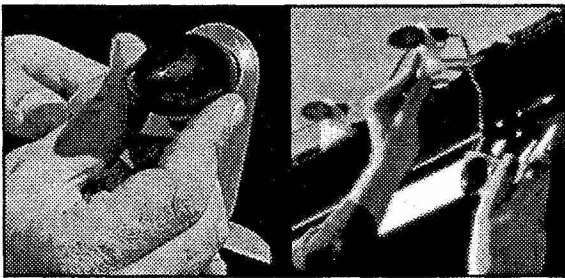
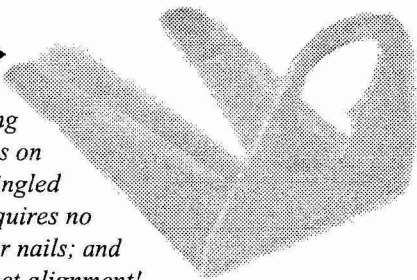


ATTACHING LIGHTS TO HOMES AND BUILDINGS

Up until the past few years, the only practical way to attach any type of holiday lighting around the roofline of a house or building involved **driving a nail, screwing in a cup hook** or other **sharp-pointed wedge into the fascia** and then hanging lights from it. Additionally, you might have had to secure them with wire, "twist ties" or other means...particularly in wind-prone areas. Sometimes, that is *still* the only **practical** way of getting the job done but the main problem with these methods is that you tend to get sagging wires, lights and sockets between the "hanging points" and generally you have a difficult time keeping the lights straight and attractive. By twisting the strings and tying them down as you go along, it is possible to do a fairly neat job of keeping the lines taut and all the lamps positioned in the same direction. You can even resort to using a **hand stapler** opened all the way back or possibly a **staple gun** to attach lights. Some installers swear by this method although it's quite likely that somewhere along the line, an errant staple could puncture the light string itself and cause a direct short. Another important thing to remember is that stapling, nailing or attaching screws to the fascia creates lasting damage and allows water to seep in and damage the wood even through the tiniest holes.

All of the means listed above can and *should* be considered "old-fashioned" methods that have worked over the years partly because holiday lighting was essentially considered a simple holiday ritual primarily practiced by the truly adventurous souls who took the time to simply "throw some lights on the roof." The means for achieving the actual installation of the lights ranged from mundane and tiresome to downright grueling in terms of securing the lights in any consistent fashion. "Putting up lights" was basically a solo journey into the uncharted waters of an installation abyss because each individual basically relied on their own sense of ingenuity to attach the lighting because there was little if any formidable solution to be found on a shelf. But, indeed, there have been some major improvements in recent seasons and you need to be aware of the new types of "hardware" available to you. So, below we will explore several relatively new, alternative methods that will make the decorating experience **easier, quicker, safer, more beneficial to business...and, without a doubt...more professional in appearance**. All this while making customers happy by eliminating any damage to the fascia, trim or other surfaces where you may be asked to install holiday lighting or decorations.

*The original ►
Shingle Tab
makes installing
C7 or C9 lights on
all types of shingled
roofs easy; requires no
tools, screws or nails; and
provides perfect alignment!*



Installing C7 or C9 Lights on Shingled Roofs

Introduced in late 1987, the first truly "revolutionary" lighting clip to hit the market was a simple triangular shaped device called the **shingle tab**. It's functional design allows quick and easy installation of either **C7** or **C9** lights along all types of rooflines. This clip is held between the bulb and socket and simply slides under the shingle and positions the bulb outward in a natural, yet sophisticated alignment. This clip allows you to "space out" the wire and take out the slack for a truly **precision installation**.

To assemble, the strings are laid out in long straight rows; then **each bulb is screwed in through the appropriate size hole in the shingle tab**. (There is a "dual hole" designed to accommodate either the smaller C7 or larger C9 lamps). The completely assembled strings are then installed along the roof

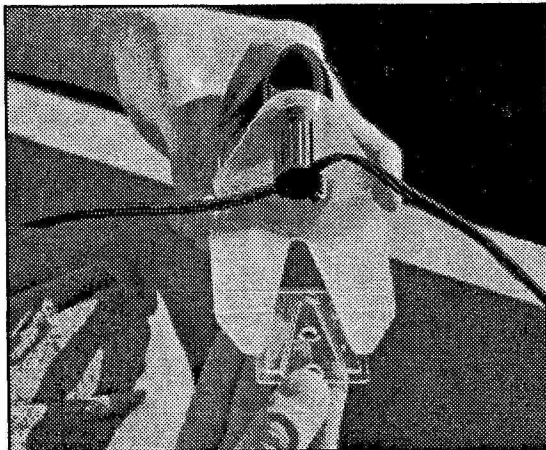
by inserting the tabs between the double-layered front edge of the shingles. You'll be amazed at how easy and effortless the entire process is...and best of all, the shingle tab works well on virtually any type of shingled roof including **wooden "shake" shingles, asphalt composition...even slate!** Each tab features a slight crease close to the end which allows the back "legs" to double back to add more thickness if needed to account for any loose or warped shingles you encounter during installation. Additionally, these unique clips that were originally designed to work exclusively along a shingle roof can also be inserted under most types of **metal**

flashing on flat roofs or along commercial buildings. These clips provide a great way to keep lights straight and neat and also keep any wiring from touching the building and will separate your installation from all others for the simple fact that a straight, uniform appearance will make your installation stand out from the ordinary. **It's important to note here that this particular clip is intended for seasonal outdoor use and it's composition (polypropylene) is not designed to withstand the extreme variances of differing seasons and weather conditions and it is not intended for permanent installation for this reason.** Removal of the shingle tabs and assembled lights is recommended after the holiday season; however, after removal, the assembled string may be left intact and stored so that the following season they can simply be unpacked, checked for bulb breakage or possible replacement of the bulbs and then reinstalled much quicker the second time around.

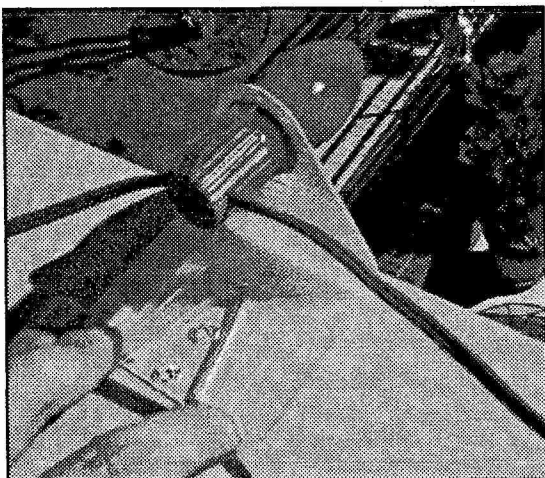
[**NOTABLE INFORMATION** regarding availability of the "**original**" shingle tab: like some of the other noted hardware in this guide, this particular clip is not generally available in any home improvement warehouse, hardware store or other holiday retailer outside the West Texas region where it was first developed; however, you will find it and most of the other specialty clips noted in this text from our recommended wholesale supplier in the back of the guide.]

Installing C7 or C9 Lights on Parapet Walls and Flat Surfaces

One of the most useful items you can put in your "bag of tricks" is a square, flat product made of acrylic plastic that is used in conjunction with the shingle tab on a flat surface where no shingle exists. Think about it: how *would* you attach a shingle tab if there were no shingle for the tab to slide under? That question is



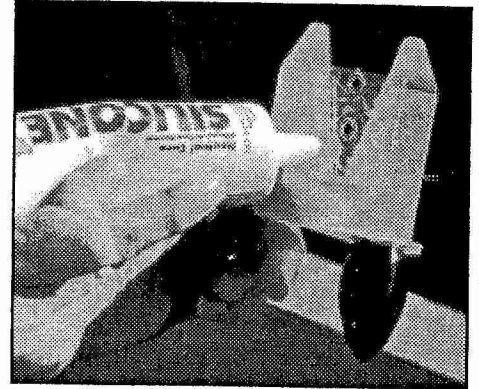
precisely what produced an accessory called the **parapet clip**...an acrylic piece of hardware which is used to attach the shingle tab to any flat, "shingle-less" surface. The clip is a small, almost completely flat, acrylic piece designed to mount permanently on most types of structure with adhesives or screws. Once this clip is in place, lights and cords with the shingle tabs already connected together can easily be "snapped-on" to the clip with ease. **Think of the parapet clip as a permanent mounting device for the removable shingle tab and a way to position a low-profile anchor for quickly attaching the tabs to season after season.** The parapet clip can be screwed down with self-tapping screws using the holes provided. In many cases, it's easier to use **construction adhesive, extra-strength silicone or carpenter's glue.** Depending on the spacing of the light line you will be using, you may choose to measure the appropriate distances between each anchor point and place a mark so you can center the parapet clip for mounting prior to attaching the assembled tabs, cords and bulbs. **Remember to be consistent in your spacing** and to allow for a small amount of acceptable "slack" in your light line or you will quickly find out that you're too close or too far apart with your parapet clip mounting when you start attaching the tabs/lights. **One suggestion to account for this factor** is to mount a single parapet clip at the beginning of the installation starting point and proceed with the attachment of a two or three light run to see how you might need



to handle your measurements to account for proper centering, line slack and clip positioning along the edge for optimum bulb visibility. Then, **after determining if you prefer, say, 11" or 11.25" spacing to allow for smooth but semi-taut light line installation, you can proceed with installing the rest of the parapet clips before coming back later with the assembled string of lights to snap precisely into place.**

Here's a SINGLE-STEP method you may want to try for Shingle Tab/Parapet Clip installation:

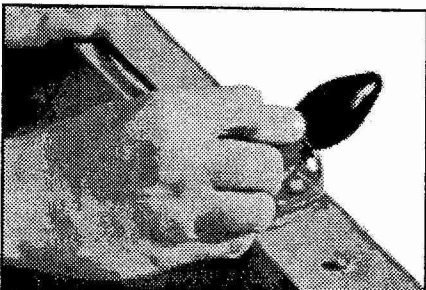
When you get ready to install your run of lights, cords and parapet clips, think about assembling them all together before going up to the flat roofline or parapet wall. Then, place a pretty good dab of adhesive on the bottom of the parapet clip itself. In this scenario, the shingle tab is already snapped onto the clip and the light and socket are attached to the shingle tab...so all the assembled components are ready to be placed along the edge of the surface. After placement, have a second helper tear off adequate strips of **duct tape** to secure the clip to the surface, hold everything in place and, consequently, let the parapet clip dry in place. Then, when you remove the products at season's end, the long-since-dried adhesive will be securely bonding the parapet clip permanently to the surface. Note, **when removing the duct tape, be sure to place your thumb squarely in the middle of the parapet clip to hold it firmly in place so you reduce the chance of breaking the adhesive bond while unsnapping the shingle tab and light.** Then, pull (unsnap) the shingle tab/lights away from the clip and leave the parapet clip itself in place. **The following season all you have to do is easily snap the assembled strings and shingle tabs onto the parapet clips already in place!**



▲ *Shingle tab and parapet clip attached.*

The parapet clip works great on all types of flat surfaces, of course, and even on single-story buildings the clips are usually on the top of a ledge or flashing so they are not going to show from the ground. They're super thin and rise above the surface a mere 1/4" at the most depending on the thickness of your bonding agent.

Another specialty clip for attaching the larger lights along flat surfaces is the **C-Clip**. This omnidirectional clip is a single piece that "**cradles**" either the C7 or C9 light socket after it's snapped into the clip. Like the parapet clip, this acrylic piece of mounting hardware will attach with adhesive or screws on **any type of flat surface**. There are a couple of significant considerations for using the C-Clip rather than the shingle tab/parapet clip configuration. Unlike the low-profile parapet clip which is virtually unnoticeable from the ground after the



▲ *C-Clip installation on flat surfaces.*

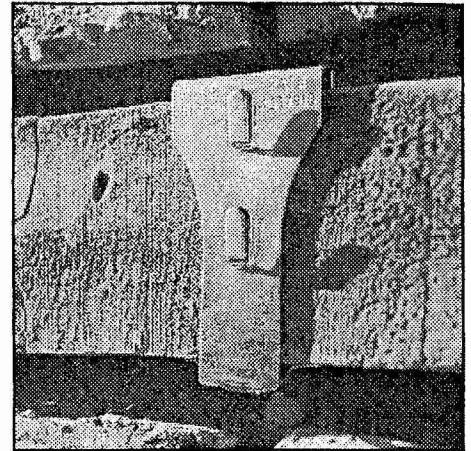
tabs and lights have been removed, the C-Clip is more noticeable from below because it is about an inch tall and features the distinctive "C" shape or half moon appearance where the "arms" of the clip curve upward for gripping the light socket when it's snapped in place. If you feel that your customer will be apprehensive about the clip being seen across the top of the building or along a ledge, you can suggest the parapet clip/shingle tab configuration and easily show how the parapet clip is much lower profile than the C-Clip. However, this issue of visibility from the ground is pretty well limited to single or two-story buildings or structures. The taller the structure, the less visible the clips will be and the less likely that people will be looking that high up to notice the clips in the first place. Another consideration is **the need for only one C-Clip** as opposed to both a shingle tab and parapet clip to achieve the same overall effect therefore you will incur less cost for the same effect; and, because the **C-Clip is entirely acrylic**, it can stay up year-round...with or without the lights in place. Some businesses like the C7/C9 lighting up and available to use all year long and the C-Clip provides a **singular**

piece of hardware that is virtually invisible behind the installed bulb. One last point regarding C-Clips: Because the shingle tab is made of polypropylene, it will become brittle and literally break down after just a few months of exposure to the changing seasons and the hardship of varying weather conditions. As noted earlier, the shingle tab is only intended to be in place for what amounts to a few short weeks of cool season conditions each year. **If for no other reason than outdoor durability, long-term installation of C7 or C9 lights should be done with the C-Clip.**

ATTACHING LIGHTS AND GREENERY ON BRICK

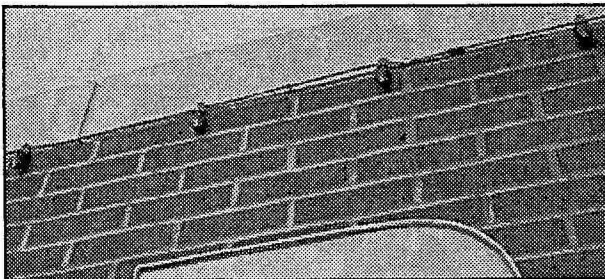
Where practical and in **low-visibility areas** on brick structures, the relatively new **brick clips** are also a good way to attach lights, garland, wreaths and roof toppers. These **spring-load** metal clips are unique in the fact that they don't damage the mortar while offering a solution for securely holding the desired object in place.

There are two sizes of clips: the first being the "**standard**" size for traditional-size brick widths; and the other being "**queen size**" to fit the newer, wider styles of brick that have become the new standard in the past few years. To install either of the clip styles, simply position the bottom portion of the clip featuring the spring under the bottom lip of the brick. Push up on the clip and you'll feel the spring action give just a bit to allow the upper portion of the clip to "crawl" over the top lip of the brick. **The "gator teeth" will tightly grip the brick without harming it or the mortar in any way.**



▲ *Brick clip attaches without damage.*

Just keep in mind that brick clips need a minimum of **1/8" surface area of brick** to grasp on successfully. Buildings that have mortar extending out almost even or totally flush with the edges of the brick will not allow the clip enough room to grasp.



▲ *Anchor screws installed in a brick wall.*



▲ *Securing a 48" wreath requires multiple anchors.*

Securing With Screw Anchors

Besides nails, staples and the innovative clips noted in this section, another way of attaching lights when nothing else works is **screw anchors**. This method is perhaps most useful when working on commercial brick buildings.

Installation requires using a **masonry bit** to drill a hole in a mortar joint, inserting a plastic anchor, and then a screw which is left **extended about half an inch** to accommodate wire-tying the strings to the screw. Screw anchors also come in handy when **attaching an extra-large wreath** to the side of a brick structure or putting garland or lights around windows or doors where it's not practical to use nails or clips.

It would be wise to consider **three or four different anchors** distributed in a triangular or squarish arrangement to secure the top and bottom portions of the wreath. **This will reduce the chances of potential winter wind gusts from raising the wreath away from the wall and possibly causing it to break loose from just a single or double anchor point.** This is especially important to consider if you are installing in medium-to-high traffic areas where the potential for a mounted wreath to fall on a pedestrian or vehicle below is highly possible. You can be assured that by taking the **small amount of extra time** required to insure a lesser chance of problems will be well worth your time and trouble in the long run. It's worth noting here that while many of the "small things" we mention might seem obvious or perhaps mundane, our priority is to **inform and educate** while reducing problems you might encounter.

The key to decorating trees, bushes, shrubs and hedges is to make the pattern of lights look **completely random—no straight lines—and no lights hanging in midair**. Most of this type of lighting should be done with miniature lights except for very large trees which should benefit from the use of C7 strings. The reasons behind this are fairly straightforward: A large tree (30'-40' tall) would be very difficult to climb and try to find out which one of the miniature lights had gone out in a particular series and was causing a whole string or series of lights not to function. With C7 lamps there will be a few individual lights burn out in random locations on occasion, but they won't be noticed and there will be no need to change them until they are taken down and put back up the following year.

When decorating with miniature lights it's usually best to do so with the **strings plugged-in**. This is in case any one of the lamps becomes loose or comes out of the socket during the twisting and wrapping process of installation. If it should happen, you know it right then and can **fix it as you run across it**...instead of having the whole tree decorated, turning it on, and finding out that only half of it works. Then it's difficult (or near impossible depending on the location within the tree) to go back and find the one or two lamps that are causing the problem. **We suggest the "team approach" to installing in general** and it is not unusual to have one or two people putting lights in trees while having one person do the unpacking and general prep work that's necessary prior to the actual installation itself. Part of this process can include opening the cases, unwrapping the polybag wrapping or removing the strings from a plastic tray and the initial checking and/or simple repairing of the mini lights so that they are ready to go when the time comes. Keep in mind that the filament in a miniature light is very durable and it can handle the shock of installation while plugged-in whereas, in contrast, the filament found in C7 and C9 lamps is a lot longer and jarring movements and rattling among branches while installing these lights will result in a lot of broken filaments. For this reason, **do not install C7 and C9 lights while they are illuminated**. They are not in series and one bad bulb won't affect the whole string.

When your business has reached the point where you are ordering lights by the full case, you can expect an occasional string not to light. If the problem is simple—fix it immediately. **If it's too time consuming—take it back to the shop and work on it at a more convenient time** (perhaps in the off-season when you're not busy with deadlines). Don't allow yourself or your staff to spend more time to repair a defective string than what a new one would cost. Simply put bad strings aside and reach for a new one if you have ample supply. As the old adage goes, **time is money** and you will realize this absolutely true when you are in the thick of a hectic season.

Installing Mini Lights on Hedges

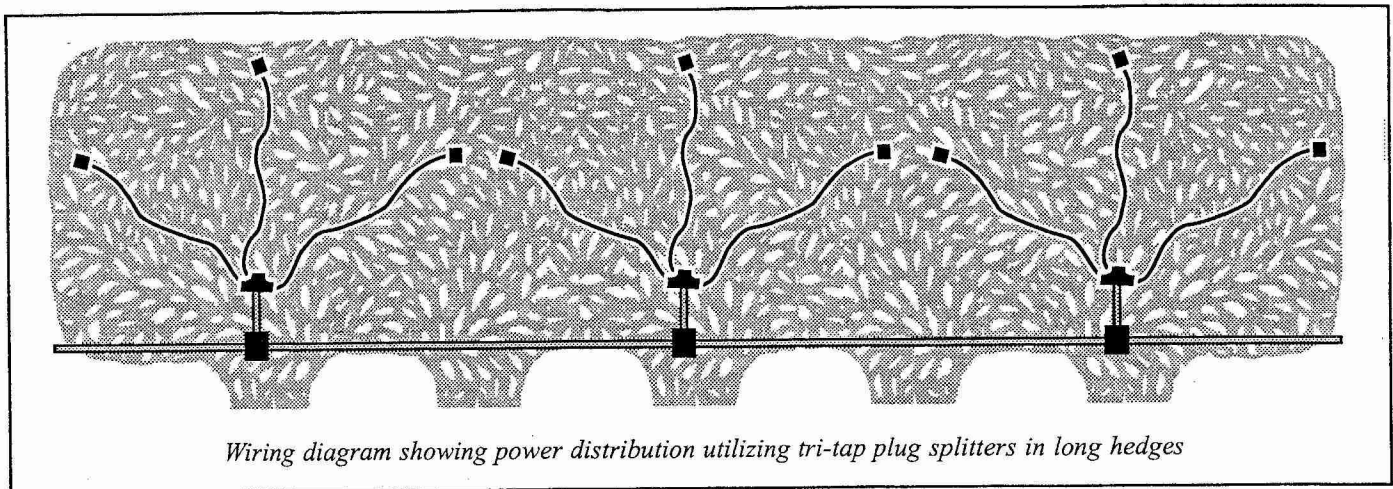
Hedges are relatively simple to light and it's easy to master the technique in a short period of time. The **main concern is where to locate power cords**. For example, if you put an extension cord on one end of the hedge, note that you can only **connect the maximum lights sets recommended by the manufacturer** together so you most likely won't make it all the way to the other end. **Start in the center of the hedge** and run the light strings in **both directions** (see next page). For really long hedges, you may need more **sources of power located at different points**. Run in both directions out of each splitter as shown. Wind the lights around the top and sides in a **random, abstract pattern** for a natural, pleasing look.



Arrange lights in a "squiggly" pattern.



Avoid straight lines when lighting hedges.



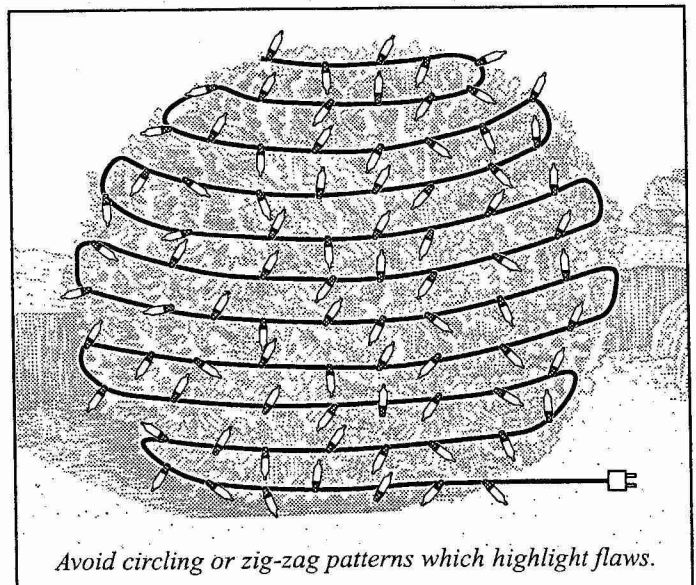
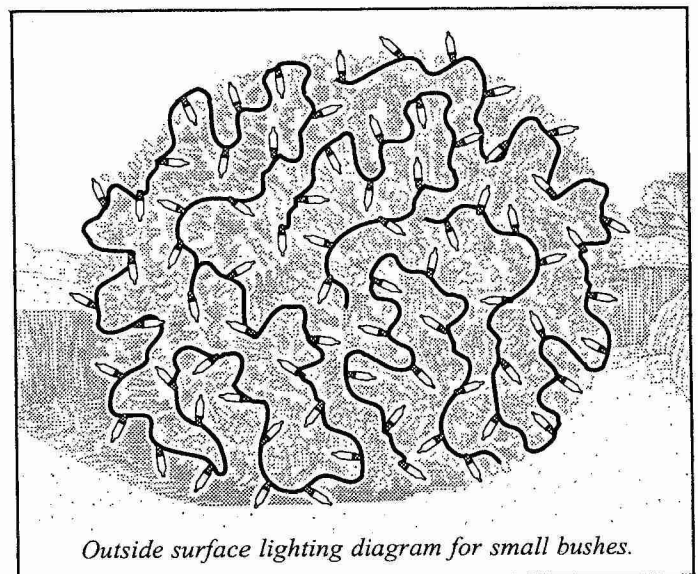
Lighting Small-to-Medium Size Bushes

The key here, again, is to make the lights look random. As with hedges, keep the lights on the **outside of the plant**. There is no need to force the lights to the interior, woody portion because small bushes and hedges are so dense that the lights won't show anyway. Think strictly in terms of **covering surface area** and concentrate on creating an even distribution of lights so the finished result reveals total light coverage on the plant.

VERY IMPORTANT TO NOTE when running power to bushes and hedges:

Run the power cord up into the middle (or trunk area) of the bush or hedge so that any plugs or connections won't be standing in water when it rains, snows, or the sprinkler system comes on. The end of the power cord, even if it branches off to feed another area, should be tied, wire-tied, or securely taped so that it's at least **a foot off the ground**. The last thing you want is power cords standing in water. Place heavy emphasis on power safety and especially on the installation aspect of the lighting process.

Also, studying the hedge lighting diagram at the top of the page and the diagrams to the right will show how proper placement of multi-outlet "plug splitters" is the most important aspect of light installation. **How and where you locate extension cords and splitters to distribute the available power is as important as understanding the principal of "splitting up the power" for distribution to the various segments of connected light strings.** It may seem like you have too many sets connected together by merely looking at the diagrams and noting the total number of sets running from a single power source; however, the tri-taps special function of "splitting" the power allows for the multiple segments of connected light strings. **Think of it as creating a "network" of light sets without exceeding the maximum connectability of any one segment of strings.**

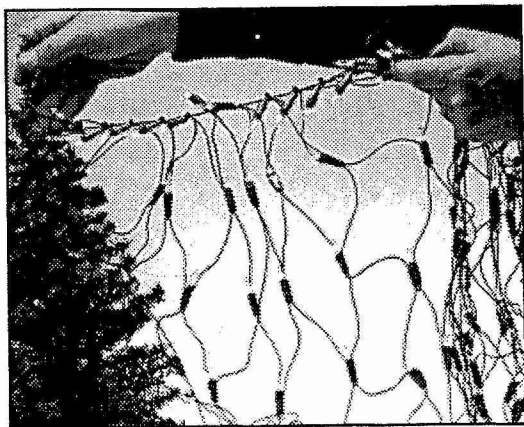


Net Lights Offer An Easy Installation Method and Provide a Consistent Look

Another, relatively new option for lighting various types of indoor and outdoor greenery are **net lights**. As the name implies, these are pre-formed and uniformly spaced lights that resemble a widely-spaced fish net. And, as an alternative to physically weaving the light strings around the branches, the nets simply lay over the plant like a **blanket of lights** and provide a quality look that covers the surface and spaces the lights evenly.



▲ *Flat nets simply drape over the hedge.*



▲ *Tapered tree nets wrap around the tree.*

The net light products, which include the **flat, rectangular style** as well as the **tapered, triangular style** fitted for **artificial or living Christmas trees**, may be a great time saver. Keep in mind that they may be a little more expensive than regular mini light strings but the savings in labor can make up for the extra expense. Note that most flat nets are made in **4-ft. x 6-ft.** and **4-ft. x 8-ft.** sizes so they are best used for medium-to-larger size surface areas so smaller bushes and trees may not be good candidates for their use. Along with the variation in physical sizes, note that most smaller nets consist of **150-lights** while the larger ones commonly feature **200-lights**. “Super-sized” nets measuring **10-ft. x 12-ft.** have recently been introduced in limited distribution and these are comprised of three series of 150-light lamps for a total of **450 lights**. These sets feature heavier, **18-gauge wire** to accommodate their commercial specifications. Keep in mind that these “monster size” nets won’t be found on local retail shelves.

To install the flat net, simply align the net on the plant so that it is straight along the edge of the hedge or bush and gently stretch over the sides and top. Tuck the bottom of the net under the hedge or bush to help secure it snugly against the plant. You may also choose to randomly add a twist-tie or other clip to fasten it.

To install the tapered tree net, simply establish a starting point and “walk” the net around to cover the tree. Generally, there are two sizes of tree nets: **6-foot** and **7-foot**. Both sizes will gently stretch a bit to allow for trees measuring just a bit taller; for example the 6-ft. size will most likely give adequate coverage to a tree measuring up to 6.5-ft. tall.

Wrapping Tree Trunks

Another variation of tree decorating involves **wrapping the trunks with miniature lights**. Most trees are so large that lighting them entirely would be too expensive for the customer. Wrapping the trunks can be an **affordable alternative** and the “glow” from the trunk will illuminate at least the bottom portion of the tree’s leafy canopy.

There are two practical ways to do this: The first is the “standard method” of **wrapping connected strings of mini lights** around the trunks. The second, and more labor-efficient way, is to use a product called **trunk wraps**. These usually come in either 6-ft. tall or 8-ft. tall sizes and generally measure 24” across...just the right width to accommodate the girth of most average-size, mature trees like oak, maple, cottonwood, etc. Once you have tried the old way you will definitely appreciate them. And, while these wraps are great for the main trunks, to go up farther into the tree, you will have to pick up where the wrap ends by using standard straight-line mini light strings to wrap around some of the branches forking off from the main trunk itself.



▲ *Trunk wrapping*

Considerations When Lighting Medium-to-Larger Size Trees

When it comes to lighting larger trees, it **may not be necessary to cover each branch all the way from the trunk to the tip of the branch**. Most of the time that would take too many lights and too much power. Just remember that the **total power availability will play a MAJOR PART of each decorating job you do**. Consider these options to make the task easier while knowing that you will still be offering you customer a professional lighting installation.

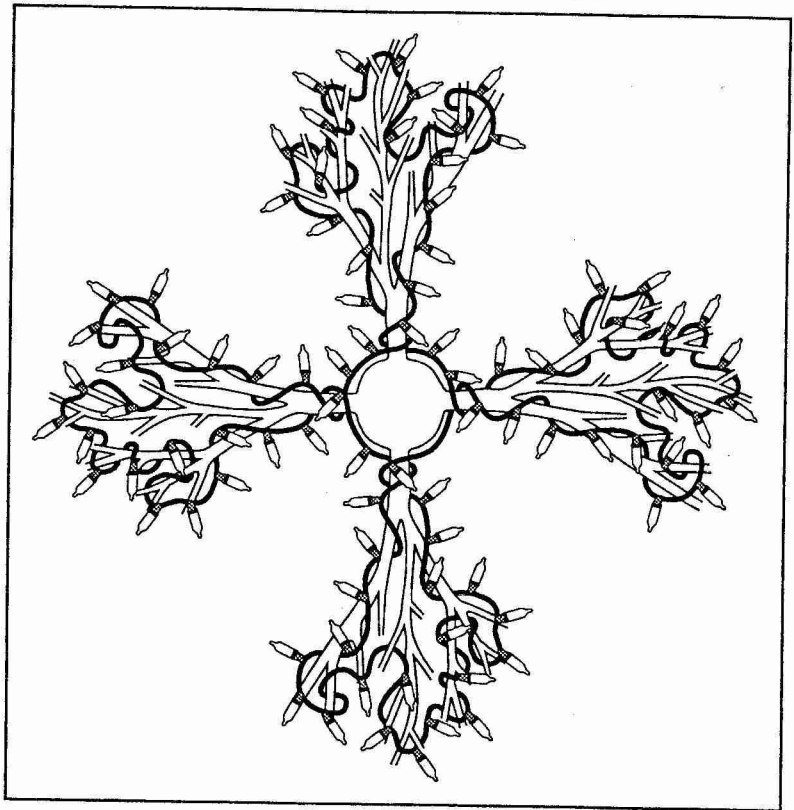
For really large trees, you will likely want to recommend lighting only the outer three feet of the main branches.

Start the lighting process by placing a string **inside the tree** along the first branch; proceed by intertwining and gently wrapping the string **outward toward the tip** of the branch in a semi-loose but consistent manner. Position the lights along the outer areas of the branch, catching some of the smaller branches on one side and then **work the lights back to the inside of the branch** catching the smaller limbs on the other side of the main branch.

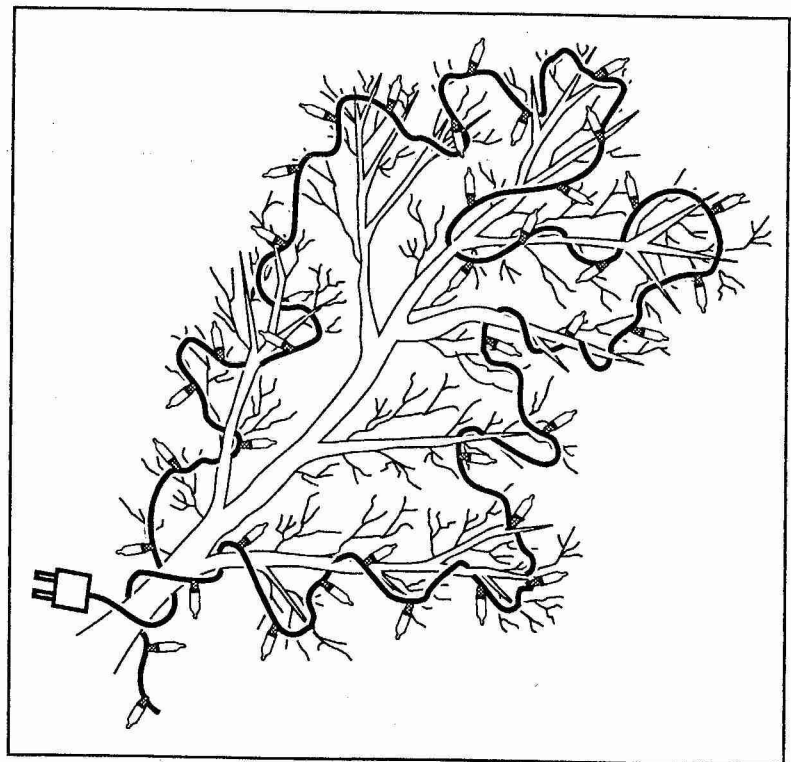
From the interior once again, jump the string to another branch in close proximity...on either side, above or below. **This way, when light strings connect between branches they are protected INSIDE THE TREE** instead of dangling or left hanging in midair. This is an important principal to incorporate into your lighting technique because when the wind blows, the outer reaches of the branches sway the most and really play havoc with exposed light strings. **If you connect adjacent branches out near the tip ends, you'll find that they can easily be ripped apart like spaghetti with a gust of medium to high winds.** By paying moderate attention to the way you install the lights and by following the examples shown in the diagrams to the right, you can **save yourself valuable time by eliminating the need to go back and repair or restring damaged sets.**

Lighting the Upper Portions of Large Trees

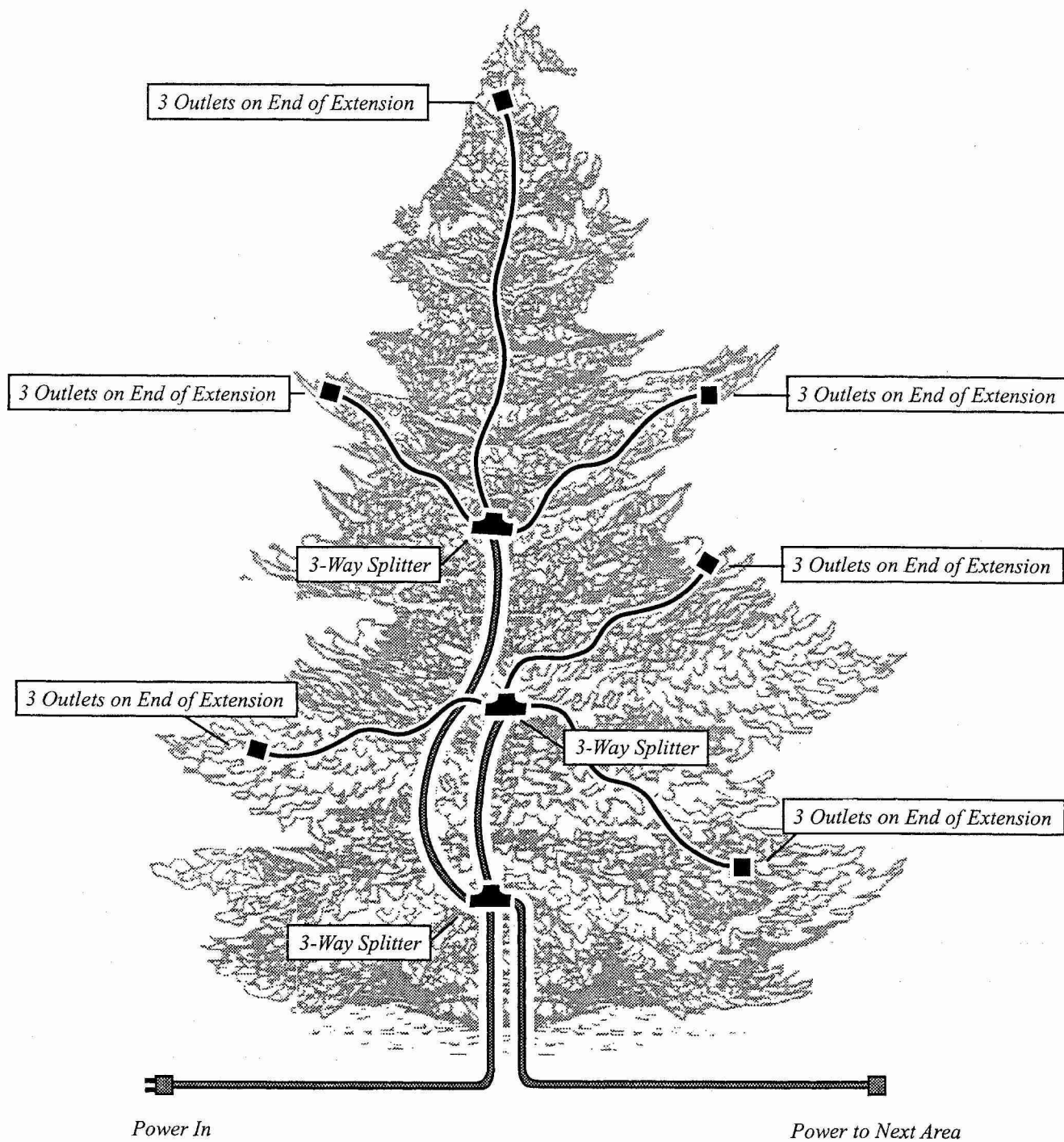
On tall trees where you're working from a ladder and can't reach some branches, utilizing an **extendable pole** may do the trick. You may also want to consider renting a "cherry picker" or **bucket truck** to assist in large-scale jobs. These handy pieces of machinery rent by the hour, day or week in most areas.



▲ Top view of tree showing light string distribution.

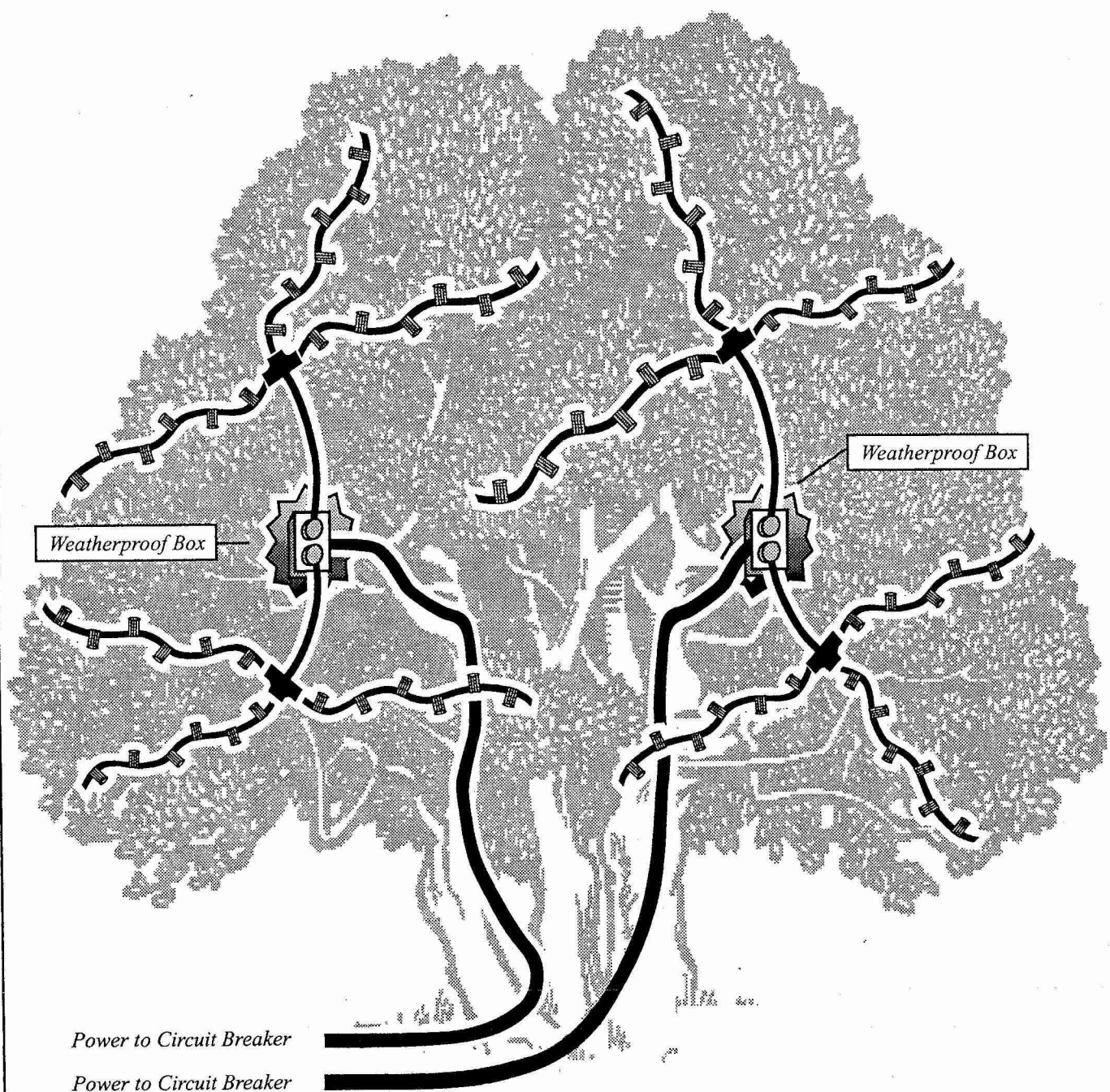


▲ Weave and wrap strings along the edge and then back to the interior.



Three (3) sets of six (6) 35-lite or 50-lite strings plugged end-to-end in two (2) different sections of the tree.

Wiring diagram for medium-size evergreen tree.



For extra large trees requiring large numbers of lights to adequately cover, have an electrician run two (2) 20-amp circuits up into tree.

Each weatherproof box has two (2) cords with 3-way outlets on the end. Each of these cords has three (3) sets of C7 standard 25-ft. fused cords plugged end-to-end. Total of 36 stings of C7 light sets.

Wiring diagram for large tree with leafy canopy.

Recommended Number of Lights for Outdoor Trees

TREE HEIGHT	MINI LIGHTS	C7 LIGHTS	C9 LIGHTS
4'	50	-	-
6'	150	50	-
8'	250	100	-
10'	350	150	-
12'	500	200	-
15'	700	250	250
20'	1,000	300	300
25'	1,300	400	400
30'	1,600	600	600
40'	2,200	1,000	1,000
50'	3,000	1,500	1,500

Note: The chart above is designed to accommodate the lighting needs for spruce, pines and other tree varieties that retain a good portion if not most of their leaves in the winter. These include live oak, yaupon, and pecan for example. **For customers who want maximum lighting - simply add 50% more lights to these figures.**

For trees that lose their leaves in the winter, use about **75%** of the recommended number above because "bare" trees will allow lights to show through from the opposite side and give the impression of more lights on the tree than there are in reality.

DECORATING WITH GARLAND AND BOWS AROUND WINDOWS AND DOORS

A simple way to give an **elegant look to any decorating job** is to put garland and bows on all the front windows and around the front porch or door. However, a single strand of cheap garland with a few lights thrown on it won't exactly fill your customer with the holiday spirit. And cheap cellophane-type garland won't cut it at all.

Find a **good artificial garland** that has the right look and feel about it. You don't necessarily have to go top-of-the-line (and yes, there are varying degrees of quality out there) but like your other products, choose the "good stuff" whenever possible. **Most garland is available in 9' or 12' sections** and can be purchased at discount stores, through wholesalers, or specialty Christmas stores. Some specialty stores sell longer, better-quality rolls that are more "full" and wider from tip to tip. For example, you may find relatively **skimpy 10"** wide, **medium-width 12"** as well as **premium-width 14" styles**. And, if you weren't aware of it up until now, you need to know that you can usually find traditional unlighted garland as well as the newer types of **pre-lighted garland, wreaths and Christmas trees**. On rare occasions, you may even find extra-wide, ultra-plush **20" or 24" wide** garland and these two styles are almost always sold unlighted.

Whichever route you decide to go when it comes to purchasing artificial greenery, here's a good way to make less-expensive or "average" unlighted garland look really good: Buy enough to **double it back** and then take the time to bend the individual tips out semi-straight and shape them somewhat so that the overall