

30 Dec 75 Val estimated Smarts to require 20 watts, absolute maximum. Val, Paul & I agreed that the smart should possibly have its own final regulator. Possible the mainframe would supply 7V, 20KHz, or 7V DC unregulated. 7V 20KHz would allow smart to generate its own voltages other than standard 5K series

12 Jan 76 Jim T. estimated Smarts to require  $\approx 40$  watts (excluding Les' AD, sampler). This to come from  $\pm 5$ ,  $+12V$  5.4amps of  $\pm 5$ ,  $\approx .99$ amps of  $+12$  2.2ma of  $-5$ .

19 Jan 76 Paul has estimated impact of smart on power supply:

	Usable Power	Power from Inverter	Supply Losses <sup>(2)</sup>	Line Power <sup>(1)</sup>	
7603A	102 watts	127 watts	49 watts (24)	151 watts	(1) Assumes .84 inverter eff.
7604	119	148	58 (28)	176 watts	(2) Parenthesis show inverter losses, based on 84% eff.
7604SS	158	207	88 (39)	246	
		<u>7603A</u>	<u>7604</u>	<u>7604SS</u>	
Main Frame		39 watts	39 watts	39	
Plug-In		49.5	66	66	
Probe & Camera		13.8	13.8	13.8	
Smarts				39	
Total		<u>102 watts</u>	<u>119 watts</u>	<u>158 watts</u>	

3 hole to 4 hole requires additional 4 watts inverter losses, + 9 watts total losses

4 hole to Smarts requires additional 11 watts " " " 30 watts " "

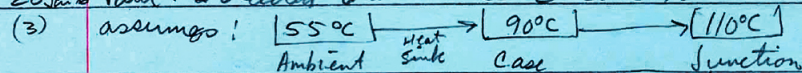
3 hole to Smarts " " 15 watts " " 39 watts " "

$\therefore$  3 hole to 4 hole Smarts requires

Costs: Paul estimates that 4 hole Smarts will increase power supply costs by  $\approx 42$  \$

His estimate includes 18 \$ for fan, 8 \$ for  $\pm 5V$  regulator, 7 \$ for  $+12V$  regulator, 5 \$ for additional rectifiers.

20 Jan 76 Paul & I decided that a  $35^{\circ}C$  case rise would be reasonable goal for series pass regulators. This



21 Jan 76 Will try to lower regulator PCB to make mounting of Series pass transistors easier. This means hooking into the Main Interface about  $1/2$  inch lower. Means rerouting lines on that board.

MAIN INTERFACE

21 Oct 75 WK 43 No major problems with new scheme. Next go round will clean problems: Remove grounds from around switches of Ch Sw; Termination resistors relocated. Move some runs. Trig Select circuit not firm. Should have new version in couple of weeks.

1 Dec 75 WK 49 Was checked with plant & says MI is flawed solderable by having ECB such that it passes thru soldering without the connector ~~tail~~ body tail touching solder. He will check into shortening the tail.

23 Jan 76 WK 3 Lowering power supply connection to MI means extra connectors must be added for routing lines to the mainframe upper level. Squeeze is too tight to get all the lines thru with lowered position.

TEK STANDARD PACKAGE

5 Nov 75 Marlene - Concerned about meeting UK + Government Specs - EMI - Says no way can do a  $5 1/4$ " 7000 ser rack + serious drawbacks to doing 5000 series. Cooling is also a problem with stackable cabinets. Considering front panel ventilation.