

Next Week:

- Send 2 resources you found helpful for your midterms to the Google group list
- Include a brief description of what can be found there.

Midterms

- Really impressive!
- Artist Statements
- Creative Engineering – describe the problem specifically and how you got things working

Week 7

The Transistor

It's 1947

Articles as Usual



Lenses broke and hand valves melted into the faces of Stuart Turner, 35, and other crew members of the movie studio camera and the writer that has received the flying saucer specimens are standing in line for tickets for the night's performance. (AP Wirephoto)

Claims Army Is Stacking Courts Martial

Indiana Senator
Lays Protest
Before Politicians

Washington, July 3.—An attack on the Army's alleged practice of stacking courts martial with officers who are known to be sympathetic to the military was made today by Senator Charles McNary, R-Ind., before a group of politicians in the Indiana state capital.

The senator, who is a member of the Senate subcommittee on military affairs, said that he had received information from a source in the Army that officers who were known to be sympathetic to the military were being placed on courts martial panels.

McNary said that this practice was unfair to the officers who were being tried and that it was also unfair to the public. He said that he would be introducing legislation to prevent this practice.

RAAF Captures Flying Saucer On Ranch in Roswell Region

House Passes Tax Slash by Large Margin

Defeat Amendment
By Opponents
Many From South

Washington, July 3.—The House today passed a bill to reduce the top marginal rate of the federal income tax from 94 to 70 percent, by a vote of 353 to 177.

The bill, known as the Revenue Act of 1947, was passed by a large margin. It was the first major tax reduction since World War II.

The bill was opposed by many members from the South, who argued that it would reduce the government's revenue and that it was unfair to the taxpayers.

No Details of Flying Disk Are Revealed

Roswell Headless
Man and Wife
Report Disk Seen

The Roswell, N.M., man and his wife, who reported that they had seen a flying saucer, today refused to give any details of the object.

The man, who is a former pilot, said that he had seen the object on the night of May 4, 1947. He said that it was a flat, circular object that was about the size of a dinner plate.

He said that it was moving very fast and that it was making a humming sound. He said that he had seen it for about 10 seconds before it disappeared.

Ex-King Carol Weds Mme. Lupasca



Former King Carol of Romania and Mme. Elena Lupasca were shown by the U. S. Army band in the photo at the wedding in May, 1947. A member of Carol's household in the photo and the wedding and the coronation in 1927 were the only royal and noble events reported in their field (Columbian Picture with AP Wirephoto)

Some of Soviet Satellites, May Attend Paris Meeting

Paris, July 3.—Soviet satellites may attend a meeting in Paris to discuss the situation in the Balkans, according to a source in the Soviet Embassy here.

The source said that the meeting would be held in the next few weeks and that it would be attended by representatives of the Soviet Union and several of its satellite states.

The source said that the meeting would be a very important one and that it would be a chance for the Soviet Union to show its leadership in the Balkans.

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Miners and Operators Sign Highest Wage Pact in History

Washington, July 3.—The United Mine Workers and the National Bituminous Coal Operators' Association today signed a new wage pact, the highest in the industry's history.

The pact provides for a 10 percent increase in wages and a 10 percent increase in the cost-of-living allowance. It also provides for a 10 percent increase in the pension plan.

The pact is the result of several months of negotiations between the two groups. It is the first time in the industry's history that the operators have agreed to a wage increase.

It's 1947



It's 1947

Democratic Party Leaders Seeking Compromise On Issue Of Civil Rights

BY THOMAS L. STOKES

WASHINGTON—A serious effort to work out a compromise on the controversial civil rights issue is under way in the Democratic Party.

Exploratory consultations have begun, embracing responsible leaders in Congress from both the Northern and Southern wings of the party. Currently confined to a comparative few key figures, the purpose is to broaden the scope of negotiations gradually.

The hope is to get an acceptable compromise in advance of the national convention which meets July 21 in Chicago. The aim thereby is to avert, if possible, a bitter convention battle such as that of four years ago. At that time Sen. Hubert Humphrey (D., Minn.) led a successful floor rebellion which overruled the majority recommendation of the resolutions committee for a general civil rights plank along lines of the 1944 platform and inserted, instead, a commitment for a compulsory FEPC, (Federal Employment Practices Commission).

That precipitated a walk-out by many Southern delegates and led to formation subsequently of the Dixiecrat independent party which broke off four Southern states from the Truman-Barkley ticket.

While there have been private, informal discussions among Democ-

His compromise bill would create a civil rights commission within the Labor Department, advisory in nature, which would co-operate with similar commissions within the states in the effort to eliminate discriminations in employment on account of race, color, creed, or national origin. No compensation would be involved.

Rep. Hays' program also includes a constitutional amendment to abolish the poll tax as a requisite for voting, which is the case now in only six Southern states, and an anti-lynching law which would provide for Federal intervention

when a state had exhausted its resources to cope with such an atrocity.

Senator Mike Mansfield (D., Utah) has taken the initiative in the compromise movement among Democratic senators.

Significantly, the Hays program was fouted acceptable quite some time ago by Sen. Richard B. Russell (D., Ga.), now an openly avowed candidate for the Democratic presidential nomination. At one time the senator discussed it with President Truman, expressing a willingness then to subscribe to the program as a "package" to be enacted as it stood; but he got no encouragement at the White House.

AMONG ANNOUNCED candidates for the Democratic nomination, none has taken the hard-and-fast stand of President Truman for a compulsory FEPC, so that such a position has no ardent champion among present aspirants. Senator Russell is, of course, against a compulsory FEPC, as is Sen. Robert S. Case of Oklahoma.



South Seethes Over Demands Of Civil Rights

Northern Insistence On Democrat Plank Stirs Deep Anger

By OVID A. MARTIN

CHICAGO, July 17 (AP)—Seething Dixie anger at Northern demands for federal action to outlaw racial discrimination bubbled to the surface before Democratic platform drafters today.

A gray-haired woman delegate from Florida, Mrs. J. V. Alderman, insisted the South would never have had a Negro problem had it not been for "Northern carpet-baggers" who she said poured into Dixie after the Civil War.

That same "interference" today is the only thing keeping the issue alive, she declared.

Mrs. Alderman, who came here from Jacksonville and who will help write the last platform draft before it is submitted to the convention floor next week, was the first Southerner who spoke up at day-long hearings on the explosive civil rights plank.

pent Up Feelings Break Her outburst came after a na-

Georgia Negro Quits Politics After Threats

OCELLA, Ga., Oct. 11 (AP)—A Negro contractor said today his abandoned candidacy for city councilman in this Georgia town resulted in a "night of terror" and an effort to shoot him by a man he described as a uniformed policeman. Ernest Davis told a Tifton Georgia reporter that he entered the race Monday after white officials and citizens told him they had no objections.

He said two men in a motor car—one in uniform—visited his home after Monday midnight and ordered him and his brother, Curtis Davis, into the car.

Davis said they got into the back seat and "the man in uniform told me things had gone as far as they could go. He said he was going to kill me if he went to jail for it."

The uniformed man pulled out a pistol and fired into the back seat.

Interracial group refused admission to Baltimore movie

BALTIMORE, April 30 (AP)—An interracial group of about 150 persons staged a "passive resistance" demonstration in front of the suburban Northwood Theater today to protest the the-

It's 1947

Daily Mirror



FORWARDED
WITH THE
PEOPLE

No. 10,000

A DAY OF SMILES

And this one is
unforgettable

BRITAIN'S BRIDAL, held in
front of the Albert Hall,
was the most of the "Wed-
nesday" being celebrated through-
out the world in honor of the
Princess.

It was the last of the
wedding - which will be
remembered as the day when
Princess Elizabeth and
Philip, Duke of Edinburgh,
were united in marriage at
Westminster Abbey.

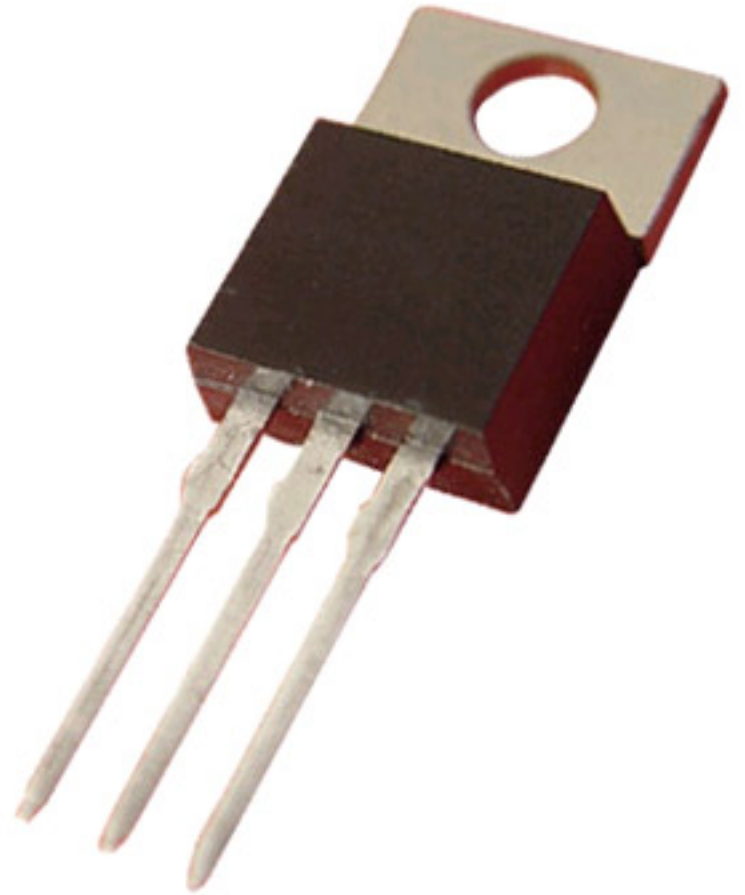


**Philip ushers his
Princess into
Honeymoon House**

By the Duke of Edinburgh
Princess Elizabeth and
Philip, Duke of Edinburgh,
were united in marriage at
Westminster Abbey, London,
today. The ceremony was
the most magnificent ever
held in the country.

PHILIP: "I AM PROUD—OF MY COUNTRY AND MY WIFE"

It's 1947



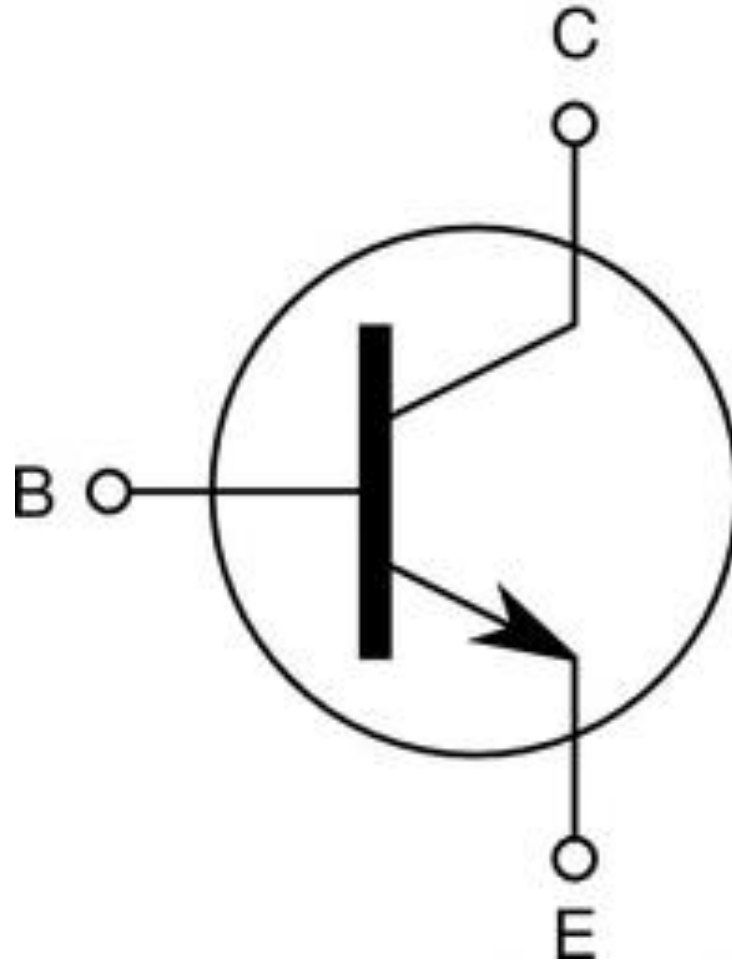
Vacuum tube



Token picture of dudes who invented it



NPN Transistor



Transistor

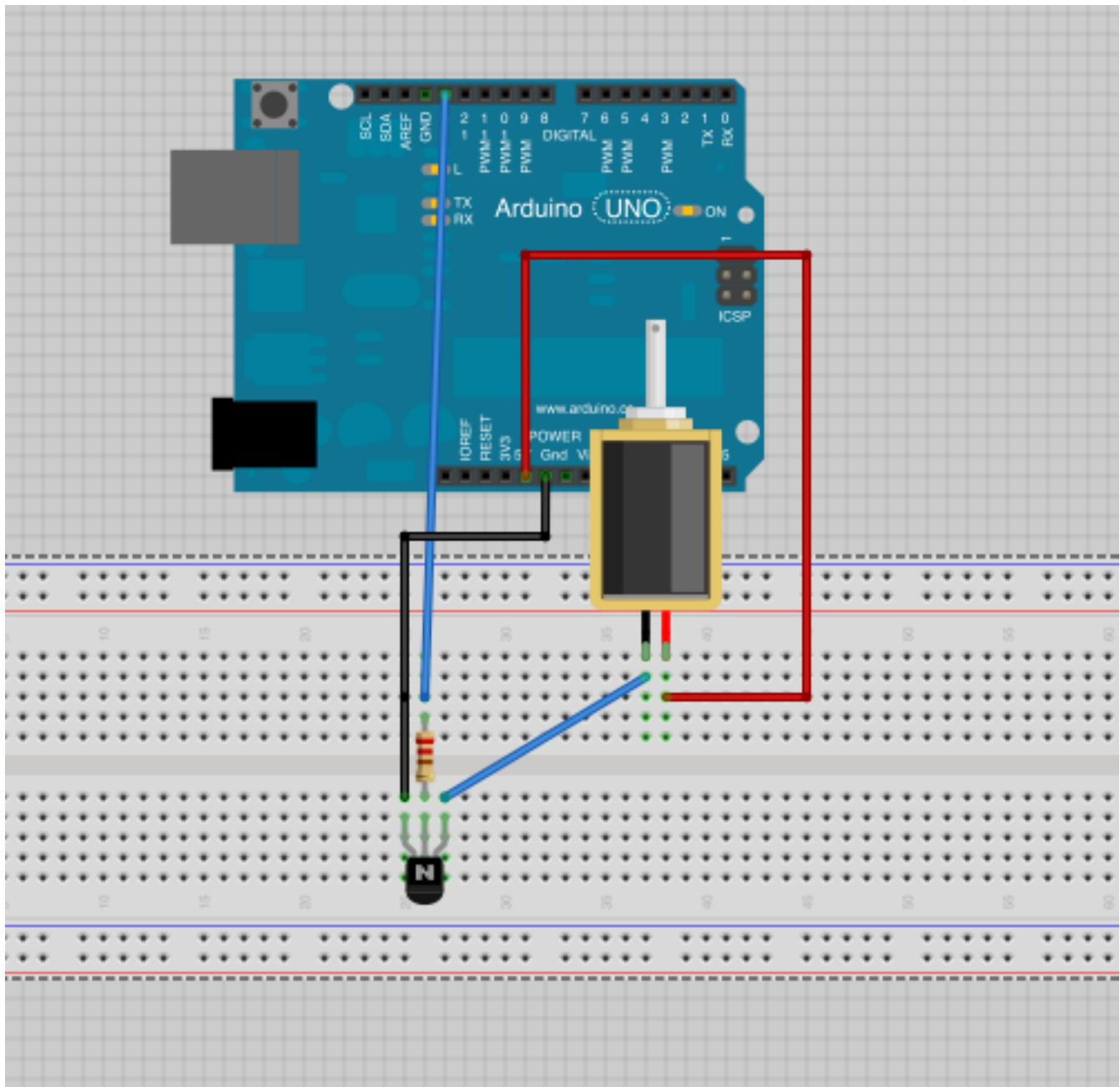
- Resistor who's value changes
 - Switch
 - Amplifier
-
- NPN is probably what you're using (2N 3904)

Parts of an 2N 3904 Transistor

- Base
 - Collector
 - Emitter
-
- Mosfets are different

2N 3904

- Base – middle pin – goes to your Arduino pin
- Emitter is connected to ground
- Collector is connected to another component



What can you do with transistors and solenoids?

<http://www.youtube.com/watch?v=GKkE-CAnHUk&feature=plcp>

Arduino Shields

We're breaking out this chip when we work with Arduinos and their shields



Soldering!

- It's hot!!
- Protect your eyes from flying metal!
- A good solder joint looks like a Hershey's kiss
- Do not eat good solder joints!

Resistor Assignment

- Solder together 4 resistors
- Label it Series or Parallel
- Figure out the value of the resistors

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