

LIVERPOOL STREET IECC
(IECC A)

**ECS SIGNALLING ITEMS
SPECIFICATION**

A30-LIV-IECA-ECS-01

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AMM	Prod	Chk	Date	Details of change
ADZ1			19/09/08	Initial issue of document.
ADZ2			01/10/08	Amendment to baud rate for both SMART links. Amendment to address 40 for SMART PC LINK 2. Pages affected: 5, 8, 10

DELTARAIL GROUP LTD	Name	Signature	Date
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1 INTRODUCTION

1.1 Document Overview

This document defines the ECS data requirements for Liverpool Street IECC.
The following information is supplied for each ECS to SMART PC link:

- Link Characteristics
- Signalling items transmitted and received
- Subsystems which will be informed of changes in remote link status

1.2 Abbreviations

ARS Automatic Routesetting Subsystem
ECS External Communication Subsystem
IDPM IECC Data Preparation Manual
IECC Integrated Electronic Control Centre
TD Train Descriptor

1.3 Related Documents

IECC Application Manuals.

IDPM 1302 External Communications

NR/SP/516/10040 Issue 7

SAO-IEC-HD-56 Issue 4.1

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2 ECS LINK TO SMART PC LINK 1

2.1 Overview

This ECS remote system link operates from port 6. It is a link to SMART PC with ETB type initialisation.

2.2 Link Characteristics

Port(s)	6	Baud Rate	9600
Physical Name	P6	Time-Out Period (secs)	2
Area	SPC1	Message Retry Count	2
Protocol	BR1810	Message Retry Field Flag	Set

2.3 Signalling Items

Changes on the status of the following signalling items will be transmitted by the ECS to SMART PC LINK 1:

/Address 00 - 0F

BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
R71AM	R71BM	R73AM	R75AM	R75BM	R80AM	R81AM	R82AM
R83AM	R83BW	R83BM	R83CW	R83CM	R84AW	R84AM	R84BM
R85AW	R85AM	R86AW	R86AM	R90AM	R90BM	R91AM	R91BM
R92AM	R92BM	R93AM	R93BM	R94AW	R94AM	R94BM	R94CM
R95AM	R95BM	R100AM	R102AM	R110AM	R112AW	R112AM	R112BM
R200AM	R200BM	R202AM	R210AW	R210AM	R1411	R1413	R1414
R1415	R1418	R1427	R1429	R1431	R1432	R1433AS	R1433BM
R1433BC	R1433BS	R1433C1M	R1433C1C	R1433C1S	R1433C2M	R1433C2C	R1433C2S
R1433D1M	R1433D1C	R1433D1S	R1433D2M	R1433D2C	R1433D2S	R1438	R1440
R1442AM	R1442BS	R1444AM	R1444BS	R1446A1M	R1446A2M	R1446BS	R1448AM
R1448BS	R5557A	R5557B	R5557C1	R5557C2	R5557D	R5561A	R5561B
R5561C	R5561D	R33AB	R35BM	R37BM	R39AM	R41AM	R41BM
R43AM	R43B1M	R43B2M	R45AM	R47AM	R49AM	R49BM	R51AM
R51BM	R53AM	R58AM	R58AC	R58BM	R58BC	R58CM	R58CC
R58DM	R58DC	R59AM	R59AW	R60AM	R60AC	R60B1M	R60B1C
R60B2M	R60B2C	R60C1M	R60C1C	R60C2M	R60C2C	R60DM	R60DC

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/Address 10 - 1F

BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
R60EM	R60EC	R60FM	R60FC	R65AM	R66AM	R66AW	R66BM
R66BW	R68AM	R68AW	R72AM	R72AW	R74AM	R74AW	R74BM
R74BW	R5040A	R5040B1	R5040B2	R5040C1	R5040C2	R5040D	R5040E1
R5040E2	R5040F	R141AM	R141BM	R141BW	R142	R147	R156AM
R156AW	R156BM	R156BW	R158	R165	R166	R167A	R167B
R170	R1404	R1408	R132	R135A	R135B	R136	R139
R140A	R140B	R145A	R145B	R1271A	R1271B	R1302M	R1302W
R1304M	R1304W	R9AM	R11AM	R13AM	R15AM	R17AM	R17B1M
R17B2M	R19AM	R19B1M	R19B2M	R21A1M	R21A2M	R21B1M	R21B2M
R21B3M	R23AM	R23B1M	R23B2M	R25AM	R25BC	R27AM	R27B1M
R27B2M	R29AM	R29BC	R31AM	R54A1M	R54A1C	R54A2M	R54A2C
R54A3M	R54A3C	R54B1M	R54B1C	R54B2M	R54B2C	R54B3M	R54B3C
R54C1M	R54C1C	R54C2M	R54C2C	R54D1M	R54D1C	R54D2M	R54D2C
R54D3M	R54D3C	R54E1M	R54E1C	R54E2M	R54E2C	R54F1M	R54F1C
R54F2M	R54F2C	R54G1M	R54G1C	R54G2M	R54G2C	R54HM	R54HC
R54JM	R54JC	R54KM	R54KC	R55AM	R56A1M	R56A1C	R56A2M

/Address 20 - 2F

BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
R56A2C	R56B1M	R56B1C	R56B2M	R56B2C	R56CM	R56CC	R56DM
R56DC	R56EM	R56EC	R56FM	R56FC	R57AM	R64AM	R64AW
R5006A	R5006B	R5006C	R5006D1	R5006D2	R5006E	R5006F	R5006G
R5006H	R5006J	R5006K	R5035A	R5035B	R5035C	R5035D	R5035E1
R5035E2	R5035E3	R5035F1	R5035F2	R5035F3	R5035G1	R5035G2	R5035H1
R5035H2	R5035H3	R5035J1	R5035J2	R5035K1	R5035K2	S71	S73
S75	S80	S81	S82	S83	S84	S85	S86
S90	S91	S92	S93	S94	S95	S100	S102
S110	S112	S200	S202	S210	S1411	S1413	S1414
S1415	S1418	S1427	S1429	S1431	S1432	S1433	S1438
S1440	S1442	S1444	S1446	S1448	S5557	S5561	S33
S35	S37	S39	S41	S43	S45	S47	S49
S51	S53	S58	S59	S60	S65	S66	S68
S72	S74	S5040	S141	S142	S147	S156	S158
S165	S166	S167	S170	S1404	S1408	S132	S135
S136	S139	S140	S145	S1271	S1302	S1304	S9

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/Address 30 – 3F

BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
S11	S13	S15	S17	S19	S21	S23	S25
S27	S29	S31	S54	S55	S56	S57	S64
S5006	S5035	L1442TRS	L1444TRS	L1446TRS	L1448TRS	L5561TRS	LCS14TRS
LCS59TRS	LCP1TRS	LCP2TRS	LCP3TRS	L5557TRS	LPL11TRS	LPL12TRS	LPL13TRS
LPL14TRS	LPL15TRS	LPL16TRS	LPL17TRS	LPL18TRS	-	LPL1TRS	LPL2TRS
LPL3TRS	LPL4TRS	LPL5TRS	LPL6TRS	LPL7TRS	LPL8TRS	LPL9TRS	LPL10TRS
TES	TRLR	TSHP	TSHN	TSJH	TACB	TRMW	TRMY
TSJP	TSJS	TLA	TLC	TLD	TLE	TMA	TMC
TMD	TME	TNA	TNC	TND	TNE	TPA	TPC
TPD	TPE	TRA	TRB	TRC	TRD	TSA	TSB
TSC	TTA	TTB	TUA	TUB	THGL	TVM	TDSK
TXHE	TAA	TAB	TAC	TAD	TBA	TBB	TBC
TBD	TCA	TCB	TCC	TCD	TDA	TDB	TDC
TDD	TEA	TEC	TED	TEE	TFA	TFC	TFD
TFE	TGA	TGB	TGC	TGD	THA	THB	THC
THD	TJA	TJB	TJC	TJD	TKA	TKB	TKC

/Address 40

BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
TKD	-	-	-	-	-	-	-

2.4 Link Status

Links status sent to DIS1, DIS2 and DIS3.

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3 ECS LINK TO SMART PC LINK 2

3.1 Overview

This ECS remote system link operates from port 7. It is a link to SMART PC with ETB type initialisation.

3.2 Link Characteristics

Port(s)	7	Baud Rate	9600
Physical Name	P7	Time-Out Period (secs)	2
Area	SPC2	Message Retry Count	2
Protocol	BR1810	Message Retry Field Flag	Set

3.3 Signalling Items

Changes on the status of the following signalling items will be transmitted by the ECS to SMART PC LINK 2:

/Address 00 - 0F

BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
R71AM	R71BM	R73AM	R75AM	R75BM	R80AM	R81AM	R82AM
R83AM	R83BW	R83BM	R83CW	R83CM	R84AW	R84AM	R84BM
R85AW	R85AM	R86AW	R86AM	R90AM	R90BM	R91AM	R91BM
R92AM	R92BM	R93AM	R93BM	R94AW	R94AM	R94BM	R94CM
R95AM	R95BM	R100AM	R102AM	R110AM	R112AW	R112AM	R112BM
R200AM	R200BM	R202AM	R210AW	R210AM	R1411	R1413	R1414
R1415	R1418	R1427	R1429	R1431	R1432	R1433AS	R1433BM
R1433BC	R1433BS	R1433C1M	R1433C1C	R1433C1S	R1433C2M	R1433C2C	R1433C2S
R1433D1M	R1433D1C	R1433D1S	R1433D2M	R1433D2C	R1433D2S	R1438	R1440
R1442AM	R1442BS	R1444AM	R1444BS	R1446A1M	R1446A2M	R1446BS	R1448AM
R1448BS	R5557A	R5557B	R5557C1	R5557C2	R5557D	R5561A	R5561B
R5561C	R5561D	R33AB	R35BM	R37BM	R39AM	R41AM	R41BM
R43AM	R43B1M	R43B2M	R45AM	R47AM	R49AM	R49BM	R51AM
R51BM	R53AM	R58AM	R58AC	R58BM	R58BC	R58CM	R58CC
R58DM	R58DC	R59AM	R59AW	R60AM	R60AC	R60B1M	R60B1C
R60B2M	R60B2C	R60C1M	R60C1C	R60C2M	R60C2C	R60DM	R60DC

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/Address 10 - 1F

BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
R60EM	R60EC	R60FM	R60FC	R65AM	R66AM	R66AW	R66BM
R66BW	R68AM	R68AW	R72AM	R72AW	R74AM	R74AW	R74BM
R74BW	R5040A	R5040B1	R5040B2	R5040C1	R5040C2	R5040D	R5040E1
R5040E2	R5040F	R141AM	R141BM	R141BW	R142	R147	R156AM
R156AW	R156BM	R156BW	R158	R165	R166	R167A	R167B
R170	R1404	R1408	R132	R135A	R135B	R136	R139
R140A	R140B	R145A	R145B	R1271A	R1271B	R1302M	R1302W
R1304M	R1304W	R9AM	R11AM	R13AM	R15AM	R17AM	R17B1M
R17B2M	R19AM	R19B1M	R19B2M	R21A1M	R21A2M	R21B1M	R21B2M
R21B3M	R23AM	R23B1M	R23B2M	R25AM	R25BC	R27AM	R27B1M
R27B2M	R29AM	R29BC	R31AM	R54A1M	R54A1C	R54A2M	R54A2C
R54A3M	R54A3C	R54B1M	R54B1C	R54B2M	R54B2C	R54B3M	R54B3C
R54C1M	R54C1C	R54C2M	R54C2C	R54D1M	R54D1C	R54D2M	R54D2C
R54D3M	R54D3C	R54E1M	R54E1C	R54E2M	R54E2C	R54F1M	R54F1C
R54F2M	R54F2C	R54G1M	R54G1C	R54G2M	R54G2C	R54HM	R54HC
R54JM	R54JC	R54KM	R54KC	R55AM	R56A1M	R56A1C	R56A2M

/Address 20 - 2F

BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
R56A2C	R56B1M	R56B1C	R56B2M	R56B2C	R56CM	R56CC	R56DM
R56DC	R56EM	R56EC	R56FM	R56FC	R57AM	R64AM	R64AW
R5006A	R5006B	R5006C	R5006D1	R5006D2	R5006E	R5006F	R5006G
R5006H	R5006J	R5006K	R5035A	R5035B	R5035C	R5035D	R5035E1
R5035E2	R5035E3	R5035F1	R5035F2	R5035F3	R5035G1	R5035G2	R5035H1
R5035H2	R5035H3	R5035J1	R5035J2	R5035K1	R5035K2	S71	S73
S75	S80	S81	S82	S83	S84	S85	S86
S90	S91	S92	S93	S94	S95	S100	S102
S110	S112	S200	S202	S210	S1411	S1413	S1414
S1415	S1418	S1427	S1429	S1431	S1432	S1433	S1438
S1440	S1442	S1444	S1446	S1448	S5557	S5561	S33
S35	S37	S39	S41	S43	S45	S47	S49
S51	S53	S58	S59	S60	S65	S66	S68
S72	S74	S5040	S141	S142	S147	S156	S158
S165	S166	S167	S170	S1404	S1408	S132	S135
S136	S139	S140	S145	S1271	S1302	S1304	S9

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/Address 30 – 3F

BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
S11	S13	S15	S17	S19	S21	S23	S25
S27	S29	S31	S54	S55	S56	S57	S64
S5006	S5035	L1442TRS	L1444TRS	L1446TRS	L1448TRS	L5561TRS	LCS14TRS
LCS59TRS	LCP1TRS	LCP2TRS	LCP3TRS	L5557TRS	LPL11TRS	LPL12TRS	LPL13TRS
LPL14TRS	LPL15TRS	LPL16TRS	LPL17TRS	LPL18TRS	-	LPL1TRS	LPL2TRS
LPL3TRS	LPL4TRS	LPL5TRS	LPL6TRS	LPL7TRS	LPL8TRS	LPL9TRS	LPL10TRS
TES	TRLR	TSHP	TSHN	TSJH	TACB	TRMW	TRMY
TSJP	TSJS	TLA	TLC	TLD	TLE	TMA	TMC
TMD	TME	TNA	TNC	TND	TNE	TPA	TPC
TPD	TPE	TRA	TRB	TRC	TRD	TSA	TSB
TSC	TTA	TTB	TUA	TUB	THGL	TVM	TDSK
TXHE	TAA	TAB	TAC	TAD	TBA	TBB	TBC
TBD	TCA	TCB	TCC	TCD	TDA	TDB	TDC
TDD	TEA	TEC	TED	TEE	TFA	TFC	TFD
TFE	TGA	TGB	TGC	TGD	THA	THB	THC
THD	TJA	TJB	TJC	TJD	TKA	TKB	TKC

/Address 40

BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
TKD	-	-	-	-	-	-	-

3.4 Link Status

Links status sent to DIS1, DIS2 and DIS3.

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