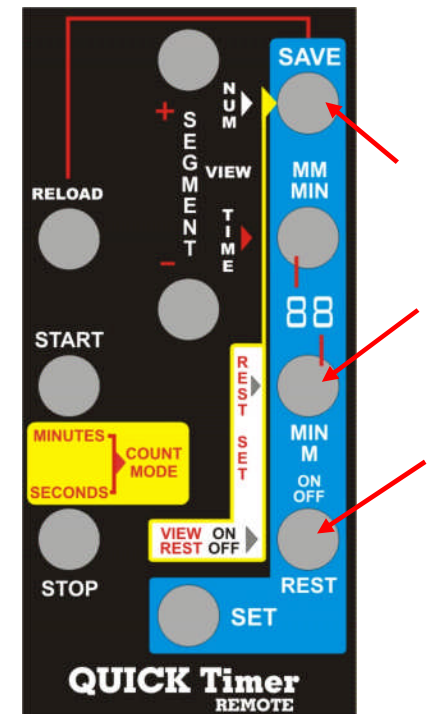
REST DURATION COMMON SET AS ONE TO NINE MINUTES (1 minute increments)

PRESS **REST** (display shows “r” and a number 1 to 9)

PRESS **MIN M** To increment the REST minute duration

PRESS **SAVE** To save the change (display **Save**)

PRESS **REST** To discard your changes



OPERATING THE DM-1 SEGMENT TIMER

ENABLE A REST PERIOD

YOU CAN ENABLE A REST SEGMENT TO RUN AFTER ANY OF THE 50 SEGMENTS.

Enable A REST Segment

PRESS **SET**

PRESS **REST** (display shows “rest ON”)

PRESS **SAVE** To enable this REST Segment

OR

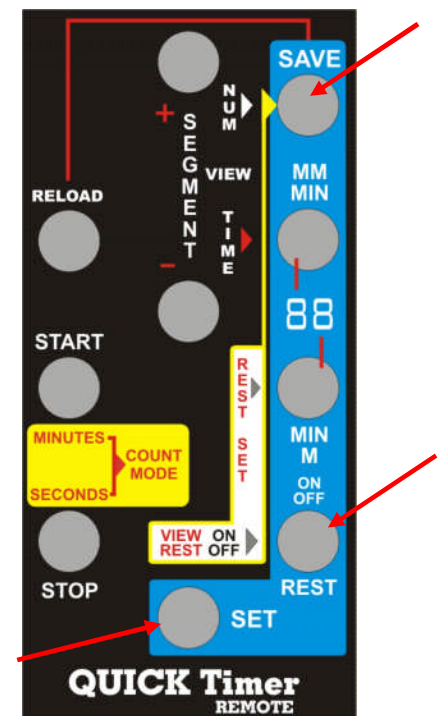
Disable A REST Segment

PRESS **REST** (display shows “rest ON”)

PRESS **REST** (display shows “rest OFF”)

PRESS **SAVE** To disable this REST Segment

NOTE: The REST “ENABLE/DISABLE” selection status will always begin with “REST ON”. If the REST was disabled, pressing “REST” again it will remain disabled.



OPERATING THE DM-1 SEGMENT TIMER

COUNT IN SECONDS MODE OR COUNT IN MINUTES MODE

THE DM-1 CAN USE THE TWO DIGITS TO COUNT AS SECONDS OR AS MINUTES

0 to 99 seconds or 0 to 99 minutes

- CHANGE AT ANY TIME
- LAST SETTING IS REMEMBERED THE NEXT TIME YOU USE THE TIMER

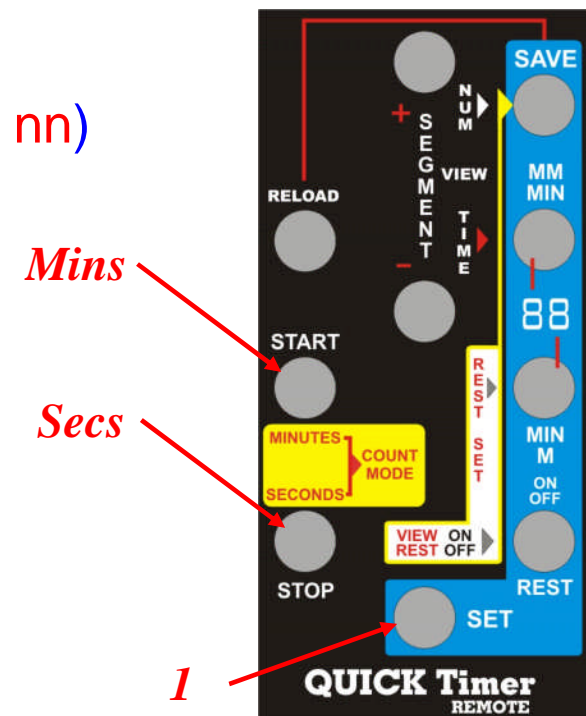
PRESS **SET**

PRESS **STOP** To count in seconds (displayed **Sec**)

PRESS **SET**

PRESS **START** To count in minutes (displayed **mn**)

PRESS **START** To begin counting



OPERATING THE DM-1 SEGMENT TIMER SWITCH TO STOPWATCH (STOP CLOCK) MODE

THE DM-1 STOPWATCH CAN BE USED AS A HANDHELD STOPWATCH OR IT HAS TWO EXTERNAL TRIGGER INPUTS LOCATED ON THE TRIPOD STAND CONNECTION BOX.

To switch from SEGMENT TIMER to STOPWATCH MODE

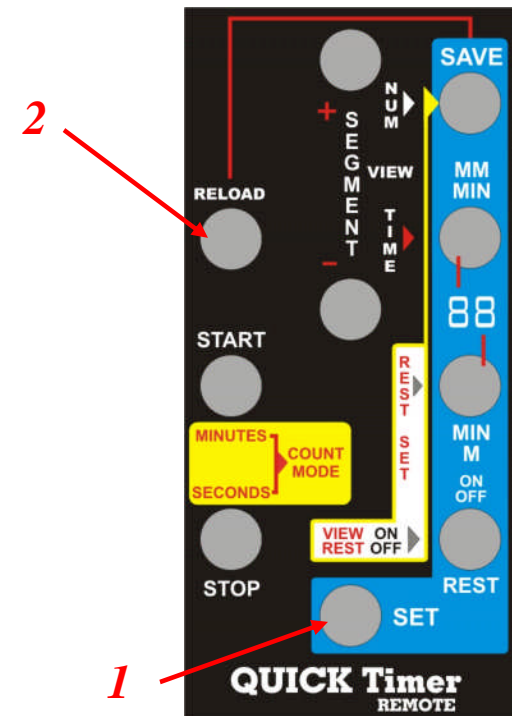
PRESS **SET**

PRESS **RELOAD** The display shows “Stop Clock”

To switch Back to SEGMENT TIMER MODE

PRESS **RELOAD** Display does not acknowledge

YOU WILL BE ON THE SAME SEGMENT YOU WERE ON BEFORE



OPERATING THE DM-1 SEGMENT TIMER

TIMER DISPLAY FORMAT: STOPWATCH TIMER

The DRILLClock DM-1 seven segment two digit display and special display protocol

DISPLAY THE RUNNING STOPWATCH

When the STOPWATCH is started the display shows the first second in 1/100th second increments. The next (10) seconds are shown in 1/10th of a second increments. Beginning at (10) second each second is shown up to (60) seconds where the display will show the minute and a graphic to indicate the running clock.

DISPLAY THE TIME RESULTS TO 1/100th OF A SECOND

If the captured time result is under one minute, the DSP display shows you the seconds as two digits. Then to display the hundredths of a second the display begins scrolling from right to left using _ as a decimal point.

The DSP Display does this by showing you the numbers as you would say them. In other words, to display a time of (30.58 seconds) the DSP display begins by showing (30) and then the characters are shifted as four visual frames. The result is seen frame by frame: (30); (0_); (_5); (58). The time display is shown as you would say it. That is “thirty point five eight seconds”.

To display a capture time of over (59.99) seconds the display adds one extra frame. The minute frame is shown as (0=) where the equal sign represents the colon in example (2:30.58 seconds) you would see (2=); (30); (0_); (_5); (58). As before it is displayed as you would say the time, “two minutes, thirty point five eight seconds”. It will display up to (9) minutes, (59) point (99) seconds in this manner.

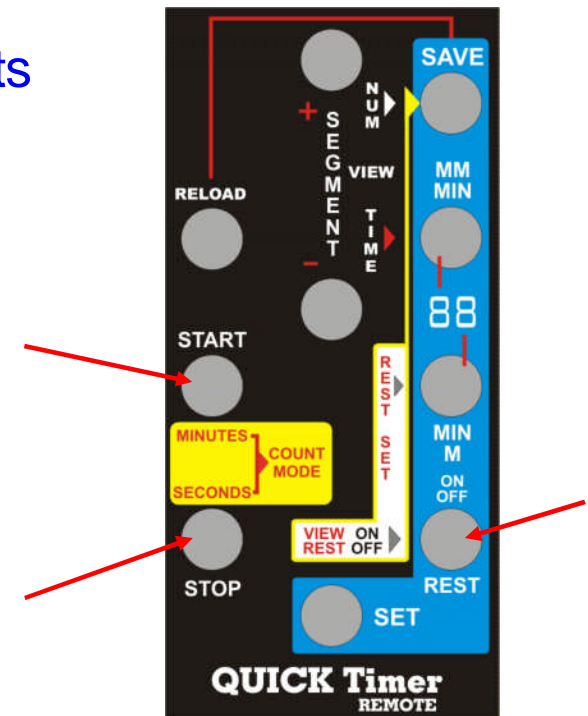
OPERATING THE DM-1 SEGMENT TIMER MANUALLY RUNNING THE STOPWATCH

TIME RESULTS ARE DISPLAYED TO 1/100th OF A SECOND

PRESS **REST** To zero (RESET) the clock

PRESS **START** To start timing

PRESS **STOP** To stop timing and display the results



OPERATING THE DM-1 SEGMENT TIMER

EXTERNAL TRIGGER AUTO-TIMER USING THE PADSWITCH

1/100th OF A SECOND CAPTURE AUTO TIMER

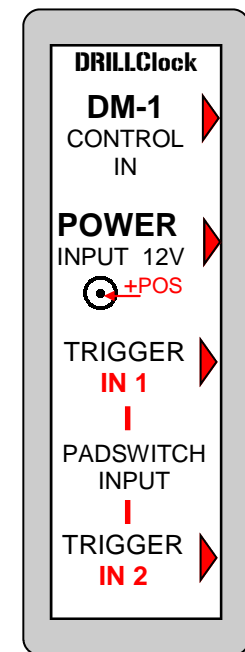
Plug the Padswitch into the stand connection box

STEP ONTO THE PADSWITCH Clock "00" (displays a short graphic)

RELEASE FROM THE PADSWITCH Clock starts

TAG THE PADSWITCH Clock stops

Time result is displayed as scrolling time up to 9:99.99 min.



STAND CONNECTION BOX

OPERATING THE DM-1 SEGMENT TIMER

BASEBALL BASE RUNNING DRILL “ADJUSTABLE RESTART” WINDOW

ADJUSTABLE “RESTART WINDOW” AUTO TIMER (SEE PAGE 24 FOR MORE INFO)

This is a “window of time” that a base runner may:

- Leave the PADS SWITCH base pad, “Starting” the clock
- Return to the base pad “Resetting” the clock to zero
- Again leave the base pad “running” for the second base pad
- Tagging the second PADS SWITCH base pad “Stops” the clock
- The time results are displayed

Plug Padswitch 1 and Padswitch 2 into the stand connection box

STEP ONTO THE PADS SWITCH Clock resets

RELEASE FROM THE PADS SWITCH Clock starts

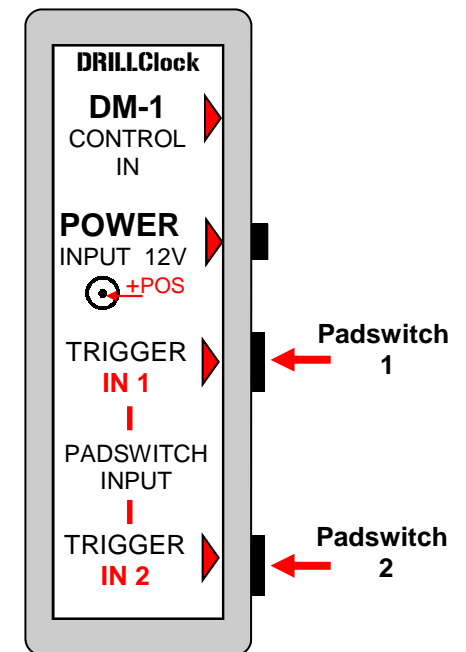
RETURN TO THE PADS SWITCH Clock resets

RELEASE FROM THE PADS SWITCH Clock starts

AFTER RETAG WINDOW EXPIRES

STEP ONTO EITHER PADS SWITCH Clock is stopped

Time result is displayed as scrolling time up to 9:99.99 min.



STAND CONNECTION BOX

OPERATING THE DM-1 SEGMENT TIMER

“START GUN” STOPWATCH MODE

WHILE IN THE STOPWATCH TIMER MODE
TO TURN ON THE START GUN MODE:

PRESS **SEGMENT +** Display shows “Gun”

Plug the Padswitch into the stand connection box

STEP ONTO THE PADSWITCH Clock resets (displayed short graphic)

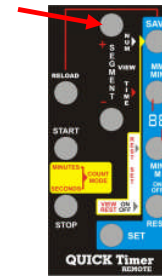
WAIT FOR AN AUDIBLE “START TONE”

Leaving before tone results in an error alarm sounding and NO TIME

LEAVE THE PADSWITCH AFTER THE TONE SOUNDS Clock starts

RETAG THE PADSWITCH OR SECOND TRIGGER Clock stops

Displayed time results, repeats until an athlete steps onto the Padswitch



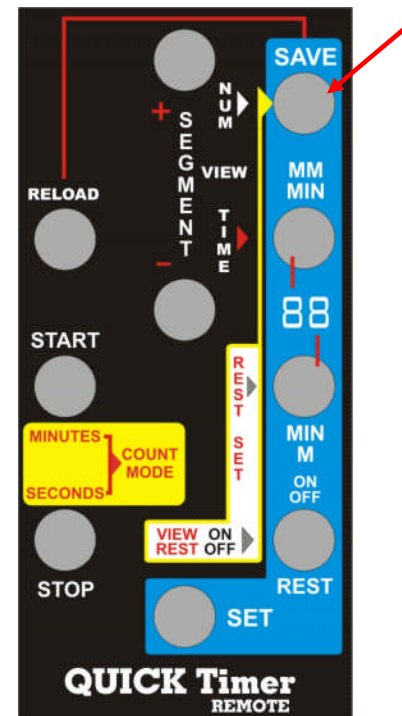
OPERATING THE DM-1 SEGMENT TIMER

ENABLE THE 25 SECOND COUNT DOWN “PLAY CLOCK” MODE

A 25 second countdown beginning with a short graphic, “referee arm signal” followed by a tone, “whistle”
And the count starting.

WHILE IN THE STOPWATCH TIMER MODE
TO ENABLE THE PLAY CLOCK FEATURE

PRESS **SAVE** Display scrolls “PLAY CLOCK”



OPERATING THE DM-1 SEGMENT TIMER

MANUALLY START THE 25 SECOND "PLAY CLOCK"

THIS ROUTINE EMULATES A REFEREE:

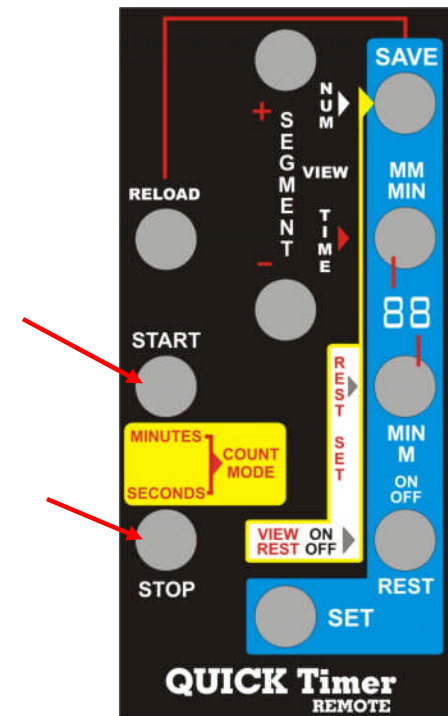
GIVING AN ARM SIGNAL, WHISTLE BLOWS STARTING A 25 SECOND COUNT DOWN

PRESS **START** Display shows ARM SIGNAL, whistle- clock starts

WHISTLE BLOWS AT ZERO

PRESS **STOP** To stop the routine before zero

PRESS **START** To begin again



OPERATING THE DM-1 SEGMENT TIMER

AUTOMATIC REFEREE "RED ZONE" 25 SECOND "PLAY CLOCK"

TO TURN ON THE AUTOMATIC REFEREE WHILE IN PLAY CLOCK MODE
(EACH PRESS WILL TOGGLE ON/OFF)

To Turn ON

PRESS **SEGMENT** - Display shows Auto On

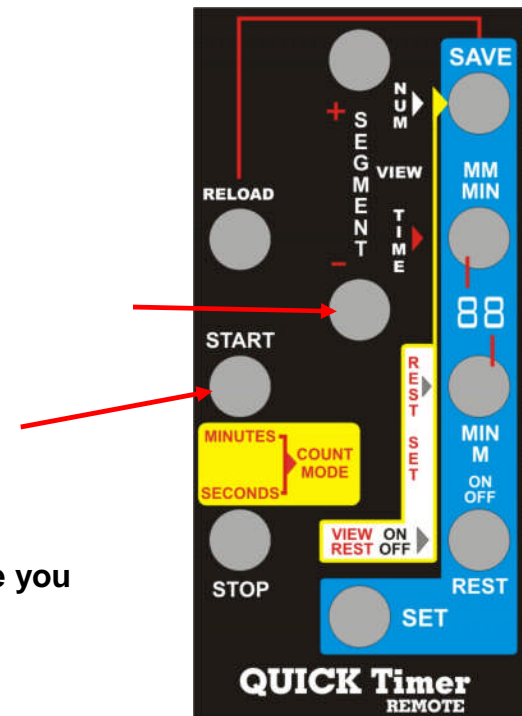
To TURN OFF

PRESS **SEGMENT** - Display shows Auto OFF

To Begin The Drill

PRESS **START** Display shows Referee Arm Sig

NOTE: These settings are not remembered and will need to be set each time you restart the Play Clock routine.



OPERATING THE DM-1 SEGMENT TIMER

CHANGE THE TIME BETWEEN AUTOMATIC REPEATS "RED ZONE"

SET A TIME PERIOD AFTER WHICH THE REFEREE WILL AGAIN SIGNAL AND START THE CLOCK
TIME DURATION IS SET AS A MULTIPLIER VALUE "1 TO 9"
CLOCK MUST BE STOPPED

Add Time

INCREMENT THE X MULTIPLIER FROM 1 TO 9

PRESS **MM MIN** Display shows "Add" and number 1 to 9

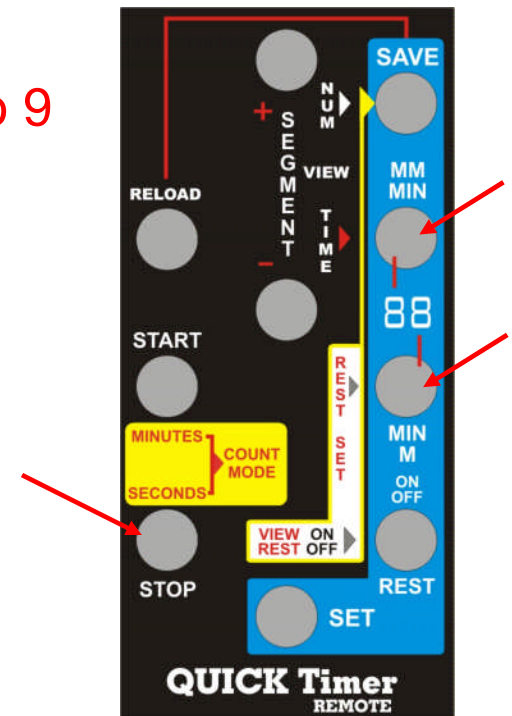
Subtract Time

DECREMENT THE X MULTIPLIER FROM 9 TO 1

PRESS **M MIN** Display shows "SUB" and number 1 to 9

NUMBER MULTIPLIER	EQUALS TIME BETWEEN PLAYS
1	13 SEC
2	24 SEC
3	34 SEC
4	44 SEC
5	54 SEC
6	64 SEC
7	74 SEC
8	84 SEC
9	94 SEC

NOTE: THIS SETTING IS RESET WHEN YOU LEAVE THE PLAY CLOCK MODE



OPERATING THE DM-1 SEGMENT TIMER

THE STOPCLOCK "RESTART WINDOW" FEATURE (BASEBALL RUNNER RETAG)

THIS FEATURE ALLOWS THE TIMER TO BE RESET TO ZERO BY RETAGGING THE PADSWITCH WITHIN A PRESET TIME "WINDOW". THE WINDOW "X" CAN BE ADJUSTED IN .2 SECOND INCREMENTS. .2secs up to 2secs

To Enable The RESTART WINDOW (While In STOP CLOCK Mode)

TOGGLE ON/OFF EACH PRESS

PRESS **SET** Display shows "reset On"

PRESS **SET** Display shows "reset OFF"

Add Time

INCREMENT THE "X" MULTIPLIER FROM 1 TO 9 (Default is 4 for approx 1 sec)

PRESS **MM MIN** Display shows "Add" and number 1 to 9

Subtract Time

DECREMENT THE "X" MULTIPLIER FROM 9 TO 1

PRESS **M MIN** Display shows "SUB" and number 1 to 9

NOTE: THIS SETTING IS RESET WHEN YOU LEAVE THE STOP CLOCK MODE

