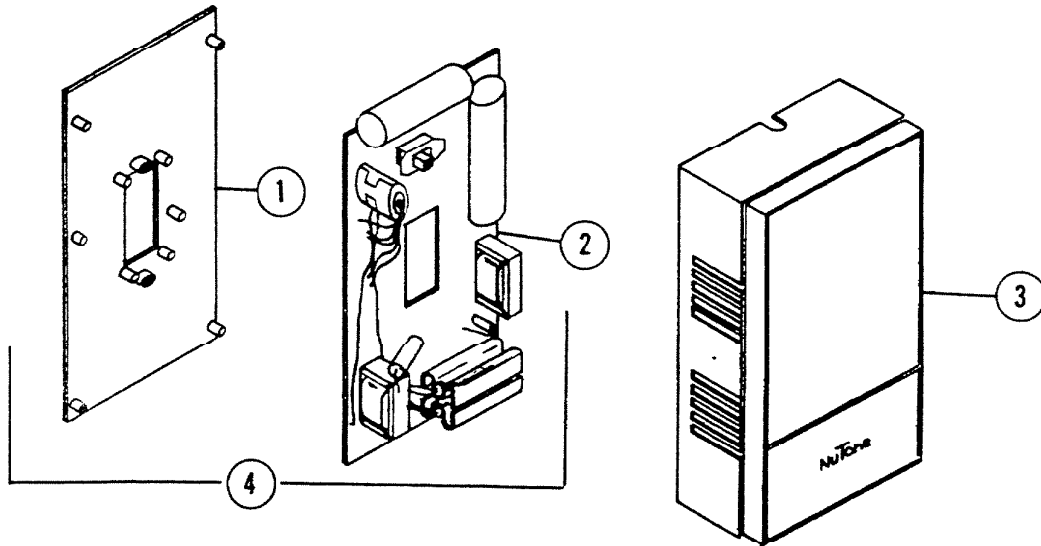


PARTS LIST

| | |
|-----------------------|----------------------------|
| MODEL | 470, IM 516 ELECTRONICS |
| EFFECTIVE DATE | NOVEMBER, 1974 |



| REF | ORIGINAL PART NO | PART DESCRIPTION | MODEL USED ON | CURRENT REPLACEMENT PART NO |
|-------------------------|------------------|------------------------------------|---------------|-----------------------------|
| 1 | 32302-000 | AMPLIFIER BASE | 470 - IM 516 | 32302-000 |
| 2 | 40519-000 | AMPLIFIER P.C. BOARD ASSY. | 470 | 41585-000 |
| | 41585-000 | | IM 516 | |
| 3 | 40517-000 | AMPLIFIER COVER ASSY. | 470 | 41583-000 |
| | 41583-000 | | IM 516 | |
| 4 | 40518-000 | AMPLIFIER BASE & P.C. BOARD ASSY. | 470 | 41584-000 |
| | 41584-000 | | IM 516 | |
| - | 40520-000 | ENVELOPE ASSY. | 470 | NOT AVAILABLE |
| - | 02747-000 | ENVELOPE ASSY. (MTG. SCREWS) | 470 - IM 516 | 02747-000 |
| ELECTRONIC PARTS | | | | |
| - | 34561-000 | SLIDE SWITCH S.P.D.T. | 470 | 34561-000 |
| - | 30561-000 | TRANSFORMER - OUTPUT | 470 - IM 516 | 30561-000 |
| - | 30562-000 | TRANSFORMER - DRIVER | 470 - IM 516 | 30562-000 |
| - | 30563-000 | TRANSFORMER - INPUT | 470 - IM 516 | 30563-000 |
| TRANSISTORS | | | | |
| TR1 TR2 | 36569-000 | TRANSISTOR - AMPLIFIER, DRIVER | 470 | PURCHASE LOCAL #HEP 63Z |
| TR3 TR4 | 36567-000 | TRANSISTOR OUTPUT | 470 | 36567-000 |
| - | 34041-000 | POTENTIOMETER 50K | IM 516 | 34041-000 |
| - | 32159-000 | TRANSFORMER BRKT. | 470 - IM 516 | 32159-000 |
| TR3 TR4 | 36583-000 | TRANSISTOR OUTPUT (2 REQUIRED) | IM 516 | 36583-000 |
| TR2 | 36613-000 | TRANSISTOR DRIVER | IM 516 | 36613-000 |
| TR1 | 36580-000 | TRANSISTOR | IM 516 | 36580-000 |
| D-1,2 | 36541-000 | SILICON RECTIFIER (1) (2 REQUIRED) | 470 - IM 516 | 36541-000 |
| PLEASE SEE OTHER SIDE | | | | |

NuTone

Order Parts From:
Parts Department c/o NuTone
P.O. Box 27 • Cincinnati, Ohio 45227

NOTE: Always order by
current part number

| REF | ORIGINAL PART NO | PART DESCRIPTION | MODEL USED ON | CURRENT REPLACEMENT PART NO. |
|----------------------|------------------|-------------------------------|-------------------|------------------------------|
| CAPACITOR | | | | |
| - | 35121-000 | CAP. 500 MF @ 50V ELECTRU | 470 - IM 516 | 35121-000 |
| - | 35100-145 | CAP. .001 MF ± 10% 1000V | 470 - IM 516 | 35100-145 |
| - | 35100-130 | CAP .005 MF ± 20% 100V | 470 | 35100-138 |
| - | 35100-138 | | IM 516 | |
| - | 35100-146 | CAP .05 MF ± 20% 50V | 470 | 35100-146 |
| - | 35100-148 | | .015 MF ± 20% 50V | IM 516 |
| - | 35068-105 | CAP 50 MF @ 10V ELECTRO | 470 | 35068-105 |
| - | 35068-103 | CAP 100MF @ 15V ELECTRO | 470 | 35068-103 |
| - | 35068-102 | CAP 300MF @ 15 V ELECTRO | 470 | 35068-102 |
| - | 35100-153 | CAP .03 ± 10% @ 50V | IM 516 | 35100-153 |
| - | 35091-109 | CAP 47MF @ 16V ELECTRU | IM 516 | 35091-109 |
| - | 35091-108 | CAP 100MF @ 25V ELECTRO | IM 516 | 35091-108 |
| - | 35068-102 | CAP 300MF @ 15V ELECTRO | IM 516 | 35068-102 |
| - | 35100-139 | CAP .01 @ 50V | IM 516 | 35100-139 |
| - | 35091-106 | CAP 2MF @ 25V ELECTRO | IM 516 | 35091-106 |
| - | 35068-104 | CAP .30MF @ 30V ELECTRO | IM 516 | 35068-104 |
| - | 35091-102 | CAP 10MF @ 16V ELECTRO | IM 516 | 35091-102 |
| RESISTORS | | | | |
| - | 33101-100 | RESISTOR 1/2 W CARBON 10 Ohm | 470 | 33101-100 |
| - | 33101-220 | RESISTOR 1/2 W CARBON 22 Ohm | 470 | 33101-220 |
| - | 33101-470 | RESISTOR 1/2 W CARBON 47 | 470 | 33101-470 |
| - | 33101-680 | RESISTOR 1/2 W CARBON 68 | 470 | 33101-680 |
| - | 33101-101 | RESISTOR 1/2 W CARBON 100 | 470 | 33101-101 |
| - | 33101-271 | RESISTOR 1/2 W CARBON 270 | 470 | 33101-271 |
| - | 33101-222 | RESISTOR 1/2 W CARBON 2.7K | 470 | 33101-222 |
| - | 33101-682 | RESISTOR 1/2 W CARBON 6.8K | 470 | 33101-682 |
| - | 33101-183 | RESISTOR 1/2 W CARBON 18K | 470 | 33101-183 |
| - | 33101-273 | RESISTOR 1/2 W CARBON 27K | 470 | 33101-273 |
| - | 33101-183 | RESISTOR 1/2 W CARBON 180hm | IM 516 | 33101-183 |
| - | 33101-330 | RESISTOR 1/2 W CARBON 330hm | IM 516 | 33101-330 |
| - | 33101-470 | RESISTOR 1/2 W CARBON 47 Ohm | IM 516 | 33101-470 |
| - | 33027-111 | RESISTOR 1/2 W CARBON 1.8 Ohm | IM 516 | 33027-111 |
| - | 33101-820 | RESISTOR 1/2 W CARBON 82 Ohm | IM 516 | 33101-820 |
| - | 33101-331 | RESISTOR 1/2 W CARBON 330 Ohm | IM 516 | 33101-331 |
| - | 33101-102 | RESISTOR 1/2 W CARBON 1K | IM 516 | 33101-102 |
| - | 33101-222 | RESISTOR 1/2 W CARBON 2.2K | IM 516 | 33101-222 |
| - | 33101-272 | RESISTOR 1/2 W CARBON 2.7K | IM 516 | 33101-272 |
| - | 33101-472 | RESISTOR 1/2 W CARBON 4.7K | IM 516 | 33101-472 |
| - | 33101-123 | RESISTOR 1/2 W CARBON 12K | IM 516 | 33101-123 |
| - | 33101-473 | RESISTOR 1/2 W CARBON 47K | IM 516 | 33101-473 |
| - | 33103-103 | RESISTOR 1/2 W METAL FILM 18K | IM 516 | 33101-183 |
| - | 33103-333 | RESISTOR 1/2 W METAL FILM 33K | IM 516 | 33101-333 |
| MISCELLANEOUS | | | | |
| - | 32296-000 | HEAT SINK | 470 | 32296-000 |
| - | 38613-000 | | IM 516 | 38613-000 |
| - | 31193-000 | "U" CLIP (1) (10 REQUIRED) | 470 | 31862-000 |
| - | 31862-000 | | IM 516 | |

Model 470

PARTS LIST

| TRANSISTORS | NUTONE PART NUMBER | DESCRIPTION |
|---------------------|----------------------------------|------------------------------------|
| TRANSISTORS | | |
| TR-1 | 36576 | AUDIO AMPLIFIER |
| TR-2 | 36557 | AUDIO DRIVER |
| TR-3 | 36567 (2N1039) | AUDIO OUTPUT |
| TR-4 | 36567 (2N1039) | AUDIO OUTPUT |
| DIODES | | |
| D-1 | 36549 (MOTOROLA 1N4002) | SILICON RECTIFIER |
| RESISTORS | | |
| R-1 | | 47 OHMS |
| R-2 | | 47 OHMS |
| R-3 | | 22 OHMS |
| R-4 | | 27K OHMS |
| R-5 | | 27K OHMS |
| R-6 | | 18K OHMS |
| R-7 | | 68 OHMS |
| R-8 | | 6.8K OHMS |
| R-9 | | 22 OHMS |
| R-10 | | 2.2K OHMS |
| R-11 | | 10 OHMS |
| R-12 | | 10 OHMS |
| R-13 | | 2.2K OHMS |
| R-14 | | 100 OHMS |
| R-15 | | 22 OHMS |
| R-16 | | 270 OHMS |
| R-17 | | 270 OHMS |
| R-18 | 34019 POTENTIOMETER (481-B only) | 50 OHMS |
| R-19 | 34034 POTENTIOMETER | 50 OHMS |
| CAPACITIES | | |
| C-1 | | .001 mfd 1KV |
| C-2 | | .05 mfd 50V |
| C-3 | | 50 mfd 10V |
| C-4 | | 300 mfd 15V |
| C-5 | | .005 mfd 100V |
| C-6 | | .005 mfd 100V |
| C-7 | | 100 mfd 15V |
| C-8 | | 500 mfd 50V |
| C-9 | | 500 mfd 50V |
| TRANSFORMERS | | |
| T-1 | 30563 | INPUT |
| T-2 | 30562 | DRIVER |
| T-3 | 30561 | OUTPUT |
| SWITCHES | | |
| SW-1 | 34551 | SLIDE SWITCH (model 481) |
| SW-2 | 34528 | LEVER SWITCH (all models) |
| SW-3 | 34589 | SLIDE SWITCH |
| SPEAKER | | |
| SP-1 | 36053 | SPEAKER 3 1/2" 8 ohms (all models) |
| BUZZER | | |
| B-1 | 36059 | SIGNAL BUZZER (all models) |
| | 36040 (alternate) | |
| KNOBS | | |
| K-1 | 31651 | LEVER |
| K-2 | 31435 | VOLUME |

| Schematic Symbol | NuTone Part No. | Description |
|----------------------|-----------------|---|
| SWITCHES | | |
| S1, S2 | 34636-000 | 4PDT, Momentary Contact. S1, DOOR OFF/ON, Normally in OFF position. S2, INTERCOM TALK/LISTEN, Normally in LISTEN position. Break before Make Alps Electric #3339156 |
| | 39398-000 | Switch Button, for S1 and S2 |
| | 38914-000 | Pushbutton, Lock for S2 |
| SPEAKER | | |
| SP1 | 36076-000 | 3½", 16 Ohm Voice Coil |
| | 39384-000 | Screw, #6-18 x 9/32". Phillips, Speaker Mounting |
| MISCELLANEOUS | | |
| | 39209-003 | Screw, #6-20 x ¾", Slotted Terminal, wire connecting |
| | 40966-000 | Envelope Assembly, includes 2 screws, #6 x 1¼" Phillips, Installation Mounting |
| | 48119-000 | Installation Instructions |