



2101 Pennsylvania Ave., Suite 11, York, PA 17404
Phone: 717-852-7700 Fax: 717-852-7755 www.atrservice.com

VS-20

High Resolution Stepped Variable Speed Oscillator

Thank you for your purchase of the VS-20. The compact VS-20 is designed for critical mastering applications. Its ultra stable clock will not increase wow and flutter like the old Ampex VS-10. It also requires no calibration to insure its accuracy over time. With control of 0.01% steps, you or your client will never be in between the desired pitch. Please read the instructions before using.

Instructions:

ATR100:

To install the VS-20 to the Ampex ATR102 simply power down and open the cabinet bottom access door. Carefully feed the supplied VS-20 cable from the back opening of the cabinet. Run the cable to the side and not in the center of the cabinet. Plug in the 56 pin straight connector to the accessory connector (J11) of the ATR102. **Important:** Observe correct polarity of the 56 pin connector. It can be plugged in backward and will damage both the ATR102 and the VS-20. The connector is numbered A through FF. The FF side of the connector **must** face the ATR102 cabinet front door. Now button up the ATR102 cabinet. We suggest securing the VS-20 to the top of the ATR102 as it cannot be dropped. The VS-20 will operate with up to 40 feet of cable if remote operation is required. Plug in the connecting cable 9 pin "D" connector to the VS-20. Plug in the 12 volt power supply cable to the power in jack. The ATR102 can now be turned on as well as the VS-20. The VS-20 power switch is on the back panel of the unit.

MM1200:

MM1200 interface requires a source voltage SPST 12V relay. This is needed for the transport to switch between VSO and normal operation. Please see the schematic diagram. The relay must be mounted close to the MM1200 plug to insure the MM1200 internal reference is clean. Use 8 pin Jones "variable speed" connector on the MM1200 side.

IMPORTANT: Do not drop the VS-20. It will severely damage the unit.

Using the VS-20:

The VS-20 is very easy to use. With the VSO-NORMAL toggle switch in the normal position the recorder will run at its nominal speed. With the switch in VSO position the VS-20 will control the speed. By holding the FAST-SLOW switch in either direction, speed display shows the per cent of nominal speed. By holding down the switch, the VSO will go to a more coarse speed setting until the switch is returned to normal. There are two additional stages of VSO acceleration. The first occurs at 1.4% and the second at 4%. Fine trim occurs when the FAST-SLOW switch is returned to the spring loaded center position.

Switching between standard speed and VSO is smooth and glitch free for easy comparison. The VS-20 selected speed is dead accurate and repeatable.

For technical support, please call 717-852-7700 between 9 AM to 6 PM EST Monday through Friday.

Supplied interconnect cable pin out diagram.

ATR100:

VS20 9 Pin D Connector

7	VSO enable
8	Signal ground
9	VSO frequency output
1	Ext. 12 Volt DC in
3	Power ground

ATR100 56 Pin accessory connector

AA
U
X
N/C
N/C

MM1200:

7	VSO Enable	5	+15 Volts
8	Gnd.	3	Gnd.
9	VSO Output	1	Ref. OUT
		2	Ref. IN

Periodic alignment:

None