

Select-A-Watt or Dial-A-Watt

- **Contributing Technicians: All the technicians at, Slim's C.B. And Radio Center Port Allen, LA. (Original) and Frank Fournier (improvements)**

Select or Dial-A-Watt is a method of doing two things. 1. Making a unit drive at the proper level to feed an amplifier while having a peaked unit when the amplifier is not being used. 2. A way of lowering the carrier level of a unit while maintaining all of the pep swing of the audio. Almost every AM unit has an anti-spiking diode on the output of the audio transformer. This is where the dc is fed to the driver and final. The reason it is there is to prevent the RF positive spikes from exceeding the insulation factor of the audio transformer, causing shorting between the primary and secondary. This diode is generally a 1 amp. 600V peak reverse (prv). This is also about the same as most of the protection diodes. Most of you have these by the dozens in your shop, if not hundreds. Silicone diodes require about .7 forward biasing voltage to began conduction. This means, if we put two such diodes in series, it would require about 1.4 volts to start conduction, three, 2.1 volts, etc.

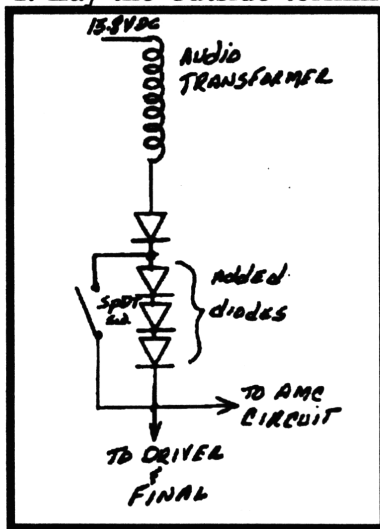
As you know, when you lower the voltage on the driver and final of a unit, your wattage output on dead key will drop. The audio swing in this case will not drop because the diodes are already forward biased. Any positive swing will be coupled through 1:1.

We can lift the cathode of the anti-spiking diode and add as many diodes in series as we desire. We can have as many levels of carrier as the number of diodes we install. Let's start with a simple SPDT switch. It will give us two levels. Peaked level for normal operation and a lower level, say, for driving an amplifier. Let's say it takes three diodes to give us the desired level of drive for the amplifier. With the SPDT switch closed you will have peaked condition. Let's say 6 watts swinging 18 watts. With the switch open it might drop to 3 watts but the swing will be 15 watts. Now let us consider a DPDT switch with center off. This could give us three levels.

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Up, would give peaked condition. Down would give a lower level, and center would give the lowest level. Now for those of you that have followed our suggestion and bought yourself a set of hand punches and would like to be more professional, you might want to try Dial-A-Watt. For this we would like to suggest a 2 pole 6 position switch such as Mouser's #10wk026. It is a printed circuit switch but the layout on this switch is easier.

1. Lay the outside terminals of one pole out at about a 45 degree angle.



FIGURE# 25

2. Bend the legs of five diodes as illustrated leaving the legs about 3/8" long.

3. Starting at pin #1, solder the diodes between 1 and 2, 2 and 3, 3 and 4, 4 and 5, 5 and 6, with the cathodes toward pin 6.

4. Mount the switch.

5. Lift the cathode of the anti-spiking diode.

6. Run a wire from the raised cathode to pin 1.

7. Run a wire from where the cathode was raised from, to the

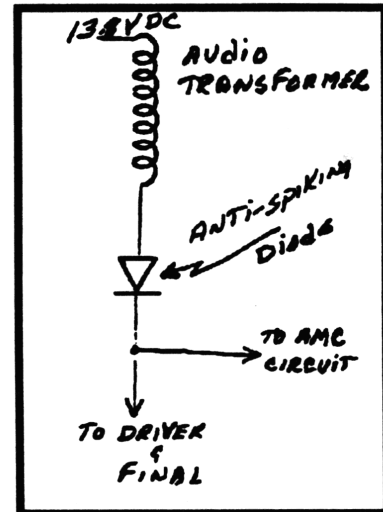
common terminal and to pin 6. Now as you rotate the knob cw, the wattage out will increase. As you rotate ccw it will decrease. This mod is such, that if you have spare-time in your shop, you can make up and wire a few of these switches in advance. Then all you have to do is mount the switch and wire it in.

Suggestion

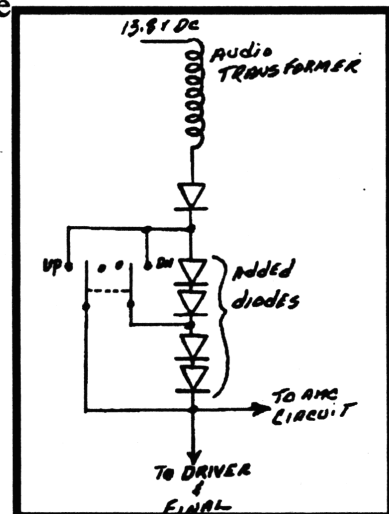
Put yourself a sign in your shop

An average shop should make an extra thousand dollars or more off of this modification each year.

Let's help each other do a better job



FIGURE# 26



FIGURE# 24