

**NatureBright® BioClock™ Portable Light Therapy System
Model D4040
Instruction Manual & Warranty Information**

Congratulations on purchasing the **NatureBright® BioClock™ Portable Light Therapy System!**

Before you operate this product, please read these instructions. Keep this manual in a safe place for future reference.

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SAFETY & OPERATING INSTRUCTIONS

Please read all Safety Guidelines Before Using Your BioClock™.

Our products are not listed as medical devices. If you suffer from serious depression, please consult a physician. NatureBright is not responsible for any adverse effects on health, including eye irritation or other adverse responses that may result from exposure to the **BioClock™**.

In order to avoid potential hazards that could result in personal injuries or damage to your unit, please follow the safety instructions listed below.

SAFETY GUIDELINES

To reduce the risk of electric shock, burns, fire, or other injuries, please follow these safety precautions:

--Do not place the **BioClock™** in water or near heated surfaces.

To prevent inadvertent contact with water, do not use your **BioClock™** while bathing and do not pick up the adapter or cord if your hands are wet.

POWER SOURCE PRECAUTIONS

- Use only approved power sources with your **BioClock™**.
- Before turning on your **BioClock™** attach the power cord to the unit and then connect the cord to an adapter or outlet.
- Turn the unit OFF before removing the adapter from any outlet.
- Unplug the unit before cleaning.
- Detach the power cord from the unit for safe storage.
- Do not place items on top of the power cord.
- Do not operate the unit if the cord or unit has been damaged. Should the unit appear to be damaged, return to an approved service center for repair.

PRODUCT DESCRIPTIONS

- a LONG LASTING BRIGHT WHITE LEDS**
- b ON/OFF/SNOOZE**
- c TIME DISPLAY**
- d DIGITAL TIMER**
- e SUNRISE SIMULATION**
- f LED CLEAR VIEW LENS**
- g BRIGHTNESS ADJUSTMENT**
- h UNIVERSAL POWER ADAPTOR (100V~240V)**

FEATURES OF THE BIOCLOCK™

Sunrise Feature – Experience the benefits of rising with the sun! The programmable SUNRISE feature activates the built-in light which fades in from zero to full intensity.

Digital Display - Easy-to-read digital clock display can be dimmed or used at full brightness.

Snooze Button - 10 minute snooze feature includes a soft buzzer at the end of each cycle.

Alarm – Optional alarm feature is accompanied within a snooze button that activates once the light reaches its maximum brightness.

Light Therapy - The BioClock™ can also be used as a portable bright light therapy device.

OPERATIONS

To Plug in the Unit

Your BioClock™ comes with a 12V universal AC adaptor ranging from 110V to 240V.

The Bioclock™ includes a memory back-up rechargeable battery. This battery preserves the clock and alarm settings in the event of power interruption. Please charge the battery for at least four hours before first use.

Leave lid close and press [On/Off/Snooze] button to turn the device on. Make sure that you have the light turned on for any setup purposes.

Note: The battery recharges whenever the unit is connected and should not need replacement during the lifetime of the product.

To Set Clock, Month, Day, Day of the week and Timer

Press and Hold **[SET]** until the hour is blinking

Press **[+] or [-]** to set the hour

Press **[SET]** button to save hour settings

You will now see the minute setting blinking

Press **[+] or [-]** to set the minute

Press **[SET]** button to save minute settings

Repeat these steps to set the month, day, day of the week and timer.

To Set and Use SUNRISE

Press and Hold **[SUNRISE]** until sunrise hour is blinking

Press **[+] or [-]** to set wake up hour,

Press **[SUNRISE]** button to save wakeup hour settings

You will now see the wake up minute blinking

Press **[+] or [-]** to set the wake up minute

Press **[SUNRISE]** button to save the wake up minute settings

You will now see the advanced sunrise time (minutes prior to the wake up time) is blinking

Press **[+] or [-]** to set the advance sunrise minutes

Press **[SUNRISE]** button to save the advanced sunrise time settings

Press Quickly **[SUNRISE]** to activate or deactivate the SUNRISE along with the back-up alarm sound (you will see a bell indicator when SUNRISE is activated).

Press **[SUNRISE] and [+]** to deactivate or activate the back-up alarm. The bell indicator will appear when the back-up alarm is activated.

Swing lid open.

To Use SNOOZE

Press **[On/Off/Snooze]** to turn the light system on or off.

When the alarm sounds and the light system is at full brightness, the user has a few options:

1. Press **[On/Off/Snooze]** once to stop the sound. The sound will come back in 10 minutes.
2. Press **[On/Off/Snooze]** twice to stop the sound completely.

To Change Light Intensity

The **[-]** button dims the light and the **[+]** button brightens the light.

To Change Clock Display Back-light Brightness

Press **[On/Off/Snooze]** button to turn device off, press **[-]** button to dim the back-light and press **[+]** button to brighten the back-light.

To Check Time

To check the time when device is turned off, press any button except the **[On/Off/Snooze]** button to turn display back-light on for 30-seconds.

ABOUT YOUR BIOCLOCK™ & THE BENEFITS OF LIGHT THERAPY

Why Wake Up to Light?

For the majority of us, hearing an alarm clock in the morning doesn't make us want to jump out of bed with joy. You may have wondered why. There is a scientific basis to your response. A jarring buzz by your morning alarm clock wakes you up by startling you, sending a jolt of adrenalin and a mix of chemicals throughout your body. In contrast, research confirms that light wakes us naturally, triggering chemical changes in our body so that we become alert.

When we are in a state of deep REM (Rapid Eye Movement) sleep, the level of serotonin is at its lowest. Our body temporarily paralyzes us to prevent us from acting out dreams. Serotonin activity is triggered by light. After a night's rest in the dark, our eyes become more sensitive to light. Even with our eyes closed, we can detect the gentle light of dawn. The light sensed by our retina transmits a command to our pineal gland, which is located in the center of our brain, to begin the production of the hormone serotonin, which gives us the ability to initiate voluntary muscle movement.

Why is this important? A study published in 2004 in the Archives of General Psychiatry found that exposure to very bright light for 30 minutes as we wake can help reset our "Biological Clock." Waking up to light as a morning ritual can benefit our hormonal and biochemical processes, as well as giving us a more pleasant way to rise and face the day.

Why Bright Light Therapy?

Light therapy uses natural or artificial light to help treat various ailments, primarily depression and sleep disorders. Most often, "bright light therapy" is used. Research has shown that exposure to bright light improves the alertness and productivity of people who feel drowsy during the day. Studies show that the eye turns light into electrical impulses, which travel along the optical nerve to the brain, triggering the release of the mood-altering chemical, serotonin, and other chemical messengers.

Healthy levels of serotonin and other neurotransmitters are central factors for our emotional well-being. Health problems can develop when our circadian rhythms (Biological Clock) are thrown off by spending too much time indoors, working odd shifts, flying across time zones, or being exposed to less daylight in the fall and winter. Bright light therapy helps the body restore its natural circadian rhythms.

How Can the BioClock™ Help You Set Your Natural Body Rhythms?

NatureBright® BioClock™ Portable Light Therapy System provides one of the most natural and stress-free ways of awakening. The sunshine-strength light brightens the room gradually, waking the sleeper so gently that even dreams are not disturbed. The BioClock™ is conveniently designed for frequent travelers who must maintain tight schedules. In addition, BioClock™ can also help many circadian rhythm disorders, such as those listed below:

SAD (Seasonal Affective Disorder)

Many of us experience some degree of the "winter blues" due to our reduced consumption of light. Bright light therapy has been proven to be particularly useful in treating the "winter blues," also known as seasonal affective disorder (SAD). SAD is a form of depression that occurs as the amount of daylight wanes with the change of seasons. Research indicates that decreased daily exposure to sunlight changes brain chemistry balance so that we can experience lethargy, fatigue, sadness, and even depression. Sitting in front of a light box with 10,000 lux capacity (a lux is the international unit of illumination, one lumen per square meter) for 15 to 20 minutes a day can help alleviate symptoms of SAD.

Pregnancy and Postpartum Depression

Depression during and after pregnancy is a challenging health issue. Around 5% of pregnant women meet the criteria for major depression. This can put the unborn child at risk for various health disorders. Bright light therapy may relieve depression during pregnancy. Additionally, many new mothers are at high risk for postpartum depression. Those women can benefit from sitting for about an hour each morning in front of the BioClock™. The BioClock™ emits the light roughly the strength of the noon sun at the beach on a clear June day. This is not harmful for the mother or her child as the light does not contain ultraviolet rays that can increase the risk of developing skin cancer. For best results, the woman should be in front of the BioClock™ within 10 to 20 minutes of waking.

Insomnia

Some people have difficulty falling asleep before the early morning hours, and, not surprisingly, end up having trouble waking when they need to start their day. This problem, known as "delayed sleep phase syndrome," or DSPS, has been remedied in many cases with the help of bright light therapy. By using a bright light at the end of your night, whenever that might be given your schedule, your sleep phase can be gradually shifted. The light therapy acts on the internal biological clock, bringing the clock into sync with local time.

Other people fall asleep far too early and wake well before sunrise. Light therapy at the start of their subjective night, in the evening, can "reset" the biological clock, normalizing - or at least improving - the sleep pattern. This technique may be especially valuable for older people, who are prone to advanced sleep phase syndrome or ASPS. It has been suggested that sitting all evening in a dimly illuminated living room predisposes people to ASPS. Turning up normal room lights can alleviate the problem in some cases.

DSPS and ASPS are extremes of insomnia. Many people experience these conditions with less intensity, for example, going to bed at 11:00pm but finding themselves unable to fall asleep before 1:00am. When this occurs, they find it difficult to be alert during their normal work days. In just a day or two, bright light therapy at the breakfast table can remedy the situation.

Shift Work Fatigue

Shift workers often experience a change in their sleep/wake cycles. Evening or night shifts can require a delay in our sleeping time of as much as 3 to 12 hours. When the sleep/wake and body temperature cycles are no longer in phase or "in sync" with each other, workers experience a condition known as internal de-synchronization. An employee placed on the night shift must ignore the light-dark patterns in the external environment and try to sleep at a time when the body clock is telling him or her to be most alert and active. While some employees are greatly disturbed by these internal disruptions, others experience only mild symptoms. Yet, like a machine which eventually breaks down when its operating specifications are continually ignored, the human body will also eventually be impaired by unnatural conditions. If employees' internal clocks are repeatedly desynchronized, some negative effects on health, safety, and/or performance generally can occur.

Jet Lag

Rapidly traveling across several time zones creates disharmony between one's internal body clock. Melatonin supplements have gained popularity among frequent flyers as a way to overcome jet lag by tricking their bodies into thinking that it's nighttime, resetting their circadian rhythm. Unfortunately, this not only causes problems with sleep/wake cycles but influences mood and energy as well. The body clock is designed for a regular rhythm of daylight and darkness. It is thrown out of "sync" when daylight and darkness occur at the "wrong" times in a new time zone. Clinical research conducted at NASA demonstrates that the body clock can be reset to a new time zone in only 2 days with properly timed exposure to sufficiently bright light in specific wavelengths.

Traveling West

DAY 1: SEEK BRIGHT LIGHT between 20:00 (8:00pm) and 23:00 (11:00pm).

AVOID LIGHT until 03:00 (3:00am) or later.

DAY 2: SEEK BRIGHT LIGHT between 23:00 (11:00pm) and 02:00.

AVOID LIGHT until 06:00 (6:00am) or later.

Traveling East

DAY 1: AVOID LIGHT (by wearing sunglasses) between 06:00 and 11:00.

SEEK BRIGHT LIGHT until 14:00 (2:00pm).

DAY 2: AVOID LIGHT (by wearing sunglasses) between 03:00 and 08:00.

SEEK BRIGHT LIGHT until 11:00.

Q & A

1. What are the benefits of waking up to light?

Bright-light therapy offers several benefits for people with sleep disorders and other complications caused by sleep deprivation. Bright-light therapy has been used effectively since the late 1980s to help those suffering from seasonal affective disorder (SAD). Studies show that people with SAD notice significant mood improvement within a week of daily morning light therapy sessions. Studies also show that bright-light therapy can also be effective for insomnia, helping to restore normal sleep patterns in people who can't fall asleep at night or who wake up too early in the morning. Light therapy has also been used to treat severe jet lag, eating disorders such as anorexia and bulimia, and depression associated with pregnancy, PMS, chronic anxiety and panic attacks.

2. What are Circadian Rhythms?

The biological clock is scientifically referred to as the circadian rhythm (Latin: *circa* means about, and *dia* means day.) These rhythms show an approximate period length of 24 hours.

3. What is SAD?

Some people suffer from symptoms of depression during the winter months, with symptoms subsiding during the spring and summer months. This may be a sign of Seasonal Affective Disorder (SAD): a mood disorder associated with depression episodes and related to seasonal variations of light. As seasons change, our "biological internal clocks" or circadian rhythms shift, due partly to these changes in sunlight patterns. This can cause our biological clocks to be out of "step" with our daily schedules. The most difficult months for SAD sufferers are January and February. Although anyone can suffer from SAD, younger people and women are at higher risk.

4. How can BioClock™'s light therapy treat my SAD?

Phototherapy or bright light therapy has been shown to suppress the brain's secretion of melatonin. BioClock uses a combination of bright-light therapy and dawn simulation to treat seasonal affective disorder.

5. How does BioClock™ help those with hearing loss or impairment?

The BioClock™ is a unique invention that was designed for the 22 million Americans who are hearing impaired. The progressive light placed on a bedside table will awaken even the deepest sleeper silently. It is a revolutionary way to wake up for everyone, with a simulated sunrise that offers the perfect alternative to traditional loud alarm clocks.

6. What are the benefits of BioClock™ for shift-time workers?

Light therapy with a high-intensity light box can help night-shift workers reset their internal clocks. That means increasing exposure to morning light if you need to advance your clock and getting extra evening light if you need to delay it. This type of treatment also helps those with certain other types of sleep disorders.

7. What are the benefits of BioClock™ for frequent travelers?

Exposure to bright morning sunlight cures jet lag after a few days in most people. A few will have prolonged sleep phase difficulties. By forcing one's self into a 27 hour day, complete with the appropriate stimulation from bright light, all the chemical cycles will be able to catch up during one week of recycling.

8. Who can benefit from BioClock™?

- Almost 4 million North Americans who suffer from Seasonal Affective Disorder (SAD);
- Over 36 million North Americans who seasonally feel light-deprived, lose their energy, and experience "the winter blues";
- Over 22 million North Americans who have hearing impairment;
- Shift workers
- Long distance flyers with disturbed sleep patterns;
- Those who work in dark work places, or in offices without windows.

9. How to use BioClock™?

Most people respond best when they use their BioClock™ in the morning. For best results, use the light at a slight angle to your face (see diagram 1), and do not look directly into the light. Sit about 20 inches away from the light and allow the light to bathe over your face. Your eyes should be open for optimal results. You can read, eat, work on the computer, watch T.V., put on make-up or use it while you are exercising. If you find that you feel sensitive to the light, adjust intensity (brightness) and duration (timer) settings. People usually start feeling better within a few days of using the BioClock™ for 15-30 minutes per day.

Please Note: These statements have not been reviewed by the Food and Drug Administration. Individual results may vary. NatureBright light therapy should be taken as part of a healthy lifestyle and is not intended to diagnose, treat, cure, or prevent any disease.

PRODUCT SERVICE

For product information:

In the U.S.A., contact the NatureBright™ Customer Service Center at

1-800-622-0231 Pacific Time,

or email care@naturebright.com, or web site <http://www.naturebright.com>.

WARRANTY INFORMATION

Service: the unit should only be serviced by qualified service personnel.

Limited Warranty Coverage

Nature Bright Company ("NBC") warrants that for a period of ONE year from the date of purchase, NBC, at its option, will repair or replace this product or any component of the product found to be defective. Replacement will be made with a new or remanufactured product or component. If the product is no longer available, replacement may be made with a similar product of equal or greater value.

NBC service center is the authorized service center for your equipment. Should your equipment develop any defect within the warranty period, call the NBC Service Center for a return authorization code.

To obtain service in the USA, please contact: Nature Bright Company

Telephone: 1-800-NBC-0231 (1-800-622-0231) Monday through Friday, 9:00 am to 5:00 pm PST

Email: care@naturebright.com

This warranty is valid for the original retail purchaser from the date of initial retail purchase and is not transferable. Keep the original sales receipt. Proof of purchase is required to obtain warranty performance.

Limited Warranty Limits and Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, setup adjustments, maladjustments of consumer controls, improper maintenance, power line surge, lightning damage, modification, introduction of sand, humidity or liquids, commercial use such as hotel, office,

restaurant, or other business or rental uses of the product, or service by anyone other than a Authorized Service Center, or damage that is attributable to acts of God.

ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF FITNESS AND MERCHANTABILITY, ARE LIMITED IN DURATION TO ONE YEAR FROM DATE OF ORIGINAL PURCHASE. UNDER NO CIRCUMSTANCES WILL NBC BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY WRITTEN OR IMPLIED WARRANTY.

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state. Some states do not allow the exclusion limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so that the above limitations and exclusions may not apply to you.

International Warranty Service

Service under the Nature Bright™ warranty may be obtained outside the United States by Nature Bright™-Authorized Distributors and Service Dealers.

ACCESSORY PURCHASE

1-800-622-0231 (Customer Orders Only)

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(9 am to 5 pm Monday-Friday PST)

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