



DESCRIPTION:

The GRI-sette is a cassette recorder providing the equivalent function of a paper tape reader/punch. It operates at speeds comparable to a high-speed paper tape reader in the read mode and six times the speed of a paper tape punch in the write mode.

Two configurations are available. The first configuration uses a single cassette recorder for both record and playback; the second configuration uses two recorders, one in the read mode and the other in the write mode. The configuration is selected by cable connections to the interface board which plugs into the computer.

APPLICATIONS:

The GRI-sette provides high-speed computer input/output capability at low cost and great convenience. Cassettes can be easily changed and stored. Pre-

recorded cassettes containing GRI-909 assemblers and text editor are available. Driver software provides the ability to search and select programs recorded on the tape. Diagnostic programs can be loaded into the computer independent of the teletype with the GRI-sette.

PHYSICAL SPECIFICATIONS:

The GRI-sette interface is contained on a single 9" x 4" I/O card. Connections to the interface are made with a six foot coaxial cable provided. The cable is terminated with jacks which plug into the cassette recorder(s). The recorder is designed for desk top use for convenience and measures 9 1/2" x 5" x 2 1/2".

POWER REQUIREMENTS:

Interface: 400 ma @ +5v, 20 ma @ +A, 15 ma @ -A (provided by the computer)

Recorder: 110 v, 60 Hz (Battery backup is provided but is not recommended for optimum reliability.)

OPERATIONAL SPECIFICATIONS:

Bit Rate: 2.84K bits/sec (352 usec./bit)

Word Rate: 158 words/sec. (6.34 usec./word), 16 bit word plus two guard bits. Equivalent 8-bit character rate is 316 characters/sec.

Recording Technique: Bit serial, phase modulation controlled from GRI-909 crystal clock.

Error Rate: Tests indicate less than one drop-out in 10⁶ bits.

<u>Capacity:</u>	<u>Tape Length</u>	<u>Bits</u>	<u>Words (16 data and 2 guard bits)</u>
	50 ft.	909,000	50,500 per side
	300 ft.	5,454,000	303,000 per side

Interface: Standard I/O board which is inserted in the I/O section of the GRI-909 computer. It contains both read and write controls and capability to drive two independent cassette units (1 read only and 1 write only). A one bit interface is connected to data bit 0. No priority interrupt functions are implemented. All input and output is done via a pair of driver sub-routines, %GGW (get word) and %GPW (put word).

Device Address: 57 (MTAPE)

Function Output Bits: CBO: rewind write (WREW)
 CB1: write run (WRITE)
 CB2: rewind read (RREW)
 CB3: Read run (READ)

CBO, CB1, CB2, CB3 = 0: STOP

Function Test Bits FTB1: output ready (ORDY)
 FTB2: not used
 FTB3: input ready (IRDY)

Instruction Examples:

<u>FAST ASSEMBLER</u>	<u>BASE ASSEMBLER</u>
WRITE TO MTAPE	FO WRITE, MTAPE
READ TO MTAPE	FO READ, MTAPE
STOP TO MTAPE	FO STOP, MTAPE
SKIP IF MTAPE IRDY	SF MTAPE, IRDY
SKIP IF MTAPE ORDY	SF MTAPE, ORDY

Record-Playback Unit:

Manual Controls: Fast Forward
 Rewind
 Stop
 Play
 Record

Interface Connections: made via microphone, remote control
and monitor jack.

Cassette: Standard Phillips type, packed with 0.5 mil
tensitized polyester tape. Tape is pre-conditioned,
cleaned and certified for 800 bpi NRZ1, two tracks.
56 mils wide, at 15 ips.

Software

Diagnostics: 79-43-012 DGST writes and checks data patterns on tape.

Check Sum: A halt is generated on a check sum error.

Systems:

73-43-012	%GAL	absolute library loader
73-43-013	%GLW	absolute library writer
73-43-011	%GBL	bootstrap loader
73-43-020	%GIO	GRI-SETTE operating system consisting of:
73-43-021	%GWB	write block
73-43-022	%GRB	read block
73-43-023	%GSB	skip block
73-43-024	%GRL	read to load point
73-43-025	%GWL	write to load point
73-43-026	%GGW	get word (driver)
73-43-027	%GPW	put word (driver)
73-43-028	%GDL	delay