

Future Horizons *Advanced Technology*

Presents:

Sonic Devastator (Upgraded)



- **Emits high powered sonic bursts**
- **Handheld and battery operated**
- **Experimental non-lethal technology**

Step by step plans show how to build your own Sonic Devastator Ultrasonic pistol that can emit powerful bursts of sonic energy to temporarily disable an animal or human attacker. Handheld device creates an invisible ultrasonic force field of high-powered sound waves capable of inducing intense pain and discomfort in any attacker.

This unit also has its own on board circuitry to allow for frequency variation, sweep, sweep rate and sweep distance. This allows the device to be user selectable for maximum effect for varying uses. Operates on (2) 9-volt batteries. Unit is effective up to 30 Ft.

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We have upgraded and redesigned our Sonic Devastator into a powerful new unit full of additional features and a much higher output. It is constructed with a very flashy high tech appearance and it is now available for sale.



Sonic Devastator- this handheld space age weapon of the future is powered by (2) 9-volt batteries contained within the handle. It is capable of emitting intense ultrasonic blasts from its output transducer. The sonic blast is capable of inducing intense pain and discomfort in humans and animals. It is effective for approximately 20ft but some people are even effected at distances as great as 50ft. Some people are more sensitive to sonic waves then others. The batteries will last for nearly 20 hours of continuous operation before needing replacement. The unit is now fully adjustable and has controls for effecting and experimenting with its output blast. The user adjustments are as follows:

Frequency adjust- Allows adjustment of output center frequency from approximately 15khz to 30khz by an adjustment knob on the back of the unit. Humans are able to hear up to about 20khz. A low frequency switch on the back of the unit allows you to select a lower adjustable center frequency range of 5khz to 20khz.

Sweep on/off- by selecting this switch to the on position the unit can be made to sweep its frequency back and forth, which causes intense sonic effects.

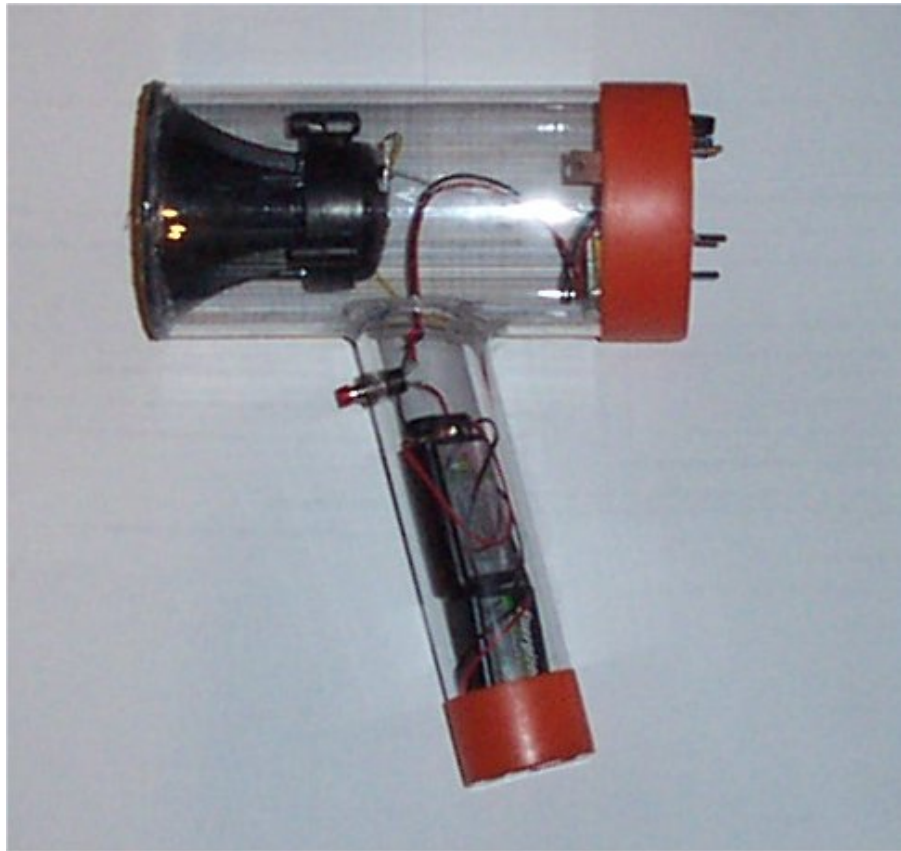


Sweep adjust- allows the selected frequency to sweep back and forth by approximately 5khz. By adjusting the knob you can make the unit sweep slower or faster causing an intense sonic output wave to be produced. There is also a low sweep switch that allows the sweep time to be much slower.

Our research has shown that by using these adjustment controls it is now possible to drastically increase the sonic output effect of the unit. It is possible to adjust the output for a maximizing effect on certain targets such as humans, dogs, unruly animal's etc. One interesting characteristic of high power sonic waves is they are able to transmit much farther then normal sound waves and can easily be

heard through thick walls and over long distances if properly tuned.

Although parts of the sonic output are actually above the range of human hearing, the output can easily be heard when the trigger is pulled because the frequency is being swept back and forth. It is a very loud and painful screeching type sound. A good example of the type of irritation it produces is to say its like somebody scratching their fingernails on a chalkboard but at 130 decibels which is about the same sound output levels experienced at a rock concert. When the device is properly tuned and used on a human target the effect causes intense nausea and headaches usually within less than 60 seconds of exposure. Some people actually feel intense pain and pressure on their eardrums and the natural reaction is to want to get away from it as quickly as possible. The device does not cause any permanent harm or damage. The effects of being hit by a sonic blast usually subside after an hour or so.



The sonic waves are highly directional and most of the output is emitted out the front in an invisible cone shape of 45 degrees to be aimed directly at the intended target. The operator is able to hear the sonic blast but it's at tolerable levels as long as it's pointed away from the operator. The unit is highly effective against most animals due to their ability to hear in the upper frequency bands. Because of this fact it makes a great anti-dog deterrent.

This new improved unit is replacing our older sonic unit and is being sold for the same price, which is \$150. We have also updated the construction plans to include the new design for those of you who wish to build one yourself. The military is currently working on a high power unit similar to this concept for crowd control and for use on the battlefield.

Sonic Devastator

In today's society with our rising levels of crime, many people have begun to arm themselves to fight back. Handguns are a dangerous way of doing this and unfortunately many people buy handguns anyway. Handguns are nothing but trouble in my opinion, if you ever have to actually use it against an attacker then he may very well be killed by you which brings about the possibility of criminal charges being filed against you. Or your unarmed assailant may wrestle the weapon from you and shoot you with it which would be ironic since you were the one who possessed the handgun and not your assailant. The other big concern is that while carrying a handgun for protection, the police catch you with it and now again you're in a sticky situation. Handguns for personal protection are not the answer!

Non-lethal Weapons

Ultrasonic weapons may sound like something from a sci-fi movie but they are for real and a great alternative to carrying a handgun. An ultrasonic weapon is a device that emits a high frequency, high-energy sound wave that can be pointed at an attacker to cause intense pain and discomfort. It is mostly inaudible to humans but many animals can hear it although it is just as painful to them as it is to humans. The ultrasonic waves are usually emitted at around 15-20Khz. Although technically humans can hear up to around 18 or 20Khz signals, the truth is that most people over 25 can barely hear up to 15 or 16Khz

because of hearing degradation. Although the ultrasonic weapons will be just as effective against them.

When an ultrasonic weapon is fired at someone within its range, the person immediately feels intense pain in the head and inner ears. It's like a high-pressure pain and it causes headaches, nausea and disorientation. Depending on the size or output of the weapon, it can sometimes have up to a 15-20Ft effective range! The intensity of the weapon does fall off considerably at longer ranges but most assaults and attacks occur at close range anyway so there is not much reason for the device to need a long range.

Many law enforcement agencies are now equipped with huge ultrasonic weapons used for riot and crowd control. These devices are massive and can scatter their energy onto a large area crowd all at once. They emit almost dangerous amounts of high-energy ultrasonic waves.

In fact one of the drawbacks of these types of devices is that they can cause permanent hearing damage to people if fired too close to the ear or head. However when compared to handguns, it is an acceptable risk and much better than losing a life! Also, not very many police will even know what your ultrasonic weapon is so you need not worry too much about trouble with the law from carrying this device. It is also comforting to know that if an attacker managed to wrestle your ultrasonic weapon from you and fired it at you, yes you will feel pain and discomfort but you will not die!

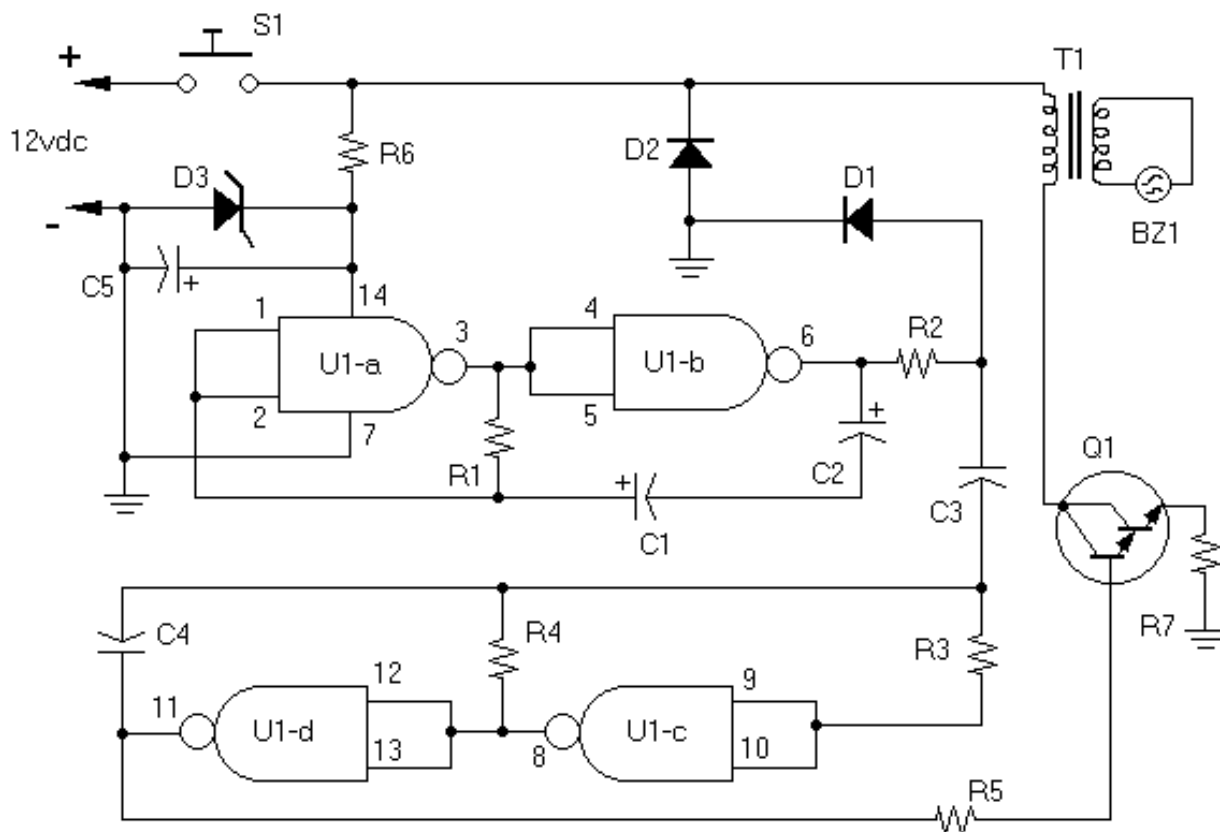
Now one of the reasons that these types of weapons are not yet widely used is due to the fact that people react differently to being hit by an ultrasonic field. Most people will be halted immediately but some will not. Since it is mostly inaudible,

some attackers may not even realize that the pain is being directed from your position and they may continue assaulting you.

Because of this, we have come up with a possible solution. To also emit a high-energy AUDIBLE and irritating sound so that not only does the attacker know where it is coming from but it will also add to his discomfort and pain by aggressively affecting a different frequency of his hearing. With both of these types of emitters combined into a single handheld weapon, it will definitely ward off virtually any attacker whether it be animal or human!

Construction

And so below is a schematic of our **Sonic Devastator**, which is



Audible version

capable of emitting an audible 3Khz signal with a high warble rate for maximum discomfort and an output intensity of 130db(decibels)! That alone is enough to cause intense pain to the ears of anyone that it is pointed at. There is also an ultrasonic emitter, which sends out a 115db(decibel) ultrasonic wave of around 18-20Khz-output frequency. The device is handheld and battery operated on (8) AAA cells to provide 12vdc to the circuits. The unit can be built in any type of shell or housing as long as the transducers (emitters) are pointed away from the user. We have provided separate schematics for the ultrasonic and the audible versions. The builder will have to use his own ingenuity in linking the 2 together but they could also be used just as effectively separately.

Parts List:

U1- 74HC00, quad 2-input nand gate

Q1- TIP120 NPN Darlington transistor

D1, D2- 1N4003 1-amp, 200-PIV

D3- 1N751, 5.1v, 400mw zener

Resistors

R1- 27k ohms

R2, R3- 4.7k ohms

R4- 8.2k ohms

R5, R6- 510 ohms

R7- 10 ohms

Other

C1, C2, C5- 3.3uf capacitor

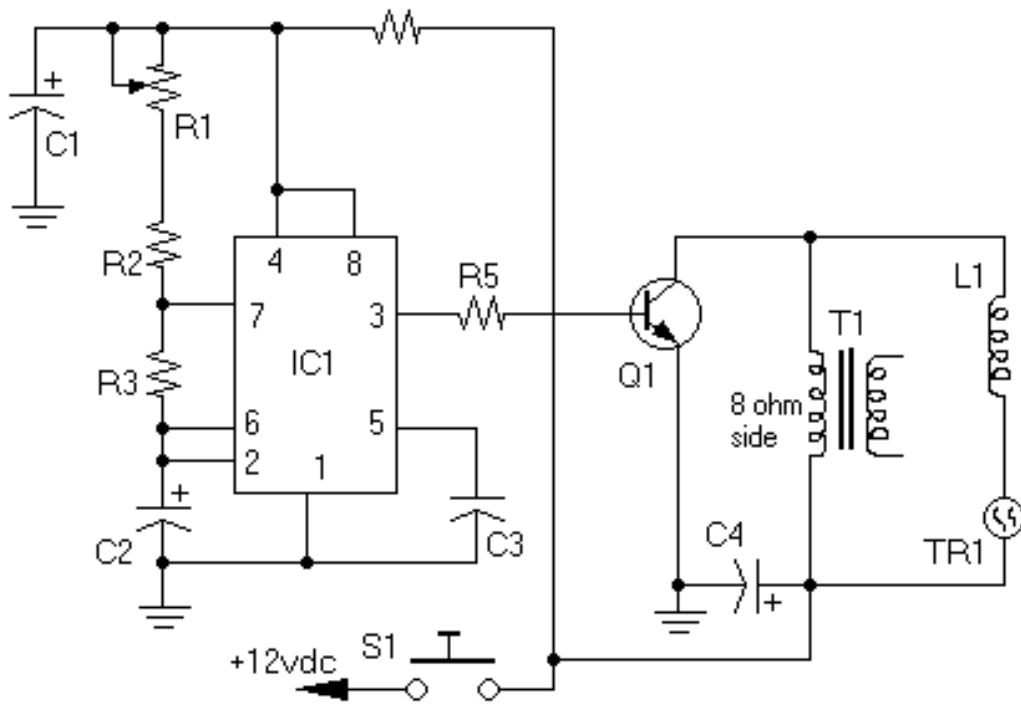
C3, C4- 0.01uf monolithic capacitor

S1- pushbutton switch(momentary)

T1- 8 ohm to 1000 ohm audio transformer

BZ1- EFB-RP34B21(Matsushita) transducer

(we have this part available for \$25.00 by special order)



Parts List:

IC1- 555 timer

Q1- D40D5 NPN power tab transistor(NTE 210)

T1- 8 ohm to 1000 ohm audio transformer

L1- 500uH(parallel two 1mH inductors)

TR1- Piezo transducer

(we have this part available for \$40.00 by special order)

S1- pushbutton switch(momentary)

Resistors

R1- 5k potentiometer

(adjusts the output frequency between 10 and 20khz)

R2- 2.2k ohm

R3- 3.9k ohm

R4- 10 ohm

R5- 1k ohm

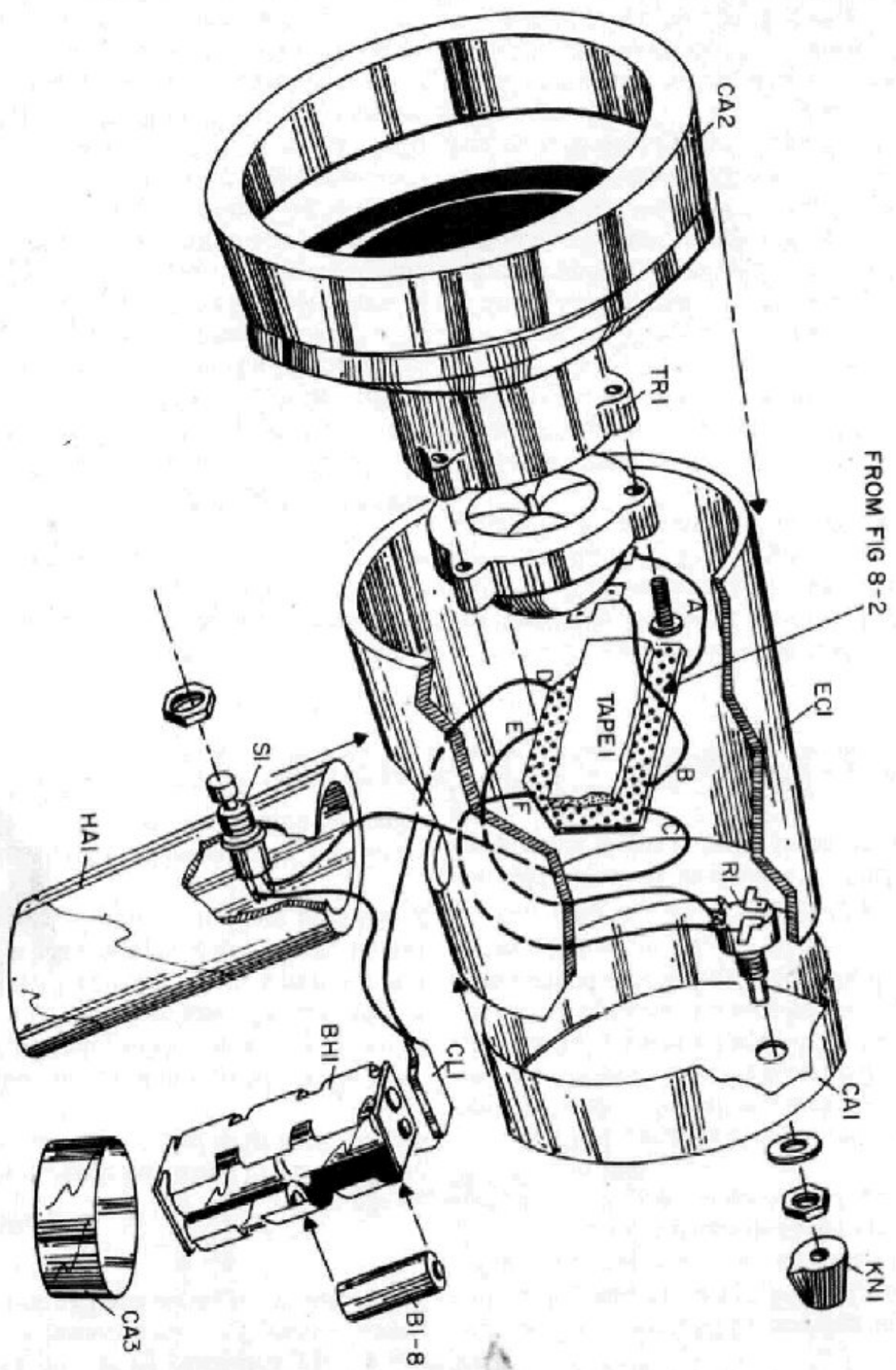
Capacitors

C1- 100uf

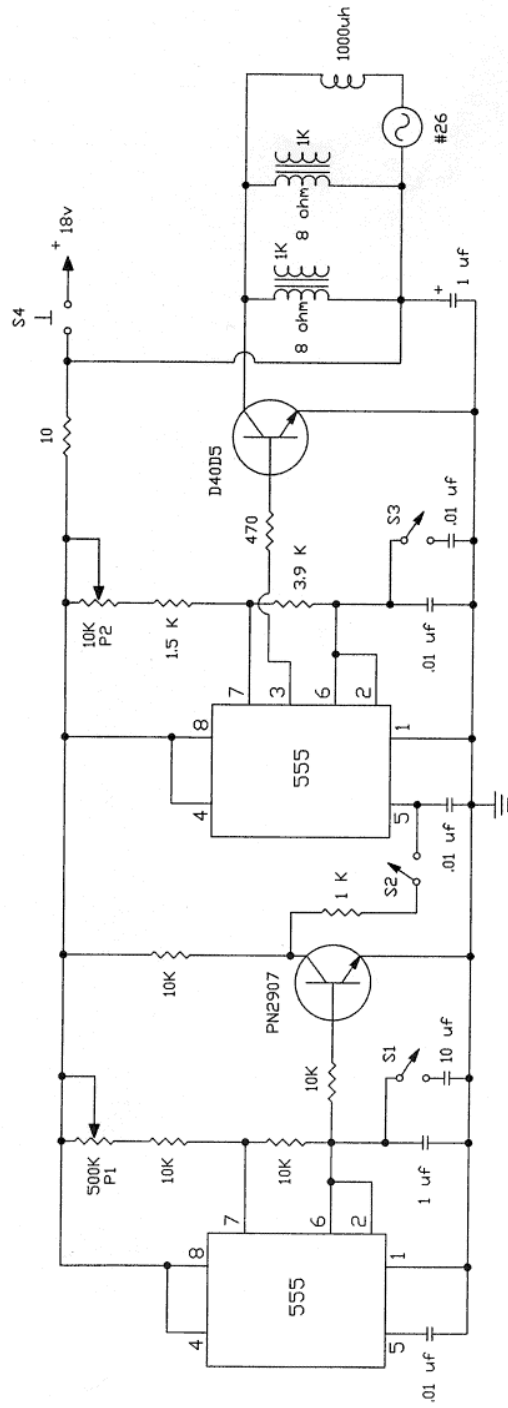
C2, C3- 0.01uf

C4- 1uf

This is an example of one assembly style that could be used
The sonic devastator is intended for intermittent use only. There is not adequate heat-sinking of the components to allow for continuous operation because of space considerations in trying to construct the device in a compact layout.



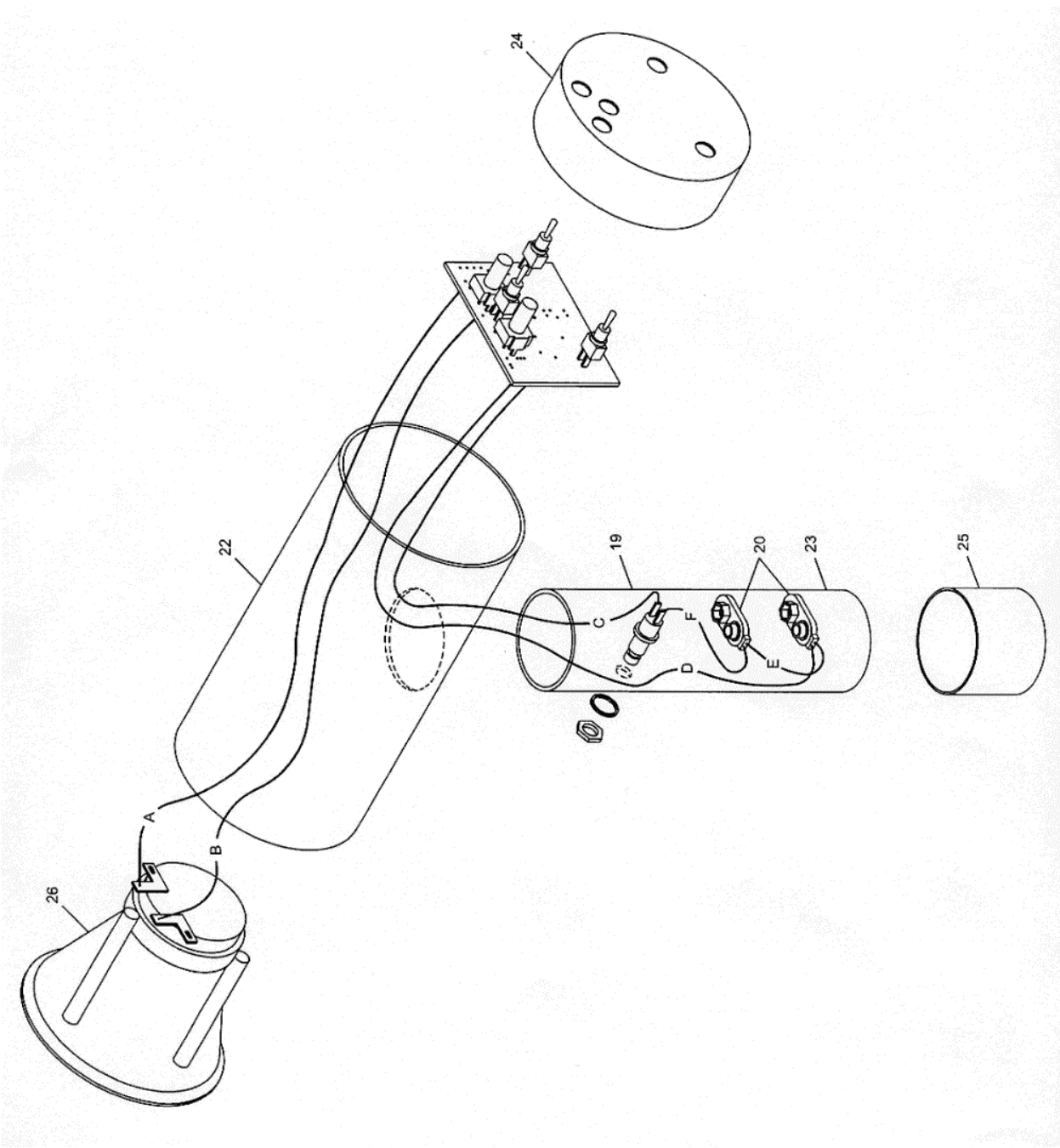
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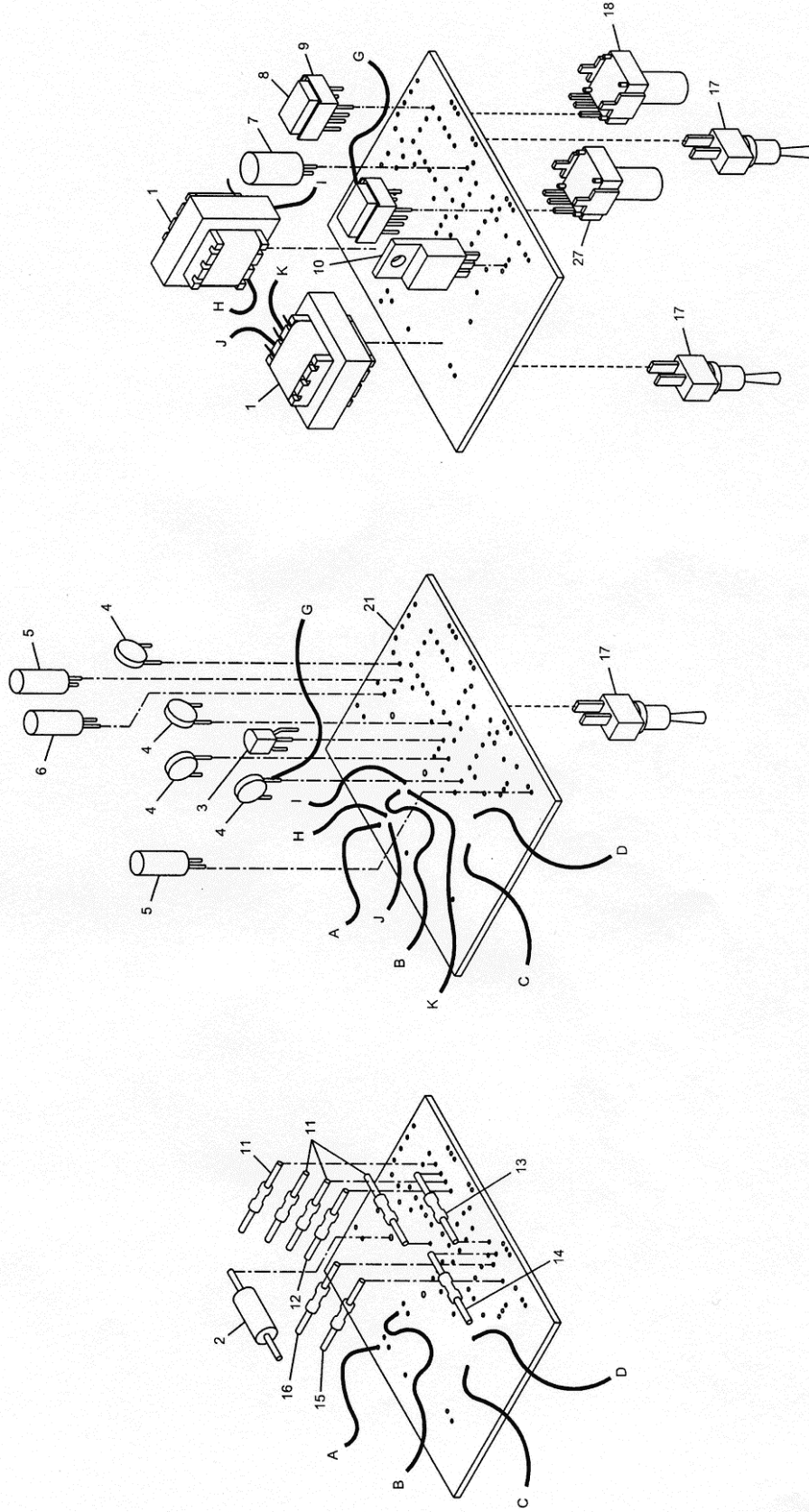


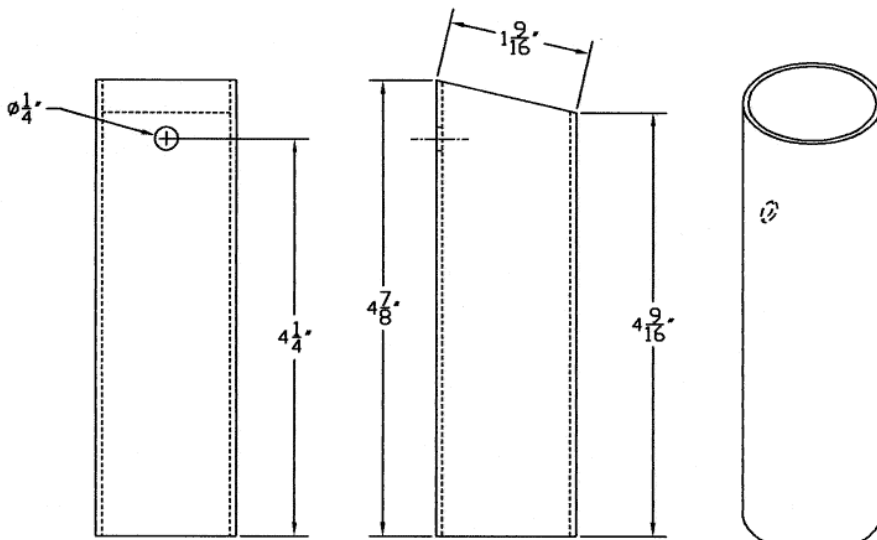
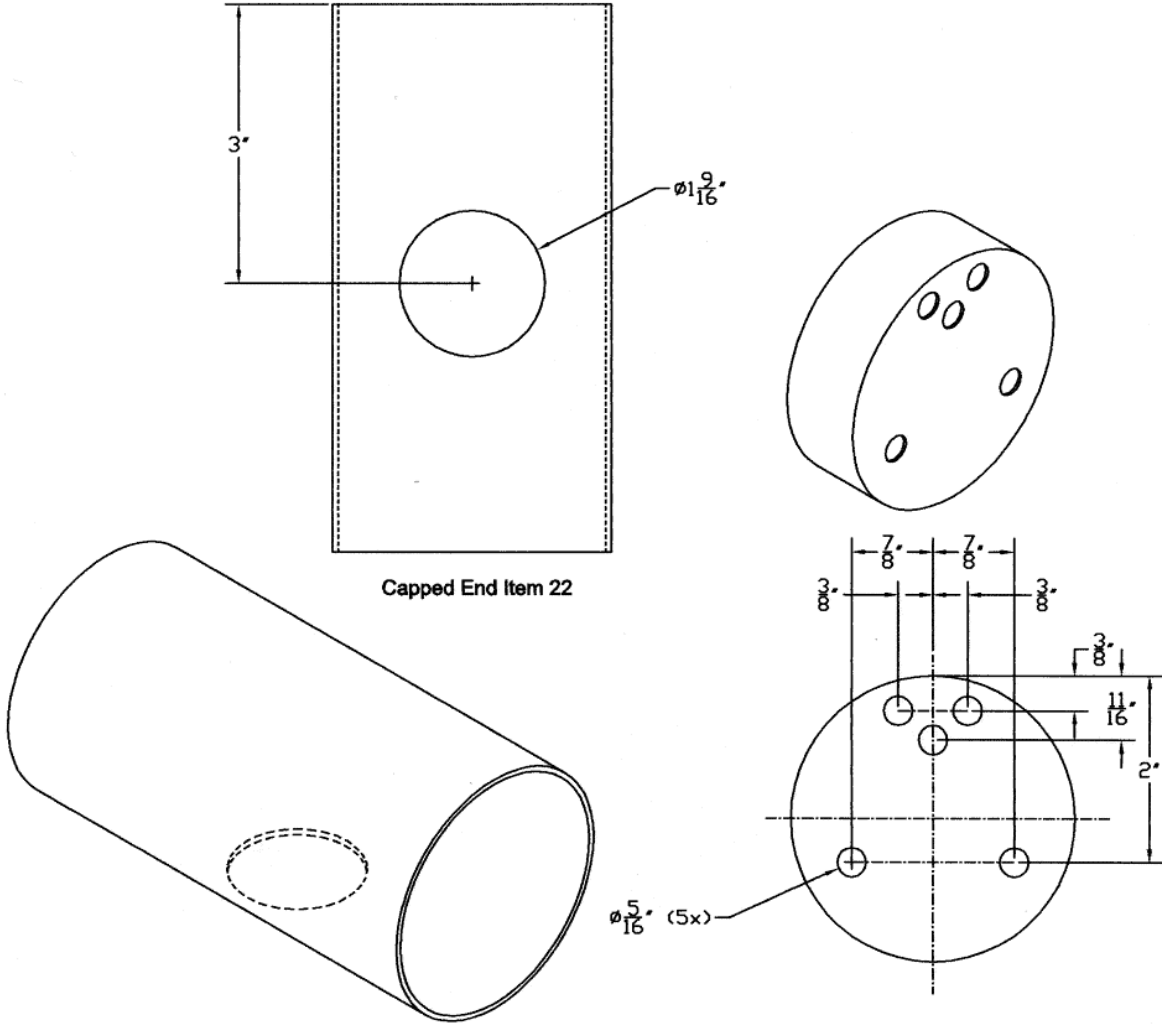
S1-slow sweep switch
 S2-sweep on/off switch
 S3-low frequency band
 S4-trigger switch

DRAWING	REVISION
SONZ	A

SONIC DEVESTOR SCHEMATIC







Cut end of Handle on angle as shown

SONIC DEVESTATOR

ITEM	VENDOR	PART #	QTY.	DESCRIPTION OF PART
1	Radio Shack	273-1380	2	Transformer (8 Ohm)
2	All Electronics	CC-1000	1	Inductor (1000uH)
3	Hofelt	2N3904	1	Transistor
4	Mouser	140-50P5-103K	4	Capacitor, Ceramic (.01uF)
5	Mouser	140-MLRL 50v1.0	2	Capacitor, Polarized Electrolytic (1uF)
6	Mouser	140-MLRL 50v10	1	Capacitor, Polarized Electrolytic (10uF)
7	Mouser	140-XAL 16v100	1	Capacitor, Polarized Electrolytic (100uF)
8	Hofelt	Lmn386N	2	Lm386N.I.C.
9	Hofelt	21-265	2	Socket, 8 Pin
10	Future Horizons	D40D5	1	Transistor
11	Mouser	291-10K	4	Resistor 10K
12	Mouser	291-1K	1	Resistor 1K
13	Mouser	291-1.5K	1	Resistor 1.5K
14	Mouser	291-10	1	Resistor 10
15	Mouser	291-470	1	Resistor 470
16	Mouser	291-3.9K	1	Resistor 3.9K
17	Mouser	10TA805	3	Switch, SPST
18	Mouser	317-2090-500K	1	Potentiometer 500K
19	All Electronics	MPB-1	1	Switch, Momentary Push Button
20	Radio Shack	270-324	2	Connector, 9 Volt Battery
21	Future Horizons	-	1	PC Board (Sonic)
22	US Plastics	43122	1	PVC Tube Clear 3" Dia. 5-7/8" long
23	US Plastics	43110	1	PVC Tube Clear 1-1/2" Dia. 5" long
24	US Plastics	42111	1	Endcap 3"
25	US Plastics	42105	1	Endcap 1-1/2"
26	Adelcom	KSN-1005/A	1	Transducer, Ultrasonic
A	-	-	8"	Wire, Blue, 26 Ga.
B	-	-	8"	Wire, Blue, 26 Ga.
C	-	-	11"	Wire, Red, 26 Ga.
D	-	-	13"	Wire, Black, 26 Ga.
E	-	-	5"	Wire, Red, 26 Ga.
F	-	-	5.5"	Wire, Red, 26 Ga.
G	-	-	1"	Wire, Blue, 26 Ga.
H	-	-	-	For Reference Only
I	-	-	-	For Reference Only
J	-	-	-	For Reference Only
K	-	-	-	For Reference Only
27	Mouser	317-2090-10K	1	Potentiometer, 10K

DRAWING	REVISION
SONZ	A

Parts Source

Electronic

Jameco: Electronic Components and Computer Products
Phone: 1-800-831-4242
website: www.Jameco.com
Address: **1355 Shoreway Rd., Belmont CA** 94002-4100

All Electronics Corporation: New and surplus electronic parts and supplies
Phone: 1-800-826-5432
website: www.allcorp.com
Address: 905 S. Vermont Ave., Los Angeles, **CA** 90006

Hosfelt: Electronics inc.
Phone: 1-800-524-6464
website: N/A
Address: 2700 Sunset Blvd., Steubenville, OH 43952-1158

Mouser Electronics
Phone: 1-800-346-6873
website: www.mouser.com
Address: 958 N. Main, Mansfield, TX 76063-4827

Digi-Key: Your ultimate destination
Phone: 1-800-344-4539
website: www.digikey.com
Address: 701 Brooks Ave. South, Thief River Falls, MN 56701-0677

Electronic Goldmine: Catalog of high tech electronics and components
Phone: 1-800-445-0697
website: www.goldmine-elec.com
Address: P.O. Box 5408, Scottsdale, AZ 85261

Parts

Small Parts Inc.: Engineering Findings Quality Components, Materials, and Tools
Phone: 1-800-220-4242
website: www.smallparts.com
Address: 13980 N.W. 58th Court, **P.O. Box** 4650, Miami Lakes, FL 33014-0650

United States Plastic Corp.: World's Largest Assortment of Plastics
Phone: 1-800-537-9724
website: www.usplastic.com
Address: 1390 Neubrecht **Rd.**, Lima **OH** 45801