



**U.S. Army Research, Development & Engineering Command**

# **Sustaining the Current - Improving the Future**

**February 2007**

**Technology to the Warfighter Quicker**



# Technology Insertion



- **Condition Based Maintenance**
- **Exportable Power Source**
- **Increased Survivability**
- **Increased Internal Alternator/Generator Power Source**



SRATS



MRAP



FTTS



JLTV

- **Suspension Performance**
- **Hybrid Electric**
- **Composite Armor Shell**
- **Internal/External Power Enhancement**



# M1114 / Golden HMMWV Power

CROWS



ITAS TOW



BPMTU



CREW 2 (DUKE)

## Other Possible Equipment:

- Blowtorch
- Rhino II
- Double Shot
- MTS
- FH MUX
- Micro Climate cooling vest
- Harris Radio
- CHAMELEON
- Duke 2 plus



SINGARS & VIC-3



DAGR / PLGR



DVE



Blue Force Tracker (FBCB2)



LRAD





# Power Draw on 200A HMMWV Alternator

With electrical systems used in theater

Item	Steady State (A)	Surge (A)
Engine, drivetrain & accessories	5	30
A/C on High (Low Steady State = 16A)	23	40
Dual Long Range SINCGARS	2.25	18.5
Blue Force Tracker	0.015	2.5
DAGR	0.25	1.5
EPLRS	2.5	35
DUKE	13	30
AFES (Surge at discharge only)	0.1	25
VIS (Surge for 15ms on cueing)	2	20
DVE (estimate)	2	4
BPMTU (see smart-charging note*)	0.24	60
VIC-3	1.35	15
<b>Total in Amps:</b>	<b>51.705</b>	<b>281.5</b>

\*NOTE: BPMTU smart-charging: 12-60A while charging turret batteries; only during low alternator loads; 0.050-0.240A with charged turret batteries



# Future and Optional Power Draw

Item	Steady State (A)	Surge (A)
<b>CROWS</b>	16	32
<b>Rhino II (850 watts)</b>	40	45
<b>Blowtorch</b>	60	190
<b>Double Shot</b>	<1	<2
<b>PLGR</b>	0.075	0.125
<b>MTS</b>	1.7	3.5
<b>FH MUX</b>	3.57	3.57
<b>Micro Climate cooling vest (estimate)</b>	1	3
<b>ITAS TOW</b>	38	45
<b>Harris Radio</b>	<20	20
<b>CHAMELEON</b>	12	60
<b>Duke 2 plus (estimate)</b>	20	40

