

KWIKSTAIRS USA

US Patent No. 8,887,456

< 49 ¾" WIDE BOX STRING / < 46 ¾" WIDE CUT STRING

10 / 7 = 70" – 124" Total Rise

9 / 8 = 70" – 132" Total Rise

Use your finished total rise measurement to find the relevant template letter that you require for your staircase.

There are two types of templates within the pack. One is suitable for a 10" run and a rise of between 6 ½" – 7 ¾" (10/7) and the other for a 9" run and a rise of between 7 – 8 ¼" (9/8). The template will help you to ensure that all the risers are the same which is essential to be compliant to the current building code for residential stairs. You are responsible for ensuring the correct code for your state and the construction of your staircase.

If for any reason your total rise does not appear in the Template Requirement section then please use the calculator supplied or visit the Web Site for your unique Template reference letter.

Follow all of the instructions precisely to ensure a well built, safe, accurate staircase. If any further information is required then visit the web site www.kwikstairs.com

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KWIKSTAIRS

10/7 TEMPLATE REQUIREMENT (6 1/2 - 7 3/4)

UP TO TOTAL RISE "	10 TREADS	11 TREADS	12 TREADS	13 TREADS	14 TREADS	15 TREADS	16 TREADS	17 TREADS	18 TREADS
70	I	-	-	-	-	-	-	-	-
70 1/2	J	-	-	-	-	-	-	-	-
71	K	-	-	-	-	-	-	-	-
71 1/2	K	A	-	-	-	-	-	-	-
72	L	B	-	-	-	-	-	-	-
72 1/2	M	B	-	-	-	-	-	-	-
73	N	C	-	-	-	-	-	-	-
73 1/2	O	D	-	-	-	-	-	-	-
74	O	E	-	-	-	-	-	-	-
74 1/2	P	E	-	-	-	-	-	-	-
75	Q	F	-	-	-	-	-	-	-
75 1/2	R	G	-	-	-	-	-	-	-
76	S	H	-	-	-	-	-	-	-
76 1/2	S	H	-	-	-	-	-	-	-
77	T	I	-	-	-	-	-	-	-
77 1/2	U	J	-	-	-	-	-	-	-
78	-	J	A	-	-	-	-	-	-
78 1/2	-	K	B	-	-	-	-	-	-
79	-	L	B	-	-	-	-	-	-
79 1/2	-	M	C	-	-	-	-	-	-
80	-	M	D	-	-	-	-	-	-
80 1/2	-	N	D	-	-	-	-	-	-
81	-	O	E	-	-	-	-	-	-
81 1/2	-	P	F	-	-	-	-	-	-
82	-	P	F	-	-	-	-	-	-
82 1/2	-	Q	G	-	-	-	-	-	-
83	-	R	H	-	-	-	-	-	-
83 1/2	-	R	H	-	-	-	-	-	-
84	-	S	I	-	-	-	-	-	-
84 1/2	-	T	J	A	-	-	-	-	-
85	-	U	J	B	-	-	-	-	-
85 1/2	-	U	K	B	-	-	-	-	-
86	-	-	L	C	-	-	-	-	-
86 1/2	-	-	L	C	-	-	-	-	-
87	-	-	M	D	-	-	-	-	-
87 1/2	-	-	N	E	-	-	-	-	-
88	-	-	N	E	-	-	-	-	-
88 1/2	-	-	O	F	-	-	-	-	-
89	-	-	P	G	-	-	-	-	-
89 1/2	-	-	P	G	-	-	-	-	-
90	-	-	Q	H	-	-	-	-	-

KWIKSTAIRS

9/8 TEMPLATE REQUIREMENT (7 - 8 1/4)

UP TO TOTAL RISE"	10 TREADS	11 TREADS	12 TREADS	13 TREADS	14 TREADS	15 TREADS	16 TREADS	17 TREADS	18 TREADS
70	A	-	-	-	-	-	-	-	-
70 1/2	B	-	-	-	-	-	-	-	-
71	C	-	-	-	-	-	-	-	-
71 1/2	C	-	-	-	-	-	-	-	-
72	D	-	-	-	-	-	-	-	-
72 1/2	E	-	-	-	-	-	-	-	-
73	F	-	-	-	-	-	-	-	-
73 1/2	G	-	-	-	-	-	-	-	-
74	G	-	-	-	-	-	-	-	-
74 1/2	H	-	-	-	-	-	-	-	-
75	I	-	-	-	-	-	-	-	-
75 1/2	J	-	-	-	-	-	-	-	-
76	K	-	-	-	-	-	-	-	-
76 1/2	K	-	-	-	-	-	-	-	-
77	L	A	-	-	-	-	-	-	-
77 1/2	M	B	-	-	-	-	-	-	-
78	N	B	-	-	-	-	-	-	-
78 1/2	O	C	-	-	-	-	-	-	-
79	O	D	-	-	-	-	-	-	-
79 1/2	P	E	-	-	-	-	-	-	-

80	Q	E	-	-	-	-	-	-	-
80 1/2	R	F	-	-	-	-	-	-	-
81	S	G	-	-	-	-	-	-	-
81 1/2	S	H	-	-	-	-	-	-	-
82	T	H	-	-	-	-	-	-	-
82 1/2	U	I	-	-	-	-	-	-	-
83	-	J	-	-	-	-	-	-	-
83 1/2	-	J	-	-	-	-	-	-	-
84	-	K	A	-	-	-	-	-	-
84 1/2	-	L	B	-	-	-	-	-	-
85	-	M	B	-	-	-	-	-	-
85 1/2	-	M	C	-	-	-	-	-	-
86	-	N	D	-	-	-	-	-	-
86 1/2	-	O	D	-	-	-	-	-	-
87	-	P	E	-	-	-	-	-	-
87 1/2	-	P	F	-	-	-	-	-	-
88	-	Q	F	-	-	-	-	-	-
88 1/2	-	R	G	-	-	-	-	-	-
89	-	R	H	-	-	-	-	-	-
89 1/2	-	S	H	-	-	-	-	-	-

KWIKSTAIRS

9/8 TEMPLATE REQUIREMENT (7 - 8 1/4)

UP TO TOTAL RISE"	10 TREADS	11 TREADS	12 TREADS	13 TREADS	14 TREADS	15 TREADS	16 TREADS	17 TREADS	18 TREADS
90	-	T	I	-	-	-	-	-	-
90 1/2	-	U	J	-	-	-	-	-	-
91	-	U	J	A	-	-	-	-	-
91 1/2	-	-	K	B	-	-	-	-	-
92	-	-	L	B	-	-	-	-	-
92 1/2	-	-	L	C	-	-	-	-	-
93	-	-	M	C	-	-	-	-	-
93 1/2	-	-	N	D	-	-	-	-	-
94	-	-	N	E	-	-	-	-	-
94 1/2	-	-	O	E	-	-	-	-	-
95	-	-	P	F	-	-	-	-	-
95 1/2	-	-	P	G	-	-	-	-	-
96	-	-	Q	G	-	-	-	-	-
96 1/2	-	-	R	H	-	-	-	-	-
97	-	-	R	H	-	-	-	-	-
97 1/2	-	-	S	I	-	-	-	-	-
98	-	-	T	J	A	-	-	-	-
98 1/2	-	-	T	J	B	-	-	-	-
99	-	-	U	K	B	-	-	-	-
99 1/2	-	-	-	K	C	-	-	-	-
100	-	-	-	L	C	-	-	-	-
100 1/2	-	-	-	M	D	-	-	-	-
101	-	-	-	M	D	-	-	-	-

101 1/2	-	-	-	N	E	-	-	-	-
102	-	-	-	O	F	-	-	-	-
102 1/2	-	-	-	O	F	-	-	-	-
103	-	-	-	P	G	-	-	-	-
103 1/2	-	-	-	P	G	-	-	-	-
104	-	-	-	Q	H	-	-	-	-
104 1/2	-	-	-	R	H	-	-	-	-
105	-	-	-	R	I	A	-	-	-
105 1/2	-	-	-	S	J	B	-	-	-
106	-	-	-	S	J	B	-	-	-
106 1/2	-	-	-	T	K	C	-	-	-
107	-	-	-	U	K	C	-	-	-
107 1/2	-	-	-	U	L	D	-	-	-
108	-	-	-	-	L	D	-	-	-
108 1/2	-	-	-	-	M	E	-	-	-
109	-	-	-	-	N	E	-	-	-
109 1/2	-	-	-	-	N	F	-	-	-
110	-	-	-	-	O	F	-	-	-
110 1/2	-	-	-	-	O	G	-	-	-

KWIKSTAIRS

9/8 TEMPLATE REQUIREMENT (7 - 8 1/4)

UP TO TOTAL RISE"	10 TREADS	11 TREADS	12 TREADS	13 TREADS	14 TREADS	15 TREADS	16 TREADS	17 TREADS	18 TREADS
111	-	-	-	-	P	G	-	-	-
111 1/2	-	-	-	-	P	H	A	-	-
112	-	-	-	-	Q	H	A	-	-
112 1/2	-	-	-	-	R	I	B	-	-
113	-	-	-	-	R	J	B	-	-
113 1/2	-	-	-	-	S	J	C	-	-
114	-	-	-	-	S	K	C	-	-
114 1/2	-	-	-	-	T	K	D	-	-
115	-	-	-	-	T	L	D	-	-
115 1/2	-	-	-	-	U	L	E	-	-
116	-	-	-	-	-	M	E	-	-
116 1/2	-	-	-	-	-	M	F	-	-
117	-	-	-	-	-	N	F	-	-
117 1/2	-	-	-	-	-	N	G	-	-
118	-	-	-	-	-	O	G	-	-
118 1/2	-	-	-	-	-	O	H	-	-
119	-	-	-	-	-	P	H	A	-
119 1/2	-	-	-	-	-	P	I	A	-
120	-	-	-	-	-	Q	I	B	-
120 1/2	-	-	-	-	-	R	J	B	-
121	-	-	-	-	-	R	J	C	-
121 1/2	-	-	-	-	-	S	K	C	-
122	-	-	-	-	-	S	K	D	-
122 1/2	-	-	-	-	-	T	L	D	-

144 1/2	-	-	-	-	-	-	-	-	Q
145	-	-	-	-	-	-	-	-	R
145 1/2	-	-	-	-	-	-	-	-	R
146	-	-	-	-	-	-	-	-	S
146 1/2	-	-	-	-	-	-	-	-	S
147	-	-	-	-	-	-	-	-	T
147 1/2	-	-	-	-	-	-	-	-	T
148	-	-	-	-	-	-	-	-	U
148 1/2	-	-	-	-	-	-	-	-	U

STRAIGHT FLIGHT BOX STRING STAIRCASE

< 49 3/4" WIDE BOX STRING

10 / 7 = 70" – 124" Total Rise

9 / 8 = 70" – 132" Total Rise

STARTING THE STRAIGHT FLIGHT BOX STRING STAIRCASE

- 1) You are responsible for ensuring that you are correctly and accurately constructing your staircase to conform to the current stair/building code for your state.
- 2) If your local building code regulates a minimum run of 10" per tread and maximum rise of 7 3/4" then all the way through the construction of your staircase use the template requirement labelled 10/7 and the template labelled 10/7.
- 3) If your local building code regulates a minimum run of 9" per tread and maximum rise of 8 1/4" then all the way through the construction of your staircase use the template requirement labelled 9/8 and the template labelled 9/8.
- 4) Using your 'on-site' total rise measurement you need to look on the template requirement sheets either 10/7 or 9/8 for the nearest measurement, this will inform you of two details; how many treads you can use (including top tread/nosing) and your appropriate Template Letter.
- 5) Now that you know your Template Letter you need to cut it from the printed card labelled either 10/7 or 9/8. Carefully cut out your required template following your chosen letter, label the template as below and discard the redundant section.

As shown above

- 1) Label this side X
- 2) Point A far left
- 3) Point B far right
- 4) Corners 1, 2, 3 left to right from first full cut out
- 5) R = riser position
- 6) T = tread position

- Label this side Y
- Point A far right
- Point B far left
- Corners 1, 2, 3 right to left from first full cut out
- R = riser position
- T = tread position

STRINGS

- 6) Lay one string on the floor. Have face up side X of your chosen template and lay the template on the string as shown in fig A. The template must be exactly flush with both the edge and the end of the string at point A. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Draw around the two lengths of your template that form point A and extend the line through the whole string as shown in fig B. Glue, drill and screw 2 support blocks to the string in the positions corner 1 and corner 2 ensuring the long edge faces away from the template as shown in fig C. Do not drill too close to the edge of the support blocks or too close to any knots as it may split when you screw to fix, use at least 3 screws per block.

Fig A

Fig B

- 7) Remove the template and cut to the lines drawn and extend the cut through the whole string as shown in fig D. This new shape of the end of your string becomes the bottom/lowest part of the string.
- 8) Re-lay the template on the string as shown in fig D. You only move the template up by **one** support block at a time. The template must be exactly flush with the edge of the string and must fit tight against the last support block you have fixed. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Glue, drill and screw 1 support block in position corner 2 to the string as shown in fig D.

Fig C

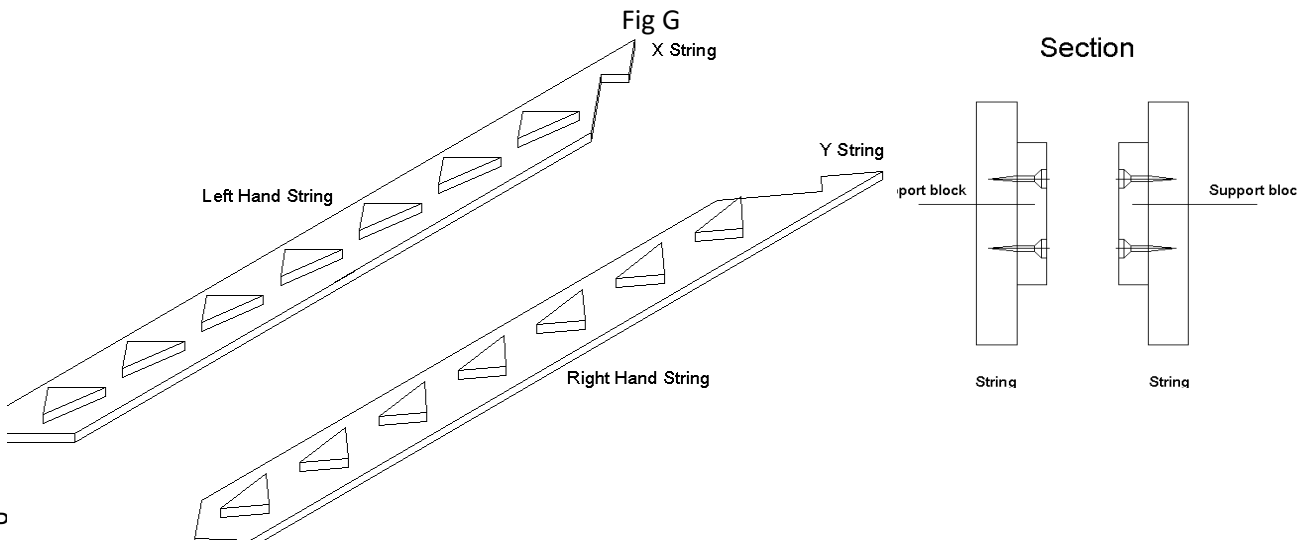
Fig D

- 9) Repeat this process until you have fixed the supports for **all bar one** of your total number of treads required.
- 10) For your last tread/nosing you need to lay the template exactly flush with the edge of the string and corner 2 must fit tight against the last support block you have fixed. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Draw around the three lengths of your template that form point B and corner 3 and extend the line through the whole string as shown in fig E. Remove the template and cut to the lines drawn, extending the cut through the whole string as shown in fig F. This new shape of the end of your string becomes the top/highest part of the string.

Fig E

Fig F

- 11) Lay the other string on the floor and this time have face up side Y of your template, repeat points 6 – 10. This will give you a left hand (side X) and a right hand (side Y) string for your stairs as shown in fig G.



PREP

- 12) The overall width of your stairs including the strings is currently 49 ¾". Should you want your staircase to be smaller than 49 ¾" wide then you must alter the width of the treads and risers accordingly.
- 13) You need to cut each of the risers you need to the exact height required before constructing your staircase, you need to measure from the top of the support block to the top of the immediately higher support block as shown in fig I

Fig I

- 14) Leave the first/lowest riser and the top one as they may need to be altered just prior to fitting on site when the desired trim/stair tread over-clad is known.
- 15) Take one string and place it on a solid level surface. The risers are to be fitted to the support blocks on the string, if you are unsure of this position then please refer to point R on your template. Take a riser and ensure it is flush with the top edge of the support block on your string and tight against the string. Now glue, drill and screw the riser to the front face of the support block ensuring at all times the top edges are flush with each other as shown in fig H

Fig H

- 16) Attach the other string and repeat point 15
- 17) Now repeat point 15 until all but the bottom and top risers have been glued, drilled and screwed to both strings. Keep to hand the bottom and top risers for fitting on site.

TREADS

- 18) If you are using the 10/7 template then please go straight to point 20
- 19) If you are using the 9/8 template then you will need to reduce the run of each tread before you continue. The current run of the tread is 10" and you need to reduce that to exactly 9" therefore you will need to cut 1" from the overall run of the tread.
- 20) The treads are to be fixed to the support blocks, if you are unsure of this position then refer to point T on your template. Fix the tread with glue to every touching face then drill and screw through the tread into the support block and into the riser ensuring that the back edge of the tread is tight against the front face of the riser and tight against the string. Drill and screw the back face of the riser into the back edge of the tread as shown in fig J. Then fix each required tread in the same way to every support block on your string remembering to keep to hand one nosing/tread for fitting on site.

Fig J

ADDITIONAL CARRIAGE

- 21) If you require any additional carriage, see page 32, now is the time to fit it.

GLUE BLOCKS

- 22) You will need to fix your glue blocks so that they run along the underside of your staircase in-between the strings and any additional carriage.
- 23) Glue two long faces of the glue block and place them on the underside of the stair into the corner between each tread and riser. Drill and screw the glue block from the face of the tread and riser as shown in fig K.

Fig K

TRIM DETAIL

- 24) You need to know the type of trim/stair tread over-clad being used on your staircase as you will need to cut both the strings and first riser accordingly. Cut from the bottom of your string the same thickness as your trim/stair tread over-clad and then cut the riser to suit as shown in fig L

Fig L

- 25) You may also need to cut the same thickness from the top of your staircase on the hook/seat cut if you want your top tread to be level with your finished floor as shown in fig M

Fig M

26) Your stairs are now ready to fix into place. Remember to keep to hand your riser and nosing/tread for use when fitting.

STRAIGHT FLIGHT CUT STRING STAIRCASE

< 46 ¾" WIDE CUT STRING

10 / 7 = 70" – 124" Total Rise

9 / 8 = 70" – 132" Total Rise

STARTING THE STRAIGHT FLIGHT CUT STRING STAIRCASE

- 1) You are responsible for ensuring that you are correctly and accurately constructing your staircase to conform to the current stair/building code for your state.
- 2) If your local building code regulates a minimum run of 10" per tread and maximum rise of 7 ¾" then all the way through the construction of your staircase use the template requirement labelled 10/7 and the template labelled 10/7.
- 3) If your local building code regulates a minimum run of 9" per tread and maximum rise of 8 ¼" then all the way through the construction of your staircase use the template requirement labelled 9/8 and the template labelled 9/8.
- 4) Using your 'on-site' total rise measurement you need to look on the template requirement sheets either 10/7 or 9/8 for the nearest measurement, this will inform you of two details; how many treads you can use (including top tread/nosing) and your appropriate Template Letter.
- 5) Now that you know your Template Letter you need to cut it from the printed card labelled either 10/7 or 9/8. Carefully cut out your required template following your chosen letter, label the template as below and discard the redundant section.

As shown above

- 1) Label this side X
- 2) Point A far left
- 3) Point B far right
- 4) Corners 1, 2, 3 left to right from point of first full cut out
- 5) R = riser position
- 6) T = tread position
- 7) Fold = Fold Line

- Label this side Y
- Point A far right
- Point B far left
- Corners 1, 2, 3 right to left from point of first full cut out
- R = riser position
- T = tread position
- Fold = Fold Line

- 6) To ensure that your template is ready for your cut string you need to make a straight fold along the internal corners of your template as shown in Fig N.

Fig N

STRINGS

- 7) Lay one string on the floor. Have face up side X of your chosen template and lay the template on the string as shown in fig O. The folded section of your template must be sit neatly along the edge of the string and corner 1 on your template should be level with the bottom of the string. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Now draw around your template from corner 1 through to corner 3.

Fig O

- 8) Using a straight edge follow the edge of the template from point A past corner 1 through the whole string as shown in fig Q. . This new line on the end of your string becomes the bottom/lowest part of the string when cut.

Fig Q

- 9) Move the template up on the string by **one** corner point at a time and ensure it sits tight against the last corner you have drawn as shown in fig R. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Now draw around the template from your last line until corner 3 as shown in fig S

Fig R

Fig S

- 10) Repeat this process until you have drawn enough for **all** of your total number of treads required including your top one
- 11) From your last tread you will need a straight edge to mark a plumb cut line through the whole string, follow the direction of the template label R though corner 3 as shown in fig T. This new shape of the end of your string becomes the top/highest part of the string.

Fig T

- 12) Now cut through the string accurately along your drawn lines. This will give you your left hand (side X) cut string as shown in fig U

Fig U

- 13) Lay the other string on the floor and this time have face up side Y of your template, repeat points 6 - 12. This will give your right hand (side Y) cut string as shown in fig V

Fig V

PREPARING THE TREADS AND RISERS

- 14) The overall width of your stairs including the strings is currently $46 \frac{3}{4}$ ". Should you want your staircase to be smaller than $46 \frac{3}{4}$ " wide then you must alter the width of the treads and risers accordingly.
- 15) You need to cut each of the risers you need to the exact height required before constructing your staircase, you need to measure from the top edge of the string to the immediately higher top edge of the string as shown in fig Z

Fig Z

RISERS

- 16) Leave the first/lowest riser and the top one as they may need to be altered just prior to fitting on site when the desired trim/stair tread over-clad is known.
- 17) Take one string and place it on a solid level surface. The risers are to be fitted to the string, if you are unsure of this position then please refer to point R on your template. Take a riser and ensure it is flush with the top

edge and the outside face of the string. Now glue, drill and screw the riser to the string ensuring at all times the top and outside edges are flush with each other as shown in fig W

Fig W

- 18) Attach the other string and repeat point 17
- 19) Now repeat point 17 until all but the bottom and top risers have been glued, drilled and screwed to both strings. Keep to hand the bottom and top risers for fitting on site.

TREADS

- 20) If you are using the 10/7 template then please go straight to point 22
- 21) If you are using the 9/8 template then you will need to reduce the run of each tread before you continue. The current run of the tread is 10" and you need to reduce that to exactly 9" therefore you will need to cut 1" from the overall run of the tread.
- 22) The treads are to be fixed to the string, if you are unsure of this position then refer to point T on your template. Fix the tread with glue to every touching face then drill and screw through the tread into the string and the riser ensuring that the back edge of the tread is tight against the front face of the riser and the outside face of the string also drill and screw the back face of the riser into the back edge of the tread as shown in fig Y.

Fig Y

- 23) Then fix each required tread in the same way **except** the very top one. Keep to hand one nosing/tread for fitting on site.

ADDITIONAL CARRIAGE

- 24) If you require any additional carriage, see page 32, now is the time to fit it.

GLUE BLOCKS

- 25) You will need to fix your glue blocks so that they run along the underside of your staircase in-between the strings and any additional carriage.
- 26) Glue two long faces of the glue block and place them on the underside of the stair into the corner between each tread and riser. Drill and screw the glue block from the face of the tread and riser as shown in fig AA

Fig AA

TRIM DETAIL

- 27) You need to know the type of trim/stair tread over-clad being used on your staircase as you will need to cut both the strings and first riser accordingly. Cut from the bottom of your string the same thickness as your trim/stair tread over-clad and then cut the riser to suit as shown in fig BB

Fig BB

- 28) Depending on how you wish to install your stairs depends on how you detail your top tread. If you wish to fix your top tread section under your trimmer then leave as is and fix accordingly as shown in fig DD

Fig DD

- 29) Should you wish to install your stairs by attaching to the front face of your trimmer/wall, using a ledger, then you will need to make a plumb cut through the whole string at the end point of the penultimate tread less the thickness of your ledger board as shown in fig EE
Fig EE

- 30) Your stairs are now ready to fix into place. Remember to keep to hand a riser and nosing/tread for use when fitting.

STRAIGHT FLIGHT BOX STRING LEFT HAND AND CUT STRING RIGHT HAND STAIRCASE

< 48 ¼" WIDE BOX STRING & CUT STRING

10 / 7 = 70" – 124" Total Rise

9 / 8 = 70" – 132" Total Rise

STARTING THE STRAIGHT FLIGHT BOX LEFT HAND STRING

- 1) You are responsible for ensuring that you are correctly and accurately constructing your staircase to conform to the current stair/building code for your state.
- 2) If your local building code regulates a minimum run of 10" per tread and maximum rise of 7 3/4" then all the way through the construction of your staircase use the template requirement labelled 10/7 and the template labelled 10/7.
- 3) If your local building code regulates a minimum run of 9" per tread and maximum rise of 8 1/4" then all the way through the construction of your staircase use the template requirement labelled 9/8 and the template labelled 9/8.
- 4) Using your 'on-site' total rise measurement you need to look on the template requirement sheets either 10/7 or 9/8 for the nearest measurement, this will inform you of two details; how many treads you can use (including top tread/nosing) and your appropriate Template Letter.
- 5) Now that you know your Template Letter you need to cut it from the printed card labelled either 10/7 or 9/8. Carefully cut out your required template following your chosen letter, label the template as below and discard the redundant section.

As shown above

- | | |
|--------|---|
| a.i.1) | Label this side X |
| a.i.2) | Point A far left |
| a.i.3) | Point B far right |
| a.i.4) | Corners 1, 2, 3 left to right from first full cut out |
| a.i.5) | R = riser position |
| a.i.6) | T = tread position |

STRINGS

- 6) Lay one string on the floor. Have face up side X of your chosen template and lay the template on the string as shown in fig A. The template must be exactly flush with both the edge and the end of the string at point A. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Draw around the two lengths of your template that form point A and extend the line through the whole string as shown in fig B. Glue, drill and screw 2 support blocks to the string in the positions corner 1 and corner 2 ensuring the long edge faces away from the template as shown in fig C. Do not drill too close to the

edge of the support blocks or too close to any knots as it may split when you screw to fix, use at least 3 screws per block.

Fig A

Fig B

- 7) Remove the template and cut to the lines drawn and extend the cut through the whole string as shown in fig D. This new shape of the end of your string becomes the bottom/lowest part of the string.
- 8) Re-lay the template on the string as shown in fig D. You only move the template up by **one** support block at a time. The template must be exactly flush with the edge of the string and must fit tight against the last support block you have fixed. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Glue, drill and screw 1 support block in position corner 2 to the string as shown in fig D.

Fig C

Fig D

- 9) Repeat this process until you have fixed the supports for **all bar one** of your total number of treads required.
- 10) For your last tread/nosing you need to lay the template exactly flush with the edge of the string and corner 2 must fit tight against the last support block you have fixed. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Draw around the three lengths of your template that form point B and corner 3 and extend the line through the whole string as shown in fig E. Remove the template and cut to the lines drawn, extending the cut through the whole string as shown in fig F. This new shape of the end of your string becomes the top/highest part of the string.

Fig E

Fig F

STARTING THE STRAIGHT FLIGHT CUT STRING RIGHT HAND SIDE

- 11) Now that you have constructed your left hand box string you need to flip your template to the other side for use as your cut string and label accordingly

As shown above

- 1) Label this side Y
- 2) Point A far right
- 3) Point B far left
- 4) Corners 1, 2, 3 right to left from point of first full cut out
- 5) R = riser position
- 6) T = tread position
- 7) Fold = Fold Line

- 12) To ensure that your template is ready for your cut string you need to make a straight fold along the internal corners of your template as shown in Fig N.

Fig N

STRINGS

- 13) Lay one string on the floor. Have face up side Y of your chosen template and lay the template on the string as shown in fig O. The folded section of your template must be sit neatly along the edge of the string and corner 1 on your template should be level with the bottom of the string. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Now draw around your template from corner 1 through to corner 3.

Fig O

- 14) Using a straight edge follow the edge of the template from point A past corner 1 through the whole string as shown in fig Q. . This new line on the end of your string becomes the bottom/lowest part of the string when cut.

Fig Q

- 15) Move the template up on the string by **one** corner point at a time and ensure it sits tight against the last corner you have drawn as shown in fig R. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Now draw around the template from your last line until corner 3 as shown in fig S

Fig R

Fig S

- 16) Repeat this process until you have drawn enough for **all** of your total number of treads required including your top one
- 17) From your last tread you will need a straight edge to mark a plumb cut line through the whole string, follow the direction of the template label R though corner 3 as shown in fig T. This new shape of the end of your string becomes the top/highest part of the string.

Fig T

- 18) Now cut through the string accurately along your drawn lines. This will give you your right hand (side Y) cut string as shown in fig U

Fig U

- 19) This now gives you a left hand (side X) box string and a right hand (side Y) cut string for your stairs as shown in fig X

Fig X

PREPARING THE TREADS AND RISERS

- 20) The overall width of your stairs including the strings is currently 48 ¼". Should you want your staircase to be smaller than 48 ¼" wide then you must alter the width of the treads and risers accordingly.
- 21) You need to cut each of the risers you need to the exact height required before constructing your staircase, on your box string (side X) you need to measure from the top of the support block to the top of the immediately higher support block as shown in fig P

Fig P

RISERS

- 22) Leave the first/lowest riser and the top one as they may need to be altered just prior to fitting on site when the desired trim/stair tread over-clad is known.
- 23) Take your BOX string (side X) and place it on a solid level surface. The risers are to be fitted to the support blocks on the string, if you are unsure of this position then please refer to point R on your template. Take a riser and ensure it is flush with the top edge of the support block on your string and tight against the string. Now glue, drill and screw the riser to the front face of the support block ensuring at all times the top edges are flush with each other as shown in fig H

Fig H

24) Now take your CUT string (side Y) and start to fix it to the right hand side of the risers. Ensure it is flush with the top edge and the outside face of the riser. Now glue, drill and screw the riser to the string ensuring at all times the top and outside edges are flush with each other as shown in fig Z

Fig Z

25) Repeat until all but the bottom and top risers have been glued, drilled and screwed. Keep to hand the bottom and top risers for fitting on site.

TREADS

26) If you are using the 10/7 template then please go straight to point 28

27) If you are using the 9/8 template then you will need to reduce the run of each tread before you continue. The current run of the tread is 10" and you need to reduce that to exactly 9" therefore you will need to cut 1" from the overall run of the tread.

28) Now the treads are to be fixed, if you are unsure of this position then refer to point T on your template. Fix the tread with glue to every touching face, drill and screw through the tread into the support block or string ensuring that the back edge of the tread is tight against the front face of the riser and tight against the string or outside face of the string. Then drill and screw through the tread into the riser and underneath through the riser into the tread as shown in fig CC

Fig CC

29) Repeat until all but the top tread/nosing have been glued, drilled and screwed. Keep to hand one nosing/tread for fitting on site.

ADDITIONAL CARRIAGE

30) If you require any additional carriage, see page 32, now is the time to fit it.

GLUE BLOCKS

31) You will need to fix your glue blocks so that they run along the underside of your staircase in-between the strings and any additional carriage.

32) Glue two long faces of the glue block and place them on the underside of the stair into the corner between each tread and riser. Drill and screw the glue block from the face of the tread and riser as shown in fig K.

Fig K

TRIM DETAIL

33) You need to know the type of trim/stair tread over-clad being used on your staircase as you will need to cut both the strings and first riser accordingly. Cut from the bottom of your strings the same thickness as your trim/stair tread over-clad and then cut the riser to suit as shown in fig L

Fig L

34) You may also need to cut the same thickness from the top of your staircase on the hook/seat cut, box string only (side X) if you want your top tread to be level with your finished floor as shown in fig M.

Fig M

35) Your stairs are now ready to fix into place as fig RR. Remember to keep to hand your riser and nosing/tread for use when fitting.

Fig RR

STRAIGHT FLIGHT BOX STRING RIGHT HAND AND CUT STRING LEFT HAND STAIRCASE

< 48 ¼" WIDE BOX STRING & CUT STRING

10 / 7 = 70" – 124" Total Rise

9 / 8 = 70" – 132" Total Rise

STARTING THE STRAIGHT FLIGHT BOX STRING RIGHT HAND SIDE

- 1) You are responsible for ensuring that you are correctly and accurately constructing your staircase to conform to the current stair/building code for your state.
- 2) If your local building code regulates a minimum run of 10" per tread and maximum rise of 7 ¾" then all the way through the construction of your staircase use the template requirement labelled 10/7 and the template labelled 10/7.
- 3) If your local building code regulates a minimum run of 9" per tread and maximum rise of 8 ¼" then all the way through the construction of your staircase use the template requirement labelled 9/8 and the template labelled 9/8.
- 4) Using your 'on-site' total rise measurement you need to look on the template requirement sheets either 10/7 or 9/8 for the nearest measurement, this will inform you of two details; how many treads you can use (including top tread/nosing) and your appropriate Template Letter.
- 5) Now that you know your Template Letter you need to cut it from the printed card labelled either 10/7 or 9/8. Carefully cut out your required template following your chosen letter, label the template as below and discard the redundant section.

- 1) label this side Y
- 2) Point A far right
- 3) Point B far left
- 4) Corners 1, 2, 3 right to left from first full cut out
- 5) R = riser position
- 6) T = tread position

STRINGS

- 6) Lay one string on the floor. Have face up side Y of your chosen template and lay the template on the string as shown in fig A. The template must be exactly flush with both the edge and the end of the string at point A. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Draw around the two lengths of your template that form point A and extend the line through the whole string as shown in fig B. Glue, drill and screw 2 support blocks to the string in the positions corner 1 and corner 2 ensuring the long edge faces away from the template as shown in fig C. Do not drill too close to the edge of the support blocks or too close to any knots as it may split when you screw to fix, use at least 3 screws per block.

Fig A

Fig B

- 7) Remove the template and cut to the lines drawn and extend the cut through the whole string as shown in fig D. This new shape of the end of your string becomes the bottom/lowest part of the string.
- 8) Re-lay the template on the string as shown in fig D. You only move the template up by one support block at a time. The template must be exactly flush with the edge of the string and must fit tight against the last support block you have fixed. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Glue, drill and screw 1 support block in position corner 2 to the string as shown in fig D.

Fig C

Fig D

- 9) Repeat this process until you have fixed the supports for all bar one of your total number of treads required.

- 10) For your last tread/nosing you need to lay the template exactly flush with the edge of the string and corner 2 must fit tight against the last support block you have fixed. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Draw around the three lengths of your template that form point B and corner 3 and extend the line through the whole string as shown in fig E. Remove the template and cut to the lines drawn, extending the cut through the whole string as shown in fig F. This new shape of the end of your string becomes the top/highest part of the string.

Fig E

Fig F

STARTING THE STRAIGHT FLIGHT CUT STRING LEFT HAND SIDE

- 11) Now that you have constructed your right hand box string you need to flip your template to the other side for use as your cut string and label accordingly

As shown above

- 1) Label this side X
- 2) Point A far left
- 3) Point B far right
- 4) Corners 1, 2, 3 left to right from point of first full cut out
- 5) R = riser position
- 6) T = tread position
- 7) Fold = Fold Line

- 12) To ensure that your template is ready for your cut string you need to make a straight fold along the internal corners of your template as shown in Fig N.

Fig N

STRINGS

- 13) Lay one string on the floor. Have face up side X of your chosen template and lay the template on the string as shown in fig O. The folded section of your template must be sit neatly along the edge of the string and corner 1 on your template should be level with the bottom of the string. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Now draw around your template from corner 1 through to corner 3.

Fig O

- 14) Using a straight edge follow the edge of the template from point A past corner 1 through the whole string as shown in fig Q. . This new line on the end of your string becomes the bottom/lowest part of the string when cut.

Fig Q

- 15) Move the template up on the string by **one** corner point at a time and ensure it sits tight against the last corner you have drawn as shown in fig R. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Now draw around the template from your last line until corner 3 as shown in fig S

Fig R

Fig S

- 16) Repeat this process until you have drawn enough for **all** of your total number of treads required including your top one

17) From your last tread you will need a straight edge to mark a plumb cut line through the whole string, follow the direction of the template label R though corner 3 as shown in fig T. This new shape of the end of your string becomes the top/highest part of the string.

Fig T

18) Now cut through the string accurately along your drawn lines. This will give you your left hand (side X) cut string as shown in fig U

Fig U

19) This now gives you a left hand (side X) cut string and a right hand (side Y) box string for your stairs as shown in fig X

Fig X

PREPARING THE TREADS AND RISERS

20) The overall width of your stairs including the strings is currently 48 ¼". Should you want your staircase to be smaller than 48 ¼" wide then you must alter the width of the treads and risers accordingly.

21) You need to cut each of the risers you need to the exact height required before constructing your staircase, on your box string (side Y) you need to measure from the top of the support block to the top of the immediately higher support block as shown in fig P

Fig P

RISERS

22) Leave the first/lowest riser and the top one as they may need to be altered just prior to fitting on site when the desired trim/stair tread over-clad is known.

23) Take your BOX string (side Y) and place it on a solid level surface. The risers are to be fitted to the support blocks on the string, if you are unsure of this position then please refer to point R on your template. Take a riser and ensure it is flush with the top edge of the support block on your string and tight against the string. Now glue, drill and screw the riser to the front face of the support block ensuring at all times the top edges are flush with each other as shown in fig H

Fig H

24) Now take your CUT string (side X) and start to fix it to the left hand side of the risers. Ensure it is flush with the top edge and the outside edge of the riser. Now glue, drill and screw the riser to the string ensuring at all times the top and outside edges are flush with each other as shown in fig W

Fig W

25) Keep to hand the bottom and top risers for fitting on site.

TREADS

26) If you are using the 10/7 template then please go straight to point 28

27) If you are using the 9/8 template then you will need to reduce the run of each tread before you continue. The current run of the tread is 10" and you need to reduce that to exactly 9" therefore you will need to cut 1" from the overall run of the tread.

28) Now the treads are to be fixed, if you are unsure of this position then refer to point T on your template. Fix the tread with glue to every touching face, drill and screw through the tread into the support block or string ensuring that the back edge of the tread is tight against the front face of the riser and tight against the string or outside face of the string. Then drill and screw through the tread into the riser and underneath through the riser into the tread as shown in fig CC

Fig CC

29) Repeat until all but the top tread/nosing have been glued, drilled and screwed. Keep to hand one nosing/tread for fitting on site.

ADDITIONAL CARRIAGE

30) If you require any additional carriage, see page 32, now is the time to fit it.

GLUE BLOCKS

- 31) You will need to fix your glue blocks so that they run along the underside of your staircase in-between the strings and any additional carriage.
- 32) Glue two long faces of the glue block and place them on the underside of the stair into the corner between each tread and riser. Drill and screw the glue block from the face of the tread and riser as shown in fig K.

Fig K

TRIM DETAIL

33) You need to know the type of trim/stair tread over-clad being used on your staircase as you will need to cut both the strings and first riser accordingly. Cut from the bottom of your strings the same thickness as your trim/stair tread over-clad and then cut the riser to fit as shown in fig L

Fig L

34) You may also need to cut the same thickness from the top of your staircase on the hook/seat cut, box string only (side Y) if you want your top tread to be level with your finished floor as shown in fig M

Fig M

35) Your stairs are now ready to fix into place as fig RR. Remember to keep to hand your riser and nosing/tread for use when fitting.

Fig RR

ADDITIONAL CARRIAGE STRING

KwikStairs USA when constructed following the instructions precisely has been stress and deflection tested. However should you feel that you would like some further support underneath the staircase then you can add additional carriage/carriages to suit your requirements.

Any additional carriage needs to be constructed as a cut string. Depending on whether you have already made a cut string will depend if you need to re-label your template For this additional cut string carriage your template should be labelled accordingly.

As shown above

- 8) Label this side X
- 9) Point A far left
- 10) Point B far right
- 11) Corners 1, 2, 3 left to right from point of first full cut out
- 12) R = riser position
- 13) T = tread position
- 14) Fold = Fold Line

1) To ensure that your template is ready for your cut string you need to make a straight fold along the internal corners of your template as shown in Fig N.

Fig N

STRINGS

- 2) Lay your own string on the floor. Have face up side X of your chosen template and lay the template on the string as shown in fig O. The folded section of your template must be sit neatly along the edge of the string and corner 1 on your template should be level with the bottom of the string. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Now draw around your template from corner 1 through to corner 3.

Fig O

- 3) Using a straight edge follow the edge of the template from point A past corner 1 through the whole string as shown in fig Q. . This new line on the end of your string becomes the bottom/lowest part of the string when cut.

Fig Q

- 4) Move the template up on the string by **one** corner point at a time and ensure it sits tight against the last corner you have drawn as shown in fig R. Cramp the template in place to eliminate any movement, this is essential for the accuracy of your stairs. Now draw around the template from your last line until corner 3 as shown in fig S

Fig R

Fig S

- 5) Repeat this process until you have drawn enough for **all** of your total number of treads required including your top one
- 6) From your last tread you will need a straight edge to mark a plumb cut line through the whole string, follow the direction of the template label R though corner 3 as shown in fig T. This new shape of the end of your string becomes the top/highest part of the string.

Fig T

- 7) Now cut through the string accurately along your drawn lines. This will give you your additional carriage string as shown in fig U

Fig U

- 8) Depending on how you wish to fit your stairs on site depends on whether you need to leave the additional carriage at its full length or whether you need to remove the top tread support.
- 9) The additional carriage fixes to the underneath of your staircase, you need to glue every touching face and drill and screw through the front face of the of your risers and treads as shown in fig RR

Fig RR

ADDITIONAL KWIKSTAIRS INFORMATION

10/7 Example

If you cannot find your finished floor to finished floor/total rise measurement in the chart provided then use the following calculation to obtain it:

Finished floor to finished floor/total rise measurement in Inches	=	65"
Divide by $7 \frac{3}{4}$, to give you the number of treads	=	8.38
If a partial figure then always round up to the next whole figure to show the number of treads including the nosing/top tread that you will need	=	9
Divide floor to floor/total rise by number of treads needed (65" / 9)	=	$7 \frac{1}{4}$ "
Correspond to the nearest measurement to obtain your template letter from the chart below	=	$7 \frac{1}{4}$ "
	=	M Template

6 1/2" = A	6 13/16" = F	7 1/8" = K	7 7/16" = P
6 9/16" = B	6 7/8" = G	7 3/16" = L	7 1/2" = Q
6 5/8" = C	6 15/16" = H	7 1/4" = M	7 9/16" = R
6 11/16" = D	7" = I	7 5/16" = N	7 5/8" = S
6 3/4" = E	7 1/16" = J	7 3/8" = O	7 11/16" = T

ADDITIONAL KWIKSTAIRS INFORMATION

9/8 Example

If you cannot find your finished floor to finished floor/total rise measurement in the chart provided then use the following calculation to obtain it:

Finished floor to finished floor/total rise measurement in inches	=	65"
Divide by 8 1/4", to give you the number of treads	=	7.87
If a partial figure then always round up to the next whole figure to show the number of treads including the nosing/top tread that you will need	=	8
Divide floor to floor by number of treads needed (65" / 8)	=	8 1/8"
Correspond to the nearest measurement to obtain your template letter from the chart below	=	8 1/8"
	=	S Template

7" = A	7 5/16" = F	7 5/8" = K	7 15/16" = P
7 1/16" = B	7 3/8" = G	7 11/16" = L	8" = Q
7 1/8" = C	7 7/16" = H	7 3/4" = M	8 1/16" = R
7 3/16" = D	7 1/2" = I	7 13/16" = N	8 1/8" = S
7 1/4" = E	7 9/16" = J	7 7/8" = O	8 3/16" = T

GLOSSARY

BASERAIL

A bottom rail that sits on top of the string to support the spindles.

BOX STRING (CLOSED)

A Stringer that encloses the ends of the treads and risers typically with the top edge following the angle of the stair

BULLNOSE

Material with a rounded end

CARRIAGE (ROUGH STRINGER)

A system of rough stringers attached to the building structure providing for the support and or attachment of the treads, risers and face stringers of a stair.

COMMERCIAL/COMMON

A stairway used by two or more dwellings.

CUT STRING (OPEN)

A stringer cut or notched on the upper edge to fit the profile of the stairs

FINISHED FLOOR TO FINISHED FLOOR

The measurement needed for the height of the stairs. From the finished surface of the floor where the stair (lower floor) is to start to the finished surface of the next floor where the stair is to end (upper floor).

DOMESTIC/PRIVATE

A stairway used only by one dwelling.

GLUE

An adhesive substance used for sticking objects or materials together.

GLUE BLOCKS

These are glued and screwed to the treads and risers

GOING

The measurement between the front of the riser on the lower tread to the front of the riser on the upper tread.

HALF LANDING

A level area within your staircase that forms a 180 degree turn.

HANDRAIL

A rail fixed to posts or a wall for people to hold onto for support.

HOOK CUT/SEAT CUT

An L shaped cut designed to be able to sit on another component.

INSIDE STRING

If your staircase turns to the right then the inside string is on your right alternatively if your staircase turns to the left then the inside string is on your left.

NEWEL

Can be either the supporting post of a staircase, a fixture point for winding treads or a fixture point for handrail.

NOSING

This is the very top tread that forms part of the upper floor. It is not used in the construction of the stairs, only the fitting.

OUTSIDE STRING

If your staircase turns to the right then the outside string is on your left alternatively if your staircase turns to the left then the outside string is on your right.

PLUMB CUT

A vertical cut on an upright surface.

PLUMB LINE

A vertical line on an upright surface.

QUARTER LANDING

A level area within your staircase that forms a 90 degree turn.

RISE

The measurement between the top face of the lower tread to the top face of the upper tread.

RISERS

These are 23/32" OSB / Strand board that fit vertically to the staircase

RUN

The measurement between the front of the riser on the lower tread to the front of the riser on the upper tread.

SCREWS

Sharp pointed metal pin with a raised helical thread running around it, used to join members together by being rotated in under pressure.

SEAT CUT/HOOK CUT

An L shaped cut designed to be able to sit on another item.

SPINDLE

The decorative vertical members that fit between the handrail and base rail alongside a staircase and landing.

STAIR REGULATIONS (within building regulations)

The measurements that you must ensure your stairs must conform to so as to ensure a safe suitable legal staircase. These are set out by your local building department.

STAIRS

Set of fixed steps leading from one floor of a building to another.

STRING/STRINGERS

Two main structural timbers on each side of the staircase. There will always be a left hand and right hand version.

SUPPORT BLOCKS

These are the main support for the treads and risers. They are glued and screwed onto the inside of both strings. The treads and risers are then screwed to the support blocks.

TEMPLATE

A shaped piece of rigid material used as a pattern for processes such as cutting out, shaping, drilling and fixing.

TOTAL GOING

The horizontal measurement from the front face of the lowest riser to the back face of the highest riser.

TOTAL RISE

The measurement needed for the height of the stairs. From the finished surface of the floor where the stair (lower floor) is to start to the finished surface of the next floor where the stair is to end (upper floor).

TREADS

These are 7/8 " OSB / Strand board that fit horizontally to the staircase.

TRIMMER

The beam on the upper floor to which your stairs will fit on and be fixed to for support.

WIDTH OF STAIRS

The overall measurement from the outside face of one string to the outside face of the opposite string.