ERF2030 Replacement instructions.

It is highly recommended to replace both the finals at the same time, even when it appears that one is still good. Replacing only one can result in damage to that same one again if the other is bad. It is also important that the Bias code matches on both finals. (this is not important on drivers).

When replacing finals in the S-3, S-380, S-6, and S-680 there is no adjustment required for bias.
When replacing finals in the S-9 and S-980 it may be required to readjust the bias on SSB.

When replacing driver(s) in any model it may be required to readjust the bias. ERF2030's made after April 2006 have a letter code on them. You can determine what the bias voltage should be by this letter. It is easiest to replace the defective ERF2030 with the same letter code, or one that is close to it (this will require no readjustments to the radio usually)

The driver bias voltage is tested at the top of R218 on all models in the TX mode, with the lowest possible carrier level (low power)

After determining what the voltage should be, you can adjust the bias on the driver by VR11.

On early models of the AM/FM only radios there is no adjustment at VR11, and if you need to adjust the voltage downward to obtain correct bias, it will be necessary to change R218 to a higher value (usually about 680K). However, if the bias voltage measured at the top of R218 is lower then the required level, no adjustment in resistor value is needed.

On the SSB models, it is required to adjust bias by measuring the current being drawn thru the source voltage going to the parts. If you do not have a way of measuring the current, you can adjust the bias by the voltage; however the best results will be from the current draw method.

Proper procedure for adjusting bias on SSB models CURRENT DRAW METHOD

1) Install DCMA meter in place of shorting bar on TP-8 to TP-9
2) Turn MIC GAIN off
3) Turn radio to an SSB mode
4) Push PTT
5) Adjust VR11 for approx 150MA reading
6) Reinstall shorting bar across TP-8 to TP-9
7) Unsolder 12 gauge red wire on back side of PCB rear power input jack
8) Install DCMA meter in series with this wire
9) Turn MIC GAIN off
10) Turn radio to an SSB mode
11) Push PTT
12) Adjust blue VR (20K pot) near finals for approx 150MA reading
13) Solder red wire back in place after test

On all models of radios, after replacement and bias adjustments are complete, reset carrier levels on AM to the following:
1) 50 watt models: 2 watts low / 10 watts high
2) 80 watt models: 2 watts low / 15 watts high.

Low power VR:	VR21 on S-3 and S-380
	VR16 on S-6 and S-680
	VR16 on S-9 and S-980
High power VR:	VR13 on all models