



Education blog

Tutorial, Education, Learning Media, Science.

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Make ESR meter with Arduino Uno R3

Rokhmad Astika Triprasetia, S.Pd 11:02 AM 44 comments



ESR meter is a tester to test electronic components, especially TTL types. for example to check the condition and pin name of: Transistor. FET, SCR, Diodes, LEDs, TRIAC, DIAC, Resistors, Elso, Capacitors. etc.

With this ESR tester we no longer need to measure with the AVO meter if we want to know the BCE pin of a transistor, or the KAG pin of an SCR. Simply install the component that will be tested on the probe tester, then the position of the foot will be displayed on the LCD screen. For schemes and components it is very easy to get, and very few components are installed.

Components needed:

- Arduino UNO R3
- 16 x 2 LCD Display
- Project board (if you want to make a solder directly on the PCB)
- 680 ohm resistor
- 470K resistor
- Resistor 1 K
- R 100 K
- Trimpot 100K
- Push Button
- Jumper cable to taste
- Arduino IDE software if you don't have one, please [download it here](#)

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Download the Library Project



LIBRARY PROJECT DI WEB INI
SILAHKAN KLIK DISINI

Download the Library Project

Sketch Prayer Hours 1 Panel



Prayer Hours 1 Panel

Sketch Clock Prayers 2 Panels



Two-hour panel

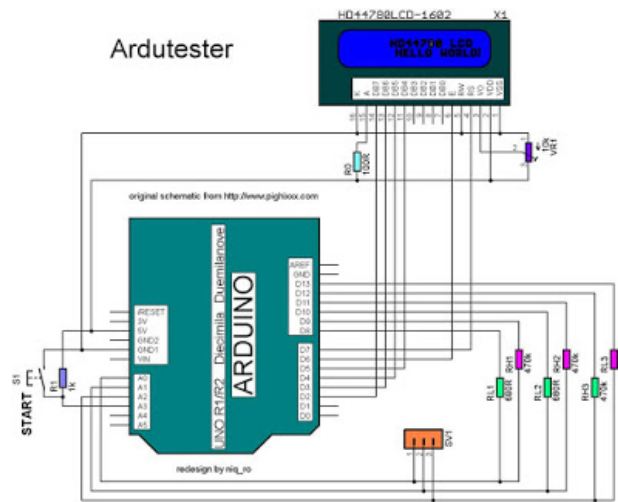
Sketch Prayer Hours 3 Panels



Sketch Prayer Hours 3 Panels

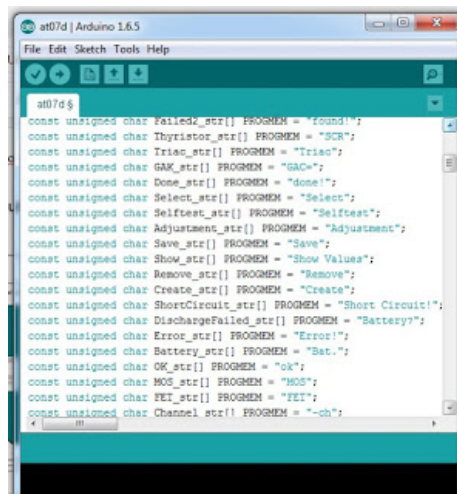
Sketch Prayer Hours 5 Panels

First Step Prepare your Arduino and assemble it according to the scheme below:



download complete Project and Sketch by [CLICK here](#)

Then open your Arduino IDE software, and upload the sketch to your Arduino Uno R3.



The results on the LCD screen will appear like this:



Install the Components in your Probe Tester, for example I test the Transistor, then press the tester button for a moment the results will be displayed on the LCD screen like this:

NPN Transistor type, EBC's foot position, with pin probes 3, 1, 2.Hfe Transistor 832

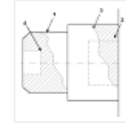


Prayer Hours 5 Panels

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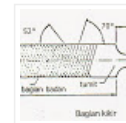
Various Types and Lines

The types of lines and their uses are as follows; Thick lines or so-called continuous thick lines are used to make lines ...



Kinds of equipment Hand- (Introduction to Electromechanical Basic Work Practices -PDE) - Part 1

To work in the field of electricity and electronics, both assembly and repair. We need tools to work beside computers ...




Types of mismanagement and their use (Introduction to Electromechanical Basic Work Practices -PDE) - Part 2

The file is used to flatten and smooth the field. This form of misery is made in various ways according to its function and needs. Men ...



Make a mini CNC machine with a used DVD ROM and Arduino Uno

 Computer Numerical Control / CNC (meaning "numerical control computer") is a machine automation system that is operated ...

UNBK Tryout



e-learning



my Edmodo



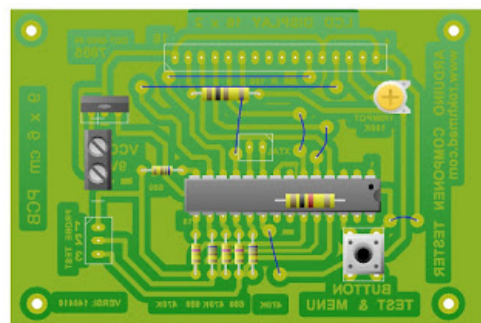
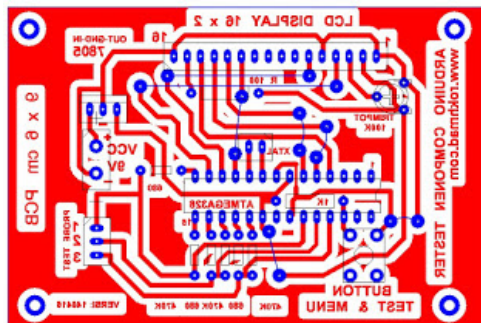
Digital Books



How to make a Smart tester like above, without the Arduino Board ??

First step fill in the sketch into the Atmega 328 ic with the arduino board, then release the IC.

then make a PCB like this:



Task & Repetition of Students

Math Problem Training

TIPTL Vocational Theory Training Exercises

SKM 2004/2015 tasks

Repeat Sist. 2014 Electronic Control (SKE)

Ulangan Gambar Teknik 2014

2011/2012 KKT National Smt Test Remedies

The task of creating a KKPI blog

KKPI UAS Problem Training

List of KKPI UAS Values 2011/2012

KKPI Email Task List

EDUCATION LINKS

Collection of PCB ronica

Madara Online

E-Learning at SMK 2 Sragen

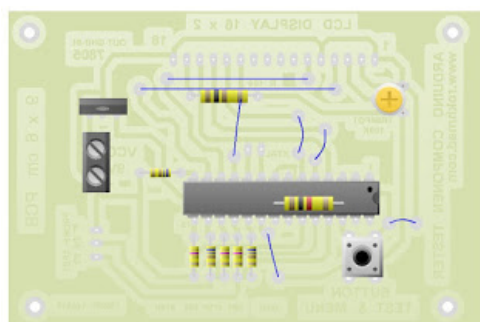
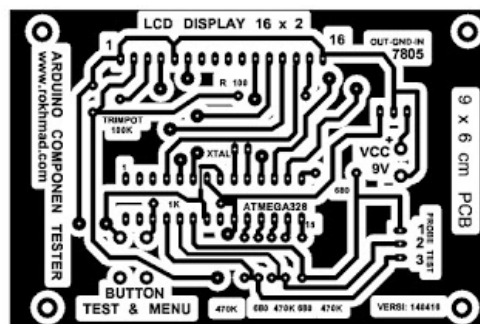
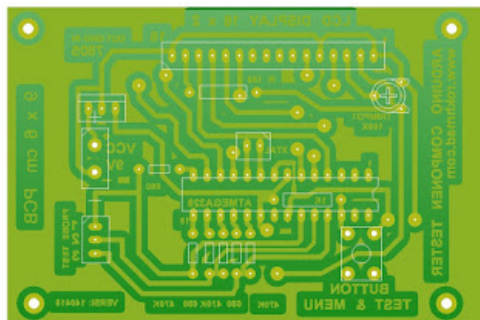
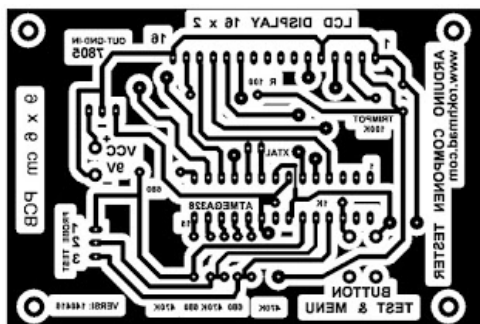
Kab. Sragen

K3LH SMK N 2 Sragen

KKPI SMK N 2 Sragen

Blog Education

Simulation



I know the layout above with a laser jet printer, on the scrap paper, (when we attach the sticker, there is paper that is removed, now use the paper)



Basic Logic Gate Simulation

PLC Basic Instruction Simulation

Simulation Function of the PLC console program button

PLC Component Simulation

PLC Console Program Simulation

Sklar series simulation

Switch Switch Simulation

Guest Book

[Upgrade Cbox]		refresh
name	e-mail / url	
message		Go
help · smiles · cbox		

Recent comments

sitiolis commented on making its own digital clock with 7 : "father, should know how kodingnya ..."

Harris Renda commented on rokhmadblogspotcom : "excuse me ...om want to ask ya sorry ..."

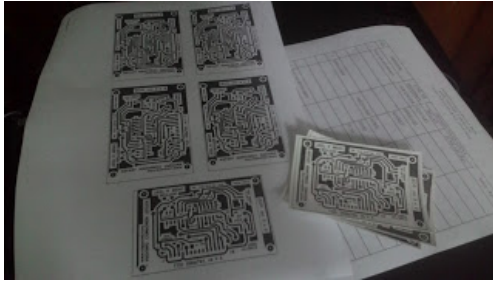
Jajap Express commented on pcb jwsd digital prayer time clock ic : "Assalamu 'Alaikum Pak Rokhmad, there ..."

Ziand David commented on how to fill in the bootloader on icmega : "assalamualaikum sir ... for the connection ..."

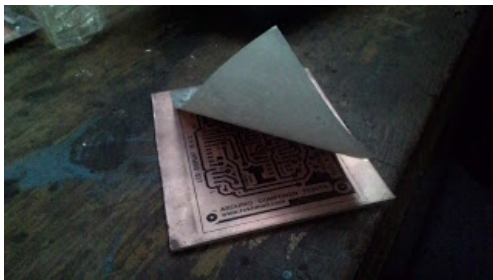
Muhammad Bagus always commented on making sendri mini cnc machine with : "If you ask, about the total cost ..."

Muhammad Bagus alwayscommented on making sendri mini cnc machine with : "What is the name of the software For printing the pictures?"

Retno Nino commented on how to fill out the bootloader on atmega ic : "Is this tool can create



Iron the layout



alternating dynamo ..."

xiitkj2 moch.rian.alviandi commented on making sendri machine mini cnc with : *"Really the project" not very ... "*

Unknown commented on the way to the smart park of Jogjakarta : *" Wow good place ... very ... "*

Djoko Wiyarto commented on 32 x 96 cm digital prayer time combination : *" If you use the type module how come sir, ... "*

Live Traffic

Donation



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BRI Unit Salak Kab Sragen
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Donation

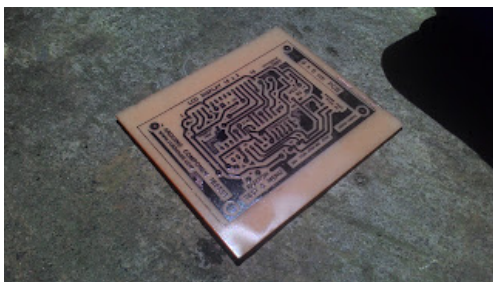
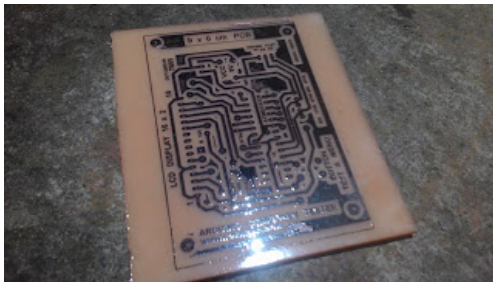
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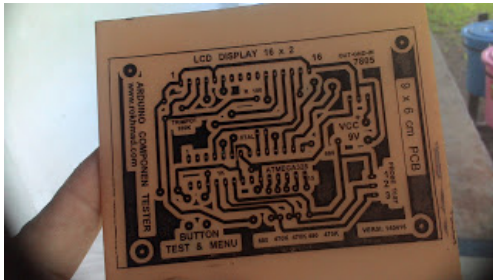


3,104,427



The result after dissolving in Ferrite Chloorida



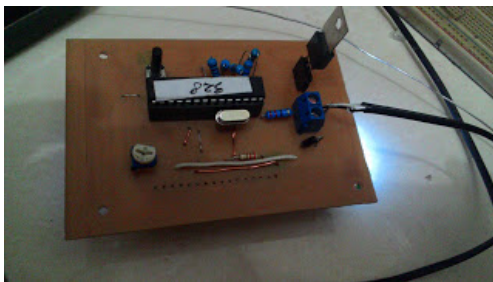


Install the Components, then install the ATM Omega 328 which has been sketched on the Arduino board to the pcb that you just created ... and the results are like this.





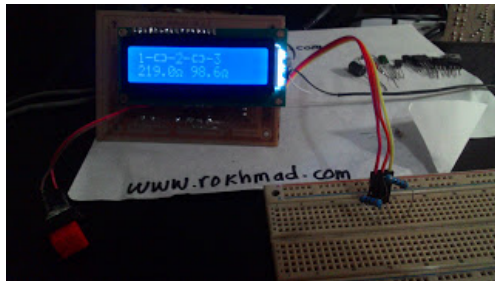
You can modify the LCD positioned behind the PCB for a more concise and practical circuit when installed on the BOX.





Example Photo Component Measurement:

Measurement of 2 220ohm series resistors and 100 ohms



SCR Fir 3D measurement



Transistor measurement





Elco 100 uF measurement



100 nF Capacitor Measurement



DI4001 diode measurement



220 Ohm Resistor Transfer



LED measurement



My Video use Ardu tester and How to Calibration

download complete Project and Sketch by [CLICK here](#)

If you don't have an Arduino Board, how do you make this ESR Tester ??

[read MY POSTING here](#)

special thx for
my reference:

<http://forum.arduino.cc/index.php?topic=164112.0>

<https://blog.adafruit.com/2013/05/02/ardutester-arduino-component-tester/>

<http://black-electronics.com/blog/wp-content/uploads/2013/05/ArduTester.txt>

<http://nicuflorica.blogspot.co.id/2015/04/ardutester-identificator-de-componente.html>

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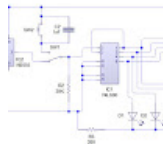
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2	Q2	Q0	15
3	Q3	DS	14
4	Q4	DE	13
5	Q5	ST_CP	12
6	Q6	SH_CP	11
7	Q7	NR	10
8	GND	Q7	9

Basic Tutorial for Runing Text with Atmega 16 Microcontroller and Register Register 74hc595



DIY (Do It Yourself) cleans AC (Air Conditioner) itself



Counter circuit with Seven Segment / binary to decimal converter



Automatic Sliding Door with PLC



Universal PCB Remote Control Infra Red with IC 4017

Reactions:

funny (0)

interesting (0)

cool (0)

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44 comments:



Unknown said ...

Mr. Rohmad UK buy the LCD screen and the IC is on .. It's not available

11:40 AM



Ahmadi Ahmadi said ...

Mr. Rohmad UK buy the LCD screen and the IC is on .. It's not available

11:41 AM



agung dalyanto said ...

Sip ... Try it, bro ...

2:10 PM



agung dalyanto said ...

Can you change the display on the LCD to the laptop screen?

2:12 PM



dani tirta said ...

Hadir..

ijin sedot pa :)

btw bkin video youtube nya jga pa.. Ins.Allah rame... coz ane untuk versi Arduino ane blm nemu..hehe

apalagi bapa share nya detail & gratis pula.. :D

9:54 PM



Rokhmad Astika Triprasetya, S.Pd said...

@unknown : di sragen ngk ada, saya beli di tokopedia online.

@ahmadi : idem jawaban diatas

@agung dalyanto : terimakasih, menurut referensi website.. bisa tampil di Laptop... dengan menggunakan data serial

@Dani Tirta : ditungu Upload Youtubnya.. makasih komentarnya

9:30 AM



yudi fahrizal said...

izin nyoba pak . tp aku belum mesen LCD nya .masih sabar nunggu dana . hehe

5:20 AM

rokhmad said...

@Yudi Fahrizal : oke. sipp.. terimakasih kunjungannya :)

6:46 AM

Anonymous said...

Kurang akurat. Itu pun kadang ngaco. Masih mendingan tester yang ada x 100k nya

7:36 PM

Anonymous said...

Kurang akurat. Itu pun kadang ngaco. Masih mendingan tester yang ada x 100k nya

7:36 PM

 **Rokhmad Astika Triprasetya, S.Pd said...**

@Charles Pandiangan : terimakasih atas komentarnya dan kunjungannya. Klo mau lebih akurat bisa menggunakan Resistor dengan toleransi 1%, dan kalibrasi dulu ESR testernya, baca sketch cara kalibrasi. panjang kabel probe juga butuh kalibrasi.

12:34 PM

 **Telo Bakar said...**

Arduino uno ganti nano bisa ndak ya pak (lebih murah tur punya hehe)

9:41 AM

 **sea gate said...**

Apa bs ukur LRC dll seperti tester di pasaran mas...?
Soalnya mau buat ukur lilitan

4:27 AM

Anonymous said...

Nice post

5:57 PM

Anonymous said...

Upto what value of resistor can read of this project? Thankyou

11:40 AM

Anonymous said...

Pak Rohmad, itu kan namanya ESR meter, koq ga ada untuk pengukuran ESR capasitor nya? padahal buat para teknisi elektronik untuk mengukur ESR itu yang perlu. Mungkin pak rohmad bias menambahkannya.
overall, mantab..

9:54 AM

Anonymous said...

Artikel yang bagus sekali, sangat bermanfaat , terima kasih atas ilmunya... Indonesia memiliki banyak sekali jumlah penduduk nomor 4 didunia, dengan jumlah sebanyak itu Indonesia memiliki potensi orang-orang hebat yang banyak sekali

12:03 PM

 **Rokhmad Astika Triprasetya, S.Pd said...**

makasih kunjungan dan komentarnya

12:14 PM

 **Soo Oeno said...**

Makasih ilmunya pak moga allah yang membalasnya.

11:49 AM

**MR F said...**

Fungsi dari trimpotnya apa ya pak? Ini auto detect komponen ya?

6:32 PM

**ahmad elektro said...**

KI buat nambahin nama kita diawal dimana pak..biar pas dinyalain tampil nama

8:01 PM

**Desy said...**

Malam Pak guru, saya ada tugas skripsi membuat biolistrik untuk pemilah sampah organik dan non organik, salah satu alat yg dibutuhkannya kan ESR Meter. Pertanyaannya apa bisa Data hasil pengukurannya saya koneksikan dengan Arduino Mega? Mohon pencerahannya pak, terima kasih :)

10:10 PM

ibnuwajak.id said...

ini bisa digunakan untuk mengetes komponen langsung di PCB???

10:52 PM

**saiful hari said...**

pak rochmad saya mau tanya,jika tester itu saya rubah menggunakan arduino wemos bisa apa tidak,dan untuk tampilanya saya pakai android pak rochmad,mohon bantuanga pak.

7:38 PM

**mohammad rifky nuris said...**

Saya sudah coba, berhasil pak. Saya pake Arduino Nano 328. . Kalo Nama tampilan awalnya kan *ARDUTester v.07* diganti nama lain bisa tidak pak? Terima kasih

6:55 PM

Anonymous said...

Pak apakah ini bisa untuk lilitan?

12:11 PM

**Nithan said...**

Any sort of electrical troubleshooting or repair work unremarkably needs a digital multimeter to pinpoint electrical issues and to produce varied measurements of physical phenomenon Garatools.com.

12:08 AM

**hanif mahendra said...**

Pakai arduino nano bisakah pak?

9:41 AM

**Rokhmad Astika Triprasetya, S.Pd said...**

paki nano Bisa

12:57 PM

**aji prasetyo said...**

Pak untuk xtal nya pakai yang berapa?

1:19 PM

**Rokhmad Astika Triprasetya, S.Pd said...**

16 Mhz

1:42 PM



Bambang Irawan said...

bisa ukur Inductance trafo ferit Pak?

8:36 AM



Aang Wahyudin said...

ko tulisan ga tampil ya? sya menggunakan rangkaian pcb yg dri bp, trus sketch jga udh d upload k ic atmega via arduino board

4:05 PM



tri wijaya said...

nilai esr nya koq gak ada ya pak guru?

1:48 AM



EFFIAN RIZ said...

Assalamualaikum pak.

Saya telah download sketch dan PCB Arduino testernya, setelah dijalankan sketch langsung di PCB Arduino UNO R3, yang tampil cuma tulisan "Ardutester v0,7" saja. setelah saya coba ukur resistor dll setelah tekan tombol start tetap display tulisan diatas. Mohon pencerahannya pak Rokhmad.

Terima kasih

hormat saya

Effian Riz

2:01 PM



Arjun Al-Mukhammad said...

mas rohmad, punya saya kok gak mau baca komponen ya??

11:28 PM



tri wijaya said...

bang saya bikin kok gak bisa dikalibrasi ya?
mentok di " shortkan sirkuit"

11:17 PM



chandan sur said...

Sir can I use arduino nano.plz reply.

11:59 PM



Dipak said...

Good Project ,Pls. update Arduino Project

5:09 PM



manh le phu said...

Really like your project

Can you share me code to make it

Because i am from viet nam

I don't know how to contact to you

My email add: manhlephu@gmail.com

Really need your feedback

9:35 PM



imam meliawan said...

gan cara kalibrasi nya gimana sih??
makasih gan

1:20 PM

Julius said ...

Thanks for sharing PCB and source code. Hopefully Mr. Rokhmad will be more successful.

12:29 AM

Moviez Maza said ...

I bought [Arduino Uno R3](#) from [Arduino Uno R3](#) and I want to learn and use it. please help me using the basic and tutorial site of [Arduino Uno R3](#)

9:50 PM

Anonymous said ...

Thank you for the knowledge and knowledge ... I hope blessings will be useful for all and hopefully Mr. Rokhmad gets a reply many times ..

11:26 PM

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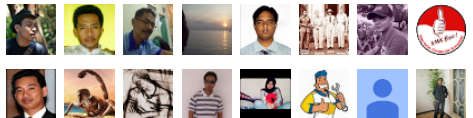
About Me



Rokhmad Astika Triprasetya, S.Pd
SRAGEN, JAWA TENGAH, Indonesia
Tenga Educators at SMK Negeri 2 Sragen
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