



FMTX SERIES RDS DYNAMIC TEXT PROTOCOL

The FMTX Series of FM broadcast transmitters use a transparent ASCII protocol, to suit a number of radio playout systems with the minimum of additional data processing or interfacing requirements.

IMPORTANT! The 9-way D-Sub connector on the rear of the transmitter is used for a number of control and monitoring functions. The RS232 input for the RDS dynamic RadioTEXT feature shares this connector, therefore pin connections are not the same as a standard RS232 port. Take care NOT to connect an ordinary RS232 cable with standard wiring to this connector. See the cross-over wiring diagram below.

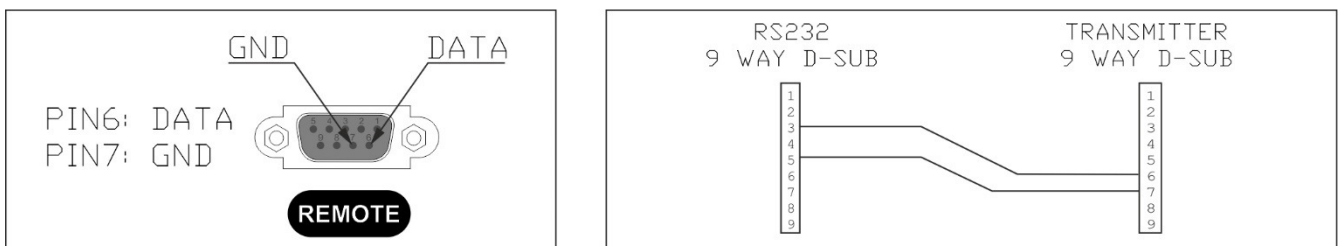
i *The RS232 port provided on streaming studio-transmitter links can be used to send ‘Now Playing...’ data to the transmitter. Alternatively, transparent ‘RS232 over TCP/IP ethernet’ converters are widely available for internet or network connectivity.*

When setting-up the transmitter for the first time, the ‘fixed’ RDS content must be programmed via the USB interface, using a Windows™ PC or Laptop running the free software available at lucorobroadcast.com/support. It is recommended that a default generic RadioTEXT message (eg. station slogan and contact details) be included. After a power re-set, this generic message will appear, until updates are sent via RS232.

Using RS232, simply send a sequence of ASCII characters (up to 64 characters in total length), followed by the ASCII Form Feed character 0x0C (CTRL+‘L’ on a keyboard) . 0x0C commands the RDS encoder to write empty spaces over unused characters in the RadioTEXT field, then return to the start position of the 64-character register, ready for the next update.

9600bps	8	N	1
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RS232 Data Format



Rear panel connections

Below shows the ASCII characters available in the encoder (Decimal, Hexadecimal, Character). These are in the range 32 to 122 (inclusive).

However, it should be noted that many radio receivers, especially older models, can only decode basic characters from this range. Use of some special characters listed below may cause unexpected results on some radio displays.

32	20	
33	21	!
34	22	"
35	23	#
36	24	\$
37	25	%
38	26	&
39	27	'
40	28	(
41	29)
42	2A	*
43	2B	+
44	2C	,
45	2D	-
46	2E	.
47	2F	/
48	30	0
49	31	1
50	32	2
54	36	6
55	37	7

56	38	8
57	39	9
58	3A	:
59	3B	;
60	3C	<
61	3D	=
62	3E	>
63	3F	?
64	40	@
65	41	A
66	42	B
67	43	C
68	44	D
69	45	E
70	46	F
71	47	G
72	48	H
73	49	I
74	4A	J
78	4E	N
79	4F	O

80	50	P
81	51	Q
82	52	R
83	53	S
84	54	T
85	55	U
86	56	V
87	57	W
88	58	X
89	59	Y
90	5A	Z
91	5B	[
92	5C	\
93	5D]
94	5E	^
95	5F	_
96	60	`
97	61	a
98	62	b
102	66	f
103	67	g

104	68	h
105	69	i
106	6A	j
107	6B	k
108	6C	l
109	6D	m
110	6E	n
111	6F	o
112	70	p
113	71	q
114	72	r
115	73	s
116	74	t
117	75	u
118	76	v
119	77	w
120	78	x
121	79	y
122	7A	z

For traffic and travel bulletins, the ASCII characters below can be used. A Form Feed Character is NOT required, and a full 64 character text field is available immediately after sending these control characters.

RDS TA On	124	7C	
RDS TA Off	126	7E	~

Remember to send the RDS TA Off character immediately after each travel bulletin. Misuse of the RDS Traffic Announcement feature will result in sanctions by the broadcasting authority. RDS TA can also be activated and deactivated via the transmitter’s 9-way ‘D’-sub connector.

Broadcasters planning to use the RDS TA feature, either via RS232 or via the 9-way ‘D’-sub connector, should ensure that the ‘TP’ option is set (ticked) when programming the fixed RDS content via USB.

RS232 dynamic RadioTEXT control is only available on Lucoro Broadcast FM transmitter models with an integrated RDS encoder and with a serial number higher than 0322000.