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NOTICE OF APPROVAL
AVIS D'APPROBATION

E-167

Ottawa, October 26, 1979

DUNCAN PTR-2 AND PTR-4, PULSE TAPE RECORDERS

Power Source		120/240/277 VAC±10%, 60 Hz
Burden		10VA Maximum
Battery Type		Gelyte, 12VDC, 6AH at 65°F, Sealed
Battery Carryover Time at 2P/P/S		22 Hrs.
External Pulse Initiator		3 Wire, Break Before Make (Form C) SPDT 3 Wire, Make Before Break (Form D) SPDT 2 Wire (Form A) SPST Duncan Solid State P.G.Type Pulse Generator
Minimum Pulse Width		Form C and D 5 milliseconds Form A 50 milliseconds
Maximum Pulse Rate		8 per second for 9 day recording period
	(Standard)	2 per second for 36 day recording period
		1 per second for 72 day recording period
		0.67 per second for 108 day recording period
Tape Speed		9 Day Recording Length .0078 inches/second 36 Day Recording Length .00194 inches/second 72 Day Recording Length .00097 inches/second 108 Day Recording Length .00065 inches/second
Tape Cartridge		3M Type 888, 1 mil mylar backing, ¼ inch wide instrumentation tape, 516 feet long between reflective markers which are located 6 feet from each end of tape.
Recording Tracks	2 channel	1 Data and 1 Time Track
	4 channel	3 Data and 1 Time Track
Time Interval		1, 5, 15, 30 or 60 minutes
Clock		Gear driven from motor with visual, adjustable minute and hour indicators. 12/24 hour dial indication.
Master Relay Contact Rating		(Master/Normal/Slave Option) 100 VA Maximum
Maximum Signal Line Resistance		200 ohms total

Heater:Thermostat	Closing Temperature	40°F±8°F
	Opening Temperature	50°F±8°F

Heater:Wattage Voltage Switch Position	Watts
120	20±10%
240	18±10%
277	23±10%

Burden at 900 Pulses/15 Minute Period:	With Counter Option	Without Counter Option
PTR-2	206MA	190MA
PTR-4	255MA	205MA

Temperature Range	-35°C to +65°C
Relative Humidity	90% Non-Condensing
Test Jacks	Provided to monitor correct connection and operation with high impedance headphones
External Connections	All connections to the P.T.R. are made on a terminal block (inside the recorder case)

Description

The Duncan Types PTR-2 and PTR-4 are similar to the Duncan BDR Billing Data Recorders, Notice of Approval E-104 and to the Duncan STR Billing/Survey Tape Recorder, Notice of Approval E-157, dated September 19, 1977.

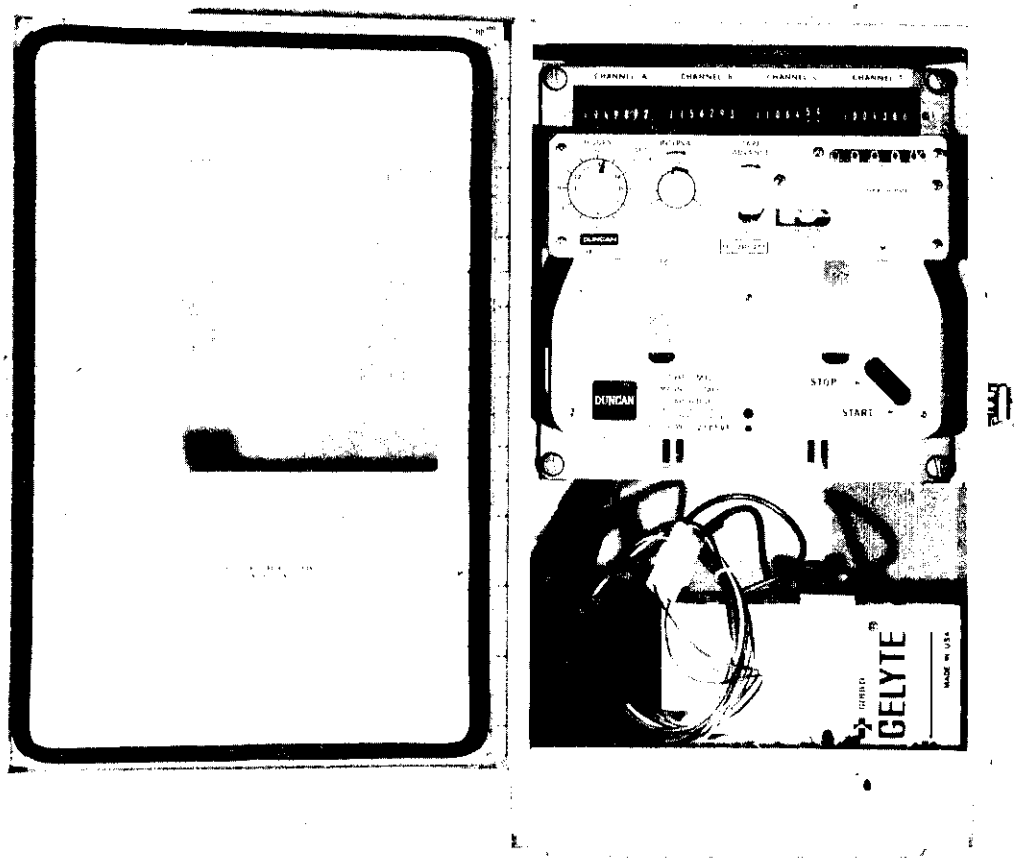
The Duncan PTR Magnetic Tape Recorder is available in two standard configurations. The first is a two track unit, Type PTR-2, and the second is a four track unit, Type PTR-4. Both the PTR-2 and PTR-4 utilize one of the tracks for recording time. All remaining tracks are for recording data.

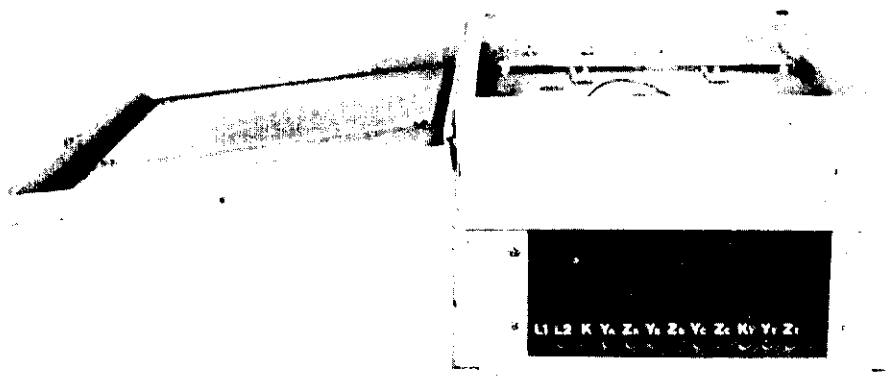
The basic unit consists of the tape transport, recording head (2 or 4 channel), clock mechanism and master printed circuit board. The master printed circuit board has the circuitry for two channels (A&T) and the power supply (120/240/277 Volts with front panel selector switch). A data input board must always be added to the basic unit. The data input board is dependent on the type of input contact devices used, Form A, Form C or Form D. The modular construction using small option boards that mount to the master printed circuit board allow the following options to be factory installed or easily added at a later date.

A. Two more data channels (changes PTR-2 to a PTR-4.

B. LEDBITE (Light Emitting Diode Built-in Test Equipment).

C. Battery Carryover (Battery mounted internally).


DUNCAN
STOP
START
GELYTE


L1 L2 K Y1 Z1 Y2 Z2 Y3 Z3 K1 Y1 Z1

D. Master/Normal/Slave, with selector switch.

E. Heater with Thermostat.

F. Pulse Registers.

G. Power Outage Indication.

H. Data Input Board (Form A, Form C or Form D).

Approval Granted to:

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