# Model 33 No. 202, ASR Sets (3300, 3310, 3320 Series)

<table>
<thead>
<tr>
<th>DRAWING NO.</th>
<th>SHEET NO.</th>
<th>DESCRIPTION</th>
<th>ISSUE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Schematic Diagrams</td>
<td></td>
</tr>
<tr>
<td>118050</td>
<td></td>
<td></td>
<td>6 7 7 7 8 9 9 11 12 12</td>
</tr>
<tr>
<td>933900</td>
<td></td>
<td>Keyboard (Schematic &amp; Actual)</td>
<td>2 2 2 2 2 2 2 2 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Actual Wiring Diagrams</td>
<td></td>
</tr>
<tr>
<td>118050</td>
<td></td>
<td>All Motors</td>
<td>7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7</td>
</tr>
<tr>
<td>937000</td>
<td></td>
<td>Selector Magnet Driver</td>
<td>6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6</td>
</tr>
<tr>
<td>745700</td>
<td></td>
<td>Reader</td>
<td>4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4</td>
</tr>
<tr>
<td>923500</td>
<td></td>
<td>Typing Unit</td>
<td>5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5</td>
</tr>
<tr>
<td>933800</td>
<td></td>
<td>Call Control Unit Sockets</td>
<td>2 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Circuit Card Assemblies</td>
<td></td>
</tr>
<tr>
<td>101621</td>
<td></td>
<td>Selector Magnet Driver</td>
<td>12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12</td>
</tr>
<tr>
<td>101807</td>
<td></td>
<td>Automatic Reader Power Pack</td>
<td>13 13 13 13 13 13 13 13 13 13 13 13 13 13 13 13 13</td>
</tr>
<tr>
<td>103087</td>
<td></td>
<td>Manual Reader Power Pack</td>
<td>13 13 13 13 13 13 13 13 13 13 13 13 13 13 13 13 13</td>
</tr>
</tbody>
</table>

**Note:** The last completed column indicates the latest issue number of WDP.

**Teletype Corporation: 21643-H**

**Sheet 1 of 1**
## CONTENTS

<table>
<thead>
<tr>
<th>SHEET NO.</th>
<th>ISSUE NO.</th>
<th>SUPPORTING INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>1</td>
<td>FS-1 REVERSE</td>
</tr>
<tr>
<td>A1</td>
<td>2</td>
<td>FS-2 SEND</td>
</tr>
<tr>
<td>A1</td>
<td>3</td>
<td>FS-3 LOCAL LOOP CURRENT SUPPLY</td>
</tr>
<tr>
<td>A1</td>
<td>4</td>
<td>FS-4 MODE CONTROL</td>
</tr>
<tr>
<td>A1</td>
<td>5</td>
<td>FS-5 AUXILIARY CIRCUITS</td>
</tr>
<tr>
<td>A1</td>
<td>6</td>
<td>FS-6 READER CONTROL</td>
</tr>
<tr>
<td>A1</td>
<td>7</td>
<td>FS-7 AUTOMATIC READER LOGIC</td>
</tr>
<tr>
<td>A1</td>
<td>8</td>
<td>FS-8 READER FEED</td>
</tr>
<tr>
<td>A1</td>
<td>9</td>
<td>FS-9 112V AC POWER DISTRIBUTION</td>
</tr>
<tr>
<td>A1</td>
<td>10</td>
<td>FS-10 MOTOR</td>
</tr>
<tr>
<td>A1</td>
<td>11</td>
<td>FS-11 440V AC POWER DISTRIBUTION</td>
</tr>
</tbody>
</table>

### SHEET INDEX NOTES

1. WHEN CHANGES ARE MADE TO THIS DRAWING ONLY THOSE EFFECTS AFFECTED WILL BE REISSUED.
2. THIS SHEET INDEX WILL BE REISSUED AND UPDATED EACH TIME ANY SHEET OF THE DRAWING IS REISSUED OR A NEW SHEET IS ADDED.
3. THE LAST COMPLETE COLUMN INDICATES THE LATEST ISSUE NUMBER OF THE SHEET INDEX.
4. SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NO.
5. ISSUE DATES WILL BE SHOWN ON THE SHEET INDEX ONLY.
FS-3
LOCAL LOOP CURRENT SUPPLY
SHEET NOTES

1. ALL RELAY CONTACTS ON THIS SHEET ARE PART OF THE MODE CONTROL RELAY.
   COIL 8 IS SHOWN ON FS-2.

FS-4
MODE CONTROL
FS-6
READER CONTROL
(ASH SETS ONLY)

NOTE: 32Q/IR (LE$5, etc.) USES 2700V 20A 45 VAC.
50-60HZ OR 24VDC NOT COMPATIBLE WITH UCCG.
FS-8
READER FEED
(ASR SETS ONLY)
FS-11
48VAC POWER DISTRIBUTION

115V AC POWER DISTRIBUTION

115V AC

115V AC
20 OHMS

LOCAL LOOP CURRENT SUPPLY

TERMINAL FIELD

48V AC FOR CUSTOMER USE (UP TO 250 mA)

TERMINAL FIELD

POWER FAIL

AUTOMATIC READER LOGIC

MODEL 33
3000, 3100, 3200 SERIES
<table>
<thead>
<tr>
<th>RELAY</th>
<th>#</th>
<th>#</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUMBER</td>
<td>2302X</td>
<td>2302X</td>
<td>2302X</td>
</tr>
<tr>
<td>FUNCTION</td>
<td>MOTOR CONTROL</td>
<td>MOTOR CONTROL</td>
<td>MOTOR CONTROL</td>
</tr>
<tr>
<td>VOLTAGE RATINGS</td>
<td>12-20 VDC</td>
<td>12-20 VDC</td>
<td>12-20 VDC</td>
</tr>
<tr>
<td>CONTACT RATINGS</td>
<td>7-7 HP 240-250 VAC, 8 AMPS</td>
<td>7-7 HP 240-250 VAC, 8 AMPS</td>
<td>7-7 HP 240-250 VAC, 8 AMPS</td>
</tr>
<tr>
<td>INsert RESISTANCE</td>
<td>40 ohms</td>
<td>40 ohms</td>
<td>40 ohms</td>
</tr>
<tr>
<td>MAX. CONTACT CURRENT</td>
<td>10 MA DC &amp; RES 1 AC</td>
<td>10 MA DC &amp; RES 1 AC</td>
<td>10 MA DC &amp; RES 1 AC</td>
</tr>
<tr>
<td>CONTACTS</td>
<td>2 AMP AC</td>
<td>2 AMP AC</td>
<td>2 AMP AC</td>
</tr>
<tr>
<td>TIME FOR DUE TO START</td>
<td>10-120 MA</td>
<td>10-120 MA</td>
<td>10-120 MA</td>
</tr>
<tr>
<td>CLOSING DELAY</td>
<td>1 sec</td>
<td>1 sec</td>
<td>1 sec</td>
</tr>
<tr>
<td>CLOSING OF CONTACT</td>
<td>1 sec</td>
<td>1 sec</td>
<td>1 sec</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SWITCH</th>
<th>#</th>
<th>#</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUMBER</td>
<td>1300X</td>
<td>1300X</td>
<td>1300X</td>
</tr>
<tr>
<td>FUNCTION</td>
<td>FUNCTION OR C.L. DC &amp; RES</td>
<td>FUNCTION OR C.L. DC &amp; RES</td>
<td>FUNCTION OR C.L. DC &amp; RES</td>
</tr>
<tr>
<td>VOLTAGE RATINGS</td>
<td>120 VAC</td>
<td>120 VAC</td>
<td>120 VAC</td>
</tr>
<tr>
<td>MAXIMUM CONTACT CURRENT</td>
<td>15 MA DC &amp; RES &amp; 1 AC</td>
<td>15 MA DC &amp; RES &amp; 1 AC</td>
<td>15 MA DC &amp; RES &amp; 1 AC</td>
</tr>
<tr>
<td>CONTACTS</td>
<td>2 AMP AC</td>
<td>2 AMP AC</td>
<td>2 AMP AC</td>
</tr>
<tr>
<td>TIME FOR DUE TO START</td>
<td>10-120 MS</td>
<td>10-120 MS</td>
<td>10-120 MS</td>
</tr>
<tr>
<td>CLOSING DELAY</td>
<td>1 sec</td>
<td>1 sec</td>
<td>1 sec</td>
</tr>
<tr>
<td>CLOSING OF CONTACT</td>
<td>1 sec</td>
<td>1 sec</td>
<td>1 sec</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MOTOR</th>
<th>#</th>
<th>#</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUMBER</td>
<td>1300X</td>
<td>1300X</td>
<td>1300X</td>
</tr>
<tr>
<td>FUNCTION</td>
<td>FUNCTION OR C.L. DC &amp; RES</td>
<td>FUNCTION OR C.L. DC &amp; RES</td>
<td>FUNCTION OR C.L. DC &amp; RES</td>
</tr>
<tr>
<td>VOLTAGE RATINGS</td>
<td>120 VAC</td>
<td>120 VAC</td>
<td>120 VAC</td>
</tr>
<tr>
<td>MAXIMUM CONTACT CURRENT</td>
<td>15 MA DC &amp; RES &amp; 1 AC</td>
<td>15 MA DC &amp; RES &amp; 1 AC</td>
<td>15 MA DC &amp; RES &amp; 1 AC</td>
</tr>
<tr>
<td>CONTACTS</td>
<td>2 AMP AC</td>
<td>2 AMP AC</td>
<td>2 AMP AC</td>
</tr>
<tr>
<td>TIME FOR DUE TO START</td>
<td>10-120 MS</td>
<td>10-120 MS</td>
<td>10-120 MS</td>
</tr>
<tr>
<td>CLOSING DELAY</td>
<td>1 sec</td>
<td>1 sec</td>
<td>1 sec</td>
</tr>
<tr>
<td>CLOSING OF CONTACT</td>
<td>1 sec</td>
<td>1 sec</td>
<td>1 sec</td>
</tr>
</tbody>
</table>
BD-2
SIGNAL AND AUXILIARY

CUSTOMER INTERFACE

SEXUAL SIGNAL (HALF OR FULL DUPLEX)

OPTION: HALF OR FULL DUPLEX

110V AC FROM IDS, FS1 (2)
110V AC POWER DISTRIBUTION

OPTION: ZONA
SELECTOR MAGNET
RESETO

48V AC FROM IDS, FS1 (2)
48V AC DISTRIBUTION

STOP
STAND BY

FS-3
AUXILIARY CIRCUITS
FOR CUSTOMER USE

HOTRECK TEST MAGNET
PAPER ALARM
EDIT FUNCTION CONTACT
48V AC DISTRIBUTION

FS-2
INTERFACE SERIAL SIGNAL
(HALF OR FULL)

FS-1
MODE CONTROL
(LINE MODE)
LOCAL MODE

PARALLEL SIGNAL

3200, 3300, 3320 SERIES
1. Indicates number of wires represented by the line below.

BD-3
READER CONTROL
(ASR SET ONLY)

FS-6
READER CONTROL
DISTRIBUTOR
STOP MAGNET
AUTOMATIC READER

FS-6
READER FEED
RECEIVER FILTER
RECEIVER FEED CONTACT

FS-6
READER FEED
FEED MAGNET

115VAC
FROM
48VDC
POWER DISTRIBUTION

115VAC
FROM
115VAC
POWER DISTRIBUTION

48VAC
FROM
48VAC
DISTRIBUTION

115VAC
FROM
115VAC
DISTRIBUTION
115V AC POWER

115V AC TO
600, FS1
RECEIVE

115V AC TO
600, FS2
READER CONTROL

115V AC TO
600, FS3
READER FEED

115V AC TO
600, FS4
TERMINAL

48V AC TO
600, FS5
TERMINAL

48V AC TO
600, FS6
TERMINAL

48V AC TO
600, FS7
TERMINAL

48V AC TO
600, FS8
TERMINAL

15V AC TO
600, FS9
TERMINAL

15V AC TO
600, FS10
TERMINAL

15V AC TO
600, FS11
TERMINAL

AC POWER

BD-4

115V AC POWER DISTRIBUTION

HOLE RELAY

CIRCUIT

TIMES

HOLE RELAY

CIRCUIT

FS-2

FS-3

FS-4

FS-5

FS-6

FS-7

FS-8

FS-9

FS-10

FS-11

FS-12

FS-13

115VAC TO
600, FS1
RECEIVE

115VAC TO
600, FS2
READER CONTROL

115VAC TO
600, FS3
READER FEED

115VAC TO
600, FS4
TERMINAL

115VAC TO
600, FS5
TERMINAL

115VAC TO
600, FS6
TERMINAL

115VAC TO
600, FS7
TERMINAL

115VAC TO
600, FS8
TERMINAL

115VAC TO
600, FS9
TERMINAL

115VAC TO
600, FS10
TERMINAL

115VAC TO
600, FS11
TERMINAL

115VAC TO
600, FS12
TERMINAL

115VAC TO
600, FS13
TERMINAL

AC POWER
<table>
<thead>
<tr>
<th>SHEET INDEX</th>
<th>ISSUE NO.</th>
<th>CATEGORY NO.</th>
<th>REVISIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. WHERE CHANGES ARE MADE IN THIS SHEET, THE EXISTING SHEET WILLS PILLED AND A NEW SHEET WILLS ISSUED.
2. THIS SHEET INDEX WILL BE SHOWN ON THE SHEET INDEX.
3. THE LAST COMPLETED COLUMN NUMBER OF THE SHEET INDEX.
4. SHEETS THAT ARE NOT CHANGED.
5. ISSUE NO. WHERE APPLICABLE SHEETS WILL BE SHOWN ON THE SHEET INDEX ONLY.

<table>
<thead>
<tr>
<th>SUPPORTING INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFG. NO.</td>
</tr>
<tr>
<td>FAB. NO.</td>
</tr>
<tr>
<td>P/N</td>
</tr>
<tr>
<td>MODEL</td>
</tr>
<tr>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>POLARITY</td>
</tr>
<tr>
<td>CLASS</td>
</tr>
<tr>
<td>TOLERANCE</td>
</tr>
<tr>
<td>DESIGN</td>
</tr>
<tr>
<td>NOTE</td>
</tr>
</tbody>
</table>

MOTOR HZ
60Hz
1870 & 19241 MOTORS, 60Hz
18267 MOTOR, 50 Hz
19521 AC SERIES MOTOR

<table>
<thead>
<tr>
<th>CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHEET</td>
</tr>
<tr>
<td>SHEET</td>
</tr>
<tr>
<td>SHEET</td>
</tr>
<tr>
<td>SHEET</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1870 &amp; 19241 MOTORS, 60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>18267 MOTOR, 50 Hz</td>
</tr>
<tr>
<td>19521 AC SERIES MOTOR</td>
</tr>
</tbody>
</table>
**Actual WD for 333521 AC Series Motor**

**A**
Series Motor 183991

**B**
Terminal covered with suitable tubing insulation secured at both ends

**C**
Terminal covered with suitable tubing insulation secured at both ends

**D**
Terminal covered with suitable tubing insulation secured at both ends

**E**
Terminal covered with suitable tubing insulation secured at both ends

**F**
Bi-directional switch 336468

**G**
Terminal point 183204 (Left)

**H**
Terminal point 181204 (Right)

**I**
Governor assembly 183212

**J**
Brush assembly 183207

**K**
Network 135631

**L**
Resistor 137438

**AB**
Terminal covered with suitable tubing insulation secured at both ends

**AA**
Fuseliner 182182 1/0 AMP. 600 V fuse

**Note:** Refer to the original sheet for more details and instructions.
CIRCUIT DESCRIPTION

The selected transistors are driven by a constant current source, which is controlled by a stepping current source. This current source is used to bias the transistors. The collector current of the transistors is controlled by the stepping current source, which is controlled by a stepping current source. The collector current is then fed back to the base of the transistors, which allows the transistors to be biased in a stable manner.

In the normal operation of the circuit, the stepping current source is used to bias the transistors. The collector current is then fed back to the base of the transistors, which allows the transistors to be biased in a stable manner. The stepping current source is controlled by a stepping current source, which is controlled by a stepping current source. The collector current is then fed back to the base of the transistors, which allows the transistors to be biased in a stable manner.

The circuit is designed to operate in a stable manner, with the collector current being fed back to the base of the transistors. The stepping current source is used to bias the transistors, and the collector current is then fed back to the base of the transistors, which allows the transistors to be biased in a stable manner. The stepping current source is controlled by a stepping current source, which is controlled by a stepping current source. The collector current is then fed back to the base of the transistors, which allows the transistors to be biased in a stable manner.
CIRCUIT DESCRIPTION

This power pack consists of a 150 volt power supply operating directly from the line AC line, a blue shunt, a silicon diode, and an arc suppressor. It is designed to operate with an injection load of approximately 100 ohms between terminals 6 and 12. With a 200 ohm load, the 200 ohm resistor connected between terminals 11 and 12.

The solid-state switch is connected between terminals 6 and 12. The relay is designed to drive the reader head in the model 115 test set.

The relay contacts are used for automatic reader controls, 480 AC input is rectified through the relay and 600 before reaching the relay. Capacitor 2A filters diode to create this common point of power.
NO.

1. MASTER ACTIVITY REPORT
2. SOME PREVIOUS CIRCUIT CARD ASSEMBLY USED 1/2 AFD
3. BOARD NUMBER WAS 1630CC.
4. FOR STANDARDIZATION CRI-4 WERE CHANGED FROM 161-654.

DESCRIPTION

FUNCTION

R1 183063 1 RESISTOR, 22 CHM
R2 183062 1 RESISTOR, 12,000 OHM
C1 183078 1 CAPACITOR, DUAL SELECTION
C2 183004 1 CAPACITOR, 22uf FD
CRI 316391 4 DIODE, 400 V (NOTE 4)
CRI 316392 4 DIODE, 400 V (NOTE 4)
CRI 316393 4 DIODE, 400 V (NOTE 4)
CRI 316394 4 DIODE, 400 V (NOTE 4)
F1 143630 1 FUSE, 3/4 A, F.B.
FC 171595 2 FUSE CLIP
T1 163065 2 TERMINAL WITH WIRE LEAD
T2 163040 1 CONTACT BLOCK, 15 POINT
E 151641 0 TERMINALS MATE, PC
EC 161657 1 SCAFF CIRCUIT BOARD
R3 161689 1 RESISTOR, 40,000 OHM

DESCRIPTION FUNCTION

SURGE LIMITER
ARC SUPPRESSOR
POWER SUPPLY FILTER
SURGE RC, RC
POWER SUPPLY RECTIFIER

NOTE 1.
NOTE 2.
NOTE 3.
NOTE 4.

THIS POWER PACK CONSISTS OF A 150 VOLT POWER SUPPLY OPERATING DIRECTLY FROM THE 117 VAC LINE. A WAVE SHAPING NETWORK AND AN ARC SUPPRESSOR IT IS DESIGNED TO OPERATE WITH AN INDUCTIVE LOAD OF APPROXIMATELY 100 OHMS BETWEEN TERMINALS 6 AND 12. WITH A 850 OHM 40 WATT RESISTOR CONNECTED BETWEEN TI AND T2.

AN ON-OFF CONTROL SWITCH IS CONNECTED BETWEEN TERMINALS 9 AND 3. THE UNIT IS DESIGNED TO DRIVE THE READER MAGNET IN THE MODEL 32 AND 33 ASR.