

INTRODUCTION

Congratulations! You are the proud owner of a **Radel** quality product, the SWAROOPINI DX digital swarmandal / sur-mandal. **Radel** products are renowned for their excellent tonal quality as well as their reliability. The latest state-of-the-art technology is used in the design as well as manufacture of the products. Being the inventor of these products and pioneer in the field of electronic musical instruments for Indian music, **Radel** continues to improve existing models and introduces new products frequently. **Radel** is an ISO 9001:2000 company. Hence, the name **Radel** assures you of excellent quality, and, although you may never need it, dedicated after-sales service.

GENERAL INFORMATION

The SWAROOPINI DX digital swarmandal / sur-mandal is a sophisticated musical product used as an accompaniment to performers of music. It can be played by the user in the same way as an acoustic swarmandal is used. It incorporates the latest state-of-the-art technology.

The main features of SWAROOPINI DX:

- Twenty four touch sensitive strings spanning a range of 3 octaves
- It can be tuned to any pitch over a range of more than one octave.
- Fine-tuning of pitch in between two standard settings is provided.
- All strings will automatically change to the relevant position in the selected pitch.
- Each string can be set to any of a selection of a minimum of 5 notes: e.g, Shuddh Gandhar can be set to Shadj, Komal rishabh, Shuddh Rishabh, Shuddh Gandhar, Shuddh Madhyam or off.
- Further, individual fine-tuning of each note is provided.
- Four note Polyphony is provided: that is, four notes can be played together (like a chord)
- Volume, Tone, Sustain control & Sensitivity control are provided.
- Five types of 'voices' are provided
- Manual saving facility: Ten raagas can be created, stored and recalled.
- LCD is provided to display pitch selections, fine tuning of pitch, selection of individual notes, fine tuning of individual notes, voice selection, memory selection, for store & recall, and to recall default factory setting.
- The instrument can operate on AC mains from 90V to 260V or six ("AA" size 1.5V) dry batteries.
- It also has Autosave facility whereby the current selections automatically are stored in memory.
- The instrument is provided with LINE OUT facility
- Mechanical arrangement is provided, to replace strings easily, by the user if ever needed.

CAUTION: 1. Provide a gap of at least 15 seconds between switching OFF and ON the product.
2. Avoid using the products close to other electronic equipment such as mobile / cordless phones, pagers etc.

IMPORTANT USAGE INFORMATION: Please make sure that you always touch the metal plate provided at the side of the instrument during battery operation, for smooth functioning.

OPERATING INSTRUCTIONS: Insert the power cord provided with the product, into the socket provided in the instrument and plug it to an electric point in a standard wall outlet.

Switch on the product by using the 'ON /OFF' switch.

Note: It has SMPS facility due to which it can be operated directly on any voltage from 90V-260V AC.

VOLUME(VOL): To adjust the volume, press ▲ or ▼ button either step by step or continuously.

TONE: To get bass/treble sound, 'TONE' adjustment is provided. Tone can be altered by pressing the ▲ or ▼ button.

SUSTAIN: To adjust the sustenance of each note (short or long duration), press ▲ or ▼ button either step by step or continuously.

SENSITIVITY: To adjust sensitivity of the strings to the touch, press ▲ or ▼ button either step by step or continuously. Initially, adjust the product to a high sensitivity.

PITCH SELECTION: Press the ▲ or ▼ button (PITCH) to change the pitch to any standard setting in steps of half-notes such as C, C# etc. Please refer to the pitch reference chart at the bottom of the product for pitch references in the Indian systems. The display will show the selected pitch. All strings will automatically change to the relevant position in the selected pitch(diagram)

FINE TUNING: For fine tuning close to a standard pitch setting, press MODE key once. The display will now confirm that the product is in fine tuning mode. Now press ▲ or ▼ button to either increase or decrease the pitch in micro-steps. (diagram) The display will indicate the pitch and fine tuning steps e.g.D# +1,+2,+3 etc. All strings will automatically change to the relevant position in the fine tuned pitch.(diagram)

SELECTING NOTES ON EACH STRING: Touch the relevant string. Press the button related to that string on the side. The note will change to the next selection and will be momentarily displayed. Press the button repeatedly till the desired note is obtained. Repeat with all strings.

FINE TUNING OF EACH NOTES: To fine tune each string, press the 'Fine-tune' button once and immediately press the ▲ or ▼ button till the required note is obtained. The display will indicate the relevant note and the number of fine-tuning steps. E.g. Ga2 +1,+2,+3 or -1,-2,-3 etc

AUTO SAVE MEMORY (ASM): The current composed raaga will be automatically stored into memory about 10 seconds after the last button-press. If there is an interruption in AC mains power or if the instrument is switched off, then on switching on the instrument again, these settings will automatically be restored. Thus, the user need not worry about losing the selected pitch and other settings, etc.

TEN RAGA MEMORY: In addition to the above, nine raagas can be stored by the user. Once stored, all that the users have to do is to "RECALL" the particular raagas with one touch of the keys.

Compose a particular raaga by selecting the relevant note on each string, and press MEM button. The display shows '1'. Press STORE(▲). The first raaga is stored. Similarly, select another set of raagas Press MEM key. The display shows '2'. Press STORE(▲). The second raaga is stored. Likewise, user can compose number of raagas and keep it in the memory as explained above

To "RECALL" a particular raaga, press MEM key. The display shows '1'. Press RECALL(▼). The first set of selections is recalled. Similarly, select another set of raagas. Press MEM key. The display shows '2'. Press STORE(▲). The second set of selections is stored. Likewise, user can compose recall other earlier stored raagas as explained above.

NOTE SELECTION CODE: The various notes are displayed as shown in the following table:

NORTH INDIAN MUSIC	SWAROOPINI DISPLAY	SOUTH INDIAN MUSIC
SHADJ	Sa	SHADJAM
KOMAL RISHABH	Ri 1	SUDDHA RISHABHAM
SHUDDH RISHABH	Ri 2	CHATUSRUTI RISHABHAM
KOMAL GANDHAR	Ga 1	SADHARANA GANDHARAM
SHUDDH GANDHAR	Ga 2	ANTARA GANDHARAM
SHUDDH MADHYAM	Ma 1	SUDDHA MADHYAMAM
TEEVRA MADHYAM	Ma 2	PRATI MADHYAMAM
PANCHAM	Pa	PANCHAMAM
KOMAL DHAIVAT	Dha 1	SUDDHA DHAIVATAM
SHUDDH DHAIVAT	Dha 2	CHATUSRUTI DHAIVATAM
KOMAL NISHAD	Ni 1	KAISIKA NISHADAM
SHUDDH NISHAD	Ni 2	KAKALI NISHADAM

For example, to create raag Ahir Bhairav on memory location 2, do the following:

Select all the 'Ri' strings to Komal Rishabh by repeatedly pressing the button marked 'Ri' at the end of the string till the display shows Ri 1. Next, select Shuddh Gandhar on all 'GA' strings, in a similar manner. Select Shuddh Madhyam on all 'MA' strings, Shuddh Dhaivat on all 'DHA' strings, Komal Nishad on all 'NI' strings. Now press 'MEM' and ▲ button till the display shows 'MEMORY 2'. Press 'STORE'. The display shows 'Stored'.

To recall this raag go to press MEM and ▲ button till the display shows 'MEMORY 2'. Now press 'RECALL'. The display shows 'recalled' and the selected raag will play.

MEM DEFAULT: To reset to factory settings, press the button marked 'MEM DEFAULT'

SELECTION OF VOICES / TONES: Press MODE button till 'VOICE' is displayed. By pressing the ▲ or ▼ button, you can select any of the five voice choices provided. The display shows 'Voice 1, Voice 2', etc.

USAGE ON BATTERIES: The SWAROOPINI DX operates on six 'AA' size batteries. It automatically switches - over to batteries (DC) on failure of mains power (AC).

Note: The product is provided with the following items free of cost:

1. Power Cord; 2. Carry Case; 3. Instruction Manual.