

PERCOM DATA CO.
TECHNICAL MEMO

TM-CIS-30-04
CIS-30+ CASSETTE INTERFACE

JULY 25, 1977

SUBJECT: THE PROPER RECORDING SIGNAL LEVEL WHEN USING THE PERCOM
CIS-30+ CASSETTE INTERFACE

ALTHOUGH MOST CASSETTE RECORDERS WITH WHICH THE CIS-30 IS USED HAVE AUTOMATIC LEVEL CONTROL DURING RECORD, IT IS POSSIBLE TO SUPPLY TOO MUCH OR TOO LITTLE SIGNAL TO THE RECORDER. THE RESULT IS BADLY RECORDED TAPES WHICH WILL EXHIBIT INORDINATELY HIGH ERROR RATES. (ONE ERROR IN A 10 K PROGRAM IS AN INORDINATELY HIGH NUMBER OF ERRORS).

ALTHOUGH THE SIGNAL LEVEL FROM THE AUXILIARY OUTPUT OF THE CIS-30 APPEARS TO BE OPTIMUM FOR RECORDERS WITH AN AUXILIARY INPUT, THE MICROPHONE LEVEL OUTPUT MAY BE TOO HIGH FOR THE MICROPHONE INPUT OF SOME RECORDERS. THIS CAUSES A DISTORTED PLAYBACK SIGNAL WHICH WILL ADVERSLY AFFECT THE PLAYBACK ERROR RATES. SYMPTOMS ARE USUALLY AN EXTREME SENSITIVITY TO PLAYBACK SIGNAL LEVEL.

HOW CAN YOU TELL IF YOUR TAPES WERE OVERDRIVEN WHEN THEY WERE RECORDED?

LISTEN TO THE 2400 HZ LEADER TONE PRECEEDING A BLOCK OF DATA. COMPARE THE SOUND TO THE LEADER TONE ON A PERCOM TEST CASSETTE OR A SWTP CASSETTE. AN OVERDRIVEN TAPE WILL BE NOTICEABLY LOUDER AND WILL HAVE A "FUZZY-BUZZY" SOUND IN THE BACKGROUND.

IF YOU ARE USING THE MICROPHONE OUTPUT FROM THE CIS-30 AND SUSPECT IT IS OVERLOADING THE MICROPHONE INPUT OF YOUR CASSETTE RECORDER, CHANGE THE VALUE OF RESISTOR R36 TO 100 OHMS OR LESS.

R36 WILL BE CHANGED TO 100 OHMS ON ALL CIS-30 UNITS SOLD AFTER SEPT. 1, 1977

YOU SHOULD AVOID USING THE MICROPHONE INPUT TO YOUR CASSETTE RECORDER IF AT ALL POSSIBLE.

BECAUSE OF THE LOW SIGNAL LEVELS INVOLVED, IT IS VERY EASY TO CREATE SPURIOUS PICKUP LOOPS WITH CONNECTING EQUIPMENT WHICH WILL PICKUP HUM, NOISE, RADIATION FROM YOUR COMPUTER, VIDEO TERMINAL, LOCAL RADIO STATIONS, AND CB TRANSMITTERS. TRACKING DOWN AND ELIMINATING SUCH SPURIOUS PICKUP LOOPS IS DIFFICULT FOR EVEN THE MOST COMPETENT TECHNICIANS.

MOST OF THESE PROBLEMS CAN BE AVOIDED BY USING THE AUXILIARY INPUT OF THE CASSETTE RECORDER. BE SURE TO OBSERVE THE WARNINGS ON PAGE 6 OF THE CIS-30 INSTRUCTION MANUAL.