

# SANDRO DUAL



The Most Advanced Technology,  
Hybrid System

Long-pulsed 755nm & 1064nm  
Hybrid System

Hair Removal  
Pigmented Lesions  
Vascular Lesions  
Skin Rejuvenation

755nm · 1064nm · Hybrid



SDQRGE 1812 V1.0.1

## Pre-Treatment Care

**Mode** 755nm/Hybrid/1064nm

**Pilot**  
Brightness of aiming beam

**SAVE**  
To save new parameters

**LOAD**  
To load preset parameters

**SCS settings**  
Pre/Post  
Cryogen quantity (in levels)

**Set Pulse / Pulse Count**  
Check and reset the number of shots accumulated or subtracted

**Cryogen Canister Status**  
Cryogen remaining amount

**System infor**

**Standby / Ready**

**Parameter Settings**  
Fluence (J/cm<sup>2</sup>)  
Pulse Duration (ms)  
Frequency (Hz)

**Alarm message**

### To Load Parameters



Press "Load" button

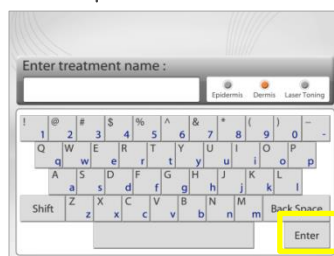


Select parameters, and then press "OK" button

### To Save Parameters

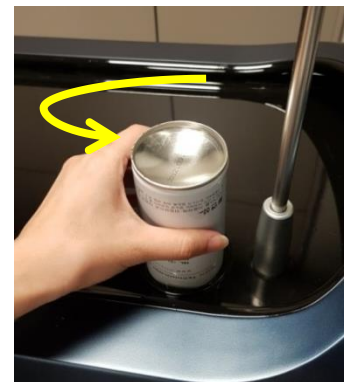


Adjust parameters and press "Save" button



Input the name of parameters, select a tab and then press "Enter" button

### To Install Cryogen Canister



- ✳ Turn off the system before installing cryogen canister
- To install, turn the canister clockwise until you feel the resistance
- To disconnect, turn canister counterclockwise
- ✳ Do not give too much force to the bottom of cryogen canister when installing

### To Install Cartridge Spot Size

Fully insert a cartridge in to the handpiece  
While pushing the button of the handpiece

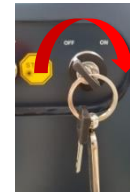


### Getting Started

1. Connect power cable to wall outlet for stable power supply.
2. Turn on the system by switching the main power switch on the back and the key switch on the front.
  - \*To turn off the system, proceed in reverse order.
3. The warming-up takes about < 15 minutes. \*Warming-up icon is displayed at the position of "standby/ready" button.



Main Power Switch



The Key Switch



The warming-up Icon

### Precautions

- Eye protection **MUST** be worn. (eyeshields for the patient and goggles for the physician)
- Parameters and SCS status **MUST** be double checked before starting the procedure.
- Test spots **MUST** be performed in order to obtain optimal endpoints for better therapeutic efficacy and safety. Fluence and LTIs vary from patient to patient depending on skin types, skin conditions and more.
- Parameters in the treatment guidelines were developed based on skin types III – IV. For darker skin types, start at lower fluence or/and longer pulse duration than indicated in the treatment guidelines.
- After each treatment, gently wipe the handpiece and cartridge tip with alcohol swap or the cue tip with 70% isopropyl alcohol.

### Skin Types

Type	Skin Color	Hair Color	Eye Color	Sun Reaction
I	White	Red	Blue-green	Always burn, never tan
II	White	Blonde	Blue	Usually burn, tans with difficulty
III	White to Light Brown	Brown	Brown	Sometimes burns, average tanning
IV	Moderate Brown	Brown-Black	Brown-Black	Rarely burns, tans with ease
V	Dark Brown	Black	Dark	Very rarely burns, tans very easily
VI	Black	Black	Dark	

- 755nm : ideal for skin types I – IV
- 1064nm : ideal for skin types V – VI
- ※ Note that the provided parameters were developed based on skin types III – IV

## Hair Removal

Lesion	Wavelength (nm)	Spot Size (mm)	Pulse Duration (ms)	Fluence (J/cm <sup>2</sup> )	Frequency (Hz)	SCS	
						Pre	Post
Fine Hair	755	10	3	15	2	4.4	(4.4)
	755	15	3	12	2	4.4	(4.4)
	755	18	3	11	2	4.4	(4.4)
	755	20	3	11	2	4.4	(4.4)
	1064	10	5	30	2	4.4	(4.4)
Normal Hair	755	10	5	15	2	4.4	(4.4)
	755	15	5	13	2	4.4	(4.4)
	755	18	5	12	2	4.4	(4.4)
	755	20	5	11	2	4.4	(4.4)
	1064	10	15	25	2	4.4	(4.4)
Thick Hair	755	10	10	15	2	4.4	(4.4)
	755	15	10	13	2	4.4	(4.4)
	755	18	10	12	2	4.4	(4.4)
	755	20	10	11	2	4.4	(4.4)
	1064	10	30	20	2	4.4	(4.4)
Hybrid Normal Hair	755	15	3	10	2	4.4	(4.4)
	1064		3	10			
	1064	15	10	15	2	4.4	(4.4)
	755		10	5			
Trichostasis spinulosa	755	12	3	14-20	2	4.4	(4.4)

- Fine Hair : female philtrum, arm, ...
- Normal Hair : female armpit, legs, male back, ...
- Thick Hair : bikini, beard, ...

## Hair Removal

### Pre-Treatment Care

- No tanning or sun exposure to the treatment area prior to treatment for 4weeks.
- Shaving must be done 1 day prior to treatment, no plucking or using hair removal cream.
- Anesthetic cream is as needed.
- Eye protection must be worn. (eyeshields for the patient, goggle for the physician)

### Intra-Treatment Care

- The Therapeutic energy for each patient may vary according to patient skin type, location, density and color of hair.
- Test spots MUST be performed before starting the treatment to find the optimal parameters for each patient. Start at the low fluence depending on spot size and skin type.
- The provided parameters are based on using SCS(Skin Cooling Spray) together. It is recommended to use only pre-cooling, but you can use pre- and post-cooling. Fluence should be adjusted if it you adjust SCS.
- The desired endpoints are mild to moderate perifollicular erythema and edema.
- For lighter skin types, increase the energy of 5–10J/cm<sup>2</sup> over the parameters provided.
- For darker skin types, decrease the energy of 5–10J/cm<sup>2</sup> and increase the pulse duration up to 30–40ms over the parameters provided.
- The handpiece should be perpendicular to the skin. It is also recommended to overlap only 10–20% of a beam profile to another and proceed 1 pass.
- Delivering double pulses is not recommended.
- If a lesion is larger, divide the treatment area using a skin marker to prevent overlapping.

### Post-Treatment Care

- Apply a cooling pack, soothing cream, or/and moisturizer to the treated area.
- Avoid sun exposure and apply sunblock regularly. (SPF 30 or higher)
- Erythema and edema are common following treatment and resolve over time. If these symptoms persist for more than 3days, anti-inflammatory medicine or dexamethasone should be prescribed.
- Pustules or pimples may develop in the first few days following treatment. In severe cases. steroids or antihistamine should be prescribed.
- Avoid hot temperatures (sauna, vigorous exercise and etc) for at least 7days.
- 3–5 or more sessions are recommended every 4–6weeks.

## Pigmented Lesion Treatment

Lesion	Wavelength (nm)	Spot Size (mm)	Pulse Duration (ms)	Fluence (J/cm <sup>2</sup> )	Frequency (Hz)	SCS	
						Pre	Post
Freckles	755	2-3	0.2	40	1	Off	4.4
	755	3	0.3	30	1	Off	4.4
Solar Lentigines Seborrheic keratosis	755	5	0.5	25-40	1	Off	4.4
Age Spot Café Au Lait	755	5	3	35-55	1	4.2	4.4
Hybrid Light Brown Spots	1064	3	5	50	1	-	4.4
	755		5	50	1		
Mole	755	2	3	150-180	1	4.8	5.0
	755	3	10	120-150	1	4.8	5.0
Melasma	755	10	3	16	1	4.2	4.4
PIH	755	7	10	7.8	1	4.2	4.4

### Mole

- 2-3pulses
- Endpoints : pigment removal, and mild erythema and edema

### Melasma and PIH

- 1-2 passes
- Endpoints : slight darkening of pigment, and mild erythema and edema

✳ Refer to the next page for other pigmented lesions.

## Pigmented Lesion Treatment

### Pre-Treatment Care

- No tanning or sun exposure to the treatment area prior to treatment for 4weeks.
- Anesthetic cream is as needed.
- Eye protection must be worn. (eyeshields for the patient, goggle for the physician)

### Intra-Treatment Care

- The Therapeutic energy for each patient may vary according to patient skin type, location, density and color of pigmentation.
- Test spots MUST be performed before starting the treatment to find the optimal parameters for each patient. Start at the low fluence depending on spot size and skin type.
- The provided parameters are based on using SCS(Skin Cooling Spray) together. Fluence should be adjusted if it you adjust SCS.
- The desired endpoints are are slight darkening of pigment, and mild erythema and edema.
- For darker skin types, decrease fluence and increase pulse duration over the parameters provided.
- If the lesion shows whitening, blanching response or blistering, it means that excessive energy is used.
- The handpiece should be perpendicular to the skin. It is also recommended to overlap only 10–20% of a beam profile to another and proceed 1 pass.
- Delivering double pulses is not recommended.

### Post-Treatment Care

- Apply a cooling pack, soothing cream, or/and moisturizer to the treated area.
- Avoid sun exposure and apply sunblock regularly. (SPF 30 or higher)
- Erythema and edema are common following treatment and resolve over time. If these symptoms persist for more than 3days, anti-inflammatory medicine or dexamethasone should be prescribed.
- Pustules or pimples may develop in the first few days following treatment. In severe cases. steroids or antihistamine should be prescribed.
- Scabs will form within 1–3 days and they fall off within 5–7 days. In the meantime, the patient should not intentionally take them off or rub the skin.
- Avoid hot temperatures (sauna, vigorous exercise and etc) for at least 7days.
- 3–5 or more sessions are recommended every 4–6weeks.

## Vascular Lesion Treatment

Lesion	Wavelength (nm)	Spot Size (mm)	Pulse Duration (ms)	Fluence (J/cm <sup>2</sup> )	Frequency (Hz)	SCS	
						Pre	Post
Telangiectasia	1064	3	5	180–200	1	4.4	4.4
	1064	3	10	180–200	1	4.4	4.4
Venulectasia	1064	3	20	160–180	1	4.4	4.4
Reticular Vein	1064	3	30	160–180	1	4.4	4.4
Dark Circles under eyes	1064	5	30	150	1	4.4	4.4
Port Wine Stains	1064	5	30	80–100	1	4.4	4.4

- Telangiectasia : mainly on the face and the nose, red and less then 1mm in diameter
- Venulectasia : mainly on the face or/and legs, dark red and 1–2mm in diameter
- Reticular Vein : mainly on legs, blue and more than 2mn in diameter

## Dark circles and Port Wine Stains

- Apply anesthetic cream for 20–30minutes
- Endpoints : purpura(may be delayed), and erythema and edema
- Time interval for treatments : 6–8weeks

※ Refer to the next page for other vascular lesions.



## Vascular Lesion Treatment

### Pre-Treatment Care

- No tanning or sun exposure to the treatment area prior to treatment for 4weeks.
- Do not use anesthetic cream. Anesthetic cream can cause vessels contractions and disappearance.
- The patient should not take anticoagulants such as aspirin.
- Eye protection must be worn. (eyeshields for the patient, goggle for the physician)

### Intra-Treatment Care

- The Therapeutic energy for each patient may vary according to size and color of the vessel.
- Test spots MUST be performed before starting the treatment to find the optimal parameters for each patient. Start at the low fluence depending on spot size and skin type.
- The provided parameters are based on using SCS(Skin Cooling Spray) together. Fluence should be adjusted if it you adjust SCS.
- The desired endpoints for red vessels are transient or persistent color change within the vessel, vessel disappearance or constriction, erythema or purpura.
- The desired endpoints for blue vessels are constrict or disappear following the laser pulse.
- For darker skin types, decrease fluence and increase pulse duration over the parameters provided.
- If the lesion shows whitening, blanching response or blistering, it means that excessive energy is used.
- The handpiece should be perpendicular to the skin. It is also recommended to overlap only 10% of a beam profile to another and proceed 1 pass.
- Do NOT deliver double pulses.
- For telangiectasia, trace the vessel with laser pulses, beginning at the distal end of the vessel branch and working to the proximal end toward the larger feeding vessel.

### Post-Treatment Care

- Apply a cooling pack, soothing cream, or/and moisturizer to the treated area.
- Avoid sun exposure and apply sunblock regularly. (SPF 30 or higher)
- Erythema and edema are common following treatment and resolve over time. If these symptoms persist for more than 3days, anti-inflammatory medicine or dexamethasone should be prescribed.
- Pustules or pimples may develop in the first few days following treatment. In severe cases. steroids or antihistamine should be prescribed.
- Avoid hot temperatures (sauna, vigorous exercise and etc) for at least 7days.
- 3-5 or more sessions are recommended every 4-6weeks.

## Skin Rejuvenation

Lesions	Mode (nm)	Spot Size (mm)	Pulse Width (ms)	Fluence (J/cm <sup>2</sup> )	Hz	SCS	
						Pre	Post
Alex Toning	755	7	0.2	5-8	8-10	Off	Off
	755	10	0.3	4-7	8-10	Off	Off
Genesis	1064	7	0.3	8	8-10	Off	Off
	1064	10	0.3	5	8-10	Off	Off
Core Heating	1064	15	30	9	2	Off	Off
Dermal Remodeling	1064	15	30 - 50	25 - 30	2	4.4	4.4
Onychomycosis	1064	5, 7	0.5	5-7	2	Off	Off
	1064	7	20	15-20	2	Off	Off
Wart	1064	5	20-50	180-250	2	5.0	5.0

### Onychomycosis and Wart

- 1-3passes on treatment area
- Endpoints : slight ash gray coloration that occurs immediately after laser irradiation or may be subtle
- Number of sessions : 3-5sessions, every 4weeks
- Do not place the tip of the handpiece in contact with the skin when lasing the wart
- Hold the tip of the handpiece 1 cm away from the lesion
- Wipe the cartridge with alcohol swap after each treatment

※ Refer to the next page for skin rejuvenation procedures.

## Skin Rejuvenation

### Pre-Treatment Care

- No tanning or sun exposure to the treatment area prior to treatment for 4weeks.
- Anesthetic cream is generally not necessary.
- Eye protection must be worn. (eyeshields for the patient, goggle for the physician)

### Intra-Treatment Care

- The Therapeutic energy for each patient may vary according to skin thickness and skin type.
- Test spots MUST be performed before starting the treatment to find the optimal parameters for each patient. Start at the low fluence depending on spot size and skin type.
- For skin rejuvenation (Alex toning, genesis, core heating or dermal remodeling), SCS is not necessary.
- The desired endpoints are mild erythema or edema that may be delayed.
- The handpiece should be perpendicular to the skin. Hold the tip of the handpiece approximately 1–2cm away from the surface of the skin to be treated.
- For Alex toning, core heating or dermal remodeling, proceed 1–2passes(500–1000shots). If the skin has no erythema and edema, you can deliver 1–2passes of Genesis afterwards.
- For Genesis, proceed 3–5passes(4–5000shots). Move the handpiece back and forth rapidly (from top to bottom and from left to right) making passes over the treatment sections.
- Check the LTIs intermittently between passes, the pulses are not an absolute as each individual may respond differently.
- Decrease fluence for sensitive area (eg. neck) or/and with hair (eg. forehead and hairline).
- It is not recommended to treat beard area as it may cause blistering or irregular hair loss.

### Post-Treatment Care

- Apply a cooling pack, soothing cream, or/and moisturizer to the treated area.
- Avoid sun exposure and apply sunblock regularly. (SPF 30 or higher)
- Erythema and edema are common following treatment and resolve over time. If these symptoms persist for more than 3days, anti-inflammatory medicine or dexamethasone should be prescribed.
- Pustules or pimples may develop in the first few days following treatment. In severe cases. steroids or antihistamine should be prescribed.
- Microcrusts may occur and naturally fall off in 5–7days of treatment
- Avoid hot temperatures (sauna, vigorous exercise and etc) for at least 7days.
- 5–8 or more sessions are recommended every 2weeks.