

Studio Flash Wizard® User's Manual

Version 3.0

The purpose of this program is to provide a tool for Photographers that will allow them to instantly calculate where in the studio to place their lights without referring to light-ratio tables or using a meter. For the first time since the advent of photography it is possible to place your lights exactly where they need to be the FIRST time without juggling them back and forth and taking endless meter readings to finally arrive at all the light-ratios you want simultaneously with correct exposure on the Main-light side of the subject.

Up until now even lighting instructors dreaded the subject because they knew how difficult a concept it was to teach. Sure you can make it seem simple at first if you only talk about using two lights that are exactly the same GN and place them the same distance from the subject. Yes, that gives you a 2:1 light-ratio. But you still have to scoot them back and forth until your meter reads the f /stop you are looking for.

But, even that goes out the window as soon as you put an umbrella on the Main-light to achieve softer shadows because now with GN's are no longer equal. Or, what if you want to add a color filter to one of the lights? Or due to the size of your studio you must change the power setting on one of the lights? Even the angle of the Main-light has a slight effect. Now you are holding your head in despair.

Studio Flash Wizard® puts an end to all those problems! You enter all your preferences for a setup i.e. ISO, f /stop, filter FF's, Main-light angle, Light-ratios for 5 different types of lights, and tap the Calculate button – poof! The distance (in meters and feet) for up to six different flashes are calculated and displayed for you. The correct power settings are also displayed. You instantly know where every light must go, no juggling around. Just pose your subject or product and shoot. Imagine setting up for different specific light ratios for the Main-light, Hair-light on either side of the subject and Edge-light on either side of the subject with any filters, power settings, etc. All you need is **Studio Flash Wizard®** installed on your PDA and a long tape measure. We suggest the kind that surveyors use. They're flexible and divided into feet and tenths of a foot so your measurement will be exactly as you see it on your PDA Screen (no converting inches to 10th's of a foot).

Studio Flash Wizard® remembers all your previous settings even if you exit the program or turn off your PDA or even soft reset it. So, when you want to create a new setup you only change the

preferences that are different from your last setup. Tap the calculate button and - poof! All your new distances and power settings are right there!

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Studio Flash Wizard® Screens

Here are the nine screens that make up the user interface with **Studio Flash Wizard®** software. The main screen is only for navigating to other screens. There is one screen where you input the GNs, Power Range, ND filters, Minimum distances and Maximum distances for all six lights. There are four screens where you input your preferences for your lighting setup. One screen displays the calculated flash distances and flash power settings that will give you perfect exposure on the Main-Light side of your subject simultaneously with all the Light-Ratios that you selected. There are two screens containing tips for those occasions when your memory needs a little nudging.

Main Screen Exit

**STUDIO
FLASH WIZARD™**

Select Screen to Revise

Flash Properties

Camera Setup

Flash Setup

Light-Ratio Setup

Calculate Flash Dist/Power

Flash Properties Read Tip 1

Enter Properties for all flashes

	Power	ND	Min	Max
GN	Range	Filters	ft.	ft.
ML	285	16	2	7 10.5
FL	200	16	2	7 10.5
MEL	110	4	1	6 9
FEL	100	8	0	6 9
MHL	100	8	1	4 6
FHL	200	16	1	4 6

Return to Main Screen

Camera Setup

Select ISO and f/stop. Enter Polarizer and Tele' factors. Enter 1 for ones not used.

ISO: 100

Lens f/stop 5.6

Polarizer Filter Factor: 1X

Tele' Magnification: 1X

Return to Main Screen

Flash Setup

1st select Main-Light angle. 2nd go to Flash Filter FF.

Main-Light Angle (Deg.): 45

Flash Filter FF

Return to Main Screen

Flash Filter FF

Enter filter factor (FF) for each flash. Enter one (1) if no filter or if flash not used.

Main-Light FF: 1X

Fill-Light FF: 1X

Main-Edge-Light FF: 1X

Fill-Edge-Light FF: 1X

Main-Hair-Light FF: 1X

Fill-Hair-Light FF: 1X

Return to Flash Setup

Light-Ratio Setup Read Tip 2

Enter Light-Ratio Desired, 1.5 to 16, for each of the following combinations of Flashes

Main-Light : Fill-Light 3:1

Main-Edge-Light : Main-Light 1.5:1

Fill-Edge-Light : Fill-Light 2:1

Main-Hair-Light : Main-Light 1.5:1

Fill-Hair-Light : Fill-Light 3:1

Return to Main Screen

Calculated Distance, Power

Flash	Flash Distance	Flash Distance	Flash Power
ML:	2.29 m.	7.5 ft.	1/16
FL:	2.35 m.	7.7 ft.	1/16
MEL:	2.1 m.	6.9 ft.	1/4
FEL:	2.35 m.	7.7 ft.	1/8
MHL:	1.37 m.	4.5 ft.	1/8
FHL:	1.68 m.	5.5 ft.	1/16

Return to Main Screen

Tip 1 (Read Tip 1a)

Enter properties of all flashes. Enter bogus properties for ones you don't yet own. (Prevents error messages.) Do NOT use factory GN values because they assume no filters, light boxes or umbrellas, etc. You must find the True GN of each flash based on 100 ISO and with the light modifying devices installed and with the flash set on full power. See details in Flash Wizard's Studio Lighting Techniques.

Return to Flash GN's Screen

Tip 2

Light-Ratio is a number representing how much brighter one area of a subject is compared to an adjacent area. For example: 2:1 means the brightest area is 2 times as bright as the adjacent area. The "1" is already shown so you only enter the "2". A pleasing ratio for the Main-light: Fill-Light for a typical portrait is 3.

Return to Light-Ratio Screen

“Main Screen” Screen:

This is the navigation screen that takes you to four other screens where you will input data and then to the “Calculated Flash Distances” Screen where all your distances and flash powers are displayed for you.

“Flash Properties” Screen:

Here is where you enter, for 2 to 6 lights, the following information:

True GN

Power Range

ND filters (you can add ND filters to your flash if its GN is too large)

Min ft.

Max ft. (a limitation determined by the size of your studio)

Just enter bogus information for all flashes that you don't own. That will insure that you don't get annoying, time wasting error messages. You won't have to use this screen again as long as you keep the same lights and don't change their True GN's by adding umbrellas or polarizers, etc. One exception is the ND filters that you might choose to add based on a particular setup.

You cannot use the manufacturers GN rating! You cannot use the manufacturers GN rating! Yes, it is worth repeating. It has nothing to do with **Studio Flash Wizard**[®], it is simply because their rating is based on the bare unit without any light modifying devices attached such as umbrellas, diffusers, louvers etc.

All the reasons are explained in **Studio Flash Wizard's**[®] *Studio Lighting Techniques Part 1* which has a plethora of valuable information regarding different types of lights and how to find their True GN's. It explains why hair lights and edge lights require special treatment. The book is a pdf file available as a bonus with the purchase of **Studio Flash Wizard**[®]. When you make your purchase you are given a Registration Code and a link for downloading the book. It is appropriate for Professional Photographers as well as Students. The key to accurate light-ratios is accurate GN's (True GN's). It has information in it that you won't find anywhere else. Enjoy.

“Camera Setup” Screen:

Here is where you select the ISO and Lens *f*/stop that you will be using for your next setup. Enter “1” for a Polarizer FF and Tele' magnification if you will not be using them. If you enter less than 1 or leave one blank you will receive an error message. Don't forget to set your camera to the values you chose on the camera setup screen.

“Flash Setup” Screen:

Here is where you select the Main-light angle (degrees). From here you can also navigate to the Flash Filter FF screen.

“Flash Filter FF” Screen:

The minimum filter factor (FF) is always “1X”. For example a UV filter or no filter would be “1X”. The “X” is already provided for you on the screen so you only enter the number. Enter the FF for the lights that will have color filters on them, and enter 1 for all other lights including lights you don't own. If you have some filters that are rated in “*f*-difference” you can use the handy table

at the end of this User's Manual to convert them to FF's. For example: 1 *f*-difference = 2X, 2.5 *f*-difference = 5.65X, etc. If you have some filters that have neither rating you can use an electronic flash meter to give them a rating. Set the meter on ExIN mode. With the flash a fixed distance from the meter, take a reading with no filter on the flash. Take another reading at the same distance, but, with a filter on it. The difference between the two readings is the *f*-diff rating of the filter. Now you can go to the table in the back of this User's Manual and convert *f*-diff to FF.

Don't confuse the FF's in Studio *Flash Wizard*[®] with the FF's in our other product Color Background Flash Wizard[®]. In the Color Background Flash Wizard[®] two FF's are assigned to each filter without regard for what the actual FF ratings of the filters are. To make the product easy to use the FF values assigned are 2, 4, 8 etc.

“Light-Ratio Setup” Screen:

Here is where you enter the Light-ratio that you want each of the studio lights to produce. It must be a number 1.5 or greater, including lights you don't own, to avoid the dreaded error message. Practical values are from 1.5 to 16.

Flash Wizard's[®] *Studio Lighting Techniques Part 2* is indispensable for Professionals and Students who want to learn as much as possible about how to Paint Beautiful photos using Light-ratios. It is a bonus book that can be downloaded upon purchase of **Studio Flash Wizard**[®]. It's not necessary to read it to be able to use **Studio Flash Wizard**[®] software but it may make your life a little happier if you do.

“Calculated Distance, Power” Screen:

While on the Main Screen, tapping the “Calculate Flash Dist./Power” button will cause all calculations to be performed and displayed on the “Calculated Distance, Power” screen. All the will display the flash-to-subject distance (meters and feet) and power setting. Don't forget to change the power setting on each flash to the calculated value. Then, place each flash at the calculated distance from the subject.

Note about calculating time:

As an example, the Palm Zire 22 requires about 30 seconds to calculate all six lights. Other models will vary (some slower, some faster). Don't immediately start writing down numbers as soon as you see the calculations appear because it takes a few more seconds to complete the calculations.

“Tip 1” & “Tip 2” Screens:

They are self explanatory.

Appendix

NOTICE:

The purchaser of **Studio Flash Wizard**® PDA software has permission to print any of the documents in this Appendix for his own private use but does not have the right to resell or distribute them.

Contents

Flash Wizard's® Table of Equivalent Units.

Flash Wizard's® Studio Protractor (Main-light on right).

Flash Wizard's® Studio Protractor (Main-light on left).

Notes about the table

The following table is included for your general information. It may help you develop a better understanding of various photographic relationships.

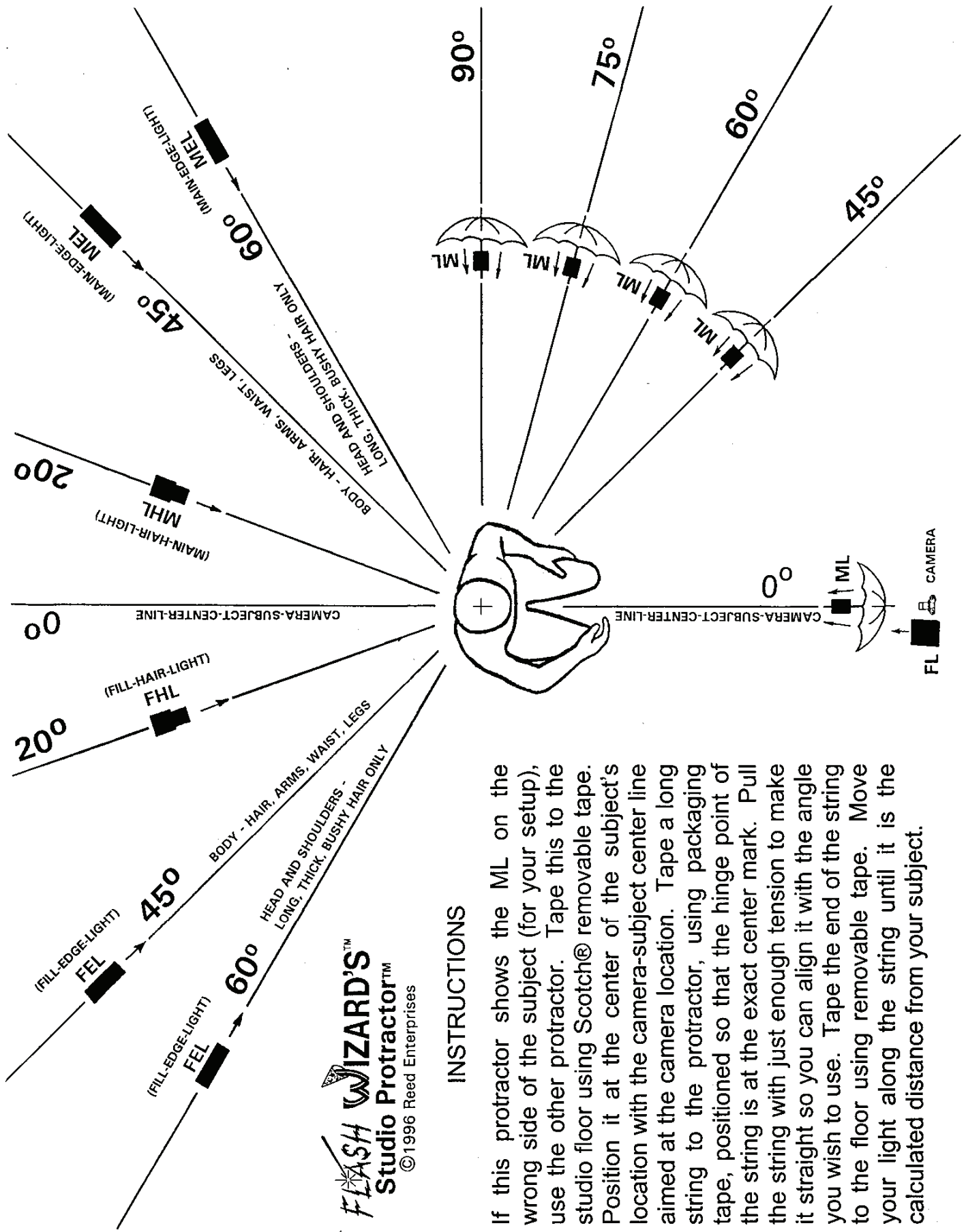
For example, you may want to use a polarizer that is rated in *f*-difference. You can reference the table and convert the rating into Filter Factor (FF) so you can enter it into Sun/fill *Flash Wizard*® or Light Fall-off *Flash Wizard*®

Flash Wizard® Table of equivalent units				
Flash Power (Frac- tional)	Flash Power (Decimal)	Flash Power (<i>f</i>-stop reduction)	Filter Factor (FF)	Tele- converter Magnifi- cation
1	1.000	0	1.00 X	1 X
	0.933	0.1	1.07 X	1.04 X
	0.871	0.2	1.15 X	1.07 X
	0.812	0.3	1.23 X	1.11 X
	0.758	0.4	1.32 X	1.15 X
	0.707	0.5	1.41 X	1.19 X
	0.660	0.6	1.52 X	1.23 X
	0.616	0.7	1.62 X	1.27 X
	0.574	0.8	1.74 X	1.32 X
	0.536	0.9	1.87 X	1.37 X
1/2	0.500	1	2.00 X	1.41 X
	0.467	1.1	2.14 X	1.46 X
	0.435	1.2	2.30 X	1.52 X
	0.406	1.3	2.46 X	1.57 X
	0.379	1.4	2.64 X	1.62 X
	0.354	1.5	2.83 X	1.68 X
	0.330	1.6	3.03 X	1.74 X
	0.308	1.7	3.25 X	1.80 X
	0.287	1.8	3.48 X	1.87 X
	0.268	1.9	3.73 X	1.93 X

1/4	0.250	2	4.00 X	2.00 X
	0.233	2.1	4.29 X	2.07 X
	0.218	2.2	4.59 X	2.14 X
	0.203	2.3	4.92 X	2.22 X
	0.189	2.4	5.28 X	2.30 X
	0.177	2.5	5.66 X	2.38 X
	0.165	2.6	6.06 X	2.46 X
	0.154	2.7	6.50 X	2.55 X
	0.144	2.8	6.96 X	2.64 X
	0.134	2.9	7.46 X	2.73 X
1/8	0.125	3	8.00 X	2.83 X
	0.117	3.1	8.57 X	2.93 X
	0.109	3.2	9.19 X	3.03 X
	0.102	3.3	9.85 X	3.14 X
	0.095	3.4	10.6 X	3.25 X
	0.088	3.5	11.3 X	3.36 X
	0.082	3.6	12.1 X	3.48 X
	0.077	3.7	13.0 X	3.60 X
	0.072	3.8	13.9 X	3.73 X
	0.067	3.9	14.9 X	3.86 X
1/16	0.063	4	16.0 X	4.00 X
	0.058	4.1	17.1 X	4.14 X
	0.054	4.2	18.4 X	4.29 X
	0.051	4.3	19.7 X	4.44 X
	0.047	4.4	21.1 X	4.59 X
	0.044	4.5	22.6 X	4.76 X
	0.041	4.6	24.2 X	4.92 X
	0.038	4.7	26.0 X	5.10 X
	0.036	4.8	27.9 X	5.28 X
	0.033	4.9	29.9 X	5.46 X
1/32	0.031	5	32.0 X	5.66 X
	0.029	5.1	34.3 X	5.86 X
	0.027	5.2	36.8 X	6.06 X
	0.025	5.3	39.4 X	6.28 X
	0.024	5.4	42.2 X	6.50 X
	0.022	5.5	45.3 X	6.73 X
	0.021	5.6	48.5 X	6.96 X
	0.019	5.7	52.0 X	7.21 X
	0.018	5.8	55.7 X	7.46 X
	0.017	5.9	59.7 X	7.73 X
1/64	0.016	6	64.0 X	8.00 X
	0.015	6.1	68.6 X	8.28 X
	0.014	6.2	73.5 X	8.57 X

	0.013	6.3	78.8 X	8.88 X
	0.012	6.4	84.4 X	9.19 X
	0.011	6.5	90.5 X	9.51 X
	0.010	6.6	97.0 X	9.85 X
	0.010	6.7	104 X	10.2 X
	0.0090	6.8	111 X	10.6 X
	0.0084	6.9	119 X	10.9 X
1/128	0.0078	7	128 X	11.3 X
	0.0073	7.1	137 X	11.7 X
	0.0068	7.2	147 X	12.1 X
	0.0063	7.3	158 X	12.6 X
	0.0059	7.4	169 X	13.0 X
	0.0055	7.5	181 X	13.5 X
	0.0052	7.6	194 X	13.9 X
	0.0048	7.7	208 X	14.4 X
	0.0045	7.8	223 X	14.9 X
	0.0042	7.9	239 X	15.5 X
1/256	0.0039	8	256 X	16.0 X

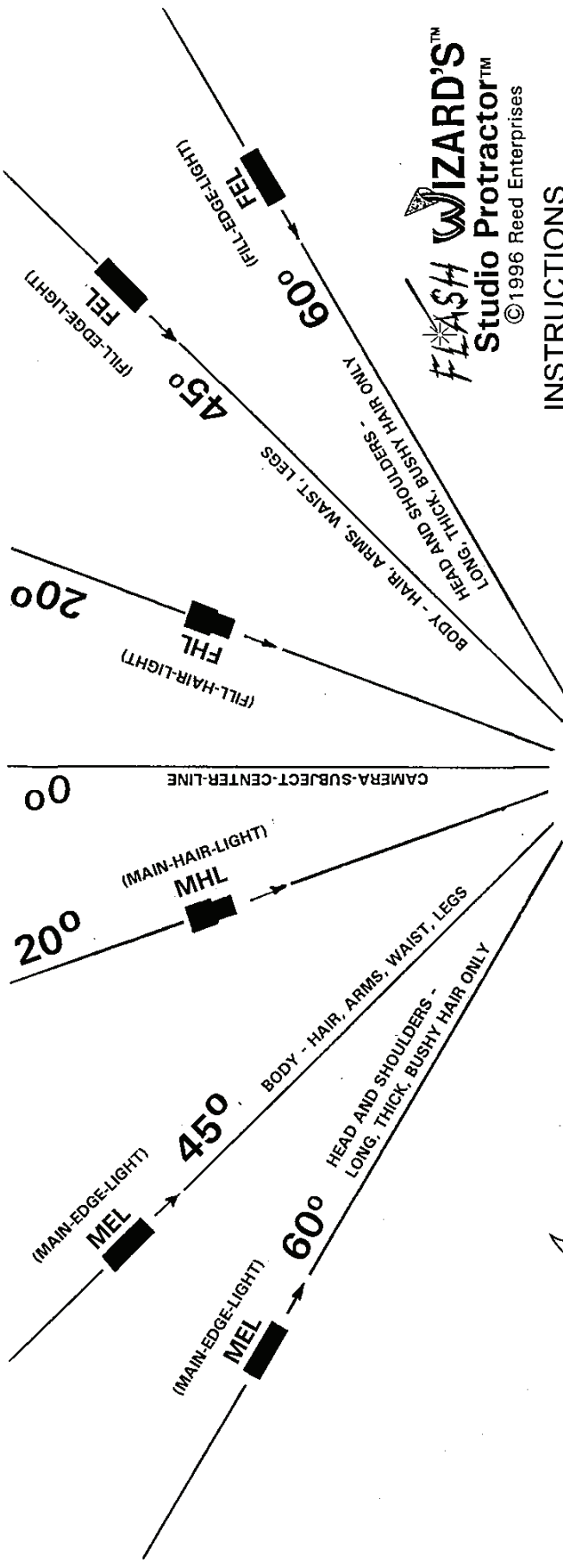
END



FLASH WIZARD'S™
Studio Protractor™
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INSTRUCTIONS

If this protractor shows the ML on the wrong side of the subject (for your setup), use the other protractor. Tape this to the studio floor using Scotch® removable tape. Position it at the center of the subject's location with the camera-subject center line aimed at the camera location. Tape a long string to the protractor, using packaging tape, positioned so that the hinge point of the string is at the exact center mark. Pull the string with just enough tension to make it straight so you can align it with the angle you wish to use. Tape the end of the string to the floor using removable tape. Move your light along the string until it is the calculated distance from your subject.



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