

Avatar Custom Electronics

DRILLClock Sports Training Timers

DOC: DM1-100 Timer User Setup Guide VER.B

Operator Guide For The DM1-100 TIMER

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OPERATING THE DM1-100 SEGMENT TIMER

GETTING SET UP

THE DM1-100 TIMER SYSTEM DESCRIPTION

The DM1-100 system is made up of a handheld controller that is the DM1-100 and an LED display. The DM1-100 controller is responsible for everything that is displayed on the LED display. The information is passed from the DM1-100 to the display via RS232 serial communication at 9600baud. Operating the DM1-100 you will see short messages on the display to let you know what mode or change that it is responding to.

The DM1-100 controller has two major operating modes. The first mode is Segment Timer and is the mode the timer is in when powered up. Upon power up, the DM1-100 will be at Time Segment number one and the Time that is set for Segment one is displayed. The Time values for each of the 100 Time Segments are stored in non-volatile memory in the DM1-100.

Also stored in memory is the Time Count mode that was used the last time the timer was powered. The Time Count mode can be set to Minutes or to Seconds and may be changed at any time without affecting the "Time values" that you have programmed. **See page 15** for details on the **Time Count** mode. In Segment Timer mode there is a Buzzer Timer drill which is a count down to zero buzzer that can be set in 1/10th second steps of up to 9.9 seconds in duration. **See page 17** for details.

The second main operation mode is a set of Special drills that include a Play Clock routine found on **page 25**, a Stopwatch Timer **see page 19**, and a Dual Reaction Time Capture routine that begins with a Starter Tone random time generator found on **page 23**. continued...

OPERATING THE DM1-100 SEGMENT TIMER

GETTING SET UP

THE DM1-100 TIMER SYSTEM DESCRIPTION

Navigating The Timer Modes

The DM1-100 Operation Modes are accessed in the following way:

1. Power Up In Segment Timer mode (*Clock Is Stopped*)

Press **RELOAD** to GOTO Buzzer Timer; Press **STOP** to return to Segment Timer

2. GOTO Special Timer mode—Press **SET** then:

A. Press **SEGMENT—** to GOTO Play Clock mode

B. Press **RELOAD** to GOTO Stopwatch mode

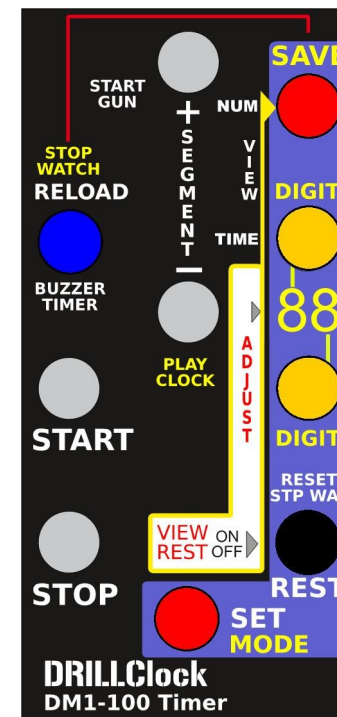
C. Press **SEGMENT+** to GOTO Dual Reaction Timer mode

3. Return to Segment Timer mode Press **SAVE**

If you have questions about your timer you can call for help or email.

Call 1-866-467-9313 toll free.

Email: info@avatarresearch.com



OPERATING THE DM1-100 SEGMENT TIMER

SYSTEM OVERVIEW

BATTERY PACK

Important!!

It is important to keep the 12VDC battery fully charged. We suggest that the AC charger be connected to a 120VAC outlet immediately after each practice. Leaving the charger connected to AC power when the timer is not being used will extend the batteries life. Operating the timer without charging the battery will result in a situation where the battery will loose it's ability to be charged.

The supply voltage is 12.5VDC average. The Sealed Lead Acid battery when fully charged will be 13.4 Volts and the voltage will slowly drop as the timer is operating.

The system can be powered from an AC power source using a 120VAC to 12.5VDC power supply with 3 amp capacity.

OPERATING THE DM1-100 SEGMENT TIMER

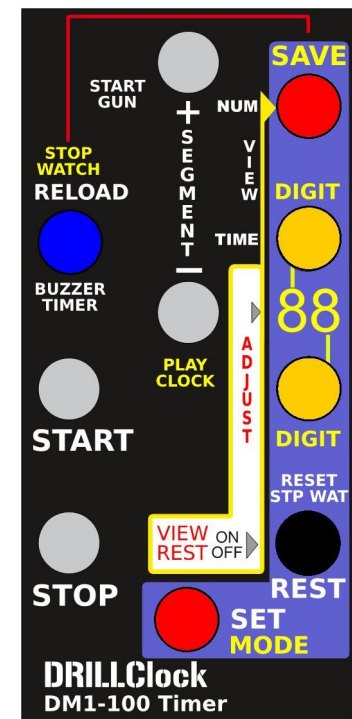
SYSTEM OVERVIEW

RAINY DAYS

- On bad weather days use the Rain Gear poly vinyl coverings on the LED display. The DM1-100 timer control should be Velcro attached to the rear of the display.
- The horns are water proof and do not need covering.

The DM1-100 TIMER System uses serial data sent from the DM1-100 to one or more LED Displays. The method of connection is XLR4pin that is far superior to standard D type connectors on a PC. Avatar can supply adapter cables to link computer serial to the LED display or DM1-100. These can be used to interface PC computer applications to the DM1-100 Timer. There are many possibilities for connecting multiple LED Displays or timer trigger devices to the timer system.

We are happy to assist you in both design and building cables and adapters to create your perfect timer setup. Email a description of what you are try to accomplish and we will configure a low cost effective solution.



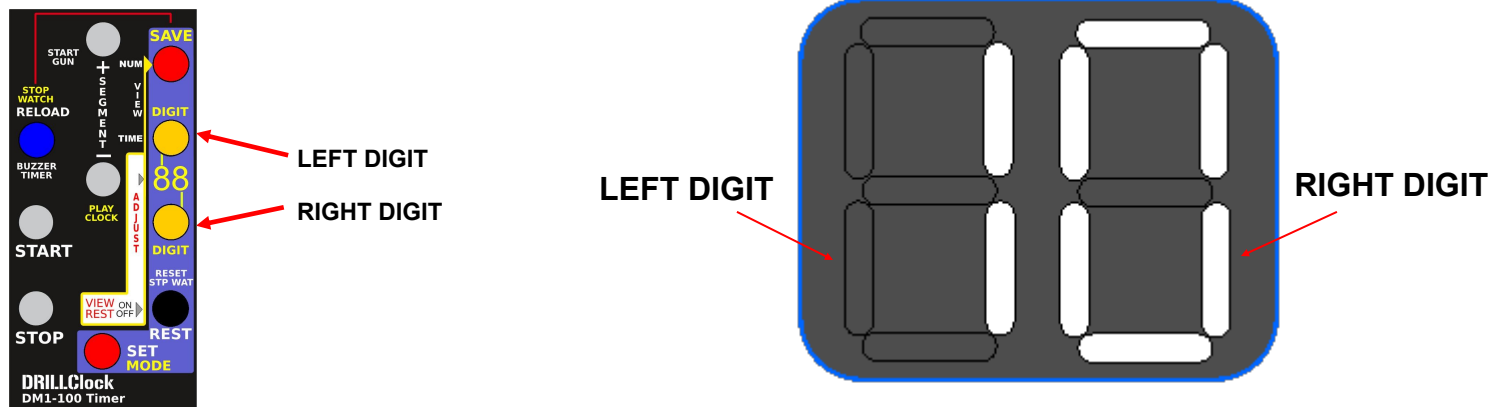
OPERATING THE DM1-100 SEGMENT TIMER

TIMER DISPLAY FORMAT: SEGMENT TIMER MODE

The two digits displayed by the DM1-100 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 indicated below.

The LEFT DIGIT is the MSD or Most Significant Digit



SEGMENT TIMER SPECIAL INFORMATION

THE DM1-100 will display special information in a side 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. 2018 Displays include the MAX20 Display with its 20" H numbers and a 3pin XLR input jack for triggering the DM1-100 1/100th second capture timer.

OPERATING THE DM1-100 SEGMENT TIMER

STEP BETWEEN THE 100 SEGMENTS (TIMER STOPPED)

TO VIEW THE TIME THAT EACH SEGMENT IS SET TO

PRESS **SEGMENT +** Step up one segment, up to segment 100

PRESS **SEGMENT -** Step down one segment , down to segment 1

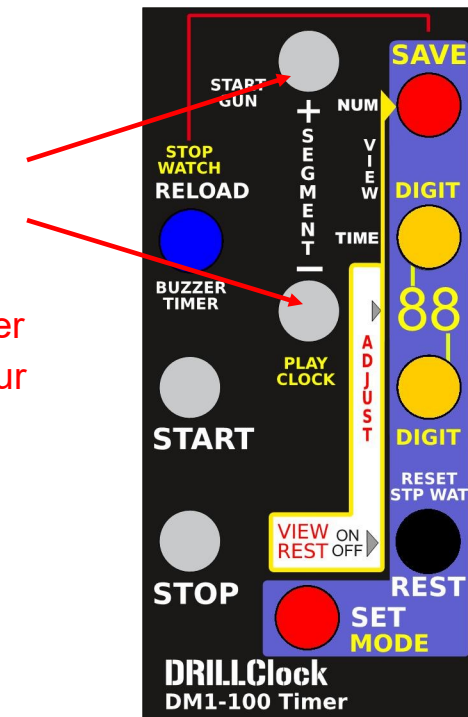
Button is **PRESSED** the next segment number is shown

Button is **RELEASED** the time that is set for the segment is shown

The word “on” will be briefly displayed before the segment number when viewing a segment that is REST SEGMENT enabled.

TIP

When the DM1-100 is powered ON it will always begin in Segment Timer Mode at segment number one. You will make all of your changes to your program while the timer is STOPPED and not running. If the timer has been started, and a segment is being counted down, the DM1-100 will ignore all other buttons except STOP.



OPERATING THE DM1-100 SEGMENT TIMER

VIEW THE CURRENT SEGMENT'S ID NUMBER (1-100)

TO IDENTIFY THE NUMBER OF THE SEGMENT YOU ARE VIEWING (TIMER STOPPED)

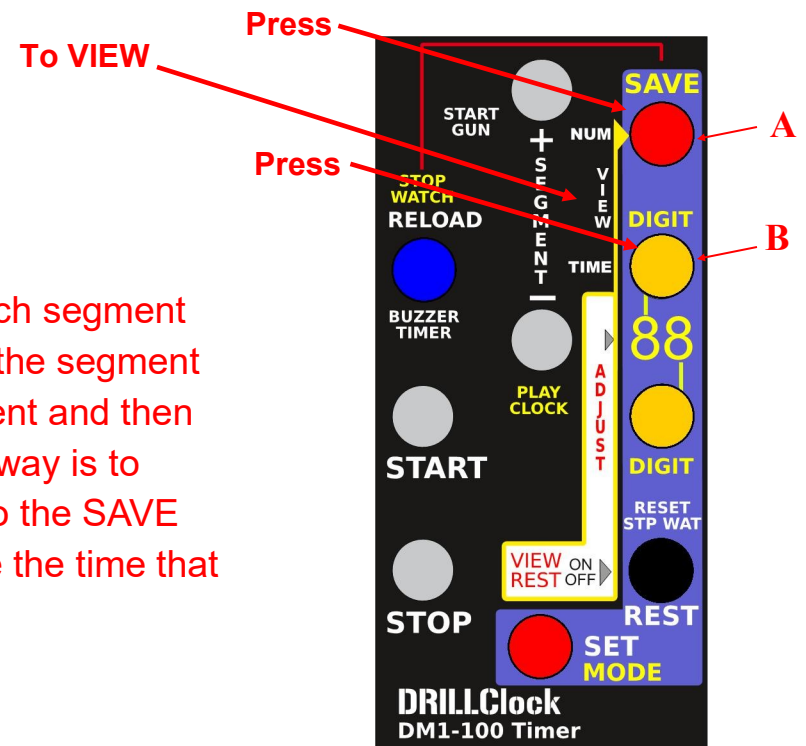
VIEW

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

PRESS **B (DIGIT)** The **time** that is set for the **current segment** (B)

TIP

Sometimes you might stop the timer and not be sure which segment had been counting. There are two ways you can identify the segment you are on. The first way is to advance to the next segment and then go back using the SEGMENT + and - buttons. The best way is to press the button indicated as "A" in the drawing. It is also the SAVE button. Then you can press the button labeled "B" to see the time that is set for the segment.



OPERATING THE DM1-100 SEGMENT TIMER

EDIT A SEGMENTS "TIME" DURATION

TO CHANGE THE TIME THAT IS SET FOR A SEGMENT (**TIMER MUST BE STOPPED**)

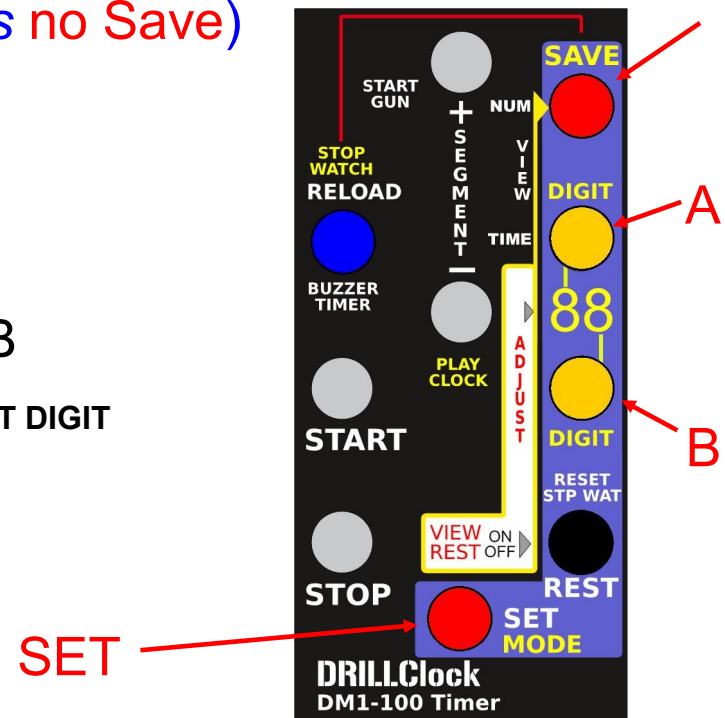
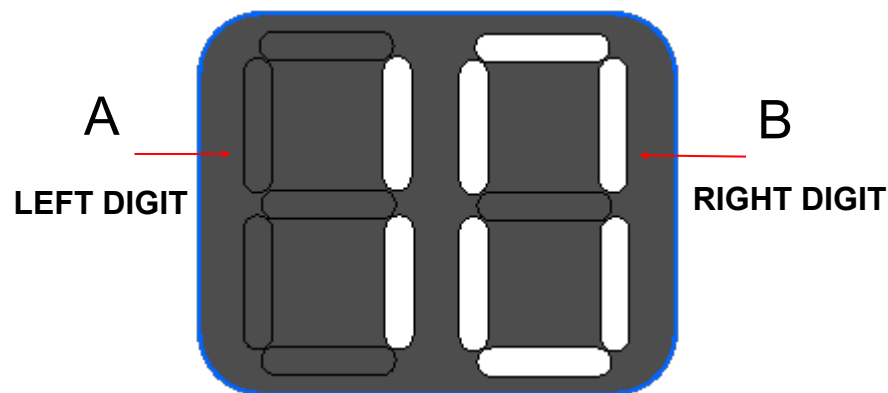
PRESS **SET** Enters the Segment Setting mode

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

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

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

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



OPERATING THE DM1-100 SEGMENT TIMER PAUSE THE CURRENT SEGMENT

YOU CAN “PAUSE” THE CLOCK AND THEN “CONTINUE”

IN MINUTE OR SECOND COUNT MODES

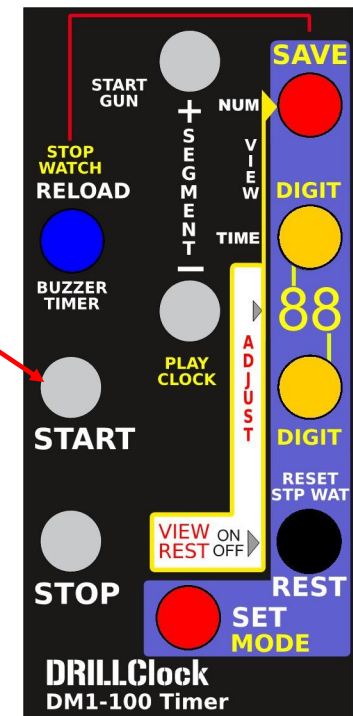
WHILE A SEGMENT IS RUNNING

PRESS **START** The display begins blinking and the clock is paused

PRESS **START** Again to continue running, blinking stops

This feature is available in both counting modes.

Use the START button on the DM1-100 TIMER or the Trigger button on the RFTX wireless remote.



OPERATING THE DM1-100 SEGMENT TIMER

SET A SEGMENT TO **STOP** "PAUSE" THE TIMER AT A PRESET SEGMENT AUTOMATICALLY

YOU CAN HAVE THE DM1-100 "PAUSE" AT ANY SEGMENT NUMBER BY SETTING "00" FOR "TIME"

PRESS **SET** Enters the Segment Setting mode

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

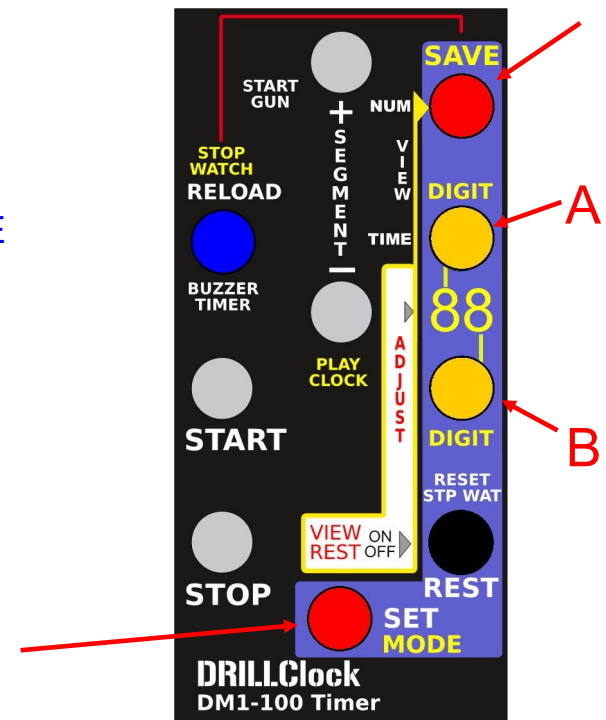
PRESS **A** Each press increments the LEFT DIGIT 0 up to 9 then 0

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

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

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

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



OPERATING THE DM1-100 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 **SEGMENT +** To move to the next segment that is not set to "00"

PRESS **SEGMENT -** To move to the previous segment

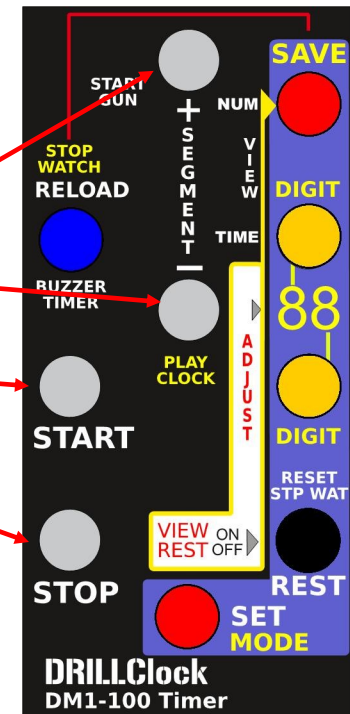
PRESS **START** To continue the drill at this segment

NOTE: When the timer is paused and showing the message "Paused Press Stop", pressing the RFTX Trigger button will move the clock to the next segment. Press again to Start the clock.

2 Move To A Non-zero Segment

3 Restart The Segment Timer

1 Un-pause The Timer



OPERATING THE DM1-100 SEGMENT TIMER

VIEW THE REST PERIOD DURATION

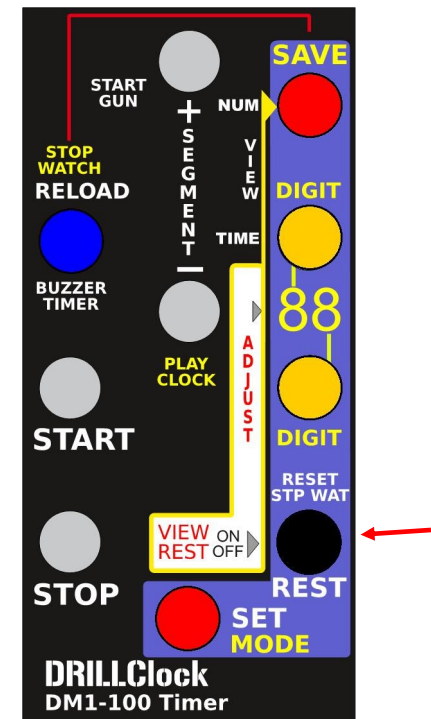
REST SEGMENTS ARE SET FROM ONE TO NINE MINUTES IN DURATION (1 minute increments)
REST DURATION SETTING IS A **“COMMON TO ALL”** FOR REST SEGMENTS ENABLED

PRESS REST The display will scroll “Rest” and then it will show “r” and a “number” that is the current minute setting for the REST segment. Shown as “r 1” up to “r 9”.

PRESS REST To exit viewing the REST minute setting.

TIP

REST Segments are set as a common duration. You can change the time duration while you are at any segment number. Rest segment duration can be set from 1 to 9 minutes in one minute increments. If you need to have a special time break during the practice you should just use a segment as the break so you can set the time as you need it. If you need a break that will “wait” for you to restart the practice, you can set any segment to a time of “00” and the DM1-100 will pause and wait for you. To continue, you must press STOP and then change to a segment that is not set to zero.



OPERATING THE DM1-100 SEGMENT TIMER

CHANGE THE REST SEGMENT TIME DURATION (**COMMON TO ALL REST SEGMENTS**)

REST DURATION IS SET **1 MINUTE UP TO 9 MINUTES** (1 minute increments).
The minute duration can be changed at any time when the Segment timer clock is “stopped”.

PRESS REST The display will show “Rest” and then it will show “**r**” and a number that is the current minute setting for all REST segments.

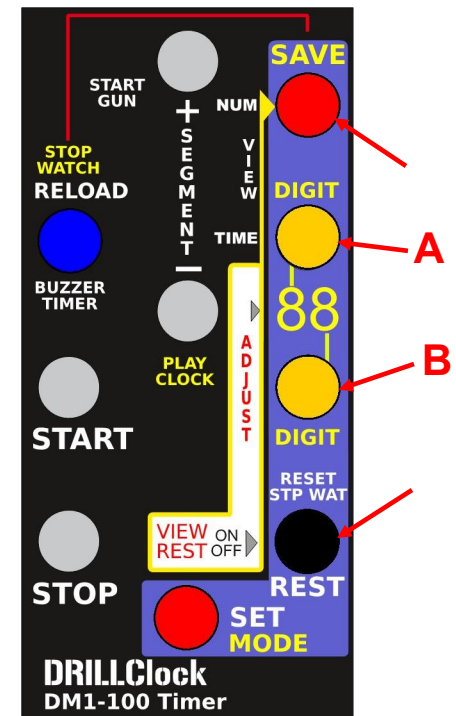
PRESS A To add one minute REST duration
The Display will show the new REST time.

PRESS B To subtract one minute from REST duration
The Display will show the new REST time.

PRESS SAVE To save the change (scrolls “**Save**”)

PRESS REST To discard your changes

The REST duration that you set will be the REST duration for all REST segments that you have enabled.



OPERATING THE DM1-100 SEGMENT TIMER

ENABLE A REST SEGMENT

YOU CAN ENABLE A REST SEGMENT TO RUN AFTER ANY OF THE 100 SEGMENTS.
Segment Timer Clock Must Be Stopped

Enable A **REST** Segment

PRESS **SET**

PRESS **REST** (display scrolls "rest ON")

PRESS **SAVE** To enable this REST Segment

OR

To Disable A **REST** Segment

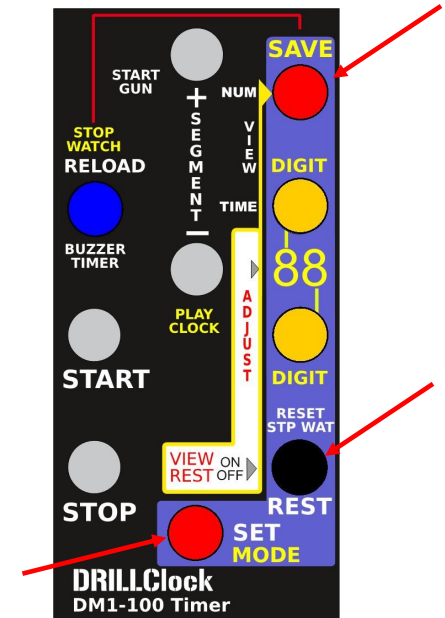
PRESS **SET**

PRESS **REST** (display scrolls "rest ON")

PRESS **REST** (display scrolls "rest OFF")

PRESS **SAVE** To disable this REST Segment

NOTE: The REST "ENABLE/DISABLE" selection status will always begin with "REST ON". This will toggle between ON and OFF for each press.
Press SAVE to keep the last setting.



OPERATING THE DM1-100 SEGMENT TIMER COUNT IN SECONDS MODE OR COUNT IN MINUTES MODE

THE DM1-100 CAN USE THE TWO DIGITS THAT ARE SET TO COUNT AS SECONDS OR AS MINUTES

0 to 99 seconds or 0 to 99 minutes

- CHANGE AT ANY TIME WHEN IN SEGMENT TIMER MODE AND CLOCK IS STOPPED
- LAST SETTING IS REMEMBERED THE NEXT TIME YOU USE THE TIMER

NOTE: Buttons are pressed one at a time!

PRESS SET

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

Or

PRESS SET

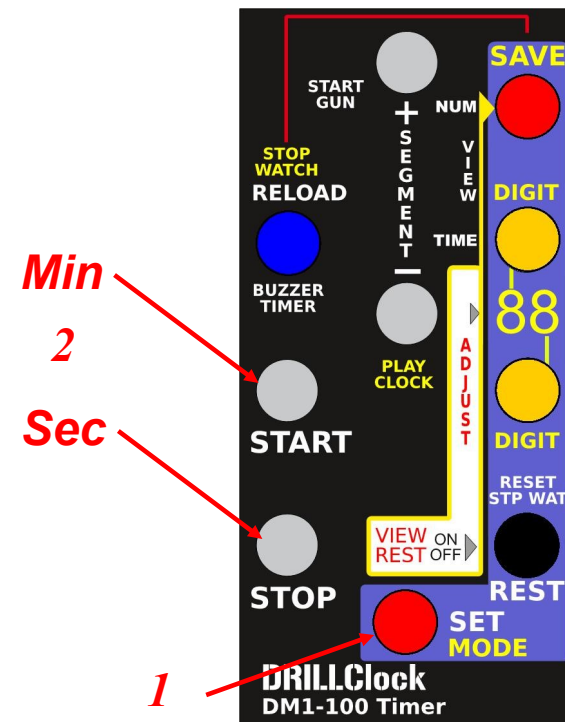
PRESS START To count in minutes (scrolls **nn**)

PRESS START To begin counting

TIP

Setup your segment times for your normal practice that will count in Minutes. Then go to a higher segment number and set a series of segments with times for a speed drill, ladder drill or any routine that would benefit from a countdown to a buzzer. When you want to run the **SECONDS** drill you would Segment Up to the speed drill first segment. Then click **SET** and then click **STOP**. Now when you click **START** the time will count in seconds. To go back to minutes just click **SET** then click **START**. The next time you click **START** it will count in minutes.

NOTE: NEW DISPLAY MODE INFORMATION PAGE 27



OPERATING THE DM1-100 SEGMENT TIMER

USE THE *BUZZER TIMER* FEATURE WHILE IN SEGMENT TIMER MODE

THE DM1-100 TIMER CAN BE USED AS A SETTABLE COUNTDOWN TO BUZZER
YOU CAN SET IN ONE TENTH SECOND INCREMENTS UP TO 9.9 SECONDS

To switch from **SEGMENT TIMER** to **BUZZER TIMER**

The Display Is Read As "0.0" Seconds (No decimal point is displayed)

WITH THE TIMER IN **SEGMENT TIMER MODE** AND THE **CLOCK STOPPED**

PRESS **RELOAD** The display scrolls "Clock"

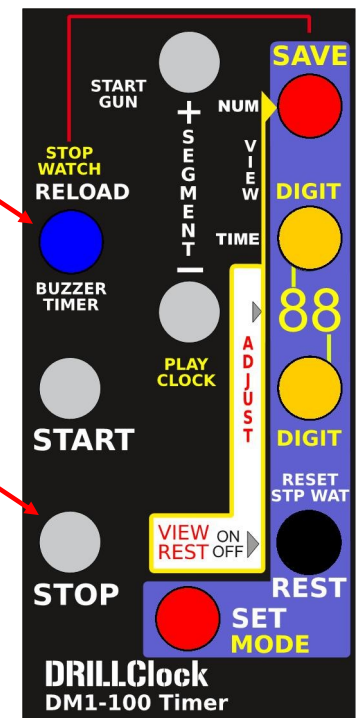
To switch Back to **SEGMENT TIMER MODE**

PRESS STOP

Continued on next page

YOU WILL BE ON THE SAME SEGMENT YOU WERE ON BEFORE SWITCHING
TO BUZZER TIMER MODE

THE TIME SET FOR THE BUZZER TIMER WILL BE REMEMBERED UNTIL THE DM1-100
IS UNPOWERED



OPERATING THE DM1-100 SEGMENT TIMER OPERATING THE BUZZER TIMER

DURING PRACTICE YOU CAN RUN THE BUZZER TIMER ANY TIME YOU WANT FOR AS MANY REPEATS AS NEEDED.

WHEN IN SEGMENT TIMER MODE begin by pressing **STOP**

Begin The **BUZZER TIMER** By Pressing **RELOAD** Then

Set the timer duration:

PRESS **A** Increments the left digit by (1 second)

PRESS **B** Increments the right digit by (0.1 seconds) **B** *Increment RIGHT DIGIT 0.1 SECONDS*

PRESS **START** Beep, Countdown to zero, Beep
TIMER AUTO RESETS READY TO RUN AGAIN

PRESS THE RFTX Remote to **START** Countdown to zero, Beep

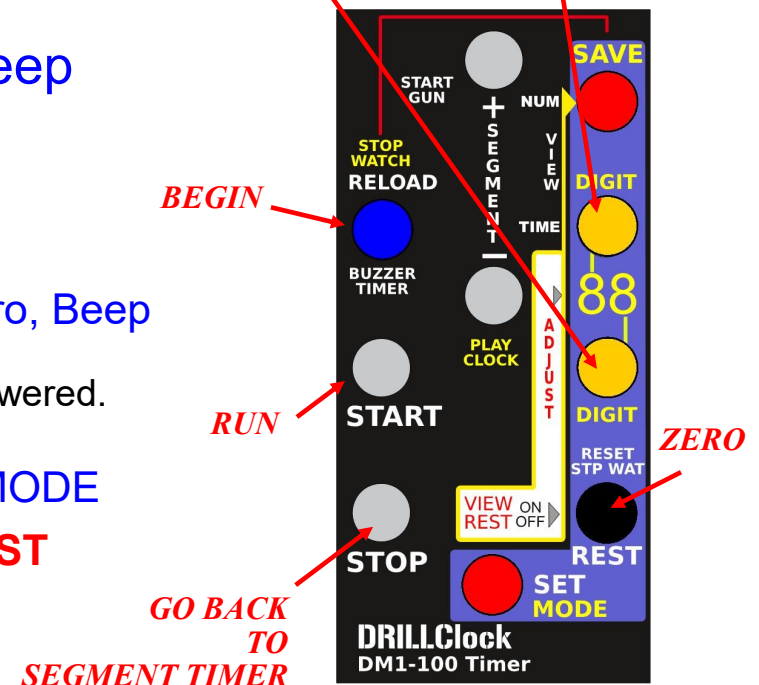
Buzzer Timer Time Set is remembered until the DM1-100 is unpowered.

PRESS **STOP** TO RETURN TO SEGMENT TIMER MODE

To Reset the Buzzer Timer Start Time to "00" PRESS **REST**

A *Increment LEFT DIGIT 1 SECONDS*

B *Increment RIGHT DIGIT 0.1 SECONDS*



OPERATING THE DM1-100 SEGMENT TIMER

SWITCH TO STOPWATCH (STOP CLOCK) MODE

THE DM1-100 **STOPWATCH** CAN BE USED AS A HANDHELD STOPWATCH OR IT HAS AN EXTERNAL TRIGGER INPUT LOCATED ON THE MAX20 DISPLAY. TRIGGER INPUT IS AN XLR 3PIN CONNECTOR. TRIGGER IS A MOMENTARY CONNECTION OF XLR 3PIN CONNECTOR PIN 2 AND PIN 3.

To switch from **SEGMENT TIMER** to **STOPWATCH MODE**

PRESS AND RELEASE **SET**

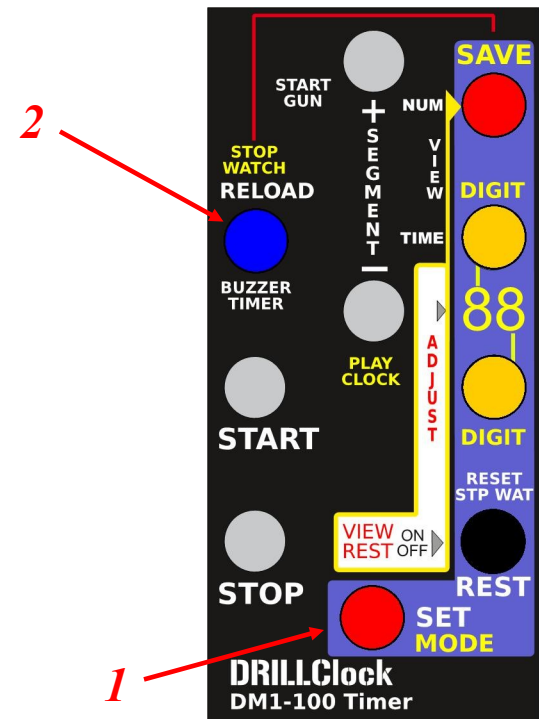
PRESS AND RELEASE **RELOAD**

The display scrolls "Stop Clock"

To switch back to SEGMENT TIMER MODE

PRESS **SAVE** display scrolls "SEG X"

YOU WILL BE ON THE SAME SEGMENT YOU WERE ON BEFORE SWITCHING TO STOPWATCH MODE



OPERATING THE DM1-100 SEGMENT TIMER

TIMER DISPLAY FORMAT: STOPWATCH TIMER

The DRILLClock DM1-100 seven segment two digit display and special display protocol

DISPLAY THE RUNNING STOPWATCH

When the STOPWATCH is started the display shows each second up to one minute. It then displays each minute in the left digit place (1-9) and in the right digit place a graphic is show. The graphic indicates each second by lighting a single segment around the digit perimeter. The maximum time for the STOPWATCH is 9 minutes 59.99 seconds. (9:59.99)

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.

In START GUN mode the DM1-100 now has a dual reaction time that will display a Release from Padswitch time in 1/100th sec, up to 9.99 seconds. Then the overall time is displayed in non blinking scroll that will display a maximum time of 9 min 59.99 sec.

OPERATING THE DM1-100 SEGMENT TIMER

MANUALLY RUNNING THE STOPWATCH (Stop Clock)

THE STOP CLOCK CAN BE USED LIKE A HANDHELD STOPWATCH USING START, STOP AND RESET. TIME RESULTS ARE DISPLAYED TO 1/100th OF A SECOND WHEN THE CLOCK IS NOT RUNNING

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

PRESS **START** To start the clock

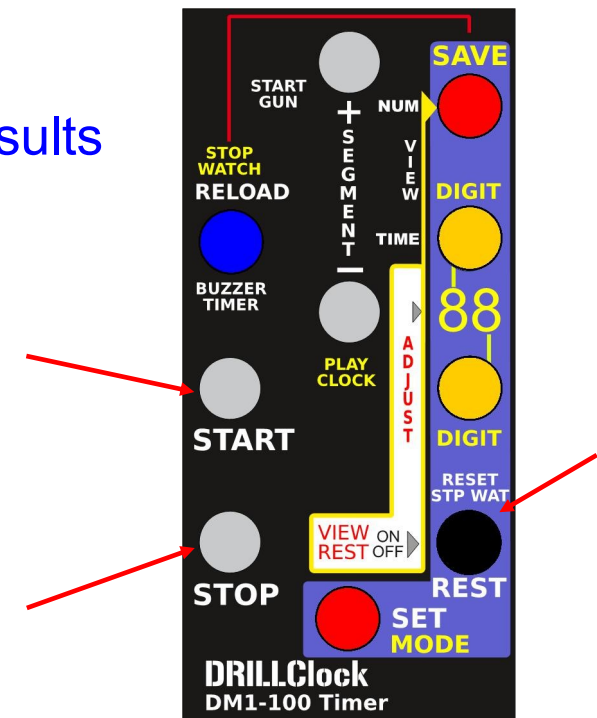
PRESS **STOP** To stop the clock and display the results

The RFTX Wireless can be used to run the STOPWATCH. After putting the DM1-100 in STOP CLOCK mode:

PRESS and HOLD the RFTX transmit button. The LED display will show a graphic acknowledgement ending in zero reset. (00)

RELEASE the RFTX transmit button to start the clock.

MOMENTARILY PRESS the RFTX transmit button to **END** the timing. The time results will begin scrolling on the LED display.



OPERATING THE DM1-100 SEGMENT TIMER

EXTERNAL TRIGGER AUTO-TIMER USING THE PADSWITCH (Optional)

1/100th OF A SECOND CAPTURE AUTO TIMER

Plug the Padswitch into the MAX20 Display External Trigger Input

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.

Trigger Input is located on the MAX20 LED Display Panel. The trigger can be an IR Beam Breaker set to stop the clock when an athlete breaks the IR light beam. Using the Padswitch and the Beam Breaker creates a true time trap.

Another method you might use to stop the clock is the Tag Pole. You can build A functional Tag Pole trigger from instructions found on this sight in a PDF. Any normal open momentary closed switch devise can be used to stop the clock and end a timing function.

OPERATING THE DM1-100 SEGMENT TIMER

“START GUN” DUAL REACTION TIMER

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

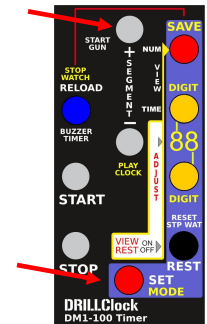
PRESS **SET**

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

Plug the Padswitch into the MAX20 Trigger input.

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

- **RELEASE THE PADSWITCH AFTER THE TONE SOUNDS-** Clock starts REACTION TIME #1 IS CAPTURED TO 1/100th of a second

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

OR using another trigger such as the Tag Pole or Beam Breaker

NOTE: The Dm1-100 control buttons cannot START the Gun timer. The STOP button will end the timing event.
If in STOP CLOCK mode press SEGMENT + to go to START GUN mode.

PRESS **SAVE** To go back to SEGMENT TIMER MODE.

OPERATING THE DM1-100 SEGMENT TIMER

START GUN DUAL REACTION CAPTURE DRILL

MAX20 Trigger Input EXTERNAL TRIGGER "Y" ADAPTER CABLE

SET UP A DEFENSE PENETRATION DRILL

The Reaction Timer

Plug A Padswitch into the 3pin jack on the MAX20 Display.

STEP ONTO THE PADSWITCH Clock resets to zero

AFTER A RANDOM TIME OF 1 TO 6 SECONDS Display blanks and a tone sounds

This visual and audible cue marks the snap of the football

CLOCK STARTS counting up as hundredths, tenths and then seconds

Athlete can release from the Padswitch

RELEASE FROM THE PADSWITCH "Release Time" is captured

This time capture is how long it took the player to react to the snap.

USING A SECOND TRIGGER Tag Pole Or Beam Breaker stops clock

A second time that is **overall** "Total" time is now captured.

Time results are displayed, first, scrolling the Release time

Then, the Total time is scrolled.

The Release time is identified by a dash then blinking as it scrolls.

The two time captures alternate scrolling until the next athlete steps onto the Padswitch.

OPERATING THE DM1-100 SEGMENT TIMER

ENABLE THE "PLAY CLOCK" MODE

A countdown clock that sounds a tone, "whistle" when started, counting down to zero, and another tone.

To go to the "Play Clock" mode

If you are in Segment Timer Mode:

PRESS SET

then

PRESS SEGMENT - Display scrolls "PLAY CLOCK"

If you are in Stop Clock or Start Gun Mode:

PRESS SEGMENT- Display scrolls "PLAY CLOCK"

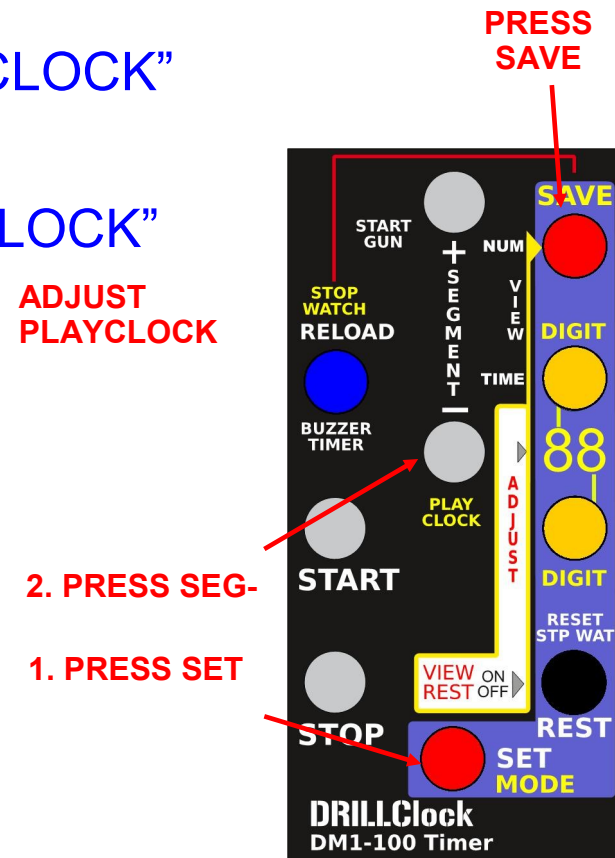
To go back to "Segment Timer Mode"

PRESS SAVE

NOTE: When changing modes you must allow the display to finish messages before it will enable buttons for switching.

NEW FOR 2018!

The Play Clock time duration is now adjustable.
The **Yellow DIGIT** buttons increment each, 0-9.
Play Clock is adjustable from 01 to 99 seconds.



OPERATING THE DM1-100 SEGMENT TIMER MANUALLY START THE “PLAY CLOCK”

THIS ROUTINE EMULATES A REFEREE:
WHISTLE BLOWS STARTING A COUNT DOWN TO ZERO

PRESS START Whistle tone– Clock starts

Or PRESS RFTX Wireless Remote
WHISTLE BLOWS AT ZERO

PRESS START To PAUSE the count

PRESS START To continue the count

PRESS STOP To stop the routine before zero

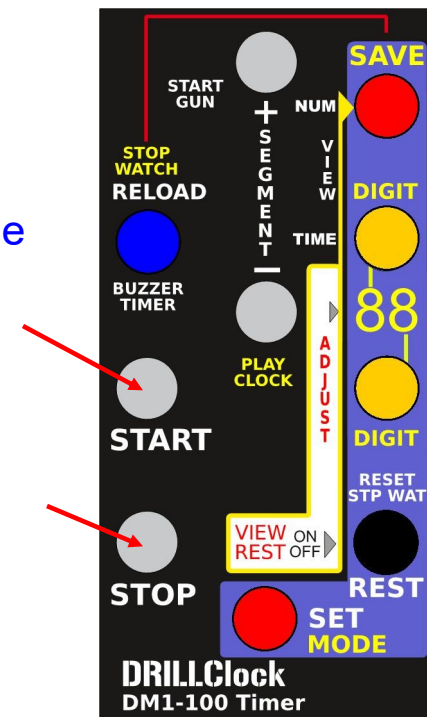
PRESS START To reset the clock and restart count

The Padswitch or RFTX Remote can be used to manually start the Drill and to pause the clock.

TIP

The Play Clock drill is intended to offer your coaching staff the reality and intensity that is created during a game. For your offense and special teams, getting plays called and the right players on the field when under the pressure of THE CLOCK.

Use to take the guess work out of operating in the Red Zone. Get them ready for the real thing.



OPERATING THE DM1-100 SEGMENT TIMER

ACKNOWLEDGEMENTS AND INFORMATION GIVEN BY THE DM1-100

DISPLAYED	WHAT THE DM1-100 IS TELLING YOU
1. SEG X	Segment Number
2. Period 1 - 100	Refers to the current Drill segment number. Displayed at 30 second intervals.
3. REST 1 - 100	Refers to the current Rest segment number. Displayed at 30 second intervals.
4. SAVE	The setting that you have made is saved in the DM1-100 nonvolatile memory.
5. No SAVE	Changes that you made have been discarded and the DM1-100 program remains unchanged.
6. Add	Increase to the time value you are setting.
7. Sub	Decrease the time value you are setting.
8. DRILL PAUSED	The segment timer program has come to a segment set at "00" time.
9. PRESS STOP	Follows the previous message to ask you to press the DM1-100 STOP button to restart the timer.
10. Clock	Scrolled word the DM1-100 acknowledge that you have begun the BUZZER TIMER mode.
11. Öö — :: 00	Series of characters that are displayed to acknowledge an athlete is pressing the Padswitch.
12. r1 to r9	Minute value that is set for the REST segments. All REST s that are enabled will be this value.
13. Clock XX*	Time remaining in the current segment. Display normally show "current segment number"

*WHAT TO LOOK FOR ON THE PRACTICE FIELD

If you see the word **Period** followed by a number scrolled every thirty seconds then the number you are seeing normally on the display is the **MINUTES REMAINING** in the segment.

"Period 10" The current segment is number 10

If you see the word **Clock** followed by a number scrolled every thirty seconds then the number you are seeing normally on the display is the number of the **CURRENT SEGMENT**.

"Clock 09" There are 9 minutes remaining in the current segment

OPERATING THE DM1-100 SEGMENT TIMER

DM1-100 DISPLAY: CHOOSE TIME REMAINING OR CURRENT SEGMENT NUMBER

DM1-100 SEGMENT TIMER MODE DISPLAY Time / Segment Number Display Selection

When you are in Segment Timer Mode, **counting in Minutes** in Minutes mode you can choose what is displayed on the LED Display during the practice session. The Display will show either the **(A) Minutes that are remaining** in the current segment or, **(B) Number of the current segment** that you are on.

While the clock is running press:

RELOAD to switch between the two. This will not alter the time values that you have set for your practice schedule but which ever setting that is used when the timer is unpowered will be the setting that will be active the next time the timer is powered ON.

If (A) then at intervals you will see the scrolling message *“Period X”* where X is the number of the current segment.

If (B) then at intervals you will see the scrolling message *“Clock X”* where X will be the Minutes remaining in the current segment.

SEGMENT TIMER COUNT MODE DISPLAY

The Segment Timer Counting mode that is being used when the timer is powered OFF will be remembered the next time that the timer is powered ON. This can be a problem when the timer is used by different coaches but it is easily fixed. Coaches should all be aware that if their “5 minute segment” only lasts 5 seconds they can quickly fix it by **Stopping** the Clock and then:

Press **SET** and then Press **START**

Now when START is pressed the Count mode will be Minutes! SEE PAGE 16

OPERATING THE DM1-100 SEGMENT TIMER

DM1-100 TIMER System LED DISPLAY Technical Description

LED Driver Electronics

The Trade Off between “brightness” and having a long practice time for a given power source is an important thing when using rechargeable batteries.

The Power consumption of the display can be modified using the jumpers J1, J2 and J3. Placing a jumper on pins 1+2 will lower power used by 85%. Add jumper to pins 3+4 to lower power to 75%. A slight difference in brightness will be seen.

AC Power Source

The DRILLClock Timer System is designed to handle both higher than normal and lower than normal voltage changes in it’s power supply. The system is protected from “reverse voltage” being applied to its input. Reasonable care should be taken when connecting power and other components.

General Specifications

Normal Operating Voltage	12.6VDC
System Fuse	3Amp AGC
Battery Fuse	5Amp automotive blade fuse
System Current	< 3000ma
Audio Output	3 multi-tone
Audio Connection	0.25” phone mono
Serial Control Input	XLR4pin female
Serial Output	9600br,NP,1stop
Trigger Input	XLR3pin female
DM1-100 Trigger	Momentary Closure High

