GENERAL INTRODUCTION :

This revolutionary pest control unit turns your office into a fortress against rodents. A high pressure transducer puts out an ultrasonic sound that is unmatched by other repellers.

It utilizes the latest in ultrasonic technology. High pressure transducer emit a powerful ultrasonic sound that normal speakers can't. Unheard by humans or pets these sounds pond the ear drums of the small offensive critters called rodents. Much like a loud siren the sound intermittently attack the pests to drive them out.

R-Scat HFT uses a variable high frequency ultrasound (Above 20 kHz) so that pests do not get accustomed, the pest will leave the area being protected immediately or it will take as long as four to six weeks before these is a significant reduction in infestation.

R-Scat transducer work silently, humans can't hear them so there is no discomfort. Human can't hear ultrasound but for rodent its like a loud police siren blasting all 24/7. It will drive them crazy. They would start avoiding areas protected by R-Scat.

The Panels are manufactured to the highest quality standards to meet the most stringent and diversed requirements.

The Panels are cost effective, reliable, easy to install & operate. This is supported by comprehensive documentation on commissioning, operating, maintenance & fault finding.

MODEL : Je-4Z15

FEATURES :

- Upto 15 Transducers can be connected to main console.
- Transducers are looped in parallel thereby large reduction in cabling cost.
- Only two terminals for 15 transducers, easy to install and service.
- Self Testing facility of transducers.
- Wall mounted consoles.
- Compacts elegant looks.
- User friendly controls.

MODEL : Je-1Z12

FEATURES :

- ERTL Tested.
- Up to 12 transducers can be connected to main console.
- Individual wiring for transducers.
- Self testing facility of Transducers.
- Compact & elegant looks.
- User Friendly controls.

R-Scat Digital Rodent Repeller; MODEL : Je-24BL

FEATURES :

- LCD Display with on board controls.
- Displays and Configures Wave Speed, Wave Density, Frequency Band time, Frequency Testing, Transducer testing, machine / controller ID.
- Can connect upto 24 Transducer with blinking LED.
- The Transducer covers an area of 500 sq.ft. in all area i.e. room void, above false ceiling and below false flooring.
- Independent driver for each transducer.
- Independent test facility of each Transducer.
- Frequency band of frequencies above 20 khz and below 60 khz is per tuned for 100 different frequencies.

DIGITAL RODENT REPELLANT SYSTEM

MAIN CONSOLE AND TRANSDUCERS

MAKE: R-SCAT   MODEL JE 24BL

INTRODUCTION:

R-Scat ultrasonic frequency generator is a high frequency generator. The transducers attached to it get these signals and convert it into high frequency sound waves in the range of 20 khz to 60 khz. These frequencies are well above the hearing range of humans, the sound waves pond the ear drum of rodent much like a loud siren.

R-Scat USFG uses a variable high frequency ultrasound so that rodents do not get accustomed, the rats will leave the area being protected immediately or it will take as long as four to six weeks before there is a significant reduction in infestation.

R-Scat transducers work silently, human can't hear them so there is no discomfort. Human can't hear ultrasound but for rodent its like a loud police blasting all 24/7. It will drive them crazy. They would start avoiding arrears protected by R-Scat.

THE SYSTEM:

R-Scat USPG is a system of one master controller and accessories that include 24 nos. of transducers and a pair of stands brackets. The master Controller is installed in the main control / server room and the transducers in the problematic area i.e. above and below false ceiling and below false flooring.

R-Scat master controller needs a power connection of 5A electrical plug point and comes equipped with a 3 pin power supply cord of 1.5 meters.

SALIENT FEATURES:

- ➢ R-Scat CRMS (Centralized Reporting and Monitoring System) Software supporting:
- ➢ Scheduled or Real Time health status report generation for Systems Audit.
- ➢ Parameter configuration of the controller.
- ➢ Two-way Communication between the controller and the computer.
- ➢ RS / EIA 485 to RS / EIA 232C converter to transfer the controller data to the serial port of your computer.
- ➢ LCD display with on-board controls for changing the following parameters.

- • **WAVE SPEED:** Is an indicator for the number of frequency sweeps per minute. It can have a maximum value of 130 and a minimum value of 60. The incremental size 5 i.e.65, 70, 75 and so on.

- • **WAVE DESITY**: Is an indicator for the number of divisions within frequency band. It can have a maximum value of 100 and a minimum value of 80.The incremental size is 10 i.e. 80, 90, and 100.

- • **FREQUENCY BAND TIME**: Is an indicator of the time for which the controller would operate in a pre programmed frequency band. There are 3 bands available: Band A, Band B, and Band C. This parameter can have maximum value of 10 minute per band and a minimum value of 1 minute per band. Depending upon the time frame set for each band, the controller will switch the bands automatically.

- • **MACHINE/CONTROLLER ID**: Is an indicator of the machine/ controller identification number. It can have any value within the range of 1 to 255.

- **FREQUENCY TESTING**: This feature will enable the user to test and verify the frequency that is being transmitted from the controller to the transducer. This feature would be particular useful during systems audit.

- **TRANSDUCER TESTING**: All the 24 transducers can be tested in an audible range one at a time by using this feature.
  - Provision for restoring all the parameters to the factory default setting.

  - Inbuilt RS/EIA-485 transmission up to 1.2 kms to BMS room.

  - Provision of a termination switch so that the controller data can be subsequently viewed by installing R-Scat CRMS software.

  - Daisy chain protocol for interfacing 64 controllers (nodes).

  - Independent Driver for each transducer.

  - The transducer can cover up to 500 sq.feet of area above false ceiling, below false ceiling and below false flooring.

  - R-Scat transducer can be interfaced with the controller.

  - Frequency band of >20 kHz and<60 kHz is pre tuned for 100 different frequencies.

R-Scat TRANSDUCERS:

- Each transducer covers an open area of 500 Sq feet where the average height of the ceiling is 12 feet. Even when installed in the false ceiling or false floorings it will cover an area of 500 sq. feet. The same is possible because of the transducer's streaming effect design.
- Each transducer occupies a maximum space of 15 cubic.inches and aesthetically designed to match your décor.
- Being monopolar in nature. They can be installed in any sensitive area with zero risk of sparking.
- The transducers can withstand high temperatures in the false ceilings and low temperatures in cold storages and air locks.
- The transducers do not need a power connection.
- The transducers can be tested on an audible range independently, by selecting the Transducer testing menu from the LCD panel.

STANDS AND BRACKETS:

- Power coated Aluminum accessory for mounting of the master controller.

CABLES:

- 2core flexible (14/40) SWG multistrand or 0.5 sq. mm single strand. CT wires for connectivity between the transducers and the controller.

SPECIFICATIONS:

* Operating Frequency : Above 20 KHZ and below 60 Khz.

* Sound output   : 80db to 110db at 1metre.

* Power output   : 1W per transducer.

* Sweeps per Minute   : 130(Configurable).

* Frequency Division   : 100(Configurable).

* Power Consumption   : 15 Watts Approximately

* Power Supply   : 230V AC/ 50Hz 14 Volts DC

* Dimensions   : 225 mm X 270mm X 100mm

* Weight   : 6.5 Kgs Approx.

* Mounting   : Wall / Table Mounti

DATA SHEET FOR CABLE 14/40 Flat cable

S.NO	PROPERTY	DATA
1	No. of cores	2 nos.
2	Conductor	Copper Tinned Multi Strand
3	No. Of Conductors	14 nos
4	Core Insulation	PVC Insulation
5	Outer Sheath	PVC
6	Color of Outer Sheath	Light Grey / White
7	Voltage Rating	230 V
8	Conductor wire	0.5 sq mm
9	FRLS / Non FRLS	Non FRLS

R-SCAT DIGITAL RODENT REPELLENT

Salient Features:

Centralised Reporting and Monitoring System. Facility to test all controllers in one go or in an individual mode.
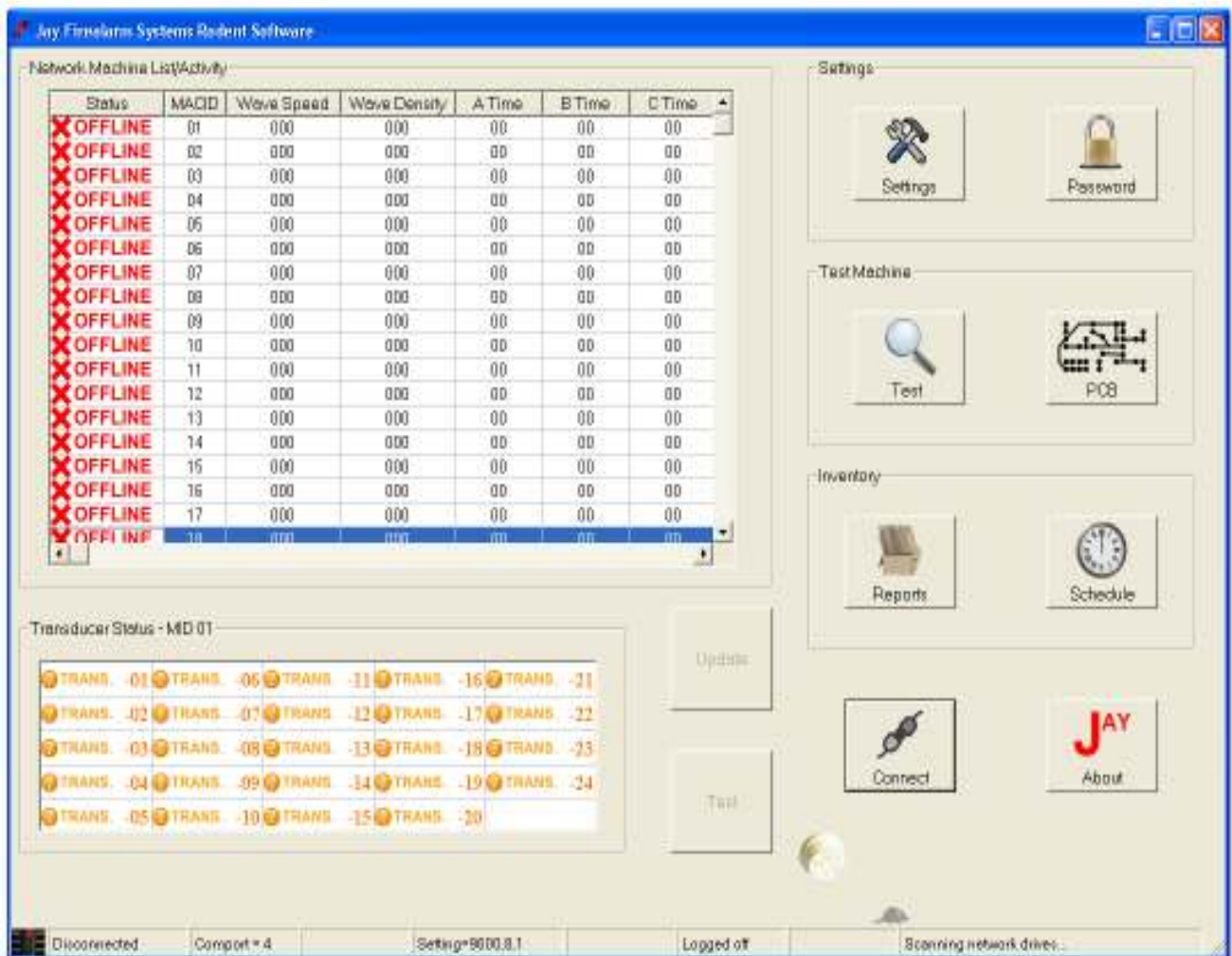
R-SCAT DIGITAL RODENT REPELLENT

Salient Features:

User friendly setup to configure number of machines , number of ping tries, ping return time. Facility to configure R-Scat Controller parameters for all controllers in one go (braodcast) or for an individual controller

R-SCAT DIGITAL RODENT REPELLENT

Salient Features:

Test Facility to check if the signal is being transmitted to the transducer from the drivers on the PCB.
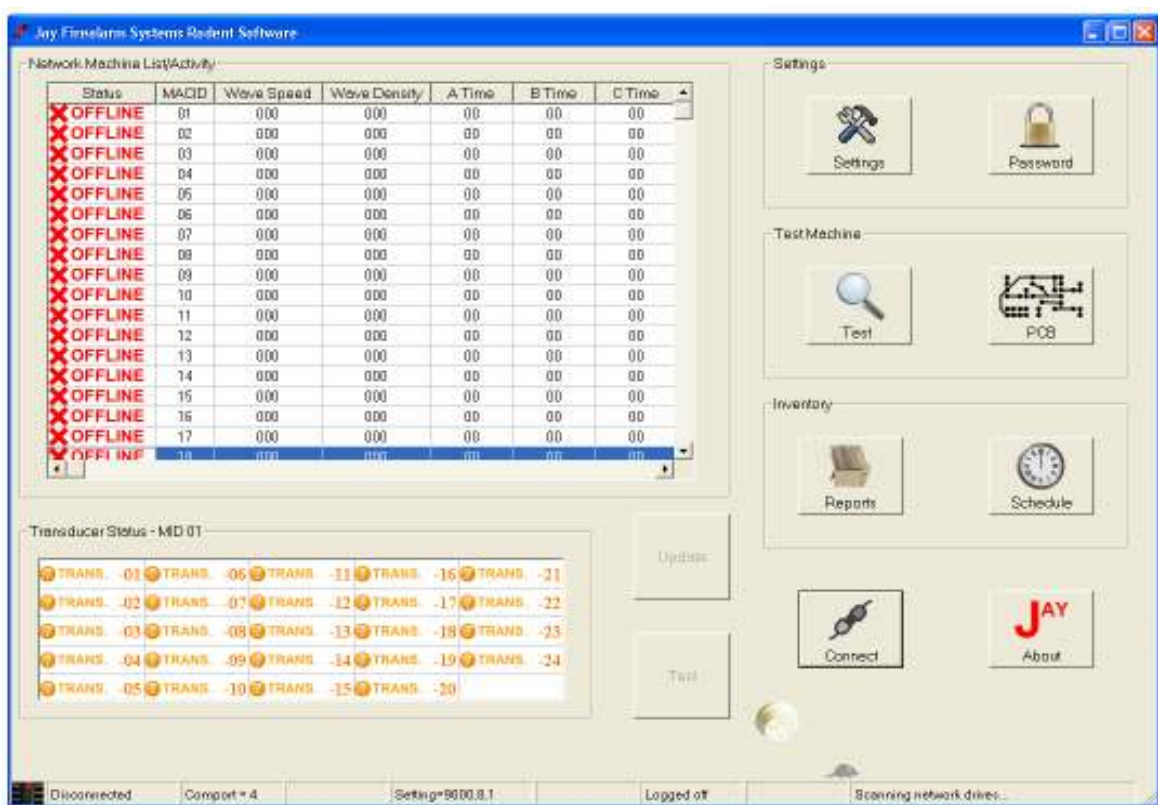
R-SCAT DIGITAL RODENT REPELLENT

Salient Features:

PCB Snapshot of the controller for facility to check transducer drivers

R Scat DIGITAL

USER and INSTALLATION MANUAL

Rodent Repellent Panel
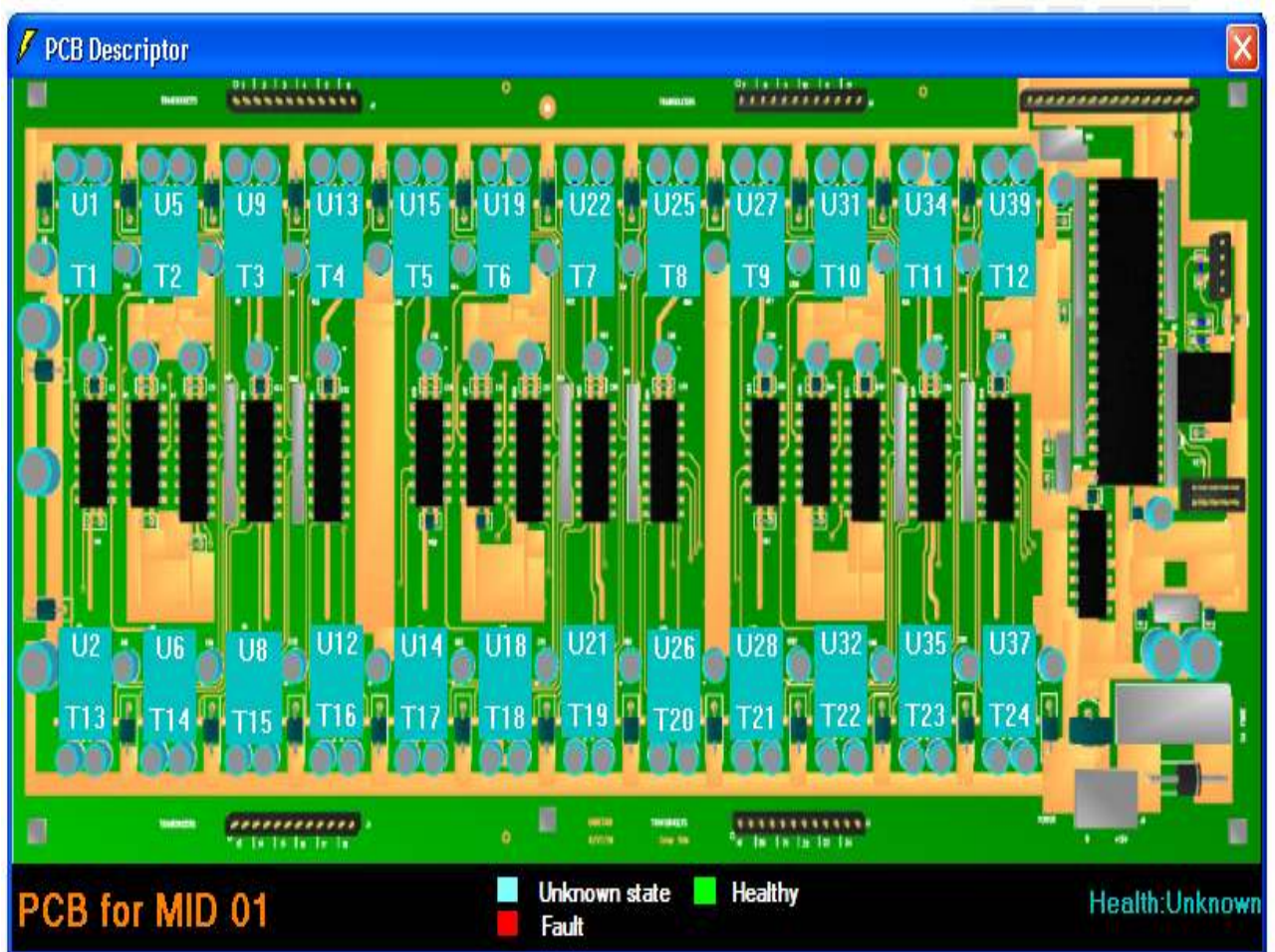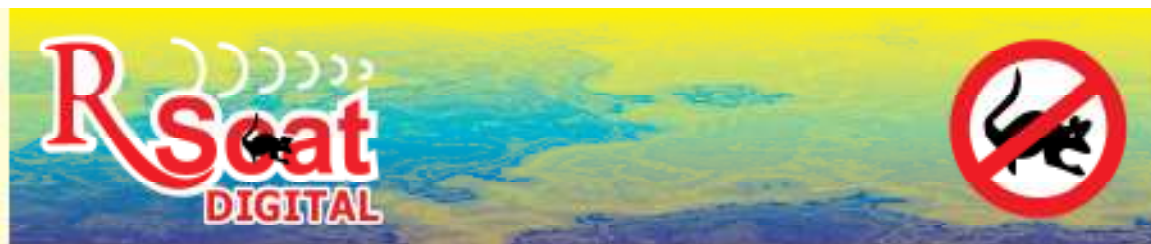
USER MANUAL FOR R-SCAT DIGITAL ULTRASONIC RODENT REPELLENT

This manual will describe how to operate R-SCAT DIGITAL Ultrasonic Rodent Repellent.
Fig 1 below shows the layout of the LCD panel and the KEYPAD.
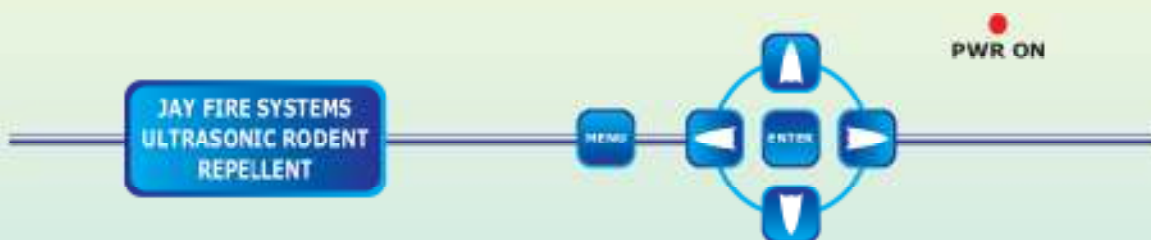
The keypad has the following 6 keys

| Menu Key | Back Key | Enter Key | Next Key | Up Key | Down Key |

Switch 'ON' R-SCAT DIGITAL RODENT PANEL . The 'POWER' LED will light up and the LCD will flash a message as shown in fig 2 for 5 secs after which it will start displaying the factory set parameters
(refer table 1 for Factory Preset Parameter Values).

If you do not conduct any activity on the panel switch within 30 secs then the LCD will go back to the power saving mode and the back light will go off till you press any again.

JAY FIRE SYSTEMS ULTRASONIC RODENT REPELLENT

The R-SCAT DIGITAL PANEL has following modes
- Default Mode.
- User Mode.

Default Mode
This is the default mode of R-SCAT DIGITAL ULTRASONIC PANEL when it is switched ON.

* Parameter Name	Factory Preset Value
Wave Speed (PPM - Pulses Per Minute)	100
Wave Density	80
Band A Time (20 Khz to 50 Khz)	5 Mins
Band B Time (30 Khz to 60 Khz)	5 Mins
Band C Time (26 Khz to 57 Khz)	5 Mins
Machine ID	0

Once the console is powered up the system will be in operation and all the twenty four transducers connected to the console will start receiving the signal transmission from the console.

User Mode:-
This mode will enable the user to change factory preset settings of the parameters during real time. Table 2 below shows the range of values for the parameters.

* Parameter Name	Minumum Value	Maximum Value
Wave Speed (PPM - Pulses Per Minute)	60	130
Wave Density	80	100
Band A Time (20 Khz to 50 Khz)	1 Minute	10 Minutes
Band B Time (30 Khz to 60 Khz)	1 Minute	10 Minutes
Band C Time (26 Khz to 57 Khz)	1 Minute	10 Minutes
Machine ID	Any number between 000 to 255	

CHANGE PARAMETERS

1. Press [MENU]

2. Press Back [◀] or Next [▶] to choose the parameter you want to change.

3. Press Enter [ENTER] to select the parameter.

4. Press Back [▲] or Next [▼] to choose a value of the parameter.

5. Press Enter [ENTER] to save.

6. Go to step 2 if you wish to change another parameter else after
   30 seconds controller will start displaying all the configured parameters.

RESTORE FACTORY SETTINGS

1. Press **MENU**

2. Press Back ◄ or Next ► to choose 'Factory Settings' parameter.

3. Press Enter **ENTER**

4. After 20 seconds controller will start displaying all the configured parameters.

FREQUENCY TEST

1. Press **MENU**

2. Press Back ◄ or Next ► to choose 'Frequency Test' parameter.

3. Press Enter **ENTER**

4. Press Back ▲ or Next ▼ to choose the desired frequency you wish to test.
   The chioces available are 20 Khz, 30 Khz, 40 Khz, 50 Khz and 60 Khz.

5. Press Enter **ENTER** - After 20 seconds controller will start displaying all the configured parameters.

TRANSDUCER TESTING

1. Press [MENU]

2. Press Back [◄] or Next [►] to choose 'Transducer Testing' parameter.

3. Press Enter [ENTER]

4. Press Back [▲] or Next [▼] to choose the transducer you wish to test.

   The selected transducer will start emitting a sound in the audible range for 20 secs.

R-SCAT DIGITAL BACK PANEL

| TR 1 | TR 2 | TR 3 | TR 4 | TR 5 | TR 6 | TR 7 | TR 8 | TR 9 | TR 10 | TR 11 | TR 12 | TR 13 | TR 14 | TR 15 | TR 16 | TR 17 | TR 18 | TR 19 | TR 20 | TR 21 | TR 22 | TR 23 | TR 24 |
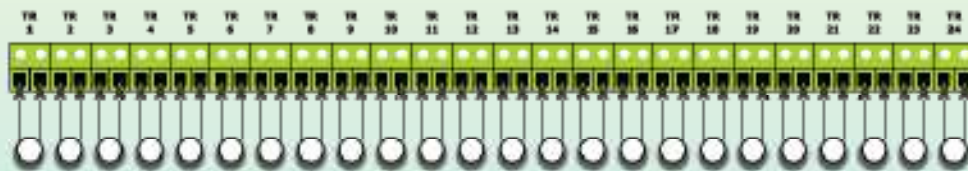
PWR ON   Fuse 3 Amps   Mains   DIP

Data Transfer ports for transmitting data to CRMS Converter.
Refer Software Installation Manual for further details.

INTERFACING CONNECTIONS BETWEEN R-SCAT DIGITAL ULTRASONIC PANEL AND TRANSDUCERS

Procedure for Installing :-

- Select an open area in the electrical room or the AHU room and fix the rack with the brackets and mount the controller on it. Adequate ventilation for the R-SCAT DIGITAL controller is a must.
- Provide a 5 A electrical plug point within 1 meter from the rack. Check for proper earthing before connecting the controller. Also check for proper A.C voltage i.e. 220/230 V.
- Select the problematic area i.e. main room / false ceiling / false flooring to be covered.
- A single transducer will cover an area of 500 sq feet irrespective of the area that is is installed i.e. Above False Ceiling, Below False Ceiling or Below False Flooring.
- The transducers have to be fixed at a height of 10 to 12 feet from the ground level, in the main room, and the distance between the transducers should be at least 15 feet.
- Install the transducers as per the markings on your floor plan.
- The transducer comprises of 2 parts, Pry open the bottom lid of the transducer to connect the cables with the help of screws provided. The bottom lid of the transducer is to fixed to the wall / ceiling / flooring and the top part of the transducer is to be press fitted to the bottom lid.
- Refer the schematic diagram shown in figure A for installation of the system.
  - The transducers in the main room / ceiling should face a wall or an obstructing surface and not open doors, windows etc so that maximum bouncing effect is attained.
  - Every transducer will have an independent cable, terminating at the rear side of the controller to be connected to the connectors.
  - Only 24 transducer can be connected to one controller and the cables ned to be encased in a PVC / GI conduit pipe. Make sure every conduit pipe contains pipe contains only 24 transducer cables. NO LOOPING IS PERMITTED AS EACH TRANSDUCER HAS AN INDEPENDENT DRIVER. DO NOT CONNECT MORE THAN ONE TRANSDUCER PER PORT.
- No transducer wiring should be done for a distance of more than 200 meters from the controller.
- All conducting to be done aesthetically.

PROCEDURE FOR REPLACEMENT OF AN AUDIBLE TRANSDUCER

BASE

FIG : 1

TOP
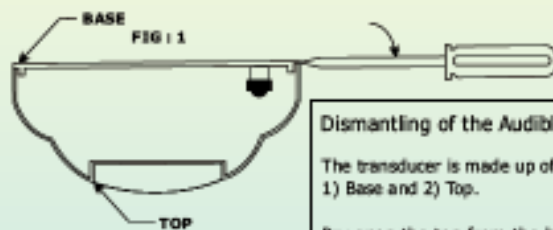
Dismantling of the Audible Transducer

The transducer is made up of two parts
1) Base and 2) Top.

Pry open the top from the base with the help of a screw driver as shown in Fig 1. Disconnect the cables from the base and separate the top from the base.

CABLES FROM MACHINE

FIG : 2

BASE
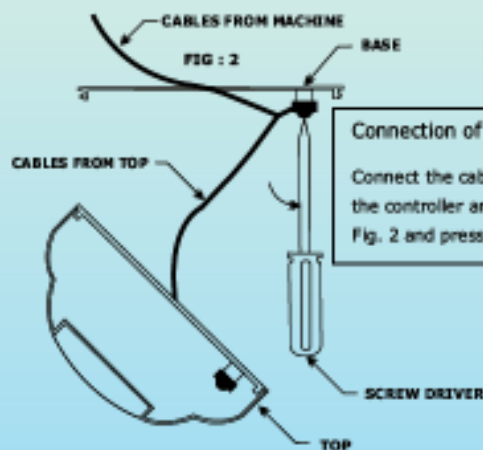
CABLES FROM TOP

Connection of a New Top

Connect the cables of the new top to the cables from the controller and screw them in position as shown in Fig. 2 and press fit the top to the base.

SCREW DRIVER

TOP