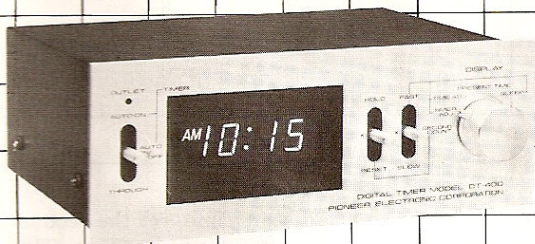


DIGITAL TIMER

# DT-400

## OPERATING INSTRUCTIONS

NA



- The DT-400 is a 24-hour timer which incorporates a time-activated switch in an electronic digital clock. The power to the timer can be made to go on and off at preset times which makes it extremely useful for a host of tasks.
- You can use it with a tape deck (having an unattended recording function) and with a tuner, for instance, to record programs while you are out of the house or asleep.
- The present time can be adjusted and displayed down to the last second.
- You can use it with a turntable or radio so that it turns the program source off after you have fallen asleep (Sleep function).
- You can use it to switch on a radio or tape deck at the preset time in the morning instead of an alarm to wake you up (Wake-up function).

## APPLICATIONS

Thank you for buying this PIONEER digital timer DT-400. Please read these operating instructions through and then you will know how to connect and operate your model properly. After reading these instructions, keep them in a safe place for future reference.

## PRECAUTIONS

When the power cord of the DT-400 is first plugged into the AC wall outlet, or when the cord is temporarily unplugged and then plugged in again, the time display will start flashing. This flashing may also occur during normal use of the DT-400. It indicates that a power failure has occurred sometime during your absence or while you were asleep, and does not indicate a failure of the DT-400. It will stop when the time is adjusted. (See "ADJUSTING TO PRESENT TIME.")

### Caution with timer setting

The DT-400 is a 24-hour timer so that when the actual time tallies with the time displayed at the TIMER ADJ position of the DISPLAY switch, the timer will be activated every day automatically. Unless you intend to use the timer, switch off the power switch of the equipment connected to the AC outlet.

## FRONT PANEL FACILITIES

### TIMER SELECTOR SWITCH

#### AUTO ON:

Power to the AC outlets is turned ON exactly at the time preset by the timer.

#### AUTO ON/OFF:

Power to the AC outlets is turned ON exactly at the time preset by the timer, and then turned OFF automatically 59 minutes later.

#### THROUGH:

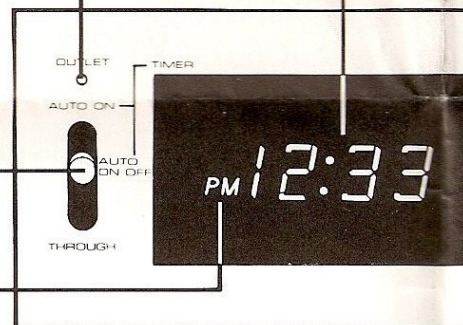
Power to the AC outlets is always ON irrespective of the operation of the timer switch. Set this selector switch to this position when the timer operation is not needed.

### OUTLET ON LAMP

Lights up when power is supplied to the AC outlets on the rear panel of this unit.

### AM/PM INDICATOR

AM is indicated at the upper left, and PM is indicated at the lower left of the time display figures.



### TIME ADJUSTING LEVER

Use this lever when adjusting the timer to the correct or desired time with the DISPLAY switch set to TIME ADJ., TIMER ADJ., or SLEEP position.

**FAST:** The displayed time advances quickly at the rate of approximately one hour a second.

**SLOW:** The displayed time advances slowly at the rate of approximately two minutes a second.

The lever will return to the middle "■" position when released, and the adjusted time is displayed. This time adjusting lever does not function if the DISPLAY switch is set to the SECOND COUNT or PRESENT TIME position.

## TIME DISPLAY

The present time (hour, minute, second) is displayed. The preset time of the timer or remaining time in the SLEEP mode operation can also be displayed. This time display unit is provided with a power failure indicating function; the time display will start flashing when the power cord of the timer is first connected to an AC outlet, or when power is shut off and then resupplied during operation of the timer.

## "SECOND" ADJUSTING LEVER

Use this lever when adjusting the timer to display the correct time to the "second" by setting the DISPLAY switch to SECOND COUNT.

The SECOND COUNT setting is also utilized when using the timer as a time counter.

HOLD: Counting of seconds stops.

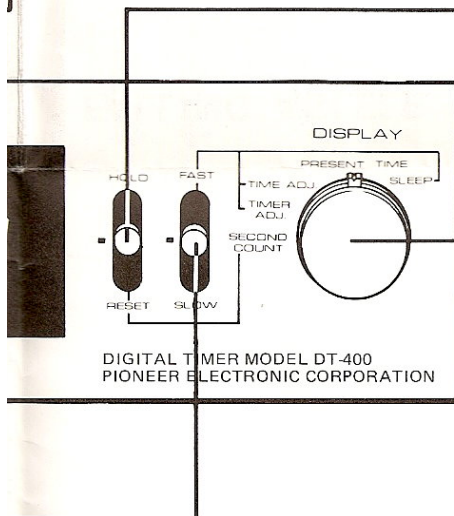
■ : Counting of seconds starts.

RESET: Second display is reset to zero.

When adjusting the timer's time to the time signal, wait for the time signal at RESET position, and move the lever to "■" position the instant the time signal is heard. (For more detailed instructions, see "ADJUSTING TO PRESENT TIME.")

### NOTES:

- If the "second" adjusting lever is moved to the HOLD or RESET position after the correct time adjustment is completed, the adjusted time will be incorrect.
- This "second" adjusting lever does not function if the DISPLAY switch is set at any position except SECOND COUNT.



## DISPLAY SWITCH

This switch is able to provide five different functions:

### SECOND COUNT:

Use this position when displaying one "minute" figure and full "seconds" of the present time, and when using this timer as a time counter.

### TIMER ADJ.:

Use this position when setting the operating time of the timer. (The operating time is displayed.)

### TIME ADJ.:

Use this position when setting the present time.

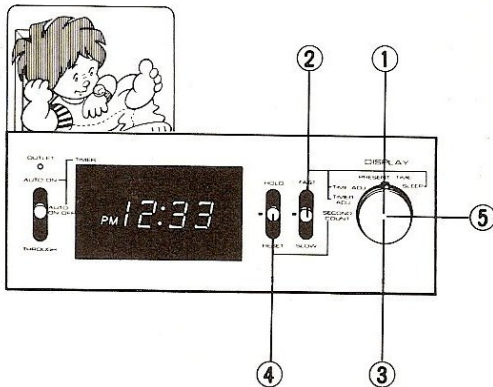
### PRESENT TIME:

The present time (hour, minute) is displayed irrespective of the position of the time adjusting lever. Normally set this switch to this position.

### SLEEP:

Set the DISPLAY switch to this position when setting the sleep time, or when adjusting (reducing) the ON duration time by using the time adjusting lever. This position does not function when the TIMER selector switch is at THROUGH.

## ADJUSTING TO PRESENT TIME



### FIRST ADJUST THE HOURS AND MINUTES

- ① Set the DISPLAY switch to the TIME ADJ. position.
- ② Operate the time adjusting lever and adjust the timer to the present correct time.  
**FAST:** The displayed time can be changed quickly hour by hour.  
**SLOW:** The displayed time can be changed slowly minute by minute.

#### NOTE:

The time can be adjusted in an advancing direction only. If set past the correct time, advance the displayed time again to just before the correct time by moving the lever to FAST, and then adjust it slowly to the correct time by moving the lever to SLOW. Make sure that AM or PM is indicated correctly.

### NEXT, ADJUST THE SECOND

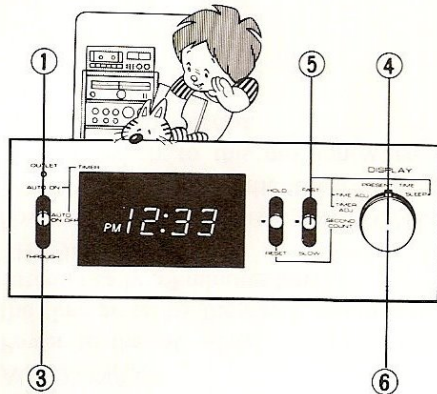
- ③ Set the DISPLAY switch at SECOND COUNT.
- ④ Move the second adjusting lever from the "■" position to RESET. Display of second will stop at 00.  
 Then, move the lever to the "■" mark position the instant the time signal is heard. This will start the counting of seconds. This completes adjustment of the hour, minute, and second.

#### NOTE:

When the second adjusting lever is set to HOLD, the count will stop at the displayed second. When the lever is set at the "■" position, counting will begin again.

- ⑤ Set the DISPLAY switch to PRESENT TIME.  
 This completes adjustment of the present time. The DISPLAY switch should normally be set to PRESENT TIME. When set at this position, the time shown will always be correct even if other levers are moved accidentally.

## UNATTENDED RECORDING (AUTO ON/OFF mode)



- ② Operation of connected equipment such as tuner, cassette deck, etc.

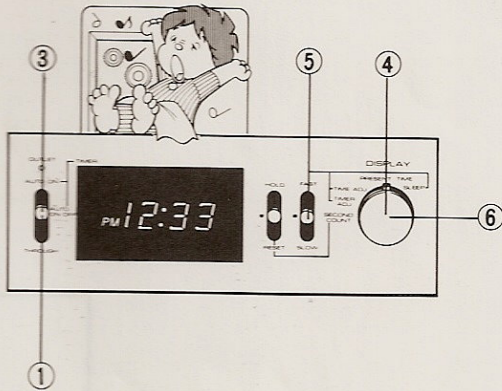
Power is supplied automatically to the AC outlets at the desired time, and is shut off about 59 minutes later.

- ① Set the TIMER selector switch to THROUGH.
- ② Turn on the power switch of the connected equipment such as tuner, cassette deck, etc., tune the desired broadcast, and set up the equipment for recording.
- ③ Set the TIMER selector switch to AUTO ON/OFF.
- ④ Set the DISPLAY switch to TIMER ADJ.  
 (The displayed time indicates the time you desire to be turned ON.)
- ⑤ Operate the time adjusting lever, and set the timer at the desired operating time.
- ⑥ Return the DISPLAY switch to PRESENT TIME. (This will not affect the operation for "unattended recording".)

Recording will begin at the desired time automatically, and the power will be shut off after 59 minutes.

The tape deck to be used for this recording should be capable of unattended recording and automatic stop.

## WAKE UP WITH MUSIC (AUTO ON mode)



- ② Operation of the connected equipment such as tuner, pre-main amplifier, etc.

The power to the AC outlets will be switched on automatically at the desired time.

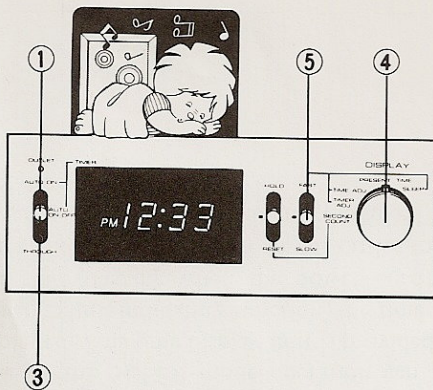
- ① Set the **TIMER** selector switch to **THROUGH**.
- ② Turn on the power switch of the connected equipment, such as tuner and pre-main amplifier, tune the desired radio program, and adjust the volume to a proper level for awakening.
- ③ Set the **TIMER** selector switch to **AUTO ON**.
- ④ Set the **DISPLAY** switch to **TIMER ADJ.** (The displayed time indicates the time you desire to be turned ON.)
- ⑤ Operate the time adjusting lever, and adjust the timer to the desired operating time.
- ⑥ Return the **DISPLAY** switch to **PRESENT TIME**. (This operation will not affect the desired **AUTO-ON** mode operation.)

Now, you will be woken up by the desired radio program at the right time.

### NOTES:

- To release the setting of the timer, set the **TIMER** selector switch at **THROUGH**, and then move it to **AUTO ON** or **AUTO ON/OFF**.
- When setting the timer, it is not possible to adjust it to the second. Note that **AUTO-ON** operation will not function if the specified procedure is not followed correctly.

## FALLING ASLEEP WHILE LISTENING TO MUSIC



- ② Operation of the connected equipment such as tuner, cassette deck and pre-main amplifier, etc.

The power to the AC outlets will be shut off automatically after a certain period of time.

- ① Set the **TIMER** selector switch to **THROUGH**.
- ② Operate the tuner, cassette deck, pre-main amplifier, etc., and adjust the volume to a level suitable for sleeping.
- ③ Set the **TIMER** selector switch to **AUTO ON/OFF**.
- ④ Set the **DISPLAY** switch to **SLEEP**. (Then, "59" minutes will appear, and the **OUTLET** lamp will light up, indicating that the power to the AC outlets will be shut off automatically after 59 minutes from the present time.)
- ⑤ To change the sleep duration time, set the time adjusting lever to **SLOW**, and adjust it to the desired time.

The operation described above is now memorized in the timer. The sleep timer operation will continue without change even after the **DISPLAY** switch is returned to the **PRESENT TIME** position.

To cancel the sleep timer operation, first set the **TIMER** selector switch to **THROUGH**, and then return it to **AUTO ON/OFF**.

# APPLICABLE LISTS

Operating Procedure  Usage	①	②	③	④	⑤	
	Timer operation	Operation of tuner and amplifier	Operation of cassette deck			Oper
	Timer selector switch position		Power switch (POWER)	Recording or playback operation	Timer selector switch position	Di
To record a radio program at the desired time	THROUGH	• Receive FM or AM radio program	ON	Stop recording temporarily (Pause switch to ON)	AUTO ON/OFF	TI
To start the playback of a tape at the desired time	THROUGH	• Set tape monitor switch of amplifier to ON	ON	Stop playback temporarily (Pause switch to ON)	AUTO ON/OFF	TI
* To stop recording (turn OFF power) automatically during the recording of a radio program	THROUGH	• Receive FM or AM radio program	ON	Stop recording temporarily (Pause switch to ON)	AUTO ON/OFF	
* To stop playback (turn OFF power) automatically	THROUGH	• Set tape monitor switch of amplifier to ON.	ON	Stop playback temporarily (Pause switch to ON)	AUTO ON/OFF	
To listen to a radio program at the desired time	THROUGH	• Receive FM or AM radio program	OFF	————	AUTO ON	T
To turn off the radio (turn OFF power) at the desired time	THROUGH	• Receive FM or AM radio program	OFF	————	AUTO ON/OFF	
To stop recording of a radio program automatically, and then listen to the radio at the desired time	THROUGH	• Set tape deck to recording • Receive FM or AM radio program	ON	Stop recording temporarily (Pause switch to ON)	AUTO ON/OFF	T
To turn off the radio automatically, and then listen to the radio at the desired time	THROUGH	• Receive FM or AM radio program	OFF	————	AUTO ON/OFF	T
To stop the playback of a record automatically (by turning OFF power)	THROUGH	• Play back the record. (Be sure to use auto-return type turntable.)	OFF	————	AUTO ON/OFF	

## USE AS A "SECOND" COUNTER

Any length of time within 10 minutes can be measured accurately to the second. This function can be used in measuring the playback time of a record, the amount of time remaining on a partially recorded tape, etc.

1. Set the DISPLAY switch to TIME ADJ., and use the time adjusting lever to set the hour figure to "0".
2. Set the DISPLAY switch to SECOND COUNT, and set the second adjusting lever to RESET. Then, the "0" minute "00" second display will appear, indicating readiness.
3. Start the record or tape whose length is to be

measured, and at the same time, set the second adjusting lever at the "■" mark position. The timer will begin counting.

4. To stop counting, change the second adjusting lever to HOLD.
5. Return to step 1 above in order to begin the counting procedure over again.

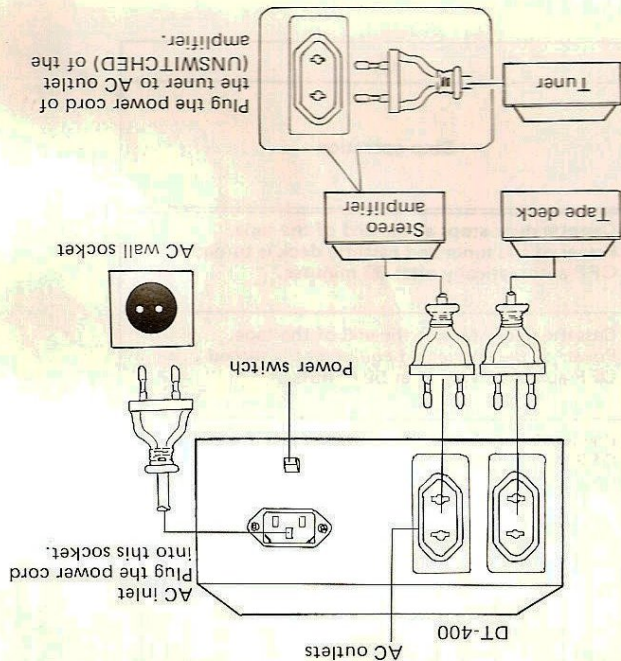
### NOTES:

- The counting will reach "9" minutes "59" seconds, and then return to "0:00" after exactly 10 minutes. The process will then be repeated, starting at "0:01".
- The displayed present time will also be changed if the second adjusting lever is operated. If this happens, the timer must again be adjusted to the correct time.

⑥		⑦		⑧		⑨	
Operation of the timer				Other operations		Stop operation	
Display switch		Operation of the time adjusting lever and others					
TIMER ADJ.		Adjust the timer to the desired time by using the SLOW or FAST position		Set the DISPLAY switch at PRESENT TIME		<ul style="list-style-type: none"> <li>● Cassette deck stops at the end of the tape.</li> <li>● Power of the tuner and cassette deck is turned OFF automatically after 59 minutes.</li> </ul>	
TIMER ADJ.		Adjust the timer to the desired time by using the SLOW or FAST position		Set the DISPLAY switch at PRESENT TIME		<ul style="list-style-type: none"> <li>● Cassette deck stops at the end of the tape.</li> <li>● Power of the connected equipment is turned OFF automatically after 59 minutes.</li> </ul>	
SLEEP		Set the sleep duration time according to the length of tape to record		<ul style="list-style-type: none"> <li>● Release the temporary stop (Pause)</li> </ul>		<ul style="list-style-type: none"> <li>● Power of the connected equipment is turned OFF automatically at the end of the preset sleep time.</li> </ul>	
SLEEP		Set the sleep duration time according to the length of tape to playback		<ul style="list-style-type: none"> <li>● Set the DISPLAY switch at PRESENT TIME</li> </ul>			
TIMER ADJ.		Adjust the timer to the desired time by using the SLOW or FAST position		<ul style="list-style-type: none"> <li>● Set the DISPLAY switch at PRESENT TIME</li> </ul>		_____	
SLEEP		Adjust the timer to the desired time by using the SLOW or FAST position		<ul style="list-style-type: none"> <li>● Set the DISPLAY switch at PRESENT TIME</li> </ul>		<ul style="list-style-type: none"> <li>● Power of the connected equipment is turned OFF automatically at the end of the preset sleep time.</li> </ul>	
① TIMER ADJ.		② Adjust the timer to the desired time by using the SLOW or FAST position		<ul style="list-style-type: none"> <li>● Cassette deck stops at the end of the tape.</li> </ul>		<ul style="list-style-type: none"> <li>● Power of the connected equipment is turned OFF automatically at the preset sleep time. Power will go ON again at the desired time adjusted with the TIMER ADJ. position and then the power will go OFF after 59 minutes.</li> </ul>	
③ SLEEP		④ Set the sleep time corresponding to the length of tape to record, and release the temporary stop (Pause) of the tape deck					
① TIMER ADJ.		② Adjust the time to the desired time by using the SLOW or FAST position		_____			
③ SLEEP		④ Set the sleep time to when you want to listen to the radio					
SLEEP		Set the sleep time corresponding to the playback time of the record		<ul style="list-style-type: none"> <li>● Playback of record</li> <li>● Set the DISPLAY switch to PRESENT TIME</li> </ul>		<ul style="list-style-type: none"> <li>● Turntable stops automatically (auto return) upon completion of the playback operation.</li> <li>● Power of the connected equipment is turned OFF automatically at the end of the preset sleep time.</li> </ul>	

**NOTES:**

- When using the sleep timer in combination with a tape deck, the time to be set should be longer than it takes for the tape to travel to the end of one side of a tape. With unattended recording using the AUTO ON/OFF position, preset the amount of tape so that the automatic stop mechanism will function within 59 minutes. If the power is shut off while the tape is running, the pinch roller may not come off the capstan, which could damage the tape or tape deck.
- When using a tape deck (cassette deck or open reel) in combination with this timer, make sure that it is function of unattended recording and automatic stop. Uses marked with "※" in the table shown above do not necessarily require the unattended recording function.



**POWER SWITCH**  
The power ON-OFF switch is provided on the rear panel. After complete the connection of the power cord set the power switch to ON.

- Connect the power cord of the tuner to the AC outlet (UNSWITCHED) of the amplifier.
- In order to avoid overheating and other trouble, never connect an iron, toaster, and other electric appliances having a high power consumption to this timer.

Some equipment (television set, high-power amplifier, etc.) has a very large rush current. Before connecting your equipment, first read their instruction operations and do not allow the total power to exceed the specified limits.  
The total power consumption of equipment connected to any two AC outlets of the DT-400 must not exceed 500 watts.

## CONNECTIONS

## SPECIFICATIONS

Power Requirements . . . . . AC220V 50 Hz  
 Display of Time . . . . . Digital display of fluorescent display tube system  
 (Switchable between hours and minutes, with display of seconds, and AM/PM)  
 Timer Type . . . . . 24-hour type (12-hour display) Operation; (1) ON after desired time (2) ON after desired time, and OFF 59 minutes later  
 Sleep Timer Type . . . . . ON time duration; 1 to 59 minutes  
 Timer Setting Interval . . . . . 1 minute  
 Accuracy of Time . . . . . Synchronized with line frequency  
 Accuracy of Timer . . . . . ON time accuracy; Delay time to displayed time (Max. +0.02 second)  
 Accuracy of Sleep Timer . . . . . Delay time for OFF to the preset time; 0 to 1 minute  
 AC Outlet Capacity Power . . . . . Total of two AC outlets 500W max. (inductive load)

Other Functions . . . . . ● Second adjusting function for present time, and second counter  
 ● ON display (LED display), with power failure indication  
 Power Consumption . . . . . 7W (clock only)  
 Dimensions . . . . . 190(W) x 75(H) x 163(D) mm  
 7-1/2 x 2-15/16 x 6-7/16 in.  
 Weight . . . . . 1.3kg (2 lb 14 oz)  
 Furnished Parts . . . . . Operating instructions x 2

**NOTE:**  
 Specifications and the design subject to possible modification without notice due to improvements.

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