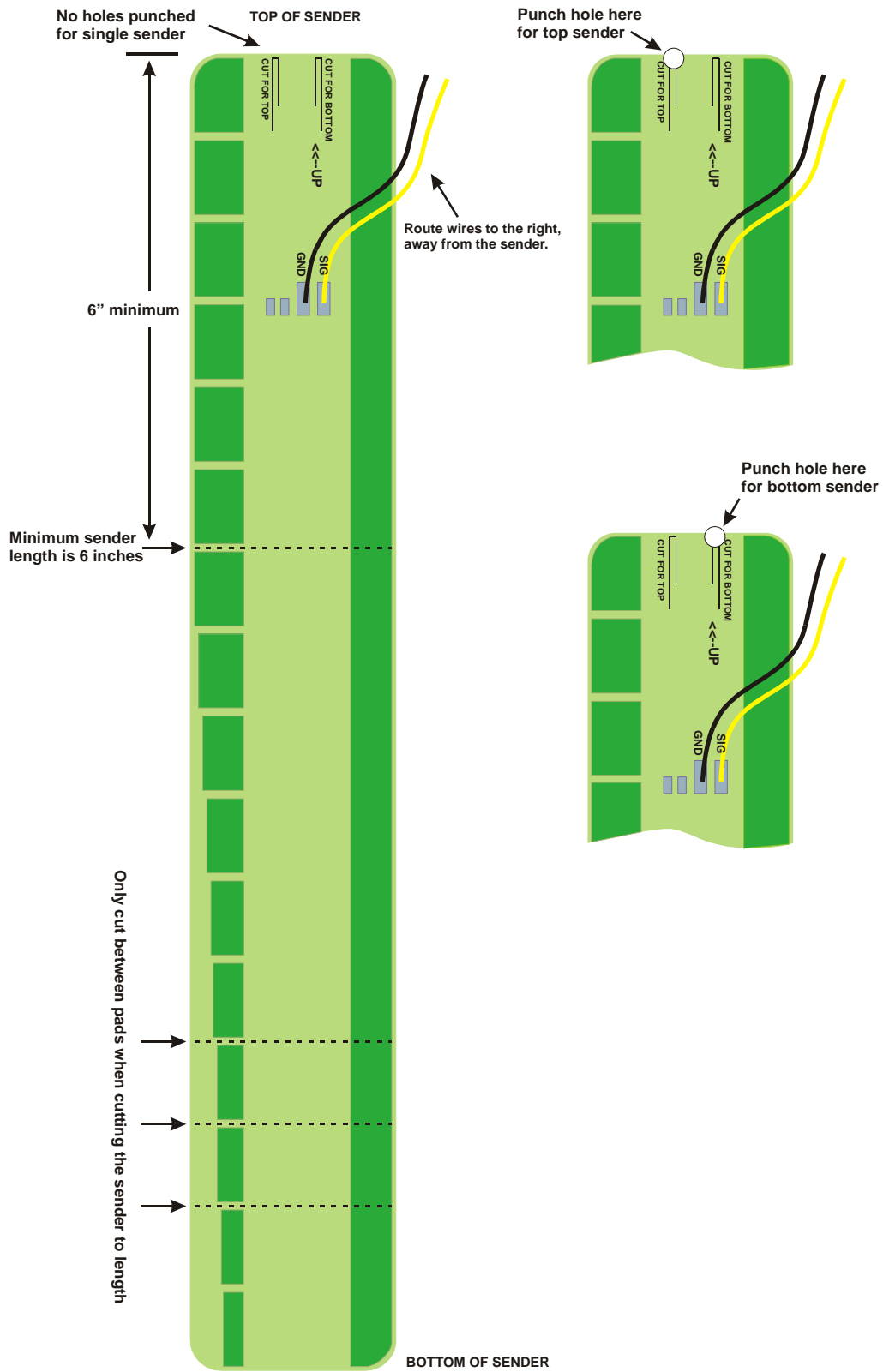


CHAPTER 5

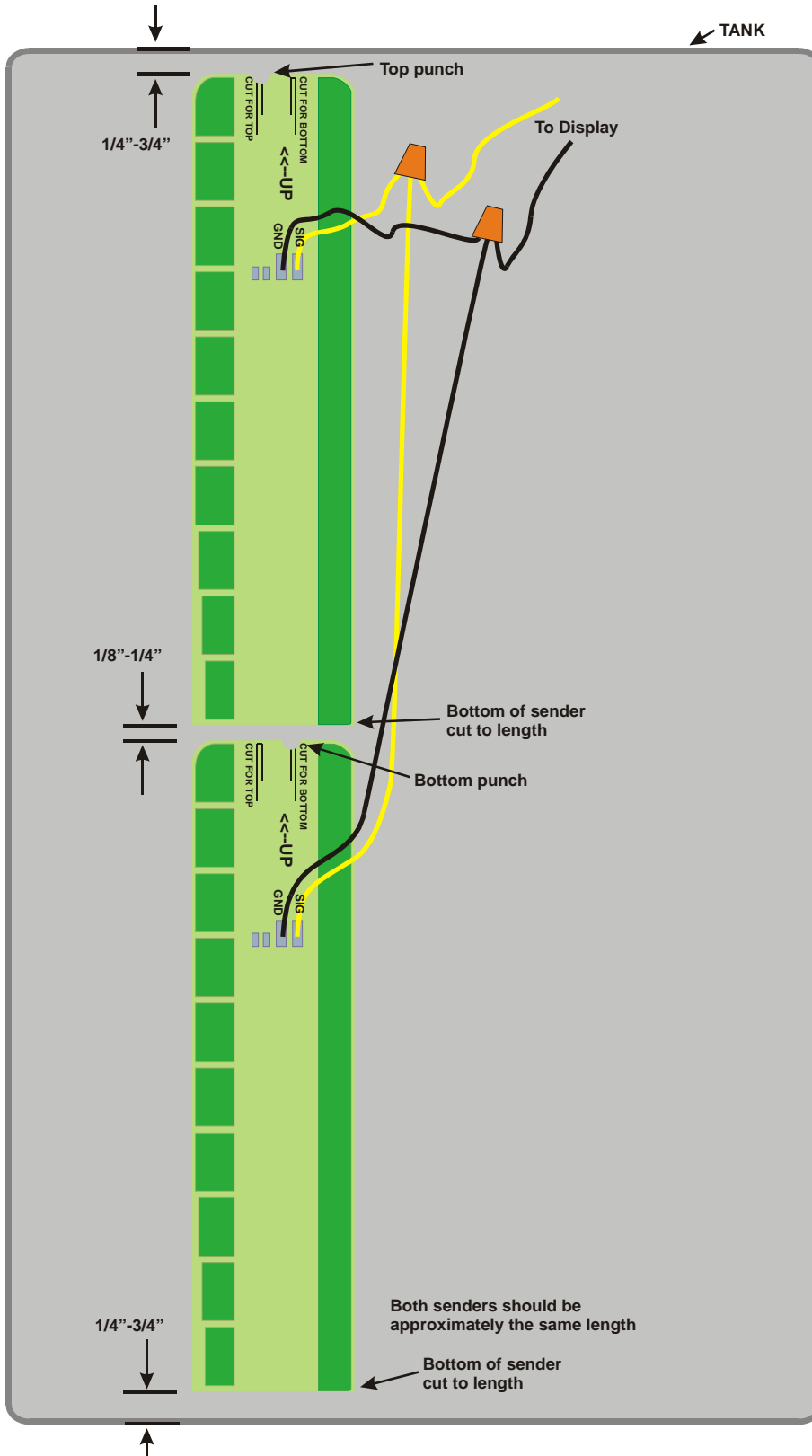
INSTALLATION GUIDE (NEW OEM INSTALLATIONS ONLY)

Wire Color	Function
Red 18 gauge	+12V power input to monitor
Black 18 gauge	Ground
Blue 22 gauge	Fresh water tank #1 sender
New 22 gauge	Fresh water tank #2 sender
Grey 22 gauge	Grey water tank sender
Brown 22 gauge	Black water tank sender
Green 22 gauge	LPG 1 tank

1. Determine where to mount the senders on the tanks. They will need to have a flat area on the side of the tank large enough so the whole width of the sender is in contact with the side of the tank, all the way from the top to the bottom of the tank. Make sure that any metal is at least an inch away from the sender. Clean the area well so that there is no dust, grease, oil, water, etc., that would prevent the adhesive on the sender from sticking.
2. Measure the height of the tank to determine how long the senders should be. For tanks less than 17" tall, follow step 6. For tanks greater than 17" tall, follow step 7.
3. For tanks less than 17" tall, a single sender is used. The sender ends should be 1/4" to 3/4" away from the top and bottom of the tank, to allow for the thickness of the tank top and bottom and any bows in them (see the diagrams). The senders are calibrated to account for this distance from the bottom of the tank. The sender is cut to the nearest even inch in length, for example, a system with a tank height of 11.75 inches, cut the sender to be 11 inches long, this allows 3/8" at each end when the sender is centered vertically on the tank. **IMPORTANT: Do not cut the sender shorter than 6 inches! The sender will not work if it is cut less than 6 inches.**
4. For tanks greater than 17" tall, two stacked senders are used. The sender ends should be 1/4" to 3/4" away from the top and bottom of the tank, to allow for the thickness of the tank top and bottom and any bows in them (see the diagrams). The senders are calibrated to account for this distance from the bottom of the tank. In addition, there needs to be a gap of 1/8" to 1/4" between the two senders. Therefore total length of both senders will be: tank height-1/4"-1/4"-1/8", then rounded down to the nearest whole inch. The top and bottom senders should be approximately the same length for best results. For example, if the tank height is 22", then $22" - 1/4" - 1/4" - 1/8" = 21 \frac{3}{8}"$, so the total length of both senders will be 21 inches. Make one sender 10" long and the other 11" long.



5. To make the senders the right length (assuming they are too long) they will need to cut off with a pair of scissors. The end to be cut is the bottom end, which is the opposite end from the top where the wires come out (see the diagrams). DO NOT cut the sides, and DO NOT cut the sender shorter than 6 inches. The cut must be in between the sensor pads, and the cut must be made parallel to the existing bottom end. Double check your measurements, if the sender is cut too short, it cannot be lengthened.
6. For two stacked sender systems, the senders need to be programmed so they know that they are being used as top or bottom senders. As shown in the diagrams, punch a hole or snip a bit of the sender away to cut the line on the sender corresponding to its position. For the bottom sender, cut the line next to the text "CUT FOR BOTTOM", and for the top sender, cut the line next to the text "CUT FOR TOP". DO NOT cut any lines for single sender systems!
7. Once the sender is cut to length, carefully peel the backing paper off the adhesive. Do this slowly to prevent the adhesive from being ripped off the sender, and to prevent the backing paper from ripping. Be careful not to bend the sender sharply in the process. Position the sender over the side of the tank and carefully stick it down. MAKE SURE THAT THE END WITH WIRES IS POINTING UP!! Position the bottom of the sender at least 1/4" above the bottom of the tank, and more if required to equalize the space at the top and bottom of the tank. Make sure that the sender is square with the tank. You only have one shot at this, if you try to peel it off the tank once it is stuck the sender may be damaged by the sharp bending. Carefully press the sender down to the tank so that all of the adhesive is contacting the tank wall.
8. Connect the yellow wire to the wire from the display corresponding to that tank. For two stacked sender systems, connect the two yellow wires together, then connect these to the display (see the diagrams). Connect the black wire from each sender to ground. Use Marrette or crimp connectors to fasten the wires together. Make sure that the wires from the sender are routed away from the sender, if they drape over the sender they could affect the reading. Secure the wires with tie wraps or something similar so that the wires do not rattle or press against the sender, this may result in sender damage or wires breaking over time.
9. Do steps 1 to 8 for the other three holding tanks.



Typical Two Stacked Sender Installation