

Exhibit AE

QSI MATERIALS INCORPORATED INTO JMRI SOFTWARE

QSI Published Manual
dated 16 February 2005, page 161
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Jacobsen
Court Doc 237-31, Exhibit AD, page 14
October 2008

Feature ID	Feature	Signal Type	Allowed States	Feature ID	Feature	Signal Type	Allowed States
0	Null Output		All	103	Directional Mars Light	LA Toggled	All
1	Whistle	LA Toggled	All	103	Mars Light	LA Toggled	All
3	Bell	LA Toggled	All	104	Strobe Mars Light	LA Toggled	All
5	Dynamic Brakes	LA-SD-Toggled	All	105	Number Board Lights	LA Toggled	All
8	Blower Hiss/Diesel Cooling Fans	LA Toggled	All	107	Directional Headlight + Directional Mars Light	LA Toggled	All
9	Long Air Let-off	TA Momentary	All	108	Directional Headlight + Directional Ditch Lights	LA Toggled	All
10	Short Air Let-off	TA Momentary	All	109	Directional Ditch Lights	LA Toggled	All
12	Pop-off	TA	NFF/NFR	110	Ditch Lights	LA Toggled	All
13	Blow Down	TA	NFF/NFR	111	Strobe Ditch Lights	LA Toggled	All
14	Injector	TA	NFF/NFR	144	Start Up	Momentary	NFF/NFR
64	Mute	LA-SD Toggled	All	145	Shut Down	PA	NFF/NFR
65	Doppler Shift	TA	FWD/REV	176	Air Brakes	TA-SD Toggled	FWD/REV
96	Directional Headlight	LA Toggled	All	178	Status Report	TA	FWD/REV
97	Directional Reverse Light	LA Toggled	All	177	Cruise Control	TA-SD Toggled	NFF/NFR
98	Headlight	LA Toggled	All	211	Coupler Effect	TA-Enable and TA	All
99	Dim Headlight	LA Toggled	All	215	Squealing Brakes	Momentary	FWD/REV
100	Reverse Light	LA Toggled	All	216	Squealing Brakes + Air Brakes	TA Momentary	FWD/REV
101	Automatic Cab Lights	LA Toggled	All	217	Pumps	LA Toggled	NFF/NFR

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  <enumChoice choice="Coupler Effect" value="211"/>
  <enumChoice choice="Pumps" value="217"/>
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