

Rädecker & Lunau Square Pianoforte, Lübeck c1830						
Double strung throughout						
Pitch a' = 425		Total Tension kgf = 2429.2				
NOTE	FREQ Hz	LENGTH	DIAMETER	MATERIAL	TENSION	
		mm longest string	inches		kgf single string	kgf
FF	1	42.2	1390			19.9
FF#	2	44.7	1357			18.7
GG	3	47.3	1325			17.6
GG#	4	50.1	1294			16.2
AA	5	53.1	1374			17.9
AA#	6	56.3	1345			17.6
BB	7	59.6	1314			18.0
C	8	63.2	1284			18.1
C#	9	66.9	1255			17.3
D	10	70.9	1226			16.8
D#	11	75.1	1198	0.033 r		15.6
E	12	79.6	1168	0.033 r		16.7
F	13	84.3	1139	0.033 r		17.8
F#	14	89.3	1111	0.033 y		18.6
G	15	94.7	1083	0.033 y		19.9
G#	16	100.3	1056	0.033 y		21.2
A	17	106.3	1028	0.030 y		18.6
A#	18	112.6	1001	0.030 y		19.8
B	19	119.3	972	0.030 i		19.6
c	20	126.4	944	0.030 i		20.8
c#	21	133.9	916	0.030 i		21.9
d	22	141.8	887	0.030 i		23.1
d#	23	150.3	857	0.026 i		18.2
e	24	159.2	828	0.026 i		19.0
f	25	168.7	799	0.026 i		19.9
f#	26	178.7	770	0.026 i		20.7
g	27	189.3	741	0.026 i		21.6
g#	28	200.6	711	0.026 i		22.3
a	29	212.5	683	0.026 i		23.1
a#	30	225.1	653	0.026 i		23.7
b	31	238.5	622	0.023 i		18.9
c'	32	252.7	591	0.023 i		19.1
c#'	33	267.7	561	0.023 i		19.3
d'	34	283.7	533	0.023 i		19.6
d#'	35	300.5	506	0.023 i		19.8
e'	36	318.4	478	0.023 i		19.9
f'	37	337.3	451	0.023 i		19.8
f#'	38	357.4	426	0.023 i		19.9
g'	39	378.6	403	0.023 i		20.0
g#'	40	401.1	381	0.023 i		20.0
a'	41	425.0	358	0.023 i		19.9
a#'	42	450.3	337	0.023 i		19.7
b'	43	477.0	317	0.023 i		19.6
c''	44	505.4	299	0.023 i		19.6
c#''	45	535.5	281	0.023 i		19.4
d''	46	567.3	265	0.023 i		19.4
d#''	47	601.0	249	0.023 i		19.2
e''	48	636.8	233	0.023 i		18.9
f''	49	674.6	219	0.020 i		14.2
f#''	50	714.8	206	0.020 i		14.1
g''	51	757.3	198	0.020 i		14.6
g#''	52	802.3	181	0.020 i		13.7
a''	53	850.0	170	0.020 i		13.5
a#''	54	900.5	159	0.020 i		13.3
b''	55	954.1	149	0.020 i		13.1
c'''	56	1010.8	140	0.020 i		13.0
c#'''	57	1070.9	131	0.020 i		12.8
d'''	58	1134.6	124	0.020 i		12.8
d#'''	59	1202.1	114	0.020 i		12.2
e'''	60	1273.6	109	0.020 i		12.5
f'''	61	1349.3	105	0.018 i		10.5
f#'''	62	1429.5	99	0.018 i		10.5
g'''	63	1514.5	94	0.018 i		10.6
g#'''	64	1604.6	89	0.018 i		10.7
a'''	65	1700.0	83	0.018 i		10.5
a#'''	66	1801.1	79	0.018 i		10.6
b'''	67	1908.2	74	0.016 i		8.3
c''''	68	2021.7	70	0.016 i		8.3
c#''''	69	2141.9	66	0.016 i		8.3
d''''	70	2269.2	61	0.016 i		8.0
d#''''	71	2404.2	59	0.016 i		8.4
e''''	72	2547.1	57	0.016 i		8.7
f''''	73	2698.6	55	0.016 i		9.1

COVERED STRING DATA						
NOTE	CORE			COVER		
	Diameter inches	Material	Mass	Diameter inches	Material	Pitch mm
1	0.036	y	5519	0.022	c	1.2
2	0.036	y	5519	0.020	c	1.2
3	0.036	y	5519	0.018	c	1.2
4	0.032	y	4361	0.018	c	1.2
5	0.032	y	4361	0.016	c	1.2
6	0.032	y	4361	0.016	c	1.5
7	0.032	y	4361	0.014	c	1.2
8	0.032	y	4361	0.013	c	1.2
9	0.032	y	4361	0.012	c	1.5
10	0.032	y	4361	0.010	c	1.5

WIRE DENSITIES		
MATERIAL	DENSITY kg/m3	CONSTANT
Z Red Brass	8564	2.74E+15
Z Yellow Brass	8404	2.69E+15
Z Soft Iron	7847	2.51E+15
Copper	8890	2.84E+15

