QUICK REFERENCE GUIDE

Defining S-CATH M in Biosense Webster CARTO®3

To ensure best probe visualization, we recommend using a **yellow pin box** (Product Code: EM-5400-04) and connecting it to the compatible PIU sockets based on the following order of recommendation:

1. QUAD B
2. DECA
3. QUAD A may be used, though visualization may be unstable during ablation (see CARTO®3 System Release Notes, BR#36062 for more information).

Important Note: The distance/spacing between the electrodes on S-CATH M can vary depending on the width and shape of the patient's esophagus. This can prevent the probe from being properly displayed on the 3D cardiac mapping system. If this happens it may be necessary to change to a 2-electrode configuration instead of a 4-electrode configuration. **We recommend defining the CIRCA S-CATH M probe in 2-electrode and 4-electrode configurations before the procedure begins.**

4-ELECTRODE CONFIGURATION

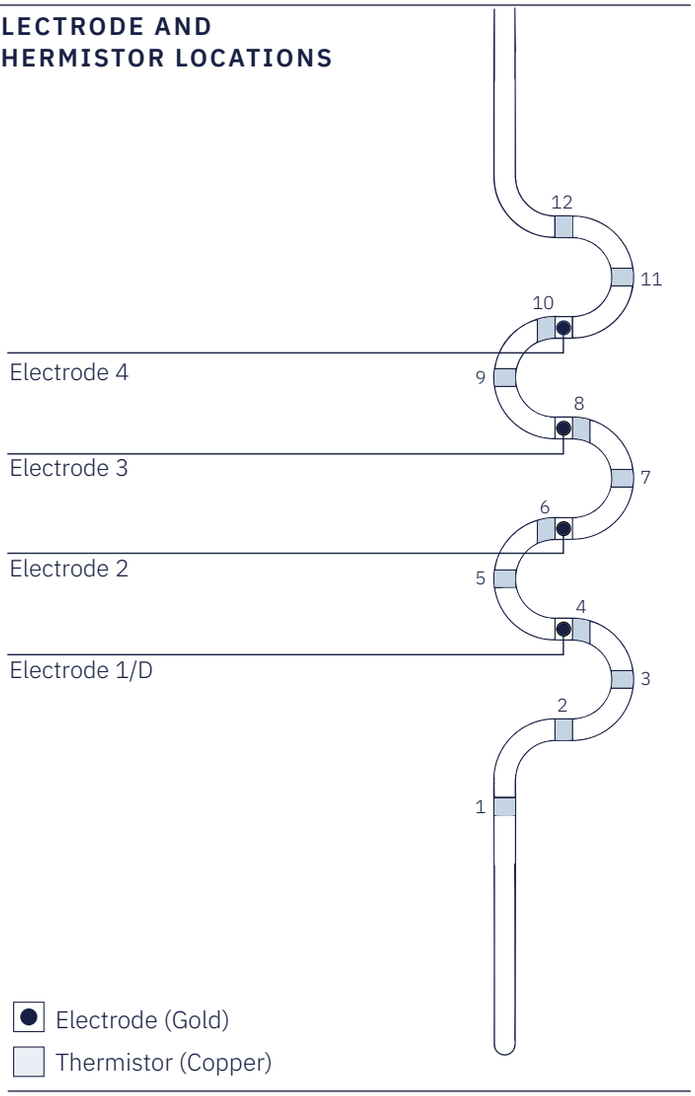
FIELD NAME	DATA TO ENTER
Catheter Name	**CIRCA 4**
Catalog Number	CS-21EP
Manufacturer	CIRCA Scientific
Number of Electrodes	4
Tip Electrode Length	Leave Blank/Unchecked (No Tip Electrode)
Distal to First Electrode	20mm
Spacing Method	Center to Center
Spacing	22-22-22 (mm)
Electrode Width	2.5mm
French Size	10F (May be adjusted so probe appears smaller on map)

2-ELECTRODE CONFIGURATION

The 2-electrode catheter definition can be used to visualize electrodes 1-2, 2-3, or 3-4 depending on which two electrodes are plugged into the first two ports of the CARTO pin box. Please note, if using electrodes 2-3 or 3-4, the corresponding pins must be physically moved to the first two ports.

FIELD NAME	DATA TO ENTER
Catheter Name	**CIRCA 2**
Catalog Number	CS-21EP
Manufacturer	CIRCA Scientific
Number of Electrodes	2
Tip Electrode Length	Leave Blank/Unchecked (No Tip Electrode)
Distal to First Electrode	20mm
Spacing Method	Center to Center
Spacing	22 (mm)
Electrode Width	2.5mm
French Size	10F (May be adjusted so probe appears smaller on map)

ELECTRODE AND THERMISTOR LOCATIONS



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QUICK REFERENCE GUIDE

Troubleshooting S-CATH M in CARTO

ISSUE	POSSIBLE CAUSE	ACTION
If S-CATH M does not appear on the map after left atrial geometry is created	**CARTO3 Matrix may not extend far enough beyond the posterior wall of the left atrium**	Ask the physician if he/she can build a more detailed matrix using a Biosense Webter sensor-based navigation catheter. Viewing the matrix (Help > Show Visualization Matrix) from a lateral perspective may be helpful to ensure that it extends far enough beyond the posterior wall to visualize electrodes located in the esophagus.
	Most distal or proximal electrode(s) may extend beyond the roof or floor of the left atrium	The CARTO3 Visualization Matrix generally only extends to the top and bottom of the left atrium. If the electrodes on the S-CATH M extend considerably above the roof or below the floor of the left atrium, all 4 electrodes may not be located in the matrix. Switch to a 2-electrode configuration, beginning with E2-E3. Remember that pins 2 and 3 must be physically moved to sockets 1 and 2 on the pin box.
	Some electrodes may not have sufficient tissue contact	Evaluate tissue contact of each electrode by viewing unipolar electrograms of each electrode and/or enabling raw electrode view (<Shift + W>). If one or more electrodes do not have stable tissue contact (noisy electrogram or are not displayed in raw electrode view), switch to a 2-electrode configuration using two electrodes that have good tissue contact. Repin as needed.
	Electrodes may not be where the system expects them to be ("S" shape compressed or stretched)	CARTO3 has a built-in error tolerance range of ±3mm. If actual electrode location differs from pre-defined electrode spacing by less than ±3mm, the probe will appear striped. If it differs by more than ±3mm, the mapping system will hide the catheter. Switch to a 2-electrode configuration, beginning with E2-E3. Repin as needed. If the probe still does not appear or appears curved, increase electrode spacing to 26 mm in the Catheter Definition Tool.
	Probe may not have been placed in esophagus (possible tracheal placement)	Observe temperature data on CIRCA Temperature Monitor. If erratic or otherwise out of normal range as determined by clinical staff, verify probe location on fluoroscopy.

ISSUE	POSSIBLE CAUSE	ACTION
If probe is flickering (appearing and disappearing)	**RF Interaction (probe visualization unstable during ablation)**	Move pins to DECA ports, revising connection to PIU as necessary. If image stability does not improve, use "Catheter Snapshot" tool to show probe position at a user-defined time when probe visualization was more stable.
	Probe electrodes may be on "edge" of CARTO3 Matrix	See action steps for "CARTO3 Matrix may not extend far enough beyond the posterior wall of the left atrium" above.
	Some electrodes may not have sufficient tissue contact	See action steps above for "Some electrodes may not have sufficient tissue contact".

ISSUE	POSSIBLE CAUSE	ACTION
If probe shape appears distorted:	**Some electrodes may not have sufficient tissue contact**	See action steps above for "Some electrodes may not have sufficient tissue contact".
	Electrodes may not be where the system expects them to be ("S" shape compressed or stretched)	See action steps above for "Electrodes may not be where the system expects them to be("S" shape compressed or stretched)".