

Exhibit S

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 10
October 2008

Item ID	Signal Type	States	Item ID	Signal Type	States	Item ID	Signal Type	States
0	Null Output	All	102	Directional Mars Light	All	102	Directional Mars Light	All
1	Whistle	All	103	Mars Light	All	103	Mars Light	All
3	Bell	All	104	Strobe Mars Light	All	104	Strobe Mars Light	All
5	Dynamic Brakes	All	105	Number Board Lights	All	105	Number Board Lights	All
8	Blower Hiss/Diesel Cooling Fans	All	107	Directional Headlight + Directional Mars Light	All	107	Directional Headlight + Directional Mars Light	All
9	Long Air Let-off	All	108	Directional Headlight + Directional Ditch Lights	All	108	Directional Headlight + Directional Ditch Lights	All
10	Short Air Let-off	All	108	Directional Ditch Lights	All	108	Directional Ditch Lights	All
12	Pop-off	All	110	Ditch Lights	All	110	Ditch Lights	All
13	Blow Down	All	111	Strobe Ditch Lights	All	111	Strobe Ditch Lights	All
14	Injector	All	144	Start Up	All	144	Start Up	All
64	Mute	All	145	Shut Down	All	145	Shut Down	All
65	Doppler Shift	All	176	Air Brakes	All	176	Air Brakes	All
96	Directional Headlight	All	178	States Report	All	178	States Report	All
97	Directional Reverse Light	All	177	Cruise Control	All	177	Cruise Control	All
98	Headlight	All	211	Coupler Effect	All	211	Coupler Effect	All
99	Dim Headlight	All	215	Squealing Brakes	All	215	Squealing Brakes	All
100	Reverse Light	All	216	Squealing Brakes + Air Brakes	All	216	Squealing Brakes + Air Brakes	All
101	Automatic Cab Lights	All	217	Pumps	All	217	Pumps	All

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